



System i

Programming

i5/OS commands

Starting with CRTJRNRCV (Create Journal Receiver)

Version 6 Release 1





System i

Programming

i5/OS commands

Starting with CRTJRNRCV (Create Journal Receiver)

Version 6 Release 1

Note

Before using this information and the product it supports, be sure to read the information in "Notices," on page 825.

This edition applies to version 6, release 1, modification 0 of IBM i5/OS (product number 5761-SS1) and to all subsequent releases and modifications until otherwise indicated in new editions. This version does not run on all reduced instruction set computer (RISC) models nor does it run on CICS models.

© **Copyright International Business Machines Corporation 1998, 2008. All rights reserved.**

US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Contents

Create Journal Receiver (CRTJRNRCV) 1

Parameters	1
Journal receiver (JRNRCV).	1
ASP number (ASP)	2
Journal receiver threshold (THRESHOLD)	2
Text 'description' (TEXT)	3
Preferred storage unit (UNIT).	3
Authority (AUT)	3
Examples	4
Error messages	4

Create Java Program (CRTJVAPGM) . . . 7

Parameters	7
Class file or JAR file (CLSF)	7
Classpath (CLASSPATH)	8
Java developer kit version (JDKVER)	8
Optimization (OPTIMIZE)	8
User profile (USRPRF)	9
Use adopted authority (USEADPAUT).	9
Replace program (REPLACE)	10
Enable performance collection (ENBPFCOL)	10
Profiling data (PRFDTA)	10
Directory subtree (SUBTREE)	11
Target release (TGTRLS)	11
Licensed Internal Code options (LICOPT)	11
LIC options file (LICOPTFILE)	12
Examples	12
Error messages	12

Create Logical File (CRTLF) 15

Parameters	15
File (FILE)	16
Source file (SRCFILE)	17
Source member (SRCMBR)	17
Generation severity level (GENLVL)	17
Flagging severity level (FLAG)	18
File type (FILETYPE)	18
Logical file member (MBR)	18
Physical file data members (DTAMBRS)	18
Text 'description' (TEXT)	20
Source listing options (OPTION)	20
System (SYSTEM)	21
Maximum members (MAXMBRS)	21
Access path size (ACCPHSIZ)	22
Access path logical page size (PAGESIZE)	22
Access path maintenance (MAINT)	23
Access path recovery (RECOVER)	23
Force keyed access path (FRCACCPH)	24
Preferred storage unit (UNIT)	24
Rcd format selector program (FMPSLR)	24
Records to force a write (FRCRATIO)	25
Maximum file wait time (WAITFILE)	25
Maximum record wait time (WAITRCD)	26
Share open data path (SHARE)	26
Sort sequence (SRTSEQ)	26

Language ID (LANGID)	27
Record format level check (LVLCHK).	27
Authority (AUT).	27
Examples	28
Error messages	29

Create Library (CRTLIB) 31

Parameters	31
Library (LIB)	31
Library type (TYPE)	32
Text 'description' (TEXT)	32
Authority (AUT).	32
ASP number (ASP)	33
ASP device (ASPDEV).	33
Create authority (CRTAUT)	34
Create object auditing (CRTOBJAUD).	34
Examples	35
Error messages	35

Create Line Desc (Async) (CRTLINASC) 37

Parameters	37
Line description (LIND)	38
Resource names (RSRCNAME)	38
Online at IPL (ONLINE)	38
Physical interface (INTERFACE)	39
Connection type (CNN)	39
Switched network backup (SNBU).	39
Vary on wait (VRYWAIT).	40
Autocall unit (AUTOCALL)	40
Data bits per character (BITSCHAR)	40
Type of parity (PARITY)	41
Stop bits (STOPBITS)	41
Duplex (DUPLEX)	41
Echo support (ECHO)	41
Line speed (LINESPEED).	42
Modem type supported (MODEM)	42
Switched connection type (SWTCNN)	42
Autoanswer (AUTOANS).	43
Autodial (AUTODIAL)	43
Dial command type (DIALCMD)	43
Set modem to ASYNC command (SETMDMASC)	43
Modem init command string (MDMINZCMD).	44
Autocall resource name (ACRSRCNAME)	45
Calling number (CALLNBR).	45
Inactivity timer (INACTTMR)	45
Maximum buffer size (MAXBUFFER).	46
Flow control (FLOWCNTL)	46
XON character (XONCHAR)	46
XOFF character (XOFFCHAR)	46
End-of-Record table (EORTBL)	47
Data Set Ready drop timer (DSRDRPTMR)	47
Autoanswer type (AUTOANSTYP)	47
Remote answer timer (RMTANSTMR)	47
Text 'description' (TEXT)	48
Attached nonswitched ctls (CTL)	48

Switched controller list (SWTCTLLST)	48
Modem data rate select (MODEMRATE).	48
Error threshold level (THRESHOLD)	48
Idle timer (IDLTMR)	49
Clear To Send timer (CTSTMR).	49
Recovery limits (CMNRCYLMT)	49
Authority (AUT).	50
Examples	50
Error messages	50

Create Line Desc (BSC) (CRTLINBSC) 51

Parameters	51
Line description (LIND)	52
Resource name (RSRCNAME)	52
Online at IPL (ONLINE)	52
Application type (APPTYPE)	53
Physical interface (INTERFACE)	53
Connection type (CNN)	53
Switched network backup (SNBU).	54
Vary on wait (VRYWAIT).	54
Autocall unit (AUTOCALL)	54
Station address (STNADR)	55
Clocking (CLOCK)	55
Duplex (DUPLEX)	55
Line speed (LINESPEED).	55
Modem type supported (MODEM)	55
Switched connection type (SWTCNN)	56
Autoanswer (AUTOANS).	56
Autodial (AUTODIAL)	56
Dial command type (DIALCMD)	56
Autocall resource name (ACRSRCNAME)	57
Calling number (CALLNBR).	57
Inactivity timer (INACTTMR)	57
Maximum buffer size (MAXBUFFER).	57
Character code (CODE)	58
Receive timer (RCVTMR).	58
Continue timer (CONTTMR)	58
Contention state retry (CTNRTY)	58
Data state retry (DASTRTY)	58
Transmit TTD or WACK retry (TMTRTY)	59
Receive TTD or WACK retry (RCVRTY)	59
Data Set Ready drop timer (DSRDRPTMR).	59
Autoanswer type (AUTOANSTYP)	59
Remote answer timer (RMTANSTMR)	60
Text 'description' (TEXT)	60
Attached nonswitched ctls (CTL)	60
Switched controller list (SWTCTLLST)	60
Modem data rate select (MODEMRATE).	60
SYN characters (SYNCCHARS).	61
Error threshold level (THRESHOLD)	61
Include STX character in LRC (STXLRC).	61
Clear To Send timer (CTSTMR).	61
Recovery limits (CMNRCYLMT)	61
Authority (AUT).	62
Examples	62
Error messages	63

Create Line Desc (DDI) (CRTLINDDI) . . 65

Parameters	65
Line description (LIND)	66

Resource name (RSRCNAME)	66
Online at IPL (ONLINE)	67
Vary on wait (VRYWAIT).	67
Maximum controllers (MAXCTL)	67
Maximum frame size (MAXFRAME)	68
Logging level (LOGLVL)	68
Local manager mode (LCLMGRMODE)	68
Attached NWI (NWI)	69
DLC identifier (NWIDLCI)	69
Local adapter address (ADPTADR)	69
Exchange identifier (EXCHID)	69
SSAP list (SSAP).	70
Text 'description' (TEXT)	70
Network controller (NETCTL)	71
Group address (GRPADR)	71
Token rotation time (TKNRTTIME)	71
Link speed (LINKSPEED)	71
Cost/connect time (COSTCNN)	72
Cost/byte (COSTBYTE)	72
Security for line (SECURITY)	72
Propagation delay (PRPDLY)	72
User-defined 1 (USRDFN1)	73
User-defined 2 (USRDFN2)	73
User-defined 3 (USRDFN3)	73
Autocreate controller (AUTOCRTCTL)	73
Autodelete controller (AUTODLTCTL)	74
Recovery limits (CMNRCYLMT)	74
Message queue (MSGQ)	74
Authority (AUT).	75
Examples	75
Error messages	75

Create Line Desc (Ethernet) (CRTLINETH) 77

Common Errors for CRTLINETH	77
Parameters	77
Line description (LIND)	79
Resource name (RSRCNAME)	79
Online at IPL (ONLINE)	80
Vary on wait (VRYWAIT).	80
Attached NWI (NWI)	80
NWI type (NWITYPE).	81
Network server description (NWS)	81
Associated port resource name (ASSOCPORT).	81
Local adapter address (ADPTADR)	82
Exchange identifier (EXCHID)	82
Ethernet standard (ETHSTD)	82
Line speed (LINESPEED).	83
Duplex (DUPLEX)	83
Serviceability options (SRVOPT)	83
Maximum frame size (MAXFRAME)	83
SSAP list (SSAP).	84
ATM access type (ACCTYPE)	85
PVC identifiers (PVCID)	85
Use LECS address (USELECSADR)	86
LES ATM address (LESATMADR).	86
Emulated LAN name (EMLLANNAME).	87
LEC disconnect time out (LECDSTIMO)	87
Text 'description' (TEXT)	87
Network controller (NETCTL)	87
Group address (GRPADR)	87

Maximum controllers (MAXCTL)	88
Error threshold level (THRESHOLD)	88
Generate test frame (GENTSTFRM)	88
Link speed (LINKSPEED)	88
Cost/connect time (COSTCNN)	89
Cost/byte (COSTBYTE)	89
Security for line (SECURITY)	89
Propagation delay (PRPDLY)	89
User-defined 1 (USRDFN1)	90
User-defined 2 (USRDFN2)	90
User-defined 3 (USRDFN3)	90
Autocreate controller (AUTOCRTCTL)	90
Autodelete controller (AUTODLTCTL)	91
Recovery limits (CMNRCYLMT)	91
Message queue (MSGQ)	91
Authority (AUT)	92
Examples	92
Error messages	93

Create Line Desc (Fax) (CRTLINFAX) 95

Parameters	95
Line description (LIND)	95
Resource names (RSRCNAME)	95
Online at IPL (ONLINE)	96
Vary on wait (VRYWAIT)	96
Text 'description' (TEXT)	96
Attached nonswitched ctls (CTL)	97
Authority (AUT)	97
Examples	97
Error messages	98

Create Line Desc (Frame Relay) (CRTLINFR) 99

Parameters	99
Line description (LIND)	100
Attached NWI (NWI)	100
DLC identifier (NWDLCI)	100
Online at IPL (ONLINE)	101
Vary on wait (VRYWAIT)	101
Maximum controllers (MAXCTL)	101
Maximum frame size (MAXFRAME)	102
Exchange identifier (EXCHID)	102
SSAP list (SSAP)	102
Text 'description' (TEXT)	103
Link speed (LINKSPEED)	103
Network controller (NETCTL)	103
Cost/connect time (COSTCNN)	104
Cost/byte (COSTBYTE)	104
Security for line (SECURITY)	104
Propagation delay (PRPDLY)	104
User-defined 1 (USRDFN1)	105
User-defined 2 (USRDFN2)	105
User-defined 3 (USRDFN3)	105
Recovery limits (CMNRCYLMT)	105
Message queue (MSGQ)	106
Authority (AUT)	106
Examples	107
Error messages	107

Create Line Desc (PPP) (CRTLINPPP) 109

Parameters	109
Line description (LIND)	110
Resource name (RSRCNAME)	110
Connection type (CNN)	111
Framing type (FRAMING)	111
Physical interface (INTERFACE)	111
Attached nonswitched NWI (NWI)	112
NWI channel number (NWLCHLNBR)	112
Switched NWI list (SWTNWILST)	112
Online at IPL (ONLINE)	113
Vary on wait (VRYWAIT)	113
Line speed (LINESPEED)	113
Information transfer type (INFTRFTYPE)	114
Modem init command string (MDMINZCMD)	114
Maximum frame size (MAXFRAME)	115
Switched connection type (SWTCNN)	115
Switched NWI selection (SWTNWISLCT)	116
Outgoing connection list (CNNLSTOUT)	116
Connection list entry (CNNLSTOUTE)	116
Incoming connection list (CNNLSTIN)	116
Clocking (CLOCK)	117
Dial command type (DIALCMD)	117
Set modem to ASYNC command (SETMDMASC)	117
Calling number (CALLNBR)	118
Flow control (FLOWCNTL)	119
Network controller (NETCTL)	119
Clear To Send timer (CTSTMR)	119
Inactivity timer (INACTTMR)	119
Remote answer timer (RMTANSTMR)	119
NRZI data encoding (NRZI)	120
Text 'description' (TEXT)	120
Async control character map (ACCM)	120
LCP authentication values (LCPAUT)	121
LCP configuration values (LPCPCFG)	121
Compression (COMPRESS)	122
Recovery limits (CMNRCYLMT)	123
Message queue (MSGQ)	123
Authority (AUT)	123
Examples	124
Error messages	124

Create Line Desc (SDLC) (CRTLINSDLC) 125

Parameters	125
Line description (LIND)	127
Resource names (RSRCNAME)	127
Online at IPL (ONLINE)	127
Data link role (ROLE)	127
Physical interface (INTERFACE)	128
Connection type (CNN)	128
Switched network backup (SNBU)	129
SHM node type (SHMNODE)	129
Vary on wait (VRYWAIT)	129
Autocall unit (AUTOCALL)	130
Exchange identifier (EXCHID)	130
NRZI data encoding (NRZI)	130
Maximum controllers (MAXCTL)	130
Clocking (CLOCK)	131
Line speed (LINESPEED)	131
Modem type supported (MODEM)	131
Switched connection type (SWTCNN)	132

Autoanswer (AUTOANS)	132
Autodial (AUTODIAL)	132
Modem init command string (MDMINZCMD)	133
Dial command type (DIALCMD)	133
Autocall resource name (ACRSRCNAME)	134
SHM call timer (SHMCALLTMR)	134
SHM maximum connect timer (SHMMAXCNN)	134
SHM answer delay timer (SHMANSPLY)	134
SHM call format (SHMALLFMT)	135
SHM access code (SHMACC)	135
Calling number (CALLNBR)	135
Station address (STNADR)	136
Connect poll retry (CNNPOLLRTY)	136
Connect timer (CNNTMR)	136
Short timer (SHORTTMR)	136
Long timer (LONGTMR)	137
Short retry (SHORTRTY)	137
Long retry (LONGRTY)	137
Call progress signal retry (CPSRTY)	137
Maximum frame size (MAXFRAME)	138
Duplex (DUPLEX)	138
Inactivity timer (INACTTMR)	138
Poll response delay (POLLRSPDLY)	138
Nonproductive receive timer (NPRDRCVTMR)	139
Idle timer (IDLTMR)	139
Connect poll timer (CNNPOLLTMR)	139
Poll cycle pause (POLLPAUSE)	139
Frame retry (FRAMERTY)	139
Fair polling timer (FAIRPLLTMR)	140
Data Set Ready drop timer (DSRDRPTMR)	140
Autoanswer type (AUTOANSTYP)	140
Remote answer timer (RMTANSTMR)	140
Text 'description' (TEXT)	140
Attached nonswitched ctls (CTL)	141
Modem data rate select (MODEMRATE)	141
Error threshold level (THRESHOLD)	141
Modulus (MODULUS)	141
Maximum outstanding frames (MAXOUT)	141
Clear To Send timer (CTSTMR)	142
Link speed (LINKSPEED)	142
Cost/connect time (COSTCNN)	142
Cost/byte (COSTBYTE)	142
Security for line (SECURITY)	143
Propagation delay (PRPDLY)	143
User-defined 1 (USRDFN1)	143
User-defined 2 (USRDFN2)	144
User-defined 3 (USRDFN3)	144
Recovery limits (CMNRCYLMT)	144
Authority (AUT)	145
Examples	145
Error messages	145

**Create Line Desc (TDLC)
(CRTLINTDLC) 147**

Parameters	147
Line description (LIND)	147
Attached work station ctl (WSC)	147
Online at IPL (ONLINE)	147
Text 'description' (TEXT)	148
Network controller (NETCTL)	148
Attached nonswitched ctls (CTL)	148

Authority (AUT)	148
Examples	149
Error messages	149

**Create Line Desc (Token-Ring)
(CRTLINTRN) 151**

Parameters	151
Line description (LIND)	153
Resource name (RSRCNAME)	153
NWI type (NWITYPE)	153
Online at IPL (ONLINE)	153
Vary on wait (VRYWAIT)	154
Maximum controllers (MAXCTL)	154
Attached NWI (NWI)	154
DLC identifier (NWIDLCI)	155
Network server description (NWS)	155
Line speed (LINESPEED)	155
Duplex (DUPLEX)	156
Maximum frame size (MAXFRAME)	156
LEC frame size (LECFRAME)	157
Local adapter address (ADPTADR)	157
Exchange identifier (EXCHID)	157
SSAP list (SSAP)	157
ATM access type (ACCTYPE)	158
PVC identifiers (PVCID)	159
Use LECS address (USELECSADR)	159
LES ATM address (LESATMADR)	159
Emulated LAN name (EMLLANNAME)	160
LEC disconnect time out (LECDSCSTIMO)	160
Text 'description' (TEXT)	160
Network controller (NETCTL)	161
Activate LAN manager (ACTLANMGR)	161
TRLAN manager logging level (TRNLOGLVL)	161
TRLAN manager mode (TRNMGRMODE)	161
Log configuration changes (LOGCFGCHG)	162
Token-ring inform of beacon (TRNINFBCN)	162
Functional address (FCNADR)	162
Early token release (ELYTKNRLS)	163
Error threshold level (THRESHOLD)	163
Link speed (LINKSPEED)	163
Cost/connect time (COSTCNN)	164
Cost/byte (COSTBYTE)	164
Security for line (SECURITY)	164
Propagation delay (PRPDLY)	165
User-defined 1 (USRDFN1)	165
User-defined 2 (USRDFN2)	165
User-defined 3 (USRDFN3)	165
Autocreate controller (AUTOCRTCTL)	166
Autodelete controller (AUTODLTCTL)	166
Recovery limits (CMNRCYLMT)	166
Message queue (MSGQ)	166
Authority (AUT)	167
Examples	167
Error messages	168

**Create Line Desc (Wireless)
(CRTLINWLS) 169**

Parameters	169
Line description (LIND)	170
Resource name (RSRCNAME)	170

Online at IPL (ONLINE)	171
Vary on wait (VRYWAIT)	171
Local adapter address (ADPTADR)	171
Exchange identifier (EXCHID)	172
Ethernet standard (ETHSTD)	172
SSAP list (SSAP)	172
Initialization source file (INZFILE)	173
Initialization source member (INZMBR)	173
Initialization program (INZPGM)	174
Text 'description' (TEXT)	174
Network controller (NETCTL)	174
Group address (GRPADR)	174
Maximum controllers (MAXCTL)	175
Link speed (LINKSPEED)	175
Cost/connect time (COSTCNN)	175
Cost/byte (COSTBYTE)	176
Security for line (SECURITY)	176
Propagation delay (PRPDLY)	176
User-defined 1 (USRDFN1)	176
User-defined 2 (USRDFN2)	176
User-defined 3 (USRDFN3)	177
Autocreate controller (AUTOCRTCTL)	177
Autodelete controller (AUTODLTCTL)	177
Recovery limits (CMNRCYLMT)	178
Authority (AUT)	178
Examples	179
Error messages	179

Create Line Desc (X.25) (CRTLINX25) 181

Parameters	181
Line description (LIND)	183
Resource names (RSRCNAME)	184
Logical channel entries (LGLCHLE)	184
Local network address (NETADR)	184
Connection initiation (CNNINIT)	185
Online at IPL (ONLINE)	185
Physical interface (INTERFACE)	185
Connection type (CNN)	185
Attached nonswitched NWI (NWI)	186
NWI channel type (NWIHLTYPE)	186
NWI channel number (NWIHLNBR)	186
Switched NWI list (SWTNWILST)	187
Vary on wait (VRYWAIT)	187
Line speed (LINESPEED)	188
Exchange identifier (EXCHID)	188
Packet mode (PKTMODE)	188
Information transfer type (INFTRFTYPE)	189
Extended network addressing (EXNNETADR)	189
Maximum frame size (MAXFRAME)	189
Default packet size (DFTPKTSIZE)	190
Maximum packet size (MAXPKTSIZE)	190
Modulus (MODULUS)	190
Default window size (DFTWDWSIZE)	191
Insert net address in packets (ADRINSERT)	191
Network user ID (NETUSRID)	191
Connection number (CNNNBR)	191
Calling number (CALLNBR)	192
Switched connection type (SWTCNN)	192
Outgoing connection list (CNNLSTOUT)	192
Connection list entry (CNNLSTOUTE)	193
Incoming connection list (CNNLSTIN)	193

Autoanswer (AUTOANS)	193
Autodial (AUTODIAL)	193
Dial command type (DIALCMD)	193
Modem init command string (MDMINZCMD)	194
Call immediate (CALLIMMED)	194
Autocall unit (AUTOCALL)	195
Autocall resource name (ACRSRCNAME)	195
Predial delay (PREDIALDLY)	195
Redial delay (REDIALDLY)	195
Dial retry (DIALRTY)	195
Switched disconnect (SWTDSC)	196
Disconnect timers (SWTDSCCTMR)	196
Data Set Ready drop timer (DSRDRPTMR)	196
Autoanswer type (AUTOANSTYP)	196
Remote answer timer (RMTANSTMR)	197
Clocking (CLOCK)	197
Switched NWI selection (SWTNWISLCT)	197
Text 'description' (TEXT)	197
X.25 DCE support (X25DCE)	198
Network controller (NETCTL)	198
Switched controller list (SWTCTLLST)	198
Idle timer (IDLTMR)	198
Frame retry (FRAMERTY)	199
Error threshold level (THRESHOLD)	199
Modem type supported (MODEM)	199
Modem data rate select (MODEMRATE)	200
Clear To Send timer (CTSTMR)	200
Link speed (LINKSPEED)	200
Cost/connect time (COSTCNN)	200
Cost/byte (COSTBYTE)	201
Security for line (SECURITY)	201
Propagation delay (PRPDLY)	201
User-defined 1 (USRDFN1)	202
User-defined 2 (USRDFN2)	202
User-defined 3 (USRDFN3)	202
Recovery limits (CMNRCYLMT)	202
Message queue (MSGQ)	203
Authority (AUT)	203
Examples	204
Error messages	204

Create Locale (CRTLOCALE) 205

Parameters	205
Locale name (LOCALE)	205
Source file path name (SRCFILE)	206
Coded character set ID (CCSID)	206
Generation severity level (GENLVL)	206
Text 'description' (TEXT)	206
Output (OUTPUT)	207
Source listing options (OPTION)	207
Replace object (REPLACE)	207
Public authority for data (DTAAUT)	208
Public authority for object (OBJAUT)	208
Examples	209
Error messages	209

Create Menu (CRTMNU) 211

Parameters	211
Menu (MENU)	212
Menu type (TYPE)	212

Display file (DSPF)	212
Message file (MSGF)	213
Command line (CMDLIN)	213
Display function keys (DSPKEY)	214
Program (PGM)	214
Source file (SRCFILE)	215
Source member (SRCMBR)	215
Source listing options (OPTION)	215
Include file (INCFIL)	216
Current library (CURLIB)	216
Product library (PRDLIB)	217
Character identifier (CHRID)	217
Replace menu (REPLACE)	217
Text 'description' (TEXT)	218
Authority (AUT)	218
Examples	218
Error messages	219

Create Mode Description (CRTMODD) 221

Parameters	221
Mode description (MODD)	221
Maximum sessions (MAXSSN)	222
Maximum conversations (MAXCNV)	222
Locally controlled sessions (LCLCTLSSN)	222
Pre-established sessions (PREESTSSN)	222
Maximum inbound pacing value (MAXINPAC)	223
Inbound pacing value (INPACING)	223
Outbound pacing value (OUTPACING)	223
Maximum length of request unit (MAXLENRU)	223
Data compression (DTACPR)	224
Inbound data compression (INDTACPR)	224
Outbound data compression (OUTDTACPR)	225
Session level encryption (SLE)	226
Text 'description' (TEXT)	226
Class-of-service (COS)	226
Authority (AUT)	226
Examples	227
Error messages	227

Create Message File (CRTMSGF) 229

Parameters	229
Message file (MSGF)	229
Text 'description' (TEXT)	230
File size (SIZE)	230
Authority (AUT)	230
Coded character set ID (CCSID)	231
Examples	232
Error messages	232

Create Menu from Msg Files (CRTMSGFMNU) 233

Parameters	233
Menu## command message file (CMDTXTMSGF)	234
Option text message file (OPTTXTMSGF)	234
Replace menu (REPLACE)	235
Free form menu (FREEFORM)	235
DDS listing (DDSLIST)	235
Maximum devices (MAXDEV)	235
Authority (AUT)	235
To DDS source file (TOFILE)	236

To DDS source member (TOMBR)	237
User specified DBCS data (IGCDTA)	237
Target Release (TGTRLS)	237
Examples	238
Error messages	238

Create Message Queue (CRTMSGQ) 241

Parameters	241
Message queue (MSGQ)	242
Text 'description' (TEXT)	242
Force to auxiliary storage (FORCE)	242
Queue size (SIZE)	242
Authority (AUT)	243
Allow alerts (ALWALR)	244
Coded character set ID (CCSID)	244
Message queue full action (MSGQFULL)	244
Examples	245
Error messages	245

Create Node Group (CRTNODGRP) 247

Parameters	247
Node group (NODGRP)	247
Relational database (RDB)	248
Partitioning file (PTNFILE)	248
Partitioning member (PTNMBR)	248
Text 'description' (TEXT)	249
Authority (AUT)	249
Examples	249
Error messages	250

Create Node List (CRTNODL) 251

Parameters	251
Node list (NODL)	251
Text 'description' (TEXT)	251
Authority (AUT)	252
Examples	252
Error messages	253

Create NetBIOS Description (CRTNTBD) 255

Parameters	255
NetBIOS description (NTBD)	256
Text 'description' (TEXT)	256
Full buffer datagrams (FULLBUFDTG)	256
Adaptive window interval (ADPWDWITV)	256
Maximum window errors (MAXWDWERR)	256
Maximum receive data size (MAXRCVDATA)	257
Inactivity timer (INACTTMR)	257
Response timer (RSPTMR)	257
Acknowledgement timer (ACKTMR)	257
Maximum outstanding receives (MAXIN)	258
Maximum outstanding transmits (MAXOUT)	258
Query timeout (QRYTMR)	258
NetBIOS retry (NTBRTY)	258
Allow multiple acknowledgement (ALWMULTACK)	258
Prebuilt message packets (PREBLTPKT)	259
Packet confirms for restart (PKTRESTART)	259
DLC retries (DLCRTY)	259
Ethernet standard (ETHSTD)	259

Authority (AUT)	260
Examples	260
Error messages	260

**Create Network Interface (FR)
(CRTNWIFR) 261**

Parameters	261
Network interface description (NWID)	261
Resource name (RSRCNAME)	262
Online at IPL (ONLINE)	262
Vary on wait (VRYWAIT)	262
Data link connection ID (DLCI)	263
NRZI data encoding (NRZI)	263
Physical interface (INTERFACE)	263
Clocking (CLOCK)	263
Line speed (LINESPEED)	264
LMI mode (LMIMODE)	264
Polling interval (POLLITV)	265
Full inquiry interval (FULLINQITV)	265
Text 'description' (TEXT)	265
Recovery limits (CMNRCYLMT)	265
Authority (AUT)	266
Examples	266
Error messages	267

**Create NWS Configuration
(CRTNWSCFG) 269**

Parameters	269
Network server configuration (NWSCFG)	270
Configuration type (TYPE)	271
IP security rules (IPSECRULE)	271
Initialize service processor (INZSP)	272
Enable unicast (ENBUNICAST)	272
Service processor name (SPNAME)	273
SP internet address (SPINTNETA)	273
SP certificate identifier (SPCERTID)	273
Enclosure identifier (EID)	274
SP configuration name (SPNWSCFG)	275
Remote system identifier (RMTSYSID)	275
Delivery method (DELIVERY)	275
Target CHAP authentication (CHAPAUT)	276
Initiator CHAP authentication (INRCHAPAUT)	277
Boot device ID (BOOTDEVID)	278
Dynamic boot options (DYNBOOTOPT)	278
Remote (initiator) interfaces (RMTIFC)	279
Text 'description' (TEXT)	281
Authority (AUT)	281
Examples	282
Error messages	283

**Create Network Server Desc
(CRTNWSD) 285**

Parameters	285
Network server description (NWSD)	288
Resource name (RSRCNAME)	289
Network server type (TYPE)	289
Storage path (STGPTH)	290
Default IP security rule (DFTSECRULE)	291
Multi-path group (MLTPTHGRP)	291
Default storage path (DFTSTGPTH)	292

Removable media path (RMVMEDPTH)	292
Activation timer (ACTTMR)	292
Online at IPL (ONLINE)	293
Vary on wait (VRYWAIT)	293
Shutdown timeout (SHUTDTIMO)	293
Partition (PARTITION)	294
Partition number (PTNNBR)	294
Domain role (DMNROLE)	294
Propagate domain users (PRPDMNUSR)	295
Language version (LNGVER)	295
Code page (CODEPAGE)	297
Server message queue (MSGQ)	297
Event log (EVTLOG)	298
Communications message queue (CMNMSGQ)	299
Configuration file (CFGFILE)	299
Server storage space sizes (SVRSTGSIZE)	300
Server storage space ASP (SVRSTGASP)	300
Server storage ASP device (STGASPDEV)	301
Pool identifier (POOL)	301
TCP/IP port configuration (TCPPORTCFG)	302
TCP/IP route configuration (TCP RTE)	303
TCP/IP local host name (TCPHOSTNAM)	304
TCP/IP local domain name (TCPDMNNAME)	305
TCP/IP name server system (TCPNAMSVR)	305
Ports (PORTS)	306
Virtual Ethernet path (VRTETHPTH)	306
Restricted device resources (RSTDDEVRS)	308
Network server configuration (NWSCFG)	308
Virtual Ethernet control port (VRTETHCTLP)	309
Synchronize date and time (SYNCTIME)	309
Disable user profiles (DSBUSRPRF)	310
IPL source (IPLSRC)	310
IPL stream file (IPLSTMF)	310
IPL parameters (IPLPARM)	311
Power control (PWRCTL)	311
Serviceability options (SRVOPT)	311
Authority (AUT)	312
Text 'description' (TEXT)	312
Examples	312
Error messages	313

**Create NWS Storage Space
(CRTNWSSTG) 315**

Parameters	315
Network server storage space (NWSSTG)	315
Size (NWSSIZE)	315
From storage space (FROMNWSSTG)	316
Format (FORMAT)	316
Data offset (OFFSET)	317
Auxiliary storage pool ID (ASP)	318
ASP device (ASPDEV)	318
Cluster domain name (CLUDMN)	318
Cluster port configuration (CLUPORTCFG)	318
Text 'description' (TEXT)	319
Examples	319
Error messages	320

Create Output Queue (CRTOUTQ) . . . 321

Parameters	321
Output queue (OUTQ)	322

Maximum spooled file size (MAXPAGES)	323
Order of files on queue (SEQ)	323
Remote system (RMTSYS)	323
Remote printer queue (RMTPTQ)	324
Writers to autostart (AUTOSTRWTR)	325
Queue for writer messages (MSGQ)	325
Connection type (CNNTYPE)	325
Destination type (DESTTYPE)	325
Transform SCS to ASCII (TRANSFORM)	326
Data transform program (USRDTATFM)	326
Manufacturer type and model (MFRYPMDL)	327
Workstation customizing object (WSCST)	334
Image configuration (IMGCFG)	334
Internet address (INTNETADR)	337
VM/MVS class (CLASS)	337
Forms Control Buffer (FCB)	337
Destination options (DESTOPT)	338
Print separator page (SEPPAGE)	338
User-defined options (USRDFNOPT)	338
User-defined object (USRDFNOBJ)	338
User-defined driver program (USRDRVPGM)	339
Spooled file ASP (SPLFASP)	340
Text 'description' (TEXT)	340
Display any file (DSPDTA)	340
Job separators (JOBSEP)	340
Operator controlled (OPRCTL)	341
Data queue (DTAQ)	341
Authority to check (AUTCHK)	342
Authority (AUT)	342
Examples	343
Error messages	343

Create Overlay (CRTOVL) 345

Parameters	345
Overlay (OVL)	345
Source file (FILE)	346
Source file member (MBR)	346
Data type (DATATYPE)	346
Text 'description' (TEXT)	346
Replace overlay (REPLACE)	347
Authority (AUT)	347
Examples	348
Error messages	348

Create Page Definition (CRTPAGDFN) 349

Parameters	349
Page definition (PAGDFN)	349
File (FILE)	350
Member (MBR)	350
Text 'description' (TEXT)	350
Replace page definition (REPLACE)	350
Authority (AUT)	351
Examples	351
Error messages	351

Create Page Segment (CRTPAGSEG) 353

Parameters	353
Page segment (PAGSEG)	353
Source file (FILE)	354
Source file member (MBR)	354

Text 'description' (TEXT)	354
Replace page segment (REPLACE)	354
Authority (AUT)	355
Examples	355
Error messages	355

Create Print Descriptor Group (CRTPDG) 357

Parameters	357
Print descriptor group (PDG)	357
Text 'description' (TEXT)	357
Authority (AUT)	358
Examples	358
Error messages	358

Create PEX Data (CRTPEXDTA) 361

Parameters	361
From collection (FROMMGTCOL)	362
To member (TOMBR)	362
To library (TOLIB)	362
Number of threads (NBRTHD)	362
Replace data (RPLDTA)	363
Text 'description' (TEXT)	363
Examples	363
Error messages	363

Create Physical File (CRTPF) 365

Parameters	365
File (FILE)	366
Source file (SRCFILE)	367
Source member (SRCMBR)	367
Record length (RCDLEN)	368
Generation severity level (GENLVL)	368
Flagging severity level (FLAG)	368
File type (FILETYPE)	369
Member (MBR)	369
User specified DBCS data (IGCDTA)	369
Text 'description' (TEXT)	370
Source listing options (OPTION)	370
System (SYSTEM)	371
Expiration date for member (EXPDATE)	371
Maximum members (MAXMBRS)	371
Access path size (ACCPHSIZ)	372
Access path logical page size (PAGESIZE)	372
Access path maintenance (MAINT)	372
Access path recovery (RECOVER)	373
Force keyed access path (FRCACCPH)	374
Member size (SIZE)	374
Allocate storage (ALLOCATE)	375
Contiguous storage (CONTIG)	375
Preferred storage unit (UNIT)	375
Records to force a write (FRCRATIO)	376
Maximum file wait time (WAITFILE)	376
Maximum record wait time (WAITRCD)	376
Share open data path (SHARE)	377
Max % deleted records allowed (DLTPCT)	377
Reuse deleted records (REUSEDLT)	377
Sort sequence (SRTSEQ)	377
Language ID (LANGID)	378
Coded character set ID (CCSID)	378

Allow update operation (ALWUPD)	379
Allow delete operation (ALWDLT)	379
Record format level check (LVLCHK)	379
Node group (NODGRP)	379
Partitioning Key (PTNKEY)	380
Authority (AUT)	380
Examples	381
Error messages	381

Create Performance Data

(CRTPFRDTA)	383
Parameters	383
From collection (FROMMGTCOL)	384
To member (TOMBR)	384
To library (TOLIB)	384
Text 'description' (TEXT)	384
Categories to process (CGY)	385
Time interval (in minutes) (INTERVAL)	386
Starting date and time (FROMTIME)	386
Ending date and time (TOTIME)	386
Examples	387
Error messages	388

Create Performance Summary

(CRTPFRSUM)	389
Parameters	389
Collection (COL)	389
Library (LIB)	389
Examples	390
Error messages	390

Create Program (CRTPGM) 391

Parameters	391
Program (PGM)	392
Module (MODULE)	392
Text 'description' (TEXT)	393
Program entry procedure module (ENTMOD)	393
Bind service program (BNDSRVPGM)	394
Binding directory (BNDDIR)	395
Activation group (ACTGRP)	395
Creation options (OPTION)	396
Listing detail (DETAIL)	397
Allow update (ALWUPD)	397
Allow *SRVPGM library update (ALWLIBUPD)	397
User profile (USRPRF)	397
Replace program (REPLACE)	398
Authority (AUT)	398
Target release (TGTRLS)	399
Allow reinitialization (ALWRINZ)	399
Storage model (STGMDL)	399
Argument optimization (ARGOPT)	400
Interprocedural analysis (IPA)	400
IPA control file (IPACTLFILE)	400
Examples	400
Error messages	400

Create Panel Group (CRTPNLGRP) 403

Parameters	403
Panel group (PNLGRP)	404
Source file (SRCFILE)	404

Source member (SRCMBR)	404
Text 'description' (TEXT)	404
Source listing options (OPTION)	405
Include file (INCFILE)	405
Character identifier (CHRID)	406
Authority (AUT)	407
Replace (REPLACE)	407
Examples	407
Error messages	408

Create Printer File (CRTPRTF) 409

Parameters	409
File (FILE)	413
Source file (SRCFILE)	414
Source member (SRCMBR)	414
Generation severity level (GENLVL)	414
Flagging severity level (FLAG)	415
Device (DEV)	415
Printer device type (DEVTYPE)	415
User specified DBCS data (IGCDTA)	416
DBCS extension characters (IGCEXNCHR)	416
Text 'description' (TEXT)	416
Source listing options (OPTION)	417
Page size (PAGESIZE)	418
Lines per inch (LPI)	418
Characters per inch (CPI)	419
Front margin (FRONTMGN)	420
Back margin (BACKMGN)	420
Overflow line number (OVRFLW)	421
Fold records (FOLD)	421
Unprintable character action (RPLUNPRT)	421
Align page (ALIGN)	422
Control character (CTLCHAR)	422
Channel values (CHLVAL)	423
Fidelity (FIDELITY)	424
Print quality (PRTQLTY)	424
Form feed (FORMFEED)	425
Source drawer (DRAWER)	425
Output bin (OUTBIN)	425
Font identifier (FONT)	426
Character identifier (CHRID)	426
Decimal format (DECfmt)	427
Font character set (FNTCHRSET)	427
Coded font (CDEFNT)	428
Table Reference Characters (TBLREFCHR)	429
Page definition (PAGDFN)	429
Form definition (FORMDF)	430
AFP Characters (AFPCHARS)	431
Degree of page rotation (PAGRRT)	431
Pages per side (MULTIUP)	432
Reduce output (REDUCE)	432
Print text (PRTTXT)	433
Hardware justification (JUSTIFY)	433
Print on both sides (DUPLEX)	433
Unit of measure (UOM)	434
Front side overlay (FRONTOVL)	434
Back side overlay (BACKOVL)	435
Convert line data (CVTLINDTA)	436
IPDS pass through (IPDSPASTHR)	436
User resource library list (USRRLIBL)	437
Corner staple (CORNERSTPL)	437

Edge stitch (EDGESTITCH)	438
Saddle stitch (SADLSTITCH)	439
Font resolution for formatting (RNTRSL)	440
Defer write (DFRWRT)	441
Spool the data (SPOOL)	441
Spooled output queue (OUTQ)	441
Form type (FORMTYPE)	442
Copies (COPIES)	442
Expiration date for file (EXPDATE)	442
Days until file expires (DAYS)	442
Page range to print (PAGERANGE)	443
Max spooled output records (MAXRCDS)	443
File separators (FILESEP)	443
Spooled output schedule (SCHEDULE)	443
Hold spooled file (HOLD)	444
Save spooled file (SAVE)	444
Output priority (on OUTQ) (OUTPTY)	444
User data (USRDTA)	444
Spool file owner (SPLFOWN)	445
User Defined Option (USRDFNOPT)	445
User Defined Data (USRDFNDTA)	446
User Defined Object (USRDFNOBJ)	446
DBCS character rotation (IGCCHRRTT)	447
DBCS characters per inch (IGCCPI)	447
DBCS SO/SI spacing (IGCSOSI)	447
DBCS coded font (IGCCDEFNT)	448
To stream file (TOSTMF)	448
Workstation customizing object (WSCST)	449
Maximum file wait time (WAITFILE)	449
Share open data path (SHARE)	450
Record format level check (LVLCHK)	450
Authority (AUT)	450
Replace file (REPLACE)	451
Examples	451
Error messages	452

Create Proxy Command (CRTPRXCMD)	453
Parameters	453
Command (CMD)	453
Target command (TGTCMD)	454
Text 'description' (TEXT)	454
Authority (AUT)	455
Replace command (REPLACE)	455
Examples	456
Error messages	456

Create PSF Configuration (CRTPSFCFG)	457
Parameters	457
PSF configuration (PSFCFG)	459
User resource library list (USRRSCLIBL)	459
Device resource library list (DEVRSCLIBL)	460
IPDS pass through (IPDSPASTHR)	460
Activate release timer (ACTRLSTMR)	461
Release timer (RLSTMR)	462
Restart timer (RESTRTMR)	462
APPC and TCP/IP retry count (RETRY)	463
Delay between APPC retries (RETRYDLY)	463
Acknowledgment frequency (ACKFRQ)	463

Printer response timer (PRTRSPTMR)	464
Generate PDF output (PDFGEN)	464
PDF device emulation type (PDFDEVTYPE)	464
PDF paper size drawer 1 (PDFPPRDWR1)	465
PDF paper size drawer 2 (PDFPPRDWR2)	465
Multiple PDF files (PDFMULT)	466
PDF fonts inline (PDFINCFNT)	466
PDF data queue (PDFDTAQ)	467
PDF mail server name (PDFMAILSVR)	467
Sender of electronic mail (PDFSENDER)	467
PDF administrator (PDFADMIN)	468
PDF user program (PDFMAPPGM)	468
PDF mapping object (PDFMAP)	469
PDF output queue (PDFOUTQ)	469
PDF directory (PDFDIR)	470
Save AFP data (AFPSAVE)	470
AFP output queue (AFPOUTQ)	471
Text 'description' (TEXT)	471
Automatic session recovery (AUTOSSNRCY)	471
Blank page (BLANKPAGE)	472
Page size control (PAGSIZCTL)	473
Resident fonts (RESFONT)	473
Resource retention (RSCRET)	473
Edge orient (EDGEORIENT)	473
Use outline fonts (USEOUTLFNT)	474
PSF defined option (PSFDFNOPT)	474
Font substitution messages (FNTPSUBMSG)	474
Capture host fonts at printer (FNTPCAPTURE)	474
Font resolution for formatting (FNTRSL)	474
Font mapping table (FNTPBTL)	475
Cut sheet emulation mode (CSEMODE)	476
Use DBCS simulation fonts (MAPIGCFNT)	476
Replace (REPLACE)	476
Authority (AUT)	476
Examples	477
Error messages	477

Create Query Management Form (CRTQMFORM)	479
Parameters	479
Query management report form (QMFORM)	479
Source file (SRCFILE)	480
Source member (SRCMBR)	480
Text 'description' (TEXT)	480
Authority (AUT)	481
Replace object (REPLACE)	481
Examples	481
Error messages	482

Create Query Management Query (CRTQMQR)	483
Parameters	483
Query management query (QMQR)	483
Source file (SRCFILE)	484
Source member (SRCMBR)	484
Text 'description' (TEXT)	484
Sort sequence (SRTSEQ)	485
Language ID (LANGID)	485
Authority (AUT)	486
Replace object (REPLACE)	486

Examples	486
Error messages	487
Create Q/A Database (CRTQSTDB)	489
Parameters	489
Q/A database (QSTDB)	489
Lib containing Q/A database (LIB)	489
Examples	490
Error messages	490
Create Q/A Database Load (CRTQSTLOD)	491
Parameters	491
Q/A database (QSTDB)	491
Lib containing Q/A database (LIB)	491
Examples	492
Error messages	492
Create RNDC Configuration (CRTRNDCCFG)	493
Parameters	493
Automatic configuration (AUTOCFG)	493
Key file (KEYFILE)	494
Server RNDC IP address (RNDCADR)	494
Domain name server port (RNDCPORT)	495
Key name (KEYNAME)	495
Key size (KEYSIZE)	495
Entropy source (ENTROPYSRC)	495
Output file (TOSTMF)	495
Examples	496
Error messages	497
Create S/36 Display File (CRTS36DSPF)	499
Parameters	499
Display file (DSPFILE)	500
Option (OPTION)	500
S/36 SFGR source member (SRCMBR)	500
S/36 source file (SRCFILE)	501
Replace display file (REPLACE)	501
Print SFGR listing (PRINT)	501
Maximum devices (MAXDEV)	502
Authority (AUT)	502
Generation option (GENOPT)	502
Check SFGR source syntax (SYNTAX)	503
To DDS source file (TOFILE)	503
To DDS source member (TOMBR)	503
Issue msg if error occurs (HALT)	504
Defer write (DFRWRT)	504
Target Release (TGTRLS)	504
Examples	505
Error messages	505
Create S/36 Menu (CRTS36MNU)	507
Parameters	507
Command text source member## (CMDTXTMBR)	508
Option text source file (OPTTXTMBR)	508
Command text source file (CMDTXTSRC)	508
Option text source file (OPTTXTSRC)	509

Menu library (LOADLIB) (MNULIB)	509
Replace menu (REPLACE)	509
Free form menu (FREEFORM)	510
Keep option text msg file (KEEP)	510
DDS listing (DDSLIST)	510
Maximum devices (MAXDEV)	510
Authority (AUT)	510
To DDS source file (TOFILE)	511
To DDS source member (TOMBR)	512
User specified DBCS data (IGCDTA)	512
Target Release (TGTRLS)	512
Examples	513
Error messages	513
Create S/36 Message File (CRTS36MSGF)	515
Parameters	516
S/36 message source member (SRCMBR)	516
S/36 source file (SRCFILE)	516
Message file library (MSGLIB)	517
Replace message file (REPLACE)	517
Message identifier prefix (MSGPFX)	517
Option (OPTION)	517
Allow # substitution fields (SUBST)	518
Enforce S/36 restrictions (RESTRICT)	518
Authority (AUT)	519
To CL source file (TOFILE)	519
To CL source member (TOMBR)	520
Issue msg if error occurs (HALT)	520
Examples	520
Error messages	521
Create Save File (CRTSAVF)	523
Parameters	523
Save file (FILE)	524
Text 'description' (TEXT)	524
Maximum records (MAXRCDS)	524
Auxiliary storage pool ID (ASP)	524
Maximum file wait time (WAITFILE)	525
Share open data path (SHARE)	525
Authority (AUT)	525
Examples	526
Error messages	526
Create Subsystem Description (CRTSBSD)	527
Parameters	527
Subsystem description (SBSD)	528
Storage pools (POOLS)	528
Maximum jobs (MAXJOBS)	529
Text 'description' (TEXT)	530
Sign-on display file (SGNDSPF)	530
Subsystem library (SYSLIBL)	531
Authority (AUT)	531
ASP group (ASPGRP)	532
Examples	532
Error messages	533
Create Search Index (CRTSCHIDX)	535
Parameters	535

Search index (SCHIDX)	535
Display title (TITLE)	536
Text 'description' (TEXT)	536
Character identifier (CHRID)	536
Authority (AUT)	537
Examples.	537
Error messages	537

Create Spelling Aid Dictionary (CRTSPADCT) 539

Parameters	540
Spelling aid dictionary (SPADCT)	540
Source file (SRCFILE).	541
Source member (SRCMBR)	541
Text 'description' (TEXT)	541
Base dictionary (BASEDCT)	541
Verify dictionary (VFYDCT)	542
Language attribute (LNGATR).	542
Stop word list language ID (SWLLANGID)	543
Base stop word list (BASESWL)	544
Source listing option (OPTION)	544
Authority (AUT)	544
Replace dictionary (REPLACE)	545
Examples.	545
Error messages	545

Create SQL Package (CRTSQLPKG) 547

Parameters	547
Program (PGM)	547
Relational database (RDB)	548
RDB user (USER)	548
RDB user password (PASSWORD)	548
Default collection (DFTRDBCOL).	548
Object type (OBJTYPE)	549
Module list (MODULE)	549
Text 'description' (TEXT)	549
Severity level (GENLVL)	550
Replace (REPLACE)	550
Print file (PRTFILE)	550
Examples.	550
Error messages	551

Create Source Physical File (CRTSRCPF). 553

Parameters	553
File (FILE)	554
Record length (RCDLEN)	554
Member (MBR).	555
User specified DBCS data (IGCDTA)	555
Text 'description' (TEXT)	555
System (SYSTEM)	555
Expiration date for member (EXPDATE)	556
Maximum members (MAXMBRS)	556
Access path size (ACCPHSIZ)	556
Access path logical page size (PAGESIZE).	557
Access path type (ACCPH)	557
Access path maintenance (MAINT)	557
Access path recovery (RECOVER)	558
Force keyed access path (FRACCPH)	558
Member size (SIZE)	558

Allocate storage (ALLOCATE).	559
Preferred storage unit (UNIT)	560
Records to force a write (FRCRATIO)	560
Maximum file wait time (WAITFILE)	560
Maximum record wait time (WAITRCD)	561
Share open data path (SHARE)	561
Max % deleted records allowed (DLTPCT).	561
Coded character set ID (CCSID)	562
Allow update operation (ALWUPD).	562
Allow delete operation (ALWDLT)	562
Authority (AUT)	562
Examples.	563
Error messages	563

Create Service Configuration (CRTSRVCFG) 565

Parameters	565
Role (ROLE).	566
Connection type (CNNTYPE)	566
Country or region ID (CNTRYID)	567
State or province code (STATE)	567
Primary telephone number (TELNBR1).	567
Alternate telephone number (TELNBR2)	568
Resource name (RSRCNAME)	568
Modem information name (MODEM)	568
Wait for dial tone (DIALTONE)	569
Remote system (RMTSYS)	569
Proxy server (PROXY)	570
ISP profile name (ISPPRF)	571
Connectivity for others (CNNPNT)	571
Connection point proxy (CNNPNTPRX)	572
Examples.	572
Error messages	573

Create Service Program (CRTSRVPGM). 575

Parameters	575
Service program (SRVPGM)	576
Module (MODULE)	576
Export (EXPORT)	577
Source file (SRCFILE).	577
Source member (SRCMBR)	578
Text 'description' (TEXT)	578
Bind service program (BNDSRVPGM)	578
Binding directory (BNDDIR)	579
Activation group (ACTGRP)	580
Creation options (OPTION).	580
Listing detail (DETAIL)	581
Allow update (ALWUPD)	581
Allow *SRVPGM library update (ALWLIBUPD)	581
User profile (USRPRF)	582
Replace program (REPLACE)	582
Authority (AUT)	582
Target release (TGTRLS).	583
Allow reinitialization (ALWRINZ)	583
Storage model (STGMDL)	583
Argument optimization (ARGOPT)	584
Interprocedural analysis (IPA)	584
IPA control file (IPACTLFILE)	584
Examples.	585

Error messages	585
Create Tape Category (CRTTAPCGY)	587
Parameters	588
Category (CGY)	588
Examples	588
Error messages	588
Create Tape File (CRTTAPF)	591
Parameters	591
File (FILE)	592
Device (DEV)	592
Volume identifier (VOL)	593
Tape reels specifications (REELS)	594
Sequence number (SEQNBR)	595
Tape label (LABEL)	596
File type (FILETYPE)	596
User specified DBCS data (IGCDTA)	596
Text 'description' (TEXT)	596
Record length (RCDLEN)	597
Block length (BLKLEN)	597
Buffer offset (BUFOFSET)	598
Record block format (RCDBLKFMFMT)	599
Extend file (EXTEND)	600
Tape density (DENSITY)	600
Data compaction (COMPACT)	605
Code (CODE)	605
Creation date (CRTDATE)	606
File expiration date (EXPDATE)	606
End of tape option (ENDOPT)	606
User label program (USRLBLPGM)	607
Maximum file wait time (WAITFILE)	607
Share open data path (SHARE)	607
Authority (AUT)	608
Replace file (REPLACE)	608
Examples	608
Error messages	609
Create Table (CRTTBL)	611
Parameters	611
Table (TBL)	612
Source file (SRCFILE)	612
Source member (SRCMBR)	613
Table type (TBLTYPE)	613
Basing table (BASETBL)	613
Basing sort sequence (BASESRTSEQ)	614
Basing language ID (BASELANGID)	614
Coded character set ID (CCSID)	615
Text 'description' (TEXT)	615
Authority (AUT)	615
Examples	616
Error messages	616
Create Time Zone Description (CRTTIMZON)	617
Parameters	617
Time zone description (TIMZON)	618
Offset (OFFSET)	618
Standard Time (STDNAME)	618
Daylight Saving Time (DST) (DSTNAME)	619

Standard Time message (STDMSG)	619
Daylight Saving Time message (DSTMSG)	620
Message file (MSGF)	620
Daylight Saving Time start (DSTSTR)	620
Daylight Saving Time end (DSTEND)	621
Daylight Saving Time shift (DSTSHIFT)	623
Text 'description' (TEXT)	623
Year offset (YEAROFS)	623
Alternate name (ALTNAME)	623
Authority (AUT)	624
Examples	624
Error messages	625

Create User-Defined FS (CRTUDFS)	627
Parameters	627
User-defined file system (UDFS)	627
Public authority for data (DTAAUT)	628
Public authority for object (OBJAUT)	629
Auditing value for objects (CRTOBJAUD)	630
Scanning option for objects (CRTOBJSCAN)	630
Restricted rename and unlink (RSTDRNMUNL)	631
Default disk storage option (DFTDISKSTG)	631
Default main storage option (DFTMAINSTG)	631
Case sensitivity (CASE)	632
Default file format (DFTFILEFMT)	632
Text 'description' (TEXT)	632
Examples	633
Error messages	633

Create User Profile (CRTUSRPRF)	635
Parameters	635
User profile (USRPRF)	637
User password (PASSWORD)	637
Set password to expired (PWDEXP)	638
Status (STATUS)	638
User class (USRCLS)	638
Assistance level (ASTLVL)	639
Current library (CURLIB)	639
Initial program to call (INLPGM)	640
Initial menu (INLMNU)	640
Limit capabilities (LMTCPB)	641
Text 'description' (TEXT)	641
Special authority (SPCAUT)	642
Special environment (SPCENV)	643
Display sign-on information (DSPSGNINF)	643
Password expiration interval (PWDEXPITV)	644
Block password change (PWDCHGBLK)	644
Local password management (LCLPWDMGMT)	644
Limit device sessions (LMTDEVSSN)	645
Keyboard buffering (KBDBUF)	645
Maximum allowed storage (MAXSTG)	645
Highest schedule priority (PTYLMT)	646
Job description (JOB)	646
Group profile (GRPPRF)	647
Owner (OWNER)	647
Group authority (GRPAUT)	647
Group authority type (GRPAUTTY)	648
Supplemental groups (SUPGRPPRF)	648
Accounting code (ACGCDE)	649
Document password (DOCPWD)	649

Message queue (MSGQ)	649
Delivery (DLVRY)	650
Severity code filter (SEV)	650
Print device (PRTDEV)	650
Output queue (OUTQ)	651
Attention program (ATNPGM)	651
Sort sequence (SRTSEQ)	652
Language ID (LANGID)	652
Country or region ID (CNTRYID)	653
Coded character set ID (CCSID)	653
Character identifier control (CHRIDCTL)	653
Locale job attributes (SETJOBATR)	654
Locale (LOCALE)	654
User options (USROPT)	655
User ID number (UID)	655
Group ID number (GID)	656
Home directory (HOMEDIR)	656
EIM association (EIMASSOC)	657
Authority (AUT)	658
Examples	658
Error messages	659

Create Validation List (CRTVLDL) 661

Parameters	661
Validation list (VLDL)	661
Text 'description' (TEXT)	661
Authority (AUT)	662
Examples	662
Error messages	662

Create WSCST (CRTWSCST) 665

Parameters	665
Workstation customizing object (WSCST)	665
Source member (SRCMBR)	666
Text 'description' (TEXT)	666
Source file (SRCFILE)	666
Authority (AUT)	667
Replace object (REPLACE)	667
Examples	667
Error messages	667

Convert CL Source (CVTCLSRC) 669

Parameters	669
From file (FROMFILE)	670
To file (TOFILE)	670
Member (FROMMBR)	670
Examples	671
Error messages	671

Convert Date (CVTDAT) 673

Parameters	673
Date to be converted (DATE)	673
CL var for converted date (TOVAR)	674
From date format (FROMFMT)	674
To date format (TOFMT)	675
To date separator (TOSEP)	676
Examples	676
Error messages	677

Convert Directory (CVTDIR) 679

Parameters	679
Option (OPTION)	679
Run priority (RUNPTY)	680
File system (FILESYS)	680
Format (FORMAT)	680
Detail (DETAIL)	680
Auxiliary storage pool ID (ASP)	680
Examples	680
Error messages	681

Convert DLS Name (CVTDLSNAM) 683

Parameters	683
Object (OBJ)	684
Directory subtree (SUBTREE)	684
Action (ACTION)	684
Preview results (PREVIEW)	685
From CCSID (FROMCCSID)	685
To CCSID (TOCCSID)	685
Examples	686
Error messages	687

Convert Education (CVTEDU) 689

Parameters	689
Course ID (COURSE)	689
Language ID (LNG)	689
Examples	690
Error messages	690

Convert IP Address (CVTIPSIFC) 691

Parameters	691
Internet address (INTNETADR)	691
Output (OUTPUT)	691
Examples	692
Error messages	692

Convert Network ID / Location (CVTIPSLOC) 693

Parameters	693
Network identifier (NETID)	693
Location name (LOC)	693
Output (OUTPUT)	694
Examples	694
Error messages	694

Convert Optical Backup (CVTOPTBKU) 695

Parameters	695
Backup volume identifier (BKUVOL)	695
Primary volume identifier (PRIVOL)	695
Examples	696
Error messages	696

Convert Performance Collection (CVTPFCOL) 699

Parameters	699
From library (FROMLIB)	699
To library (TOLIB)	699
Collection type (COLTYPE)	700
Examples	700

Error messages 700

Convert Pfr Thread Data (CVTPFRTHD) 703

Parameters 703
Member (MBR) 703
Library (LIB) 703
Replace (REPLACE) 704
Examples 704
Error messages 704

Convert RPC Source (CVTRPCSRC) 705

Parameters 705
From file (FROMFILE) 705
Option (OPTION) 705
Protocol (PROTOCOL) 706
To file (TOFILE) 706
Examples 707
Error messages 707

Convert TCP/IP CL Source (CVTTCPCL) 709

Parameters 710
From file (FROMFILE) 710
To file (TOFILE) 710
From member (FROMMBR) 711
Examples 711
Error messages 711

Convert To Folder (CVTTOFLR) 713

Error messages for CVTTOFLR 713
Parameters 713
From virtual disk (FROMVDSK) 713
To folder (TOFLR) 714
Replace documents (REPLACE) 714
Examples 714
Error messages 714

Convert User Certificate (CVTUSRCERT) 717

Parameters 717
User profile (USRPRF) 717
Option (OPTION) 717
Examples 718
Error messages 718

Data (DATA) 719

Parameters 719
Input file (FILE) 719
File type (FILETYPE) 720
Characters for end of data (ENDCHAR) 720
User specified DBCS data (IGCDTA) 720
Examples 720
Error messages 721

Copy To LDIF (DB2LDIF) 723

Parameters 723
Instance (INSTANCE) 723
LDIF stream file (LDIFSTMF) 724

Administrator (ADMIN) 724
Subtree distinguished name (SUBTREE) 724
Copy cn=localhost (LOCALHOST) 724
Copy cn=pwdpolicy (PWDPOLICY) 725
Copy nested replication (NESTRPLC) 725
Copy operational attributes (OPRATR) 725
Passphrase (PASSPHRASE) 725
Encryption salt (ENCSALT) 726
Examples 726
Error messages 727

Declare CL Variable (DCL) 729

Parameters 729
CL variable name (VAR) 730
Type (TYPE) 730
Storage (STG) 730
Length of variable (LEN) 731
Initial value (VALUE) 732
Basing pointer variable (BASPTR) 732
Defined on (DEFVAR) 732
Address (ADDRESS) 733
Examples 733
Error messages 734

Declare File (DCLF) 735

Parameters 737
File (FILE) 737
Record format (RCDFMT) 737
Open file identifier (OPNID) 738
Allow variable length fields (ALWVARLEN) 738
Allow field value of null (ALWNULL) 738
Allow graphic fields (ALWGRAPHIC) 738
Declare binary fields (DCLBINFLD) 739
Examples 739
Error messages 739

Declare Processing Options (DCLPRCOPT) 741

Parameters 741
Subroutine stack depth (SUBRSTACK) 742
Log commands (LOG) 742
Allow RTVCLSRC (ALWRTVSRC) 743
Text 'description' (TEXT) 743
User profile (USRPRF) 743
Authority (AUT) 744
Sort sequence (SRTSEQ) 744
Language ID (LANGID) 745
Storage model (STGMDL) 745
Default activation group (DFTACTGRP) 746
Activation group (ACTGRP) 746
Bind service program (BNDSRVPGM) 746
Binding directory (BNDDIR) 747
Examples 748
Error messages 749

Decompress Object (DCPOBJ) 751

Parameters 751
Object (OBJ) 751
Object type (OBJTYPE) 753
Program option (PGMOPT) 753

Examples	753
Error messages	754
Remove Link (DEL)	757
Parameters	758
Object link (OBJLNK)	758
Examples	758
Error messages	759
Dependent Definition (DEP)	761
Parameters	761
Controlling conditions (CTL)	762
Dependent parameter (PARAM)	763
Number of true dependencies (NBRTRUE)	763
Message identifier (MSGID)	764
Examples	764
Error messages	765
Start DIG Query (DIG)	767
Parameters	767
Query name (HOSTNAME)	769
Query type (TYPE)	769
Query class (CLASS)	769
Reverse lookup (REVERSE)	770
Domain name server (DMNNSVR)	771
Domain name server port (PORT)	771
Query timeout (TIMEOUT)	771
Use domain search list (USEDMNSCHL)	772
Domain search list (DMNSCHLIST)	772
Source address (SRCADR)	772
Batch input file (BCHFILE)	773
IP Version (IPVSN)	774
Network protocol (PROTOCOL)	774
Recursion desired (SETRDFLAG)	774
Authoritative answers only (SETAAFLAG)	774
Authentic data (SETADFLAG)	775
Disable DNSSEC checking (SETCDFLAG)	775
Print multiple lines (MULTILINE)	775
Print short answer (SHORT)	775
Print server in short answer (IDENTIFY)	775
Print query (PRTQRY)	776
Print RR class (PRTCLASS)	776
Print RR TTL (PRTTTL)	776
Print all query detail (PRTALL)	776
Print query command (CMD)	776
Print query comments (COMMENTS)	777
Print query statistics (STATS)	777
Print question section (QUESTION)	777
Print answer section (ANSWER)	777
Print authority section (AUTHORITY)	777
Print additional section (ADDITIONAL)	778
Key file (KEYFILE)	778
Key name (KEYNAME)	778
Stop on SERVFAIL (STOPFAIL)	779
Ignore truncated responses (UDPTRUNC)	779
List authoritative servers (NSSCH)	779
Trace delegation path (TRACE)	779
Times to try UDP query (UDPTRIES)	779
UDP retry (UDPNBRRTY)	780
Number of dots (NBRDOTS)	780

UDP buffer size for EDNS (BUFSIZE)	780
Set EDNS version (EDNS)	780
Clear EDNS version (NOEDNS)	781
Best effort display (BESTEFFORT)	781
Request DNSSEC records (DNSSEC)	781
Chase DNSSEC chains (SIGCHASE)	781
Trusted keys file (TRUSTEDKEY)	782
DNSSEC top down validation (TOPDOWN)	782
Output file (TOSTMF)	782
Examples	782
Error messages	785

Deallocate Object (DLCOBJ)	787
Parameters	788
Object specifications (OBJ)	788
Lock scope (SCOPE)	791
Examples	792
Error messages	793

Delete Alert (DLTALR)	795
Parameters	795
Delete option (DLTOPT)	795
Days (DAYS)	796
Alert type (ALRTYPE)	796
Alert resource (ALRRSC)	796
Alert resource type (ALRRSCTYPE)	797
User assigned (ASNUSE)	797
Group (GROUP)	797
Examples	798
Error messages	798

Delete Alert Table (DLTALRTBL)	799
Parameters	799
Alert table (ALRTBL)	799
Examples	800
Error messages	800

Delete APAR Data (DLTAPARDTA)	803
Parameters	803
Problem identifier (PRBID)	803
Origin (ORIGIN)	803
Examples	804
Error messages	804

Delete Authority Holder (DLTAUHLR)	805
Parameters	805
Object (OBJ)	805
Examples	805
Error messages	806

Delete Authorization List (DLTAUTL)	807
Parameters	807
Authorization list (AUTL)	807
Examples	807
Error messages	808

Delete Binding Directory (DLTBNDIR)	809
Parameters	809

Binding directory (BNDDIR)	809
Examples	810
Error messages	810

Delete Configuration List (DLTCFGL) 813

Parameters	813
Configuration list (CFGL)	813
Examples	813
Error messages	813

Delete C Locale Description (DLTCLD) 815

Error messages for DLTCLD	815
Parameters	815
Locale name (CLD)	815
Examples	816
Error messages	816

Delete Class (DLTCLS) 817

Parameters	817
Class (CLS)	817
Examples	818
Error messages	819

Delete Command (DLTCMD) 821

Parameters	821
Command (CMD)	821
Examples	822
Error messages	822

Appendix. Notices 825

Programming interface information	826
Trademarks	827
Terms and conditions	828
Code license and disclaimer information	828

Create Journal Receiver (CRTJRNRCV)

Where allowed to run: All environments (*ALL)
Threadsafe: Yes

Parameters
Examples
Error messages

The Create Journal Receiver (CRTJRNRCV) command creates a journal receiver. Once a journal receiver is attached to a journal (with the Create Journal (CRTJRN) or Change Journal (CHGJRN) command), journal entries can be placed in it. A preferred auxiliary storage pool(ASP), and a storage space threshold value can be specified for the journal receiver.

Restrictions:

- A journal receiver cannot be created in library QTEMP.
- This command cannot be used to create a journal receiver for a remote journal.
- If the library to contain the journal receiver is on an independent ASP then ASP(*LIBASP) must be specified.

Top

Parameters

Keyword	Description	Choices	Notes
JRNRCV	Journal receiver	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Journal receiver	<i>Simple name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
ASP	ASP number	1-32, *LIBASP	Optional
THRESHOLD	Journal receiver threshold	1-1000000000, <u>1500000</u> , *NONE	Optional
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
UNIT	Preferred storage unit	1-255, *ANY	Optional
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional

Top

Journal receiver (JRNRCV)

Specifies the name and library of the journal receiver that is being created.

This is a required parameter.

Qualifier 1: Journal receiver

receiver-name

Specify the name of the journal receiver being created.

Qualifier 2: Library

*CURLIB

The journal receiver is created in the current library. If no library is specified as the current library for the job, QGPL is used.

library-name

Specify the library where the journal receiver is to be created.

Top

ASP number (ASP)

Specifies the auxiliary storage pool (ASP) from which the system allocates storage for the journal receiver.

***LIBASP**

The storage space for the journal receiver is allocated from the same auxiliary storage pool as the storage space of the journal receiver's library.

ASP-identifier

Specify a value ranging from 1 through 32 to specify the identifier of the ASP from which to have the storage space of the journal receiver allocated. Valid values depend on how ASPs are defined on the system.

Note: The value of 1 is the system ASP, any other value indicates a user ASP.

Top

Journal receiver threshold (THRESHOLD)

Specifies a storage space threshold value (in KB) for the journal receiver. If the threshold value is exceeded during journaling, one of the following occurs:

- The message CPF7099 is sent to the journal message queue if the journal has the MNGRCV(*USER) attribute.
- The system attempts to create and attach a new receiver if the journal has the MNGRCV(*SYSTEM) attribute. When the old receiver is detached, the message CPF7020 is sent to the journal message queue. If the attempt fails due to lock conflicts, the system sends the message CPI70E5 and then tries again every ten minutes (or as often as requested via the MNGRCVDLY parm) until the change journal operation is successful.
- When the system cannot determine if the journal has the MNGRCV(*SYSTEM) attribute, or if the attempt to create and attach a new journal receiver fails because of something other than a lock conflict, the message CPI70E3 is sent.

The journal message queue is specified on the CRTJRN (Create Journal) or CHGJRN (Change Journal) command.

Note: The value for the MNGRCV parameter is specified for the journal on the CRTJRN or CHGJRN command. If you have not specified MNGRCV(*SYSTEM), and the threshold value is exceeded, you may want to take some action, such as issuing a CHGJRN command.

Note: If RCVSIZOPT(*RMVINTENT) is specified for the journal, the internal space occupied by the internal entries applies toward the receiver threshold. Sometime after the journal receiver is detached, the space for the internal entries will be freed. At that time the size of the journal receiver will be less than the specified threshold value.

1500000

This is the default threshold value. Each 1000KB specifies 1,024,000 bytes of storage space.

***NONE**

No threshold value is specified. The message CPF7099 is not sent and MNGRCV(*SYSTEM) cannot be specified when attaching this receiver to a journal.

1-100000000

Specify the journal receiver threshold value in kilobytes (KB) of storage. Each 1000 KB specifies 1,024,000 bytes of storage space. A value less than 100,000 will automatically be reset to 100,000. When the size of the space for the journal receiver is larger than the size specified by this value, a message is sent to the identified message queue if appropriate, and journaling continues.

Notes:

1. If you plan to attach this journal receiver to a journal that does not have one of the *MAXOPT values from the RCVSIZOPT parameter specified, the maximum threshold you should specify is 1,919,999 in kilobytes.
2. If you specify a value less than 100,000, the value will automatically be reset to 100,000. Otherwise you may see the threshold exceeded message too frequently. Also, if the threshold value is too small, the threshold exceeded message may occur when the journal receiver is attached to a journal either with the Create Journal (CRTJRN) command or the Change Journal (CHGJRN) command.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

***BLANK**

No text is specified.

'description'

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Preferred storage unit (UNIT)

This parameter is no longer supported. It has been kept strictly for syntactic compatibility with releases prior to Version 1 Release 3 Modification 0 of the operating system.

To isolate the journal receiver to a disk arm, use the ASP parameter. For more information on using user ASPs, see the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

You can specify either *ANY or a value from 1 through 32 for this parameter.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

***LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

***CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled

by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

```
CRTJRNRCV  JRNRCV(MYLIB/JRNRCLA) ASP(3)
           THRESHOLD(100000) AUT(*ALL)
           TEXT('RECEIVER FOR WEEK 37')
```

This command creates a journal receiver named JRNRCLA in library MYLIB. Storage space for the journal receiver is allocated from user auxiliary storage pool (ASP) 3. When the size of JRNRCLA is larger than 100000 kilobytes (102,400,000 bytes), the message CPF7099 is sent to the journal message queue, if the journal to which this receiver is attached has the MNGRCV(*USER) attribute. The public authority to the journal receiver is *ALL.

Top

Error messages

*ESCAPE Messages

CPF2108

Object &1 type *&3 not added to library &2.

CPF2283

Authorization list &1 does not exist.

CPF70FD

Internal system journal status object recreated.

CPF7010

Object &1 in &2 type *&3 already exists.

CPF7011

Not enough storage or resources.

CPF7012

Auxiliary storage pool &4 not found for object &1.

CPF70FD

Internal system journal status object recreated.

CPF9801

Object &2 in library &3 not found.

CPF9802

Not authorized to object &2 in &3.

CPF9803

Cannot allocate object &2 in library &3.

CPF9810

Library &1 not found.

CPF9820

Not authorized to use library &1.

CPF9830

Cannot assign library &1.

CPF9839

Object &1 not created.

CPF9840

Object &1 not created.

CPF9873

ASP status is preventing access to object.

CPF9875

Resources exceeded on ASP &1.

Top

Create Java Program (CRTJVAPGM)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Java Program (CRTJVAPGM) command creates a Java program from a Java class file, JAR file, or ZIP file. The resulting Java program object becomes part of the class file, JAR file or ZIP file object. The Java program runs when started by the JAVA (Run Java Program) command.

Restrictions: The file must be in one of the following file systems: QOpenSys,"root", or a user-defined file system.

Top

Parameters

Keyword	Description	Choices	Notes
CLSF	Class file or JAR file	<i>Path name</i>	Required, Positional 1
CLASSPATH	Classpath	<i>Path name</i> , *NONE, *ENVVAR	Optional
JDKVER	Java developer kit version	<i>Character value</i> , *NONE	Optional
OPTIMIZE	Optimization	<u>10</u> , *INTERPRET, 20, 30, 40	Optional
USRPRF	User profile	* <u>USER</u> , *OWNER	Optional
USEADPAUT	Use adopted authority	*NO, *YES	Optional
REPLACE	Replace program	*YES, *NO	Optional
ENBPFCOL	Enable performance collection	*NONE, *ENTRYEXIT, *FULL	Optional
PRFDTA	Profiling data	* <u>NOCOL</u> , *COL	Optional
SUBTREE	Directory subtree	*NONE, *ALL	Optional
TGTRLS	Target release	<i>Character value</i> , * <u>CURRENT</u>	Optional
LICOPT	Licensed Internal Code options	<i>Character value</i> , * <u>OPTIMIZE</u>	Optional
LICOPTFILE	LIC options file	<i>Path name</i> , *NONE	Optional

Top

Class file or JAR file (CLSF)

Specifies the class file , JAR file, or ZIP file name from which to create the Java program. The file name may be qualified by one or more directory names.

class-file-name

Specify the name of the class file or a pattern for identifying the class file or files to be used. A pattern can be specified in the last part of the name. An asterisk matches any number of characters and a question mark matches a single character. If the name is qualified or contains a pattern it must be enclosed in apostrophes. An example of a qualified class file name is '/directory1/directory2/myclassname.class'. An example of a pattern is '/directory1/directory2/myclass*.class'.

JAR-file-name

Specify the name of the Java archive (JAR) file or pattern for identifying the JAR or ZIP file or files to be used. A file is assumed to be a JAR file if the file name ends with '.jar' or '.zip'. A pattern can be specified in the last part of the name. An asterisk matches any number of characters and a question mark matches a single character. If the name is qualified or contains a pattern it must be enclosed in apostrophes. An example of a qualified JAR file name is '/directory1/directory2/myappname.jar'. An example of a pattern is '/directory1/directory2/myapp*.zip'.

Top

Classpath (CLASSPATH)

Specifies the path used to locate classes for inter-JAR binding. Directories are separated by colons.

***NONE**

No additional directories or JAR files are added to the class path for locating classes.

***ENVVAR**

The class path is determined by the environment variable CLASSPATH.

class-path

Path used to locate classes. An example class path is '/directory1/directory2:/QIBM/ProdData/Java400'.

Either CLASSPATH or JDKVER must be specified for inter-JAR binding to occur. CLASSPATH must be *NONE when CLSF is a class file.

Top

Java developer kit version (JDKVER)

Specifies the Java Development Kit (JDK) version to add to the class path for locating classes for inter-JAR binding.

***NONE**

No additional directories for this JDK version are added to the class path for locating classes.

Java-Development-Kit version

The jar files and directories for this JDK version are added to the class path for locating classes. An example JDK version is '1.2.2'.

Either CLASSPATH or JDKVER must be specified for inter-JAR binding to occur. JDKVER must be *NONE when CLSF is a class file.

Top

Optimization (OPTIMIZE)

Specifies the optimization level of the Java program.

The OPTIMIZE parameter is only used when creating Java programs for a target release prior to Version 6 Release 1 Modification 0. For target release V6R1M0 and later, the value is ignored and OPTIMIZE(*INTERPRET) is used.

As of V6R1M0, Java programs do not contain machine instructions. The class file is pre-verified and converted to an internal form. However the Java program is either interpreted from the bytecodes or else run with the Just In Time compiler (JIT).

For target releases prior to V6R1M0, the OPTIMIZE parameter specifies the optimization level of the Java program. When creating a Java program for a target release prior to V6R1M0, the value of the OPTIMIZE parameter is encapsulated within the Java program, but no machine instructions are generated. The encapsulated value of the OPTIMIZE parameter is used during Java program retranslation on the target release of the operating system.

10 The Java program contains a compiled version of the class bytecodes but has only minimal additional compiler optimization. Variables can be displayed and modified while debugging.

***INTERPRET**

The Java program created does not contain machine instructions. The Java program is interpreted from the bytecodes or run with the JIT compiler when it is started. Variables can be displayed and modified while debugging.

20 The Java program contains a compiled version of the class bytecodes and has some additional compiler optimization. Variables can be displayed but not modified while debugging.

30 The Java program contains a compiled version of the class bytecodes and has more compiler optimization than optimization level 20. During a debug session, user variables cannot be changed, but can be displayed. The presented values may not be the current values of the variables.

40 The Java program contains a compiled version of the class bytecodes and has more compiler optimization than optimization level 30. All call and instruction tracing is disabled.

Top

User profile (USRPRF)

Specifies whether the authority checking done while this program is running should include only the user who is running the program (*USER) or both the user who is running the program and the program owner (*OWNER). The profiles of the program user or both the program user and the program owner are used to control which objects can be used by the program, including the authority the program has for each object. Only the program owner or a user with QSECOFR authority can change the user profile attribute.

***SAME**

The user profile attribute does not change.

***USER**

The program runs under the user profile of the program's user.

***OWNER**

The user profiles of both the program's owner and the program's user are used when the program is processed. The collective sets of object authority in both user profiles are used to find and access objects during program processing. Authority from the owning user profile's group profile is not included in the authority for the running program.

Top

Use adopted authority (USEADPAUT)

Specifies whether program adopted authority from previous programs in the call stack will be used as a source of authority when this program is running.

- *NO** Program adopted authority from previous call levels is not used when this program is running.
- *YES** Program adopted authority from previous call levels is used when this program is running. If an authorization list is specified for the QUSEADPAUT system value and the user is not authorized to that authorization list, *NO is used.

Top

Replace program (REPLACE)

Specifies whether an existing Java program associated with this file is replaced with the new Java program being created.

- *YES** The existing Java program associated with this file is replaced by the new Java program created.
- *NO** An existing Java program associated with this file is replaced only if the class file was changed since the existing program was created; otherwise, creation of the new Java program is stopped and a message is displayed. If a pattern was used to indicate multiple creations, processing continues with the next file.

Top

Enable performance collection (ENBPFCOL)

Specifies whether collection of performance data is enabled.

The ENBPFCOL parameter is only used when creating Java programs for a target release prior to Version 6 Release 1 Modification 0. For target release V6R1M0 and later, the value is ignored and ENDPFCOL(*NONE) is used.

For a target release prior to V6R1M0, the following values may be specified, but values *ENTRYEXIT and *FULL will not be effective until the Java program is retranslated on the target release of the operating system.

- *NONE**
The collection of performance data is not enabled. No performance data is to be collected.
- *ENTRYEXIT**
Performance data is collected for procedure entry and exit.
- *FULL** Performance data is collected for procedure entry and exit. Performance data is also collected before and after calls to external procedures.

Top

Profiling data (PRFDTA)

The PRFDTA parameter is outdated. The parameter value is ignored and PRFDTA(*NOCOL) is used.

- *NOCOL**
The Java program is not enabled to collect profiling data.
- *COL** *COL is only provided for compatibility with previous versions of the operating system. It is ignored and *NOCOL is used.

Top

Directory subtree (SUBTREE)

Specifies whether directory subtrees are processed when looking for files that match the CLSF keyword.

*NONE

Only the files that match the object name pattern will be processed. No subtrees are processed. If the directory has subdirectories, neither the subdirectories nor the objects in the subdirectories are processed.

***ALL** The entire subtree of the path specified in CLSF is processed to create java programs for files matching the name specified on CLSF parameter.

Top

Target release (TGTRLS)

Specifies the release of the operating system on which you intend to use the object being created. When specifying the target-release value, the format VxRxMx is used to specify the release, where Vx is the version, Rx is the release, and Mx is the modification level. For example, V5R2M0 is version 5, release 2, modification level 0.

Valid values depend on the current version, release, and modification level, and they change with each new release.

*CURRENT

The object is to be used on the release of the operating system currently running on your system. The object can also be used on a system with any subsequent release of the operating system installed.

target-release

Specify the release in the format VxRxMx. The object can be used on a system with the specified release or with any subsequent release of the operating system installed.

Top

Licensed Internal Code options (LICOPT)

Specifies one or more Licensed Internal Code compile-time options. This parameter allows individual compile-time options to be selected, and is intended for the advanced programmer who understands the potential benefits and drawbacks of each selected type of compiler option.

*OPTIMIZE

Use the set of compile-time options which are implicitly associated with the optimization level specified on the OPTIMIZE parameter. If OPTIMIZE(*INTERPRET) is specified, no compile-time optimizations will be performed.

'Licensed-Internal-Code-options-string'

The selected Licensed Internal Code compile-time options are used when creating the Java program object. Certain options may reduce your ability to debug the created Java program.

Note: Additional information about the LICOPT options can be found in the IBM Developer Kit for Java topic collection in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Top

LIC options file (LICOPTFILE)

Specifies a file name which lists one or more Licensed Internal Code compile-time options.

*NONE

There is no file specified.

'Licensed-Internal-Code-options-filename'

The file is used for specifying which Licensed Internal Code compile-time options are used when creating the Java program object. Certain options may reduce your ability to debug the created Java program.

Note: Additional information about the LICOPT options can be found in the IBM Developer Kit for Java topic collection in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Top

Examples

Example 1: Create a Java Program

```
CRTJVAPGM  CLSF('/projectA/myJavaclassname.class')
```

This command will create a Java program and associate it with the class file myJavaclassname. The Java program will contain pre-verified class file information which is used when the Java program is invoked via the RUNJVA (Run Java) or the JAVA CL command.

Example 2: Create a Java Program Specifying a LICOPT File

```
CRTJVAPGM  CLSF('/projectA/myJavaclassname.class')
           LICOPTFILE('/projectA/mylicoptfile.txt')
```

This command will create a Java program and associate it with the class file myJavaclassname. The command will read the Licensed Internal Code options contained in the text file mylicoptfile.txt and prepend them to the default Licensed Internal Code Options.

Example 3: Create Numerous Java Programs

```
CRTJVAPGM  CLSF('/projectA/*.class') SUBTREE(*ALL)
```

This command will create a Java program and associate it with any class file in the projectA directory and any class file in directories below projectA.

Top

Error messages

*ESCAPE Messages

JVAB524

&1 Java programs created, &4 with errors. &2 Java programs were current. &3 Java programs not created

JVAB532

Unable to create Java program for "&1".

JVAB535

Unmonitored exception received.

[Top](#)

Create Logical File (CRTLF)

Where allowed to run: All environments (*ALL)
Threadsafe: Conditional

Parameters
Examples
Error messages

The Create Logical File (CRTLF) command creates a logical file from the information specified on this command and from the data description specifications (DDS) contained in a source file.

A logical file is a database file that describes how data records contained in one or more physical files are presented to a program. The logical file does not contain data records. The data records are contained in the physical files associated with the logical file.

The data records contained in the physical files are grouped into physical file members. The logical file accesses the data records through one or more logical file members. Each logical file member describes the data contained in one or more physical file members, and each logical file member has its own access path to the data. Normally, database files have only one member which, by default, is added to the file when the file is created.

Restrictions:

- To create a keyed logical file over one or more physical files, you must have object operational (*OBJOPR) authority and either object management (*OBJMGT) authority or object alter (*OBJALTER) authority for each of the files specified for the PFILE or JFILE keywords in DDS.
To create a non-keyed logical file, only *OBJOPR authority is required.
- This command is conditionally threadsafe. In multithreaded jobs, this command is not threadsafe for distributed files and fails for distributed files that use relational databases of type *SNA.

Top

Parameters

Keyword	Description	Choices	Notes
FILE	File	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: File	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
SRCFILE	Source file	<i>Qualified object name</i>	Optional, Positional 2
	Qualifier 1: Source file	<i>Name, QDDSSRC</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
SRCMBR	Source member	<i>Name, *FILE</i>	Optional, Positional 3
GENLVL	Generation severity level	0-30, <u>20</u>	Optional
FLAG	Flagging severity level	0-30, <u>0</u>	Optional
FILETYPE	File type	<i>*DATA, *SRC</i>	Optional
MBR	Member, if desired	<i>Name, *FILE, *NONE</i>	Optional

Keyword	Description	Choices	Notes
DTAMBRS	Physical file data members	Single values: *ALL Other values (up to 32 repetitions): <i>Element list</i>	Optional
	Element 1: Physical file	<i>Qualified object name</i>	
	Qualifier 1: Physical file	Name, <u>QDDSSRC</u>	
	Qualifier 2: Library	Name, *CURRENT	
	Element 2: Members	Single values: *NONE Other values (up to 32 repetitions): <i>Name</i>	
TEXT	Text 'description'	Character value, *SRCMBRTXT, *BLANK	Optional
OPTION	Source listing options	Values (up to 4 repetitions): *SRC, *NOSRC, *SOURCE, *NOSOURCE, *LIST, *NOLIST, *SECLVL, *NOSECLVL, *EVENTF, *NOEVENTF	Optional, Positional 4
SYSTEM	System	*LCL, *RMT, *FILETYPE	Optional
MAXMBRS	Maximum members	Integer, <u>1</u> , *NOMAX	Optional
ACCPHSIZ	Access path size	*MAXITB, *MAX4GB	Optional
PAGESIZE	Access path logical page size	*KEYLEN, 8, 16, 32, 64, 128, 256, 512	Optional
MAINT	Access path maintenance	*IMMED, *DLY, *REBLD	Optional
RECOVER	Access path recovery	*NO, *AFTIPL, *IPL	Optional
FRCACPTH	Force keyed access path	*NO, *YES	Optional
UNIT	Preferred storage unit	1-255, *ANY	Optional
FMTSLR	Rcd format selector program	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Rcd format selector program	Name, <u>QDDSSRC</u>	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
FRCRATIO	Records to force a write	Integer, *NONE	Optional
WAITFILE	Maximum file wait time	Integer, <u>30</u> , *IMMED, *CLS	Optional
WAITRCD	Maximum record wait time	Integer, <u>60</u> , *IMMED, *NOMAX	Optional
SHARE	Share open data path	*NO, *YES	Optional
SRTSEQ	Sort sequence	Single values: *SRC, *JOB, *LANGIDSHR, *LANGIDUNQ, *HEX Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Sort sequence	<i>Name</i>	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
LANGID	Language ID	Character value, *JOB	Optional
LVLCHK	Record format level check	*YES, *NO	Optional
AUT	Authority	Name, *LIBCRTAUT, *ALL, *CHANGE, *EXCLUDE, *USE	Optional

Top

File (FILE)

Specifies the logical file to be created.

If the file is used in a high-level language program, the file name should be consistent with the naming rules of that language; otherwise, the file must be renamed in the program.

This is a required parameter.

Qualifier 1: File

name Specify the name of the logical file.

Qualifier 2: Library

*CURLIB

The file is located in the current library for the job. If no library is specified as the current library for the job, QGPL is used.

name Specify the library where the file is located.

Note: If a logical file and the physical file on which it is based are in different libraries, and the logical or physical file does not exist when it is to be restored (such as during disaster recovery or when the files are deleted), the access path is not restored. It is rebuilt. To make it possible for access paths to be restored and not rebuilt, the logical files and the based-on physical files must be in the same library. More information on the restoring of saved access paths is in the Recovering your system book, SC41-5304.

Top

Source file (SRCFILE)

Specifies the source file that contains the data description specifications (DDS) source used to create the logical file.

Qualifier 1: Source file

QDDSSRC

The DDS source file QDDSSRC contains the source descriptions used to create the logical file.

name Specify the name of the source file that contains the DDS used to create the logical file.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the job is used to locate the source file. If no library is specified as the current library for the job, QGPL is used.

name Specify the library where the source file is located.

Top

Source member (SRCMBR)

Specifies the name of the source file member that contains the DDS source for the logical file being created.

*FILE The source file member name is the same as the name specified for the **File (FILE)** parameter.

name Specify the name of the member in the source file.

Top

Generation severity level (GENLVL)

Specifies the severity level of data description specifications (DDS) messages that cause file creation to fail. This parameter applies only to messages created while processing DDS source files.

- 20** If errors occur in the DDS source file processing with a severity level greater than or equal to 20, the file is not created.
- 0-30** Specify the desired severity level value. If 0 is specified, the file is not created. The value specified must be greater than or equal to the value specified for the **Flagging severity level (FLAG)** parameter.

Top

Flagging severity level (FLAG)

Specifies the minimum severity level of messages to be listed.

- 0** All messages are listed.
- 0-30** Specify a number indicating the minimum severity of messages to be listed. The value specified must be greater than or equal to the value specified for the **Generation severity level (GENLVL)** parameter.

Top

File type (FILETYPE)

Specifies whether each member of the logical file being created contains data records, or contains source records for a program or another file.

- *DATA** The logical file contains data records.
- *SRC** The logical file contains source records. This value cannot be specified for join logical files.

Top

Logical file member (MBR)

Specifies the logical file member to be added when the logical file is created.

- *FILE** The name of the member to be added is the same as the name specified for the **File (FILE)** parameter.
- *NONE** No member is added when the file is created.
- name** Specify the name of the logical file member to be added.

Top

Physical file data members (DTAMBRs)

Specifies the physical files and members that contain the data associated with the logical file member being added by this command. A logical file member can be based on all (*ALL) of the physical files and members on which the logical file itself is based, or the member can be based on a subset of the total files and members.

Note: When adding a member to a logical file that is a DDM file, the physical file, if specified, must also be a DDM file with its library and member(s) specified explicitly. *CURRENT is not supported when the logical file is a DDM file.

When a logical file is created, the physical files specified for the PFILE or JFILE DDS keyword are used to create the logical file. If no library name is specified for the physical files on the PFILE or JFILE keyword, the library list (*LIBL) at file creation time is used to find the physical files; the physical files from the library list are used to create the logical file. The qualified physical files from the PFILE or JFILE keyword (regardless of whether a library name was specified or if the library list was used to find the files) are the physical files associated with the logical file. The names of the physical files associated with the logical file are saved in the description of the logical file. When a member is added to the logical file, the DTAMBRS parameter is used to specify the physical file members associated with the logical file member. Each physical file name specified on the DTAMBRS parameter must be the name of a physical file that is associated with the logical file (saved in the description of the logical file).

Single values

***ALL** The logical file member being added is based on all the physical files and members (that exist at the time this CRTLF command is entered) used by the logical file. At least one member must exist in at least one of the physical files. The physical file names are specified for the PFILE or JFILE parameter in the DDS.

Element 1: Physical file

Qualifier 1: Physical file

name Specify the names of the physical files that contain the data being accessed by the logical file member being added.

The physical file names must match a name on the PFILE or JFILE keywords in the DDS and cannot be specified more often on the DTAMBRS parameter than on the PFILE or JFILE keywords in the DDS. For join logical files, all physical files specified for the JFILE keyword must be specified for the DTAMBRS parameter and each physical file must contain only one member. If a physical file name is not specified for a physical file that is on a PFILE or JFILE keyword in the DDS, the logical file member is not based on any member of that physical file.

Qualifier 2: Library

***CURRENT**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

If a library name is not specified, the current library name (*CURRENT) from the logical file description is used. If the library name is specified, the physical file must be a physical file associated with the logical file. If the logical file is associated with more than one physical file of the same name, the library name must be specified.

name Specify the name of the library to be searched.

Element 2: Member

Single values

***NONE**

A member name is not specified.

Other values (up to 32 repetitions)

name Specify the names of the physical file members that contain the data being accessed by the logical file member being added.

When the FILE parameter specifies a join logical file or an arrival sequence logical file, only one data member must be specified for the DTAMBRs parameter for each physical file that was specified for the PFILE or JFILE keyword in the DDS. *ALL is valid only if each based-on physical file has only one member. If any of the physical files has more than one member, the specific physical file member must be specified for the DTAMBRs parameter.

The same physical file name can be specified more than once on the JFILE keyword. In this case, each occurrence of the file name is treated as a different based-on physical file, and must be specified for the DTAMBRs parameter.

Up to 32 qualified physical file names and physical file member names can be specified. Also, the total number of member names cannot exceed 32. For example, one file can specify 32 members, two files can each have 16 members, or 32 files can each have one member specified.

For DDM file:

- The file names specified in the DTAMBRs parameter must be the names of the DDM files that represent the remote based-on physical files. If a member name was specified as part of the remote file name in the DDM file, only that member name can be specified for the DTAMBRs parameter. The member names must be the actual remote file member names.
- The based-on physical files must be at the same system location as the logical file to which the member is being added.
- When no member name is specified for the remote file name in the DDM file, all members are accessible. When only one member name is specified, only that member is accessible through that DDM file.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

*SRCMBRTXT

If the source file is a database file, the text is taken from the source file member used to create the file. If the source file is an inline file or a device file, the text is blank.

*BLANK

No text is specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Source listing options (OPTION)

Specifies the type of output produced when the file is created. A maximum of four of the following values can be specified in any order on this parameter. If neither or both of the values on an option are specified, the first value listed for the option is used.

Note: The first values on each option are similar to, but are not actually default values, and therefore, cannot be changed with the CHGCMDDFT (Change Command Default) command.

Source Listing Option

***SRC or *SOURCE**

A printout of the source statements, including a list of errors, is created.

***NOSRC or *NOSOURCE**

No printout of the source statements is created unless errors are detected. If errors are detected, they are listed along with the keyword or record format that caused the error.

Program Listing Option

***LIST** An expanded source printout is created, showing a detailed list of the file specifications and the references to other file descriptions.

***NOLIST**

The expanded source printout is not created.

Second-Level Message Text Option

***NOSECLVL**

The messages section of the data description specifications (DDS) printout does not contain the online help information for messages issued during DDS processing.

***SECLVL**

The online help information appears in the DDS printout.

Event File Creation Option

***NOEVENTF**

The compiler does not produce an event file for the CoOperative Development Environment for i5/OS (CODE for i5/OS) product.

***EVENTF**

The compiler produces an event file that can be used by the CODE for i5/OS product. The event file is created as a member in the file EVFEVENT in your object library. The CODE for i5/OS product uses this file to offer error feedback integrated with the CODE for i5/OS editor. This value is normally specified by the CODE for i5/OS product on your behalf.

Top

System (SYSTEM)

Specifies whether the logical file is created on the local system or the remote system.

***LCL** The logical file is created on the local system.

***RMT** The logical file is created on a remote system. The file specified for the **File (FILE)** parameter must be the name of a DDM file that identifies the remote system and the name of the logical file being created.

***FILETYPE**

If the file specified for the FILE parameter does not exist on the system, the logical file is created on the local system. Otherwise, the file on the FILE parameter must be a DDM file, and the logical file is created on a remote system. The DDM file identifies the remote system and the name of the logical file being created.

Top

Maximum members (MAXMBRS)

Specifies the maximum number of members that the logical file can contain.

1 Only one member can be contained in the file.

***NOMAX**

The number of members that can be contained in the file is the system maximum of 32,767 members.

integer

Specify the maximum number of members that can be contained in the file. Valid values range from 1 through 32767.

Top

Access path size (ACCPHSIZ)

Specifies the maximum size of auxiliary storage that can be occupied by access paths that are associated with join logical files or with files that have keyed sequence access paths.

Note: For a join logical file, this parameter applies to all join secondary access paths even if the join logical file is not a keyed file.

***MAX1TB**

The access paths associated with this file can occupy a maximum of one terabyte (1,099,511,627,776 bytes) of auxiliary storage.

***MAX4GB**

The access paths associated with this file can occupy a maximum of four gigabytes (4,294,966,272 bytes) of auxiliary storage.

Top

Access path logical page size (PAGESIZE)

Specifies the access path logical page size that is used when the access path is created.

The access path logical page size is used by the system to determine the size of each page of the index. This logical page size is the amount of bytes of the access path that can be moved into the job's storage pool from the auxiliary storage for a page fault.

***KEYLEN**

The access path logical page size will be determined by the total length of the key, or keys.

- 8 Logical page size of 8k.
- 16 Logical page size of 16k.
- 32 Logical page size of 32k.
- 64 Logical page size of 64k.
- 128 Logical page size of 128k.
- 256 Logical page size of 256k.
- 512 Logical page size of 512k.

Top

Access path maintenance (MAINT)

Specifies, for files with key fields or join logical files, the type of access path maintenance used for all members of the logical file.

*IMMED

The access path is updated each time a record is changed, added, or deleted from a member. *IMMED must be specified for files that require unique keys.

*REBLD

The access path is completely rebuilt each time a file member is opened. The access path is maintained until the member is closed, then the access path is deleted. *REBLD cannot be specified for files that require unique keys.

***DLY** The maintenance of the access path is delayed until the logical file member is opened. Then the access path is changed only for records that have been added, deleted, or changed since the file was last opened. While the file is open, all changes made to based-on file members are immediately reflected in the access paths of the opened file's own members, no matter what is specified for this parameter. To prevent a long rebuilding time when the file is opened, *DLY should be specified only when the number of changes to the access path between successive open operations are small; that is, when the file is opened frequently or when the key fields in records for this access path change infrequently. *DLY is not valid for access paths that require unique key values.

If the number of changes between a close operation and the next open operation reaches approximately 10 percent of the access path size, the system stops saving changes and the access path is completely rebuilt the next time the file is opened. The access path is updated when the member is opened with records that have been added, deleted, or changed from the member since the last time the member was opened.

Top

Access path recovery (RECOVER)

Specifies, for files having immediate or delayed maintenance on their access paths, when recovery processing of the file is performed after a system failure occurs while the access path is being changed. This parameter is valid only for join logical files or files with a keyed access path.

If *IMMED or *DLY is specified for the **Access path maintenance (MAINT)** parameter, the access path can be rebuilt during initial program load (IPL) (before any user can run a job), after IPL has ended (during concurrent job running), or when the file is next opened. While the access path is being rebuilt, the file cannot be used by any job.

During the IPL, an Override Access Path Recovery display lists those paths that must be recovered and what the RECOVER parameter value is for each path. The user can override the RECOVER parameter value on this display. More information is in the Recovering your system book, SC41-5304.

If *REBLD is specified for the MAINT parameter, the access path is rebuilt the next time its file is opened.

***NO** The access path of the file is rebuilt when the file is opened. *NO is the default for all files that do not require unique keys.

*AFTIPL

The access path of the file is rebuilt after the initial program load (IPL) operation is completed. This option allows other jobs not using this file to start processing immediately after the completion of IPL. If a job tries to allocate the file while its access path is being rebuilt, a file open exception occurs. *AFTIPL is the default for files that require unique keys.

***IPL** The access path of the file is rebuilt during the IPL operation. This ensures that the file's access

path is rebuilt before the first user program tries to use it; however, no jobs can start running until after all files that specify RECOVER(*IPL) have their access paths rebuilt.

Top

Force keyed access path (FRCACCPH)

Specifies, for files with key fields or a join logical file, whether access path changes are forced to auxiliary storage along with the associated records in the file. FRCACCPH(*YES) minimizes (but does not remove) the possibility that an abnormal job end could cause damage to the access path that would require it to be rebuilt.

Note: For a join logical file, this parameter value applies to all join secondary files even if the join file is not a keyed file.

***NO** The access path and associated records are not written to auxiliary storage whenever the access path is changed.

***YES** The access path and associated records are written to auxiliary storage whenever the access path is changed. *YES cannot be specified if *REBLD is specified for the **Access path maintenance (MAINT)** parameter.

FRCACCPH(*YES) slows the response time of the system if the access path is changed in an interactive job. If the access path is changed frequently, the overall performance of the system is affected somewhat.

Top

Preferred storage unit (UNIT)

This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 3 Release 6 Modification 0 of the i5/OS. For information on using auxiliary storage pools (ASPs), refer to the Recovering your system book, SC41-5304.

You can specify the value *ANY or a value ranging from 1 through 255 on this parameter.

Top

Rcd format selector program (FMTSLR)

Specifies the record format selector program that is called when the logical file member contains more than one logical record format.

The user-written selector program is called when a record is written to the database file and a record format name is not included in the high-level language program. The selector program receives the record as input, determines the record format used, and returns it to the database.

This parameter is not valid if the logical file has only one record format.

Single values

***NONE**

There is no selector program for this logical file.

Qualifier 1: Rcd format selector program

QDDSSRC

The format selector program name is QDDSSRC.

name Specify the name of the format selector program to be called. A program specified as the format selector program cannot be created with *OWNER specified for the **User profile (USRPRF)** parameter.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library is used to locate the program name. If no library is specified as the current library for the job, QGPL is used.

name Specify the library where the program is located.

Top

Records to force a write (FRCRATIO)

Specifies the number of inserted or updated records that are processed before the records are forced into auxiliary storage.

The force write ratio specified for a logical file cannot be less than or equal to the smallest force write ratio of its based-on files. If a larger force write ratio is specified, it is ignored and a message is sent informing the user of the action.

For example, if the force ratios of three physical files are 2, 6, and 8, the logical file force ratio that is based on these three physical files must be as restrictive as the least of them; that is 2 in this case. Two would be used even if the FRCRATIO parameter is not specified. Thus, each time a program inserts, updates, or deletes two records in the logical file (regardless of which based-on physical files are affected), those records are forced to permanent storage.

If a physical file associated with this logical file is being journaled, a large force write ratio or *NONE is specified. More information on journal management is in the Recovering your system book, SC41-5304.

*NONE

There is no specified force ratio. The system determines when the records are written to auxiliary storage.

integer

Specify the number of inserted or updated records that are processed before the records are written to auxiliary storage.

Top

Maximum file wait time (WAITFILE)

Specifies the number of seconds that the program waits for the file resources to be allocated when the file is opened, or the device or session resources to be allocated when an acquire operation is performed to the file. If the file resources cannot be allocated in the specified wait time, an error message is sent to the program.

30 The program waits for 30 seconds for file resources to be allocated.

***IMMED**

The program does not wait. Immediate allocation of file resources is required.

***CLS** The job default wait time is used as the wait time for the file resources to be allocated.

1-32767

Specify the number of seconds to wait for file resources to be allocated.

Top

Maximum record wait time (WAITRCD)

Specifies the number of seconds that the program waits for a record being changed or deleted. If the record cannot be allocated within the specified wait time, an error message is sent to the program.

60 The program waits for 60 seconds for a record being changed or deleted.

***IMMED**

The program does not wait. Immediate allocation of file resources is required.

***NOMAX**

The wait time is the maximum allowed by the system, which is 32767 seconds.

integer

Specify the number of seconds that the program waits for a record being changed or deleted. Valid values range from 1 through 32767 seconds.

Top

Share open data path (SHARE)

Specifies whether the open data path (ODP) is shared with other programs in the same routing step. When an ODP is shared, the programs accessing the file share facilities such as the file status and the buffer.

Note: This parameter is not valid when ***NONE** is specified for the **Logical file member (MBR)** parameter.

***NO** The ODP is not shared with other programs in the routing step. A new ODP for the file is created and used every time a program opens the file.

***YES** The same ODP is shared with each program in the job that also specifies ***YES** when it opens the file.

Top

Sort sequence (SRTSEQ)

Specifies the sort sequence used for this file. The sort sequence is used with the LANGID parameter to determine which sort sequence table is used.

Single values

***SRC** The table specified in the data description specifications (DDS) on the ALTSEQ keyword is used. If ALTSEQ is not used in the DDS, use the value specified for ***JOB** on this parameter.

***JOB** The sort sequence value used is the value for the job issuing this command to create the logical file.

***LANGIDSHR**

The sort sequence table can contain the same weight for multiple characters, and is the shared weighted table associated with the language specified in the LANGID parameter.

***LANGIDUNQ**

The sort sequence table must contain a unique weight for each character in the code page.

***HEX** A sort sequence table is not used, and the hexadecimal values of the characters are used to determine the sort sequence.

Qualifier 1: Sort sequence

name Specify the name of the sort sequence table.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library to be searched.

Top

Language ID (LANGID)

Specifies the language identifier used when *LANGIDSHR or *LANGIDUNQ is specified for the **Sort sequence (SRTSEQ)** parameter. The language identifier is used with the SRTSEQ parameter to determine which sort sequence table the file uses.

***JOB** The language identifier specified for the job is used.

character-value

Specify a language identifier. To see a complete list of identifiers when prompting this command, position the cursor on the field for this parameter and press F4 (Prompt).

Top

Record format level check (LVLCHK)

Specifies whether the level identifiers of the record formats in the logical file are checked when the file is opened by a program.

***YES** The level identifiers of the record formats are checked. If the level identifiers do not all match, an open error message is sent to the program requesting the open operation.

***NO** The level identifiers are not checked when the file is opened.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

***LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

***CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

Example 1: Creating a Logical File Without Members

```
CRTLFILE(INVEN/STOCKCTL) SRCFILE(SRCLIB/STKLFSRC)
  MBR(*NONE)
```

This command creates a logical file named STOCKCTL, in the INVEN library. The source descriptions in the source file STKLFSRC in the SRCLIB library are used to create the logical file. The file is created without any members (*NONE was specified), and only one member can be added later (because one member is the default for the MAXMBRS parameters). The logical file accesses the data contained in the physical files specified in the DDS source file used to create this logical file. For successful completion of the CRTLFILE command, the user must have object operational authority for all the physical files specified in the DDS. If the logical file is keyed, object management authority is also required.

Example 2: Creating a Logical File With Members

```
CRTLFILE(PAYLIB/PAYCODESEQ) SRCFILE(PAYLIB/PAYTXSRC)
  DTAMBR(PAYTRANS FIRSTQTR) AUT(*EXCLUDE)
  TEXT('Pay taxes in code sequence')
```

This command creates a logical file and logical file member, both named PAYCODESEQ in the PAYLIB library. The file and its member are created from the PAYTXSRC source file that is in the same library. The logical file member accesses the data contained in the FIRSTQTR member of the physical file PAYTRANS. The logical file is secured for the private use of the owner. The owner must have object operational authority for the PAYTRANS file to create the member. If the logical file is keyed, object management authority is also required.

Top

Error messages

*ESCAPE Messages

CPF3204

Cannot find object needed for file &1 in &2.

CPF323C

QRECOVERY library could not be allocated.

CPF5702

File either not DDM file or not found.

CPF7302

File &1 not created in library &2.

[Top](#)

Create Library (CRTLIB)

Where allowed to run: All environments (*ALL)
Threadsafe: Yes

Parameters
Examples
Error messages

The Create Library (CRTLIB) command adds a new library to the system. Before any objects are placed into a library, the library must have been created. When the library is created, it appears as though it exists in the QSYS (system) library.

Restrictions:

1. A library with the name QRCL or QRPLOBJ can only be created in the system ASP (ASP 1).
2. A library with the name QRCLxxxxx or QRPLxxxxx can only be created in the ASP for which the ASP number corresponds to 'xxxxx' (where 'xxxxx' is the number of a primary ASP right adjusted and padded on the left with zeros); for example, library QRPL00033 can only be created in the ASP device corresponding to ASP number 33.
3. When library QSPLnnnn is created in a primary or secondary ASP, it must be created in the ASP for which the ASP number corresponds to 'nnnn' (where 'nnnn' is the number of a primary or secondary ASP right adjusted and padded on the left with zeros).
4. You cannot create a library with the name QSYSxxxxx, QSYS2xxxxx, or SYSIBxxxxx (where 'xxxxx' is a number).

Top

Parameters

Keyword	Description	Choices	Notes
LIB	Library	Name	Required, Positional 1
TYPE	Library type	*PROD, *TEST	Optional, Positional 2
TEXT	Text 'description'	Character value, *BLANK	Optional
AUT	Authority	Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE	Optional
ASP	ASP number	1-32, 1, *ASPDEV	Optional
ASPDEV	ASP device	Name, *ASP, *ASPGRPPRI, *SYSTEM	Optional
CRTAUT	Create authority	Name, *SYSVAL, *CHANGE, *ALL, *USE, *EXCLUDE	Optional
CRTOBJAUD	Create object auditing	*SYSVAL, *NONE, *USRPRF, *CHANGE, *ALL	Optional

Top

Library (LIB)

Specifies the library to be created.

Note: You should not use a name that begins with the character Q. The system assumes that libraries with those names are system libraries.

This is a required parameter.

name Specify the name of the library to be created.

Top

Library type (TYPE)

Specifies the type of library to be created.

*PROD

This is a production library. Database files in production libraries cannot be opened for updating if a user is in debug mode and he requested that production libraries be protected. A user can protect all database files in production libraries from updates by specifying *NO for the **Update production files (UPDPROD)** parameter on the Start Debug (STRDBG) command to begin testing. However, this protection does not prevent the program from deleting database files or from changing other objects (such as data areas) in the library.

***TEST** This is a test library. All objects in a test library can be updated during testing, even if special protection is requested for production libraries.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the library.

*BLANK

The text is set to blanks.

'description'

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Authority (AUT)

Specifies the default public authority for this library. This is the authority you are giving to a user who does not have specific authority for the library, who is not on an authorization list specified for the library, and whose group profiles have no specific authority for the library.

*LIBCRTAUT

The authority for the library is the same as the create authority for the QSYS library. The create authority for the QSYS library can be displayed by using the Display Library Description (DSPLIBD) command. If the create authority for QSYS is changed with the Change Library (CHGLIB) command, the new authority will not affect existing libraries.

***CHANGE**

Change (*CHANGE) authority provides the authority needed to perform all operations on the library except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the library. Change (*CHANGE) authority provides object operational (*OBJOPR) authority and all data authority.

***ALL** All (*ALL) authority provides the authority needed to perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the library's existence, specify the security for the library, change the library, and perform basic functions on the library. The user also can change ownership of the library.

***USE** Use (*USE) authority provides the authority needed to perform basic operations on the library,

such as running a program or reading a file. The user cannot change the library. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the library.

name Specify the name of an authorization list. Users included on the authorization list are granted authority for the library as specified by the list. The authorization list must exist when the library is created.

Top

ASP number (ASP)

Specifies the number of the system or basic user auxiliary storage pool (ASP) where storage for the library is allocated. For libraries created in an ASP, all objects in the library must be in the same ASP as the library. When a value other than *ASP is specified for the **ASP device (ASPDEV)** parameter, *ASPDEV is the only valid value that can be specified for the **ASP number (ASP)** parameter, if specified. Also when a value other than *ASP is specified for the ASPDEV parameter, the ASP parameter can be omitted and its defaulted value will be ignored.

1 The storage space for the library is allocated from the system auxiliary storage pool ASP 1.

***ASPDEV**

The storage for the library is allocated from the primary or secondary ASP specified for the ASPDEV parameter.

number

Specify a value ranging from 1 through 32 that is the number of the system or basic user ASP.

Top

ASP device (ASPDEV)

Specifies the auxiliary storage pool (ASP) device name where storage is allocated for the library. When a value other than *ASPDEV is specified for the **ASP number (ASP)** parameter, ASPDEV(*ASP) is the only valid value for the **ASP device (ASPDEV)** parameter, if specified. Other values for the ASPDEV parameter are valid if the ASP parameter is omitted. In this case, the defaulted value for the ASP parameter is ignored.

*ASP The storage for the library is allocated from the system or basic user ASP specified for the ASP parameter.

***ASPGRPPRI**

The storage for the library is allocated from the primary ASP of the thread's ASP group. If no ASP group is associated with the thread an error message is sent.

***SYSTEM**

The storage for the library is allocated from the system ASP (ASP 1).

name Specify the name of a primary or secondary ASP device. The storage for the library is allocated from the primary or secondary ASP. The primary or secondary ASP must have been activated (by varying on the ASP device) and have a status of 'Available'.

Note: To specify a specific auxiliary storage pool (ASP) device name, you must have use (*USE) authority for each ASP device in the ASP group.

Top

Create authority (CRTAUT)

Specifies the default public authority for an object created into this library. This is the authority given to a user who does not have specific authority for the object, who is not on an authorization list specified for the object, and whose user groups have no specific authority for the object.

When the user creates an object into this library, the **Authority (AUT)** parameter on the create command for the object determines the public authority for the object. If the AUT value on the create command for the object is *LIBCRTAUT, the public authority for the object is set to the CRTAUT value for the library.

*SYSVAL

The default public authority will be determined by the value of the QCRTAUT system value when an object is created into this library.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

*EXCLUDE

The user cannot access the object.

name Specify the name of the authorization list whose authority is used for the object.

Top

Create object auditing (CRTOBJAUD)

Specifies the auditing value for objects created in this library.

Note: To specify a value other than *SYSVAL for this parameter, you must have audit (*AUDIT) special authority.

*SYSVAL

The auditing value will be determined by the value of the QCRTOBJAUD system value when an object is created into this library.

*NONE

Using or changing this object will not cause an audit entry to be sent to the security journal.

*USRPRF

The user profile of the user accessing this object is used to determine if an audit entry will be sent to the security journal for the access. The **Object auditing value (OBJAUD)** parameter on the Change User Auditing (CHGUSRAUD) command is used to turn auditing on for a specific user.

*CHANGE

All change access to this object by all users will cause an audit entry to be sent to the security journal.

***ALL** All change or read access to this object by all users will cause an audit entry to be sent to the security journal.

Top

Examples

Example 1: Creating a Production Library

```
CRTLIB LIB(MYLIB) TEXT('My Production Library')
```

The library MYLIB is added to the system. The library is a production library; only the owner has object existence (*OBJEXIST) and object (*OBJMGT) management authorities for it. The authority for other users for library MYLIB is determined by the create authority of library QSYS, since *LIBCRTAUT was assumed for the AUT parameter. The text, 'My Production Library', is displayed whenever the library description for MYLIB is displayed.

Example 2: Creating a Test Library

```
CRTLIB LIB(Z) TYPE(*TEST) AUT(*EXCLUDE)
      TEXT('This is a test library')
```

Test library Z is added to the system. Only the owner of Z can use it because no other users have been granted any authority. The specified text ('This is a test library') is displayed whenever the library description for Z is displayed.

Example 3: Creating a Library in an Independent Auxiliary Storage Pool (ASP)

```
CRTLIB LIB(INVENTORY) ASPDEV(SALES)
      TEXT('Inventory Library on SALES ASP')
```

The library INVENTORY is added to the system in an independent auxiliary storage pool (ASP) named SALES. The SALES ASP must have been activated (by varying on the ASP device) and have a status of 'Available'. The library is a production library; only the owner has object existence (*OBJEXIST) and object management (*OBJMGT) authorities for it. The authority for other users to library INVENTORY is determined by the create authority of library QSYS, since *LIBCRTAUT was assumed for the AUT parameter. The text, 'Inventory Library on SALES ASP', is displayed whenever the library description for INVENTORY is displayed.

Top

Error messages

*ESCAPE Messages

CPF8ED

Device description &1 not correct for operation.

CPF21A0

*AUDIT required to create or change libraries.

CPF210E

Library &1 not available for reason code &2.

- CPF2111**
Library &1 already exists.
- CPF2122**
Storage limit exceeded for user profile &1.
- CPF2138**
Creation of library &3 not allowed.
- CPF2166**
Library name &1 not valid.
- CPF2172**
ASPDEV value not valid with value specified for ASP.
- CPF218A**
Library &1 cannot be created into ASP &2.
- CPF218B**
Library &1 cannot be created into ASPDEV &2.
- CPF2197**
Library &1 cannot be created into user ASP &2.
- CPF2283**
Authorization list &1 does not exist.
- CPF7012**
Auxiliary storage pool &4 not found for object &1.
- CPF9814**
Device &1 not found.
- CPF9825**
Not authorized to device &1.
- CPF9833**
*CURASPGRP or *ASPGRPPRI specified and thread has no ASP group.

Top

Create Line Desc (Async) (CRTLINASC)

Where allowed to run: All environments (*ALL)
 Threadsafes: No

Parameters
 Examples
 Error messages

The Create Line Description Asynchronous (Async) (CRTLINASC) command creates a line description for an asynchronous line.

Restriction: You must have input/output system configuration (*IOSYSCFG) special authority to use this command.

Top

Parameters

Keyword	Description	Choices	Notes
LIND	Line description	<i>Name</i>	Required, Positional 1
RSRCNAME	Resource name	<i>Name</i>	Required, Positional 2
ONLINE	Online at IPL	<u>*YES</u> , *NO	Optional
INTERFACE	Physical interface	<u>*RS232V24</u> , *RS530V36, *INTMODEM	Optional
CNN	Connection type	<u>*NONSWTPP</u> , *SWTPP, *NONSWTCAL, *NONSWTANS	Optional
SNBU	Switched network backup	<u>*NO</u> , *YES	Optional
VRYWAIT	Vary on wait	15-180, <u>*NOWAIT</u>	Optional
AUTOCALL	Autocall unit	<u>*NO</u> , *YES	Optional
BITSCHAR	Data bits per character	<u>8</u> , 7	Optional
PARITY	Type of parity	<u>*NONE</u> , *ODD, *EVEN	Optional
STOPBITS	Stop bits	<u>1</u> , 2	Optional
DUPLEX	Duplex	<u>*FULL</u> , *HALF	Optional
ECHO	Echo support	<u>*NONE</u> , *ALL, *CNTL	Optional
LINESPEED	Line speed	50, 75, 110, 150, 300, 600, 1200 , 2400, 4800, 7200, 9600, 14400, 19200, 28800, 38400, 57600, 76800, 115200	Optional
MODEM	Modem type supported	<u>*NORMAL</u> , *V54, *IBMWRAP	Optional
SWTCNN	Switched connection type	<u>*BOTH</u> , *ANS, *DIAL	Optional
AUTOANS	Autoanswer	<u>*YES</u> , *NO	Optional
AUTODIAL	Autodial	<u>*NO</u> , *YES	Optional
DIALCMD	Dial command type	<u>*NONE</u> , *V25BIS, *OTHER	Optional
SETMDMASC	Set modem to ASYNC command	<i>Character value</i> , <u>*NONE</u> , END	Optional
MDMINZCMD	Modem init command string	<i>Character value</i> , <u>*NONE</u>	Optional
ACRSRCNAME	Autocall resource name	<i>Name</i>	Optional
CALLNBR	Calling number	<i>Character value</i> , <u>*NONE</u>	Optional
INACTTMR	Inactivity timer	150-4200, <u>300</u> , *NOMAX	Optional
MAXBUFFER	Maximum buffer size	128-4096, <u>896</u>	Optional
FLOWCNTL	Flow control	<u>*NO</u> , *YES, *HARDWARE	Optional
XONCHAR	XON character	01-FF, <u>11</u>	Optional

Keyword	Description	Choices	Notes
XOFFCHAR	XOFF character	01-FF, <u>13</u>	Optional
EORTBL	End-of-Record table	Values (up to 8 repetitions): <i>Element list</i>	Optional
	Element 1: End-of-Record character	00-FF, <u>00</u>	
	Element 2: Trailing characters	0-4, <u>0</u>	
DSRDRPTMR	Data Set Ready drop timer	3-60, <u>6</u>	Optional
AUTOANSTYP	Autoanswer type	* <u>DTR</u> , *CDSTL	Optional
RMTANSTMR	Remote answer timer	30, 35, 40, 45, 50, 55, <u>60</u> , 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120	Optional
TEXT	Text 'description'	<i>Character value</i> , * <u>BLANK</u>	Optional
CTL	Attached nonswitch controller	<i>Name</i>	Optional
SWTCTLLST	Switched controller list	Values (up to 64 repetitions): <i>Name</i>	Optional
MODEMRATE	Modem data rate select	* <u>FULL</u> , *HALF	Optional
THRESHOLD	Error threshold level	* <u>OFF</u> , *MIN, *MED, *MAX	Optional
IDLTMTR	Idle timer	0-254, <u>1</u>	Optional
CTSTMR	Clear To Send timer	10-120, <u>25</u> , *NOMAX	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
AUT	Authority	<i>Name</i> , * <u>CHANGE</u> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

Top

Line description (LIND)

Specifies the name of the line description

This is a required parameter.

Top

Resource names (RSRCNAME)

Specifies the resource name that identifies the hardware this description represents. Use the WRKHDWRSC command to determine the resource name.

This is a required parameter.

You can enter multiple values for this parameter.

Top

Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

*YES The line is automatically varied on at initial program load (IPL).

*NO This line is not automatically varied on at IPL.

Top

Physical interface (INTERFACE)

Specifies the type of physical interface on the input/output adapter (IOA) port.

*RS232V24 (Async, BSC, X.25 and SDLC only)
RS-232/V.24 physical interface.

*V35 (BSC and SDLC only)
V.35 physical interface.

*X21 (X.25 and SDLC only)
X.21 physical interface.

*X21BISV24 (X.25, BSC and SDLC only)
X.21 bis/V.24 physical interface.

*X21BISV35 (X.25, BSC and SDLC only)
X.21 bis/V.35 physical interface.

*RS449V36 (Async, BSC, X.25 and SDLC only)
RS-449/V.36 physical interface.

*INTMODEM
The integrated modem interface is used.

Top

Connection type (CNN)

Specifies the type of line connection.

*NONSWTPP
A nonswitched point-to-point line is used.

*SWTPP
A switched point-to-point line is used.

*NONSWTCAL
A nonswitched point-to-point line is used for call mode.

*NONSWTANS
A nonswitched point-to-point line is used for answer mode.

Top

Switched network backup (SNBU)

Specifies, for nonswitched modems only, if the local modem supports the switched network backup utility (SNBU) feature. The backup feature is used to bypass a broken nonswitched (nonswitched line) connection by establishing a switched connection.

To activate SNBU, you must change the mode of the modem from nonswitched to switched. If the modem model is IBM 386x, 586x, or 786x, no change is required. Otherwise, specify *YES for the **Activate swt network backup (ACTSNBU)** parameter for the line description you are using.

*NO The local modem does not have the SNBU feature.

*YES The local modem has the SNBU feature.

Top

Vary on wait (VRYWAIT)

Specifies whether the line is varied on asynchronously or synchronously. For synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

*NOWAIT

The system does not wait for vary on completion. The line is varied on asynchronously.

vary-on-wait

Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

Notes:

1. When ONLINE(*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
 - Put tasks in place to manage the line
 - Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
 - Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

Top

Autocall unit (AUTOCALL)

Specifies, for switched or switched network backup lines (Async, BSC, SDLC, or X.25 line), whether the line has an associated automatic call unit that can automatically call the remote system.

*NO No automatic call unit is associated with this line.

*YES An automatic call unit is associated with this line.

Top

Data bits per character (BITSCHAR)

Specifies the number of data bits per character (excluding the parity bit if any).

8 8 data bits per character are used.

Note: 8 bits with parity cannot be used with some Input/Output processors.

7 7 data bits per character are used.

Top

Type of parity (PARITY)

Specifies the type of parity used for error checking (a parity bit is a binary digit inserted in each byte of data to make the arithmetic sum of all the digits, including the parity bit, always odd or always even).

Note: The remote system must use the same parity.

***NONE**

No parity bit is inserted in the data byte.

***ODD** The arithmetic sum of all the digits, including the parity bit, is odd.

***EVEN**

The arithmetic sum of all the digits, including the parity bit, is even.

Top

Stop bits (STOPBITS)

Specifies the number of bits added to the end of each character. These bits are used to keep the local and remote ends of the line synchronized.

Note: The remote system must use the same number of stop bits as the local system.

1 1 stop bit is added to each character.

2 2 stop bits are added to each character.

Note: At line speeds of 300 bps or lower, 2 stop bits are recommended.

Top

Duplex (DUPLEX)

Specifies whether request-to-send (RTS) is permanently turned on (for duplex modems) or turned on only when transmission is required (for half duplex modems).

***HALF**

Request-to-send (RTS) is turned on only when transmission is required (for half duplex modems). You can choose to run half duplex even if the modem can support duplex communication.

***FULL** Request-to-send (RTS) is permanently set on (for duplex modems).

Top

Echo support (ECHO)

Specifies whether the system sends back (echo) all characters it receives to the remote system, send back all characters except end-of-record characters, or if echo is inhibited.

Note: Specify ***ALL** or ***CNTL** if this line supports communication with a remote system that requires echo. If you specify ***ALL** or ***CNTL**, you must also specify ***FULL** for the **Duplex (DUPLEX)** parameter.

***NONE**

No characters received are echoed to the remote system.

***ALL** All characters received are echoed to the remote system.

***CNTL**

All characters received prior to end-of-record characters are echoed to the remote system.

Line speed (LINESPEED)

Specifies the line speed in bits per second (bps).

1200 1200 bps is used.

line-speed

Specify the line speeds. Valid lines speeds are: 50, 75, 110, 150, 300 600, 1200, 2400 4800, 7200, 9600, 14400, 19200, 28800, 38400, 57600, 76800, or 115200 bits per second.

Modem type supported (MODEM)

Specifies the type of modem supported on the communications line. Refer to the modem manual to determine the appropriate value to select.

***NORMAL**

No attempt is made to run diagnostic tests to your modem.

***V54** Certain types of diagnostic tests (as defined by the CCITT recommendations) are run to your modem. This system supports CCITT V.54 loop 3, (a local loop back,) and loop 2, (which is a remote loop back).

***IBMWRAP**

An IBM modem with wrap test capabilities is used on the communications line.

***IBMLPDA1**

An IBM modem with Link Problem Determination Aid-1 (LPDA-1) is used on the line.

***IBMLPDA2**

An IBM modem with Link Problem Determination Aid-2 (LPDA-2) is used on the line.

Switched connection type (SWTCNN)

Specifies whether the switched (Async, BSC, SDLC, or IDLC) line or switched network backup (Async, BSC, or SDLC) line is used for incoming calls, outgoing calls, or both.

***BOTH**

The line is used for both incoming and outgoing calls.

***ANS** The line is used for incoming calls only.

***DIAL**

The line is used for outgoing calls only.

Autoanswer (AUTOANS)

Specifies, for switched or switched network backup lines (Async, BSC, SDLC, or X.25 line), whether the system automatically answers a call from a remote system to establish the connection, or whether the system operator manually answers the call and places the modem in data mode.

Note: *YES is a valid option only if the modem has the automatic answer feature.

***YES** The incoming call is automatically answered by the automatic answer feature.

***NO** The incoming call must be manually answered.

Top

Autodial (AUTODIAL)

Specifies, for switched lines, whether the system automatically calls a remote system to establish a connection or if the system operator must manually place the call.

***NO** The line connection is made by manually dialing the X.25 network.

***YES** The line connection is made by the system automatically dialing the X.25 network.

Top

Dial command type (DIALCMD)

Specifies the type of dial command used to establish a switched connection with a remote system.

***NONE**

No dial command is used. (An automatic call unit is used to establish the connection.)

***V25BIS**

V.25 bis is a recommendation which allows the use of one physical interface for call establishment and data transmission. It is referred to as a serial automatic call interface because the digits are presented serially on the link from the system to the modem.

***OTHER**

The IBM command set is one example of another command type that is used by asynchronous protocols. The dial digits and all other call-related data must be placed directly into the data stream by the application program.

Top

Set modem to ASYNC command (SETMDMASC)

Specifies the V25BIS command string to send to the modem to set the modem to ASYNC mode.

***NONE**

No V25BIS command string is sent to the modem.

END The END command string is generally used as the command to set most modems to ASYNC mode. For cases that do not use the END command string, you should enter the command string appropriate for that modem to set it to ASYNC mode.

command-string

Specify up to 40 characters that represent the command issued. Valid characters are upper case characters A through Z, lower case characters a through z, numbers 0 through 9, and the following special characters:

.	Period
<	Less than sign
(Left parenthesis
+	Plus sign
&	Ampersand
*	Asterisk
)	Right parenthesis
;	Semicolon
-	Minus sign
/	Slash
,	Comma
_	Underline
>	Greater than sign
?	Question mark
:	Colon
=	Equal sign

Top

Modem init command string (MDMINZCMD)

Specifies the modem initialization command string sent to set the modem.

Note: Valid only when INTERFACE(*INTMODEM) or INFTRFTYPE(*SYNCMODEM) is specified.

*NONE

No command string is sent to the modem.

command-string

Specifies up to 60 characters that represent the command string sent to the modem. Valid characters are upper case A thru Z, lower case a thru z, numbers 0 thru 9, and special characters:

Period
Less than sign
Left parenthesis
Plus sign
Ampersand
Asterisk
Right parenthesis
Semicolon
Minus sign
Slash
Comma
Underline
Greater than sign
Question mark
Colon
Equal sign
Spaces
Number sign
Double quote
Exclamation point
At sign

Hat symbol
Percent
Left square bracket
Right square bracket
Back slash

Note: The modem initialization string must begin with the two characters 'AT'.

Top

Autocall resource name (ACRSRCNAME)

Specifies the automatic call resource name that describes the automatic call unit port that is used to establish a connection with a remote system. Use the Work with Hardware Resources (WRKHDWRSC) command to determine the resource name.

Top

Calling number (CALLNBR)

Specifies the local telephone number of the line that is used for the V.25 bis Call Request with Identification (CRI) dial command. When V.25 bis CRI dialing is used, the system takes the called (connection) number (CANNBR parameter), adds a separator character (;), and puts the calling number at the end. The default, *NONE, indicates that Call Request Normal (CRN) is used.

Specify the calling number only when the modem and network support the CRI dial command.

*NONE

Call Request Normal (CRN) is used. CRN dialing sends only the connection number to the V.25 bis modem.

calling-number

Specify the local telephone number if V.25 bis CRI dialing is required. The number can be up to 32 characters in length. See your modem documentation to determine the values allowed by the modem.

Note: Specify the calling number only if both the modem and network support the V.25 bis CRI dial command.

Top

Inactivity timer (INACTTMR)

Specifies the time (in tenths of a second) the system waits for activity on a switched line before disconnecting the line.

*NOMAX

The system waits indefinitely for activity.

inactivity-timer

Specify a value from 150 to 4200 units. Each unit represents 0.1 second, which provides a time range of 0.3 to 9.9 seconds.

Top

Maximum buffer size (MAXBUFFER)

Specifies the maximum size of inbound and outbound data buffers.

Top

Flow control (FLOWCTL)

Specifies whether the hardware controls the data flow.

- *NO** Prevents the hardware from generating or recognizing flow control characters, and prevents the use of Request to Send (RTS) and Clear to Send (CTS) flow control signals.
- *YES** The system uses the flow control capabilities of the asynchronous protocol. If *YES is specified, the hardware recognizes flow control characters. This means that upon receipt of an XOFF character, the hardware stops transmission until an XON character is received. It also means that the hardware sends an XOFF character to the remote location when it is incapable of receiving characters. When the hardware is again able to receive characters, it sends an XON character to the remote system.
- *HARDWARE**
If this option is specified, the hardware signals the modem to stop sending data by dropping RTS signals when it is not capable of receiving characters. When the hardware is able to receive characters again, it raises the RTS signal to the modem. Also, the hardware monitors the CTS and RTS signal from the modem and stops sending data when it is turned off.

NOTES:

1. If *YES or *HARDWARE is specified, DUPLEX(*FULL) must be specified.
2. Hardware flow control is performed using the Request To Send (RTS) and Clear To Send (CTS) flow control signals.

Top

XON character (XONCHAR)

Specifies the hexadecimal value of the flow control character XON. If the system received an XOFF character while sending data, it automatically stops sending, and it starts sending data again only after receiving an XON character.

XON-character

The XON-character can be any value from hexadecimal 01 through FF; however, you must specify a different character than the XOFF character and one that does not appear in your normal data stream, such as hexadecimal 20 (ASCII blank).

Top

XOFF character (XOFFCHAR)

Specifies the hexadecimal value of the flow control character XOFF. If the system receives an XOFF character while sending data, it automatically stops sending, and starts sending data again only after receiving an XON character.

XOFF-character

Specify the hexadecimal XOFF character. The XOFF-character can be any value between hexadecimal 01 and FF; however, you must specify a different character than the XON character and one that does not appear in your normal data stream, such as hexadecimal 20 (ASCII blank).

End-of-Record table (EORTBL)

Specifies the table which allows the hardware to recognize logical records when receiving data. You can define a line feed (LF) as an end-of-record (EOR) character in the data stream, and have the hardware return the data when the LF character is detected in the data stream.

The EOR table is specified as a set of paired elements, in which the first element of a pair is the EOR character and the second element specifies the number of characters that follow the EOR character. Up to 8 entries can be specified. A value of 00 indicates that no end-of-record character is defined.

You can enter multiple values for this parameter.

EOR-character

Specify the end-of-record character(s). Valid end-of-record characters are in the range hexadecimal 01 through 7F (if 7 bits-per-character) or 01 through FF (if 8 bits-per-character). End-of-record characters are specified as they appear on the line after any translation by the Asynchronous communications support.

trailing-characters

Specify the number of additional characters received after the end-of-record character is detected. The number of trailing characters is 0 through 4.

Top

Data Set Ready drop timer (DSRDRPTMR)

Specifies the amount of time that the system waits for the modem to exit the Data Set Ready (DSR) state before signaling an error.

drop-timer

Specify a value ranging from 3 through 60 seconds.

Top

Autoanswer type (AUTOANSTYP)

Specifies the method that the system uses to answer incoming calls.

***DTR** The system enters the Data Terminal Ready state, signals the modem to answer calls, and waits for the modem to enter the Data Set Ready (DSR) state.

***CDSTL**

The system enters the Connect Data Set to Line (CDSTL) state after monitoring the Ring Indicator to signal the modem to answer the call.

Top

Remote answer timer (RMTANSTMR)

Specifies the amount of time that system waits for the modem to enter the Data Set Ready (DSR) state after dialing before signaling an error.

answer-timer

Specify a value ranging from 30 through 120 seconds in 5-second intervals.

Text 'description' (TEXT)

Specifies text that briefly describes the line description.

***BLANK**

Text is not specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Attached nonswitched ctls (CTL)

Specifies, for nonswitched lines, the names of one or more controllers to which this line is attached. The controller descriptions must already exist.

Switched controller list (SWTCTLLST)

Specifies the names of up to 64 switched controllers that can establish a connection with this switched line. The controller descriptions must already exist. This parameter is valid only if the line is switched or the nonswitched line has the switched network backup (SNBU) feature.

You can enter multiple values for this parameter.

switched-controller-list

Specify the switched controller names. Up to 64 switched controllers can be specified.

Modem data rate select (MODEMRATE)

Specifies the speed at which the line operates if the modem has the data rate select feature.

***FULL** The line operates at the full rate of the modem.

***HALF**

The line operates at half the full rate of the modem.

Error threshold level (THRESHOLD)

Specifies the temporary error threshold level being monitored by the system. A permanent error is reported only if the errors occurred consecutively and exceeded the retry limit.

Note: Specifying the THRESHOLD parameter affects all threshold errors. They cannot be specified individually.

***OFF** No threshold errors are reported.

***MIN** The threshold for errors is set to a minimum monitoring level.

***MED** The threshold for errors is set to a medium monitoring level.

***MAX** The threshold for errors is set to a maximum monitoring level.

Top

Idle timer (IDLTMR)

Specifies the time (in 0.5 second intervals) that the system waits between characters before the adapter forwards the receive buffer to the system.

idle-timer

Specify a value from 1 to 254 in 0.5 second intervals, or specify 0 which represents no timer.

Note: Idle timer is also referred to as inter-character timer.

Top

Clear To Send timer (CTSTMR)

Specifies the amount of time the system waits for the modem to enter or exit the Clear to Send (CTS) state before signaling an error.

***NOMAX**

The system waits indefinitely.

cts-timer

Specify a value ranging from 10 through 120 seconds.

Top

Recovery limits (CMNRCYLMT)

Specifies the second-level communications recovery limits to be used for this line description.

The possible **count-limit** values are:

2 Two recovery attempts are made within the specified time interval.

***SYSVAL**

The value in the QCMNRCYLMT system value is used.

count-limit

Specify the number of recovery attempts to be performed by the system. Valid values range from 0 through 99.

The possible **time-interval** values are:

5 The specified number of recovery attempts are made within a 5-minute interval.

time-interval

Specify the number of minutes within which recovery attempts are made. Valid values range from 0 through 120 in 1-minute intervals.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

***LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

```
CRTLINASC LIND(ITF) RSCRNAME(LIN031)
```

This command creates an asynchronous line description named ITF with a resource name of LIN031.

Top

Error messages

*ESCAPE Messages

CPF2718

Line description &1 not created due to errors.

Top

Create Line Desc (BSC) (CRTLINBSC)

Where allowed to run: All environments (*ALL)
 Threadsafte: No

Parameters
 Examples
 Error messages

The Create Line Description (BSC) (CRTLINBSC) command creates a line description for a BSC line.

Restriction: You must have input/output system configuration (*IOSYSCFG) special authority to use this command.

Top

Parameters

Keyword	Description	Choices	Notes
LIND	Line description	<i>Name</i>	Required, Positional 1
RSRCNAME	Resource name	<i>Name</i>	Required, Positional 2
ONLINE	Online at IPL	<u>*YES</u> , *NO	Optional
APPTYPE	Application type	<u>*PGM</u> , *RJE, *EML	Optional
INTERFACE	Physical interface	<u>*RS232V24</u> , *RS449V36, *RS530V36, *V35, *X21BISV24, *X21BISV35	Optional
CNN	Connection type	<u>*NONSWTPP</u> , *SWTPP, *MPTRIB	Optional
SNBU	Switched network backup	<u>*NO</u> , *YES	Optional
VRYWAIT	Vary on wait	15-180, <u>*NOWAIT</u>	Optional
AUTOCALL	Autocall unit	<u>*NO</u> , *YES	Optional
STNADR	Station address	04-FE	Optional
CLOCK	Clocking	<u>*MODEM</u> , *SYSTEM	Optional
DUPLEX	Duplex	<u>*HALF</u> , *FULL	Optional
LINESPEED	Line speed	600, 1200, 2400, 4800, 7200, <u>9600</u> , 14400, 19200, 48000, 56000, 57600	Optional
MODEM	Modem type supported	<u>*NORMAL</u> , *V54, *IBMWRAP	Optional
SWTCNN	Switched connection type	<u>*BOTH</u> , *ANS, *DIAL	Optional
AUTOANS	Autoanswer	<u>*YES</u> , *NO	Optional
AUTODIAL	Autodial	<u>*NO</u> , *YES	Optional
DIALCMD	Dial command type	<u>*NONE</u> , *V25BIS	Optional
ACRSRCNAME	Autocall resource name	<i>Name</i>	Optional
CALLNBR	Calling number	<i>Character value</i> , <u>*NONE</u>	Optional
INACTTMR	Inactivity timer	150-4200, <u>300</u> , *NOMAX	Optional
MAXBUFFER	Maximum buffer size	8-8192, <u>1024</u>	Optional
CODE	Character code	<u>*EBCDIC</u> , *ASCII	Optional
RCVTMR	Receive timer	30-254, <u>30</u>	Optional
CONTTMR	Continue timer	16-24, <u>20</u>	Optional
CTNRTY	Contention state retry	0-21, <u>7</u>	Optional
DTASTRTY	Data state retry	0-255, <u>7</u>	Optional

Keyword	Description	Choices	Notes
TMTRTY	Transmit TTD or WACK retry	0-65534, <u>60</u> , *NOMAX	Optional
RCVRTY	Receive TTD or WACK retry	0-65534, <u>45</u> , *NOMAX	Optional
DSRDRPTMR	Data Set Ready drop timer	3-60, <u>6</u>	Optional
AUTOANSTYP	Autoanswer type	*DTR, *CDSTL	Optional
RMTANSTMR	Remote answer timer	30, 35, 40, 45, 50, 55, <u>60</u> , 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120	Optional
TEXT	Text 'description'	Character value, *BLANK	Optional
CTL	Attached nonswitched ctls	Name	Optional
SWTCTLLST	Switched controller list	Values (up to 64 repetitions): Name	Optional
MODEMRATE	Modem data rate select	*FULL, *HALF	Optional
SYNCCHARS	SYN characters	<u>2</u> , 4	Optional
THRESHOLD	Error threshold level	*OFF, *MIN, *MED, *MAX	Optional
STXLRC	Include STX character in LRC	*NO, *YES	Optional
CTSTMR	Clear To Send timer	10-60, <u>25</u>	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: Element list	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
AUT	Authority	Name, *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

Top

Line description (LIND)

Specifies the name of the line description

This is a required parameter.

Top

Resource name (RSRCNAME)

Specifies the resource name that describes the automatic call unit port.

Note: Use the Work with Hardware Resources (WRKHDWRSC) command with *CMN specified for the TYPE parameter to help determine the resource name. The resource name is on the port. For example, the resource name may be CMN01 on an Ethernet port.

This is a required parameter.

Top

Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

*YES The line is automatically varied on at initial program load (IPL).

*NO This line is not automatically varied on at IPL.

Application type (APPTYPE)

Specifies the application type used by this device.

***PGM** This BSC line is used by a user-written program (not RJE or EML).

***RJE** This BSC line is used by the Remote Job Entry Facility.

***EML** This BSC line is used by 3270 device emulation.

Physical interface (INTERFACE)

Specifies the type of physical interface on the input/output adapter (IOA) port.

***RS232V24 (Async, BSC, X.25 and SDLC only)**
RS-232/V.24 physical interface.

***V35 (BSC and SDLC only)**
V.35 physical interface.

***X21 (X.25 and SDLC only)**
X.21 physical interface.

***X21BISV24 (X.25, BSC and SDLC only)**
X.21 bis/V.24 physical interface.

***X21BISV35 (X.25, BSC and SDLC only)**
X.21 bis/V.35 physical interface.

***RS449V36 (Async, BSC, X.25 and SDLC only)**
RS-449/V.36 physical interface.

***INTMODEM**
The integrated modem interface is used.

Connection type (CNN)

Specifies the type of line connection.

***NONSWTPP**
A nonswitched point-to-point line is used.

Note: This value cannot be selected if you choose *EML for the **Application type (APPTYPE)** parameter.

***SWTPP**
A switched point-to-point line is used.

Note: This value cannot be selected if you choose *EML for the **Application type (APPTYPE)** parameter.

***MPTRIB**
A multipoint tributary line.

Note: This value cannot be selected if you choose *RJE for the **Application type (APPTYPE)** parameter.

Switched network backup (SNBU)

Specifies, for nonswitched modems only, if the local modem supports the switched network backup utility (SNBU) feature. The backup feature is used to bypass a broken nonswitched (nonswitched line) connection by establishing a switched connection.

To activate SNBU, you must change the mode of the modem from nonswitched to switched. If the modem model is IBM 386x, 586x, or 786x, no change is required. Otherwise, specify *YES for the **Activate swt network backup (ACTSNBU)** parameter for the line description you are using.

*NO The local modem does not have the SNBU feature.

*YES The local modem has the SNBU feature.

Top

Vary on wait (VRYWAIT)

Specifies whether the line is varied on asynchronously or synchronously. For synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

*NOWAIT

The system does not wait for vary on completion. The line is varied on asynchronously.

vary-on-wait

Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

Notes:

1. When ONLINE(*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
 - Put tasks in place to manage the line
 - Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
 - Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

Top

Autocall unit (AUTOCALL)

Specifies, for switched or switched network backup lines (Async, BSC, SDLC, or X.25 line), whether the line has an associated automatic call unit that can automatically call the remote system.

*NO No automatic call unit is associated with this line.

*YES An automatic call unit is associated with this line.

Top

Station address (STNADR)

Specifies, for multipoint tributary lines, the hexadecimal address by which the local system is known to the remote system. The hexadecimal address is the polling address assigned to this system.

If a character code of *ASCII is specified, any address with the 6-bit set on cannot be used. If a character code of *EBCDIC is specified, any address with the 2-bit set on cannot be used.

station-address

Specify a hexadecimal value from 04 to FE. BSC control characters can not be specified.

Top

Clocking (CLOCK)

Specifies how the clocking function for the line is provided.

*MODEM

The clocking function for the line is provided by the modem.

Top

Duplex (DUPLEX)

Specifies whether request-to-send (RTS) is permanently turned on (for duplex modems) or turned on only when transmission is required (for half duplex modems).

*HALF

Request-to-send (RTS) is turned on only when transmission is required (for half duplex modems). You can choose to run half duplex even if the modem can support duplex communication.

*FULL Request-to-send (RTS) is permanently set on (for duplex modems).

Top

Line speed (LINESPEED)

Specifies the line speed in bits per second (bps).

1200 1200 bps is used.

line-speed

Specify the line speeds. Valid lines speeds are: 50, 75, 110, 150, 300 600, 1200, 2400 4800, 7200, 9600, 14400, 19200, 28800, 38400, 57600, 76800, or 115200 bits per second.

Top

Modem type supported (MODEM)

Specifies the type of modem supported on the communications line. Refer to the modem manual to determine the appropriate value to select.

*NORMAL

No attempt is made to run a diagnostic test to your modem.

***V54** A certain type of diagnostic test (as defined by the CCITT recommendations) is run to your modem. This system supports CCITT V.54 loop 3, local loop back, and loop 2, which is a remote loop back.

***IBMWRAP**

An IBM modem with wrap test capabilities is used on the communications line.

Top

Switched connection type (SWTCNN)

Specifies whether the switched (Async, BSC, SDLC, or IDLC) line or switched network backup (Async, BSC, or SDLC) line is used for incoming calls, outgoing calls, or both.

***BOTH**

The line is used for both incoming and outgoing calls.

***ANS** The line is used for incoming calls only.

***DIAL**

The line is used for outgoing calls only.

Top

Autoanswer (AUTOANS)

Specifies, for switched or switched network backup lines (Async, BSC, SDLC, or X.25 line), whether the system automatically answers a call from a remote system to establish the connection, or whether the system operator manually answers the call and places the modem in data mode.

Note: *YES is a valid option only if the modem has the automatic answer feature.

***YES** The incoming call is automatically answered by the automatic answer feature.

***NO** The incoming call must be manually answered.

Top

Autodial (AUTODIAL)

Specifies, for switched lines, whether the system automatically calls a remote system to establish a connection or if the system operator must manually place the call.

***NO** The line connection is made by manually dialing the X.25 network.

***YES** The line connection is made by the system automatically dialing the X.25 network.

Top

Dial command type (DIALCMD)

Specifies the type of dial command used to establish a switched connection with a remote system.

***NONE**

No dial command is used. (An automatic call unit is used to establish the connection.)

***V25BIS**

V.25 bis is a recommendation which allows the use of one physical interface for call establishment

and data transmission. It is referred to as a serial automatic call interface because the digits are presented serially on the link from the system to the modem.

Top

Autocall resource name (ACRSRCNAME)

Specifies the automatic call resource name that describes the automatic call unit port that is used to establish a connection with a remote system. Use the Work with Hardware Resources (WRKHDWRSC) command to determine the resource name.

Top

Calling number (CALLNBR)

Specifies the local telephone number of the line that is used for the V.25 bis Call Request with Identification (CRI) dial command. When V.25 bis CRI dialing is used, the system takes the called (connection) number (C>NNNBR parameter), adds a separator character (;), and puts the calling number at the end. The default, *NONE, indicates that Call Request Normal (CRN) is used.

Specify the calling number only when the modem and network support the CRI dial command.

*NONE

Call Request Normal (CRN) is used. CRN dialing sends only the connection number to the V.25 bis modem.

calling-number

Specify the local telephone number if V.25 bis CRI dialing is required. The number can be up to 32 characters in length. See your modem documentation to determine the values allowed by the modem.

Note: Specify the calling number only if both the modem and network support the V.25 bis CRI dial command.

Top

Inactivity timer (INACTTMR)

Specifies the time (in tenths of a second) the system waits for activity on a switched line before disconnecting the line.

*NOMAX

The system waits indefinitely for activity.

inactivity-timer

Specify a value from 150 to 4200 units. Each unit represents 0.1 second, which provides a time range of 0.3 to 9.9 seconds.

Top

Maximum buffer size (MAXBUFFER)

Specifies the maximum size of inbound and outbound data buffers.

Top

Character code (CODE)

Specifies whether the extended binary-coded decimal interchange code (*EBCDIC) or the American National Standard Code for Information Interchange (*ASCII) character code is used on the line.

*EBCDIC

The EBCDIC character set code is used.

*ASCII

The ASCII character code is used.

Top

Receive timer (RCVTMR)

Specifies the duration of time the system waits for data from the remote system before a receive timeout occurs.

receive-timer

Specify a value from 30 to 254 in 0.1-second intervals.

Top

Continue timer (CONTTMR)

Specifies, when the system is not ready to transmit or receive data, the duration of time the system waits before sending a control character which prevents the line from becoming inoperative. This parameter is not valid for an application type of RJE.

continue-timer

Specify a value from 16 to 24 in 0.1-second intervals.

Top

Contention state retry (CTNRTRY)

Specifies the number of contention state retries to attempt before indicating the error and making the line inoperative.

For BSC, contention is the state that exists after the end of transmission (EOT) character is received or sent and before a starting sequence (ENQ) has been positively acknowledged (ACK0).

In data communications, a type of half-duplex line or link control in which either user may transmit any time the line/link is available. In the event that both users attempt to transmit a request simultaneously, the protocols or the hardware determines who wins the contention.

contention-state-retry

Specify a value from 0 to 21 for the number of contention state retries.

Top

Data state retry (DTASTTRY)

Specifies the number of data state retries to attempt before indicating the error and ending the session.

For BSC, a data state is a time during which BSC is sending or receiving characters on the communications line.

data-state-retry

Specify a value from 0 to 255 for the number of data state retries.

Top

Transmit TTD or WACK retry (TMTRTY)

Specifies the number of retries for transmitting temporary text delay (TTD) or wait before transmitting (WACK) before indicating a session failure. This parameter is not valid for an application type of RJE.

***NOMAX**

Retries are attempted indefinitely.

transmit-TTD-or-WACK-retry

Specify a value from 0 to 65534 for the number of retries.

Top

Receive TTD or WACK retry (RCVRTY)

Specifies the number of retries for receiving temporary text delay (TTD) or wait before transmitting (WACK) before indicating a session failure. This parameter can only be specified if the application type is program-to-program.

***NOMAX**

Retries are attempted indefinitely.

receive-TTD-or-WACK-retry

Specify a value from 0 to 65534 for the number of retries.

Top

Data Set Ready drop timer (DSRDRPTMR)

Specifies the amount of time that the system waits for the modem to exit the Data Set Ready (DSR) state before signaling an error.

drop-timer

Specify a value ranging from 3 through 60 seconds.

Top

Autoanswer type (AUTOANSTYP)

Specifies the method that the system uses to answer incoming calls.

***DTR** The system enters the Data Terminal Ready state, signals the modem to answer calls, and waits for the modem to enter the Data Set Ready (DSR) state.

***CDSTL**

The system enters the Connect Data Set to Line (CDSTL) state after monitoring the Ring Indicator to signal the modem to answer the call.

Top

Remote answer timer (RMTANSTMR)

Specifies the amount of time that system waits for the modem to enter the Data Set Ready (DSR) state after dialing before signaling an error.

answer-timer

Specify a value ranging from 30 through 120 seconds in 5-second intervals.

Top

Text 'description' (TEXT)

Specifies text that briefly describes the line description.

***BLANK**

Text is not specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Attached nonswitched ctls (CTL)

Specifies, for nonswitched lines, the names of one or more controllers to which this line is attached. The controller descriptions must already exist.

Top

Switched controller list (SWTCTLLST)

Specifies the names of up to 64 switched controllers that can establish a connection with this switched line. The controller descriptions must already exist. This parameter is valid only if the line is switched or the nonswitched line has the switched network backup (SNBU) feature.

You can enter multiple values for this parameter.

switched-controller-list

Specify the switched controller names. Up to 64 switched controllers can be specified.

Top

Modem data rate select (MODEMRATE)

Specifies the speed at which the line operates if the modem has the data rate select feature.

***FULL** The line operates at the full rate of the modem.

***HALF**

The line operates at half the full rate of the modem.

Top

SYN characters (SYNCCHARS)

Specifies the number of BSC SYN (synchronous) control characters to send when transmitting. The SYN control character is used to establish and maintain synchronization and as a time fill in the absence of any data or other control character.

- 2 The synchronization pattern consists of two consecutive SYN characters.
- 4 The synchronization pattern consists of four consecutive SYN characters.

Top

Error threshold level (THRESHOLD)

Specifies the temporary error threshold level being monitored by the system. A permanent error is reported only if the errors occurred consecutively and exceeded the retry limit.

Note: Specifying the THRESHOLD parameter affects all threshold errors. They cannot be specified individually.

- *OFF No threshold errors are reported.
- *MIN The threshold for errors is set to a minimum monitoring level.
- *MED The threshold for errors is set to a medium monitoring level.
- *MAX The threshold for errors is set to a maximum monitoring level.

Top

Include STX character in LRC (STXLRC)

Specifies whether the start of text (STX) control character is included in the longitudinal redundancy check (LRC) calculation. This applies only to lines using the ASCII character code.

- *NO The STX control character is not included in the LRC calculation.
- *YES The STX control character is included in the LRC calculation.

Top

Clear To Send timer (CTSTMR)

Specifies the amount of time the system waits for the modem to enter or exit the Clear to Send (CTS) state before signaling an error.

cts-timer

Specify a value ranging from 10 through 60 seconds.

Top

Recovery limits (CMNRCYLMT)

Specifies the second-level communications recovery limits to be used for this line description.

The possible **count-limit** values are:

- 2 Two recovery attempts are made within the specified time interval.

***SYSVAL**

The value in the QCMNRCYLMT system value is used.

count-limit

Specify the number of recovery attempts to be performed by the system. Valid values range from 0 through 99.

The possible **time-interval** values are:

5 The specified number of recovery attempts are made within a 5-minute interval.

time-interval

Specify the number of minutes within which recovery attempts are made. Valid values range from 0 through 120 in 1-minute intervals.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

***CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

***LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

```
CRTLINBSC  LIND(BRANCHES)  RSRNAME(LIN021)
           ONLINE(*NO)   CNN(*SWTPP)
           AUTOCALL(*YES) ACRSRNAME(LIN032)
           SWTCTLLST(BRANCH1 BRANCH2)
```

This command creates a BSC line description for the first port on the second IOA. It is set up to autodial on the second port of the third IOA, or to automatic answer. The controller descriptions in the SWCTLLST already exist.

[Top](#)

Error messages

***ESCAPE Messages**

CPF2718

Line description &1 not created due to errors.

[Top](#)

Create Line Desc (DDI) (CTRLINDDI)

Where allowed to run: All environments (*ALL)
 Threadsafte: No

Parameters
 Examples
 Error messages

The Create Line Description (Distributed Data Interface) (CTRLINDDI) command creates a line description for a data-description interface line such as an FDDI (Fiber Distributed Data Interface) local area network. More information about using this command is in the Communications Configuration book, SC41-5401.

Restriction: You must have input/output system configuration (*IOSYSCFG) special authority to use this command.

Top

Parameters

Keyword	Description	Choices	Notes
LIND	Line description	<i>Name</i>	Required, Key, Positional 1
RSRCNAME	Resource name	<i>Name</i> , *NWID	Required, Key, Positional 2
ONLINE	Online at IPL	*YES, *NO	Optional
VRYWAIT	Vary on wait	15-180, *NOWAIT	Optional
MAXCTL	Maximum controllers	1-256, 40	Optional
MAXFRAME	Maximum frame size	265-4444	Optional
LOGLVL	Logging level	*OFF, *ERRORS, *ALL	Optional
LCLMGRMODE	Local manager mode	*OBSERVING, *NONE	Optional
NWI	Attached NWI	<i>Name</i> , *NONE	Optional
NWIDLCI	DLC identifier	1-1018, *NONE	Optional
ADPTADR	Local adapter address	400000000000-7FFFFFFFFF, *ADPT	Optional
EXCHID	Exchange identifier	05600000-056FFFFF, *SYSGEN	Optional
SSAP	SSAP list	Single values: *SYSGEN Other values (up to 24 repetitions): <i>Element list</i>	Optional
	Element 1: Source service access point	02-FE	
	Element 2: SSAP maximum frame	265-4444, *MAXFRAME	
	Element 3: SSAP type	*CALC, *NONSNA, *SNA	
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
NETCTL	Network controller	<i>Name</i>	Optional
GRPADR	Group address	Values (up to 12 repetitions): 800000000000-FFFFFFFFFE, *NONE	Optional
TKNRTTIME	Token rotation time	4-167, *CALC	Optional

Keyword	Description	Choices	Notes
LINKSPEED	Link speed	*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, *MAX	Optional
COSTCNN	Cost/connect time	0-255, <u>0</u>	Optional
COSTBYTE	Cost/byte	0-255, <u>0</u>	Optional
SECURITY	Security for line	*NONSECURE, *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, *MAX	Optional
PRPDLY	Propagation delay	*PKTSWTNET, *LAN, *MIN, *TELEPHONE, *SATELLITE, *MAX	Optional
USRDFN1	User-defined 1	0-255, <u>128</u>	Optional
USRDFN2	User-defined 2	0-255, <u>128</u>	Optional
USRDFN3	User-defined 3	0-255, <u>128</u>	Optional
AUTOCTCTL	Autocreate controller	*YES, *NO	Optional
AUTODLCTL	Autodelete controller	1-10000, <u>1440</u> , *NONE	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
MSGQ	Message queue	Single values: *SYSVAL, *SYSOPR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
AUT	Authority	<i>Name</i> , *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

Top

Line description (LIND)

Specifies the name of the line description

This is a required parameter.

Top

Resource name (RSRCNAME)

Specifies the resource name that identifies the hardware that the description represents.

Note: Use the Work with Hardware Resources (WRKHDWRSC) command with *CMN specified for the TYPE parameter to help determine the resource name. The resource name is on the port. For example, the resource name may be CMN01 on an Ethernet port.

Note: The value specified on the RSRCTYPE parameter cannot be changed from *NWID to another value or from another value to *NWID.

This is a required parameter.

*NWID

The resource name specified on the attached frame relay network interface description is used.

name Specify a resource name.

Top

Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES** The line is automatically varied on at initial program load (IPL).

***NO** This line is not automatically varied on at IPL.

Top

Vary on wait (VRYWAIT)

Specifies whether the line is varied on asynchronously or synchronously. For synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

***NOWAIT**

The system does not wait for vary on completion. The line is varied on asynchronously.

vary-on-wait

Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

Notes:

1. When ONLINE(*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
 - Put tasks in place to manage the line
 - Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
 - Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

Top

Maximum controllers (MAXCTL)

Specifies the maximum number of controllers that the line supports.

40 The line supports 40 controllers.

maximum-controllers

Specify a number large enough to account for all controllers currently active to this network, and the controllers that will be attached in the near future. Valid values range from 1 through 256.

Top

Maximum frame size (MAXFRAME)

Specifies the maximum frame (path information unit (PIU)) size that the controller can send or receive. This value is used to calculate request unit (RU) sizes. Since the maximum PIU size that the controller can send or receive is negotiated when system identifiers are exchanged, the maximum PIU size used at run time may be different. This value matches the corresponding value on the host system.

Note: The MAXFRAME value is provided by your telephone carrier from which you should subtract 44 bytes for the size of the header.

4105 The maximum frame size is 4105 bytes.

Note: This value changes to 1556 when RSRCTYPE(*NWID) is specified.

maximum-frame-size

Specify the maximum frame size. Valid values range from 265 through 4444 bytes.

Top

Logging level (LOGLVL)

Specifies the error logging level used by the DDI local area network (LAN) manager. This parameter is used to determine whether unsolicited LAN errors are logged. These messages are logged in either the QHST message queue or the QSYSOPR message queue.

Note: The LOGLVL parameter is not used when RSRCTYPE(*NWID) is specified.

***OFF** Errors are not monitored.

***ERRORS**

Logs LAN manager error messages only.

***ALL** Logs LAN manager error messages and informational messages.

Top

Local manager mode (LCLMGRMODE)

Specifies whether this station is an observing network manager. An observing network manager logs network error messages and informational messages for this and other stations on the ring. These messages are logged in either the QHST message queue or the QSYSOPR message queue.

Examples of information available in observing mode only include errors on remote stations that do not affect general ring operation, or information about stations that are joining or leaving the ring.

Note: The LCLMGRMODE parameter is not used when RSRCTYPE(*NWID) or LOGLVL(*OFF) is specified.

***OBSERVING**

The LAN manager function of this station retrieves information generated by all adapters.

***NONE**

The LAN manager function of this station only retrieves information generated by the local adapter.

Note: A local area network manager logs only those messages that pertain to this station and its ability to access the ring when *NONE is specified.

Top

Attached NWI (NWI)

Specifies an attached nonswitched frame relay NWI.

Note: NWI(*NONE) must be specified when RSRCTYPE(*NWID) is not specified. Otherwise, NWI(*NONE) can be specified only when NWIDLCI(*NONE) is also specified.

*NONE

No network interface is specified.

name Specify the name of an attached nonswitched frame relay NWI.

Top

DLC identifier (NWIDLCI)

Specifies the data link connection identifier (DLCI) for the network interface.

Note: NWIDLCI(*NONE) must be specified when RSRCTYPE(*NWID) is not specified. Otherwise, NWIDLCI(*NONE) can be specified only when NWI(*NONE) is also specified.

*NONE

A DLCI is not specified for the network interface.

data-link-connection-ID

Specify the DLCI for the network interface to which this line permanently attaches. Valid values range from 1 through 1018.

Top

Local adapter address (ADPTADR)

Specifies the 12-character hexadecimal adapter address.

Note: ADPTADR(*ADPT) cannot be specified when RSRCTYPE(*NWID) is specified.

*ADPT

This value gives the user the preset DDI default address for this DDI adapter card. The user may display this by doing a DSPLIND on this line description after it has successfully varied on.

local-adapter-address

Specify an address for this system in the DDI network. Valid values range from hexadecimal 400000000000 through 7FFFFFFFFFFFFF.

Top

Exchange identifier (EXCHID)

Specifies the hexadecimal exchange identifier that is used to identify the local system to the remote system. The 8-digit hexadecimal exchange identifier contains three digits for the block number and five digits for the identifier of this system.

*SYSGEN

The operating system generates the exchange identifier.

exchange-identifier

Specify an exchange identifier composed of eight hexadecimal digits starting with 056.

SSAP list (SSAP)

Specifies source service access points (SSAPs). This is the hexadecimal logical address used to route incoming data from the bus to the proper user. A maximum frame size can be specified for each SSAP. Valid SSAP values are AA (for TCP/IP), and 04 through 9C divisible by 4 (for SNA).

The destination service access point (DSAP), specified by the remote controller, must match one of the SSAPs specified in order for communication to occur. All SSAP values must be unique.

*SYSGEN

The system automatically creates three SSAPs, hex 04 for SNA, and hex 06 for TCP/IP applications.

The possible **SSAP** values are:

source-service-access-point

Specify a maximum of 24 SSAPs using valid SSAP values.

You can enter multiple values for this parameter.

The possible **Frame Size for SSAP** values are:

*MAXFRAME

The frame size specified on the MAXFRAME parameter is used.

SSAP-maximum-frame

Specify the maximum SSAP frame size (the maximum size of the data field that may be transmitted or received). Valid values for this parameter range from 265 through 4444 bytes, but must not exceed the value of the MAXFRAME parameter.

The possible **SSAP Type** values are:

*CALC

The system determines the SSAP type based on the following values:

- 04 through 9C, divisible by 4 (for SNA)
- 02 through FE, divisible by 2 (for non-SNA)

*SNA The SSAP is used for SNA communications. Valid values range from 04 through 9C and must be divisible by 4.

*NONSNA

The SSAP is used for non-SNA communications. Valid values range from 02 through FE and must be divisible by 2.

Text 'description' (TEXT)

Specifies text that briefly describes the line description.

*BLANK

Text is not specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Network controller (NETCTL)

Specifies the name of an existing network controller.

Group address (GRPADR)

Specifies the distributed data interface group addresses used. Group addresses must each be specified as a 12-digit hexadecimal number. Valid values range from 800000000000 through FFFFFFFF0000.

You can enter multiple values for this parameter.

*NONE

No group addresses are specified.

group-address

Specify the group addresses to be used.

Token rotation time (TKNRTTIME)

Specifies the token rotation time requested. This value is used when the station bids on the network. The lowest value of all attached stations on a ring determines the value the ring uses.

Note: TKNRTTIME(*CALC) must be specified when RSRCTYPE(*NWID) is specified.

*CALC

The system calculates the value based on the type of line that is linked to the controller.

token-rotation-time

Specify a value ranging from 4 through 167 milliseconds.

Link speed (LINKSPEED)

Specifies the link speed in bits per second (bps). This parameter is valid only if APPN is used on the system.

***MAX** A link speed greater than 16M bps is used.

4M The link speed is 4M bps.

***MIN** A link speed of less than 1200 bps is used.

link-speed

Specify the link speed. Valid values are: 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, and 16M.

Cost/connect time (COSTCNN)

Specifies the relative cost of being connected on the line. This parameter is required only if APPN is used on the system.

0 The cost per connect time is 0.

cost-per-connect-time

Specify a value ranging from 0 through 255.

Top

Cost/byte (COSTBYTE)

Specifies the relative cost per byte for sending and receiving data on the line. This parameter is required only if APPN is used on the system.

0 The cost per byte is 0.

cost-per-byte

Specify a value ranging from 0 through 255.

Top

Security for line (SECURITY)

Specifies the security level of the physical line.

***NONSECURE**

Normal priority is used.

***PKTSWTNET**

A packet switched network is used. Data does not always follow the same path through the network.

***UNDGRDCBL**

An underground cable is used.

***SECURECND**

A secure, unguarded conduit (for example, a pressurized pipe) is used.

***GUARDCND**

A guarded conduit, which is protected against physical tapping, is used.

***ENCRYPTED**

Data flowing on the line is encrypted.

***MAX** A guarded conduit, protected against physical and radiation tapping, is used.

Top

Propagation delay (PRPDLY)

Specifies the level of propagation delay on the line. This parameter is valid only if APPN is used on the system. The order of the values from shortest to longest delay is *MIN, *LAN, *TELEPHONE, *PKTSWTNET, and *SATELLITE.

***LAN** The local area network propagation delay is used.

***PKTSWTNET**

The packet switched network propagation delay is used.

***MIN** The minimum propagation delay is used.

***TELEPHONE**

The telephone propagation delay is used.

***SATELLITE**

The satellite propagation delay is used.

***MAX** The maximum propagation delay is used.

Top

User-defined 1 (USRDFN1)

Specifies the first of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.

128 A value 128 is used.

user-defined-1

Specify a value ranging from 0 through 255.

Top

User-defined 2 (USRDFN2)

Specifies the second of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.

128 A value 128 is used.

user-defined-2

Specify a value ranging from 0 through 255.

Top

User-defined 3 (USRDFN3)

Specifies the third of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.

128 A value 128 is used.

user-defined-3

Specify a value ranging from 0 through 255.

Top

Autocreate controller (AUTOCRTCTL)

Specifies whether the system automatically creates controller descriptions when calls are received from adjacent systems on the local area network (LAN).

***NO** The system does not automatically create a controller description when incoming calls are received.

***YES** The system automatically creates a controller description when incoming calls are received.

Top

Autodelete controller (AUTODLTCTL)

Specifies the number of minutes an automatically created controller can remain in an idle state (switched from varied on to varied on pending) before the controller description and attached device descriptions are varied off and deleted.

1440 The controller description can be idle for 1440 minutes (24 hours).

*NONE

The system does not automatically delete or vary off the automatically configured, idle controller descriptions.

wait-time

Specify the number of minutes to wait before deleting the automatically configured, idle controller descriptions for this line. Valid values range from 1 to 10,000 minutes.

Top

Recovery limits (CMNRCYLMT)

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

The possible **Maximum Recovery Limit** values are:

2 Two recovery attempts are made within the interval specified.

count-limit

Specify the number of recovery attempts to be made. Valid values range from 0 through 99.

The possible **Recovery Time Interval** values are:

5 A 15-second timeout period is used.

time-interval

Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

*SYSVAL

The recovery limits specified in the QCMNRCYLMT system value are used.

Top

Message queue (MSGQ)

Specifies the message queue to which operational messages are sent.

*SYSVAL

The value in the system value QCFGMSGQ is used.

*SYSOPR

Messages are sent to the system operator message queue (QSYS/QSYSOPR).

Qualifier 1: Message queue

name Specify the name of the message queue to which operational messages are sent.

Qualifier 2: Library

name Specify the name of the library where the message queue is located.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

***LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

```
CRTLINDDI LIND(DDILAN1) RSRcname(LIN011)
          TEXT('Fiber Distributed Data Interface (FDDI) Line')
```

This command creates a DDI line description named DDILAN1 for an FDDI line installed on adapter LIN011 on the system.

Top

Error messages

*ESCAPE Messages

CPF2718

Line description &1 not created due to errors.

[Top](#)

Create Line Desc (Ethernet) (CRTLINETH)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Line Description (Ethernet) (CRTLINETH) command creates a line description for an Ethernet line.

Restriction: You must have input/output system configuration (*IOSYSCFG) special authority to use this command.

Common Errors for CRTLINETH

In order to avoid common configuration errors, determine the port configuration of your switch or hub prior to configuring your line description. The line description parameters and the port configuration must match in order for operating system to communicate properly with the network.

Use the following guidelines when configuring your line description:

- If the switch or hub auto-negotiates either the line speed or duplex, specify *AUTO for both the LINESPEED and DUPLEX parameters. For example, do not specify LINESPEED(100M) and DUPLEX(*FULL).
- If the switch or hub does not auto-negotiate either the line speed or duplex, specify the corresponding values on the system. For example, if the switch specifies a line speed of 100M and full duplex, specify LINESPEED(100M) and DUPLEX(*FULL) on the command.

One frequent cause of problems is a mismatch between the duplex setting of an auto-negotiation capable adapter and the switch or hub. In the case of auto-negotiation, duplex is not detectable by either the switch, hub, or the auto-negotiation capable adapter. So, there is no way to notify the user of a mismatch. Symptoms of a duplex mismatch include:

- A6E3, A6F4 reference codes
- Poor performance
- Large numbers of TCP/IP retransmits

The following are common reference codes:

A6E3 Duplex mismatch, cable problems, or an auto-negotiation timeout

A6F4 Unable to establish link, line speed mismatch, duplex mismatch, or no cable.

A42B The switch or hub did not participate in auto-negotiation. A good link may not be established. The line description should be reconfigured to match the switch or hub.

Top

Parameters

Keyword	Description	Choices	Notes
LIND	Line description	Name	Required, Positional 1
RSRCNAME	Resource name	Name, *NWID, *NWSD	Required, Positional 2

Keyword	Description	Choices	Notes
ONLINE	Online at IPL	<u>*YES</u> , *NO	Optional
VRYPWAIT	Vary on wait	15-180, <u>*NOWAIT</u>	Optional
NWI	Attached NWI	<i>Name</i> , <u>*NONE</u>	Optional
NWITYPE	NWI type	<u>*FR</u>	Optional
NWIDLCI	DLC identifier	1-1018, <u>*NONE</u>	Optional
NWS	Network server description	Single values: <u>*NONE</u> Other values: <i>Element list</i>	Optional
	Element 1:	<i>Name</i>	
	Element 2: Port number	1-2, *VRTETHPTP, *VRTETH0, *VRTETH1, *VRTETH2, *VRTETH3, *VRTETH4, *VRTETH5, *VRTETH6, *VRTETH7, *VRTETH8, *VRTETH9	
ASSOCPORT	Associated port resource name	<i>Name</i> , <u>*NONE</u>	Optional
ADPTADR	Local adapter address	<i>Character value</i> , <u>*ADPT</u>	Optional
EXCHID	Exchange identifier	05600000-056FFFFF, <u>*SYSGEN</u>	Optional
ETHSTD	Ethernet standard	*ETHV2, *IEEE8023, <u>*ALL</u>	Optional
LINESPEED	Line speed	<i>Character value</i> , 10M, 100M, 1G, 10G, <u>*AUTO</u>	Optional
DUPLEX	Duplex	<i>Character value</i> , <u>*AUTO</u> , *HALF, *FULL	Optional
SRVOPT	Serviceability options	<i>Character value</i> , <u>*NONE</u>	Optional
MAXFRAME	Maximum frame size	1496-8996, <u>1496</u> , 8996	Optional
SSAP	SSAP list	Single values: <u>*SYSGEN</u> Other values (up to 24 repetitions): <i>Element list</i>	Optional
	Element 1: Source service access point	02-FE	
	Element 2: SSAP maximum frame	265-8996, <u>*MAXFRAME</u> , 265, 521, 1033, 1466, 1493, 1496, 8996	
	Element 3: SSAP type	<u>*CALC</u> , *NONSNA, *SNA, *HPR	
ACCTYPE	ATM access type	<u>*SVC</u> , *PVC	Optional
PVCID	PVC identifiers	<i>Element list</i>	Optional
	Element 1: Virtual path identifier	0-7	
	Element 2: Virtual circuit identifier	32-4095	
USELECSADR	Use LECS address	<u>*YES</u> , *NO	Optional
LESATMADR	LES ATM address	Single values: <u>*NONE</u> Other values: <i>Element list</i>	Optional
	Element 1: Network prefix	<i>Hexadecimal value</i>	
	Element 2: End system identifier	<i>Hexadecimal value</i>	
	Element 3: Selector byte	<i>Hexadecimal value</i>	
EMLLANNAME	Emulated LAN name	<i>Character value</i> , <u>*NONE</u>	Optional
LECDSTIMO	LEC disconnect time out	1-30, <u>10</u> , *NOMAX	Optional
TEXT	Text 'description'	<i>Character value</i> , <u>*BLANK</u>	Optional
NETCTL	Network controller	<i>Name</i>	Optional
GRPADR	Group address	Single values: <u>*NONE</u> Other values (up to 12 repetitions): 010000000000-FDFFFFFFF	Optional
MAXCTL	Maximum controllers	1-256, <u>40</u>	Optional
THRESHOLD	Error threshold level	<u>*OFF</u> , *MIN, *MED, *MAX	Optional
GENTSTFRM	Generate test frame	<u>*YES</u> , *NO	Optional

Keyword	Description	Choices	Notes
LINKSPEED	Link speed	1200-603979776000, *MIN, 4M, <u>10M</u> , 16M, 100M, *MAX	Optional
COSTCNN	Cost/connect time	0-255, <u>0</u>	Optional
COSTBYTE	Cost/byte	0-255, <u>0</u>	Optional
SECURITY	Security for line	*NONSECURE, *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, *MAX	Optional
PRPDLY	Propagation delay	*LAN, *MIN, *TELEPHONE, *PKTSWTNET, *SATELLITE, *MAX	Optional
USRDFN1	User-defined 1	0-255, <u>128</u>	Optional
USRDFN2	User-defined 2	0-255, <u>128</u>	Optional
USRDFN3	User-defined 3	0-255, <u>128</u>	Optional
AUTOCTCTL	Autocreate controller	*YES, *NO	Optional
AUTODLCTL	Autodelete controller	1-10000, <u>1440</u> , *NONE	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
MSGQ	Message queue	Single values: *SYSVAL, *SYSOPR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
AUT	Authority	<i>Name</i> , *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

Top

Line description (LIND)

Specifies the name of the line description

This is a required parameter.

Top

Resource name (RSRCNAME)

Specifies the resource name that identifies the communications port.

Note: Use the Work with Hardware Resources (WRKHDWRSC) command with *CMN specified for the TYPE parameter to help determine the resource name. The resource name is on the port. For example, the resource name may be CMN01 on an Ethernet port.

Note: The value specified on the RSRCTYPE parameter cannot be changed from *NWSD to another value or from another value to *NWSD.

*NWID

The resource name specified on the attached frame relay network interface description is used.

*NWSD

The resource name is determined by the network server used.

name Specify the resource name of the communications port.

This is a required parameter.

Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES** The line is automatically varied on at initial program load (IPL).

***NO** This line is not automatically varied on at IPL.

Top

Vary on wait (VRYWAIT)

Specifies whether the line is varied on asynchronously or synchronously. For synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

***NOWAIT**

The system does not wait for vary on completion. The line is varied on asynchronously.

vary-on-wait

Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

Notes:

1. When ONLINE(*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
 - Put tasks in place to manage the line
 - Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
 - Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

Top

Attached NWI (NWI)

Specifies the network interface description to use.

Note: NWI(*NONE) must be specified when RSRNAME(*NWID) is not specified. Otherwise, NWI(*NONE) can be specified only when NWIDLCI(*NONE) is also specified.

***NONE**

No network interface is specified.

name Specify the name of the network interface description to be used.

Top

NWI type (NWITYPE)

Specifies the network interface type.

Note: This parameter is ignored when RSRCTYPE is not *NWID.

*FR The network interface type is frame relay.

Top

Specifies the frame relay network interface data link connection identifier to be used.

Note: NWIDLCI(*NONE) must be specified when RSRCTYPE(*NWID) is not specified. Otherwise, NWIDLCI(*NONE) can be specified only when NWI(*NONE) is also specified.

*NONE

A DLCI is not specified for the network interface.

data-link-connection-ID

Specify the DLCI for the network interface to which this line permanently attaches. Valid values range from 1 through 1018.

Top

Network server description (NWS)

Specifies the network server name to which this line is attached.

Note: NWS must be specified when RSRCTYPE(*NWSD) is specified. NWS(*NONE) must be specified if RSRCTYPE(*NWSD) is not specified.

The possible Network server description values are:

*NONE

No network server description is specified.

name Specify the name of an existing network server description to be used.

The possible Network server port value is:

network-server-port

Specify the network server port to which the line is attached. Valid values are 1,2 or virtual ports *VRTETHPTP or *VRTETHn where n is 0-9.

Top

Associated port resource name (ASSOCPORT)

Specifies the resource name that describes the port that is used to establish a connection between a Windows network server and the network.

Note: Use the Work with Hardware Resources (WRKHDWRSC) command with *CMN specified for the TYPE parameter to help determine the resource name. The resource name is on the port. For example, the resource name may be CMN01 on an Ethernet port.

Note: ASSOCPORT parameter is only valid when RSRCTYPE(*NWSD) is specified.

***NONE**

An associated port resource name is not associated with the line.

name Specify the resource name.

Top

Local adapter address (ADPTADR)

Specifies the 12-character hexadecimal adapter address.

***ADPT**

The preset default address for this Ethernet adapter card is used.

Note: This value is not valid when RSRCTYPE(*NWID) and NWITYPE(*FR) is specified.

Note: *ADPT must be specified when the NWS parameter specifies a virtual ethernet port number, *VRTETHPTP or *VRTETHn where n is 0-9.

local-adapter-address

Specify an adapter address of your choice to describe this system in the Ethernet network. The value specified must be an individual address that is locally administered. Valid values are *ADPT or hexadecimal 020000000000 through FFFFFFFF. The second digit must be 2, 6, A, or E.

Top

Exchange identifier (EXCHID)

Specifies the hexadecimal exchange identifier that is used to identify the local system to the remote system. The 8-digit hexadecimal exchange identifier contains three digits for the block number and five digits for the identifier of this system.

***SYSGEN**

This value allows the operating system to create the exchange identifier. Use the Display Line Description (DSPLIND) command to see the resulting exchange identifier.

exchange-ID

Specify an 8-character (four hexadecimal bytes) exchange identifier ranging from 05600000 through 056FFFFF.

Top

Ethernet standard (ETHSTD)

Identifies the Ethernet standard used on the network.

***ALL** All Ethernet standards will be used on the network.

***ETHV2**

Ethernet Version 2.

***IEEE8023**

IEEE 802.3 standard.

Top

Line speed (LINESPEED)

Specifies the line speed in bits per second (bps).

*AUTO

The line speed value will be determined by the hardware using auto-negotiation.

10M The line speed is 10 million bits per second.

100M The line speed is 100 million bits per second.

1G The line speed is 1 gigabit per second(1000 million bits per second).

10G The line speed is 10 gigabits per second(10000 million bits per second).

Note: The values 1G and 10G specify gigabit Ethernet. Gigabit Ethernet is only available when running strictly TCP/IP protocol. 1G or 10G must be specified when the NWS parameter specifies a virtual Ethernet port number, *VRTETHPTP or *VRTETHn where n is 0-9.

Top

Duplex (DUPLEX)

Specifies whether the hardware can send and receive data simultaneously. In half duplex mode, the hardware must alternate between sending data and receiving data. In full duplex mode, data can be sent and received simultaneously.

Note: For optimum performance, this setting should match the setting on the switch or hub this line is connected to. Refer to i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/> for more information.

*AUTO

The duplex value will be determined by the hardware using auto-negotiation.

*HALF

The line communicates using half duplex mode.

***FULL** The line communicates using full duplex mode.

Note: *FULL must be specified when the NWS parameter specifies a virtual ethernet port number, *VRTETHPTP or *VRTETHn where n is 0-9.

Top

Serviceability options (SRVOPT)

Specifies serviceability options. This parameter allows serviceability options to be provided and is intended to be used under the direction of a service provider.

*NONE

No serviceability options provided.

character-value

Specify a value as directed by your service provider.

Top

Maximum frame size (MAXFRAME)

Specifies the maximum frame size that can be transmitted and received on this line description.

1496 The maximum frame size is 1496 bytes.

maximum-frame-size

Specify the maximum frame size value to be used. The valid frame sizes (in bytes) range from 1496 through 8996.

Note: When RSRCNAME(*NWID) specified, the only valid value for this parameter is 1496 bytes. If the maximum frame size is greater than 1496 bytes, LINESPEED(1G) or LINSPEED(*AUTO) and DUPLEX(*FULL) or DUPLEX(*AUTO) must be specified. 8996 is recommended when the NWS parameter specifies a virtual ethernet port number, *VRTETHPTP or *VRTETHn where n is 0-9.

Top

SSAP list (SSAP)

Specifies the source service access point (SSAP) information, including an SSAP value, a maximum frame size, and an SSAP type.

You can enter multiple values for this parameter.

The possible **source service access point** values are:

***SYSGEN**

The system determines the source service access points.

- If ETHSTD(*ALL) or ETHSTD(*IEEE8023) is specified, the system generates the SSAPs 04, 12, AA, and C8.
- If ETHSTD(*ETHV2) is specified, the system generates the SSAPs 04 and 08

source-service-access-point

Specify a service access point for receiving and transmitting data. The SSAP must be hexadecimal 06 or AA for TCP/IP applications if ETHSTD is *ALL or *IEEE8023 (06 and AA are not allowed when ETHSTD is *ETHV2; however, TCP/IP can still be run). For SNA applications, specify a value ranging from 04 through 9C in multiples of four. For example, 7C is a valid choice. For non-SNA applications, specify a value ranging from 02 through FE in multiples of 2.

The possible SSAPs value is:

source-service-access-point

Specify a source service access point for receiving and transmitting data. A maximum of 24 SSAP values can be specified.

- For Transmission Control Protocol/Internet Protocol (TCP/IP) applications, the SSAP must be AA.
Note: If ETHSTD(*ETHV2) is specified, AA cannot be specified. However, TCP/IP can be run. For Systems Network Architecture (SNA) applications, the SSAP must be a hex value ranging from 04 through 9C in multiples of four (04, 08, 0C, and so on).
- For high-performance routing (HPR) applications, the SSAP must be hex C8.
- For non-SNA applications, the SSAP must be a hex value ranging from 02 through FE in multiples of two (02, 04, 06, and so on).
- For LAN printing applications, specify a SSAP value of 12 with SSAP type of *NONSNA.

The possible **SSAP maximum frame size** values are:

***MAXFRAME**

The system determines the maximum frame size (data field size) that can be transmitted or

received. If ETHSTD(*ALL or *IEEE8023) was specified, *CALC produces a frame size of 1496 for TCP/IP and SNA SSAPs. If ETHSTD(*ETHV2) was specified, *CALC produces a frame size of 1493 for SNA SSAPs.

SSAP-maximum-frame

Specify a maximum frame size for this SSAP. Valid values range from 265 through 8996 (265 through 1493 for SNA SSAPs when *ETHV2 is specified on the **Ethernet standard (ETHSTD)** parameter).

Note: When *NWID is specified on the **Resource name (RSRCNAME)** parameter and *ETHV2 is specified on the ETHSTD parameter, the valid values for this parameter range from 265 through 1486 bytes. When *NWID is specified on the RSRCNAME parameter, and *ALL or *IEEE8023 is specified on the ETHSTD parameter, the valid values for this parameter range from 265 through 1489 bytes. Maximum frame size larger than 1486 or 1489 is valid only when AA SSAP for TCP/IP is specified.

The possible **SSAP type** values are:

***CALC**

The system determines the SSAP type based on the SSAP value specified.

***SNA** The system uses IBM's Systems Network Architecture for communication. Only SSAP values of 04 through 9C in multiples of 4 are supported.

***NONSNA**

The system does not use SNA communications. Only SSAP values of 02 through FE in multiples of 2 are supported.

***HPR** The SSAP is used for HPR communications. It also can be used for SNA applications. The valid value is hex C8.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

ATM access type (ACCTYPE)

Specifies the type of access to the ATM network.

***SVC** This line represents a LAN emulation client using switched virtual circuits.

***PVC** This line represents a LAN emulation client using a permanent virtual circuit.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

PVC identifiers (PVCID)

Specifies the virtual path identifier and virtual circuit identifier pairs associated with this permanent virtual circuit.

Note: PVCID is required if ACCTYPE(*PVC) is specified.

The possible **Virtual Path Identifier** value is:

virtual-path-id

Specify a number that represents the virtual path identifier. This number must be in the range of 0 to 7.

The possible **Virtual Circuit Identifier** value is:

virtual-circuit-id

Specify a number that represents the virtual circuit identifier. This number must be in the range of 32 to 4095.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

Use LECS address (USELECSADR)

Specifies whether the LAN emulation configuration server (LECS) should be connected to request the remote LAN emulation server (LES) address.

***YES** The LECS address is used.

***NO** The LECS address is not used.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

LES ATM address (LESATMADR)

Specifies the ATM network address of the remote LAN emulation server.

Note: This parameter cannot be ***NONE** if USELECSADR(***NO**) is specified.

The possible **Single Value** is:

***NONE**

The ATM network address is not used.

The possible **Network prefix** value is:

network-prefix

Specify the network prefix of the ATM address of the remote server. This is a 26 digit hexadecimal value.

The possible **End system identifier** value is:

end-system-identifier

Specify the end system identifier of the remote server. This is a 12 digit hexadecimal value.

The possible **Selector byte** value is:

selector byte

Specify the selector byte of the remote server. This is a two digit hexadecimal value.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

Emulated LAN name (EMLLANNAME)

Specifies the emulated LAN name.

***NONE**

The emulated LAN name not used.

emulated-LAN-name

Specify the emulated LAN name. A maximum of 32 characters can be specified.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

LEC disconnect time out (LECDSTIMO)

Specifies the amount of time in minutes a LAN emulation (LE) client waits before disconnecting an idle virtual circuit connection to another client.

10 The LE client waits 10 minutes.

***NOMAX**

The LE client waits indefinitely.

LEC-disconnect-timeout

Specify the number of minutes the LE client waits before disconnecting an idle virtual circuit connection to another client. The value must be in the range of 1 to 30 minutes.

Top

Text 'description' (TEXT)

Specifies text that briefly describes the line description.

***BLANK**

Text is not specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Network controller (NETCTL)

Specifies the name of an existing network controller.

Top

Group address (GRPADR)

A group address is an address to which a subset of nodes on the Ethernet line will respond in addition to their local adapter addresses.

***NONE**

No group addresses are defined.

group-address

Specify a group address of your choice to describe this system in the Ethernet network. Valid values are hexadecimal 010000000000 through FDEFFFFFFF. The second digit of the value specified must be 1, 3, 5, 7, 9, B, D, or F. Up to 12 addresses may be specified.

Top

Maximum controllers (MAXCTL)

Specifies the maximum number of controllers that the line supports.

40 The number of controllers is 40.

maximum-controllers

Specify value ranging from 1 to 256. The number must be large enough to account for all of the SNA controllers that are currently active to this line, and for those controllers you know will be attached in the near future.

Top

Error threshold level (THRESHOLD)

This parameter, and its values *OFF, *MIN, *MED, and *MAX, can be specified but it is not used by the system starting in release V2R3M0. The parameter may be removed in a later release.

Top

Generate test frame (GENTSTFRM)

Specifies whether the system will automatically generate test frames to determine network availability.

***YES** The system will generate test frames.

***NO** The system will not generate test frames.

Top

Link speed (LINKSPEED)

Specifies the link speed in bits per second (bps). This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

10M The link speed is 10 million bits per second.

4M The link speed is 4 million bits per second.

16M The link speed is 16 million bits per second.

100M The link speed is 100 million bits per second.

***MIN** A link speed of less than 1200 bps is used.

***MAX** A link speed greater than 100M bps is used.

link-speed

Specify the link speed. Valid values range from 1200 to 603979776000 bps.

Cost/connect time (COSTCNN)

Specifies the relative cost of being connected on the line. This parameter is required only if APPN is used on the system.

0 The cost per connect time is 0.

cost-per-connect-time

Specify a value ranging from 0 through 255.

Cost/byte (COSTBYTE)

Specifies the relative cost per byte for sending and receiving data on the line. Zero implies a low cost while 255 indicates a high cost. This parameter is valid only if APPN is used on the system.

0 The cost per byte is 0.

cost-per-byte

Specify a value ranging from 0 through 255.

Security for line (SECURITY)

Specifies the security level of the physical line. This parameter is valid only if APPN is used on the system.

***NONSECURE**

There is no security on the line.

***PKTSWTNET**

A packet switched network is used. Data does not always follow the same path through the network.

***UNDRGRDCBL**

An underground cable is used.

***SECURECND**

A secure, but unguarded, conduit is used.

***GUARDCND**

A guarded conduit, protected against physical tapping, is used.

***ENCRYPTED**

Data flowing on the line is encrypted.

***MAX** A guarded conduit, protected against physical and radiation tapping is used.

Propagation delay (PRPDLY)

Specifies the level of propagation delay on the line. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system. The order of the values from shortest to longest delay is

*MIN, *LAN, *TELEPHONE, *PKTSWTNET, and *SATELLITE.

*LAN Propagation delay using a local area network.

*MIN The minimum propagation delay is used.

***TELEPHONE**

Propagation delay using telephone lines.

***PKTSWTNET**

Propagation delay using a packet switched network.

***SATELLITE**

Propagation delay using satellite communications.

*MAX The maximum propagation delay is used.

Top

User-defined 1 (USRDFN1)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

128 The default value is 128.

user-defined-1

Specify a value ranging from 0 through 255.

Top

User-defined 2 (USRDFN2)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

128 The default value is 128.

user-defined-2

Specify a value ranging from 0 through 255.

Top

User-defined 3 (USRDFN3)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

128 The default value is 128.

user-defined-3

Specify a value ranging from 0 through 255.

Top

Autocreate controller (AUTOCRTCTL)

Specifies whether the system automatically creates an advanced program-to-program communications (APPC) controller description when an incoming advanced peer-to-peer networking (advanced peer-to-peer networking (APPN)) call is received from an adjacent system on the Local Area Network (LAN).

*NO A controller description is not automatically created for this line.

*YES A controller description is automatically created for this line.

Top

Autodelete controller (AUTODLTCTL)

Specifies how many minutes the system waits before automatically varying off and deleting automatically created advanced program-to-program communications (APPC) controller descriptions (associated with this line) which have gone to an idle state.

1440 The controller description can be idle for 1440 minutes (24 hours).

*NONE

The controller descriptions for this line are not automatically deleted.

auto-delete-controller

Specify a value ranging from 1 through 10000 minutes. The value 1440 is 24 hours.

Top

Recovery limits (CMNRCYLMT)

Specifies the second-level communications recovery limits to be used for this line description.

The possible **count-limit** values are:

2 Two recovery attempts are made within the specified time interval.

*SYSVAL

The value in the QCMNRCYLMT system value is used.

count-limit

Specify the number of recovery attempts to be performed by the system. Valid values range from 0 through 99.

The possible **time-interval** values are:

5 The specified number of recovery attempts are made within a 5-minute interval.

time-interval

Specify the number of minutes within which recovery attempts are made. Valid values range from 0 through 120 in 1-minute intervals.

Top

Message queue (MSGQ)

Specifies the message queue to which operational messages are sent.

*SYSVAL

The value in the system value QCFGMSGQ is used.

*SYSOPR

Messages are sent to the system operator message queue (QSYS/QSYSOPR).

Qualifier 1: Message queue

name Specify the name of the message queue to which operational messages are sent.

Qualifier 2: Library

name Specify the name of the library where the message queue is located.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

***LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

Example 1: Creating an Ethernet Line Description

```
CRTLINETH LIND(BOSTON) RSRNAME(LIN041)
```

This command creates an Ethernet line description named BOSTON with a resource name of LIN041.

Example 2: Creating an Ethernet Line Description Attached to a Network Server Description

```
CRTLINETH LIND(ETHLIN) RSRNAME(*NWS) NWS(REMODEL 1)
```

This command creates an Ethernet line description named ETHLIN that is attached to port 1 of the network server description named REMODEL.

Example 3: Creating a Gigabit Ethernet Line Description

```
CRTLINETH LIND(GIGETH) RSRNAME(LIN041) LINESPEED(1G)
          DUPLEX(*FULL) MAXFRAME(8996)
```

This command creates an Ethernet line description using the maximum gigabit ethernet connectivity configuration.

[Top](#)

Error messages

*ESCAPE Messages

CPF2718

Line description &1 not created due to errors.

[Top](#)

Create Line Desc (Fax) (CRTLINFAX)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Line Description (Fax) (CRTLINFAX) command creates a line description for a facsimile (fax) line.

Restriction: You must have input/output system configuration (*IOSYSCFG) special authority to use this command.

Top

Parameters

Keyword	Description	Choices	Notes
LIND	Line description	<i>Name</i>	Required, Positional 1
RSRCNAME	Resource names	Values (up to 2 repetitions): <i>Name</i>	Required, Positional 2
ONLINE	Online at IPL	<u>*YES</u> , *NO	Optional
VRYWAIT	Vary on wait	15-180, <u>*NOWAIT</u>	Optional
TEXT	Text 'description'	<i>Character value</i> , <u>*BLANK</u>	Optional
CTL	Attached nonswitched ctls	<i>Name</i>	Optional
AUT	Authority	<i>Name</i> , <u>*CHANGE</u> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

Top

Line description (LIND)

Specifies the name of the line description

This is a required parameter.

Top

Resource names (RSRCNAME)

Specifies the resource names that describe the fax ports.

Note: Use the Work with Hardware Resources (WRKHDWRSC) command with *CMN specified for the TYPE parameter to help determine the resource name.

The resource name consists of the input/output adapter (IOA) resource name and the port number on the IOA. For example, if the resource name of the IOA is LIN01, the resource names for ports 1 and 2 are LIN011 and LIN012.

The resource name for both ports of the fax IOA must be specified. All lines specified must be attached to the same input/output processor.

rsrcname-1

Specify the first resource name to be used to describe the fax ports.

rsrcname-2

Specify the second resource name to be used to describe the fax ports.

Top

Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES** The line is automatically varied on at initial program load (IPL).

***NO** This line is not automatically varied on at IPL.

Top

Vary on wait (VRYWAIT)

Specifies whether the line is varied on asynchronously or synchronously. For synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

***NOWAIT**

The system does not wait for vary on completion. The line is varied on asynchronously.

vary-on-wait

Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

Notes:

1. When ONLINE(*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
 - Put tasks in place to manage the line
 - Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
 - Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

Top

Text 'description' (TEXT)

Specifies text that briefly describes the line description.

***BLANK**

Text is not specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Attached nonswitched ctls (CTL)

Specifies the name of the controller description to which this object is attached.

Note: This parameter is valid only when the associated controller description has been created before this line description.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

***CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

***LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

```
CRTLINFAX  LIND(FAXLINE)  RSRNAME(LIN041 LIN042)
```

This command creates fax line description named FAXLINE with resource names of LIN041 and LIN042.

Top

Error messages

*ESCAPE Messages

CPF2718

Line description &1 not created due to errors.

[Top](#)

Create Line Desc (Frame Relay) (CRTLINFR)

Where allowed to run: All environments (*ALL)
 Threadsafte: No

Parameters
 Examples
 Error messages

The Create Line Description (Frame-Relay Network) (CRTLINFR) command creates a line description for a frame-relay network (FR) line. More information about using this command is in the Communications Configuration book, SC41-5401.

Restriction: You must have input/output system configuration (*IOSYSCFG) special authority to use this command.

Top

Parameters

Keyword	Description	Choices	Notes
LIND	Line description	<i>Name</i>	Required, Positional 1
NWI	Attached NWI	<i>Name</i> , * NONE	Optional, Positional 2
NWIDLCI	DLC identifier	1-1018, * NONE	Optional, Positional 3
ONLINE	Online at IPL	* YES , * NO	Optional
VRYWAIT	Vary on wait	15-180, * NOWAIT	Optional
MAXCTL	Maximum controllers	1-256, 40	Optional
MAXFRAME	Maximum frame size	265-8182, 1590	Optional
EXCHID	Exchange identifier	05600000-056FFFFF, * SYSGEN	Optional
SSAP	SSAP list	Single values: * SYSGEN Other values (up to 24 repetitions): <i>Element list</i>	Optional
	Element 1: Source service access point	02-FE	
	Element 2: SSAP maximum frame	265-8182, * MAXFRAME , 265, 502, 1014, 2038, 4086, 8182	
	Element 3: SSAP type	* CALC , * NONSNA , * SNA , * HPR	
TEXT	Text 'description'	<i>Character value</i> , * BLANK	Optional
LINKSPEED	Link speed	1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000 , 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000	Optional
NETCTL	Network controller	<i>Name</i>	Optional
COSTCNN	Cost/connect time	0-255, 0	Optional
COSTBYTE	Cost/byte	0-255, 0	Optional
SECURITY	Security for line	* PKTSWTNET , * NONSECURE , * UNDGRDCBL , * SECURECND , * GUARDCND , * ENCRYPTED , * MAX	Optional
PRPDLY	Propagation delay	* PKTSWTNET , * LAN , * MIN , * TELEPHONE , * SATELLITE , * MAX	Optional
USRDFN1	User-defined 1	0-255, 128	Optional

Keyword	Description	Choices	Notes
USRDFN2	User-defined 2	0-255, <u>128</u>	Optional
USRDFN3	User-defined 3	0-255, <u>128</u>	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
MSGQ	Message queue	Single values: *SYSVAL, *SYSOPR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
AUT	Authority	<i>Name</i> , *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

Top

Line description (LIND)

Specifies the name of the line description

This is a required parameter.

Top

Attached NWI (NWI)

Specifies, for a nonswitched connection, the frame relay network interface description containing the DLCI to which this line permanently attaches. If a DLCI is not specified for the network interface, a description cannot be specified. If a DLCI is specified for the network interface, a description must be specified.

*NONE

No network interface is specified.

name Specify the name of the network interface to which this line permanently attaches.

Top

DLC identifier (NWIDLCI)

Specifies the data link connection identifier (DLCI) for the network interface.

Note: NWIDLCI(*NONE) must be specified when RSRNAME(*NWID) is not specified. Otherwise, NWIDLCI(*NONE) can be specified only when NWI(*NONE) is also specified.

*NONE

A DLCI is not specified for the network interface.

data-link-connection-ID

Specify the DLCI for the network interface to which this line permanently attaches. Valid values range from 1 through 1018.

Top

Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES** The line is automatically varied on at initial program load (IPL).

***NO** This line is not automatically varied on at IPL.

Top

Vary on wait (VRYWAIT)

Specifies whether the line is varied on asynchronously or synchronously. For synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

***NOWAIT**

The system does not wait for vary on completion. The line is varied on asynchronously.

vary-on-wait

Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

Notes:

1. When ONLINE(*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
 - Put tasks in place to manage the line
 - Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
 - Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

Top

Maximum controllers (MAXCTL)

Specifies the maximum number of controllers supported by a line.

40 The line supports 40 controllers.

maximum-controllers

Specify a number large enough to account for all controllers currently active to this network, and the controllers that will be attached in the near future. Valid values range from 1 through 256.

Top

Maximum frame size (MAXFRAME)

Specifies the maximum frame (path information unit (PIU)) size that the controller can send or receive. This value is used to calculate request unit (RU) sizes. Since the maximum PIU size that the controller can send or receive is negotiated at exchange identifier time, the maximum PIU size used at run time may be different. This value matches the corresponding value on the host system. The recommended MAXFRAME values are: 502, 1014, 1590, 2038, 4086, and 8182 bytes.

1590 The maximum frame size is 1590 bytes.

maximum-frame-size

Specify the maximum frame size value to be used. Valid values range from 265 through 8182.

Top

Exchange identifier (EXCHID)

Specifies the hexadecimal exchange identifier that is used to identify the local system to the remote system. The 8-digit hexadecimal exchange identifier contains three digits for the block number and five digits for the identifier of this system.

***SYSGEN**

The operating system generates the exchange identifier.

exchange-identifier

Specify (if the *SYSGEN value is not specified) an exchange identifier composed of eight hexadecimal digits starting with 056.

Top

SSAP list (SSAP)

Specifies the source service access point (SSAP). The most commonly used SNA SSAP is hex 04. All SSAP values must be unique.

***SYSGEN**

The system automatically creates three SSAPs: hex 04 for Systems Network Architecture (SNA) applications, hex C8 for high-performance routing (HPR) applications, and hex AA for Transmission Control Protocol/Internet Protocol (TCP/IP) applications.

The possible SSAPs value is:

source-service-access-point

Specify a source service access point for receiving and transmitting data. A maximum of 24 SSAP values can be specified.

- For TCP/IP applications, the SSAP must be AA.
- For SNA applications, the SSAP must be a hex value ranging from 04 through 9C in multiples of four (04, 08, 0C, and so on).
- For HPR applications, the SSAP must be hex C8.
- For non-SNA applications, the SSAP must be a hex value ranging from 02 through FE in multiples of two (02, 04, 06, and so on).

The possible Frame Size for SSAPs values are:

***MAXFRAME**

The frame size specified on the MAXFRAME parameter is used.

SSAP-maximum-frame

Specify the maximum SSAP frame size (the maximum size of the data field that can be transmitted or received). Valid values for this parameter range from 265 through 8182 bytes.

Note: This value cannot be larger than the value specified on the MAXFRAME parameter.

The possible SSAP Type values are:

***CALC**

The system determines the SSAP type based on the following hex values:

- 04 through 9C, divisible by 4 (for SNA)
- C8 (for HPR)
- 02 through FE, divisible by 2 (for non-SNA)

***SNA** The SSAP is used for SNA communications. Valid values range from hex 04 through hex 9C in multiples of four (04, 08, 0C, and so on).

***NONSNA**

The SSAP is used for non-SNA communications. Valid values range from hex 02 through hex FE in multiples of two (02, 04, 06, and so on).

***HPR** The SSAP is used for HPR communications. It also can be used for SNA applications. The valid value is hex C8.

Top

Text 'description' (TEXT)

Specifies text that briefly describes the line description.

***BLANK**

Text is not specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Link speed (LINKSPEED)

Specifies the link speed in bits per second (bps). This parameter is valid only if APPN is used on the system.

64000 The link speed is 64000 bps.

link-speed

Specify the link speed. Valid values are: 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000.

Top

Network controller (NETCTL)

Specifies the name of an existing network controller.

Top

Cost/connect time (COSTCNN)

Specifies the relative cost of being connected on the line. This parameter is required only if APPN is used on the system.

0 The cost per connect time is 0.

cost-per-connect-time

Specify a value ranging from 0 through 255.

Top

Cost/byte (COSTBYTE)

Specifies the relative cost per byte for sending and receiving data on the line. This parameter is required only if APPN is used on the system.

0 The cost per byte is 0.

cost-per-byte

Specify a value ranging from 0 through 255.

Top

Security for line (SECURITY)

Specifies the security level of the physical line. This parameter is valid only if APPN is used on the system.

***PKTSWTNET**

A packet switched network is used. Data does not always follow the same path through the network.

***NONSECURE**

Normal priority is used.

***UNDGRDCBL**

An underground cable is used.

***SECURECND**

A secure, unguarded conduit (for example, a pressurized pipe) is used.

***GUARDCND**

A guarded conduit, which is protected against physical tapping, is used.

***ENCRYPTED**

Data flowing on the line is encrypted.

***MAX** A guarded conduit, protected against physical and radiation tapping, is used.

Top

Propagation delay (PRPDLY)

Specifies the level of propagation delay on the line. This parameter is valid only if APPN is used on the system. The order of the values from shortest to longest delay is *MIN, *LAN, *TELEPHONE, *PKTSWTNET, and *SATELLITE.

***PKTSWTNET**

The packet switched network propagation delay is used.

***LAN** The local area network propagation delay is used.

***MIN** The minimum propagation delay is used.

***TELEPHONE**

The telephone propagation delay is used.

***SATELLITE**

The satellite propagation delay is used.

***MAX** The maximum propagation delay is used.

Top

User-defined 1 (USRDFN1)

Specifies the first of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.

128 A value 128 is used.

user-defined-1

Specify a value ranging from 0 through 255.

Top

User-defined 2 (USRDFN2)

Specifies the second of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.

128 A value 128 is used.

user-defined-2

Specify a value ranging from 0 through 255.

Top

User-defined 3 (USRDFN3)

Specifies the third of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.

128 A value 128 is used.

user-defined-3

Specify a value ranging from 0 through 255.

Top

Recovery limits (CMNRCYLMT)

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

2 Two recovery attempts are made within the interval specified.

count-limit

Specify the number of recovery attempts to be made. Valid values range from 0 through 99.

5 A 15-second time-out period is used.

time-interval

Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

***SYSVAL**

The recovery limits specified in the QCMNRCYLMT system value are used.

Top

Message queue (MSGQ)

Specifies the message queue to which operational messages are sent.

***SYSVAL**

The value in the system value QCFGMSGQ is used.

***SYSOPR**

Messages are sent to the system operator message queue (QSYS/QSYSOPR).

Qualifier 1: Message queue

name Specify the name of the message queue to which operational messages are sent.

Qualifier 2: Library

name Specify the name of the library where the message queue is located.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

***CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

***LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library

containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

```
CRTLINFR  LIND(FRLIN)  NWI(NEWONE)  NWIDLCI(1001)
           ONLINE(*YES)
           VRYWAIT(*NOWAIT)  MAXFRAME(1600)  LINKSPEED(2400)
```

This command creates frame relay line FRLIN. FRLIN is attached to a frame relay NWI named NEWONE using DLCI number 1001. FRLIN is automatically varied on at initial program load (IPL). The system does not wait for the vary on to complete; therefore, the line is varied on asynchronously. The maximum frame size for this line is 1600 and the link speed is 2400 bits per second (bps).

Top

Error messages

*ESCAPE Messages

CPF2718

Line description &1 not created due to errors.

Top

Create Line Desc (PPP) (CRTLINPPP)

Where allowed to run: All environments (*ALL)
 Threadsafte: No

Parameters
 Examples
 Error messages

The Create Line Description (Point-to-Point Protocol (PPP)) (CRTLINPPP) command creates a line description for a PPP line. More information about using this command is in the Communications Configuration book, SC41-5401.

Restriction: You must have input/output system configuration (*IOSYSCFG) special authority to use this command.

Top

Parameters

Keyword	Description	Choices	Notes
LIND	Line description	<i>Name</i>	Required, Key, Positional 1
RSRCNAME	Resource name	<i>Name</i>	Required, Key, Positional 2
CNN	Connection type	* SWTPP , *NONSWTPP, *NONSWTCAL, *NONSWTANS	Optional, Key
FRAMING	Framing type	* ASYNC , *SYNC	Optional
INTERFACE	Physical interface	<i>Character value</i> , * RS232V24 , *RS449V36, *V35, *X21, *INTMODEM	Optional
NWI	Attached nonswitched NWI	<i>Name</i>	Optional
NWICHLNBR	NWI channel number	<i>Character value</i>	Optional
SWTNWILST	Switched NWI list	Single values: * NONE Other values (up to 64 repetitions): <i>Element list</i>	Optional
	Element 1: NWI description	<i>Name</i>	
	Element 2: NWI channel type	* B	
	Element 3: NWI channel number	* CALC , 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30	
ONLINE	Online at IPL	* NO , *YES	Optional
VRYWAIT	Vary on wait	15-180, * NOWAIT	Optional
LINESPEED	Line speed	<i>Character value</i> , 115200	Optional
INFTRFTYPE	Information transfer type	<i>Character value</i> , * UNRESTRICTED , *V110, *DOV, *ASYNCMODEM, *SYNCMODEM	Optional
MDMINZCMD	Modem init command string	<i>Character value</i> , * NONE	Optional
MAXFRAME	Maximum frame size	<i>Character value</i> , 2048	Optional
SWTCNN	Switched connection type	<i>Character value</i> , * BOTH , *ANS, *DIAL	Optional
SWTNWISLCT	Switched NWI selection	<i>Character value</i> , * FIRST , *CALC	Optional
CNNLSTOUT	Outgoing connection list	<i>Name</i>	Optional
CNNLSTOUTE	Connection list entry	<i>Name</i>	Optional
CNNLSTIN	Incoming connection list	<i>Name</i> , * NETATR	Optional
CLOCK	Clocking	* MODEM , *INVERT, *LOOP	Optional
DIALCMD	Dial command type	<i>Character value</i> , * ATCMD , *V25BIS	Optional

Keyword	Description	Choices	Notes
SETMDMASC	Set modem to ASYNC command	Character value, <u>*NONE</u> , END	Optional
CALLNBR	Calling number	Character value, <u>*NONE</u>	Optional
FLOWCNTL	Flow control	Character value, <u>*HARDWARE</u> , *NO	Optional
NETCTL	Network controller	Name	Optional
CTSTMR	Clear To Send timer	10-60, <u>25</u>	Optional
INACTTMR	Inactivity timer	Character value, <u>*NOMAX</u>	Optional
RMTANSTMR	Remote answer timer	Character value, <u>60</u>	Optional
NRZI	NRZI data encoding	*YES, <u>*NO</u>	Optional
TEXT	Text 'description'	Character value, <u>*BLANK</u>	Optional
ACCM	Async control character map	Hexadecimal value, <u>00000000</u>	Optional
LCPAUT	LCP authentication values	Element list	Optional
	Element 1: Remote peer challenge timer	Integer, <u>*NONE</u>	
	Element 2: Max authentication attempts	1-255, <u>5</u>	
LCPCFG	LCP configuration values	Element list	Optional
	Element 1: Configuration retry timer	0.1-60.0, <u>3.0</u>	
	Element 2: Max configuration failures	1-255, <u>5</u>	
	Element 3: Max configuration requests	1-255, <u>10</u>	
	Element 4: Max termination requests	1-255, <u>2</u>	
COMPRESS	Compression	Character value, <u>*STACLZS</u> , *NONE	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: Element list	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
MSGQ	Message queue	Single values: *SYSVAL, *SYSOPR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	Name	
	Qualifier 2: Library	Name	
AUT	Authority	Name, <u>*CHANGE</u> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

Top

Line description (LIND)

Specifies the name of the line description

This is a required parameter.

Top

Resource name (RSRCNAME)

Specifies the resource name that identifies the hardware that the description represents.

Note: Use the Work With Hardware Resources (WRKHDWRSC) command with *CMN specified for the TYPE parameter to help determine the resource name.

Top

Connection type (CNN)

Specifies the type of line connection used.

Note: *NONSWTCAL and *NONSWTANS valid only when INTERFACE(*INTMODEM), or INFTRFTYPE *ASYNCMODEM or *SYNCMODEM.

***SWTPP**

A switched point-to-point line is used.

***NONSWTPP**

A nonswitched point-to-point line is used.

***NONSWTCAL**

A nonswitched point-to-point line is used for call mode.

***NONSWTANS**

A nonswitched point-to-point line is used for answer mode.

Top

Framing type (FRAMING)

Specifies whether the line uses asynchronous or synchronous framing.

Note: Not valid when RSRCTYPE(*NWID).

***ASYNC**

Asynchronous frames are used.

***SYNC**

Synchronous frames are used.

Top

Physical interface (INTERFACE)

Specifies the type of physical interface on the input/output adapter (IOA) port.

Note: Not valid when RSRCTYPE(*NWID).

***RS232V24**

The RS232/V.24 interface is used.

***RS449V36**

The RS449/V.36 interface is used.

***X35** The X.35 interface is used.

***X21** The X.21 interface is used.

***INTMODEM**

The integrated modem interface is used.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

Attached nonswitched NWI (NWI)

Specifies, for a nonswitched connection, the network interface description containing the channel to which this line permanently attaches.

Note: Valid only when RSRCTYPE(*NWID) and CNN not *SWTPP.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

NWI channel number (NWICHLNBR)

Specifies, for a nonswitched connection, the channel number (1 through 30) of the network interface description that is used by this line description. 2, 23 or 30 channels are available for each network interface description, depending on whether the network interface is basic or primary rate and what the network type is, but only one line description can be permanently attached to a channel. The Display Network Interface Description (DSPNWID) command is used to display information about the channel numbers for a given NWID.

Note: Valid only when RSRCTYPE(*NWID) and CNN not *SWTPP.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

Switched NWI list (SWTNWILST)

Specifies, for ISDN/T1 switched connections, a list of network interface descriptions to which this line can be attached. A network interface description is chosen from the list based on the value specified by the switched NWI selection parameter (SWTNWISLCT) at the time an incoming or outgoing call is processed.

Note: Valid only when RSRCTYPE(*NWID) and CNN(*SWTPP).

The possible **Network Interface Description Name** values are:

***NONE**

No network interface description is specified.

name Specify, for switched connections, the name of the network interface description to which this line attaches.

The possible **Network Interface Channel Type** values are:

***B** The B channel is used.

The possible **Network Interface Channel-Number** values are:

*CALC

The system selects one of the 30 channel numbers (based on availability) defined for the network interface description when an incoming or outgoing call is processed.

NWI-channel-number

Specify a channel number (1 to 30) to which the line description is restricted.

Top

Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

*YES The line is automatically varied on at initial program load (IPL).

*NO This line is not automatically varied on at IPL.

Top

Vary on wait (VRYWAIT)

Specifies whether the line is varied on asynchronously or synchronously. For synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

*NOWAIT

The system does not wait for vary on completion. The line is varied on asynchronously.

vary-on-wait

Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

Notes:

1. When ONLINE(*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
 - Put tasks in place to manage the line
 - Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
 - Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

Top

Line speed (LINESPEED)

Specifies the line speed in bits per second (bps).

9600 9600 bps is used.

line-speed

Specify the line speeds. Valid line speeds are: 600, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 57600, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 392000, 448000, 504000, 512000, 560000, 576000, 616000, 640000, 672000, 704000, 728000,

768000, 784000, 832000, 840000, 896000, 952000, 960000, 1008000, 1024000, 1064000, 1088000, 1120000, 1152000, 1176000, 1216000, 1232000, 1280000, 1288000, 1344000, 1400000, 1408000, 1456000, 1472000, 1512000, 1536000, 1568000, 1600000, 1624000, 1664000, 1680000, 1728000, 1736000, 1792000, 1856000, 1920000, 1984000, or 2048000 bits per second.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

Information transfer type (INFTRFTYPE)

Specifies the information transfer type. The information transfer type determines the layer 1 protocol.

Note: Valid only when RSRCTYPE(*NWID) and CNN not *SWTPP.

*UNRESTRICTED

The data-channel traffic appears as digital information; no physical transformation is required and each B-channel operates at capacity (64k bps).

***V110** The transfer type is V-series Recommendation 110. Each B-channel operates at 56k bps.

***DOV** Allows Data Over Voice (DOV) digital data to be transferred over an ISDN voice call. Also, this is referred to as Data Over Voice Bearer Service (DOVBS), Data Over Speech Bearer Service (DOSBS), TollSaver, or TollMizer. This option should only be used if an ISDN voice call is less expensive than an ISDN data call or if a bearer service for data is not available. The remote location must also support this feature. Data is transferred at 56Kbps in each direction.

*ASYNCMODEM

Allows data from the integrated asynchronous modem to be transferred over an ISDN voice call. This option should be used to connect to a remote location that is using an asynchronous modem on an analog telephone line. Data is transferred at modem speeds up to 33.6Kbps from the remote analog device to this digital connection and up to 56Kbps from this digital connection to the remote analog device.

*SYNCMODEM

Allows data from the integrated synchronous modem to be transferred over an ISDN voice call. This option should be used to connect to a remote location that is using a synchronous modem on an analog telephone line. Data is transferred at modem speeds up to 33.6Kbps from the remote analog device to this digital connection and up to 56Kbps from this digital connection to the remote analog device.

Top

Modem init command string (MDMINZCMD)

Specifies the modem initialization command string sent to set the modem

Note: Valid only when INTERFACE(*INTMODEM) or INFTRFTYPE(*ASYNCMODEM) or INFTRFTYPE(*SYNCMODEM) is specified.

*NONE

No command string is sent to the modem.

command-string

Specifies up to 60 characters that represent the command string sent to the modem. Valid characters are upper case A thru Z, lower case a thru z, numbers 0 thru 9, and special characters:

Period
Less than sign
Left parenthesis
Plus sign
Ampersand
Asterisk
Right parenthesis
Semicolon
Minus sign
Slash
Comma
Underline
Greater than sign
Question mark
Colon
Equal sign
Spaces
Number sign
Double quote
Exclamation point
At sign
Hat symbol
Percent
Left square bracket
Right square bracket
Back slash

Note: The modem initialization string must begin with the two characters 'AT'.

[Top](#)

Maximum frame size (MAXFRAME)

Specifies the maximum length for the information field in a PPP frame, including padding, but not including the protocol field. It is also known as the Maximum Receive Unit (MRU). By negotiation, consenting PPP implementations may use other values for the MRU.

2048 The maximum frame size is 2048 bytes.

maximum-frame-size

Specify the maximum frame size (in bytes). Valid maximum frame sizes range from 1500 to 4096 bytes.

[Top](#)

Switched connection type (SWTCNN)

Specifies, for the switched line, whether the line is used for incoming calls, outgoing calls, or both incoming and outgoing calls.

***BOTH**

The line is used for both incoming and outgoing calls.

***ANS** The line is used for incoming calls only.

***DIAL**

The line is used for outgoing calls only.

[Top](#)

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

Switched NWI selection (SWTNWISLCT)

Specifies the method used to select network interfaces from the switched network interface list.

Note: Valid only when RSRCTYPE(*NWID) and CNN(*SWTPP).

*FIRST

Selection begins with the first network interface specified in the switched network interface list.

*CALC

The system calculates which network interface is selected.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

Outgoing connection list (CNLSTOUT)

Specifies, for ISDN/T1 switched connections, the name of a connection list object that contains the ISDN/T1 assigned numbers for a dial-out operation to the ISDN/T1.

Note: Valid only when RSRCTYPE(*NWID) and CNN(*SWTPP).

name Specify the name of the connection list for dial out operations.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

Connection list entry (CNLSTOUTE)

Specifies, for ISDN/T1 switched connections, the entry name from the connection list used to make a call to the ISDN/T1. The connection list must be specified on the CNLSTOUT parameter.

Note: Valid only when RSRCTYPE(*NWID) and CNN(*SWTPP).

name Specify the entry name from the connection list.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

Incoming connection list (CNLSTIN)

Specifies for ISDN/T1 switched connections the name of the connection list that is used to retrieve call information (or connection) for identifying authorized incoming calls.

Note: Valid only when RSRCTYPE(*NWID) and CNN(*SWTPP).

*NETATR

The connection list used by this line description is taken from the list of system default network

attributes that were identified at IPL (Initial Program Load). The Display Network Attributes (DSPNETA) command can be used to see the name of the connection list.

name Specify the name of the connection list used for this line description.

Top

Clocking (CLOCK)

Specifies how the clocking function for the line is provided.

Note: Not valid when RSRCTYPE(*NWID).

*MODEM

The modem supplies the clocking function.

*LOOP

The receiving clock provided by the modem data circuit-terminating equipment (DCE) is looped back to the (DTE) transmitting clock. This option can be used to improve high speed data transmission when the modem (DCE) supports such an option. The valid interfaces for *LOOP are *V35, *X21BISV35, and *RS449V36.

*INVERT

The transmit clock provided by the modem data circuit-terminating equipment (DCE) is inverted before use. This option can be used when having problems with high speed data transmission and the modem (DCE) does not support looped clocking. The valid interfaces for *INVERT are *V35, *X21, *X21BISV35, and *RS449V36.

Top

Dial command type (DIALCMD)

Specifies the type of dial command used to establish a switched connection with a remote system.

Note: Not valid when RSRCTYPE(*NWID).

*ATCMD

The Attention (AT) command set (sometimes referred to as the Hayes command set) is a group of modem commands that allow an application program to control the modem while it is operating asynchronously. The application program must place all AT commands directly into the data stream. The AT commands supported are dependent on the specific modem being used.

*V25BIS

Uses the International Telecommunication Union - Telecommunication (ITU-T) (formerly known as CCITT) V.25 bis standard for serial automatic calling

Top

Set modem to ASYNC command (SETMDMASC)

Specifies the ASCII V.25 bis command string to send to the modem to set the modem to ASYNC mode.

Note: Not valid when RSRCTYPE(*NWID).

*NONE

No V.25 bis command string is sent to the modem.

***END** The END command string is generally used as the command to set most modems to ASYNC

mode. For cases that do not use the END command string, you should enter the command string appropriate for that modem to set it to ASYNC mode.

command-string

Specifies up to 40 characters that represent the command string sent to the modem. Valid characters are upper case A thru Z, lower case a thru z, numbers 0 thru 9, and special characters:

- . Period
- < Less than sign
- (Left parenthesis
- + Plus sign
- & Ampersand
- * Asterisk
-) Right parenthesis
- ; Semicolon
- Minus sign
- / Slash
- , Comma
- _ Underline
- > Greater than sign
- ? Question mark
- : Colon
- = Equal sign

Top

Calling number (CALLNBR)

Specifies the local telephone number of the line used for the V.25 bis call request with identification (CRI) dial command. This parameter is used when the CRI function is needed for V.25 bis. When V.25 bis CRI dialing is used, the system takes the called (connection) number from the C>NNNBR parameter of the controller description, adds a separator character (;), and concatenates the calling number at the end. Specify the calling number only if the modem and the network both support the CRI dial command.

Note: Not valid when RSRNAME(*NWID).

***NONE**

The Call Request Normal (CRN) dial command is used by the V.25 bis line.

calling-number

Specify up to 32 characters that represent the local telephone number for V.25 bis CRI auto-dialing.

Top

Flow control (FLOWCNTL)

Specifies whether the system controls the data flow.

Note: Not valid when RSRCNAME(*NWID).

***NO** Prevents the hardware from generating or recognizing flow control characters, and prevents the use of Request To Send (RTS) and Clear To Send (CTS) flow control signals.

***HARDWARE**

Hardware flow control is performed using the Request to Send (RTS) and Clear To Send (CTS) flow control signals.

Top

Network controller (NETCTL)

Specifies the name of an existing network controller.

Top

Clear To Send timer (CTSTMR)

Specifies the amount of time the system waits for the modem to enter or exit the Clear to Send (CTS) state before signaling an error.

Note: Not valid when RSRCNAME(*NWID).

25 The system waits up to 25 seconds for the CTS state to begin or end.

timer-value

Specify a value ranging from 10 through 60 seconds.

Top

Inactivity timer (INACTTMR)

Specifies the time (in seconds) that the system waits for activity on a switched line before disconnecting.

***NOMAX**

The inactivity timer is disabled.

timer-value

Specify a value ranging from 15 through 65535 seconds.

Top

Remote answer timer (RMTANSTMR)

Specifies the amount of time the system waits for the modem to enter the DSR state after dialing before signaling an error.

Note: Not valid when RSRCNAME(*NWID).

60 The system waits 60 seconds before signaling an error.

timer-value

Specify a value ranging from 30 through 120 seconds.

NRZI data encoding (NRZI)

Specifies whether non-return-to-zero-inverted (NRZI) data encoding is used for modems that are sensitive to certain bit patterns in the data stream. This ensures that the signal does not remain the same for an extended period of time. For digital phone lines, *NO is suggested.

Note: Not valid when RSRNAME(*NWID).

NOTES:

1. All data communications equipment on the line must use the same data transmission coding method.
2. Framing (FRAMING parameter) must be *SYNC to use NRZI data encoding.

*YES NRZI data encoding is used.

*NO NRZI data encoding is not used.

Top

Text 'description' (TEXT)

Specifies text that briefly describes the line description.

*BLANK

Text is not specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Async control character map (ACCM)

Specifies a mapping for control characters in the transmitted data that may be either removed or introduced by data communications equipment on the line.

Note: ACCM(00000000) must be specified unless FRAMING(*ASYNC) is specified.

Host system sends all characters specified by this map to the remote peer as a 2-byte escape sequence. Additionally, all characters specified by this map must be sent by the remote peer to host system as a 2-byte escape sequence. Any characters specified in this map that are not escaped are discarded by host system.

Attention

The default value for this parameter does not normally need to be changed. Do not specify a different value for this parameter unless you are fully aware of the effect of the change.

00000000

No ASCII control characters between '00'X and '1F'X are escaped.

control-character-map

Specifies a 32-bit value as a 8-digit hexadecimal number. Each bit in this 32-bit value indicates whether a character is escaped or not. If the bit value is set to 1, the corresponding character is escaped. If the bit is set to 0, the control character is not escaped.

The ordinal number of a bit in the 32-bit value determines the character affected. The leftmost bit (number 0) corresponds to the character '00'X. The rightmost bit (number 31) corresponds to the character '1F'X. For example,

- Specifying ACCM(80000000) requires character '00'X be sent and received as the 2-byte escape sequence '7D20'X. Characters '01'X to '1F'X are not mapped.
- Specifying ACCM(00000001) requires character '1F'X be sent and received as the 2-byte escape sequence '7D3F'X. Characters '00'X to '1E'X are not mapped.
- Specifying ACCM(0000A000) requires characters '11'X and '13'X be sent and received as the 2-byte escape sequence '7D31'X and '7D33'X, respectively.

Top

LCP authentication values (LCPAUT)

Specifies values controlling how the Link Control Protocol layer of host PPP authenticates a remote peer.

The **Remote peer challenge timer** value specifies the interval, in minutes, to periodically issue an authentication challenge to the remote peer.

*NONE

The remote peer is authenticated only once when the PPP link is initially opened. No additional authentication challenges are issued.

challenge-interval

Specify the interval, in minutes, to re-validate the remote peer's authentication.

The **Maximum authentication attempts** value specifies the maximum number of unacknowledged authentication challenges sent to a remote peer before assuming that the peer is unable to respond.

NOTES:

1. A challenge is considered unacknowledged when host system does not receive a response within the interval specified by the configuration retry timer (element 1 of parameter LCPCFG).
2. This value does not affect how host system responds when a peer fails authentication. Host system always terminates communication without any retry if a response from the remote peer fails authentication.
5. If the remote peer does not respond after host system has sent five authentication challenges, host system terminates communication.

maximum-number-of-attempts

Specifies the maximum number of unacknowledged challenges sent to a remote peer before communication is terminated.

Top

LCP configuration values (LCPCFG)

Specifies values controlling how the Link Control Protocol layer of host PPP negotiates mutually acceptable link configuration values with a remote peer.

Attention:

The default values for this parameter do not normally need to be changed. Do not specify different values for this parameter unless you are fully aware of the effect of the change.

The **Configuration retry timer** value specifies the interval, in seconds, that host system waits before resending an unacknowledged configuration, termination, or authentication challenge request to a remote peer.

3.0 Unacknowledged configuration requests are resent every 3 seconds.

retry-interval

Specify the time interval after which unacknowledged requests are resent.

The **Maximum configuration failures** value specifies the maximum number of attempts that are made to negotiate a mutually acceptable configuration with a remote peer before assuming that configuration is not converging.

5 If the configuration does not converge after 5 attempts, host system terminates communication.

maximum-number-of-attempts

Specifies the maximum number of attempts made to negotiate a mutually acceptable configuration.

The **Maximum configuration requests** value specifies the maximum number of unacknowledged configuration requests sent to a remote peer before assuming that the peer is unable to respond.

10 If host system transmits ten configuration requests to the remote peer but does not receive a response, host system terminates communication.

maximum-number-of-attempts

Specifies the maximum number configuration attempts made before host system terminates communication.

The **Maximum termination requests** value specifies the maximum number of unacknowledged termination request packets sent to a remote peer before assuming that the peer is unable to respond.

2 If no response is received after sending two termination requests, host system terminates communication immediately.

maximum-number-of-attempts

Specifies the maximum number of attempts made to notify the remote peer that communication will be terminated.

Top

Compression (COMPRESS)

Specifies the compression function is provided.

Note: This parameter allows you to enable a compression protocol, but does not guarantee that compression will be used. Data compression will not be activated unless both the local system and the remote peer system connects to agree to use the specified compression protocol.

***STACLZS**

Host system is allowed to negotiate the use of STAC LZS data compression.

***NONE**

Host system is not allowed to negotiate or use any Point-to-Point Compression protocol.

Top

Recovery limits (CMNRCYLMT)

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

The possible **Maximum Recovery Limit** values are:

- 2 Two recovery attempts are made within the specified time interval.

count-limit

Specify the number of recovery attempts to be made. Valid values range from 0 through 99.

The possible **Recovery Time Interval** values are:

- 5 The specified number of recovery attempts is made within a 5-minute interval.

time-interval

Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, then the value 0 specifies infinite recovery.

The possible **Other Single Value** is:

***SYSVAL**

The recovery limits specified in the system value QCMNRCYLMT are used.

Top

Message queue (MSGQ)

Specifies the message queue to which operational messages are sent.

***SYSVAL**

The value in the system value QCFGMSGQ is used.

***SYSOPR**

Messages are sent to the system operator message queue (QSYS/QSYSOPR).

Qualifier 1: Message queue

name Specify the name of the message queue to which operational messages are sent.

Qualifier 2: Library

name Specify the name of the library where the message queue is located.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

***CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can

change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**
The user cannot access the object.

***LIBCRTAUT**
The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

```
CRTLINPPP LIND(PPP01) RSCRNAME(LIN031)
```

This command creates a PPP line description named PPP01 with a resource name of LIN031.

Top

Error messages

*ESCAPE Messages

CPF261E
Line description &1 not created due to errors.

Top

Create Line Desc (SDLC) (CRTLINSDLC)

Where allowed to run: All environments (*ALL)
 Threadsafte: No

Parameters
 Examples
 Error messages

The Create Line Description (SDLC) (CRTLINSDLC) command creates a line description for a synchronous data link control (SDLC) line. More information about using this command is in the Communications Configuration book, SC41-5401.

Restriction: You must have input/output system configuration (*IOSYSCFG) special authority to use this command.

Top

Parameters

Keyword	Description	Choices	Notes
LIND	Line description	<i>Name</i>	Required, Positional 1
RSRCNAME	Resource names	Values (up to 6 repetitions): <i>Name</i>	Required, Positional 2
ONLINE	Online at IPL	<u>*YES</u> , *NO	Optional
ROLE	Data link role	<u>*NEG</u> , *PRI, *SEC	Optional
INTERFACE	Physical interface	<u>*RS232V24</u> , *RS530V36, *V35, *X21, *X21BISV24, *X21BISV35, *RS449V36, *INTMODEM	Optional
CNN	Connection type	<u>*NONSWTTP</u> , *SWTTP, *MP, *SHM, *NONSWTCAL, *NONSWTANS	Optional
SNBU	Switched network backup	<u>*NO</u> , *YES	Optional
SHMNODE	SHM node type	<u>*T21</u> , *T20	Optional
VRYWAIT	Vary on wait	15-180, <u>*NOWAIT</u>	Optional
AUTOCALL	Autocall unit	<u>*NO</u> , *YES	Optional
EXCHID	Exchange identifier	05600000-056FFFFF, <u>*SYSGEN</u>	Optional
NRZI	NRZI data encoding	<u>*YES</u> , *NO	Optional
MAXCTL	Maximum controllers	1-254, <u>1</u>	Optional
CLOCK	Clocking	<u>*MODEM</u> , *SYSTEM, *LOOP, *INVERT	Optional
LINESPEED	Line speed	600, 1200, 2400, 4800, 7200, <u>9600</u> , 14400, 19200, 48000, 56000, 57600, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 392000, 448000, 504000, 512000, 560000, 576000, 616000, 640000, 672000, 704000, 728000, 768000, 784000, 832000, 840000, 896000, 952000, 960000, 1008000, 1024000, 1064000, 1088000, 1120000, 1152000, 1176000, 1216000, 1232000, 1280000, 1288000, 1344000, 1400000, 1408000, 1456000, 1472000, 1512000, 1536000, 1568000, 1600000, 1624000, 1664000, 1680000, 1728000, 1736000, 1792000, 1856000, 1920000, 1984000, 2048000	Optional
MODEM	Modem type supported	<u>*NORMAL</u> , *V54, *IBMWRAP, *IBMLPDA1, *IBMLPDA2	Optional
SWTCNN	Switched connection type	<u>*BOTH</u> , *ANS, *DIAL	Optional
AUTOANS	Autoanswer	<u>*YES</u> , *NO	Optional
AUTODIAL	Autodial	<u>*NO</u> , *YES	Optional

Keyword	Description	Choices	Notes
MDMINZCMD	Modem init command string	<i>Character value</i> , * NONE	Optional
DIALCMD	Dial command type	* NONE , *V25BIS	Optional
ACR SRCNAME	Autocall resource name	<i>Name</i>	Optional
SHM CALLTMR	SHM call timer	1-60, * NONE	Optional
SHM MAXCNN	SHM maximum connect timer	1-254, 8 , *NOMAX	Optional
SHM ANSDLY	SHM answer delay timer	1-254, 11 , *NOMAX	Optional
SHM CALLFMT	SHM call format	0-15, * DNIC , *DCC	Optional
SHMACC	SHM access code	<i>Character value</i> , * X	Optional
CALLNBR	Calling number	<i>Character value</i> , * NONE	Optional
STNADR	Station address	01-FE	Optional
CNN POLLRTY	Connect poll retry	0-64, 7	Optional
CNNTMR	Connect timer	1-32767, * NOMAX	Optional
SHORTTMR	Short timer	10-600, 50	Optional
LONGTMR	Long timer	100-6000, 600	Optional
SHORTRTY	Short retry	0-254, 7	Optional
LONGRTY	Long retry	0-254, 1	Optional
CPSRTY	Call progress signal retry	Values (up to 11 repetitions): *CPS41, *CPS42, *CPS43, *CPS44, *CPS45, *CPS46, *CPS47, *CPS48, *CPS49, *CPS71, *CPS72	Optional
MAXFRAME	Maximum frame size	265, 521 , 1033, 2057	Optional
DUPLEX	Duplex	* HALF , *FULL	Optional
INACTTMR	Inactivity timer	150-4200, 300 , *NOMAX	Optional
POLL RSPDLY	Poll response delay	0-2048, 0	Optional
NPRDRCVTMR	Nonproductive receive timer	160-4200, 320	Optional
IDL TMR	Idle timer	5-300, 30	Optional
CNN POLLTMR	Connect poll timer	2-300, 30	Optional
POLL PAUSE	Poll cycle pause	0-2048, 0	Optional
FRAMERTY	Frame retry	0-64, 7	Optional
FAIR PLLTMR	Fair polling timer	5-60, 15	Optional
DSR DRPTMR	Data Set Ready drop timer	3-60, 6	Optional
AUTO ANSTYP	Autoanswer type	* DTR , *CDSTL	Optional
RMTANSTMR	Remote answer timer	30, 35, 40, 45, 50, 55, 60 , 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120	Optional
TEXT	Text 'description'	<i>Character value</i> , * BLANK	Optional
CTL	Attached nonswitched cts	Values (up to 254 repetitions): <i>Name</i>	Optional
MODEM RATE	Modem data rate select	* FULL , *HALF	Optional
THRESHOLD	Error threshold level	* OFF , *MIN, *MED, *MAX	Optional
MODULUS	Modulus	8 , 128	Optional
MAXOUT	Maximum outstanding frames	1-28, 7	Optional
CTSTMR	Clear To Send timer	10-60, 25	Optional
LINKSPEED	Link speed	* INTERFACE , *MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, *MAX	Optional
COSTCNN	Cost/connect time	0-255, * CNN	Optional

Keyword	Description	Choices	Notes
COSTBYTE	Cost/byte	0-255, * <u>CNN</u>	Optional
SECURITY	Security for line	* <u>NONSECURE</u> , *PKTSWTNET, *UNDGRDCBL, * <u>SECURECND</u> , *GUARDCND, *ENCRYPTED, *MAX	Optional
PRPDLY	Propagation delay	*MIN, *LAN, * <u>TELEPHONE</u> , *PKTSWTNET, *SATELLITE, *MAX	Optional
USRDFN1	User-defined 1	0-255, <u>128</u>	Optional
USRDFN2	User-defined 2	0-255, <u>128</u>	Optional
USRDFN3	User-defined 3	0-255, <u>128</u>	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
AUT	Authority	<i>Name</i> , * <u>CHANGE</u> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

Top

Line description (LIND)

Specifies the name of the line description

This is a required parameter.

Top

Resource names (RSRCNAME)

Specifies the resource name that identifies the hardware this description represents. Use the WRKHDWRSC command to determine the resource name.

This is a required parameter.

You can enter multiple values for this parameter.

Top

Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

*YES The line is automatically varied on at initial program load (IPL).

*NO This line is not automatically varied on at IPL.

Top

Data link role (ROLE)

Specifies whether the system is the primary station, or the secondary station, or whether the system dynamically negotiates the primary and secondary roles.

The primary station is the controlling station and the secondary station is the responding station. The primary station controls the data link by sending commands to the secondary station, and the secondary station responds to the commands.

***NEG** This value allows this system and the remote system to negotiate which station is primary.

***PRI** This system is the primary station on this communications line.

***SEC** This system is a secondary station on this communications line.

Top

Physical interface (INTERFACE)

Specifies the type of physical interface on the input/output adapter (IOA) port.

***RS232V24 (Async, BSC, X.25 and SDLC only)**

RS-232/V.24 physical interface.

***V35 (BSC and SDLC only)**

V.35 physical interface.

***X21 (X.25 and SDLC only)**

X.21 physical interface.

***X21BISV24 (X.25, BSC and SDLC only)**

X.21 bis/V.24 physical interface.

***X21BISV35 (X.25, BSC and SDLC only)**

X.21 bis/V.35 physical interface.

***RS449V36 (Async, BSC, X.25 and SDLC only)**

RS-449/V.36 physical interface.

***INTMODEM**

The integrated modem interface is used.

Top

Connection type (CNN)

Specifies the type of line connection.

***NONSWTPP**

A nonswitched point-to-point line is used.

***SWTPP**

A switched point-to-point line is used.

***MP** A nonswitched multipoint line.

***SHM** An X.21 short hold mode line.

***NONSWTCAL**

A nonswitched point-to-point line is used for call mode.

***NONSWTANS**

A nonswitched point-to-point line is used for answer mode.

Top

Switched network backup (SNBU)

Specifies, for nonswitched modems only, if the local modem supports the switched network backup utility (SNBU) feature. The backup feature is used to bypass a broken nonswitched (nonswitched line) connection by establishing a switched connection.

To activate SNBU, you must change the mode of the modem from nonswitched to switched. If the modem model is IBM 386x, 586x, or 786x, no change is required. Otherwise, specify *YES for the **Activate swt network backup (ACTSNBU)** parameter for the line description you are using.

*NO The local modem does not have the SNBU feature.

*YES The local modem has the SNBU feature.

Top

SHM node type (SHMNODE)

Specifies, for X.21 short hold mode lines only, the physical unit type of the controllers using the X.21 short hold mode line. This parameter is valid only if CNN(*SHM) is specified.

*T21 Specifies physical unit type 2.1 controllers. *NEG must also be specified for the **Data link role (ROLE)** parameter.

This value should be specified when using the following controllers:

- APPC controllers

*T20 Specifies physical unit type 2.0 controllers. *PRI or *SEC must be specified for the **Data link role (ROLE)** parameter.

This value should be specified when using the following controllers:

- host controllers
- remote work station controllers
- finance controllers

Top

Vary on wait (VRYWAIT)

Specifies whether the line is varied on asynchronously or synchronously. For synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

*NOWAIT

The system does not wait for vary on completion. The line is varied on asynchronously.

vary-on-wait

Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

Notes:

1. When ONLINE(*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
 - Put tasks in place to manage the line

- Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
- Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

Top

Autocall unit (AUTOCALL)

Specifies, for switched or switched network backup lines (Async, BSC, SDLC, or X.25 line), whether the line has an associated automatic call unit that can automatically call the remote system.

- *NO No automatic call unit is associated with this line.
- *YES An automatic call unit is associated with this line.

Top

Exchange identifier (EXCHID)

Specifies the hexadecimal exchange identifier that is used to identify the local system to the remote system. The 8-digit hexadecimal exchange identifier contains three digits for the block number and five digits for the identifier of this system.

*SYSGEN

This value allows the operating system to create the exchange identifier. Use the Display Line Description (DSPLIND) command to see the resulting exchange identifier.

exchange-ID

Specify an 8-character (four hexadecimal bytes) exchange identifier ranging from 05600000 through 056FFFFFF.

Top

NRZI data encoding (NRZI)

Specifies whether non-return-to-zero-inverted (NRZI) data coding is to be used for modems that are sensitive to certain bit patterns in the data stream. This ensures that the signal does not remain the same for an extended period of time.

Note: All data communications equipment on the line must use the same transmission method.

- *YES NRZI data coding is used.
- *NO NRZI data coding is not used.

Top

Maximum controllers (MAXCTL)

Specifies the maximum number of controllers that the line supports.

- 1 One controller is supported. Use the default (1) for:
 - Nonswitched point-to-point and switched point-to-point connection types

- Nonswitched point-to-point and multipoint connection types communicating with a host system using duplex, two-way simultaneous data transfer. (The host system specifies duplex data transfer in its NCP generation by specifying LINE ADDRESS=(nnn,FULL) on the LINE macroinstruction.)
- Short-hold mode lines specified with ROLE(*SEC) and SHMNODE(*T20)

Short-hold mode lines specified with ROLE(*PRI) or ROLE(*NEG) can support up to 64 controllers.

maximum-controllers

Specify value ranging from 1 to 254. The number must be large enough to account for all of the controllers that are currently active to this line, and for those controllers you know will be attached in the near future.

Top

Clocking (CLOCK)

Specifies how the clocking function for the line is provided.

***MODEM**

The clocking function for the line is provided by the modem.

***LOOP**

The receiving clock provided by the modem data circuit-terminating equipment (DCE) is looped back to the modem DCE on the system data terminal equipment (DTE) transmitting clock. This option can be used to provide high speed data transmission when the modem DCE supports such an option. The valid interfaces for *LOOP are *V35, *X21BISV35, and *RS449V36.

***INVERT**

The transmit clock provided by the modem data circuit-terminating equipment (DCE) is inverted before use. This option can be used when having problems with high speed data transmission and the modem (DCE) does not support looped clocking. The valid interfaces for *INVERT are *V35, *X21, *X21BISV35, and *RS449V36.

Top

Line speed (LINESPEED)

Specifies the line speed in bits per second (bps).

9600 9600 bps is used.

line-speed

Specify the line speeds. Valid lines speeds are: 600, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 57600, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 392000, 448000, 504000, 512000, 560000, 576000, 616000, 640000, 672000, 704000, 728000, 768000, 784000, 832000, 840000, 896000, 952000, 960000, 1008000, 1024000, 1064000, 1088000, 1120000, 1152000, 1176000, 1216000, 1232000, 1280000, 1288000, 1344000, 1400000, 1408000, 1456000, 1472000, 1512000, 1536000, 1568000, 1600000, 1624000, 1664000, 1680000, 1728000, 1736000, 1792000, 1856000, 1920000, 1984000, or 2048000 bits per second.

Top

Modem type supported (MODEM)

Specifies the type of modem supported on the communications line. Refer to the modem manual to determine the appropriate value to select.

***NORMAL**

No attempt is made to run diagnostic tests to your modem.

***V54** Certain types of diagnostic tests (as defined by the CCITT recommendations) are run to your modem. This system supports CCITT V.54 loop 3, (a local loop back,) and loop 2, (which is a remote loop back).

***IBMWRAP**

An IBM modem with wrap test capabilities is used on the communications line.

***IBMLPDA1**

An IBM modem with Link Problem Determination Aid-1 (LPDA-1) is used on the line.

***IBMLPDA2**

An IBM modem with Link Problem Determination Aid-2 (LPDA-2) is used on the line.

Top

Switched connection type (SWTCNN)

Specifies whether the switched (Async, BSC, SDLC, or IDLC) line or switched network backup (Async, BSC, or SDLC) line is used for incoming calls, outgoing calls, or both.

***BOTH**

The line is used for both incoming and outgoing calls.

***ANS** The line is used for incoming calls only.

***DIAL**

The line is used for outgoing calls only.

Top

Autoanswer (AUTOANS)

Specifies, for switched or switched network backup lines (Async, BSC, SDLC, or X.25 line), whether the system automatically answers a call from a remote system to establish the connection, or whether the system operator manually answers the call and places the modem in data mode.

Note: *YES is a valid option only if the modem has the automatic answer feature.

***YES** The incoming call is automatically answered by the automatic answer feature.

***NO** The incoming call must be manually answered.

Top

Autodial (AUTODIAL)

Specifies, for switched lines, whether the system automatically calls a remote system to establish a connection or if the system operator must manually place the call.

***NO** The line connection is made by manually dialing the X.25 network.

***YES** The line connection is made by the system automatically dialing the X.25 network.

Top

Modem init command string (MDMINZCMD)

Specifies the modem initialization command string sent to set the modem.

Note: Valid only when INTERFACE(*INTMODEM) or INFTRFTYPE(*SYNCMODEM) is specified.

*NONE

No command string is sent to the modem.

command-string

Specifies up to 60 characters that represent the command string sent to the modem. Valid characters are upper case A thru Z, lower case a thru z, numbers 0 thru 9, and special characters:

- Period
- Less than sign
- Left parenthesis
- Plus sign
- Ampersand
- Asterisk
- Right parenthesis
- Semicolon
- Minus sign
- Slash
- Comma
- Underline
- Greater than sign
- Question mark
- Colon
- Equal sign
- Spaces
- Number sign
- Double quote
- Exclamation point
- At sign
- Hat symbol
- Percent
- Left square bracket
- Right square bracket
- Back slash

Note: The modem initialization string must begin with the two characters 'AT'.

Top

Dial command type (DIALCMD)

Specifies the type of dial command used to establish a switched connection with a remote system.

*NONE

No dial command is used. (An automatic call unit is used to establish the connection.)

*V25BIS

V.25 bis is a recommendation which allows the use of one physical interface for call establishment and data transmission. It is referred to as a serial automatic call interface because the digits are presented serially on the link from the system to the modem.

Top

Autocall resource name (ACRSRCNAME)

Specifies the automatic call resource name that describes the automatic call unit port that is used to establish a connection with a remote system. Use the Work with Hardware Resources (WRKHDWRSC) command to determine the resource name.

Top

SHM call timer (SHMCALLTMR)

Specifies the interval at which a connection is re-established on an X.21 short hold mode (SHM) line to verify the state of the remote system if no SHM reconnection has occurred in the specified interval. This parameter is valid only if *SHM is specified on the **Connection type (CNN)** parameter.

*NONE

No call is made to verify the connection.

short-hold-mode-call-timer

Specify an interval, from 1 to 60 minutes, at which a call is made to verify the connection.

Top

SHM maximum connect timer (SHMMAXCNN)

Specifies the amount of time the system allows a connection to continue if there are more controllers than there are available ports. The system clears the connection after the specified amount of time, delays further calls for the amount of time specified on the **SHM answer delay timer (SHMANSDLY)** parameter, and then makes any calls that had been waiting before re-calling the controller that was interrupted.

Note: This parameter is valid only if *PRI or *NEG is specified on the **Data link role (ROLE)** parameter and if *SHM is specified on the **Connection type (CNN)** parameter.

8 The system waits eight seconds before checking for other controllers.

*NOMAX

The timer is disabled.

maximum-connect-timeout

Specify a value ranging from 1 through 254 seconds.

Top

SHM answer delay timer (SHMANSDLY)

Specifies the amount of time the system waits for controllers to call in before making outgoing calls. The SHM answer delay timer is started when one of the following is true:

- The time specified by the SHM maximum connect timer (SHMMAXCNN parameter) has expired.
- A period of time equal to twice the value of the SHMMAXCNN parameter has elapsed with no opportunities for incoming calls to be received.

Note: This parameter is valid only if *PRI or *NEG is specified on the **Data link role (ROLE)** parameter and if *SHM is specified on the **Connection type (CNN)** parameter.

11 The system waits 1.1 seconds before making outgoing calls.

***NOMAX**

The timer is disabled.

ans-delay-timeout

Specify a value ranging from 1 through 254 tenths of seconds. For example, 10 seconds equal 100 tenths of seconds.

Top

SHM call format (SHMCALLFMT)

Specifies the format for the X.21 short hold mode line call number. This parameter is valid only if *SHM is specified on the **Connection type (CNN)** parameter.

***DNIC**

The Data Network Identification Code (DNIC) is used.

***DCC** The Data Country Code (DCC) is used.

call-format

The length of the area code or country or region code portion of the SHM calling number. Specify a number from 0 to 15.

Top

SHM access code (SHMACC)

Specifies the access code for the X.21 short hold mode line. This parameter is valid only if *SHM is specified on the **Connection type (CNN)** parameter.

Top

Calling number (CALLNBR)

Specifies the local telephone number of the line that is used for the V.25 bis Call Request with Identification (CRI) dial command. When V.25 bis CRI dialing is used, the system takes the called (connection) number (CINNBR parameter), adds a separator character (;), and puts the calling number at the end. The default, *NONE, indicates that Call Request Normal (CRN) is used.

Specify the calling number only when the modem and network support the CRI dial command.

***NONE**

Call Request Normal (CRN) is used. CRN dialing sends only the connection number to the V.25 bis modem.

calling-number

Specify the local telephone number if V.25 bis CRI dialing is required. The number can be up to 32 characters in length. See your modem documentation to determine the values allowed by the modem.

Note: Specify the calling number only if both the modem and network support the V.25 bis CRI dial command.

Top

Station address (STNADR)

Specifies, for a switched secondary or negotiable line, the hexadecimal station address to which the local system responds when polled by the remote system if it answers a call.

station-address

Specify a hexadecimal value from 01 to FE.

Top

Connect poll retry (CNNPOLLRTY)

Specifies, for a switched primary line or a negotiable line, the number of connection polling retries to make before indicating the error and making the station inoperative.

connect-poll-retry

Specify a value from 0 through 64 for the number of retries.

Top

Connect timer (CNNTMR)

Specifies, for an X.21 circuit switched interface, the amount of time an automatic answer connect request waits for an incoming call to be accepted.

***NOMAX**

The system waits indefinitely.

connect-timer

Specify a value from 1 to 32767 in 0.1 second intervals.

Top

Short timer (SHORTTMR)

Specifies, for X.21 circuit switched interface or short hold mode, the short timer used during bursts of retry operations. The system waits between connection attempts for this timeout period.

1. The SHORTTMR parameter is used only for X.21 circuit-switched or short-hold mode lines.
2. The default meets most countries' or regions' requirements relative to call retries and call delays. In the event that the default does not meet your country's or region's requirements, the value must be configured in accordance with the country or region requirement. Before changing this value, ensure that the new value is in accordance with your country's or region's requirements.

If you are not aware of your country's or region's requirement, your IBM representative or IBM-approved remarketer can provide this information.

This parameter is used to control retries when you are attempting to make a call over an X.21 circuit-switched or short-hold mode network. Call attempts are characterized by bursts of retries. A single burst of retries is controlled by the short timer and short retry value. If all short retries are completed, the system delays for a longer time (the long timer) before attempting another burst of retries. The total number of these bursts of retries is based on the long retry value.

50 The system waits five seconds.

short-timer

Specify a value from 10 to 600 in 0.1 second intervals.

Top

Long timer (LONGTMR)

Specifies for an X.21 circuit switched interface or short hold mode, the long timer used between bursts of retry operations. After a burst of retry attempts, the system waits for this timeout period before the next attempt.

This parameter is used to control retries when you are attempting to make a call over an X.21 circuit-switched or short-hold mode network. Call attempts are characterized by &odq.bursts&cdq. of retries. A single burst of retries is controlled by the short timer and short retry value. If all short retries are completed, the system delays for a longer time (the long timer) before attempting another burst of retries. The total number of these bursts of retries is based on the long retry value.

600 The system waits 60 seconds.

long-timer

Specify a value from 100 to 6000 in 0.1 second intervals.

Top

Short retry (SHORTRTY)

Specifies for an X.21 circuit switched interface or short hold mode, the number of retry attempts that are made during a burst of retries.

short-retry

Specify a value from 0 to 254 for the number of retries.

Top

Long retry (LONGRTY)

Specifies, for an X.21 circuit switched interface or short hold mode, the number of burst retry attempts when processing a connect request.

This parameter is used to control retries when you are attempting to make a call over an X.21 circuit-switched or short-hold mode network. Call attempts are characterized by &odq.bursts&cdq. of retries. A single burst of retries is controlled by the short timer and short retry value. If all short retries are completed, the system delays for a longer time (the long timer) before attempting another burst of retries. The total number of these bursts of retries is based on the long retry value.

1 One retry is attempted.

long-retry

Specify a value from 0 to 254 for the number of retries.

Top

Call progress signal retry (CPSRTY)

Specifies which call progress signals are retried for X.21 circuit switched interface or X.21 short hold mode lines. Up to 11 values can be specified; duplicate values are ignored.

Valid values are: *CPS41, *CPS42, *CPS43, *CPS44, *CPS45, *CPS46, *CPS47, *CPS48, *CPS49, *CPS71, and *CPS72.

This parameter can be specified only if *SHM or *SWTPP is specified for the **Connection type (CNN)** parameter and *X21 is specified on the **Physical interface (INTERFACE)** parameter.

Top

Maximum frame size (MAXFRAME)

Specifies the maximum frame size that can be transmitted and received on this line description.

frame-size

The standard frame sizes are:

- 265 (All line types)
- 521 (All line types)
- 1033 (All line types)
- 1994 (Token-ring only)
- 2057 (SDLC or Token-ring)
- 4105 (TDLC or Token-ring)
- 4060 (Token-ring only)
- 8156 (Token-ring only)
- 16393 (Token-ring only)

Top

Duplex (DUPLEX)

Specifies whether request-to-send (RTS) is permanently turned on (for duplex modems) or turned on only when transmission is required (for half duplex modems).

***HALF**

Request-to-send (RTS) is turned on only when transmission is required (for half duplex modems). You can choose to run half duplex even if the modem can support duplex communication.

***FULL** Request-to-send (RTS) is permanently set on (for duplex modems).

Top

Inactivity timer (INACTTMR)

Specifies, for a secondary or negotiable line, the time (in tenths of a second) the system waits for a valid frame to flow before reporting the error and disconnecting the line. This timer is started at connection time and restarted when any frame is sent, and then reset when a frame with a valid frame check sequence is received.

300 The system waits 30 seconds (300 tenths of a second) for a valid frame.

inactivity-timer

Specify a value from 150 to 4200 in 0.1 second intervals.

Top

Poll response delay (POLLRSPDLY)

Specifies, for a secondary or negotiable line, the minimum time the system must wait before it responds to a data poll if there is no frame to transmit.

poll-response-delay

Specify a value from 1 to 2048 in 0.0001 second intervals, or 0 to indicate no delay.

Top

Nonproductive receive timer (NPRDRCVTMR)

Specifies, for a primary or negotiable line, the time the system waits for either a final frame or an idle signal while the secondary station is continuously sending. If this timer expires, the nonproductive receive condition is reported.

nonproductive-receive-timer

Specify a value from 160 to 4200 in 0.1 second intervals.

Top

Idle timer (IDLTMR)

Specifies, for a primary or negotiable line, the time (in 0.1 second intervals) that the system waits before sampling the line for an idle signal. If an idle signal is detected, error recovery procedures are started.

idle-timer

Specify a value from 5 to 300 in 0.1 second intervals.

Top

Connect poll timer (CNNPOLLTMR)

Specifies, for a primary or negotiable line, the time the system waits for the response to a connect poll before resending the poll.

connect-poll-timer

Specify a value from 2 to 300 in 0.1 second intervals.

Top

Poll cycle pause (POLLPAUSE)

Specifies, for a primary or negotiable line, the time the system pauses after the last remote system in the poll list is polled.

poll-cycle-pause

Specify a value from 1 to 2048 in 0.0001 second intervals, or 0 to indicate no pause.

Top

Frame retry (FRAMERTY)

Specifies, for a primary, negotiable, or X.25 line, the number of retries for an unanswered command frame or unacknowledged information frame before indicating the error.

frame-retry

Specify a value from 0 to 64 for the number of retries.

Top

Fair polling timer (FAIRPLLTMR)

Specifies, for a multipoint line, the number of seconds the system waits before resuming polling of stations without pending data transfer requests.

fair-poll-timer

Specify a value from 5 to 60 in one second intervals.

Top

Data Set Ready drop timer (DSRDRPTMR)

Specifies the amount of time that the system waits for the modem to exit the Data Set Ready (DSR) state before signaling an error.

drop-timer

Specify a value ranging from 3 through 60 seconds.

Top

Autoanswer type (AUTOANSTYP)

Specifies the method that the system uses to answer incoming calls.

***DTR** The system enters the Data Terminal Ready state, signals the modem to answer calls, and waits for the modem to enter the Data Set Ready (DSR) state.

***CDSTL**

The system enters the Connect Data Set to Line (CDSTL) state after monitoring the Ring Indicator to signal the modem to answer the call.

Top

Remote answer timer (RMTANSTMR)

Specifies the amount of time that system waits for the modem to enter the Data Set Ready (DSR) state after dialing before signaling an error.

answer-timer

Specify a value ranging from 30 through 120 seconds in 5-second intervals.

Top

Text 'description' (TEXT)

Specifies text that briefly describes the line description.

***BLANK**

Text is not specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Attached nonswitched ctls (CTL)

Specifies, for nonswitched lines, the names of one or more controllers to which this line is attached. The controller descriptions must already exist.

You can enter multiple values for this parameter.

name Specify the names of one or more attached nonswitched controllers. Up to 254 controller names can be specified.

Top

Modem data rate select (MODEMRATE)

Specifies the speed at which the line operates if the modem has the data rate select feature.

***FULL** The line operates at the full rate of the modem.

***HALF**
The line operates at half the full rate of the modem.

Top

Error threshold level (THRESHOLD)

Specifies the temporary error threshold level being monitored by the system. A permanent error is reported only if the errors occurred consecutively and exceeded the retry limit.

Note: Specifying the THRESHOLD parameter affects all threshold errors. They cannot be specified individually.

***OFF** No threshold errors are reported.

***MIN** The threshold for errors is set to a minimum monitoring level.

***MED** The threshold for errors is set to a medium monitoring level.

***MAX** The threshold for errors is set to a maximum monitoring level.

Top

Modulus (MODULUS)

Specifies whether the extended sequence numbers are used.

8 Extended sequence numbers are not used (Modulus 8).

128 Extended sequence numbers are used (Modulus 128).

Top

Maximum outstanding frames (MAXOUT)

Specifies the maximum number of frames that can be sent to a remote system before the remote system must respond back. For modulus 8, the maximum number of frames must be 1 to 7. For modulus 128, the maximum number of frames must be 8 to 28.

maximum-outstanding-frames

Specify a value from 1 to 28 for the number of outstanding frames.

Clear To Send timer (CTSTMR)

Specifies the amount of time the system waits for the modem to enter or exit the Clear to Send (CTS) state before signaling an error.

cts-timer

Specify a value ranging from 10 through 60 seconds.

Top

Link speed (LINKSPEED)

Specifies the link speed in bits per second (bps). This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

***INTERFACE (SDLC and X.25 only)**

The link speed is based on the physical interface type: 9600 bps for RS-232/V.24 and X.21 bis/V.24, 48000 bps for V.35 and X.21 bis/V.35, and 64000 bps for X.21 and RS-449V.36.

***MIN** A link speed of less than 1200 bps is used.

***MAX** A link speed greater than 100M bps is used.

link-speed

Specify a link speed. The valid link speeds are 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M and 16M bps.

Top

Cost/connect time (COSTCNN)

Specifies the relative cost of being connected on the line. Zero implies a low cost while 255 indicates a high cost. This parameter is valid only if APPN is used on the system.

***CNN (SDLC and IDLC only)**

The cost per connection time is based on the connection type: Zero for nonswitched connections and 128 for switched connections.

cost-per-connect-time

Specify a value ranging from 0 through 255.

Top

Cost/byte (COSTBYTE)

Specifies the relative cost per byte for sending and receiving data on the line. Zero implies a low cost while 255 indicates a high cost. This parameter is valid only if APPN is used on the system.

***CNN (SDLC and IDLC only)**

The cost per byte is based on the connection type: Zero for nonswitched connections and 128 for switched connections.

cost-per-byte

Specify a value ranging from 0 through 255.

Security for line (SECURITY)

Specifies the security level of the physical line. This parameter is valid only if APPN is used on the system.

***NONSECURE**

There is no security on the line.

***PKTSWTNET**

A packet switched network is used. Data does not always follow the same path through the network.

***UNDRGRDCBL**

An underground cable is used.

***SECURECND**

A secure, but unguarded, conduit is used.

***GUARDCND**

A guarded conduit, protected against physical tapping, is used.

***ENCRYPTED**

Data flowing on the line is encrypted.

***MAX** A guarded conduit, protected against physical and radiation tapping is used.

Top

Propagation delay (PRPDLY)

Specifies the level of propagation delay on the line. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system. The order of the values from shortest to longest delay is *MIN, *LAN, *TELEPHONE, *PKTSWTNET, and *SATELLITE.

***MIN** The minimum propagation delay is used.

***LAN** Propagation delay using a local area network.

***TELEPHONE**

Propagation delay using telephone lines.

***PKTSWTNET**

Propagation delay using a packet switched network.

***SATELLITE**

Propagation delay using satellite communications.

***MAX** The maximum propagation delay is used.

Top

User-defined 1 (USRDFN1)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

128 The default value is 128.

user-defined-1

Specify a value ranging from 0 through 255.

Top

User-defined 2 (USRDFN2)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

128 The default value is 128.

user-defined-2

Specify a value ranging from 0 through 255.

Top

User-defined 3 (USRDFN3)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

128 The default value is 128.

user-defined-3

Specify a value ranging from 0 through 255.

Top

Recovery limits (CMNRCYLMT)

Specifies the second-level communications recovery limits to be used for this line description.

The possible **count-limit** values are:

2 Two recovery attempts are made within the specified time interval.

***SYSVAL**

The value in the QCMNRCYLMT system value is used.

count-limit

Specify the number of recovery attempts to be performed by the system. Valid values range from 0 through 99.

The possible **time-interval** values are:

5 The specified number of recovery attempts are made within a 5-minute interval.

time-interval

Specify the number of minutes within which recovery attempts are made. Valid values range from 0 through 120 in 1-minute intervals.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

***LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

```
CRTLNSDLC  LIND(BOSTON)  RSRNAME(LIN041)
```

This command creates an SDLC line description named BOSTON with a resource name of LIN041.

Top

Error messages

*ESCAPE Messages

CPF2718

Line description &1 not created due to errors.

Top

Create Line Desc (TDLC) (CRTLINTDLC)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Line Description (TDLC) (CRTLINTDLC) command creates a line description for a twinaxial data link control line.

Restriction: You must have input/output system configuration (*IOSYSCFG) special authority to use this command.

Top

Parameters

Keyword	Description	Choices	Notes
LIND	Line description	<i>Name</i>	Required, Positional 1
WSC	Attached work station ctl	<i>Name</i>	Required, Positional 2
ONLINE	Online at IPL	*YES , *NO	Optional
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
NETCTL	Network controller	<i>Name</i>	Optional
CTL	Attached nonswitched ctls	Values (up to 64 repetitions): <i>Name</i>	Optional
AUT	Authority	<i>Name</i> , *CHANGE , *ALL , *USE , *EXCLUDE , *LIBCRTAUT	Optional

Top

Line description (LIND)

Specifies the name of the line description

This is a required parameter.

Top

Attached work station ctl (WSC)

Specifies the name of the work station controller to which the 5150 devices and other displays are attached.

name Specify the work station controller name.

Top

Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES** The line is automatically varied on at initial program load (IPL).

***NO** This line is not automatically varied on at IPL.

Top

Text 'description' (TEXT)

Specifies text that briefly describes the line description.

***BLANK**

Text is not specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Network controller (NETCTL)

Specifies the name of an existing network controller. This network controller is used to run TCP/IP over the connection.

Top

Attached nonswitched ctls (CTL)

Specifies, for nonswitched lines, the names of one or more controllers to which this line is attached. The controller descriptions must already exist.

You can enter multiple values for this parameter.

names Specify up to 56 APPC controller names.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

***CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

*EXCLUDE

The user cannot access the object.

*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

Example 1: Creating a TDLC Line Description

```
CRTLINTDLC LIND(WNFLINE) WSC(CTL01)
```

This command creates a TDLC line description named WSFLINE that is attached to work station controller CTL01.

Example 2: Creating a TDLC Line Description Associated with a Network Controller

```
CRTLINTDLC LIND(NETLINE) WSC(CTL01) NETCTL(NETC01)
```

This command creates a TDLC line description named NETLINE that is attached to work station controller CTL01, and NETC01 is used as network controller to run TCP/IP over the connection.

Top

Error messages

*ESCAPE Messages

CPF2718

Line description &1 not created due to errors.

Top

Create Line Desc (Token-Ring) (CRTLINTRN)

Where allowed to run: All environments (*ALL)
 Threadsafte: No

Parameters
 Examples
 Error messages

The Create Line Description (Token-Ring Network) (CRTLINTRN) command creates a line description for a token-ring network line.

Restriction: You must have input/output system configuration (*IOSYSCFG) special authority to use this command.

Top

Parameters

Keyword	Description	Choices	Notes
LIND	Line description	<i>Name</i>	Required, Key, Positional 1
RSRCNAME	Resource name	<i>Name</i> , *NWID, *NWSD	Required, Key, Positional 2
NWITYPE	NWI type	*FR	Optional, Key
ONLINE	Online at IPL	*YES , *NO	Optional
VRYWAIT	Vary on wait	15-180, *NOWAIT	Optional
MAXCTL	Maximum controllers	1-256, 40	Optional
NWI	Attached NWI	<i>Name</i> , *NONE	Optional
NWIDLCI	DLC identifier	1-1018, *NONE	Optional
NWS	Network server description	Single values: *NONE Other values: <i>Element list</i>	Optional
	Element 1:	<i>Name</i>	
	Element 2: Port number	1-3, *INTERNAL	
LINESPEED	Line speed	4M, 16M , 100M, *AUTO, *NWI	Optional
DUPLEX	Duplex	<i>Character value</i> , *HALF , *FULL, *AUTO	Optional
MAXFRAME	Maximum frame size	265-16393, 265, 521, 1033, 1466, 1556, 1600, 1994, 4060, 8156, 16393	Optional
LECFRAME	LEC frame size	1516, 4544 , 9234, 18190	Optional
ADPTADR	Local adapter address	<i>Character value</i> , *ADPT	Optional
EXCHID	Exchange identifier	05600000-056FFFFFF, *SYSGEN	Optional
SSAP	SSAP list	Single values: *SYSGEN Other values (up to 24 repetitions): <i>Element list</i>	Optional
	Element 1: Source service access point	02-FE	
	Element 2: SSAP maximum frame	265-16393, *MAXFRAME , 265, 521, 1033, 1466, 1994, 4060, 8156, 16393	
	Element 3: SSAP type	*CALC , *NONSNA, *SNA, *HPR	
ACCTYPE	ATM access type	*SVC , *PVC	Optional

Keyword	Description	Choices	Notes
PVCID	PVC identifiers	<i>Element list</i>	Optional
	Element 1: Virtual path identifier	0-7	
	Element 2: Virtual circuit identifier	32-4095	
USELECSADR	Use LECS address	*YES, *NO	Optional
LESATMADR	LES ATM address	Single values: *NONE Other values: <i>Element list</i>	Optional
	Element 1: Network prefix	<i>Hexadecimal value</i>	
	Element 2: End system identifier	<i>Hexadecimal value</i>	
	Element 3: Selector byte	<i>Hexadecimal value</i>	
EMLLANNAME	Emulated LAN name	<i>Character value, *NONE</i>	Optional
LECDSTIMO	LEC disconnect time out	1-30, 10 , *NOMAX	Optional
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
NETCTL	Network controller	<i>Name</i>	Optional
ACTLANMGR	Activate LAN manager	*YES, *NO	Optional
TRNLOGLVL	TRLAN manager logging level	*OFF, *MIN, *MED, *MAX	Optional
TRNMGRMODE	TRLAN manager mode	*OBSERVING, *CONTROLLING	Optional
LOGCFGCHG	Log configuration changes	*LOG, *NOLOG	Optional
TRNINFBCN	Token-ring inform of beacon	*YES, *NO	Optional
FCNADR	Functional address	Single values: *NONE Other values (up to 31 repetitions): C00000000001, C00000000002, C00000000004, C00000000008, C00000000010, C00000000020, C00000000040, C00000000080, C00000000100, C00000000200, C00000000400, C00000000800, C00000001000, C00000002000, C00000004000, C00000008000, C00000010000, C00000020000, C00000040000, C00000080000, C00000100000, C00000200000, C00000400000, C00000800000, C00001000000, C00002000000, C00004000000, C00008000000, C00010000000, C00020000000, C00040000000, C00080000000, C00100000000, C00200000000, C00400000000	Optional
ELYTKNRLS	Early token release	*YES, *NO, *LINESPEED	Optional
THRESHOLD	Error threshold level	*OFF, *MIN, *MED, *MAX	Optional
LINKSPEED	Link speed	1200-603979776000, 4M, 10M, 16M , 100M, *MIN, *MAX	Optional
COSTCNN	Cost/connect time	0-255, 0	Optional
COSTBYTE	Cost/byte	0-255, 0	Optional
SECURITY	Security for line	*NONSECURE, *PKTSWTNET, *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, *MAX	Optional
PRPDLY	Propagation delay	*MIN, *LAN, *TELEPHONE, *PKTSWTNET, *SATELLITE, *MAX	Optional
USRDFN1	User-defined 1	0-255, 128	Optional
USRDFN2	User-defined 2	0-255, 128	Optional
USRDFN3	User-defined 3	0-255, 128	Optional
AUTOCRTCTL	Autocreate controller	*YES, *NO	Optional
AUTODLTCTL	Autodelete controller	1-10000, 1440 , *NONE	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, 2	
	Element 2: Time interval	0-120, 5	

Keyword	Description	Choices	Notes
MSGQ	Message queue	Single values: *SYSVAL, *SYSOPR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
AUT	Authority	<i>Name</i> , *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

Top

Line description (LIND)

Specifies the name of the line description

This is a required parameter.

Top

Resource name (RSRCNAME)

Specifies the resource name that identifies the hardware the description represents.

Note: Use the Work with Hardware Resources (WRKHDWRSC) command with *CMN specified for the TYPE parameter to help determine the resource name. The resource name is on the port. For example, the resource name may be CMN01 on an Ethernet port.

Note: The value specified on the RSRCNAME parameter cannot be changed from *NWSD to another value or from another value to *NWSD.

*NWID

The resource name specified on the attached frame relay network interface description is used.

*NWSD

The resource name is determined by the network server description used.

name Specify the resource name of the communications port.

This is a required parameter.

Top

NWI type (NWITYPE)

Specifies the network interface type.

Note: This parameter is ignored when RSRCNAME is not *NWID.

*FR The network interface type is frame relay.

Top

Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

*YES The line is automatically varied on at initial program load (IPL).

*NO This line is not automatically varied on at IPL.

Top

Vary on wait (VRYWAIT)

Specifies whether the line is varied on asynchronously or synchronously. For synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

*NOWAIT

The system does not wait for vary on completion. The line is varied on asynchronously.

vary-on-wait

Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

Notes:

1. When ONLINE(*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
 - Put tasks in place to manage the line
 - Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
 - Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

Top

Maximum controllers (MAXCTL)

Specifies the maximum number of controllers that the line supports.

maximum-controllers

Specify value ranging from 1 to 256. The number must be large enough to account for all of the controllers that are currently active to this line, and for those controllers you know will be attached in the near future.

Top

Attached NWI (NWI)

Specifies the network interface description to use.

Note: NWI(*NONE) must be specified when RSRNAME(*NWID) is not specified. Otherwise, NWI(*NONE) can be specified only when NWIDLCI(*NONE) is also specified.

*NONE

No network interface is specified.

name Specify the name of the network interface description to be used.

Top

DLC identifier (NWIDLCI)

Specifies the data link connection identifier (DLCI) for the network interface.

Note: NWIDLCI(*NONE) must be specified when RSRCTYPE(*NWID) is not specified. Otherwise, NWIDLCI(*NONE) can be specified only when NWI(*NONE) is also specified.

*NONE

A DLCI is not specified for the network interface.

data-link-connection-ID

Specify the DLCI for the network interface to which this line permanently attaches. Valid values range from 1 through 1018.

Top

Network server description (NWS)

Specifies the network server name to which this line is attached.

Note: The NWS parameter must be specified when RSRCTYPE(*NWS) is specified.

When the network server description is of TYPE(*AIX), only *INTERNAL can be specified for the network server port and the line must be a token-ring line.

The possible Network server description values are:

*NONE

No network server description is specified.

name Specify the name of an existing network server description to be used.

The possible Network server port value is:

*INTERNAL

The internal network server port to which the line is attached. There can only be one internal network server port configured for each network server.

network-server-port

Specify the network server port to which the line is attached. Valid values are 1 and 2.

Top

Line speed (LINESPEED)

Specifies the line speed in bits per second (bps).

Note: When RSRCTYPE(*NWID) and NWI(*FR) are specified, *NWI must be specified on this parameter.

4M The line speed is 4M bps.

16M The line speed is 16M bps.

100M The line speed is 100M bps.

*AUTO

The line speed value will be determined by the hardware using auto-negotiation.

***NWI** The line speed used is for a network interface.

Note: LINESPEED(*NWI) is only valid when RSRCTYPE(*NWI) and NWITYPE(*FR) are specified.

Duplex (DUPLEX) parameter set to *AUTO, if it has a default value and line speed (LINESPEED) parameter has 100M or *AUTO.

Top

Duplex (DUPLEX)

Specifies whether the hardware can send and receive data simultaneously. In half duplex mode, the hardware must alternate between sending data and receiving data. In full duplex mode, data can be sent and received simultaneously.

***HALF**

The line communicates using half duplex mode.

***FULL** The line communicates using full duplex mode.

***AUTO**

The duplex value will be determined by the hardware using auto-negotiation.

Note: Duplex (DUPLEX) parameter set to *AUTO, if it has a default value and line speed (LINESPEED) parameter has 100M or *AUTO.

Top

Maximum frame size (MAXFRAME)

Specifies the maximum frame size that can be transmitted and received on this line description.

A default of 1556 bytes is used when RSRCTYPE(*NWI) and NWITYPE(*FR) are specified. A default of 4060 is used when RSRCTYPE(*NWI) and NWITYPE(*ATM) are specified. Otherwise, a default of 4105 bytes is used.

NOTES

1. If the token-ring adapter supports only a 4M LINESPEED, values 4472 and lower can be specified.
2. When RSRCTYPE(*NWI) and NWITYPE(*FR) are specified, valid values for this parameter range from 265 through 8148 bytes. The MAXFRAME value is provided by your telephone carrier from which you should subtract 44 bytes for the size of the header.
3. When RSRCTYPE(*NWI) and NWITYPE(*ATM) are specified, valid values for this parameter range from 265 through 16393 bytes. The MAXFRAME value is provided by your telephone carrier from which you should subtract 20 bytes for the size of the header.

maximum-frame-size

Specify the maximum frame size value to be used. The valid frame sizes (in bytes) range from 265 through 8148 bytes when the network interface is a frame relay. Otherwise, valid frame sizes (in bytes) range from 265 through 16393.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

LEC frame size (LECFRAME)

Specifies the LAN emulation client (LEC) frame size that can be transmitted and received on this line description.

Note: MAXFRAME must always be at least 20 less than this field.

4544 The LEC frame size is 4544 bytes.

1516 The LEC frame size is 1516 bytes.

9234 The LEC frame size is 9234 bytes.

18190 The LEC frame size is 18190 bytes.

Top

Local adapter address (ADPTADR)

Specifies the local system's token-ring adapter address.

*ADPT

This value gives the user the present token-ring address for this token-ring adapter card. This address can be shown by using the Display Line Description (DSPLIND) command for this line description after it has successfully varied on.

Note: This value is not valid when RSRCTYPE(*NWID) and NWITYPE(*FR) are specified, or RSRCTYPE(*NWSD) is specified.

local-adapter-address

Specify an adapter address of your choice to describe this system in the token-ring network. Valid values are hexadecimal 400000000000 through 7FFFFFFFFFFFFF.

Top

Exchange identifier (EXCHID)

Specifies the hexadecimal exchange identifier that is used to identify the local system to the remote system. The 8-digit hexadecimal exchange identifier contains three digits for the block number and five digits for the identifier of this system.

*SYSGEN

This value allows the operating system to create the exchange identifier. Use the Display Line Description (DSPLIND) command to see the resulting exchange identifier.

exchange-ID

Specify an 8-character (four hexadecimal bytes) exchange identifier ranging from 05600000 through 056FFFFFFF.

Top

SSAP list (SSAP)

Specifies the source service access point (SSAP) information, including an SSAP value, a maximum frame size, and an SSAP type.

You can enter multiple values for this parameter.

The possible **source service access point** values are:

*SYSGEN

The system generates the source service access points 04, 12, AA or C8.

The possible SSAPs value is:

source-service-access-point

Specify a source service access point for receiving and transmitting data. A maximum of 24 SSAP values can be specified.

- For Transmission Control Protocol/Internet Protocol (TCP/IP) applications, the SSAP must be AA.
- For Systems Network Architecture (SNA) applications, the SSAP must be a hex value ranging from 04 through 9C in multiples of four (04, 08, 0C, and so on).
- For high-performance routing (HPR) applications, the SSAP must be hex C8.
- For non-SNA applications, the SSAP must be a hex value ranging from 02 through FE in multiples of two (02, 04, 06, and so on).

The possible **SSAP maximum frame size** values are:

*MAXFRAME

The system uses the value specified on the MAXFRAME parameter of this command for the SSAP maximum frame size.

SSAP-maximum-frame

Specify the maximum SSAP frame size (the maximum size of the data field that can be transmitted or received). When RSRCTYPE(*NWID) and NWITYPE(*FR) are specified, valid values for this parameter range from 265 through 8148 bytes. Otherwise, valid values for this parameter range from 265 through 16393 bytes.

Note: This value cannot be larger than the value specified on the MAXFRAME parameter.

The possible **SSAP type** values are:

*CALC

The system calculates the value to use.

***SNA** The SSAP used is used for SNA communications. Valid values range from 04 through hex 9C in multiples of four (04, 08, 0C, and so on).

*NONSNA

The SSAP is used for non-SNA communications. Valid values range from hex 02 through hex FE in multiples of two (02,04, 06, and so on).

***HPR** The SSAP is used for HPR communications. It also can be used for SNA applications. The valid value is hex C8.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

ATM access type (ACCTYPE)

Specifies the type of access to the ATM network.

***SVC** This line represents a LAN emulation client using switched virtual circuits.

***PVC** This line represents a LAN emulation client using a permanent virtual circuit.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

PVC identifiers (PVCID)

Specifies the virtual path identifier and virtual circuit identifier pairs associated with this permanent virtual circuit.

Note: PVCID is required if ACCTYPE(*PVC) is specified.

The possible **Virtual Path Identifier** value is:

virtual-path-id

Specify a number that represents the virtual path identifier. This number must be in the range of 0 to 7.

The possible **Virtual Circuit Identifier** value is:

virtual-circuit-id

Specify a number that represents the virtual circuit identifier. This number must be in the range of 32 to 4095.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

Use LECS address (USELECSADR)

Specifies whether the LAN emulation configuration server (LECS) should be connected to request the remote LAN emulation server (LES) address.

***YES** The LECS address is used.

***NO** The LECS address is not used.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

LES ATM address (LESATMADR)

Specifies the ATM network address of the remote LAN emulation server.

Note: This parameter cannot be *NONE if USELECSADR(*NO) is specified.

The possible **Single Value** is:

***NONE**

The ATM network address is not used.

The possible **Network prefix** value is:

network-prefix

Specify the network prefix of the ATM address of the remote server. This is a 26 digit hexadecimal value.

The possible **End system identifier** value is:

end-system-identifier

Specify the end system identifier of the remote server. This is a 12 digit hexadecimal value.

The possible **Selector byte** value is:

selector byte

Specify the selector byte of the remote server. This is a two digit hexadecimal value.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

Emulated LAN name (EMLLANNAME)

Specifies the emulated LAN name.

***NONE**

The emulated LAN name not used.

emulated-LAN-name

Specify the emulated LAN name. A maximum of 32 characters can be specified.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

LEC disconnect time out (LECDSTIMO)

Specifies the amount of time in minutes a LAN emulation (LE) client waits before disconnecting an idle virtual circuit connection to another client.

10 The LE client waits 10 minutes.

***NOMAX**

The LE client waits indefinitely.

LEC-disconnect-timeout

Specify the number of minutes the LE client waits before disconnecting an idle virtual circuit connection to another client. The value must be in the range of 1 to 30 minutes.

Top

Text 'description' (TEXT)

Specifies text that briefly describes the line description.

***BLANK**

Text is not specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Network controller (NETCTL)

Specifies the name of an existing network controller.

Top

Activate LAN manager (ACTLANMGR)

Specifies whether Local Area Network (LAN) Manager is activated for this line.

NOTES:

1. ACTLANMGR(*YES) must be specified when RSRCNAME(*NWID) is specified.
2. ACTLANMGR(*NO) will ignore the values in TRNLOGLVL, TRNMGRMODE, LOGCFGCHG, and TRNINFBCN.

***YES** LAN manager support is activated for this line.

***NO** LAN manager support is not activated for this line.

Top

TRLAN manager logging level (TRNLOGLVL)

Specifies the error logging level used by the TRLAN Manager.

Note: TRNLOGLVL(*OFF) must be specified when RSRCNAME(*NWID) is specified.

***OFF** All error reporting on the specified line is stopped.

***MIN** The minimum reporting level, which reports only conditions that indicate degraded performance, is used.

***MED** The medium reporting level, which reports conditions that indicate potential degraded performance in addition to the minimum reporting level, is used.

***MAX** The maximum reporting level, which reports all error conditions, including the information that would be reported for *MIN and *MED reporting levels, is used.

Top

TRLAN manager mode (TRNMGRMODE)

Specifies which mode of network manager will be active on this line. A controlling manager can do functions that an observing manager can not do such as removing stations and performing a path test.

However, only one controlling manager should be active on any one ring.

Note: TRNMGRMODE(*OBSERVING) must be specified when RSRCNAME(*NWID) is specified.

***OBSERVING**

This line's manager will function as an observing network manger.

***CONTROLLING**

This line's manager will function as a controlling network manger.

Top

Log configuration changes (LOGCFGCHG)

Specifies if this line's network manager will keep track of changes that happen to the nearest active upstream neighbor (NAUN).

Note: LOGCFGCHG(*LOG) must be specified when RSRNAME(*NWID) is specified.

*LOG The line manager logs the changes.

*NOLOG

This line's manager will not log changes.

Top

Token-ring inform of beacon (TRNINFBCN)

Specifies if this line's network manager will send a message to the QSYSOPR message queue when a beaconing condition occurs.

Note: TRNINFBCN(*YES) must be specified when RSRNAME(*NWID) is specified.

*YES This line's manager will send a message to the QSYSOPR message queue when a beaconing condition occurs.

*NO This line's manager will not send a message to the QSYSOPR message queue when a beaconing condition occurs but will instead log an entry in the QHST log.

Top

Functional address (FCNADR)

Specifies whether token ring functional addresses are used.

*NONE

A functional address is not used.

functional-address

Specify a group of hexadecimal functional addresses that are encoded in bit-significant format. Valid values range from hex C0000000001 through hex C0004000000. The first digit must be C. Functional addresses must be unique.

Active Monitor

C0000000001

Ring Parameter Server

C0000000002

Network Server Heartbeat

C0000000004

Ring Error Monitor

C0000000008

Configuration Report Server

C0000000010

Synchronous Bandwidth Manager

C0000000020

Locate Directory Server

C0000000040

NetBIOS
C00000000080

Bridge
C00000000100

IMPL Server
C00000000200

Ring Authorization Server
C00000000400

LAN Gateway
C00000000800

Ring Wiring Concentration
C00000001000

LAN Manager
C00000002000

User-defined
C00000004000 through C00040000000

Top

Early token release (ELYTKNRLS)

Specifies if the early token release option is used by this line.

Note: ELYTKNRLS(*LINESPEED) must be specified when RSRCTYPE(*NWID) is specified.

*LINESPEED

This line's LINESPEED parameter will select if the early token release option will be used or not used.

***YES** This line will use the early token release option.

***NO** This line will not use the early token release option.

Top

Error threshold level (THRESHOLD)

This parameter, and its values *OFF, *MIN, *MED, and *MAX, can be specified but it is not used by the system starting in release V2R3M0. The parameter may be removed in a later release.

Top

Link speed (LINKSPEED)

Specifies the link speed in bits per second (bps). This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

4M The link speed is 4 million bits per second.

10M The link speed is 10 million bits per second.

16M The link speed is 16 million bits per second.

100M The link speed is 100 million bits per second.

***MIN** A link speed of less than 1200 bps is used.

***MAX** A link speed greater than 100M bps is used.

link-speed

Specify the link speed. Valid values range from 1200 to 603979776000 bps.

Top

Cost/connect time (COSTCNN)

Specifies the relative cost of being connected on the line. This parameter is required only if APPN is used on the system.

0 The cost per connect time is 0.

cost-per-connect-time

Specify a value ranging from 0 through 255.

Top

Cost/byte (COSTBYTE)

Specifies the relative cost per byte for sending and receiving data on the line. Zero implies a low cost while 255 indicates a high cost. This parameter is valid only if APPN is used on the system.

0 The cost per byte is 0.

cost-per-byte

Specify a value ranging from 0 through 255.

Top

Security for line (SECURITY)

Specifies the security level of the physical line. This parameter is valid only if APPN is used on the system.

***NONSECURE**

There is no security on the line.

***PKTSWTNET**

A packet switched network is used. Data does not always follow the same path through the network.

***UNDRGRDCBL**

An underground cable is used.

***SECURECND**

A secure, but unguarded, conduit is used.

***GUARDCND**

A guarded conduit, protected against physical tapping, is used.

***ENCRYPTED**

Data flowing on the line is encrypted.

***MAX** A guarded conduit, protected against physical and radiation tapping is used.

Top

Propagation delay (PRPDLY)

Specifies the level of propagation delay on the line. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system. The order of the values from shortest to longest delay is *MIN, *LAN, *TELEPHONE, *PKTSWTNET, and *SATELLITE.

*LAN Propagation delay using a local area network.

*MIN The minimum propagation delay is used.

*TELEPHONE

Propagation delay using telephone lines.

*PKTSWTNET

Propagation delay using a packet switched network.

*SATELLITE

Propagation delay using satellite communications.

*MAX The maximum propagation delay is used.

Top

User-defined 1 (USRDFN1)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

128 The default value is 128.

user-defined-1

Specify a value ranging from 0 through 255.

Top

User-defined 2 (USRDFN2)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

128 The default value is 128.

user-defined-2

Specify a value ranging from 0 through 255.

Top

User-defined 3 (USRDFN3)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

128 The default value is 128.

user-defined-3

Specify a value ranging from 0 through 255.

Top

Autocreate controller (AUTOCRTCTL)

Specifies whether the system automatically creates an advanced program-to-program communications (APPC) controller description when an incoming advanced peer-to-peer networking (advanced peer-to-peer networking (APPN)) call is received from an adjacent system on the Local Area Network (LAN).

***NO** A controller description is not automatically created for this line.

***YES** A controller description is automatically created for this line.

Top

Autodelete controller (AUTODLTCTL)

Specifies how many minutes the system waits before automatically varying off and deleting automatically created advanced program-to-program communications (APPC) controller descriptions (associated with this line) which have gone to an idle state.

1440 The controller description can be idle for 1440 minutes (24 hours).

***NONE**

The controller descriptions for this line are not automatically deleted.

auto-delete-controller

Specify a value ranging from 1 through 10000 minutes. The value 1440 is 24 hours.

Top

Recovery limits (CMNRCYLMT)

Specifies the second-level communications recovery limits to be used for this line description.

The possible **count-limit** values are:

2 Two recovery attempts are made within the specified time interval.

***SYSVAL**

The value in the QCMNRCYLMT system value is used.

count-limit

Specify the number of recovery attempts to be performed by the system. Valid values range from 0 through 99.

The possible **time-interval** values are:

5 The specified number of recovery attempts are made within a 5-minute interval.

time-interval

Specify the number of minutes within which recovery attempts are made. Valid values range from 0 through 120 in 1-minute intervals.

Top

Message queue (MSGQ)

Specifies the message queue to which operational messages are sent.

***SYSVAL**

The value in the system value QCFGMSGQ is used.

*SYSOPR

Messages are sent to the system operator message queue (QSYS/QSYSOPR).

Qualifier 1: Message queue

name Specify the name of the message queue to which operational messages are sent.

Qualifier 2: Library

name Specify the name of the library where the message queue is located.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

*EXCLUDE

The user cannot access the object.

*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

Example 1: Creating a Token-Ring Line Description

```
CRTLINTRN  LIND(TRLAN1)  RSRNAME(LIN011)
           TEXT('TOKEN-RING LINE')
```


This command creates a token-ring line (TRLAN1) with resource name LIN011 and exchange identifier 05612345.

Example 2: Creating a Token-Ring Line Description

```
CRTLINTRN LIND(TRNLIN) RSRNAME(*NWS) NWS(REMODEL 2)
```

This command creates a token-ring line description named TRNLIN that is attached to port 2 of network server description named REMODEL.

[Top](#)

Error messages

***ESCAPE Messages**

CPF2718

Line description &1 not created due to errors.

[Top](#)

Create Line Desc (Wireless) (CRTLINWLS)

Where allowed to run: All environments (*ALL)
 Threadsafte: No

Parameters
 Examples
 Error messages

The Create Line Description (Wireless) (CRTLINWLS) command creates a line description for a wireless local area network (LAN) line.

Note: Extended wireless line configuration data is contained in the source file and member specified on the INZFILE and INZMBR parameters, respectively. When the line is varied on, this configuration data is downloaded to the wireless adapter. It is recommended that INZPGM(QZXCINZ) and INZFILE(QEWLSRC) be used, and that the source member configuration initialization data be specified on the INZMBR parameter. For more information about downloading extended wireless line configuration data, see the LAN, Frame-Relay and ATM Support book, SC41-5404.

More information about using this command is in the Communications Configuration book, SC41-5401.

Restriction: You must have input/output system configuration (*IOSYSCFG) special authority to use this command.

Top

Parameters

Keyword	Description	Choices	Notes
LIND	Line description	<i>Name</i>	Required, Positional 1
RSRCNAME	Resource name	<i>Name</i>	Required, Positional 2
ONLINE	Online at IPL	<u>*YES</u> , *NO	Optional
VRYWAIT	Vary on wait	15-180, <u>*NOWAIT</u>	Optional
ADPTADR	Local adapter address	020000000000-FEFFFFFFFF, <u>*ADPT</u>	Optional
EXCHID	Exchange identifier	05600000-056FFFFFF, <u>*SYSGEN</u>	Optional
ETHSTD	Ethernet standard	*ETHV2, *IEEE8023, <u>*ALL</u>	Optional
SSAP	SSAP list	Single values: <u>*SYSGEN</u> Other values (up to 24 repetitions): <i>Element list</i>	Optional
	Element 1: Source service access point	02-FE	
	Element 2: SSAP maximum frame	265-1496, <u>*MAXFRAME</u> , 265, 521, 1033, 1466, 1493, 1496	
	Element 3: SSAP type	<u>*CALC</u> , *NONSNA, *SNA	
INZFILE	Initialization source file	<i>Qualified object name</i>	Optional
	Qualifier 1: Initialization source file	<i>Name</i> , <u>*NONE</u>	
	Qualifier 2: Library	<i>Name</i> , <u>*LIBL</u> , *CURLIB	
INZMBR	Initialization source member	<i>Name</i> , <u>*NONE</u>	Optional

Keyword	Description	Choices	Notes
INZPGM	Initialization program	Qualified object name	Optional
	Qualifier 1: Initialization program	Name, * <u>NONE</u>	
	Qualifier 2: Library	Name, * <u>LIBL</u> , *CURLIB	
TEXT	Text 'description'	Character value, * <u>BLANK</u>	Optional
NETCTL	Network controller	Name	Optional
GRPADR	Group address	Single values: * <u>NONE</u> Other values (up to 12 repetitions): 010000000000-FDFFFFFFF	Optional
MAXCTL	Maximum controllers	1-256, <u>40</u>	Optional
LINKSPEED	Link speed	*MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000 , 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, *MAX	Optional
COSTCNN	Cost/connect time	0-255, <u>0</u>	Optional
COSTBYTE	Cost/byte	0-255, <u>0</u>	Optional
SECURITY	Security for line	* <u>NONSECURE</u> , *ENCRYPTED	Optional
PRPDLY	Propagation delay	* <u>LAN</u> , *MIN, *MAX	Optional
USRDFN1	User-defined 1	0-255, <u>128</u>	Optional
USRDFN2	User-defined 2	0-255, <u>128</u>	Optional
USRDFN3	User-defined 3	0-255, <u>128</u>	Optional
AUTOCRTCTL	Autocreate controller	*YES, * <u>NO</u>	Optional
AUTODLTCTL	Autodelete controller	1-10000, <u>1440</u> , *NONE	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
AUT	Authority	Name, * <u>CHANGE</u> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

Top

Line description (LIND)

Specifies the name of the line description

This is a required parameter.

Top

Resource name (RSRCNAME)

Specifies the resource name that describes the automatic call unit port. The resource name consists of the input/output adapter (IOA) resource name and the port number on the IOA. For example, if the resource name of the IOA is LIN01 and the port on the IOA is 1, then the resource name would be LIN011.

Note: You can use the Work with Hardware Resources (WRKHDWRSC) command with *CMN specified for the TYPE parameter to help determine the resource name.

This is a required parameter.

Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES** The line is automatically varied on at initial program load (IPL).

***NO** This line is not automatically varied on at IPL.

Top

Vary on wait (VRYWAIT)

Specifies whether the line is varied on asynchronously or synchronously. For synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

***NOWAIT**

The system does not wait for vary on completion. The line is varied on asynchronously.

vary-on-wait

Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

Notes:

1. When ONLINE(*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
 - Put tasks in place to manage the line
 - Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
 - Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

Top

Local adapter address (ADPTADR)

Specifies the 12-character hexadecimal adapter address.

***ADPT**

The preset wireless adapter address is used as the local adapter address. The adapter address can be displayed by using the Display Line Description (DSPLIND) command after the line description has been successfully varied on.

local-adapter-address

Specify the local wireless adapter address to override the preset local address. The local adapter address must be an individual address (it cannot be a group address). Valid values range from 020000000000 through FFFFFFFF in hexadecimal format. The second digit (from the left) of the address must be 2, 6, A, or E.

Top

Exchange identifier (EXCHID)

Specifies the hexadecimal exchange identifier that is used to identify the local system to the remote system. The 8-digit hexadecimal exchange identifier contains three digits for the block number and five digits for the identifier of this system.

*SYSGEN

This value allows the operating system to create the exchange identifier. Use the Display Line Description (DSPLIND) command to see the resulting exchange identifier.

exchange-ID

Specify an 8-character (four hexadecimal bytes) exchange identifier ranging from 05600000 through 056FFFFF.

Top

Ethernet standard (ETHSTD)

Specifies the Ethernet standard frame type that is used on this line.

*ALL All Ethernet standards can be used. However, Systems Network Architecture (SNA) data will be placed in IEEE 802.3 frames.

*ETHV2

Ethernet Version 2 frames are used for all data.

*IEEE8023

IEEE 802.3 frames are used for all data.

Top

SSAP list (SSAP)

Specifies source service access points (SSAPs). This is the hexadecimal logical address used to route incoming data from the Ethernet bus to the proper user. A maximum frame size can be specified for each SSAP.

Note: Ethernet Version 2 (specified as *ETHV2 on the ETHSTD parameter) does not allow the SSAP values of 06 and AA.

The destination service access point (DSAP), specified by the remote controller, must match one of the SSAPs specified in order for communication to occur. All SSAP values must be unique.

*SYSGEN

For ETHSTD(*ALL or *IEEE8023), the operating system creates three SSAPs: SSAP 04 for SNA applications; AA and 06 for TCP/IP applications. For ETHSTD(*ETHV2), the system creates hex 04 for SNA.

The possible SSAPs value is:

source-service-access-point

Specify up to 24 SSAPs, including hex AA and 06 for TCP/IP, and any hexadecimal number 04 through 9C that is divisible by four for SNA applications.

The possible Frame Size for SSAPs values are:

***MAXFRAME**

The system determines the maximum frame size (data field size) that can be transmitted or received. If ETHSTD(*ALL or *IEEE8023) is specified, *CALC produces a frame size of 1496 for TCP/IP and SNA SSAPs. If ETHSTD(*ETHV2) is specified, *CALC produces a frame size of 1493 for SNA SSAPs.

SSAP-maximum-frame

Specify the maximum frame size for each SSAP. Valid values for the maximum frame size range from 265 through 1496.

The possible SSAP Type values are:

***CALC**

The system determines the value to use.

***SNA** The SSAP is used for SNA communications. Valid values range from 04 through 9C and must be divisible by 4.

***NONSNA**

The SSAP is used for communications other than SNA communications. Valid values range from 02 through FE and must be divisible by 2.

Top

Initialization source file (INZFILE)

Specifies the name of a source file containing configuration initialization data.

Note: The INZFILE and INZMBR parameters are required when downloading extended wireless line configuration data to the wireless adapter as discussed at the beginning of this command description.

***NONE**

No initialization file name is specified.

The name of the initialization file can be qualified by one of the following library values:

***LIBL** All libraries in the job's library list are searched until the first match is found.

***CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library to be searched.

name Specify the name of a source file containing the initialization data. A value of *NONE is accepted for this parameter. If a source file name has not been added prior to varying on this line description, then the current IOP defaults are used for initialization.

Top

Initialization source member (INZMBR)

Specifies the name of a source file member containing configuration initialization data.

Note: The INZFILE and INZMBR parameters are required when downloading extended wireless line configuration data to the wireless adapter as discussed at the beginning of this command description.

***NONE**

No source file member name is specified.

name Specify the name of a source file member containing the initialization data. If a source member name has not been added prior to varying on this line description, the the current IOP defaults are used for initialization.

Top

Initialization program (INZPGM)

Specifies the name of a program to manage configuration initialization data.

Note: For 2663 wireless adapters, it is recommended that INZPGM(QZXCINZ) be specified. This results in the values of INZFILE and INZMBR being passed to the Change Extended Wireless Line Member (CHGEWLM) command when the line is varied on.

***NONE**

No initialization program name is specified.

The name of the initialization program can be qualified by one of the following library values:

***LIBL** All libraries in the job's library list are searched until the first match is found.

***CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library to be searched.

name Specify the name of a program to manage configuration initialization data. If a program name is specified, it is called when this line description is created. The names of the source file and member containing configuration initialization data are passed to this program as parameters.

Top

Text 'description' (TEXT)

Specifies text that briefly describes the line description.

***BLANK**

Text is not specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Network controller (NETCTL)

Specifies the name of an existing network controller. This parameter can be specified for lines attached to a Transmission Control Protocol/Internet Protocol (TCP/IP) network.

Top

Group address (GRPADR)

Specifies whether to include the adapter as part of a wireless group address. This address is used to identify all adapters on the wireless network that have the same group address.

***NONE**

A group address is not used.

group-address

Specify the address of the group of adapters to which the local adapter is added. Valid values range from 010000000000 through FDFDFDFDFDFDF in hexadecimal format. The second digit (from the left) must be odd. All group addresses must be unique.

Top

Maximum controllers (MAXCTL)

Specifies the maximum number of SNA controllers that the line supports.

40 Up to 40 controllers are supported by the line.

maximum-controllers

Specify the maximum number of controllers supported by the line. This should be a number large enough to account for all of the controllers that are currently attached to this line, and for those controllers to be attached in the near future. Valid values range from 1 through 256.

Top

Link speed (LINKSPEED)

Specifies the link speed in bits per second (bps). This parameter is valid only if APPN is used on the system.

280000 A link speed of 280000 bps is used.

4M A link speed of 4 million bps is used.

***MIN** A link speed of less than 4M is used.

***MAX** A link speed greater than 4M is used.

link-speed

Specify the link speed. Valid values are: 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, and 4M.

Top

Cost/connect time (COSTCNN)

Specifies the relative cost of being connected on the line. This parameter is required only if APPN is used on the system.

0 The cost per connect time is 0.

cost-per-connect-time

Specify a value ranging from 0 through 255.

Top

Cost/byte (COSTBYTE)

Specifies the relative cost per byte for sending and receiving data on the line. This parameter is required only if APPN is used on the system.

0 The cost per byte is 0.

cost-per-byte

Specify a value ranging from 0 through 255.

Top

Security for line (SECURITY)

Specifies the security level of the line.

***NONSECURE**

Normal priority is used.

***ENCRYPTED**

Data flowing on the line is encrypted.

Top

Propagation delay (PRPDLY)

Specifies the level of propagation delay on the line. This parameter is valid only if Advanced Peer-to-Peer Networking (APPN) is used on the system.

***LAN** The local area network propagation delay is used.

***MIN** The minimum propagation delay is used.

***MAX** The maximum propagation delay is used.

Top

User-defined 1 (USRDFN1)

Specifies the first of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.

Note: Information about the values that are specified for this parameter is provided in the APPN information in the Networking category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

128 The value 128 is used.

user-defined-1

Specify a value ranging from 0 through 255.

Top

User-defined 2 (USRDFN2)

Specifies the second of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.

Note: Information about the values that are specified for this parameter is provided in the APPN information in the Networking category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

128 The value 128 is used.

user-defined-2

Specify a value ranging from 0 through 255.

Top

User-defined 3 (USRDFN3)

Specifies the third of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.

Note: Information about the values that are specified for this parameter is provided in the APPN information in the Networking category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

128 The value 128 is used.

user-defined-3

Specify a value ranging from 0 through 255.

Top

Autocreate controller (AUTOCRTCTL)

Specifies whether the system automatically creates controller descriptions when calls are received from adjacent systems on the local area network (LAN).

***NO** The system does not automatically create a controller description when incoming calls are received.

***YES** The system automatically creates a controller description when incoming calls are received.

Top

Autodelete controller (AUTODLTCTL)

Specifies the number of minutes an automatically created controller can remain in an idle state (switched from varied on to varied on pending) before the controller description and attached device descriptions are varied off and deleted.

1440 The controller description can be idle for 1440 minutes (24 hours).

***NONE**

The system does not automatically delete or vary off the automatically configured idle controller descriptions.

wait-time

Specify the number of minutes to wait before deleting the automatically configured, idle controller descriptions for this line. Valid values range from 1 to 10000 minutes.

Top

Recovery limits (CMNRCYLMT)

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

The possible Maximum Recovery Limit values are:

- 2 Two recovery attempts are made within the interval specified.

count-limit

Specify the number of recovery attempts to be made. Valid values range from 0 through 99.

The possible Recovery Time Interval values are:

- 5 The specified number of recovery attempts is made within a 5-minute interval.

time-interval

Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

The possible Single Value values are:

***SYSVAL**

The recovery limits specified in the QCMNRCYLMT system value are used.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

***CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

- *ALL The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

- *USE The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

***LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

```
CRTLINWLS  LIND(MYLINE)  RSRNAME(LIN041)
            INZFILE(*NONE) INZMBR(*NONE)
```

This command creates a wireless line description named MYLINE with a resource name of LIN041. The source file name and member name for configuration initialization data are left unspecified, and can be changed later.

Top

Error messages

*ESCAPE Messages

CPF261E

Line description &1 not created due to errors.

Top

Create Line Desc (X.25) (CRTLINX25)

Where allowed to run: All environments (*ALL)
 Threadsafte: No

Parameters
 Examples
 Error messages

The Create Line Description (X.25) (CRTLINX25) command creates a line description for an X.25 line.

Restriction: You must have input/output system configuration (*IOSYSCFG) special authority to use this command.

Top

Parameters

Keyword	Description	Choices	Notes
LIND	Line description	<i>Name</i>	Required, Positional 1
RSRCNAME	Resource name	<i>Name</i>	Required, Positional 2
LGLCHLE	Logical channel entries	Single values: *PROMPT Other values (up to 256 repetitions): <i>Element list</i>	Required, Positional 3
	Element 1: Logical channel identifier	<i>Character value</i>	
	Element 2: Logical channel type	*PVC, *SVCIN, *SVCBOTH, *SVCOUT	
	Element 3: PVC controller	<i>Name</i>	
NETADR	Local network address	<i>Character value</i>	Required, Positional 4
CNNINIT	Connection initiation	*LOCAL, *REMOTE, *WAIT, *CALLER	Required, Positional 5
ONLINE	Online at IPL	*YES, *NO	Optional
INTERFACE	Physical interface	*X21BISV24, *X21BISV35, *RS232V24, *RS449V36, *X21, *INTMODEM	Optional
CNN	Connection type	*NONSWTPP, *SWTPP, *NONSWTCAL, *NONSWTANS	Optional
NWI	Attached nonswitched NWI	<i>Name</i>	Optional
NWICHLTYPE	NWI channel type	*B	Optional
NWICHLNBR	NWI channel number	1-30	Optional
SWTNWILST	Switched NWI list	Single values: *NONE Other values (up to 64 repetitions): <i>Element list</i>	Optional
	Element 1: NWI description	<i>Name</i>	
	Element 2: NWI channel type	*B	
	Element 3: NWI channel number	1-30, *CALC	
VRYWAIT	Vary on wait	15-180, *NOWAIT	Optional

Keyword	Description	Choices	Notes
LINESPEED	Line speed	*CALC, 600, 1200, 2400, 4800, 7200, 9600 , 12000, 14400, 19200, 48000, 56000, 57600, 64000, 128000, 192000, 256000, 320000, 384000, 448000, 512000, 576000, 640000, 704000, 768000, 832000, 896000, 960000, 1024000, 1088000, 1152000, 1216000, 1280000, 1344000, 1408000, 1472000, 1536000, 1600000, 1664000, 1728000, 1792000, 1856000, 1920000, 1984000, 2048000	Optional
EXCHID	Exchange identifier	05600000-056FFFFF, *SYSGEN	Optional
PKTMODE	Packet mode	*YES, *NO	Optional
INFTRFTYPE	Information transfer type	*UNRESTRICTED , *V110, *DOV, *SYNCMODEM	Optional
EXNNETADR	Extended network addressing	*YES, *NO	Optional
MAXFRAME	Maximum frame size	1024 , 2048, 4096	Optional
DFTPKTSIZE	Default packet size	<i>Element list</i>	Optional
	Element 1: Transmit value	64, 128 , 256, 512, 1024, 2048, 4096	
	Element 2: Receive value	*TRANSMIT , 64, 128, 256, 512, 1024, 2048, 4096	
MAXPKTSIZE	Maximum packet size	<i>Element list</i>	Optional
	Element 1: Transmit value	*DFTPKTSIZE , 64, 128, 256, 512, 1024, 2048, 4096	
	Element 2: Receive value	*DFTPKTSIZE , *TRANSMIT , 64, 128, 256, 512, 1024, 2048, 4096	
MODULUS	Modulus	8 , 128	Optional
DFTWDWSIZE	Default window size	<i>Element list</i>	Optional
	Element 1: Transmit value	1-15, 2	
	Element 2: Receive value	1-15, *TRANSMIT	
ADRINSERT	Insert net address in packets	*YES , *NO	Optional
NETUSRID	Network user ID	<i>Character value</i>	Optional
CNNNBR	Connection number	<i>Character value</i>	Optional
CALLNBR	Calling number	<i>Character value</i> , *NONE	Optional
SWTCNN	Switched connection type	*BOTH , *ANS, *DIAL	Optional
CNNLSTOUT	Outgoing connection list	<i>Name</i>	Optional
CNNLSTOUTE	Connection list entry	<i>Name</i>	Optional
CNNLSTIN	Incoming connection list	<i>Name</i> , *NETATR	Optional
AUTOANS	Autoanswer	*YES , *NO	Optional
AUTODIAL	Autodial	*NO , *YES	Optional
DIALCMD	Dial command type	*NONE , *V25BIS	Optional
MDMINZCMD	Modem init command string	<i>Character value</i> , *NONE	Optional
CALLIMMED	Call immediate	*NO , *YES	Optional
AUTOCALL	Autocall unit	*NO , *YES	Optional
ACRSRCNAME	Autocall resource name	<i>Name</i>	Optional
PREDIALDLY	Predial delay	0-254, 6	Optional
REDIALDLY	Redial delay	0-254, 120	Optional
DIALRTY	Dial retry	0-254, 2	Optional
SWTDSC	Switched disconnect	*YES , *NO	Optional
SWTDSCTMR	Disconnect timers	<i>Element list</i>	Optional
	Element 1: Minimum connect timer	0-65535, 170	
	Element 2: Disconnection delay timer	0-65535, 0	
DSRDRPTMR	Data Set Ready drop timer	1-60, 6	Optional

Keyword	Description	Choices	Notes
AUTOANSTYP	Autoanswer type	* <u>DTR</u> , *CDSTL	Optional
RMTANSTMR	Remote answer timer	30, 35, 40, 45, 50, 55, <u>60</u> , 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120	Optional
CLOCK	Clocking	* <u>MODEM</u> , *LOOP, *INVERT	Optional
SWTNWISLCT	Switched NWI selection	* <u>FIRST</u> , *CALC	Optional
TEXT	Text 'description'	Character value, * <u>BLANK</u>	Optional
X25DCE	X.25 DCE support	* <u>NO</u> , *YES, *NEG	Optional
NETCTL	Network controller	Name	Optional
SWTCTLLST	Switched controller list	Single values: * <u>NONE</u> , *ALL Other values (up to 64 repetitions): Name	Optional
IDLTMR	Idle timer	3-600, <u>40</u>	Optional
FRAMERTY	Frame retry	0-64, <u>7</u>	Optional
THRESHOLD	Error threshold level	* <u>OFF</u> , *MIN, *MED, *MAX	Optional
MODEM	Modem type supported	* <u>NORMAL</u> , *V54, *IBMWRAP	Optional
MODEMRATE	Modem data rate select	* <u>FULL</u> , *HALF	Optional
CTSTMR	Clear To Send timer	10-60, <u>25</u>	Optional
LINKSPEED	Link speed	* <u>INTERFACE</u> , *MIN, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 128000, 192000, 256000, 320000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, 16M, *MAX	Optional
COSTCNN	Cost/connect time	0-255, <u>128</u>	Optional
COSTBYTE	Cost/byte	0-255, <u>128</u>	Optional
SECURITY	Security for line	*NONSECURE, * <u>PKTSWTNET</u> , *UNDGRDCBL, *SECURECND, *GUARDCND, *ENCRYPTED, *MAX	Optional
PRPDLY	Propagation delay	*MIN, *LAN, *TELEPHONE, * <u>PKTSWTNET</u> , *SATELLITE, *MAX	Optional
USRDFN1	User-defined 1	0-255, <u>128</u>	Optional
USRDFN2	User-defined 2	0-255, <u>128</u>	Optional
USRDFN3	User-defined 3	0-255, <u>128</u>	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: Element list	Optional
	Element 1: Count limit	0-99, <u>2</u>	
	Element 2: Time interval	0-120, <u>5</u>	
MSGQ	Message queue	Single values: * <u>SYSVAL</u> , *SYSOPR Other values: Qualified object name	Optional
	Qualifier 1: Message queue	Name	
	Qualifier 2: Library	Name	
AUT	Authority	Name, * <u>CHANGE</u> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

Top

Line description (LIND)

Specifies the name of the line description

This is a required parameter.

Top

Resource names (RSRCNAME)

Note: Use the Work with Hardware Resources (WRKHDWRSC) command with *CMN specified for the TYPE parameter to help determine the resource name. The resource name is on the port. For example, the resource name may be CMN01 on an Ethernet port.

Specifies the resource name that identifies the hardware the description represents.

Top

Logical channel entries (LGLCHLE)

Specifies, when using the Create Line X.25 Description (CRTLINX25) or Change Line Description X.25 (CHGLINX25) command, up to 256 entries to be added, removed, or changed in the logical channel table. A channel entry consists of a channel identifier, a logical channel type, and a PVC controller.

You can enter multiple values for this parameter.

The possible **channel identifier** values are:

***PROMPT**

Specifying *PROMPT presents an interactive display that can be used to process current logical channel entries.

channel-identifier

Specify a three-character hexadecimal number ranging from 001 to FFF for the logical channel identifier. The first digit (from left to right) is the logical channel group number; the second and third digits make up the logical channel number. Specify a logical channel identifier. Valid values range from hexadecimal numeral 001 through FFF.

The possible **channel type** values are:

***PVC** The logical channel is a permanent virtual circuit.

***SVCIN**

The logical channel is a switched virtual circuit for incoming calls.

***SVCBOTH**

The logical channel is a switched virtual circuit for both incoming and outgoing calls.

***SVCOUT**

The logical channel is a switched virtual circuit for outgoing calls.

PVC-controller

Specify the name of the PVC controller to be assigned to the logical channel. This field is valid only if *PVC is specified for the channel type.

Top

Local network address (NETADR)

Specifies the local network address for this system. Up to 17 characters can be specified if *YES is specified for the EXNNETADR parameter. Otherwise, up to 15 characters can be specified.

local-network-address

Specify the local network address.

Top

Connection initiation (CNNINIT)

Specifies the method used to establish the X.25 data link connection.

*LOCAL

The local system initiates the connection by issuing the set asynchronous balanced mode (SABM) communications command to establish the connection.

*REMOTE

The remote system initiates the connection issuing the SABM communications command. The local system waits for the connection to be established.

*WAIT

The local system waits for a disconnect (DISC) or disconnect mode (DM) from the DCE before attempting to activate the link.

*CALLER

The connection is initiated from either the local system or the remote system based on call direction.

Top

Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

*YES The line is automatically varied on at initial program load (IPL).

*NO This line is not automatically varied on at IPL.

Top

Physical interface (INTERFACE)

Specifies the type of physical interface on the input/output adapter (IOA) port.

*X21BISV24 (X.25, BSC and SDLC only)

X.21 bis/V.24 physical interface.

*X21BISV35 (X.25, BSC and SDLC only)

X.21 bis/V.35 physical interface.

*X21 (X.25 and SDLC only)

X.21 physical interface.

*RS232V24 (Async, BSC, X.25 and SDLC only)

RS-232/V.24 physical interface.

*RS449V36 (Async, BSC, X.25 and SDLC only)

RS-449/V.36 physical interface.

*INTMODEM

The integrated modem interface is used.

Top

Connection type (CNN)

Specifies the type of line connection.

Note: *NONSWTCAL and *NONSWTANS valid only when INTERFACE(*INTMODEM), or INFTRFTYPE *SYNCMODEM.

***NONSWTPP**

A nonswitched point-to-point line is used.

***SWTPP**

A switched point-to-point line is used.

***NONSWTCAL**

A nonswitched point-to-point line is used for call mode.

***NONSWTANS**

A nonswitched point-to-point line is used for answer mode.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

Attached nonswitched NWI (NWI)

Specifies, for a nonswitched connection, the network interface description containing the channel to which this line permanently attaches.

Note: Valid only when RSRCTYPE(*NWID) and CNN not *SWTPP.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

NWI channel type (NWICHLTYPE)

Specifies, for a nonswitched connection, the type of Integrated Services Digital Network (ISDN) channel that this line description uses. This parameter is pre-set to use one ISDN B-channel (a data-bearing channel) of the Network Interface description specified on the **Attached nonswitched NWI (NWI)** parameter.

***B** The B channel is used.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

NWI channel number (NWICHLNBR)

Specifies, for a nonswitched connection, the channel number (1 through 30) of the network interface description that is used by this line description. 2, 23 or 30 channels are available for each network interface description, depending on whether the network interface is basic or primary rate and what the network type is, but only one line description can be permanently attached to a channel. The Display Network Interface Description (DSPNWID) command is used to display information about the channel numbers for a given NWID.

Note: Valid only when RSRCTYPE(*NWID) and CNN not *SWTPP.

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

Switched NWI list (SWTNWILST)

Specifies, for ISDN/T1 switched connections, a list of network interface descriptions to which this line can be attached. A network interface description is chosen from the list based on the value specified by the switched NWI selection parameter (SWTNWISLCT) at the time an incoming or outgoing call is processed.

Note: Valid only when RSRNAME(*NWID) and CNN(*SWTPP).

The possible **Network Interface Description Name** values are:

***NONE**

No network interface description is specified.

name Specify, for switched connections, the name of the network interface description to which this line attaches.

The possible **Network Interface Channel Type** values are:

***B** The B channel is used.

The possible **Network Interface Channel-Number** values are:

***CALC**

The system selects one of the 30 channel numbers (based on availability) defined for the network interface description when an incoming or outgoing call is processed.

NWI-channel-number

Specify a channel number (1 to 30) to which the line description is restricted.

Vary on wait (VRYWAIT)

Specifies whether the line is varied on asynchronously or synchronously. For synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

***NOWAIT**

The system does not wait for vary on completion. The line is varied on asynchronously.

vary-on-wait

Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

Notes:

1. When ONLINE(*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
 - Put tasks in place to manage the line

- Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
- Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

Top

Line speed (LINESPEED)

Specifies the line speed in bits per second (bps).

9600 The line speed is 9600 bps.

***CALC**

The system calculates the value to use.

line-speed

Specify one of the following values (in bps) for the line speed:

600	57600	576000	1152000	1728000
1200	64000	640000	1216000	1792000
2400	128000	704000	1280000	1856000
4800	192000	768000	1344000	1920000
7200	256000	832000	1408000	1984000
14400	320000	896000	1472000	2048000
19200	384000	960000	1536000	
48000	448000	1024000	1600000	
56000	512000	1088000	1664000	

Top

Exchange identifier (EXCHID)

Specifies the hexadecimal exchange identifier that is used to identify the local system to the remote system. The 8-digit hexadecimal exchange identifier contains three digits for the block number and five digits for the identifier of this system.

***SYSGEN**

This value allows the operating system to create the exchange identifier. Use the Display Line Description (DSPLIND) command to see the resulting exchange identifier.

exchange-ID

Specify an 8-character (four hexadecimal bytes) exchange identifier ranging from 05600000 through 056FFFFF.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

Packet mode (PKTMODE)

Specifies whether to access the ISDN or T1 virtual circuit service.

***NO** The ISDN/T1 network is used to provide transparent access to an X.25 packet switched network external to the ISDN/T1 (Case A).

***YES** The ISDN/T1 virtual circuit service is accessed (Case B).

188 System i: Programming i5/OS commands Starting with CRTJRNRCV (Create Journal Receiver)

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

Information transfer type (INFTRFTYPE)

Specifies the information transfer type. The information transfer type determines the layer 1 protocol.

Note: Valid only when RSRCTYPE(*NWID) and CNN not *SWTPP.

*UNRESTRICTED

The data-channel traffic appears as digital information; no physical transformation is required and each B-channel operates at capacity (64k bps).

***V110** The transfer type is V-series Recommendation 110. Each B-channel operates at 56k bps.

***DOV** Allows Data Over Voice (DOV) digital data to be transferred over an ISDN/T1 voice call. Also, this is referred to as Data Over Voice Bearer Service (DOVBS), Data Over Speech Bearer Service (DOSBS), TollSaver, or TollMizer. This option should only be used if an ISDN voice call is less expensive than an ISDN data call or if a bearer service for data is not available. The remote location must also support this feature. Data is transferred at 56Kbps in each direction.

*SYNCMODEM

Allows data from the integrated synchronous modem to be transferred over an ISDN/T1 voice call. This option should be used to connect to a remote location that is using a synchronous modem on an analog telephone line. Data is transferred at modem speeds up to 33.6Kbps from the remote analog device to this digital connection and up to 56Kbps from this digital connection to the remote analog device.

Extended network addressing (EXNNETADR)

Specifies whether network addressing is extended to permit the use of 17 characters in an address name.

***NO** Network addresses can be up to 15 characters.

***YES** Network addresses can be up to 17 characters.

Maximum frame size (MAXFRAME)

Specifies the maximum frame size that can be transmitted and received on this line description.

1024 The default frame size is 1024.

maximum-frame-size

Specify one of the following values: 1024, 2048, or 4096.

Default packet size (DFTPKTSIZE)

Specifies the default packet sizes used for transmission and reception on this line. The values specified should match the default values used by the X.25 network.

The possible **transmission** values are:

128 The default packet size is 128.

transmit-packet-size

Specify a default packet size for transmission to all controllers that will attach to this line. The controller commands can override this default with the DFTPKTSIZE parameter on the controller commands. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

The possible **reception** values are:

***TRANSMIT**

The value specified as the default packet size for transmission is used as the default for reception.

receive-packet-size

Specify a default packet size for reception for all controllers that will attach to this line. The controller commands can override this default with the DFTPKTSIZE parameter on the controller commands. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

Top

Maximum packet size (MAXPKTSIZE)

Specifies the maximum packet sizes for transmission and reception on this line. These values should match the maximum packet sizes supported for transmission and reception by the X.25 network. The value specified must not be less than the default packet size specified.

The possible **transmission** values are:

***DFTPKTSIZE**

The maximum packet size for transmission is the same as the default packet size for transmission.

max-transmit-packet-size

Specify a packet size for transmission to all controllers attached to this line. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

Top

Modulus (MODULUS)

Specifies whether the extended sequence numbers are used.

8 Extended sequence numbers are not used (Modulus 8).

128 Extended sequence numbers are used (Modulus 128).

Top

Default window size (DFTWDWSIZE)

Specifies the default packet window size for transmission to and reception from controllers attached to this line. The controllers can override this default by specifying the **X.25 default window size (DFTWDWSIZE)** parameter on the controller commands.

The possible **transmission** values are:

2 The default packet window size is 2.

transmit-window-size

Specify the appropriate default window size. If you specified modulus 8, valid values range from 1 through 7. If you specified modulus 128, valid values range from 1 through 15.

The possible **reception** values are:

***TRANSMIT**

The value specified as the default window size for transmission is used as the default for reception.

receive-window-size

Specify the appropriate default window size. If you specified modulus 8, valid values range from 1 through 7. If you specified modulus 128, valid values range from 1 through 15.

Top

Insert net address in packets (ADRINSERT)

Specifies whether the system inserts the local network address in call request packets.

***YES** The local network address is inserted in packets.

***NO** The local network address is not inserted in packets.

Top

Network user ID (NETUSRID)

For switched lines, this parameter allows the network subscriber to request network user identification (NUI) information be encoded in the NUI Selection Facility for all call request packets sent by the local system on this line.

network-user-identification

Specify a NUI up to 214 hexadecimal characters in length.

Top

Connection number (CNNNBR)

Specifies the number used to connect to this line. This is the telephone number to be dialed by the modem. A maximum of 32 characters can be specified.

connection-number

Specifies the connection number.

Top

Calling number (CALLNBR)

Specifies the local telephone number of the line that is used for the V.25 bis Call Request with Identification (CRI) dial command. When V.25 bis CRI dialing is used, the system takes the called (connection) number (CANNBR parameter), adds a separator character (;), and puts the calling number at the end. The default, *NONE, indicates that Call Request Normal (CRN) is used.

Specify the calling number only when the modem and network support the CRI dial command.

*NONE

Call Request Normal (CRN) is used. CRN dialing sends only the connection number to the V.25 bis modem.

calling-number

Specify the local telephone number if V.25 bis CRI dialing is required. The number can be up to 32 characters in length. See your modem documentation to determine the values allowed by the modem.

Note: Specify the calling number only if both the modem and network support the V.25 bis CRI dial command.

Top

Switched connection type (SWTCNN)

Specifies whether the switched (Async, BSC, SDLC, or IDLC) line or switched network backup (Async, BSC, or SDLC) line is used for incoming calls, outgoing calls, or both.

*BOTH

The line is used for both incoming and outgoing calls.

*ANS The line is used for incoming calls only.

*DIAL

The line is used for outgoing calls only.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

Outgoing connection list (CNLSTOUT)

Specifies, for ISDN switched connections, the name of a connection list object that contains the ISDN assigned numbers for a dial-out operation to the ISDN.

*NONE

A user specified connection list for dial-out operations is not used. The connection list is automatically configured if OSI Communications Subsystems is installed.

name Specify the name of the connection list for dial out operations.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

Connection list entry (CNLSTOUTE)

Specifies, for ISDN switched connections, the entry name from the connection list used to make a call to the ISDN. The connection list must be specified on the CNLSTOUT parameter.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

Incoming connection list (CNLSTIN)

Specifies for ISDN switched connections the name of the connection list that is used to retrieve call information (or connection) for identifying authorized incoming calls.

*NETATR

The connection list used by this line description is taken from the list of system default network attributes that were identified at IPL (Initial Program Load). The Display Network Attributes (DSPNETA) command can be used to see the name of the connection list.

name Specify the name of the connection list used for this line description.

Top

Autoanswer (AUTOANS)

Specifies, for switched or switched network backup lines (Async, BSC, SDLC, or X.25 line), whether the system automatically answers a call from a remote system to establish the connection, or whether the system operator manually answers the call and places the modem in data mode.

Note: *YES is a valid option only if the modem has the automatic answer feature.

*YES The incoming call is automatically answered by the automatic answer feature.

*NO The incoming call must be manually answered.

Top

Autodial (AUTODIAL)

Specifies, for switched lines, whether the system automatically calls a remote system to establish a connection or if the system operator must manually place the call.

*NO The line connection is made by manually dialing the X.25 network.

*YES The line connection is made by the system automatically dialing the X.25 network.

Top

Dial command type (DIALCMD)

Specifies the type of dial command used to establish a switched connection with a remote system.

*NONE

No dial command is used. (An automatic call unit is used to establish the connection.)

*V25BIS

V.25 bis is a recommendation which allows the use of one physical interface for call establishment

and data transmission. It is referred to as a serial automatic call interface because the digits are presented serially on the link from the system to the modem.

Top

Modem init command string (MDMINZCMD)

Specifies the modem initialization command string sent to set the modem.

Note: Valid only when INTERFACE(*INTMODEM) or INFTRFTYPE(*SYNCMODEM) is specified.

*NONE

No command string is sent to the modem.

command-string

Specifies up to 60 characters that represent the command string sent to the modem. Valid characters are upper case A thru Z, lower case a thru z, numbers 0 thru 9, and special characters:

- Period
- Less than sign
- Left parenthesis
- Plus sign
- Ampersand
- Asterisk
- Right parenthesis
- Semicolon
- Minus sign
- Slash
- Comma
- Underline
- Greater than sign
- Question mark
- Colon
- Equal sign
- Spaces
- Number sign
- Double quote
- Exclamation point
- At sign
- Hat symbol
- Percent
- Left square bracket
- Right square bracket
- Back slash

Note: The modem initialization string must begin with the two characters 'AT'.

Top

Call immediate (CALLIMMED)

Specifies, for switched lines, whether a call (using the number specified in the C>NNNBR parameter) is made immediately after varying on the line.

***NO** The system does not try to immediately call after varying on.

***YES** The system does try to immediately call after varying on.

Top

Autocall unit (AUTOCALL)

Specifies, for switched or switched network backup lines (Async, BSC, SDLC, or X.25 line), whether the line has an associated automatic call unit that can automatically call the remote system.

***NO** No automatic call unit is associated with this line.

***YES** An automatic call unit is associated with this line.

Top

Autocall resource name (ACRSRCNAME)

Specifies the automatic call resource name that describes the automatic call unit port that is used to establish a connection with a remote system. Use the Work with Hardware Resources (WRKHDWRSC) command to determine the resource name.

Top

Predial delay (PREDIALDLY)

Specifies the time interval to wait before dialing a number.

6 The default value of six provides a 3-second delay.

predial-delay

Specify a value ranging from 0 through 254 units. Each unit represents 0.5 second. To indicate no delay, specify a value of 0.

Top

Redial delay (REDIALDLY)

Specifies the time interval to wait (in 0.5 second intervals) before re-dialing when the call attempt is unsuccessful.

120 The default value of 120 provides a 60-second delay.

redial-delay

Specify a value ranging from 0 through 254 units. Each unit represents 0.5 second. To indicate no delay, specify a value of 0.

Top

Dial retry (DIALRTY)

Specifies the number of re-dial attempts made by the system before considering the dialing unsuccessful.

2 The default number of retries is 2.

dial-retry

Specify a value ranging from 0 through 254.

Top

Switched disconnect (SWTDSC)

Specifies whether the line is dropped when the last switched virtual circuit (SVC) is cleared and the switched disconnect timers (SWTDSCTMRs) have expired.

***YES** The switched connection is dropped.

***NO** The switched connection is not dropped.

Top

Disconnect timers (SWTDSCTMR)

Specifies the timers used for disconnecting switched X.25 lines from the network or remote system. The minimum connect timer specifies the minimum length of time the system keeps the connection active. This timer is started when the connection is established. The disconnect delay timer specifies the length of time the system waits before attempting to disconnect the switched connection when no SVCs are active on the line or the last SVC completes and the **minimum-connect-timer** has expired.

The possible **minimum-connect-timer** values are:

min-connect-timer

Specify a value ranging from 0 through 65535 seconds.

The possible **disconnect-delay-timer** values are:

disconnect-delay-timer

Specify a value ranging from 0 through 65535 seconds.

Top

Data Set Ready drop timer (DSRDRPTMR)

Specifies the amount of time that the system waits for the modem to exit the Data Set Ready (DSR) state before signaling an error.

drop-timer

Specify a value ranging from 1 through 60 seconds.

Top

Autoanswer type (AUTOANSTYP)

Specifies the method that the system uses to answer incoming calls.

***DTR** The system enters the Data Terminal Ready state, signals the modem to answer calls, and waits for the modem to enter the Data Set Ready (DSR) state.

***CDSTL**

The system enters the Connect Data Set to Line (CDSTL) state after monitoring the Ring Indicator to signal the modem to answer the call.

Top

Remote answer timer (RMTANSTMR)

Specifies the amount of time that system waits for the modem to enter the Data Set Ready (DSR) state after dialing before signaling an error.

answer-timer

Specify a value ranging from 30 through 120 seconds in 5-second intervals.

Top

Clocking (CLOCK)

Specifies how the clocking function for the line is provided.

*MODEM

The modem supplies the clocking function.

*LOOP

The receiving clock provided by the modem data circuit-terminating equipment (DCE) is looped back to the modem DCE on the system data terminal equipment (DTE) transmitting clock. This option can be used to improve high speed data transmission when the modem DCE supports such an option.

*INVERT

The transmit clock provided by the modem data circuit-terminating equipment (DCE) is inverted before use. This option can be used when having problems with high speed data transmission and the modem (DCE) does not support looped clocking. The valid interfaces for *INVERT are *X21, *X21BISV35, and *RS449V36.

Top

Note: This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of the operating system.

Switched NWI selection (SWTNWISLCT)

Specifies the method used to select network interfaces from the switched network interface list.

*FIRST

Selection begins with the first network interface specified in the switched network interface list.

*CALC

The system calculates which network interface is selected.

Top

Text 'description' (TEXT)

Specifies text that briefly describes the line description.

*BLANK

Text is not specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

X.25 DCE support (X25DCE)

Specifies whether the system communicates through the X.25 data circuit-terminating equipment (DCE) support. This allows a system to communicate with another system without going through an X.25 network.

- ***NO** The system does not communicate through the X.25 DCE support.
- ***YES** The system does communicate through the X.25 DCE support.
- ***NEG** The operating system negotiates with another system about whether to communicate through the X.25 DCE support. This value can only be specified for switched lines.

Top

Network controller (NETCTL)

Specifies the name of an existing network controller.

Top

Switched controller list (SWTCTLLST)

Specifies the names of up to 64 switched asynchronous controllers or specify *ALL for an unlimited number of switched asynchronous X.25 controllers that can establish a connection with an X.25 switched virtual circuit (SVC). The controller descriptions must already exist. This parameter is valid only if the line is used to attach switched asynchronous X.25 controllers created by the Create Controller Description (Async) (CRTCTLASC) command. Attaching controllers that specify CNNNBR(*ANY) or ANSNBR(*ANY) may result in a reordering of this list.

You can enter multiple values for this parameter.

- ***ALL** All X.25 switched controllers that are created using the Create Controller Description (Async) (CRTCTLASC) command and list this line description on the Switched Line List (SWTLINLST) parameter can be used to establish a connection with an X.25 switched virtual circuit (SVC).
- ***NONE**
No switched asynchronous controller is specified.

names Specify the switched controller names. Up to 64 switched controllers can be specified.

Top

Idle timer (IDLTMR)

Specifies the maximum amount of time (in 0.1 second intervals) that the system waits for acknowledgment from the network for each frame sent before re-transmission.

Note: The IDLTMR value should be greater than or equal to the following equation: $(2 * P + (\text{MAXPKTSIZE} * 8) / \text{LINESPEED} + D) * 10$, where "P" is the propagation delay (in seconds) of the medium that connects you to the network, MAXPKTSIZE is the maximum transmit packet size, and "D" is the DCE (Data Circuit-terminating Equipment) processing overhead (in seconds). Contact your network provider for information regarding these two values.

40 The default for this parameter is 40.

idle-timer

Specify a value ranging from 3 through 600. Each unit represents 0.1 seconds, which provides a timeout value ranging from 0.3 through 60 seconds.

Top

Frame retry (FRAMERTY)

Specifies, for a primary, negotiable, or X.25 line, the number of retries for an unanswered command frame or unacknowledged information frame before indicating the error.

frame-retry

Specify a value from 0 to 64 for the number of retries.

Top

Error threshold level (THRESHOLD)

Specifies the temporary error threshold level being monitored by the system. A permanent error is reported only if the errors occurred consecutively and exceeded the retry limit.

Note: Specifying the THRESHOLD parameter affects all threshold errors. They cannot be specified individually.

- *OFF No threshold errors are reported.
- *MIN The threshold for errors is set to a minimum monitoring level.
- *MED The threshold for errors is set to a medium monitoring level.
- *MAX The threshold for errors is set to a maximum monitoring level.

Top

Modem type supported (MODEM)

Specifies the type of modem supported on the communications line. Refer to the modem manual to determine the appropriate value to select.

*NORMAL

No attempt is made to run diagnostic tests to your modem.

- *V54 Certain types of diagnostic tests (as defined by the CCITT recommendations) are run to your modem. This system supports CCITT V.54 loop 3, (a local loop back,) and loop 2, (which is a remote loop back).

*IBMWRAP

An IBM modem with wrap test capabilities is used on the communications line.

*IBMLPDA1

An IBM modem with Link Problem Determination Aid-1 (LPDA-1) is used on the line.

*IBMLPDA2

An IBM modem with Link Problem Determination Aid-2 (LPDA-2) is used on the line.

Top

Modem data rate select (MODEMRATE)

Specifies the speed at which the line operates if the modem has the data rate select feature.

***FULL** The line operates at the full rate of the modem.

***HALF**
The line operates at half the full rate of the modem.

Top

Clear To Send timer (CTSTMR)

Specifies the amount of time the system waits for the modem to enter or exit the Clear to Send (CTS) state before signaling an error.

cts-timer
Specify a value ranging from 10 through 60 seconds.

Top

Link speed (LINKSPEED)

Specifies the link speed in bits per second (bps). This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

***INTERFACE (SDLC and X.25 only)**
The link speed is based on the physical interface type: 9600 bps for RS-232/V.24 and X.21 bis/V.24, 48000 bps for V.35 and X.21 bis/V.35, and 64000 bps for X.21.

***MIN** A link speed of less than 1200 bps is used.

***MAX** A link speed greater than 100M bps is used.

link-speed
Specify the link speed. Valid values are: 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 128000, 192000, 256000, 320000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, and 16M.

Top

Cost/connect time (COSTCNN)

Specifies the relative cost of being connected on the line. Zero implies a low cost while 255 indicates a high cost. This parameter is valid only if APPN is used on the system.

***CNN (SDLC and IDLC only)**
The cost per connection time is based on the connection type: Zero for nonswitched connections and 128 for switched connections.

cost-per-connect-time
Specify a value ranging from 0 through 255.

Top

Cost/byte (COSTBYTE)

Specifies the relative cost per byte for sending and receiving data on the line. Zero implies a low cost while 255 indicates a high cost. This parameter is valid only if APPN is used on the system.

*CNN (SDLC and IDLC only)

The cost per byte is based on the connection type: Zero for nonswitched connections and 128 for switched connections.

cost-per-byte

Specify a value ranging from 0 through 255.

Top

Security for line (SECURITY)

Specifies the security level of the physical line. This parameter is valid only if APPN is used on the system.

*NONSECURE

There is no security on the line.

*PKTSWTNET

A packet switched network is used. Data does not always follow the same path through the network.

*UNDRGRDCBL

An underground cable is used.

*SECURECND

A secure, but unguarded, conduit is used.

*GUARDCND

A guarded conduit, protected against physical tapping, is used.

*ENCRYPTED

Data flowing on the line is encrypted.

*MAX A guarded conduit, protected against physical and radiation tapping is used.

Top

Propagation delay (PRPDLY)

Specifies the level of propagation delay on the line. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system. The order of the values from shortest to longest delay is

*MIN, *LAN, *TELEPHONE, *PKTSWTNET, and *SATELLITE.

*MIN The minimum propagation delay is used.

*LAN Propagation delay using a local area network.

*TELEPHONE

Propagation delay using telephone lines.

*PKTSWTNET

Propagation delay using a packet switched network.

*SATELLITE

Propagation delay using satellite communications.

*MAX The maximum propagation delay is used.

User-defined 1 (USRDFN1)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

128 The default value is 128.

user-defined-1

Specify a value ranging from 0 through 255.

Top

User-defined 2 (USRDFN2)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

128 The default value is 128.

user-defined-2

Specify a value ranging from 0 through 255.

Top

User-defined 3 (USRDFN3)

This field is used to describe unique characteristics of the line that you want to control. This parameter is valid only if advanced peer-to-peer networking (APPN) is used on the system.

128 The default value is 128.

user-defined-3

Specify a value ranging from 0 through 255.

Top

Recovery limits (CMNRCYLMT)

Specifies the second-level communications recovery limits to be used for this line description.

The possible **count-limit** values are:

2 Two recovery attempts are made within the specified time interval.

***SYSVAL**

The value in the QCMNRCYLMT system value is used.

count-limit

Specify the number of recovery attempts to be performed by the system. Valid values range from 0 through 99.

The possible **time-interval** values are:

5 The specified number of recovery attempts are made within a 5-minute interval.

time-interval

Specify the number of minutes within which recovery attempts are made. Valid values range from 0 through 120 in 1-minute intervals.

Top

Message queue (MSGQ)

Specifies the message queue to which operational messages are sent.

*SYSVAL

The value in the system value QCFGMSGQ is used.

*SYSOPR

Messages are sent to the system operator message queue (QSYS/QSYSOPR).

Qualifier 1: Message queue

name Specify the name of the message queue to which operational messages are sent.

Qualifier 2: Library

name Specify the name of the library where the message queue is located.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

*EXCLUDE

The user cannot access the object.

*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Examples

```
CRTLINX25  LIND(X251)  RSRNAME(LIN011)
           LGLCHLE((111 *PVC CTL1) (222 *SVCIN))
           NETADR(12345)  CNNINIT(*LOCAL)  TEXT('X.25 Line')
```

This command creates an X.25 line (X251) with resource name LIN011, two logical channels (with an attached PVC controller), a network address of 12345, and local connection initiation.

Top

Error messages

*ESCAPE Messages

CPF2718

Line description &1 not created due to errors.

Top

Create Locale (CRTLOCALE)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Locale (CRTLOCALE) command creates a locale object (*LOCALE) using the source information from the file provided on the SRCFILE parameter.

A locale is an object that can determine how data is processed, printed, and displayed. Locales are made up of categories that define language, cultural data, and character sets. Locales, in the form of a system object, are not shipped with the operating system. Rather, the locale definition source files are provided.

For more information about locales, see the Globalization information in the iSeries Information Center at <http://www.ibm.com/eserver/series/infocenter>.

Restriction

Locales must be created in the QSYS file system.

Top

Parameters

Keyword	Description	Choices	Notes
LOCALE	Locale name	<i>Path name</i>	Required, Positional 1
SRCFILE	Source file path name	<i>Path name</i>	Required, Positional 2
CCSID	Coded character set ID	1-65533, *JOB, *UTF	Required, Positional 3
GENLVL	Generation severity level	<u>10</u> , 20	Optional
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
OUTPUT	Output	*PRINT, *NONE	Optional
OPTION	Source listing options	<i>Element list</i>	Optional
	Element 1: Source listing	<i>Integer</i> , *SRC, *NOSRC	
	Element 2: Second level messages	<i>Integer</i> , *SECLVL, *NOSECLVL	
REPLACE	Replace object	*YES, *NO	Optional
DTAAUT	Public authority for data	<i>Name</i> , *INDIR, *NONE, *RWX, *RX, *RW, *WX, *R, *W, *X, *EXCLUDE	Optional
OBJAUT	Public authority for object	Single values: *INDIR, *NONE, *ALL Other values (up to 4 repetitions): *OBJEXIST, *OBJMGT, *OBJALTER, *OBJREF	Optional

Top

Locale name (LOCALE)

Specifies the path name of the locale being created.

Source file path name (SRCFILE)

Specifies the path name of the source file that contains the description of the locale being created. If the CCSID of the file is 65535, the job default CCSID is assumed by this command. If the file is from the QSYS file system, then it must be a database source physical file.

Note: If the source file is not a record file, then each line in the source file must have been terminated with a newline or linefeed character when the source file was created.

Top

Coded character set ID (CCSID)

Specifies the coded character set ID (CCSID) in which to store the locale information for the locale object.

The possible values are:

- *JOB** Specifies that the job CCSID is used for the locale information. If the job CCSID is 65535, the job default CCSID is used.
- *UTF** Specifies that two locales will be created, one for UTF8 and one for UTF32. The UTF8 locale name will have `_8` appended to the specified locale name. The UTF32 locale name will have `_4` appended to the specified locale name. The locale name specified will be limited to 8 characters in length when `CCSID(*UTF)` is specified.

coded-character-set-ID

Specify the CCSID used for the locale information.

Top

Generation severity level (GENLVL)

Specifies the severity level at which the creation operation can be controlled. The severity level of the messages generated in the creation operation indicate the type of errors that have occurred.

Note: If errors occur with a severity level greater than 20, the locale is not created.

The possible values are:

- 10** The locale is created with level 10 severity errors.
- 20** The locale is created with level 20 severity errors.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the locale.

The possible values are:

***BLANK**

Text is not specified.

'description'

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Output (OUTPUT)

Specifies whether or not a compiler listing is produced.

The possible values are:

***PRINT**

The compiler listing is produced. The information contained in the listing depends on the values specified on the OPTION parameter.

***NONE**

The compiler listing is not produced. To improve compile-time performance, this value should be specified when a listing is not required.

Top

Source listing options (OPTION)

Specifies the types of output lists created when this command is processed.

The possible values are:

***SRC** The source input used to create the locale is printed.

***NOSRC**

The source input used to create the locale is not printed.

***NOSECLVL**

Only the first-level error message text is included in the source listing.

***SECLVL**

Second-level error message text is printed.

Top

Replace object (REPLACE)

Specifies whether an existing version of the locale is replaced by the current locale.

The possible values are:

***YES** The existing locale is replaced with the new version. The old version is moved to the library QRPLOBJ and renamed based on the system date and time. The text description of the original locale is not used as the text description for the new locale. The old locale is deleted at the next IPL or you can use the Delete Locale (DLTLOCALE) command to delete it.

***NO** The local is not replaced and an error message is issued.

Top

Public authority for data (DTAAUT)

Specifies the public authority given users for the data in the object created.

The possible values are:

*INDIR

The authority for the object being created is determined by the directory it is being created in. If *INDIR is used for DTAAUT, it is also required for OBJAUT.

***RWX** The users are given *RWX authority to the objects. *RWX authority allows the user to perform all operations on the object except those limited to the owner or controlled by object existence, object management, object alter, and object reference authority. The user can change the object and perform basic functions on the object. *RWX authority provides object operational authority and all the data authorities.

***RX** *RX authority allows the user to perform basic operations on the object, such as run a program or display the contents of a file. The user is prevented from changing the object. *RX authority provides object operational authority and read and execute authorities.

***RW** *RW authority allows the user to view the contents of an object and modify the contents of an object. *RW authority provides object operational authority and data read, add, update, and delete authorities.

***WX** *WX authority allows the user to modify the contents of an object and run a program or search a library or directory. *WX authority provides object operational authority and data add, update, delete, and execute authorities.

***R** *R authority allows the user to view the contents of an object. *R authority provides object operational authority and data read authority.

***W** *W authority allows the user to modify the contents of an object. *W authority provides object operational authority and data add, update, and delete authorities.

***X** *X authority allows the user to run a program or search a library or directory. *X authority provides object operational authority and data execute authority.

***EXCLUDE**

Exclude authority prevents the user from accessing the object. The OBJAUT value must be *NONE if this special value is used.

***NONE**

The users will not be given any of the data authorities to the objects. This value cannot be used with OBJAUT value of *NONE.

authorization-list-name

Specify the name of the authorization list used.

Top

Public authority for object (OBJAUT)

Specifies the authorities given users to the object.

The possible values are:

*INDIR

The object authority is based on the authority for the directory where this object is being created. If *INDIR is used for DTAAUT, it is also required for OBJAUT.

***NONE**

None of the other object authorities (existence, management, alter, or reference) will be given to the users. If *EXCLUDE or an authorization list name is specified for the DTAAUT parameter, this value must be specified.

***ALL** All of the other object authorities (existence, management, alter, and reference) will be given to the users.

Or specify up to four (4) of the following values:

***OBJEXIST**

The users will be given object existence authority to the object.

***OBJMGT**

The users will be given object management authority to the object.

***OBJALTER**

The users will be given object alter authority to the object.

***OBJREF**

The users will be given object reference authority to the object.

Top

Examples

```
CRTLOCALE  LOCALE('/QSYS.LIB/MYLIB.LIB/USLOCALE.LOCALE')
           SRCFILE('/QSYS.LIB/MYLIB.LIB/LSRC.FILE/USLOCALE.MBR')
           CCSID(37) TEXT('Locale for USA')
```

This command creates a locale named USLOCALE in the library called MYLIB in the QSYS.LIB file system with a CCSID of 37. The text parameter describes this as a locale for the USA.

```
CRTLOCALE  LOCALE('/QSYS.LIB/MYLIB.LIB/USLOCALE.EXAMPLE')
           SRCFILE('/QSYS.LIB/MYLIB.LIB/LSRC.FILE/EXAMPLE.MBR')
           CCSID(*UTF) TEXT('UTF Locale examples')
```

This command creates two locales named EXAMPLE_4 with a CCSID of 1232 and EXAMPLE_8 with a CCSID of 1208 in the library called MYLIB in the QSYS.LIB file system. The text parameter describes them as UTF locale examples.

Top

Error messages

*ESCAPE Messages

CPF3BE1

Locale object &1 not created.

Top

Create Menu (CRTMNU)

Where allowed to run: All environments (*ALL)
 Threadsafef: No

Parameters
 Examples
 Error messages

The Create Menu (CRTMNU) command is used to create a menu object. Both Display File (*DSPF) and Program (*PGM) menus can be created by using this command. A menu can be displayed using the Go to Menu (GO) command.

Restrictions:

- You must have change (*CHANGE), read (*READ), and add (*ADD) authorities for the library where the menu is to be created.

Top

Parameters

Keyword	Description	Choices	Notes
MENU	Menu	Qualified object name	Required, Positional 1
	Qualifier 1: Menu	Name	
	Qualifier 2: Library	Name, * <u>CURLIB</u>	
TYPE	Menu type	*DSPF, *PGM, *UIM	Required, Positional 2
DSPF	Display file	Qualified object name	Optional
	Qualifier 1: Display file	Name, * <u>MENU</u>	
	Qualifier 2: Library	Name, * <u>LIBL</u> , *CURLIB	
MSGF	Message file	Qualified object name	Optional
	Qualifier 1: Message file	Name, * <u>MENU</u>	
	Qualifier 2: Library	Name, * <u>LIBL</u> , *CURLIB	
CMDLIN	Command line	* <u>LONG</u> , *SHORT, *NONE	Optional
DSPKEY	Display function keys	* <u>NO</u> , *YES	Optional
PGM	Program	Qualified object name	Optional
	Qualifier 1: Program	Name, * <u>MENU</u>	
	Qualifier 2: Library	Name, * <u>LIBL</u> , *CURLIB	
SRCFILE	Source file	Qualified object name	Optional
	Qualifier 1: Source file	Name, <u>QMNU</u> <u>SRC</u>	
	Qualifier 2:	Name, * <u>LIBL</u> , *CURLIB	
SRCMBR	Source member	Name, * <u>MENU</u>	Optional
OPTION	Source listing options	Values (up to 3 repetitions): *SOURCE, *NOSOURCE, *SRC, *NOSRC, *NOSECLVL, *SECLVL, *NOEVENTF, *EVENTF	Optional
INCFILE	Include file	Single values: * <u>SRCFILE</u> Other values: Qualified object name	Optional
	Qualifier 1: Include file	Name	
	Qualifier 2: Library	Name, * <u>LIBL</u> , *CURLIB	
CURLIB	Current library	Name, * <u>NOCHG</u> , *MNULIB, *CRTDFT	Optional
PRDLIB	Product library	Name, * <u>NOCHG</u> , *NONE	Optional

Keyword	Description	Choices	Notes
CHRID	Character identifier	Integer, *DEVD, *JOBCCSID, *CHRIDCTL	Optional
REPLACE	Replace menu	*YES, *NO	Optional
TEXT	Text 'description'	Character value, *SRCMBRTXT, *BLANK	Optional
AUT	Authority	Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE	Optional

Top

Menu (MENU)

Specifies the menu to be created.

This is a required parameter.

Qualifier 1: Menu

name Specify the name of the menu.

Qualifier 2: Library

*CURLIB

The current library for the job is used to store the new menu. If no library is specified as the current library for the job, QGPL is used.

name Specify the library where the menu is to be stored.

Top

Menu type (TYPE)

Specifies the type of menu to be created.

Note: *DSPF must be specified for values to be specified for the **Display file (DSPF)** and **Message file (MSGF)** parameters. The **Program (PGM)** parameter is valid only if *PGM is specified here.

This is a required parameter.

*DSPF

An existing display file and message file are used to create a menu.

*PGM The menu being created calls a program when the menu is requested.

*UIM The menu is created using the UIM tag language found in the file specified for the **Source file (SRCFILE)** and **Source member (SRCMBR)** parameters.

Top

Display file (DSPF)

Specifies the display file to be used in creating the menu object. The display file must include one record format with the same name as the display file itself, called the menu format. Help formats may also be included in the file.

Help formats follow the naming convention #Hxxyy, where xx is the first and yy is the last menu option to which the help format applies. For example, #H0306 would apply to menu options 3 to 6. #H0000 designates the general help for the menu.

The display file must have a separate indicator area (INDARA keyword) and contain no subfile descriptions.

This parameter can be specified only if *DSPF is specified for the **Menu type (TYPE)** parameter.

Qualifier 1: Display file

*MENU

The display file has the same name as the menu name specified for the **Menu (MENU)** parameter.

name Specify the name of the display file to be used.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the job is used to locate the display file. If no library is specified as the current library for the job, QGPL is used.

name Specify the library where the display file is located.

Top

Message file (MSGF)

Specifies the message file containing the commands to run when a menu option is selected. The MSGIDs of the messages in this file are of the form USRxxxx where xxxx is the menu option number typed on the command line.

Note: If the message file being created is to be used for menus, you must add message file members to the file using the Add Message Description (ADDMSGD) command.

Qualifier 1: Message file

*MENU

The message file containing the commands to run has the same name as the menu name specified for the **Menu (MENU)** parameter.

name Specify the name of the message file to be used.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the job is used to locate the message file. If no library is specified as the current library for the job, QGPL is used.

name Specify the library where the message file is located.

Top

Command line (CMDLIN)

Specifies whether a long command line, a short command line, or no command line (an option line) is used.

***LONG**

A 153-byte long command line is used.

***SHORT**

A 73-byte long command line is used.

***NONE**

No command line is used. A 4-byte option line is used.

Top

Display function keys (DSPKEY)

Specifies whether the function key legend appears at the bottom of the menu when the menu is shown.

***NO** The function key legend is not shown at the bottom of the display.

***YES** The function key legend is shown at the bottom of the display.

Top

Program (PGM)

Specifies the program to call when the menu is shown.

Three parameters are passed to the program:

- The first parameter is the ten-character name of the menu object which identifies the program to call.
- The second parameter is the ten-character name of the library containing the menu object.
- The third parameter is a two-character binary return code declared as a variable in the called program. The program must set one of the following return codes:

Return Code	Hex	Description
0	0000	Call the program (display the menu) again
-1	FFFF	Exit function requested
-2	FFFE	Previous function requested
-4	FFFC	Home function requested (display the home menu)

Qualifier 1: Program

***MENU**

The program called has the same name as the menu name specified for the **Menu (MENU)** parameter.

name Specify the name of the program to be called.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is used to locate the program. If no library is specified as the current library for the job, QGPL is used.

name Specify the library where the program is located.

Top

Source file (SRCFILE)

Specifies the source file containing the menu description source statements.

Qualifier 1: Source file

QMNUSRC

The source file QMNUSRC contains the menu description source statements.

name Specify the name of the source file containing the menu description source statements.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the job is used to locate the source file. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library where the source file is located.

Top

Source member (SRCMBR)

Specifies the member of the source file containing the menu description.

*MENU

The member name is the same as the menu name specified for the **Menu (MENU)** parameter.

name Specify the name of the source file member containing the menu description.

Top

Source listing options (OPTION)

Specifies options for the output produced during the compile. Multiple option values can be specified in any order on this parameter. If neither or both of the values in each group are specified, the underlined value will be used.

Note: The underlined values for this parameter are similar to, but not actually default values, and therefore, cannot be changed with the Change Command Default (CHGCMDDFT) command.

Source Listing Option

*SRC or *SOURCE

A source listing is produced.

*NOSRC or *NOSOURCE

No source listing is produced unless errors are detected.

Second-Level Message Text Option

*NOSECLVL

Second-level text is not provided with the first-level text when the messages are printed at the end of the listing.

*SECLVL

Second-level text is provided with the first-level text when the messages are printed at the end of the listing.

Event File Creation Option

*NOEVENTF

The compiler does not produce an event file for the CoOperative Development Environment for i5/OS (CODE for i5/OS).

*EVENTF

The compiler produces an event file that can be used by the CODE for i5/OS product. The event file is created as a member in the file EVFEVENT in your object library. The CODE for i5/OS product uses this file to offer error feedback integrated with the CODE for i5/OS editor. This value is normally specified by the CODE for i5/OS product on your behalf.

Top

Include file (INCFILE)

Specifies the source file containing the members to be included.

Note: If the coded character set identifier (CCSID) of the source file is different than the CCSID of the primary source file specified for the **Source file (SRCFILE)** parameter, the CCSID is changed to the CCSID of the primary source file. The CCSID must be the same for all source members used to create the object.

Single values

*SRCFILE

The include file is the same file as the file specified for the SRCFILE parameter.

Qualifier 1: Include file

name Specify the name of the source file containing the members to be included.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the job is used to locate the source file. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library where the source file is located.

Top

Current library (CURLIB)

Specifies the library used as the current library when menu is shown.

*NOCHG

The current library does not change for the processing of this menu.

*MNULIB

The current library is changed to the library containing the menu while the menu is shown.

*CRTDFT

There is no current library when the menu is shown.

name Specify the library name used as the current library when the menu is shown.

Top

Product library (PRDLIB)

Specifies the library used as the product library when the menu is shown.

Note: The product library for a command or menu remains in the library list while a command or menu is active, unless another command or menu changes the product library. When a command or menu that changed the product library ends, the product library is restored to what it was when the command or library started.

*NOCHG

The product library is not changed when the menu is shown and is not restored after exiting the menu.

*NONE

The product library entry in the library list is not used while the menu is shown.

name Specify the library name used as the product library when the menu is shown.

Top

Character identifier (CHRID)

Specifies whether the character identifier (graphic character set and code page) of the menu object is changed to the character identifier of the device when the menu is displayed.

Note: This parameter can be specified only if *UIM is specified for the **Menu type (TYPE)** parameter.

*DEV

No change occurs. The character identifier of the menu object is the same as the character identifier of the device.

*JOBCCSID

The character identifier of the menu object is changed from the CCSID of the file specified for the **Source file (SRCFILE)** parameter to the character identifier of the device.

*CHRIDCTL

The system checks the CHRIDCTL job attribute to determine whether to use *JOBCCSID or *DEV on the CHRID command parameter for this menu.

Top

Replace menu (REPLACE)

Specifies whether an existing menu with the same name is replaced.

Note: The menu cannot be replaced if it is in use by this job or another job.

*YES The existing menu is moved to the system library QRPLOBJ and replaced with the new menu.

*NO The existing menu is not replaced with the new menu.

Top

Text 'description' (TEXT)

Specifies the descriptive text associated with the menu.

*SRCMBRTXT

The text for the menu is obtained from the text associated with the source file member. Please note that this special value will only retrieve the text from the source file member if the menu is a *UIM type. For other menu types, the text will be set to blanks.

*BLANK

No text description is given for the menu.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

*EXCLUDE

The user cannot access the object.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

```
CRTMNU MENU(ARLIB/ARPEPS) TYPE(*PGM)
```

This command creates a menu named ARPERS in library ARLIB. The menu calls a program (also named ARPERS) when the menu is run.

[Top](#)

Error messages

***ESCAPE Messages**

CPF6AC3

Menu not created.

[Top](#)

Create Mode Description (CRTMODD)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Mode Description (CRTMODD) command creates a mode description for advanced-program-to-program communications (APPC) devices. A **mode description** defines the session characteristics and number of sessions for a link between the local and remote locations. More information on modes is in the APPC Programming book, SC41-5443 and the APPN information in the Networking category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

APPC support uses Systems Network Architecture (SNA).

Top

Parameters

Keyword	Description	Choices	Notes
MODD	Mode description	<i>Communications name</i>	Required, Positional 1
MAXSSN	Maximum sessions	1-512, <u>8</u>	Optional
MAXCNV	Maximum conversations	1-512, <u>8</u>	Optional
LCLCTLSSN	Locally controlled sessions	0-512, <u>4</u>	Optional
PREESTSSN	Pre-established sessions	0-512, <u>0</u>	Optional
MAXINPAC	Maximum inbound pacing value	1-32767, * <u>CALC</u>	Optional
INPACING	Inbound pacing value	0-63, <u>7</u>	Optional
OUTPACING	Outbound pacing value	0-63, <u>7</u>	Optional
MAXLENRU	Maximum length of request unit	241-32767, * <u>CALC</u>	Optional
DTACPR	Data compression	1-2147483647, * <u>NETATR</u> , *NONE, *ALLOW, *REQUEST, * <u>REQUIRE</u>	Optional
INDTACPR	Inbound data compression	* <u>RLE</u> , *LZ9, *LZ10, *LZ12, *NONE	Optional
OUTDTACPR	Outbound data compression	* <u>RLE</u> , *LZ9, *LZ10, *LZ12, *NONE	Optional
SLE	Session level encryption	* <u>NONE</u> , *ALL	Optional
TEXT	Text 'description'	<i>Character value</i> , * <u>BLANK</u>	Optional
COS	Class-of-service	<i>Communications name</i> , # <u>CONNECT</u> , #BATCH, #INTER, #BATCHSC, #INTERSC	Optional
AUT	Authority	<i>Name</i> , * <u>CHANGE</u> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

Top

Mode description (MODD)

Specifies the name of the mode description.

This is a required parameter.

Maximum sessions (MAXSSN)

Specifies the maximum number of active sessions that are established for this mode. This number must be greater than or equal to the sum of the number of locally controlled sessions as specified on the **Locally controlled sessions** prompt (LCLCTLSSN) and the number of locally controlled sessions specified at the remote location.

maximum-number-of-sessions

Specify the maximum number of sessions.

Valid values range from 1 to 512.

Top

Maximum conversations (MAXCNV)

Specifies the maximum number of conversations that can be established at the same time with the remote system. The maximum number of conversations is the sum of synchronous and asynchronous conversations; this value must be greater than or equal to the value specified by the **Maximum sessions** prompt (MAXSSN parameter). A synchronous conversation is a conversation where both the source and the target programs are communicating. An asynchronous conversation is a conversation where the source program has detached itself from the conversation, but data is still being read by the target program.

maximum-number-of-conversations

Specify the maximum number of conversations. Valid values range from 1 to 512.

Top

Locally controlled sessions (LCLCTLSSN)

Specifies the minimum number of locally controlled sessions that must be active to establish this mode. This value must be less than or equal to the value specified in the **Maximum sessions** prompt (MAXSSN parameter).

locally-controlled sessions

Specify the number of locally-controlled sessions used as source sessions. Valid values range from 0 to 512.

Top

Pre-established sessions (PREESTSSN)

Specifies the maximum number of locally-controlled sessions that are established when the mode is started. Additional sessions are established as required, up to the maximum number of locally-controlled sessions specified in the **Maximum sessions** prompt (MAXSSN parameter). This value must be less than or equal to the value specified in the **Locally controlled sessions** prompt (LCLCTLSSN parameter).

number-of-established-sessions

Specify the maximum number of concurrent locally-controlled sessions established when the mode is started. Valid values range from 0 to 512.

Top

Maximum inbound pacing value (MAXINPAC)

Specifies the maximum SNA pacing value used to schedule the incoming request units (RUs). **Pacing** is established by the receiving system to control the rate of transmission of the sending system to prevent loss of data.

Note: To ensure an optimum rate, the value *CALC is recommended.

*CALC

The system determines the value to use. The value is calculated to be 2*INPACING, which is two times the value specified on the INPACING parameter.

maximum-inbound-pacing

Specify a value, ranging from 1 through 32767 in RUs, for the maximum inbound pacing value.

Top

Inbound pacing value (INPACING)

Specifies the Systems Network Architecture (SNA) pacing value used to schedule the incoming request units (RUs).

7 A value of 7 is used as the RU pacing value.

inbound-pacing-value

Specify a value from 0 to 63 used as the limiting value.

Top

Outbound pacing value (OUTPACING)

Specifies the SNA pacing value used for outgoing request units (RUs).

7 A value of 7 is used as the RU pacing value.

outbound-pacing-value

Specify a value from 0 to 63 used as the limiting value.

Top

Maximum length of request unit (MAXLENRU)

Specifies the maximum request unit (RU) length allowed.

Note: To ensure an optimum length, the value *CALC is recommended.

*CALC

The system calculates the value to use.

maximum-request-unit-length

Specify a value, ranging from 241 through 32767 in bytes, for the maximum length of incoming request units.

Some other common values are:

- SDLC lines: 256, 512, 1024, 2048
- Token-Ring Network lines: 256, 512, 1024, 1985
- X.25 (QLLC) lines: 247, 503, 1015
- X.25 (ELLC) lines: 241, 497, 1009

Data compression (DTACPR)

Specifies whether data compression is used.

*NETATR

The value from the DTACPR network attributes is used.

*NONE

Compression is not allowed on the session.

*ALLOW

Data compression is allowed on the session by the local system if requested by a remote system. The local system does not request compression.

If data compression is requested by the remote system, the data compression levels used by the session are the lower of the requested levels and the levels specified on the **Inbound data compression** and **Outbound data compression** prompts (INDTACPR and OUTDTACPR parameters).

*REQUEST

Data compression is requested on the session by the local system. However, the request can be refused or changed to lower compression levels by the remote system. Data compression is allowed on the session if requested by the remote system. The requested compression levels for inbound and outbound data are the levels specified on the **Inbound data compression** and **Outbound data compression** prompts (INDTACPR and OUTDTACPR parameters).

If data compression is requested by the remote system, the data compression levels used by the session are the lower of the requested levels and the levels specified on the **Inbound data compression** and **Outbound data compression** prompts (INDTACPR and OUTDTACPR parameters).

*REQUIRE

Data compression is required on the session. If the remote system does not accept the local system's exact required levels of compression, the session is not established.

The data compression levels that the local system require are the levels specified on the **Inbound data compression** and **Outbound data compression** prompts (INDTACPR and OUTDTACPR parameters).

line-speed

Specify the maximum line speed at which data is compressed. If the line speed of the link used by the session is less than or equal to this specified line speed, data compression is used for the session as if *REQUEST is specified. Otherwise, compression is used for the session as if *ALLOW is specified. Valid values range from 1 through 2147483647 in bits per second (bps).

Inbound data compression (INDTACPR)

Specifies the desired level of compression for inbound data. No data compression occurs if *NONE is specified on the **Data compression** prompt (DTACPR parameter).

Note: Adaptive dictionary-based compression is a dynamic compression algorithm, similar to Lempel-Ziv, that compresses previously seen strings to 9-, 10-, and 12-bit codes. This algorithm is referred to as LZ in the following parameters.

- *RLE** The Run Length Encoding (RLE) algorithm is used. RLE substitutes a 1- or 2-byte sequence in the data stream for each repeated occurrence of the same character. This algorithm requires no storage and less processing time than the other options.
- *LZ9** The LZ algorithm with the 9-bit code for repeated substrings in the data stream is used. These codes refer to entries in a common dictionary, created as the data flows between the sender and receiver. The LZ algorithms require storage and extra processing time. The LZ9 requires the least storage and processing time of the LZ algorithms; however, it compresses the data stream the least.
- *LZ10** The LZ algorithm with the 10-bit code for repeated substrings in the data stream is used. These codes refer to entries in a common dictionary, created as the data flows between the sender and receiver. The LZ algorithms require storage and extra processing time. The LZ10 table algorithm requires more storage and processing time than the LZ9, but less than the LZ12. The LZ10 compresses the data stream more than the LZ9, but less than the LZ12.
- *LZ12** The LZ algorithm with the 12-bit code for repeated substrings in the data stream is used. These codes refer to entries in a common dictionary, created as the data flows between the sender and receiver. The LZ algorithms require storage and extra processing time. LZ12 requires the most storage and processing time of the LZ algorithms; however, it compresses the data stream the most.
- *NONE**
No compression occurs.

Top

Outbound data compression (OUTDTACPR)

Specifies the desired level of compression for outbound data. No data compression occurs if *NONE is specified on the **Data compression** prompt (DTACPR parameter).

- *RLE** The Run Length Encoding (RLE) algorithm is used. RLE substitutes a 1- or 2-byte sequence in the data stream for each repeated occurrence of the same character. This algorithm requires no storage and less processing time than the other options.
- *LZ9** The LZ algorithm with the 9-bit code for repeated substrings in the data stream is used. These codes refer to entries in a common dictionary, created as the data flows between the sender and receiver. The LZ algorithms require storage and extra processing time. The LZ9 requires the least storage and processing time of the LZ algorithms; however, it compresses the data stream the least.
- *LZ10** The LZ algorithm with the 10-bit code for repeated substrings in the data stream is used. These codes refer to entries in a common dictionary, created as the data flows between the sender and receiver. The LZ algorithms require storage and extra processing time. The LZ10 table algorithm requires more storage and processing time than the LZ9, but less than the LZ12. The LZ10 compresses the data stream more than the LZ9, but less than the LZ12.
- *LZ12** The LZ algorithm with the 12-bit code for repeated substrings in the data stream is used. These codes refer to entries in a common dictionary, created as the data flows between the sender and receiver. The LZ algorithms require storage and extra processing time. LZ12 requires the most storage and processing time of the LZ algorithms; however, it compresses the data stream the most.
- *NONE**
No compression occurs.

Top

Session level encryption (SLE)

Specifies the desired level of session encryption.

*NONE

No data is encrypted or decrypted.

***ALL** All data is encrypted before it is sent out to the network and is decrypted as it is received from the network.

Note: The use of session level encryption requires that IBM Common Cryptographic Architecture Services for i5/OS is installed along with the Cryptographic Processor feature or the Cryptographic Processor-Commercial feature.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

***BLANK**

No text is specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Class-of-service (COS)

Specifies the path control network characteristics (represented by a class-of-service description) used by advanced peer-to-peer networking (APPN).

- #CONNECT
- #BATCH
- #INTER
- #BATCHSC
- #INTERSC

class-of-service-name

Specify the class-of-service name.

Note: The class-of-service name will be ignored if using mode for APPC.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

- *ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.
- *USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.
- *EXCLUDE**
The user cannot access the object.
- *LIBCRTAUT**
The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.
- name* Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

```
CRTMODD  MODD(MODE1)  COS(COSD1)
          TEXT('Mode using COSD1 Class-of-Service')
```

This command creates a mode, MODE1, that specifies class-of-service description COSD1.

Top

Error messages

*ESCAPE Messages

CPF261B

Mode description &1 not created due to errors.

Top

Create Message File (CRTMSGF)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Message File (CRTMSGF) command creates a user-defined message file for storing message descriptions. The message file should be stored in a library for which all users who are to use the predefined messages have authority. The system is shipped with the IBM-supplied message files, stored in the system library, QSYS: the CPF message file, QCPFMSG (for the i5/OS system and machine interface messages); and the licensed program message files, such as QRPGMSG (for RPG messages).

Top

Parameters

Keyword	Description	Choices	Notes
MSGF	Message file	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Message file	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
SIZE	File size	<i>Element list</i>	Optional, Positional 2
	Element 1: Initial storage size	<i>Integer, <u>10</u></i>	
	Element 2: Increment storage size	<i>Integer, <u>2</u></i>	
	Element 3: Maximum increments	<i>Integer, *NOMAX</i>	
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional
CCSID	Coded character set ID	1-65535, *HEX, *MSGD, *JOB	Optional

Top

Message file (MSGF)

Specifies the message file to be created.

This is a required parameter.

Qualifier 1: Message file

message-file-name

Specify the name of the message file being created.

Qualifier 2: Library

*CURLIB

The current library for the job is used to create the message file. If no current library entry exists in the library list, the QGPL library is used.

library-name

Specify the library where the message file is to be created.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

*BLANK

No text is specified.

'description'

Specify no more than 50 characters, enclosed in apostrophes.

Top

File size (SIZE)

Specifies the initial storage size of the message file, the amount of each increase in its storage, and the number of times the size can be increased. The storage size is expressed in kilobytes (KB). (1KB equals 1024 bytes of storage.)

Element 1: Initial storage size

10 The message file has 10 KB of storage assigned to it.

initial-Kilobytes

Specify the initial size of the file (must be greater than 0).

Element 2: Increment storage size

2 2 KB of storage is added to the message file each time its size is increased.

increment-value

Specify the number of kilobytes added each time the message file's size is increased.

Element 3: Maximum increments

*NOMAX

The amount added to the message file is not limited by the user. The maximum size is determined by the system.

number-of-increments

Specify the maximum number of times that a message file's size can be increased. Specify a 0 to prevent any additions to the initial size of the file.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library

containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

***CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Coded character set ID (CCSID)

Specifies the coded character set identifier (CCSID) that is to be associated with the message file. The CCSID associated with the message file always overrides the CCSID associated with the message description. To use the CCSID associated with the message description, change the CCSID associated with the message file to *MSGD. For more information on message handler and its use of CCSIDs, see the i5/OS globalization topic collection in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

***HEX** The CCSID that is associated with the message file is set to 65535. The 65535 CCSID means that no conversions are to occur when adding or changing message descriptions in the message file and no conversions are to occur when retrieving message descriptions from the file. The CCSID associated with the message description is saved in the event the message file is ever changed to *MSGD.

***MSGD**

The CCSID that is associated with the message file is set to 65534. The 65534 CCSID means to use the CCSID associated with the message description when retrieving message text from the file. When adding or changing message descriptions in the message file, no conversions are to occur. The message description is tagged with the CCSID specified on the ADDMSGD or CHGMSGD commands.

***JOB** The CCSID that is associated with the message file is the CCSID of the job calling this command.

coded-character-set-identifier

Specify the CCSID that the message file is to be created with. Any message descriptions added to this message file are converted from the CCSID specified to the CCSID of the message file. Valid values range from 1 through 65535. See the Globalization information in the iSeries Information Center at <http://www.ibm.com/eserver/iseries/infocenter> for a list of valid CCSID values. Only CCSID values that a job can be changed to are accepted.

Top

Examples

```
CRTMSGF  MSGF(INVLIB/INVMSGGS)
         TEXT('Inventory Application Messages')
```

This command creates a message file named INVMSGGS in which predefined inventory application messages are stored. The file is stored in the library INVLIB, for which all users of the file must have *USE authority. Because the AUT parameter is defaulted, all users have *CHANGE authority for the file, meaning they can retrieve messages from the file.

Top

Error messages

*ESCAPE Messages

CPF2108

Object &1 type *&3 not added to library &2.

CPF2112

Object &1 in &2 type *&3 already exists.

CPF2113

Cannot allocate library &1.

CPF2151

Operation failed for &2 in &1 type *&3.

CPF2182

Not authorized to library &1.

CPF2283

Authorization list &1 does not exist.

CPF2402

Library &1 not found

CPF247E

CCSID &1 is not valid.

CPF2497

Size for &1 in &2 exceeds machine limit.

CPF9838

User profile storage limit exceeded.

Top

Create Menu from Msg Files (CRTMSGFMNU)

Where allowed to run: All environments (*ALL)
 Threadsafte: No

Parameters
 Examples
 Error messages

The Create Message File Menu (CRTMSGFMNU) command creates a menu (display file) from the specified message files. You can specify that this menu is created either in a fixed-format, with options 1 through 24 arranged in two columns, or in free-format.

If you want to create a menu from the source member, use the Create System/36 Menu (CRTS36MNU) command.

Restriction: Option 5 of the operating system must be installed to run this command. This command can be run either natively or in the System/36 environment.

Top

Parameters

Keyword	Description	Choices	Notes
CMDTXTMSGF	Menu## command message file	<i>Qualified object name</i>	Optional, Positional 1
	Qualifier 1: Menu## command message file	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
OPTTXTMSGF	Option text message file	Single values: *NONE Other values: <i>Qualified object name</i>	Optional, Positional 2
	Qualifier 1: Option text message file	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CMDLIB, *CURLIB</i>	
REPLACE	Replace menu	*NO, *YES	Optional
FREEFORM	Free form menu	*NO, *YES	Optional
DDSLIST	DDS listing	*PARTIAL, *FULL	Optional
MAXDEV	Maximum devices	1-256, <u>5</u>	Optional
AUT	Authority	<i>Name, *USE, *ALL, *CHANGE, *EXCLUDE, *LIBCRTAUT</i>	Optional
TOFILE	To DDS source file	<i>Qualified object name</i>	Optional
	Qualifier 1: To DDS source file	<i>Name, QDDSSRC</i>	
	Qualifier 2: Library	<i>Name, *CMDLIB, *CURLIB</i>	
TOMBR	To DDS source member	<i>Name, *NONE</i>	Optional
IGCDTA	User specified DBCS data	*NO, *YES	Optional
TGTRLS	Target Release	<i>Character value, *CURRENT, *PRV</i>	Optional

Top

Menu## command message file (CMDTXTMSGF)

Specifies the name and library of the command text message file that contains the text for the command that runs when the corresponding option is selected. This parameter must identify an existing message file and not a screen file generator (SFGR) or a System/36 message source member. The message IDs used must begin with USR. Trailing ## symbols are required on the CMDTXTMSGF name. The menu (display file) name is the message-file-name without the ## symbols. The run-time menu processor appends the trailing ## symbols to the menu name to determine the message file name. This is the name of the message file that contains messages whose text is the command that is run for any option selected.

This is a required parameter.

message-file-name-##

Specify the message file name used to create the menu. The trailing ## symbols are required. The menu (display file) name is the same as the message file name without the ## symbols.

The possible library values are:

*CURLIB

The current library for the job is used to locate the file. If no library is specified as the current library for the job, the QGPL library is used.

library-name

Specify the name of the library where the command text message file is located. The CMDTXTMSGF library is also where the menu display file is created. This is a requirement of the run-time MENU processor.

Top

Option text message file (OPTTXTMSGF)

Specifies the name and library of the option text message file that contains the text that is displayed on the menu to describe the options that can be selected. The message IDs used must begin with USR, unless *YES is specified on the **User specified DBCS data (IGCDTA)** parameter, which allows the message ID to begin with USZ.

*NONE

No option text message file is used. The **Menu## command message file (CMDTXTMSGF)** parameter is used to specify the option text.

message-file-name

Specify the name of the option text message file used for the descriptions of the options on the menu you are creating.

The possible library values are:

*CMDLIB

The library specified on the Menu## command message file (CMDTXTMSGF) parameter is used to locate the option text message file.

*CURLIB

The current library for the job is used to locate the option text message file. If no library is specified as the current library for the job, the QGPL library is used.

library-name

Specify the name of the library where the option text message file is located.

Top

Replace menu (REPLACE)

Specifies whether the original display file is replaced by the new file.

***NO** The existing display file does not change.

***YES** The existing display file is replaced by the one being created. Other types of files are not replaced.

Note: The menu is not created if it has the same name and library as an existing program or message file.

If terminating errors are encountered, the existing display file is not replaced. If the display file already exists, the **Authority (AUT)** parameter is ignored and the authorities for the old display file are copied to the new menu display file that replaces it.

Top

Free form menu (FREEFORM)

Specifies whether the menu is created in free-format or in a fixed-format.

***NO** Free-format is not used. A fixed-format menu with two-columns is created. Option text message numbers correspond to the option numbers.

***YES** A free-format menu is created. If ***YES** is specified, a value must be specified on the **Option text message file (OPTTXTMSGF)** parameter. Option text message numbers correspond to the row numbers on the display.

Top

DDS listing (DDSLIST)

Specifies whether a partial or full DDS compile listing is provided.

***PARTIAL**
A partial listing is provided.

***FULL** A full DDS listing and cross-reference are provided.

Top

Maximum devices (MAXDEV)

Specifies the maximum number of devices that can use the menu at one time.

5 The maximum number of devices is five.

number-of-devices

Specify the maximum number of devices that can use the menu at one time. Valid values range from 1 through 256.

Top

Authority (AUT)

Specifies the authority you are giving the users who do not have specific authority to the object, who are not on the authorization list, and whose user group has no specific authority to the object.

If OPTION(*CREATE) and REPLACE(*YES) are specified, and the display file already exists, the AUT parameter is ignored and the authorities for the old display file are copied to the new display file that replaces it.

***LIBCRTAUT**

The authority for the object is the same as the value specified on the **Create authority (CRTAUT)** parameter of the library in which the object is being created. If the value specified on the CRTAUT parameter is changed, the new value will not affect any existing objects.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***EXCLUDE**

The user cannot access the object.

authorization-list-name

Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

To DDS source file (TOFILE)

Specifies the name and library of the source file in which to store the DDS source that is used to create the menu display. The source file need not already exist. If the user is authorized to the CRTSRCPF (Create Source Physical File) command, and the file does not exist, a new source file is created. This parameter is ignored if TOMBR(*NONE) is specified.

QDDSSRC

The source file, QDDSSRC, is used.

file-name

Specify the name of the source file in which to store the DDS source.

The possible library values are:

***CMDLIB**

The library specified on the Menu## command message file (CMDTXTMSGF) parameter is used to locate the source file.

***CURLIB**

The current library for the job is used to locate the file. If no current library entry exists in the library list, the QGPL library is used.

library-name

Specify the name of the library where the source file is located.

To DDS source member (TOMBR)

Specifies the source file member name in which to store the DDS source. If the member does not exist, it is created. When the member name is the same as that of the display file name, and the to-file is QS36DDSSRC in the same library as the display file being created, the DDS is saved in this member only if the compile operation of the display file is successful. To guarantee that the DDS is saved, specify the name of some other source file, library, or member.

*NONE

The DDS source is not stored in the source file specified on the **To DDS source file (TOFILE)** parameter.

member-name

Specify the name of the source file member in which to store the DDS source. If the member does not exist, it is added. If it exists, it is replaced.

Top

User specified DBCS data (IGCDTA)

Specifies whether the display file contains double-byte character data.

*NO The display file does not contain double-byte character data. Option text message IDs must begin with USR.

*YES The display file or the message files contain double-byte character data. Option text message IDs can begin with USZ.

Top

Target Release (TGTRLS)

Specifies the release level of the operating system on which you intend to use the object being saved.

When specifying the **target-release** value, the format VxRxMx is used to specify the release, where Vx is the version, Rx is the release, and Mx is the modification level. For example, V5R3M0 is version 5, release 3, modification 0.

Valid values depend on the current version, release, and modification level of the operating system, and they change with each new release. You can press F4 while prompting this command parameter to see a list of valid target release values.

*CURRENT

The object is to be restored to, and used on, the release of the operating system currently running on your system. The object can also be restored to a system with any subsequent release of the operating system installed.

*PRV The object is to be restored to the previous release with modification level 0 of the operating system. The object can also be restored to a system with any subsequent release of the operating system installed.

character-value

Specify the release in the format VxRxMx. The object can be restored to a system with the specified release or with any subsequent release of the operating system installed.

Examples

```
CRTMSGFMNU  CMDTXTMSGF(MYMENU##)  REPLACE(*YES)  FREEFORM(*NO)
```

This command creates a menu by using a message file named MYMENU. The message file is located in the current library for the job and it contains the commands run for each menu option. Because no OPTTXTMSGF parameter is specified, the text of the command appears on the screen in place of the option text. REPLACE(*YES) specifies that an existing display file is replaced. The created display file is in a fixed-format, with options 1 through 24 arranged in two 12-element columns.

Top

Error messages

*ESCAPE Messages

SSP4464

Member &3 in file &1 in use, cannot be shared.

SSP5004

&1—This load member exists, but is not a \$SFGR member.

SSP5005

&1 display file already exists.

SSP5011

&1 not allowed for display file name.

SSP5017

TOFILE library &1 not found.

SSP5019

Terminating errors in \$SFGR input specifications.

SSP5027

TGTRLS(*PRV) allowed with changes only when existing display file created for previous release.

SSP5451

Existing file &1 is not a display file.

SSP5750

Command message file messages 1-24 contain only blank text.

SSP5751

Command text message file name must end with ##.

SSP5752

Command text message file library &1 not found.

SSP5753

Command text message file &1 not found.

SSP5754

Option text message file &1 not found.

SSP5755

Unable to create \$BMENU work file.

- SSP5756**
Command message file name must be longer than 2 characters.
- SSP5757**
Command text message file has no MIC in 0001-0024 range
- SSP5762**
Option text message file name cannot be same as menu name.
- SSP5770**
Option text message file required for free format menu.
- SSP5774**
Command and option message files must not be the same.
- SSP6124**
Unexpected error occurred.
- SSP7375**
Error &1 received by &2 utility.
- SSP8663**
User not authorized to access &1.
- SSP8679**
Not authorized to access member &1.

Top

Create Message Queue (CRTMSGQ)

Where allowed to run: All environments (*ALL)
 Threadsafte: Yes

Parameters
 Examples
 Error messages

The Create Message Queue (CRTMSGQ) command creates a user-defined message queue and stores it in a specified library. The message queue should be put in a library for which all users who are to send messages to and receive messages from the queue have *USE authority. The messages sent can be either predefined messages or immediate messages. The message queue has the following attributes initialized when it is created: the DLVRY parameter is set to *HOLD, the first element of the PGM parameter is set to *DSPMSG and the second element of the PGM parameter is set to *ALWRPY, SEV is set to 00, and RESET is set to *NO. These initialized attributes cannot be specified on the CRTMSGQ command and the CHGMSGQ command must be used to change them after the queue is created.

Note: Message queue QSYSOPR is shipped with a message queue full action of *WRAP. If the value is changed to *SNDMSG and the queue needs to be recreated because it was damaged, the value is reset to the shipped value of *WRAP.

Top

Parameters

Keyword	Description	Choices	Notes
MSGQ	Message queue	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
FORCE	Force to auxiliary storage	<i>*NO, *YES</i>	Optional
SIZE	Queue size	<i>Element list</i>	Optional
	Element 1: Initial storage size	<i>Integer, <u>3</u></i>	
	Element 2: Increment storage size	<i>Integer, <u>1</u></i>	
	Element 3: Maximum increments	<i>Integer, *NOMAX</i>	
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional
ALWALR	Allow alerts	<i>*NO, *YES</i>	Optional
CCSID	Coded character set ID	<i>1-65535, *MSG, *HEX, *JOB</i>	Optional
MSGQFULL	Message queue full action	<i>*SNDMSG, *WRAP</i>	Optional

Top

Message queue (MSGQ)

Specifies the message queue to be created.

This is a required parameter.

Qualifier 1: Message queue

name Specify the name of the message queue being created.

Qualifier 2: Library

*CURLIB

The current library for the job is used to create the message queue. If no current library entry exists in the library list, the QGPL library is used.

name Specify the library where the message queue is to be created.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

*BLANK

No text is specified.

'description'

Enter no more than 50 characters, enclosed in apostrophes.

Top

Force to auxiliary storage (FORCE)

Specifies whether changes made to the message queue description or messages added to or removed from the queue are immediately forced into auxiliary storage; this ensures that changes to the queue, or messages sent or received, are not lost if a system failure occurs.

*NO Changes made to the message queue, including its messages, are not immediately forced to auxiliary storage.

*YES All changes to the message queue description and to the messages in the queue are immediately forced to auxiliary storage.

Top

Queue size (SIZE)

Specifies the initial storage size of the message queue, the size of each addition to its storage, and the number of times the size can be increased. The storage size is expressed in kilobytes (KB).

Element 1: Initial storage size

3 Initially, the message queue has 3 KB of storage assigned to it. (1 KB equals 1024 bytes of storage.)

initial-Kilobytes

Specify the initial size of the queue (must be greater than 0).

Element 2: Increment storage size

One of the following is used to specify the amount of storage in kilobytes added to the message queue's size each time the size is increased.

1 One KB of storage is added to the message queue each time its size is increased.

increment-value

Specify the number of kilobytes added each time the message queue's size is increased.

Element 3: Maximum increments

One of the following is used to specify the maximum number of times the message queue's size can be increased.

*NOMAX

The number of times storage can be added to the message queue is not limited by the user. The maximum size is determined by the system.

number-of-increments

Specify the maximum number of times storage can be added to the queue. Enter a 0 to prevent any additions to the initial size of the queue.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

*EXCLUDE

The user cannot access the object.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Allow alerts (ALWALR)

Specifies whether the queue being created allows alerts to be generated from alert messages that are sent to it.

- *NO** Does not allow alerts to be generated from this message queue.
- *YES** Allows alerts to be generated from this message queue.

Top

Coded character set ID (CCSID)

Specifies the coded character set identifier (CCSID) associated with this message queue. The CCSID applies only to immediate messages and message data that is defined as a character field that can be converted (*CCHAR).

- *HEX** Messages sent to, received from, or displayed from this message queue are not converted. The message queue CCSID is 65535.
- *MSG** Messages sent to this message queue are not converted. The CCSID specified by the sending job is saved in case a conversion is needed for a display or receive function. The message queue CCSID is 65534.
- *JOB** The CCSID of the message queue will be the CCSID of the job running this command.

coded-character-set-identifier

Specify the CCSID associated with this message queue. Messages sent to this message queue are converted to this CCSID. Valid values range from 1 through 65535. See the Globalization information in the iSeries Information Center at <http://www.ibm.com/eserver/iseres/infocenter> for a list of valid CCSID values.

For more information about the message handler and its use of CCSIDs, see the i5/OS globalization topic collection in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Top

Message queue full action (MSGQFULL)

Specifies the action to take when the message queue is full.

***SNDMSG**

When the message queue is full, CPF2460 (Message queue could not be extended.) is sent to the program or user that is sending a message to the full message queue.

***WRAP**

When the message queue is full, the oldest informational and answered messages are removed from the message queue to allow space for new messages to be added. If the removing of the informational and answered messages does not provide enough space to add the requested message, then unanswered inquiry messages are removed until there is space to add the requested message. The default reply is sent before an unanswered inquiry message is removed. When the message queue is wrapped, CPI2420 or CPI2421 will be sent to the queue that was full to indicate it was wrapped. If there is no space on the queue to send these messages they are sent to the joblog of the user that was sending the message to the queue and they are sent to QHST if the full queue is QSYSOPR.

NOTE:

When a queue uses *WRAP and a job sends a message to the queue that causes a wrap, messages are removed for the following conditions in order to perform the wrap:

- the queue is in break or notify mode for a job
- a job is in a message wait state because it did a receive function on the queue with a wait time specified
- the queue is allocated by a job via the ALCOBJ command

Only the system wrap function can remove messages from queues in these conditions. Other jobs still are not allowed to remove messages from the queues during these conditions. With *SNDMSG, these conditions do not allow another job to remove messages from the queue.

Also when a queue specifies *WRAP and it is in break mode, the wrap function only removes messages that have been received by the break-handling program. For example, if the break-handling program did not receive all messages from the the queue and it was becoming full, CPF2460 could be issued because messages could not be removed to perform the wrap.

Top

Examples

```
CRTMSGQ  MSGQ(MYQ)  SIZE(3 3 *NOMAX)
         TEXT('Message queue for inventory transactions')
         AUT(*CHANGE)
```

This command creates the message queue MYQ and stores it in the current library (*CURLIB) by default. All users are authorized to send messages to the queue and to read its messages.

The message queue is created with an initial size of 3 kilobytes (KB) and increased in size in 3 KB increments. The restriction on its maximum size is the system limit for objects, which is about 16,000 KB.

Top

Error messages***ESCAPE Messages****CPF2108**

Object &1 type *&3 not added to library &2.

CPF2112

Object &1 in &2 type *&3 already exists.

CPF2113

Cannot allocate library &1.

CPF2151

Operation failed for &2 in &1 type *&3.

CPF2182

Not authorized to library &1.

CPF2283

Authorization list &1 does not exist.

CPF2402

Library &1 not found

CPF247E

CCSID &1 is not valid.

CPF2497

Size for &1 in &2 exceeds machine limit.

CPF9838

User profile storage limit exceeded.

Top

Create Node Group (CRTNODGRP)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Node Group (CRTNODGRP) command creates a node group to be used for creating distributed database files.

Top

Parameters

Keyword	Description	Choices	Notes
NODGRP	Node group	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Node group	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
RDB	Relational database	Values (up to 32 repetitions): <i>Character value</i>	Required, Positional 2
PTNFILE	Partitioning file	<i>Qualified object name</i>	Optional
	Qualifier 1: Partitioning file	<i>Name, *NONE</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
PTNMBR	Partitioning member	<i>Name, *FIRST</i>	Optional
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional

Top

Node group (NODGRP)

Specifies the node group to be created.

This is a required parameter.

Qualifier 1: Node group

name Specify the name of the node group to be created.

Qualifier 2: Library

*CURLIB

The node group is created in the current library for the job. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library for the node group.

Top

Relational database (RDB)

Specifies the relational databases to be included in the node group.

This is a required parameter.

character-value

Specify the name of each relational database to be used. A maximum of 18 characters can be specified for the relational database name. These must have already been defined in the system's relational database directory using the Add RDB Directory Entry (ADDRDBDIRE) command. At least two relational database names must be specified. One of the entries must correspond to the local system. All other entries must correspond to remote iSeries systems. Up to 32 relational database names may be specified.

When the node group is created, a node number is assigned for each relational database specified. Node numbers are assigned consecutively, starting with 1. The first relational database is assigned node number 1, the second database is assigned node number 2, and so on. Once the node group has been created, you can use the DSPNODGRP (Display Node Group) command to see the correspondence between node numbers and relational database names.

Top

Partitioning file (PTNFILE)

Specifies the name of the file to be used to determine the partitioning attributes for the node group. The node group contains a table with 1024 partitions. Each partition contains a node number. The partitioning file allows you to set the node number for each of the 1024 partitions. For a complete description of the format of a partitioning file, refer to the DB2 Multisystem for OS/400 book.

Qualifier 1: Partitioning file

*NONE

A partitioning file will not be used to set the partitioning attributes for the node group object. Each valid node number will be assigned to equal number of partitions. For example, if two relational databases are specified there will be two valid node numbers (1 and 2), and the partitions will be divided equally so that 512 partitions have a node number of 1 and the other 512 partitions have a node number of 2.

name Specify the name of the partitioning file to be used.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library to be searched.

Top

Partitioning member (PTNMBR)

Specifies the member in the partitioning file to be used to determine the partitioning attributes for the node group.

*FIRST

The first member in the partitioning file is used.

name Specify the name of the member to be used.

Note: This parameter is not valid when *NONE is specified for the **Partitioning file (PTNFILE)** parameter.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the node group.

*BLANK

Text is not specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

*EXCLUDE

The user cannot access the object.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

Example 1: Creating a Group with Default Partitioning

```
CRTNODGRP  NODGRP(LIB1/GROUP1)
           RDB(SYSTEMA SYSTEMB SYSTEMC SYSTEMD)
           TEXT('Node group for test files')
```

This command creates a node group containing four nodes. The partitioning attributes default to assigning one-fourth of the partitions to each node number. This node group can be used on the NODGRP parameter of the Create Physical File (CRTPF) CL command to create a distributed file. Distributed files created specifying this node group will have their data spread across the four node systems. If the records in the distributed file contain a uniform distribution of values for those fields which comprise the partition key, the records will be spread evenly between the node systems.

Example 2: Creating a Group with Specific Partitioning

```
CRTNODGRP  NODGRP(LIB1/GROUP2) RDB(SYSTEMA SYSTEMB SYSTEMC)
           PTNFILE(LIB1/PTN1)
           TEXT('Partition most of the data to SYSTEMA')
```

This command creates a node group containing three nodes. The partitioning attributes are taken from the file called PTN1. This file can be set up to force a higher percentage of the records (or rows) to be located on a particular system.

Top

Error messages

*ESCAPE Messages

CPF3165

Node group &1 in library &2 could not be created.

Top

Create Node List (CRTNODL)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Node List (CRTNODL) command allows the user to create a node list object. This object is used to store node names that identify a set of systems in a network.

Note: Node lists can be used by system functions to indicate an operation is to be performed on a set of systems.

Top

Parameters

Keyword	Description	Choices	Notes
NODL	Node list	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Node list	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional

Top

Node list (NODL)

Specifies the qualified name of the node list object to be created.

The node list name can be qualified by one of the following library values:

***CURLIB**

The node list is created in the current library for the job. If no library is specified as the current library for the job, the QGPL library is used.

library-name

Specify the name of the library where the node list is to be created.

The possible values are:

node-list-object-name

Specify the name of the node list to be created.

Top

Text 'description' (TEXT)

Specifies text that briefly describes the node list.

The possible values are:

***BLANK**

Text is not specified.

'description'

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Authority (AUT)

Specifies the authority given to users who do not have specific authority to the object, who are not on the authorization list, and whose user group has no specific authority to the object.

The possible values are:

***LIBCRTAUT**

The public authority for the object is taken from the CRTAUT value of the target library (the library that is to contain the object). This value is determined when the object is created. If the CRTAUT value for the library changes after the object is created, the new value does not affect any existing objects.

***CHANGE**

The user can perform all operations on the file except those limited to the owner or controlled by object existence authority and object management authority. The user can perform basic functions on the file, and the user can change it. Change authority provides object operational authority and all data authority.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user can transfer ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user is prevented from accessing the object.

authorization-list-name

Specify the name of the authorization list used.

Top

Examples

Example 1: Node List Creation without Text Description

```
CRTNODL  NODL(QGPL/NODL01)
```

This command creates a node list in library QGPL called NODL01. The node list has the same public authority as that defined for QGPL and it does not have a text description.

Example 2: Node List Creation with Text Description

```
CRTNODL  NODL(MYLIB/NODL02)  AUT(*EXCLUDE)  
        TEXT('This is my Node List number 2')
```

This command creates node list NODL02 in library MYLIB with public *EXCLUDE authority. The text description for this node list is 'This is my Node List number 2'.

[Top](#)

Error messages

*ESCAPE Messages

CPF2108

Object &1 type *&3 not added to library &2.

CPF2112

Object &1 in &2 type *&3 already exists.

CPF2113

Cannot allocate library &1.

CPF2151

Operation failed for &2 in &1 type *&3.

CPF2182

Not authorized to library &1.

CPF2283

Authorization list &1 does not exist.

CPF9810

Library &1 not found.

CPF9820

Not authorized to use library &1.

[Top](#)

Create NetBIOS Description (CRTNTBD)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create NetBIOS Description (CRTNTBD) command creates a NetBIOS configuration description. Configuration objects, such as network server descriptions, for IOPs that support NetBIOS can then refer to this object for their NetBIOS parameters.

More information about using this command is in the Communications Configuration book, SC41-5401 book.

Top

Parameters

Keyword	Description	Choices	Notes
NTBD	NetBIOS description	<i>Name</i>	Required, Positional 1
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
FULLBUFDTG	Full buffer datagrams	*YES, *NO	Optional
ADPWDWITV	Adaptive window interval	0-65535, <u>1000</u>	Optional
MAXWDWERR	Maximum window errors	0-10, <u>0</u>	Optional
MAXRCVDATA	Maximum receive data size	512-16384, <u>4168</u>	Optional
INACTTMR	Inactivity timer	1000-65535, <u>30000</u>	Optional
RSPTMR	Response timer	50-65535, <u>500</u>	Optional
ACKTMR	Acknowledgement timer	50-65535, <u>200</u>	Optional
MAXIN	Maximum outstanding receives	1-127, <u>1</u>	Optional
MAXOUT	Maximum outstanding transmits	1-127, <u>1</u>	Optional
QRYTMR	Query timeout	500-10000, <u>500</u>	Optional
NTBRTY	NetBIOS retry	1-50, <u>8</u>	Optional
ALWMULTACK	Allow multiple acknowledgement	*YES, *NO	Optional
PREBLTPKT	Prebuilt message packets	1-200, <u>5</u>	Optional
PKTRESTART	Packet confirms for restart	0-9999, <u>2</u>	Optional
DLCRTY	DLC retries	1-65535, <u>5</u>	Optional
ETHSTD	Ethernet standard	*IEEE8023, *ETHV2	Optional
AUT	Authority	*CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

Top

NetBIOS description (NTBD)

Specifies the name of the NetBIOS configuration object being created.

This is a required parameter.

Top

Text 'description' (TEXT)

Specifies text that briefly describes the NetBIOS description.

*BLANK

Text is not specified.

'description'

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Full buffer datagrams (FULLBUFDTG)

Specifies whether to request the full transmit buffer size for datagrams.

*NO The full transmit buffer size is not requested. The length of a datagram is equal to the transmit buffer size minus the size of the overhead, for a maximum of 512 bytes. Large messages are truncated.

Note: The size of the overhead is the sum of the sizes of the NetBIOS header (44 bytes), the LAN header (a maximum of 36 bytes), and the buffer hold overhead (a maximum of 6 bytes).

*YES The full transmit buffer size is requested.

Top

Adaptive window interval (ADPWDWITV)

Specifies the time, in milliseconds, between runs of the adaptive window algorithm. For each link, this algorithm is used to change the values on the MAXIN and MAXOUT parameters to match the values set on the remote workstation using NetBIOS protocol. The algorithm considers the conditions of the link, including adapter receive buffers and transmission load, when changing the values.

1000 The time between runs of the adaptive window algorithm is 1000 milliseconds.

adaptive-window-interval

Specify the time between algorithm runs, in milliseconds. Valid values range from 0 through 65535.

Note: The value 0 disables the algorithm.

Top

Maximum window errors (MAXWDWERR)

Specifies the number of dropped packets the adaptive window algorithm allows before decreasing the value on the MAXOUT parameter.

0 The number of dropped packets is 0.

window-errors

Specify the number of window errors allowed. Valid values range from 0 through 10.

Top

Maximum receive data size (MAXRCVDATA)

Specifies the maximum data size in any frame that can be received in a session. The partner in the transmission limits the size to the smaller of this specified size, or the size available in the partner's transmit buffer. NetBIOS takes into account the maximum size that is forwarded by bridges in the path.

4168 The maximum data size that can be received is 4168 bytes.

maximum-receive-data-size

Specify the maximum data size that can be received, in bytes. Valid values range from 512 through 16384.

Top

Inactivity timer (INACTTMR)

Specifies the amount of time that a link can be inactive before the NetBIOS protocol driver checks to verify that the link is operational.

30000 The link can be inactive for 30000 milliseconds.

inactivity-timer

Specify the amount of time to wait for activity, in milliseconds. Valid values range from 1000 through 65535.

Top

Response timer (RSPTMR)

Specifies the amount of time to wait before again transmitting a link-level frame when no acknowledgement is received from the previous transmission.

500 The NetBIOS protocol driver waits 500 milliseconds.

response-timer

Specify the amount of time to wait, in milliseconds. Valid values range from 50 through 65535.

Top

Acknowledgement timer (ACKTMR)

Specifies the amount of time the NetBIOS protocol driver delays acknowledging a received frame, when the number of frames sent is less than the maximum specified on the MAXIN parameter.

200 The driver delays for 200 milliseconds.

acknowledgement-timer

Specify the amount of time to delay, in milliseconds. Valid values range from 50 through 65535.

Top

Maximum outstanding receives (MAXIN)

Specifies the maximum number of NetBIOS messages packets that can be received before sending an acknowledgement.

1 An acknowledgement is sent after one packet is received.

maximum-receives

Specify the number of packets to receive. Valid values range from 1 through 127.

Top

Maximum outstanding transmits (MAXOUT)

Specifies the maximum number of NetBIOS messages packets that can be sent before expecting an acknowledgement.

Note: This parameter is used only when ADPWDWITV(0) is specified.

1 An acknowledgement is expected after one packet is sent.

maximum-transmits

Specify the number of packets to send. Valid values range from 1 through 127.

Top

Query timeout (QRYTMR)

Specifies the time, in milliseconds, to wait between transmission retry attempts.

500 The time to wait is 500 milliseconds.

query-timeout

Specify a value in the range of 500 through 10000 milliseconds.

Top

NetBIOS retry (NTBRTY)

Specifies the number of transmission retries that are attempted at the NetBIOS level before assuming that the receiving party is not present.

8 The number of retries is 8.

NetBIOS-retry

Specify a value in the range of 1 through 50 attempts.

Top

Allow multiple acknowledgement (ALWMULTACK)

Specifies whether acknowledgements for received data can be combined with requests for data.

Note: When the NetBIOS protocol driver sends and receives acknowledgements with incoming data, LAN performance is improved.

*YES The acknowledgements can be combined with data requests.

Note: Both parties to the transmission must support combining acknowledgements with data requests or this value is ignored.

***NO** The acknowledgements cannot be combined with data requests.

Top

Prebuilt message packets (PREBLTPKT)

Specifies the number of NetBIOS message packets that are prebuilt for each session.

5 The number of NetBIOS message packets is 5.

prebuilt-packets

Specify a value in the range of 1 through 200 message packets.

Top

Packet confirms for restart (PKTRESTART)

Specifies the number of transmission confirmations that must be received before sending additional packets when an out-of-resource condition occurs. The NetBIOS protocol driver stops sending packets when an out-of-resource condition is received from a port.

2 The maximum number of transmission confirmations is 2.

packet-restart

Specify the number of transmission confirmations. Valid values range from 0 through 9999.

Top

DLC retries (DLCRTY)

Specifies the number of additional transmission attempts that will be made before assuming that the receiving data control link (DLC) layer is not responding.

5 The additional number of transmission attempts is 5.

DLC-retries

Specify a value in the range of 1 through 65535 attempts.

Top

Ethernet standard (ETHSTD)

Specifies the Ethernet standard frame type that is used for NetBIOS communication.

***IEEE8023**

IEEE 802.3 frames are used.

***ETHV2**

Ethernet Version 2 frames are used.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

***LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

```
CRTNTBD  NTBD(MYNETBIOS)  ADPWDWITV(6000)
```

This command creates a NetBIOS description named MYNETBIOS specifying that the adapter window algorithm is to be run every 6000 milliseconds (6 seconds).

Top

Error messages

*ESCAPE Messages

CPF26C3

IPX description &1 not created due to errors.

CPF27A6

NetBIOS description &1 not created due to errors.

Top

Create Network Interface (FR) (CRTNWIFR)

Where allowed to run: All environments (*ALL)
 Threadsafes: No

Parameters
 Examples
 Error messages

The Create Network Interface (Frame-Relay Network) (CRTNWIFR) command creates a network interface for a frame-relay (FR) network. More information about using this command is in the Communications Configuration book, SC41-5401.

Top

Parameters

Keyword	Description	Choices	Notes
NWID	Network interface description	<i>Name</i>	Required, Positional 1
RSRCNAME	Resource name	<i>Name</i>	Required, Positional 2
ONLINE	Online at IPL	*YES , *NO	Optional
VRYWAIT	Vary on wait	15-180, *NOWAIT	Optional
DLCI	Data link connection ID	Single values: *NONE Other values (up to 256 repetitions): <i>Element list</i>	Optional
	Element 1: DLCI number	1-1018	
	Element 2: Line description	<i>Name</i>	
NRZI	NRZI data encoding	*NO , *YES	Optional
INTERFACE	Physical interface	*RS449V36 , *V35 , *X21	Optional
CLOCK	Clocking	*MODEM , *LOOP , *INVERT	Optional
LINESPEED	Line speed	56000-2048000, 56000, 64000, 128000, 192000, 256000, 320000, 384000, 448000, 512000, 1024000, 1536000 , 2048000	Optional
LMIMODE	LMI mode	*TE , *FH , *NONE , *ANNEXA	Optional
POLLITV	Polling interval	5-30, 10	Optional
FULLINQITV	Full inquiry interval	1-255, 6	Optional
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
CMNRCYLMT	Recovery limits	Single values: *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Count limit	0-99, 2	
	Element 2: Time interval	0-120, 5	
AUT	Authority	<i>Name</i> , *CHANGE , *ALL , *USE , *EXCLUDE , *LIBCRTAUT	Optional

Top

Network interface description (NWID)

This is a required parameter.

Specifies the name of the network interface description.

network-interface-description-name

Specify the name of a network interface description.

Top

Resource name (RSRCNAME)

This is a required parameter.

Specifies the resource name that identifies the hardware that the description represents.

Note: Use the Work with Hardware Resources (WRKHDWRSC) command with *CMN specified for the TYPE parameter to help determine the resource name. Specify the resource name of the communications port. The resource name consists of the input/output adapter (IOA) resource name and the port number on the IOA. For example, if the resource name of the IOA is LIN01 and the port on the IOA is 1, then the resource name is LIN011.

resource-name

Specify a resource name.

Top

Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

***YES** The network interface is automatically varied on at initial program load (IPL).

***NO** This network interface is not automatically varied on at IPL.

Top

Vary on wait (VRYWAIT)

Specifies whether the network interface is varied on asynchronously or synchronously. For synchronous vary on, specifies how long the system waits for the vary on to complete.

***NOWAIT**

The system does not wait for the vary on to complete. The network interface is varied on asynchronously.

vary-on-wait

Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the network interface is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

Notes:

1. Specifying a wait time in the network interface description affects system IPL time, if ONLINE(*YES) is used, by the amount of time it takes to synchronously vary on the network interface or reach the wait-time value.
2. The time required to vary on a network interface is the time it takes to put tasks in place to manage the network interface, to activate the communications I/O processor (IOP) (including downloading the IOP model-unique Licensed Internal Code), and to establish communications with the data circuit-terminating equipment (DCE). Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, network interface protocol, and other factors.

Data link connection ID (DLCI)

Specifies the data link connection identifiers of the line descriptions for the frame relay network interface being created.

*NONE

No data link connection identifier is specified.

Element 1: DLCI Number

DLCI-number

Specify the DLCI number for the line.

Element 2: Line Description

line-description

Specify the DLCI line description.

Top

NRZI data encoding (NRZI)

Specifies whether non-return-to-zero-inverted (NRZI) data encoding is used for modems that are sensitive to certain bit patterns in the data stream. This ensures that the signal does not stay the same for an extended period of time.

Note: All data communications equipment on the line must use the same transmission method.

*NO NRZI data encoding is not used.

*YES NRZI data encoding is used.

Top

Physical interface (INTERFACE)

Specifies the type of physical interface on the input/output adapter (IOA) port.

*RS449V36

An RS-499/V.36 physical interface is used. This value is valid only for frame relay and SDLC links.

*V35 A V.35 physical interface is used. This value is valid only for frame relay, BSC, and SDLC links.

*X21 An X.21 physical interface is used. This value is valid only for frame relay, X.25, and SDLC links.

Top

Clocking (CLOCK)

Specifies the method in which the clocking function is provided for the network interface.

*MODEM

The modem provides the clocking.

***LOOP**

The system inverts the clock from the modem and uses it as the transmit clock on the line.

***INVERT**

The transmit clock provided by the modem data circuit-terminating equipment (DCE) is inverted before use. This option can be used when having problems with high speed data transmission and the modem (DCE) does not support looped clocking.

Top

Line speed (LINESPEED)

Specifies the line speed in bits per second (bps)

1536000

The line speed is 1536000 bps.

56000 The line speed is 56000 bps.

64000 The line speed is 64000 bps.

128000 The line speed is 128000 bps.

192000 The line speed is 192000 bps.

256000 The line speed is 256000 bps.

320000 The line speed is 320000 bps.

384000 The line speed is 384000 bps.

448000 The line speed is 448000 bps.

512000 The line speed is 512000 bps.

1024000

The line speed is 1024000 bps.

1536000

The line speed is 1536000 bps.

2048000

The line speed is 2048000 bps.

line-speed

Specify the line speed. Valid values range from 56000 bps through 2048000 bps.

Top

LMI mode (LMIMODE)

Specifies whether the local management interface (LMI) for this adapter is configured as terminal equipment or a frame handler.

***TE**

The local system is configured to interface with a frame relay network as terminal equipment. The frame relay network must be set to operate at ANSI T1.617 Annex D, to be compatible with system link management frames.

***FH**

The local system is configured to interface with another system as a frame handler. In this configuration, the local system is performing as the frame relay network.

***ANNEXA**

The local system is configured to interface with a frame relay network as terminal equipment.

The frame relay network must operate as an ITU (previously CCITT) Q.933 Annex A to be compatible with system link management frames.

***NONE**

The local system is configured to interface with the frame relay network or another system without performing any LMI function.

Top

Polling interval (POLLITV)

Specifies the rate of the polling cycle. The polling cycle consists of a status inquiry message and a status message exchange. The status message includes the status of the DLCI.

10 A polling interval of 10 seconds is used.

polling-interval

Specify the polling interval to be used. Valid values range from 5 through 30 seconds.

Top

Full inquiry interval (FULLINQITV)

Specifies the number of polling cycles that occur before a full status inquiry is requested.

6 A full inquiry interval of 6 polling cycles is used.

full-inquiry-interval

Specify the number of polling cycles for a full status cycle to be requested. Valid values range from 1 through 255.

Top

Text 'description' (TEXT)

Specifies text that briefly describes the network interface.

***BLANK**

Text is not specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Recovery limits (CMNRCYLMT)

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

Element 1: Maximum Recovery Limit

2 Two recovery attempts are made within the interval specified.

count-limit

Specify the number of recovery attempts to be made. Valid values range from 0 through 99.

Element 2: Recovery Time Interval

5 A 5-second time-out period is used.

time-interval

Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

Other Single Value

*SYSVAL

The recovery limits specified in the QCMNRCYLMT system value are used.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

*EXCLUDE

The user cannot access the object.

*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

```
CRTNWIFR  NWID(THISONE)  RSRNAME(LINE031)
          ONLINE(*YES)  VRYWAIT(15)
          DLCI((32 LINEABC) (409 LINEDEF) (94 LINELAST))
          INTERFACE(*V35)  LMIMODE(*TE)
```

This command creates the frame relay network interface THISONE. THISONE represents the resource named LINE031. THISONE is varied on at initial program load (IPL) with a vary on wait time of 15 seconds. It is created with three DLCIs (32, 409, and 94) which refer to line descriptions LINEABC, LINEDEF, and LINELAST respectively. The type of physical interface for the input/output adapter (IOA) port specified by THISONE is *V35. The local management interface mode is configured to interface with a frame relay network as terminal equipment (TE).

[Top](#)

Error messages

*ESCAPE Messages

CPF27A0

Network interface description &1 not created due to errors.

[Top](#)

Create NWS Configuration (CRTNWSCFG)

Where allowed to run: All environments (*ALL)
 Threadsafes: No

Parameters
 Examples
 Error messages

The Create NWS Configuration (CRTNWSCFG) command creates a network server configuration and an associated validation list. The network server configuration defines connection security or remote system attributes.

Restrictions:

- This command is shipped with public exclude (*EXCLUDE) authority. When this command is shipped, authority is issued only to the security officer. The security officer can grant the use of this command to other users.
- You must have input/output system configuration (*IOSYSCFG) special authority to use this command.
- To specify a non-default value for the IPSECRULE, CHAPAUT, INRCHAPAUT, or SPCERTID parameters, you must have security administrator (*SECADM) special authority.

Top

Parameters

Keyword	Description	Choices	Notes
NWSCFG	Network server configuration	<i>Communications name</i>	Required, Positional 1
TYPE	Configuration type	*CNNSEC, *RMTSYS, *SRVPRC	Required, Positional 2
IPSECRULE	IP security rules	Single values: <u>*NONE</u> Other values (up to 16 repetitions): <i>Character value</i> , *GEN, *REGEN	Optional
INZSP	Initialize service processor	<u>*MANUAL</u> , *AUTO, *NONE	Optional
ENBUNICAST	Enable unicast	<u>*YES</u> , *NO	Optional
SPNAME	Service processor name	<i>Character value</i> , <u>*SPINTNETA</u>	Optional
SPINTNETA	SP internet address	<i>Character value</i>	Optional
SPCERTID	SP certificate identifier	Single values: <u>*NONE</u> Other values: <i>Element list</i>	Optional
	Element 1: Component	*COMMONNAME, *EMAIL, *ORGUNIT	
	Element 2: Compare value	<i>Character value</i>	
EID	Enclosure identifier	Single values: *AUTO Other values: <i>Element list</i>	Optional
	Element 1: Serial number	<i>Character value</i>	
	Element 2: Manufacturer type and model	<i>Character value</i>	
SPNWSCFG	SP configuration name	<i>Communications name</i>	Optional
RMTSYSID	Remote system identifier	Single values: <u>*SPNWSCFG</u> Other values: <i>Element list</i>	Optional
	Element 1: Serial number	<i>Character value</i>	
	Element 2: Manufacturer type and model	<i>Character value</i>	

Keyword	Description	Choices	Notes
DELIVERY	Delivery method	Character value, <u>*DYNAMIC</u> , *MANUAL	Optional
CHAPAUT	Target CHAP authentication	Single values: *NONE Other values: <i>Element list</i>	Optional
	Element 1: CHAP name	Character value, <u>*NWSCFG</u>	
	Element 2: CHAP secret	Character value, <u>*GEN</u>	
INRCHAPAUT	Initiator CHAP authentication	Single values: *NONE Other values: <i>Element list</i>	Optional
	Element 1: CHAP name	Character value, <u>*NWSCFG</u>	
	Element 2: CHAP secret	Character value, <u>*GEN</u>	
BOOTDEVID	Boot device ID	Single values: <u>*SINGLE</u> Other values: <i>Element list</i>	Optional
	Element 1: Bus	0-255	
	Element 2: Device	0-31	
	Element 3: Function	0-7	
DYNBOOTOPT	Dynamic boot options	<i>Element list</i>	Optional
	Element 1: Vendor ID	Character value, <u>*DFT</u>	
	Element 2: Alternate client ID	Character value, <u>*ADPT</u>	
RMTIFC	Remote (initiator) interfaces	Values (up to 4 repetitions): <i>Element list</i>	Optional
	Element 1: SCSI interface	<i>Element list</i>	
	Element 1: Adapter address	Hexadecimal value, *NONE	
	Element 2: Internet address	Character value	
	Element 3: Subnet mask	Character value	
	Element 4: Gateway address	Character value, <u>*NONE</u>	
	Element 5: iSCSI qualified name	Character value, <u>*GEN</u>	
	Element 2: LAN interface	<i>Element list</i>	
	Element 1: Adapter address	Hexadecimal value, *NONE	
	Element 2: Internet address	Character value	
	Element 3: Subnet mask	Character value	
	Element 4: Gateway address	Character value, <u>*NONE</u>	
	TEXT	Text 'description'	
AUT	Authority	Name, <u>*CHANGE</u> , *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional

Top

Network server configuration (NWSCFG)

Specifies the name of the network server configuration.

This is a required parameter.

name Specify the name of the network server configuration to be created.

Top

Configuration type (TYPE)

Specifies the type of network server configuration to be created.

This is a required parameter.

*CNNSEC

Connection security defines the IP Security (IPSec) rule attributes.

*RMTSYS

Remote system defines the hardware and configuration attributes required to boot the server.

*SRVPRC

Service processor defines the attributes used to locate and manage the server.

Top

IP security rules (IPSECRULE)

Specifies the configuration IP Security (IPSec) rules used between the hosting and remote system.

This parameter is only valid when TYPE(*CNNSEC) is specified.

Single values

*NONE

IP Security (IPSec) protocol security settings are not configured.

Other values (up to 16 repetitions)

*GEN Generate a random pre-shared key.

*REGEN

Automatically generate a random pre-shared key every time the system is varied on.

character-value

Specify a nontrivial pre-shared key up to 32 characters long.

Valid characters are upper case A through Z, lower case a through z, numbers 0 through 9, and the following special characters:

- Plus sign
- Equal sign
- Percent
- Ampersand
- Left parenthesis
- Right parenthesis
- Comma
- Underline
- Minus sign
- Period
- Colon
- Semicolon

Top

Initialize service processor (INZSP)

Specifies how the remote system service processor is secured.

This parameter is only valid when TYPE(*SRVPRC) is specified.

*MANUAL

Security parameters are manually configured on remote system service processor. *MANUAL provides the highest security.

To use this option, it is required that the remote system service processor is pre-configured with a user name, password and certificate. Certificate management will be required. This method is appropriate when connecting to the service processor via public networks to protect the password.

*AUTO

Parameters are automatically configured on the remote system service processor.

*AUTO provides security without requiring pre-configuration of the remote system service processor. The remote system service processor will have certificates automatically regenerated when the certificates are near expiration. This option is appropriate if the interconnecting network is physically secure or is protected by a firewall.

Note: An administrator will need to regenerate the certificate using the Initialize NWS Configuration (INZNWSCFG) command when the service processor certificate has expired, or if a new certificate and password are desired at any time before the certificate expires.

*NONE

Provides no security.

Use this only if the interconnecting network is physically secure.

Note: Some service processors do not support secure connections. Use *NONE for these service processors. Additional information can be found at System i integration with BladeCenter and System x at <http://www.ibm.com/systems/i/bladecenter/>.

Top

Enable unicast (ENBUNICAST)

Specifies whether unicast packet distribution is to be used. Unicast is a transmission method where packets are sent directly to the specified **Service processor name (SPNAME)** or **SP internet address (SPINTNETA)** parameter.

When unicast packet distribution is used, the **Service processor name (SPNAME)** or **SP internet address (SPINTNETA)** parameter must be specified.

The system identification for the Enclosure identifier (EID) parameter is automatically retrieved if *AUTO is specified and the system hardware supports it.

This parameter is only valid when TYPE(*SRVPRC) is specified.

*YES Enable unicast.

*NO Disable unicast

Top

Service processor name (SPNAME)

Specifies the remote system service processor host name.

This parameter is only valid when TYPE(*SRVPRC) is specified.

Notes:

1. This parameter is required when ENBUNICAST(*YES) is specified.
2. This parameter is ignored when ENBUNICAST(*NO) is specified.

*SPINTNETA

The remote system is identified by the value specified for the **SP internet address (SPINTNETA)** parameter.

character-value

Specify the remote system service processor host name.

Top

SP internet address (SPINTNETA)

Specifies the remote system service processor internet address.

This parameter is only valid when TYPE(*SRVPRC) is specified.

Notes:

1. This parameter is ignored when ENBUNICAST(*NO) is specified.
2. This parameter is required when SPNAME(*SPINTNETA) is specified.

character-value

Specify the internet address of the service processor.

The value is specified in the form nnn.nnn.nnn.nnn , where nnn is a decimal number ranging from 0 through 255.

Top

SP certificate identifier (SPCERTID)

The SP certificate identifier specifies one of three possible fields that identifies the service processor certificate.

This parameter is specified to provide additional validation that the certificate is from the service processor. The contents of the selected field must exactly match the value of the field that was entered when the certificate was generated or requested from a certificate authority.

This parameter is only valid when TYPE(*SRVPRC) is specified.

This parameter is required when INZSP(*MANUAL) is specified and cannot have the value *NONE.

Single values

*NONE

Service processor certificate is not configured.

Element 1: Component

***COMMONNAME**

Selects the certificate common name specified when the certificate was generated or requested from a certificate authority. On the remote supervisor adapter II this correlates to the "ASM Domain Name" field used to generate a self-signed certificate or generate a certificate signing request.

***EMAIL**

Selects the certificate e-mail address specified when the certificate was generated or requested from a certificate authority. On the remote supervisor adapter II this correlates to the "Email Address" field used to generate a self-signed certificate or generate a certificate signing request.

***ORGUNIT**

Selects the certificate organizational unit specified when the certificate was generated or requested from a certificate authority. On the remote supervisor adapter II this correlates to the "Organizational Unit" field used to generate a self-signed certificate or generate a certificate signing request.

Element 2: Compare value

character-value

Specify the certificate component compare value. Enter no more than 255 characters of text, enclosed in apostrophes.

Top

Enclosure identifier (EID)

Specifies the identifying serial number, type and model of the enclosure containing the service processor.

When specified, they are used to locate the system on the network.

Look for these values on the label of the system.

This parameter is only valid when TYPE(*SRVPRC) is specified.

Single values

***AUTO**

Automatically retrieve the identifier when ENBUNICAST(*YES) is specified.

Element 1: Serial number

character-value

Specify the machine serial number.

Element 2: Manufacturer type and model

character-value

Specify the machine type and model.

The value is entered in the form tttmmm where ttt is the machine type and mmm is the machine model number.

Top

SP configuration name (SPNWSCFG)

Specifies the name of the service processor network server configuration to be used to manage the remote server.

This parameter is only valid when TYPE(*RMTSYS) is specified.

name Specify the name of the service processor network server configuration.

Top

Remote system identifier (RMTSYSID)

Specifies the identifying serial number, type and model of the remote system. When specified, they are used to locate the remote system on the network.

Look for these values on the label of the system.

Note: The machine type and model may be omitted if the system serial number is unique on the network.

This parameter is only valid when TYPE(*RMTSYS) is specified.

Single values

*SPNWSCFG

Use the serial number and type/model specified in the Enclosure identifier (EID) parameter of the service processor (*SRVPRC) network server configuration.

Element 1: Serial number

character-value

Specify the machine serial number.

Element 2: Manufacturer type and model

character-value

Specify the machine type and model.

The value is entered in the form tttmmm where ttt is the machine type and mmm is the machine model number.

Top

Delivery method (DELIVERY)

Specifies how the parameters necessary to configure the remote system are delivered.

This parameter is only valid when TYPE(*RMTSYS) is specified.

*DYNAMIC

Parameters are dynamically delivered to the remote system using Dynamic Host Configuration Protocol (DHCP).

*MANUAL

Parameters are manually configured on the remote system using the BIOS utilities (System BIOS or Adapter BIOS - CTRL-Q).

Target CHAP authentication (CHAPAUT)

Specifies the Challenge Handshake Authentication Protocol (CHAP) for the System i iSCSI target to authenticate the remote system iSCSI initiators.

This parameter is only valid when TYPE(*RMTSYS) is specified.

Single values

***NONE**

CHAP authentication is not enabled.

Element 1: CHAP name

***NWSCFG**

The system will automatically generate a name for CHAP using the Network server configuration name.

character-value

Specify the name you want to use for the Challenge Handshake Authentication Protocol.

Valid characters are upper case A through Z, lower case a through z, numbers 0 through 9, and the following special characters:

- Plus sign
- Equal sign
- Percent
- Ampersand
- Left parenthesis
- Right parenthesis
- Comma
- Underline
- Minus sign
- Period
- Colon
- Semicolon

Element 2: CHAP secret

***GEN** The system will automatically generate a random CHAP secret.

character-value

Specify the secret you want to use for the Challenge Handshake Authentication Protocol.

Note: Target and initiator CHAP secrets must not be the same.

Valid characters are upper case A through Z, lower case a through z, numbers 0 through 9, and the following special characters:

- Plus sign
- Equal sign
- Percent
- Ampersand
- Left parenthesis

- Right parenthesis
- Comma
- Underline
- Minus sign
- Period
- Colon
- Semicolon

Top

Initiator CHAP authentication (INRCHAPAUT)

Specifies the Challenge Handshake Authentication Protocol (CHAP) for the remote system iSCSI initiators to authenticate the System i iSCSI target.

This parameter is only valid when TYPE(*RMTSYS) is specified.

Single values

***NONE**

CHAP authentication is not enabled.

Element 1: CHAP name

***NWSCFG**

The system will automatically generate a name for CHAP using the Network server configuration name.

character-value

Specify the name you want to use for the Challenge Handshake Authentication Protocol.

Valid characters are upper case A through Z, lower case a through z, numbers 0 through 9, and the following special characters:

- Plus sign
- Equal sign
- Percent
- Ampersand
- Left parenthesis
- Right parenthesis
- Comma
- Underline
- Minus sign
- Period
- Colon
- Semicolon

Element 2: CHAP secret

***GEN** The system will automatically generate a random CHAP secret.

character-value

Specify the secret you want to use for the Challenge Handshake Authentication Protocol.

Note: Target and initiator CHAP secrets must not be the same.

Valid characters are upper case A through Z, lower case a through z, numbers 0 through 9, and the following special characters:

- Plus sign
- Equal sign
- Percent
- Ampersand
- Left parenthesis
- Right parenthesis
- Comma
- Underline
- Minus sign
- Period
- Colon
- Semicolon

Top

Boot device ID (BOOTDEVID)

Specifies the PCI Function Address (Bus/Device/Function) of the iSCSI initiator port in the remote system that will be used to boot from.

Note: Remote systems with more than one iSCSI initiator port installed are required to specify which port will be used to boot from.

This parameter is only valid when TYPE(*RMTSYS) is specified.

Single values

*SINGLE

The single iSCSI initiator port is used on the remote system

Element 1: Bus

0-255 Specify the bus number of the remote system iSCSI initiator port that will be used to boot.

Element 2: Device

0-31 Specify the device number of the remote system iSCSI initiator port that will be used to boot.

Element 3: Function

0-7 Specify the function number of the remote system iSCSI initiator port that will be used to boot.

Top

Dynamic boot options (DYNBOOTOPT)

Specifies the internal Dynamic Host Configuration Protocol (DHCP) Server configuration.

Note: This is an advanced configuration function.

This parameter is used to configure the internal DHCP Server that is part of the iSCSI target host bus adapter (HBA) firmware. It is used to provide IP address and diskless boot parameters for the remote system iSCSI initiator port.

This parameter is only valid when TYPE(*RMTSYS) is specified.

This parameter is only valid when DELIVERY(*DYNAMIC) is specified.

Element 1: Vendor ID

The client and server are pre-configured to a default vendor ID. Network administrators can configure clients to define their own identifying values to convey hardware, operating system or other identifying information. DHCP option 60 described in the IETF RFC 2132 is used for this function.

***DFT** The default vendor ID will be used.

character-value

Vendor ID of the remote system iSCSI initiator port that will be used.

Element 2: Alternate client ID

Used by clients to specify their unique identifier to the server. Each client identifier must be unique among all other client identifiers used on the effective DHCP network to which the client is attached (that is, the client local subnet and any remote subnets reachable using DHCP relay). Vendors and system administrators are responsible for choosing client identifiers that meet this requirement for uniqueness. DHCP option 61 described in the IETF RFC 2132 is used for this function.

***ADPT**

The default Client ID consists of the adapter address for the remote system iSCSI initiator port. This value will be used to identify the remote system.

character-value

Specify the Client ID of the remote system iSCSI initiator port that will be used to boot.

Top

Remote (initiator) interfaces (RMTIFC)

Specifies the remote system iSCSI initiator host bus adapter (HBA) configuration. Each iSCSI initiator port has two functions to support a SCSI and a LAN or TCP Offload Engine (TOE) interface.

This parameter is only valid when TYPE(*RMTSYS) is specified.

Note: A minimum of one SCSI interface and one LAN interface is required though they may reside on different initiator ports in the remote system.

You can specify up to 4 repetitions for this parameter.

Element 1: SCSI interface

Specifies the SCSI interface.

***NONE**

No SCSI interface is configured for this initiator port.

Element 1: Adapter address

hexadecimal-value

Specify the 12-character hexadecimal adapter address for the initiator port.

Element 2: Internet address

character-value

Specify the internet address for the initiator port.

The value is specified in the form nnn.nnn.nnn.nnn , where nnn is a decimal number ranging from 0 through 255.

Element 3: Subnet mask

character-value

Specify the subnet mask for the initiator port.

The value is specified in the form nnn.nnn.nnn.nnn , where nnn is a decimal number ranging from 0 through 255.

Element 4: Gateway address

*NONE

No gateway address is configured for this initiator port.

character-value

Specify the gateway address for the initiator port.

The value is specified in the form nnn.nnn.nnn.nnn , where nnn is a decimal number ranging from 0 through 255.

Element 5: iSCSI qualified name

*GEN The system will automatically generate the iSCSI qualified name.

character-value

Specify the iSCSI qualified name for the initiator port.

The following characters are allowed in iSCSI qualified names:

- Alphabetical characters A through Z converted to lower case (refer to RFC 3722)
- Alphabetical characters a through z
- Digits 0 through 9
- Period (.)
- Dash (-)
- colon (:)

Element 2: LAN interface

Specifies the LAN interface.

*NONE

No LAN interface is configured for this initiator port.

Element 1: Adapter address

hexadecimal-value

Specify the 12-character hexadecimal adapter address for the initiator port.

Element 2: Internet address

character-value

Specify the internet address for the initiator port.

The value is specified in the form nnn.nnn.nnn.nnn , where nnn is a decimal number ranging from 0 through 255.

Element 3: Subnet mask

character-value

Specify the subnet mask for the initiator port.

The value is specified in the form nnn.nnn.nnn.nnn , where nnn is a decimal number ranging from 0 through 255.

Element 4: Gateway address

*NONE

No gateway address is configured for this initiator port.

character-value

Specify the gateway address for the initiator port.

The value is specified in the form nnn.nnn.nnn.nnn , where nnn is a decimal number ranging from 0 through 255.

Top

Text 'description' (TEXT)

Specifies text that briefly describes the network server configuration.

*BLANK

Text is not specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

Example 1: Security Connection Network Server Configuration

```
CRTNWSCFG NWSCFG(MYSEC)
          TYPE(*CNNSEC)
          IPSECRULE(*NONE)
          TEXT('Connection security')
```

This command creates a Connection Security Configuration with no security rules.

Example 2: Service Processor Network Server Configuration

```
CRTNWSCFG NWSCFG(CAT4SP)
          TYPE(*SRVPRC)
          INZSP(*MANUAL)
          ENBUNICAST(*YES)
          SPINTNETA('1.5.10.75')
          SPCERTID(*ORGUNIT 'ACME Corp')
          EID(RTYM14A 3305R8U)
          TEXT('CAT4SP Service processor')
```

This command creates a service processor configuration. The service processor is contacted using IP Address 1.5.10.75. The remote system is identified by the serial number RTYM14A. The service processor is manually secured using a certificate configured with the 'ACME Corp' organizational unit.

Example 3: Remote System Network Server Configuration

```
CRTNWSCFG NWSCFG(CAT4SVR)
          TYPE(*RMTSYS)
          SPNWSCFG(CAT4SP)
          RMTSYSID(*SPNWSCFG)
          DELIVERY(*DYNAMIC)
          RMTIFC(((111111111111 '1.5.10.10'
                  '255.255.255.0' '1.5.10.129' *GEN)
                  (1FFFFFFFFF '1.5.10.20'
                  '255.255.255.0' '1.5.10.129'))))
          TEXT('CAT4SVR Service processor')
```

This command creates a remote system configuration which uses the dynamic delivery method to configure the remote system. The system is identified using the CAT4SP service processor configuration specified by the SPNWSCFG parameter. The iSCSI remote interface for SCSI is configured using an IP address of 1.5.10.10 and a LAN address of 1.5.10.20. The iSCSI qualified name is automatically generated.

Error messages

*ESCAPE Messages

CPF2182

Not authorized to library &1.

CPF90A8

*SECADM special authority required to do requested operation.

CPF96C9

Network server configuration &1 not created.

CPF9870

Object &2 type *&5 already exists in library &3.

CPFA1B8

*IOSYSCFG authority required to use &1.

Create Network Server Desc (CRTNWS D)

Where allowed to run: All environments (*ALL)
 Threadsaf e: No

Parameters
 Examples
 Error messages

The Create Network Server Description (CRTNWS D) command creates a description for a network server. The description includes server software parameters, network protocol descriptions and definition of attached communications equipment (for example, line descriptions).

This command should be run from the Configure Network Server (CFGNWS) menu, which includes all of the steps needed to create an initial server configuration.

More information about using this command is in the Communications Configuration book, SC41-5401

More information about using this command can be found in the System i integration category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Restrictions:

- You must have input/output system configuration (*IOSYSCFG) special authority to use this command.

Top

Parameters

Keyword	Description	Choices	Notes
NWSD	Network server description	<i>Communications name</i>	Required, Positional 1
RSRCNAME	Resource name	<i>Name</i> , *NONE, *AUTO	Required, Positional 2
TYPE	Network server type	<i>Element list</i>	Optional, Positional 3
	Element 1: Server connection	*IXSVR, *ISCSI, *GUEST, *WINDOWSNT	
	Element 2: Server operating system	*WIN32, *LINUX32, *WIN64, *LINUX64, *LINUXPPC, *AIXPPC, *OPSYS	
STGPTH	Storage path	Values (up to 4 repetitions): <i>Element list</i>	Optional
	Element 1: Network server host adapter	<i>Name</i> , *NONE	
	Element 2: IP security rules	<i>Element list</i>	
	Element 1: Remote interface 1 rule	1-16, *DFTSECRULE, *NONE	
	Element 2: Remote interface 2 rule	1-16, *DFTSECRULE, *NONE	
	Element 3: Remote interface 3 rule	1-16, *DFTSECRULE, *NONE	
	Element 4: Remote interface 4 rule	1-16, *DFTSECRULE, *NONE	
DFTSECRULE	Default IP security rule	1-16, *NONE	Optional
MLTPTHGRP	Multi-path group	Single values: *NONE Other values (up to 4 repetitions): 1-4	Optional

Keyword	Description	Choices	Notes
DFTSTGPTH	Default storage path	1-4, <u>1</u> , *MLTPTHGRP	Optional
RMVMEDPTH	Removable media path	1-4, <u>1</u>	Optional
ACTTMR	Activation timer	30-1800, <u>120</u>	Optional
ONLINE	Online at IPL	* <u>YES</u> , *NO	Optional
VRYPWAIT	Vary on wait	1-15, * <u>NOWAIT</u>	Optional
SHUTDTIMO	Shutdown timeout	2-45, * <u>TYPE</u>	Optional
PARTITION	Partition	<i>Character value</i> , * <u>NONE</u>	Optional
PTNNBR	Partition number	1-65535, * <u>NONE</u>	Optional
DMNROLE	Domain role	* <u>DMNCTL</u> , *BKUCTL, *SERVER	Optional
PRPDMNUSR	Propagate domain users	* <u>YES</u> , *NO	Optional
LNGVER	Language version	<i>Integer</i> , * <u>PRIMARY</u>	Optional
CODEPAGE	Code page	<i>Integer</i> , * <u>LNGVER</u>	Optional
MSGQ	Server message queue	Single values: * <u>JOBLOG</u> , *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Server message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
EVTLOG	Event log	Single values: * <u>ALL</u> , *NONE Other values (up to 3 repetitions): *SYS, *SEC, *APP	Optional
CMNMSGQ	Communications message queue	Single values: * <u>SYSOPR</u> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Communications message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
CFGFILE	Configuration file	Single values: * <u>NONE</u> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Configuration file	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
SVRSTGSIZE	Server storage space sizes	<i>Element list</i>	Optional
	Element 1: Install source size	<i>Integer</i> , * <u>DFT</u>	
	Element 2: System size	<i>Integer</i> , * <u>DFT</u>	
SVRSTGASP	Server storage space ASP	<i>Element list</i>	Optional
	Element 1: Install source ASP	1-255, <u>1</u>	
	Element 2: System ASP	1-255, <u>1</u>	
STGASPDEV	Server storage ASP device	<i>Element list</i>	Optional
	Element 1: Install source ASP device	<i>Name</i>	
	Element 2: System ASP device	<i>Name</i>	

Keyword	Description	Choices	Notes
POOL	Pool identifier	* BASE , *SHRPOOL1, *SHRPOOL2, *SHRPOOL3, *SHRPOOL4, *SHRPOOL5, *SHRPOOL6, *SHRPOOL7, *SHRPOOL8, *SHRPOOL9, *SHRPOOL10, *SHRPOOL11, *SHRPOOL12, *SHRPOOL13, *SHRPOOL14, *SHRPOOL15, *SHRPOOL16, *SHRPOOL17, *SHRPOOL18, *SHRPOOL19, *SHRPOOL20, *SHRPOOL21, *SHRPOOL22, *SHRPOOL23, *SHRPOOL24, *SHRPOOL25, *SHRPOOL26, *SHRPOOL27, *SHRPOOL28, *SHRPOOL29, *SHRPOOL30, *SHRPOOL31, *SHRPOOL32, *SHRPOOL33, *SHRPOOL34, *SHRPOOL35, *SHRPOOL36, *SHRPOOL37, *SHRPOOL38, *SHRPOOL39, *SHRPOOL40, *SHRPOOL41, *SHRPOOL42, *SHRPOOL43, *SHRPOOL44, *SHRPOOL45, *SHRPOOL46, *SHRPOOL47, *SHRPOOL48, *SHRPOOL49, *SHRPOOL50, *SHRPOOL51, *SHRPOOL52, *SHRPOOL53, *SHRPOOL54, *SHRPOOL55, *SHRPOOL56, *SHRPOOL57, *SHRPOOL58, *SHRPOOL59, *SHRPOOL60	Optional
TCPPORTCFG	TCP/IP port configuration	Single values: * NONE Other values (up to 9 repetitions): <i>Element list</i>	Optional
	Element 1: Port	1, 2, 3, 4, *INTERNAL, *VRTETHPTP, *VRTETH0, *VRTETH1, *VRTETH2, *VRTETH3, *VRTETH4, *VRTETH5, *VRTETH6, *VRTETH7, *VRTETH8, *VRTETH9	
	Element 2: Internet address	<i>Character value</i>	
	Element 3: Subnet mask	<i>Character value</i>	
	Element 4: Maximum transmission unit	<i>Integer, 1500</i>	
	Element 5: Gateway address	<i>Character value, *NONE</i>	
TCPRTE	TCP/IP route configuration	Single values: * NONE Other values (up to 24 repetitions): <i>Element list</i>	Optional
	Element 1: Route destination	<i>Character value, *DFTRROUTE</i>	
	Element 2: Subnet mask	<i>Character value, *NONE, *HOST</i>	
	Element 3: Next hop	<i>Character value</i>	
TCPHOSTNAM	TCP/IP local host name	<i>Character value, *NWSD</i>	Optional
TCPDMNNAME	TCP/IP local domain name	<i>Character value, *SYS</i>	Optional
TCPNAMSVR	TCP/IP name server system	Single values: * SYS , * NONE Other values (up to 3 repetitions): <i>Character value</i>	Optional
PORTS	Ports	Single values: * NONE Other values (up to 5 repetitions): <i>Element list</i>	Optional
	Element 1: Port number	1-2, *INTERNAL, *VRTETHPTP, *VRTETH0, *VRTETH1, *VRTETH2, *VRTETH3, *VRTETH4, *VRTETH5, *VRTETH6, *VRTETH7, *VRTETH8, *VRTETH9	
	Element 2: Line description	<i>Name</i>	

Keyword	Description	Choices	Notes
VRTETHPTH	Virtual Ethernet path	Values (up to 5 repetitions): <i>Element list</i>	Optional
	Element 1: Port number	*VRTETHPTP, *VRTETH0, *VRTETH1, *VRTETH2, *VRTETH3, *VRTETH4, *VRTETH5, *VRTETH6, *VRTETH7, *VRTETH8, *VRTETH9	
	Element 2: Network server host adapter	<i>Name</i>	
	Element 3: IP security rules	<i>Element list</i>	
	Element 1: Remote interface 1 rule	1-16, *DFTSECRULE, *NONE	
	Element 2: Remote interface 2 rule	1-16, *DFTSECRULE, *NONE	
	Element 3: Remote interface 3 rule	1-16, *DFTSECRULE, *NONE	
	Element 4: Remote interface 4 rule	1-16, *DFTSECRULE, *NONE	
RSTDDEVRSRSC	Restricted device resources	Single values: *NONE, *ALL Other values (up to 10 repetitions): <i>Name</i> , *ALLTAPE, *ALLOPT	Optional
NWSCFG	Network server configuration	<i>Element list</i>	Optional
	Element 1: Remote system name	<i>Name</i> , *DFT	
	Element 2: Connection security name	<i>Name</i> , *DFT	
VRTETHCTLP	Virtual Ethernet control port	1024-65535, <u>8800</u>	Optional
SYNCTIME	Synchronize date and time	*TYPE, *YES, *NO, *NONE	Optional
DSBUSRPRF	Disable user profiles	*AUTO, *NO	Optional
IPLSRC	IPL source	*NWSSTG, *PANEL, *STMF, A, B, D	Optional
IPLSTMF	IPL stream file	<i>Path name</i> , *NONE	Optional
IPLPARM	IPL parameters	<i>Character value</i> , *NONE	Optional
PWRCTL	Power control	*YES, *NO	Optional
SRVOPT	Serviceability options	<i>Character value</i> , *NONE	Optional
AUT	Authority	<i>Name</i> , *CHANGE, *ALL, *USE, *EXCLUDE, *LIBCRTAUT	Optional
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional

Top

Network server description (NWS D)

Specifies the network server description to be created.

This is a required parameter.

communications-name

Specify the name of the network server description. The name must be a valid communications name. The name cannot end with the character at code point X'5B'. That character is converted to a dollar sign (\$) character in the ASCII character set. A name cannot end in a dollar sign (\$).

Top

Resource name (RSRCNAME)

Specifies the resource name that identifies the hardware that the description represents. This is a required parameter.

Note: Use the Work with Hardware Resources (WRKHDWRSC) command with *CMN specified for the TYPE parameter to help determine the resource name. Specify the resource name of the input/output processor (IOP) or the input/output adapter (IOA) for the file server. More information about determining the resource name can be found in the IBM Systems Hardware Information Center.

*NONE

A hardware resource is not associated with the network server description.

1. This value is only valid when **Server connection** specified *GUEST or *ISCSI for the **Network server type (TYPE)** parameter.
2. *NONE is the only valid value when *ISCSI is specified for **Server connection** on the **Network server type (TYPE)** parameter.
3. *NONE is not valid when **Server connection** specified *GUEST and **Server operating system** specified *OPSYS for the **Network server type (TYPE)** parameter.
4. *NONE is only valid value when **Server connection** specified *GUEST for the **Network server type (TYPE)** parameter and the hardware is prior to POWER 5.

*AUTO

A hardware resource will be determined based on the partition. This value is only valid when **Server connection** specified *GUEST for the **Network server type (TYPE)** parameter.

name Specify a resource name.

Top

Network server type (TYPE)

Specifies the type of network server description to create. This information consists of two parts including the Server connection and the Server operating system.

Element 1: Server connection

*IXSVR

Create an integrated network server description. The Server operating system value is required for *IXSVR.

*ISCSI

Create a network server description that uses an iSCSI connection. The Server operating system value is required for *ISCSI.

*GUEST

Create a network server description for a guest operating system running in a logical partition. The Server operating system value is optional for *GUEST.

Note: Specifying *GUEST is equivalent to specifying *GUEST with *LINUXPPC for the server operating system.

*WINDOWSNT

Create a Windows network server description. The Server operating system value is ignored for *WINDOWSNT.

Note: Specifying *WINDOWSNT is equivalent to specifying *IXSVR with *WIN32 for the server operating system.

Element 2: Server operating system

Note: This element is ignored when *WINDOWSNT is specified on the first element.

***WIN32**

Create a network server description for a Windows x86-32 operating system.

***LINUX32**

Create a network server description for a Linux x86-32 operating system.

***WIN64**

Create a network server description for a Windows x86-64 operating system. This value is only valid when **Server connection** specified *ISCSI for the **Network server type (TYPE)** parameter.

***LINUX64**

Create a network server description for a Linux x86-64 operating system. This value is only valid when **Server connection** specified *ISCSI for the **Network server type (TYPE)** parameter.

***LINUXPPC**

Create a network server description for the Linux on POWER operating system.

***AIXPPC**

Create a network server description for the AIX on POWER operating system.

***OPSYS**

Create a network server description for the i5/OS operating system.

Note: *OPSYS is only valid on POWER 5 and later hardware.

Top

Storage path (STGPTH)

Specifies the storage paths the storage spaces can use. This information consists of two parts including the **Network server host adapter** description and the **IP security rules** for this path. You can enter up to four values for this parameter. You must enter at least one storage path.

Note: This parameter is only valid when **Server connection** specified *ISCSI for the **Network server type (TYPE)** parameter.

Element 1: Network server host adapter

name Specify the name of the network server host adapter (NWSH) device description.

The network server host adapter name must be unique for each **Storage path (STGPTH)** parameter on this NWSA.

***NONE**

This storage path is not configured by this network server description.

Element 2: IP security rules

Specify any relative entry of the IP security rule (IPSECRULE) parameter, defined in NWS Configuration(NWSCFG) of type *CNNSEC, that will be used for each remote port's security.

Element 1: Remote interface 1 rule

***DFTSECRULE**

Remote interface 1 will use IP security rule specified on the **Default IP security rule (DFTSECRULE)** parameter.

***NONE**

Remote interface 1 will not use IP security rule.

1-16 Remote interface 1 will use IP security rule specified.

Element 2: Remote interface 2 rule

***DFTSECRULE**

Remote interface 2 will use IP security rule specified on the DFTSECRULE parameter.

***NONE**

Remote interface 2 will not use IP security rule.

1-16 Remote interface 2 will use IP security rule specified.

Element 3: Remote interface 3 rule

***DFTSECRULE**

Remote interface 3 will use IP security rule specified on the DFTSECRULE parameter.

***NONE**

Remote interface 3 will not use IP security rule.

1-16 Remote interface 3 will use IP security rule specified.

Element 4: Remote interface 4 rule

***DFTSECRULE**

Remote interface 4 will use IP security rule specified on the DFTSECRULE parameter.

***NONE**

Remote interface 4 will not use IP security rule.

1-16 Remote interface 4 will use IP security rule specified.

Top

Default IP security rule (DFTSECRULE)

Specify any defined entry of the **IP security rules (IPSECRULE)** parameter, defined in **Network server configuration (NWSCFG)** of type connection security (*CNNSEC), that will be used for storage and virtual Ethernet connections that are configured to use the default security rule.

Note: This parameter is only valid when **Server connection** specified *ISCSI for the **Network server type (TYPE)** parameter.

***NONE**

Remote interfaces will not use IP security rules.

1-16 Remote interfaces will use IP security rule specified.

Top

Multi-path group (MLPTHGRP)

Specify storage paths as defined in the **Storage path (STGPTH)** parameter.

1. See the **Storage path (STGPTH)** parameter to determine what storage paths are valid.
2. This parameter is only valid when **Server connection** specified *ISCSI for the **Network server type (TYPE)** parameter.

Single values

*NONE

No multi-path group defined.

Other values (up to 4 repetitions)

1-4 Specify at least one relative storage path.

Top

Default storage path (DFTSTGPTH)

Specify a storage path as defined in the **Storage path (STGPTH)** parameter or specify the multi-path group as defined in the **Multi-path group (MLTPTHGRP)** parameter.

1. See the **Storage path (STGPTH)** parameter to determine what storage paths are valid.
2. This parameter is only valid when **Server connection** specified *ISCSI for the **Network server type (TYPE)** parameter.

1 Default storage path will be storage path 1.

2-4 Default storage path will be storage path 2, 3 or 4.

*MLTPTHGRP

Default storage path will be the multi-path group storage path.

Top

Removable media path (RMVMEDPTH)

Specify a storage path as defined in the **Storage path (STGPTH)** parameter.

1. See the **Storage path (STGPTH)** parameter to determine what storage paths are valid.
2. This parameter is only valid when **Server connection** specified *ISCSI for the **Network server type (TYPE)** parameter.

1 Removable media will use storage path 1.

2-4 Removable media will use storage path 2, 3 or 4.

Top

Activation timer (ACTTMR)

Specifies the amount of time (in seconds) the system will wait for the connection to be established to the remote server service processor and to power on the remote server.

Note: This parameter is only valid when **Server connection** specified *ISCSI for the **Network server type (TYPE)** parameter.

120 The activate time of 120 seconds is used.

integer

Specify, in seconds, a value ranging from 30 through 1800.

Top

Online at IPL (ONLINE)

Specifies whether this object is automatically varied on at initial program load (IPL).

Notes:

1. This parameter is ignored when **Server connection** specified *IXSVR or *ISCSI for the **Network server type (TYPE)** parameter. To have the integrated server vary on, use the Change TCP/IP Interface (CHGTCPIFC) command and set the AUTOSTART parameter to *YES for the private LAN line description for the server or a startup program could be called to vary on the servers after IPL processing has completed.
2. When **Server connection** specified *GUEST for the **Network server type (TYPE)** parameter, it is recommended that *NO is specified. A startup program should then be called to vary on the servers after IPL processing has completed.
3. If more than one network server description is created for a file server resource, only one network server description should specify ONLINE(*YES). If more than one network server description specifies ONLINE(*YES), only the first description, in alphabetical order, is varied on during the IPL.

***YES** This network server description is automatically varied on at IPL. All configuration objects attached to the network server description will also be varied on.

***NO** This network server description is not automatically varied on at IPL.

Top

Vary on wait (VRYWAIT)

Specifies whether the network server description is varied on asynchronously or synchronously. For synchronous vary on, specifies how long the operating system waits for the vary on to complete.

Note: Vary on of a network server description resets the IOP for TYPE *WINDOWSNT or *IXSVR. The vary on wait time specifies time in addition to the reset time.

*NOWAIT

The operating system does not wait for the vary on to complete. The network server description is varied on asynchronously.

- 1-15** Specify the number of minutes to wait. The operating system waits until the network server description is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

Top

Shutdown timeout (SHUTDTIMO)

Specifies the shutdown timeout value in minutes. This is used to limit the amount of time that the integrated server operating system is allowed to shutdown before the network server description is varied off.

***TYPE** The shutdown time-out value is based on the network server description type.

Note: The shutdown timeout value is 31 when **Server connection** specified *GUEST and **Server operating system** specified *OPSYS for the **Network server type (TYPE)** parameter. Shutdown timeout value is 15 for all other NWSDs.

- 2-45** Specify the number of minutes to wait. i5/OS waits until the integrated server operating system has shutdown successfully, or until the specified time passes before varying the network server description off.

Note: When **Server connection** specified *GUEST and **Server operating system** specified *OPSYS for the **Network server type (TYPE)** parameter the range is 31 to 45 minutes.

Top

Partition (PARTITION)

Specifies the name of the logical partition to be used by this integrated server. Up to 48 characters can be specified.

Note: When **Server connection** specified *GUEST for the **Network server type (TYPE)** parameter either the **Partition (PARTITION)** or **Partition number (PTNNBR)** parameter can be specified but both parameters cannot be specified. When **Server connection** specified *GUEST for the **Network server type (TYPE)** parameter and RSRCTYPE is specified, the **Partition (PARTITION)** and **Partition number (PTNNBR)** parameter can be set to *NONE.

*NONE

A partition name is not used by this integrated server.

name Specify the name of the partition to be used by this integrated server. The partition name PRIMARY cannot be specified.

Top

Partition number (PTNNBR)

Specifies the number of the logical partition to be used by this integrated server.

Notes:

1. When **Server connection** specified *GUEST for the **Network server type (TYPE)** parameter either the **Partition (PARTITION)** or **Partition number (PTNNBR)** parameter can be specified but both parameters cannot be specified.
2. When **Server connection** specified *GUEST for the **Network server type (TYPE)** parameter and RSRCTYPE is specified, the **Partition (PARTITION)** and **Partition number (PTNNBR)** parameter can be set to *NONE.

*NONE

A partition number is not used by this integrated server.

integer

Specify the number of the partition to be used by this integrated server.

Top

Domain role (DMNROLE)

Specifies the domain controller role performed by this integrated server.

Note: This parameter is not valid when **Server connection** specified *GUEST or **Server operating system** specified *LINUX32 or *LINUX64 for **Network server type (TYPE)** parameter.

*DMNCTL

This integrated server is a domain controller within its domain.

*BKUCTL

This integrated server is a backup controller within its domain.

*SERVER

This integrated server is a stand alone server.

Top

Propagate domain users (PRPDMNUSR)

Specifies whether domain user enrollment should be allowed or not for this network server description.

Note: This parameter is ignored when **Server connection** specified *GUEST or **Server operating system** specified *LINUX32 or *LINUX64 for **Network server type (TYPE)** parameter.

***YES** Propagation of domain user enrollment is allowed for this network server description.

***NO** Propagation of domain user enrollment is not allowed for this network server description.

Top

Language version (LNGVER)

Specifies the language version of the integrated server product. To change the language version, a new network server description must be created specifying the desired language.

Note: This parameter is not valid when **Server connection** specified *GUEST or **Server operating system** specified *LINUX32 or *LINUX64 for **Network server type (TYPE)** parameter.

*PRIMARY

The language version for the currently installed primary national language is used.

integer

Specify the language version of the integrated server product to be used. The language must be one of the installed versions of the integrated server product. Use the Work with Licensed Programs (LICPGM) menu to determine the installed languages. Language versions are entered in the command as an integer value.

Supported language version values include:

2902	Estonia
2903	Lithuanian
2904	Latvian
2905	Vietnamese
2906	Laotian
2909	English Belgium
2911	Slovenian
2912	Croatian
2914	Serbian
2922	Portuguese
2923	Dutch Netherlands
2924	English
2925	Finnish
2926	Danish

2928 French
2929 German
2930 Japanese Universal
2931 Spanish
2932 Italian
2933 Norwegian
2937 Swedish
2938 English Uppercase DBCS
2939 German Multinational Character Set
2940 French Multinational Character Set
2942 Italian Multinational Character Set
2950 English Uppercase
2954 Arabic
2956 Turkish
2957 Greek
2958 Icelandic
2961 Hebrew
2962 Japanese Kanji
2963 Belgian Dutch Multinational Character Set
2966 Belgian French Multinational Character Set
2972 Thai
2974 Bulgarian
2975 Czech
2976 Hungarian
2978 Polish
2979 Russian
2980 Brazilian Portuguese
2981 Canadian French Multinational Character Set
2984 English DBCS
2986 Korean
2987 Traditional Chinese
2989 Simplified Chinese
2992 Romanian
2994 Slovakian
2995 Albanian
2996 Portuguese Multinational Character Set
2998 Farsi

See the i5/OS globalization topic collection in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/> for more information.

Top

Code page (CODEPAGE)

Specifies the ASCII code page representing the character set to be used by this integrated server. Only certain code pages can be used for a given country or region code.

*LNGVER

Specifies to use the default code page corresponding to the language version (LNGVER) selected. When **Server connection** specified *GUEST or **Server operating system** specified *LINUX32 or *LINUX64 for **Network server type (TYPE)** parameter, value 437 will be used.

integer

Specify the ASCII code page which represents the character set used by the integrated server. The code page values that can be used with each country or region code are:

437	United States
850	Multilingual
852	Latin 2 (Czechoslovakia, Hungary, Poland, countries of the former Yugoslavia)
857	Turkish
860	Portuguese
861	Iceland
862	Hebrew-speaking
863	Canada (French-speaking)
864	Arabic-speaking
865	Nordic
866	Russian
932	Japanese
934	Korean
938	Chinese
942	Japanese SAA
944	Korean SAA
948	Chinese SAA
950	Traditional Chinese (DBCS)
1381	Simplified Chinese (DBCS)

Top

Server message queue (MSGQ)

Specifies the message queue to receive integrated server messages.

For details on the type of messages that are sent to this message queue, see the appropriate documentation that is associated with the type of integrated server.

Note: When a value other than *NONE is specified, all integrated server activity will be logged to either the monitor job log or the specified message queue. You should take the appropriate steps to secure this information on i5/OS.

One method of restricting access to the integrated server information on i5/OS is to create a message queue to contain the server activity. This message queue should be created with AUT(*EXCLUDE) and then any users that are to have access to the integrated server activity can be granted explicit authority to the message queue using the GRTOBJAUT command. Specify this message queue for this parameter.

Single values

*JOBLOG

Messages are placed on the joblog of the monitor job.

*NONE

Messages are not placed on any message queue.

Qualifier 1: Server message queue

name Specify the name of the message queue to receive messages issued by the integrated server.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library to be searched.

Top

Event log (EVTLOG)

Specifies whether or not messages from the event logs are received from the server.

Notes:

1. Event log messages are placed in the message queue that is specified for the **Server message queue (MSGQ)** parameter. The MSGQ value cannot be *NONE if a value other than *NONE is specified for this parameter. See the MSGQ parameter description for more information.
2. This parameter is not valid when **Server connection** specified *GUEST or **Server operating system** specified *LINUX32 or *LINUX64 for **Network server type (TYPE)** parameter.

Single values

*ALL All the event log messages are received.

*NONE

No event log messages are received.

Other values (up to 3 repetitions)

Note: Each value can only be specified once.

*SYS The system event log messages are received.

***SEC** The security event log messages are received.

***APP** The application event log messages are received.

Top

Communications message queue (CMNMSGQ)

Specifies the name of a message queue to receive network server host adapter communications status messages.

Note: This parameter is only valid when **Server connection** specified ***ISCSI** for the **Network server type (TYPE)** parameter.

Single values

*SYSOPR

Causes network server host adapter communications status messages to be placed in the system operator message queue.

Qualifier 1: Communications message queue

name Specify the name of a message queue to receive network server host adapter communications status messages.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library to be searched.

Top

Configuration file (CFGFILE)

Specifies the source file containing configuration data to be used in activating or further defining the integrated server.

Note: This parameter is not valid when **Server connection** specified ***GUEST** for **Network server type (TYPE)** parameter.

Single values

*NONE

No configuration file is specified.

Qualifier 1: Configuration file

name Specify the name of the source file containing the configuration data members for the server. At the time the server is activated, all members in the file are processed. The file must exist on the system by the time the server is activated.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library to be searched.

Top

Server storage space sizes (SVRSTGSIZE)

Specifies the size of the storage spaces, in megabytes.

Note: This parameter is not valid when **Server connection** specified *GUEST for **Network server type (TYPE)** parameter.

Element 1: Install source size

Specifies the size of the drive that holds the files that are used to install the server.

***DFT** The default drive size is to be used.

integer

Specifies the number of megabytes to use for the install source drive size. Valid values range from 200 to 2047 megabytes.

Element 2: System size

Specifies the size of the drive that the integrated server's operating system is installed on.

***DFT** The default drive size is to be used.

integer

Specifies the number of megabytes to use for the system drive size. Valid values range from 500 to 1024000 megabytes.

Top

Server storage space ASP (SVRSTGASP)

Specifies the auxiliary storage pool (ASP) identifiers for the storage space that will contain the files used to install the integrated server and the storage space that will contain the integrated server's operating system.

Note: This parameter is not valid when **Server connection** specified *GUEST for **Network server type (TYPE)** parameter.

Note: You cannot specify both a SVRSTGASP and STGASPDEV parameter value for the same element.

Element 1: Install source ASP

Specifies the auxiliary storage pool for the storage space object that holds the files that are used to install the integrated server.

1 The storage space is created in auxiliary storage pool 1, the system auxiliary storage pool.

2-255 Specify the number of the ASP to be used. Valid values depend on what ASPs are defined on the system.

Element 2: System ASP

Specifies the auxiliary storage pool for the storage space object that holds the integrated server's operating system.

1 The storage space is created in auxiliary storage pool 1, the system auxiliary storage pool.

2-255 Specify the number of the ASP to be used. Valid values depend on what ASPs are defined on the system.

Top

Server storage ASP device (STGASPDEV)

Specifies the auxiliary storage pool (ASP) device for the storage space that will contain the files used to install the integrated server and the storage space that will contain the integrated server's operating system.

Note: This parameter is not valid when **Server connection** specified *GUEST for **Network server type (TYPE)** parameter.

Note: The ASP must have been activated (by varying on the ASP device) and have a status of 'Available'.

Note: You cannot specify both a SVRSTGASP and STGASPDEV parameter value for the same element.

Element 1: Install source ASP device

Specifies the auxiliary storage pool device name for the storage space object that holds the files that are used to install the integrated server.

name Specify the device name of the ASP to use for the network server storage space.

Element 2: System ASP device

Specifies the auxiliary storage pool (ASP) device for the storage space object that holds the integrated server's operating system.

name Specify the device name of the ASP to use for the network server storage space.

Top

Pool identifier (POOL)

Specifies the shared data storage pool this integrated server should use.

Note: This parameter is not valid when **Server connection** specified *IXSVR or *WINDOWSNT for **Network server type (TYPE)** parameter.

*BASE

The base pool is to be used by this integrated server.

*SHRPOOLnn

Specifies the shared pool to be used by this integrated server. There are sixty general-purpose shared pools, identified by special values *SHRPOOL1 to *SHRPOOL60.

Top

TCP/IP port configuration (TCPPORTCFG)

Specifies the TCP/IP configuration values that are specific to a port on the integrated server.

This information consists of five parts including the identification of the integrated server port, the internet address, the subnet mask, MTU and the default gateway assigned to the port.

Note: *NONE cannot be specified when **Server connection** specified *IXSVR or *ISCSI for the **Network server type (TYPE)** parameter.

Single values

*NONE

There is no TCP/IP port configuration.

Other values (up to 5 repetitions)

Element 1: Port

Note: Each value can only be specified once.

- 1 Integrated server port number 1 is configured.
- 2 Integrated server port number 2 is configured.
- 3 Integrated server port number 3 is configured.
- 4 Integrated server port number 4 is configured.

*INTERNAL

The integrated server internal token ring port is configured.

Note: *INTERNAL is not valid when **Server connection** specified *ISCSI or *GUEST for the **Network server type (TYPE)** parameter in the corresponding CRTNWS command.

*VRTETHPTP

The integrated server virtual Ethernet point to point port is configured.

*VRTETHn

Virtual Ethernet port 'n' is configured, where 'n' is a number from 0 to 9.

Element 2: Internet address

character-value

Specify the internet address associated with the integrated server port.

The value is specified in the form nnn.nnn.nnn.nnn , where nnn is a decimal number ranging from 0 through 255.

An internet address that has a binary value of all ones or all binary zeros for the network identifier (ID) portion or the host ID portion of the internet address is not valid.

Note: The internet address selected must be unique across all network server descriptions and the i5/OS TCP/IP configuration.

Element 3: Subnet mask

character-value

Specify the subnet mask associated with the integrated server port.

The value is specified in the form nnn.nnn.nnn.nnn , where nnn is a decimal number ranging from 0 through 255.

Element 4: Maximum transmission unit

1500 The maximum transmission unit (MTU) value is 1500 bytes.

integer

Specifies the MTU value for the interface.

Element 5: Gateway address

***NONE**

There is no gateway address.

character-value

Specify the gateway address associated with the integrated server port.

The value is specified in the form nnn.nnn.nnn.nnn , where nnn is a decimal number ranging from 0 through 255.

Top

TCP/IP route configuration (TCP RTE)

Specifies routes to remote destination systems or networks to the Transmission Control Protocol/Internet Protocol (TCP/IP) configuration for the integrated server. A route specification has three elements: the route destination, the subnet mask, and the next hop internet address. A maximum of 24 route specifications can be specified.

Note: This parameter will be ignored when **Server connection** specified *IXSVR or *ISCSI for the **Network server type (TYPE)** parameter.

Two values uniquely define a route. They are the route destination field and the subnet mask. For *DFTRROUTE values, the next hop element uniquely defines the route.

Single values

***NONE**

There is no routing specification needed for the integrated server. *NONE must be specified when TCPROUTECFG(*NONE) is specified. *NONE may be specified if there is no need for route specifications.

Element 1: Route destination

Specifies the remote network or host that is being added. The user must specify all four bytes that make up an internet address though some of the bytes may be equal to 0. For example, a route to all the hosts on the 9.5.11 subnet is identified by entering 9.5.11.0 for the route destination. Used in combination with a subnet mask, the route destination will identify a route to a network or system.

***DFTRROUTE**

A TCP/IP default route is being added. A default route entry is used by the system to route data that is being sent to an undefined network or system. Multiple *DFTRROUTE entries may be specified. The *DFTRROUTE entries are used in the order specified. If a particular next hop gateway on a *DFTRROUTE entry is not available, then the subsequent *DFTRROUTE entry's next hop gateway specified will be used. This will continue until a *DFTRROUTE entry's gateway is found that is active or the list of next hop gateway values is exhausted.

character-value

Specify the route destination being added. The route destination can be specified in the form, *nnn.0.0.0* for Class A, *nnn.nnn.0.0* for Class B, and *nnn.nnn.nnn.0* for Class C, or *nnn.nnn.nnn.nnn* for any combination thereof, where *nnn* is a decimal number ranging from 0 through 255.

Note: Any combination thereof means that you may specify a route, such as 9.5.0.0 to the hosts on the 9.5 subnet even though all 9.5.x.x addresses are class A network addresses.

Exceptions:

- The first byte (octet) must be greater than 0 and less than 255
- The last byte (octet) may not equal 255.
- The last byte (octet) may not equal 0 if *HOST is specified for the SUBNETMASK value.
- Routes to a broadcast address are not allowed.

Element 2: Subnet mask

A subnet mask value must be specified if *DFTRROUTE or a route destination is entered for the route destination element. Subnet mask specifies a bit mask that identifies to TCP/IP which bits of the value specified for the route destination compose the network and subnet portions of the internet address. The subnet is identified by combining the route destination internet address and the subnet mask.

*NONE

There is no subnet mask. If *DFTRROUTE is specified in the route destination element, then *NONE must be specified. *NONE is valid only for the *DFTRROUTE route destination value.

*HOST

The internet address value specified in the route destination field is a host address. The subnetmask value is calculated to be 255.255.255.255.

character-value

Specify the mask of the subnet field. The internet address is in the form, *nnn.nnn.nnn.nnn*, where *nnn* is a decimal number ranging from 0 through 255. For example, a destination route's internet address value of 129.35.11.0 is a Class B subnet. The network ID part of its address is 129.35. The upper 2 bytes must designate 255 in the subnet mask, for example, the subnet mask must appear like 255.255.x.x, where x is determined by the user. The portion of the subnet mask which is associated with the network portion of a particular class of address must equal 255.

Element 3: Next hop

The next hop value specifies the internet address of the next system (gateway) on the route. A route cannot be added unless the internet address specified by the next hop element is directly reachable through a network associated with one of the integrated server ports.

See the *Fastpath for TCP/IP* book for general information about internet addresses.

character-value

Specify the internet address of the next system on the route in the form, *nnn.nnn.nnn.nnn*, where *nnn* is a decimal number ranging from 0 through 255 except that the host ID portion and the network ID portion of the internet address may not be all 0 bits or all 1 bits. An internet address that has all binary ones or all binary zeros for the network ID portion or the host ID portion of the internet address is not valid.

Top

TCP/IP local host name (TCPHOSTNAM)

Specifies the short form of the host name to be associated with the integrated server.

The host name can be a text string having 1 through 63 characters.

The following characters are allowed in host names:

- Alphabetical characters A through Z

- Digits 0 through 9
- Minus sign (-)
- Period (.)
- Underscore (_)

***NWSD**

Specifies that the host name for the integrated server is the same as the name of the network server description. *NWSD must be specified if *NONE is specified for the **TCP/IP port configuration (TCPPORTCFG)** parameter.

name Specify a host name to be associated with the integrated server.

Top

TCP/IP local domain name (TCPDMNNAME)

Specifies the local domain name associated with the integrated server.

A domain name can be a text string having 1 to 255 characters. Domain names consist of one or more labels separated by periods. Each label can contain up to 63 characters. The following characters are allowed in domain names:

- Alphabetical characters A through Z
- Digits 0 through 9
- Minus sign (-)
- Underscore (_)
- Period (.). Periods are only allowed when they separate labels of domain style name (refer to RFC 1034).

Uppercase and lowercase characters are allowed, but no significance attached to the case. The case is maintained as entered. The first and last character of the host name must be an alphabetic character or a digit.

Note: *SYS must be specified if TCPPORTCFG(*NONE) is specified. Also, *SYS must be specified if only an *INTERNAL port is specified on the TCPPORTCFG parameter.

***SYS** Specifies that the local domain name for the integrated server should be the same value as is configured for i5/OS.

character-value

Specify a TCP domain name to be associated with the integrated server.

Top

TCP/IP name server system (TCPNAMSVR)

Specifies the internet address of the name server system that is used by the integrated server. Typically, this is the same value as it is for i5/OS.

Note: *SYS must be specified if TCPPORTCFG(*NONE) is specified.

Single values

***SYS** The name server systems used by the integrated server should be the same as for i5/OS.

***NONE**

There is no name server to be used by the integrated server.

Other values (up to 3 repetitions)

character-value

Specify an internet address for the name server system to be used by the integrated server. Up to three remote name server systems can be specified. The name server systems are used in the order they are specified.

The value is specified in the form nnn.nnn.nnn.nnn , where nnn is a decimal number ranging from 0 through 255.

Top

Ports (PORTS)

Specifies the names of the lines attached to the *INTERNAL port, *VRTETH port or to the two line ports on the integrated server.

Note: This parameter is not valid when **Server connection** specified *GUEST for **Network server type (TYPE)** parameter.

*NONE

No lines are attached to this server. Lines may be attached later by specifying this server description in the line descriptions when they are created.

Element 1: Port number

*INTERNAL

If *INTERNAL is specified, then the line description must be the name of a token ring network (TRN). Also, *INTERNAL can only be specified for one token ring line description. This value is not valid when **Server connection** specified *ISCSI for the **Network server type (TYPE)** parameter in the corresponding CRTNWSD command.

*VRTETHPTP

The integrated server virtual Ethernet point to point port is configured.

*VRTETHn

Virtual Ethernet port 'n' is configured, where 'n' is a number from 0 to 9.

- 1 Integrated server port number 1 is configured. This value is not valid for server connection type *ISCSI.
- 2 Integrated server port number 2 is configured. This value is not valid for server connection type *ISCSI.

Element 2: Line description

name Specify the name of an existing line description. The name of a token ring network (TRN) or an Ethernet (ETH) line description can be specified. The line must have been created specifying RSRcname(*NWSD), and must not be currently attached to another server. The name of a token ring network (TRN) line description is not valid for server connection type *ISCSI.

Top

Virtual Ethernet path (VRTETHPTH)

Specifies the virtual Ethernet paths the Ethernet line descriptions can use. This information consists of three parts including the virtual Ethernet port, the **Network server host adapter** description and the **IP security rules** for this path. You can enter up to five values for this parameter. You must enter at least one virtual Ethernet path which is the path to be used by the *VRTETHPTP line description.

Note: This parameter is only valid when **Server connection** specified *ISCSI for the **Network server type (TYPE)** parameter.

Element 1: Port number

***VRTETHPTP**

The integrated server virtual Ethernet point to point port is configured.

***VRTETHn**

Virtual Ethernet port 'n' is configured, where 'n' is a number from 0 to 9.

Element 2: Network server host adapter

name Specify the name of an existing network server host adapter (NWSH) description. The network server host adapter name does not need to be unique for each VRTETHPTH parameter on this NWSD.

Element 3: IP security rules

Specify any relative entry of the IP security rule (IPSECRULES) parameter, defined in NWS Configuration(NWSCFG) of type *CNNSEC, that will be used for each remote port's security.

Element 1: Remote interface 1 rule

***DFTSECRULE**

Remote interface 1 will use IP security rule specified on the **Default IP security rule (DFTSECRULE)** parameter.

***NONE**

Remote interface 1 will not use IP security rule.

1-16 Remote interface 1 will use IP security rule specified.

Element 2: Remote interface 2 rule

***DFTSECRULE**

Remote interface 2 will use IP security rule specified on the DFTSECRULE parameter.

***NONE**

Remote interface 2 will not use IP security rule.

1-16 Remote interface 2 will use IP security rule specified.

Element 3: Remote interface 3 rule

***DFTSECRULE**

Remote interface 3 will use IP security rule specified on the DFTSECRULE parameter.

***NONE**

Remote interface 3 will not use IP security rule.

1-16 Remote interface 3 will use IP security rule specified.

Element 4: Remote interface 4 rule

***DFTSECRULE**

Remote interface 4 will use IP security rule specified on the DFTSECRULE parameter.

***NONE**

Remote interface 4 will not use IP security rule.

1-16 Remote interface 4 will use IP security rule specified.

Restricted device resources (RSTDDEVRS)

Specifies the tape and optical device resource names that are restricted and cannot be used by the integrated server.

The resource is used when the integrated server is active and a request is issued from a client that is running an application. The device resource cannot be used by the client application and i5/OS based application at the same time. If the device resource is intended to be used by an application, it will need to be available when the application is ready to use it.

Notes:

1. Only tape and optical device resources can be restricted.
2. If other device resources are specified that are not valid or are not detected, they will not allow the network server description to vary on.

Single values

*NONE

No device resources are restricted from the integrated server. Therefore, any tape or optical device resources that exist on the system can be used.

***ALL** All tape and optical device resources are restricted from being used by the integrated server.

Other values (up to 10 repetitions)

***ALLOPT**

All optical device resources are restricted from being used by the integrated server.

Note: This value can only be specified once.

***ALLTAPE**

All tape resources are restricted from being used by the integrated server.

Note: This value can only be specified once.

name Specify the resource name of a restricted device that cannot be used by the integrated server. Up to 10 restricted device resource names can be specified.

Network server configuration (NWSCFG)

Specifies the network server configuration descriptions to use with this NWSD. This information consists of two parts including the **Remote system name** and **Connection security name**

Note: This parameter is only valid when **Server connection** specified *ISCSI for the **Network server type (TYPE)** parameter.

Element 1: Remote system name

***DFT** Use the system generated default remote system network server configuration name of 'nwsdnameRM' where nwsdname is the name of this network server description.

name Specify the name of an existing remote system network server configuration description.

Element 2: Connection security name

***DFT** Use the system generated default connection security network server configuration name of 'nwsdnameCN' where nwsdname is the name of this network server description.

name Specify the name of an existing connection security network server configuration description.

Top

Virtual Ethernet control port (VRTETHCTLP)

Specifies the TCP port to use for virtual Ethernet control.

This port listens through the local area network (LAN) interface configured for any network server host adapter (NWSH) device associated with the network server description (NWS) object on the **Virtual Ethernet path (VRTETHPTH)** parameter.

Note: This parameter is only valid when **Server connection** specified ***ISCSI** for the **Network server type (TYPE)** parameter.

8800 Use the TCP port number of 8800.

integer

Specifies the port number identifying the port that is to be used for virtual Ethernet control. Valid values range from 1024 through 65,535.

Top

Synchronize date and time (SYNCTIME)

Specifies whether i5/OS should synchronize the integrated server date and time with i5/OS date and time.

The QTIMZON system value must be set to the correct value for time synchronization to work correctly.

Note: This parameter is not valid when ***GUEST** is specified for the **Network server type (TYPE)** parameter.

***TYPE** i5/OS will perform synchronization based on the network server description type. If **Server connection** specified ***IXSVR** or ***ISCSI** or ***WINDOWSNT** for the **Network server type (TYPE)** parameter, synchronization will be done as if **SYNCTIME(*YES)** was specified.

***YES** i5/OS will synchronize integrated server date and time with i5/OS date and time.

The following occurs when **Server connection** specified ***IXSVR** or ***ISCSI** for the **Network server type (TYPE)** parameter:

- If the network server description is varied on, this reset will occur immediately and at least every 30 minutes thereafter.
- If the network server description is varied off, this reset will occur when the network server description is varied on and at least every 30 minutes thereafter.

***NO** i5/OS only synchronizes the integrated server date and time with i5/OS date and time once when the network server description is varied on.

***NONE**

i5/OS will never synchronize the integrated server date and time with the i5/OS date and time when the network server description is varied on.

Top

Disable user profiles (DSBUSRPRF)

Specifies whether to disable the integrated servers user profiles if the corresponding i5/OS user profiles are disabled.

Note: This parameter is not valid when **Server connection** specified *GUEST or **Server operating system** specified *LINUX32 or *LINUX64 for **Network server type(TYPE)** parameter.

*AUTO

Integrated server user profiles are disabled if corresponding i5/OS user profiles are disabled.

***NO** Integrated server user profiles are not disabled if corresponding i5/OS user profiles are disabled.

Top

IPL source (IPLSRC)

Specifies the source of the load image that the partition is started from.

Note: This parameter is only valid when **Server connection** specified *GUEST for **Network server type (TYPE)** parameter.

*NWSSTG

The partition is started using the load image in the first network server storage space attached to this network server description.

***STMF**

The partition is started using the load image in the stream file specified by the IPL stream file (IPLSTMF) parameter.

Note: This value is not valid when **Server operating system** specified *OPSYS for **Network server type (TYPE)** parameter.

***PANEL**

The partition is started from the source indicated on the operator's panel.

A The partition is started from the A-source.

B The partition is started from the B-source.

D The partition is started from the D-source.

Top

IPL stream file (IPLSTMF)

Specifies the path of the stream file containing the image that the partition should be loaded from.

Note: This parameter is only valid when **Server connection** specified *GUEST for **Network server type (TYPE)** parameter, and *STMF is specified for the **IPL source (IPLSRC)** parameter.

*NONE

A stream file is not specified.

path-name

Specify the path of the stream file containing the load image. Up to 5000 characters may be specified.

IPL parameters (IPLPARM)

Specifies a string of characters that will be passed to the load image at IPL time. It consists of commands or configuration information for the guest operating system.

Note: This parameter is only valid when **Server connection** specified *GUEST for **Network server type (TYPE)** parameter.

*NONE

IPL parameters are not passed to the load image.

Note: *NONE is only valid value when **Server operating system** specified *OPSYS for the **Network server type (TYPE)** parameter.

character-value

Specify a string of up to 256 characters containing the IPL parameters to be passed to the load image.

Power control (PWRCTL)

Specifies whether the integrated server partition will be powered down when the network server description is varied offline or powered up when the network server description is varied online.

Note: This parameter is only valid when **Server connection** specified *GUEST for **Network server type (TYPE)** parameter.

*YES The integrated server partition will be powered down when the network server description is varied offline or powered up when the network server description is varied online.

*NO The integrated server partition will not be powered down when the network server description is varied offline and the partition will not be powered up when the network server description is varied online.

Serviceability options (SRVOPT)

Specifies serviceability options. This parameter allows serviceability options to be provided and is intended to be used under the direction of a service provider.

*NONE

No serviceability options provided.

character-value

Specify a value as directed by your service provider.

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

***LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the network server description.

*BLANK

Text is not specified.

***BLANK**

Text is not specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Examples

Note: The Install Windows Server (INSWNTSVR) or Install Linux Server (INSLNXSVR) command should be used when a **Server connection** of *ISCSI, *IXSVR or *WINDOWSNT for the **Network server type (TYPE)** parameter is to be created. More information about using network server descriptions CRTNWSD command can be found in the System i integration category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Example 1: Creating a *GUEST NWSD

```
CRTNWSD  NWSD(LINUX1)  RSRcname(*NONE)  TYPE(*GUEST)
          PARTITION(TEST)
          VRYWAIT(*NOWAIT)  CODEPAGE(437)  POOL(*SHRPOOL5)
          TCPPOrtCFG((1 '9.5.3.2' '255.255.255.0' 2048))
          TCPHOSTNAME(*NWSD)  TCPDMNNAME(*SYS)  TCPNAMSVR(*SYS)
```

This command creates a network server description named LINUX1. LINUX1 has no associated resource name. LINUX1 is a network server description associated with a guest operating system running in the logical partition named TEST. The TCP/IP protocol stack will be activated when LINUX1 is varied on. Code page 437 (United States) will be used. Port 1 will have TCP/IP internet addresses assigned. Shared storage pool 5 will be used by this NWSD. The TCP/IP local host name is the same as the network server description name. The TCP/IP local domain name is the same as the IBM System i5 and the same TCP/IP name server system will be used.

Example 2: Creating a *GUEST NWSD

```
CRTNWSD  NWSD(MYNWSD)  RSRcname(CMN04)  TYPE(*GUEST *OPSYS)
          PARTITION(TEST)  VRYWAIT(*NOWAIT)  CODEPAGE(437)
```

This command creates a network server description named MYNWSD with a resource name of CMN04. LINUX1 is a network server description associated with a guest operating system running in the logical partition named TEST. The logical partitions operating system is i5/OS. Code page 437 (United States) will be used.

Top

Error messages

*ESCAPE Messages

CPF26AC

Network server description &1 not created due to errors.

Top

Create NWS Storage Space (CRTNWSSTG)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Network Server Storage Space (CRTNWSSTG) command creates a storage space used by a network server. The network storage space must be linked to a network server description before it can be used. For more information see the Add Network Server Storage Link (ADDNWSSTGL) command.

Top

Parameters

Keyword	Description	Choices	Notes
NWSSTG	Network server storage space	<i>Name</i>	Required, Positional 1
NWSSIZE	Size	<i>Integer</i> , <u>*CALC</u>	Optional, Positional 2
FROMNWSSTG	From storage space	<i>Name</i> , <u>*NONE</u>	Optional
FORMAT	Format	<u>*NTFS</u> , *FAT, *FAT32, *OPEN, *NTFSQR	Optional
OFFSET	Data offset	<u>*FORMAT</u> , *ALIGNLGLPTN, *ALIGNLGLDSK, *NONE	Optional
ASP	Auxiliary storage pool ID	1-255, <u>1</u>	Optional
ASPDEV	ASP device	<i>Name</i>	Optional
CLUDMN	Cluster domain name	<i>Character value</i>	Optional
CLUPORTCFG	Cluster port configuration	<i>Element list</i>	Optional
	Element 1: Connection port	*VRTETH0, *VRTETH1, *VRTETH2, *VRTETH3, *VRTETH4, *VRTETH5, *VRTETH6, *VRTETH7, *VRTETH8, *VRTETH9	
	Element 2: Cluster internet address	<i>Character value</i>	
	Element 3: Cluster subnet mask	<i>Character value</i>	
TEXT	Text 'description'	<i>Character value</i> , <u>*BLANK</u>	Optional

Top

Network server storage space (NWSSTG)

Specify the name of the network server storage space to be created.

Top

Size (NWSSIZE)

Specifies the size of the network server storage space to be created.

*CALC

If the FROMNWSSTG parameter is *NONE, then the size calculated is based on the FORMAT type specified:

- *NTFS will set the storage space size to '2' MB.
- *FAT or *OPEN will set the storage space size to '1' MB.
- *FAT32 will set the storage space size to '512' MB.
- *NTFSQR will set the storage space size to '500' MB.

If a valid network server storage space name has been specified in the FROMNWSSTG parameter, the new storage space will be created with the same size as the storage space specified in the FROMNWSSTG parameter.

1-1024000

Specify the size for the network server storage space, in megabytes.

- The range for FORMAT(*NTFS) is from 2 to 1024000 megabytes.
- The range for FORMAT types *FAT, *FAT32, and *OPEN is from 1 to 1024000 megabytes.
- The range for FORMAT(*NTFSQR) is from 500 to 1024000 megabytes.

When a FROMNWSSTG network server storage space is specified, the NWSSIZE parameter must be set equal to or greater than the size of the network server storage space specified in the FROMNWSSTG parameter.

Top

From storage space (FROMNWSSTG)

Specifies the name of an existing network server storage space that will be copied to the new network server storage space.

***NONE**

A copy operation from an existing network server storage space will not be performed.

'*name*' An existing network server storage space name used to copy to the new network server storage space being created.

Top

Format (FORMAT)

When a storage space is initially created, it is not formatted by the system. The storage space will need to be linked to a network server description and formatted by the hosted operating system.

***NTFS**

This storage space format offers the greatest benefit for use by integrated servers using the Master Boot Record (MBR) partitioning scheme used by network server descriptions with a connection type of *WINDOWSNT, *IXSVR or *ISCSI.

The storage space should be formatted using Windows NT File System when linked to Windows network server descriptions.

***FAT** The storage space should be formatted using the File Allocation Table file system.

***FAT32**

The storage space should be formatted using the 32-bit File Allocation Table file system.

***OPEN**

The storage space should be formatted with an open source file system.

This storage space format offers the greatest benefit for use by integrated servers used by network server descriptions with a connection type of *GUEST as well as connection types *IXSVR or *ISCSI using some Linux distributions. Refer to specific product documentation for additional guidelines.

***NTFSQR**

The storage space created with this format will contain special attributes which make it linkable as a quorum resource disk used for integrated server clustering.

The storage space should be formatted using Windows NT File System when linked to Windows network server descriptions.

Top

Data offset (OFFSET)

Specifies the data offset sector alignment to use by the system to align the underlying network server storage space with the hosting system pages.

Note: This is an advanced configuration function. Incorrectly setting this parameter may adversely affect actual virtual disk performance.

Network server storage space virtual disk access may realize a performance improvement by specifying a data offset value other than the default value. Many factors influence the actual performance impact. Some factors affecting network server storage space performance include the following:

- Network server operating system version and distribution.
- Disk partitioning method
- File system used
- Application and OS data access patterns

***FORMAT**

The data offset sector alignment used will be determined by the network server storage space format type selected.

When a format type of *OPEN is specified, the first sector of the disk image is aligned with the hosting system page by default. This is equivalent to specifying OFFSET(*ALIGNLGLDSK). Refer to the documentation for the specific network server type this will be used with to determine if this is the appropriate type for server type that this will be used with.

For all other format types, the default is to page align the first logical partition.

When a format type of *NTFS, *FAT, *FAT32 or *NTFSQR is specified, the first sector of the logical partition is aligned with the hosting system page by default. This is equivalent to specifying OFFSET(*ALIGNLGLPTN). Secondary partitions may also be aligned when partition sizes are a multiple listed below based on the total size of the network server storage space.

- For storage spaces that are 1024 MB or less, the partition should be a multiple of 1 MB.
- For storage spaces that are 1025 MB to 511000 MB, the partition should be a multiple of 63 MB.
- For storage spaces that are 511000 MB or greater, the partition should be a multiple of 252 MB.

***NONE**

No data offset sector alignment will be used.

***ALIGNLGLPTN**

The data offset sector alignment used will align the first logical partition sector. This is the value used by default for when the format type is *NTFS, *FAT, *FAT32 or *NTFSQR. This is appropriate for most PC Server network server description types (*WINDOWSNT, *IXSVR, *ISCSI) which utilize a PC BIOS master boot record to partition disks.

***ALIGNLGLDSK**

The data offset sector alignment used will align the first logical disk sector. This is the value used by default for when the format type is *OPEN. This is appropriate for most *GUEST and some network server types that need to access raw disk images.

Auxiliary storage pool ID (ASP)

Specifies the auxiliary storage pool (ASP) that will contain the new network server storage space.

Note: You cannot specify a value for both the ASP and ASPDEV parameters.

'1' The network server storage space is created in the system auxiliary pool ASP 1.

ASP-number

The network server storage space is created in user auxiliary storage pool 2-32 or in independent auxiliary storage pools 33-255.

Top

ASP device (ASPDEV)

Specifies the name of the auxiliary storage pool (ASP) device where storage is allocated for the network server storage space.

Note: The ASP must have been activated (by varying on the ASP device) and have a status of 'Available'.

Note: You cannot specify a value for both the ASP and ASPDEV parameters.

ASP-device-name

The device name of the ASP to use for the network server storage space.

Top

Cluster domain name (CLUDMN)

Specifies the domain name of the cluster. This is the domain where the cluster service account will be created.

Note: This parameter is required when FORMAT(*NTFSQR) is specified.

Top

Cluster port configuration (CLUPORTCFG)

Specifies the TCP/IP configuration values that are specific to the cluster service. This information consists of three parts including the identification of the cluster connection port, the cluster internet address, and the cluster subnet mask.

Note: This parameter is required when FORMAT(*NTFSQR) is specified.

Element 1: Connection port

Specifies the virtual ethernet port to be configured for this cluster. This connection will be used as a private cluster connection between each cluster node.

Element 2: Cluster internet address

Specifies the internet address of this cluster. The internet address is specified in the form, *nnn.nnn.nnn.nnn* where *nnn* is a decimal number ranging from 0 through 255. An internet address that has a binary value of all ones or all zeros for the network identifier (ID) portion or the host ID portion of the internet address is not valid.

Element 3: Cluster subnet mask

Specifies the subnet mask associated with cluster internet address. Subnetting provides the capability to partition an internet domain. Specify the mask for the network subnet and host address fields of the internet address that defines a subnet. The subnet mask is in the form, *nnn.nnn.nnn.nnn*, where *nnn* is a decimal number ranging from 0 through 255.

Top

Text 'description' (TEXT)

Specifies text describing the storage space.

*BLANK

Text is not specified.

'description'

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Examples

Example 1: Create NTFS-format Storage Space

```
CRTNWSSTG NWSSTG(STGSPACE3) NWSSIZE(200) FORMAT(*NTFS)
```

This command creates a network server storage space called STGSPACE3 with a size of 200 megabytes.

Example 2: Copy Existing Storage Space

```
CRTNWSSTG NWSSTG(STGSPACE4) NWSSIZE(*CALC)
FROMNWSSTG(FROMSTG) ASP(3)
```

This command creates a network server storage space called STGSPACE4 with a size and format the same as FROMSTG and copies the contents into STGSPACE4. It will be created in user auxiliary storage pool (ASP) 3.

Example 3: Copy and Extend Existing Storage Space

```
CRTNWSSTG NWSSTG(OPENWEB3) NWSSIZE(10000)
FROMNWSSTG(WEBDATA) OFFSET(*ALIGNFST)
```

This command creates a network server storage space called OPENWEB3 with a new size of 10000 MB and copies the contents from WEBDATA. The new storage space OPENWEB3 has its data offset alignment sector set to optimize for sector zero page alignment.

Top

Error messages

*ESCAPE Messages

CPFA42D

Storage space &1 not created.

[Top](#)

Create Output Queue (CRTOUTQ)

Where allowed to run: All environments (*ALL)
 Threadsafes: No

Parameters
 Examples
 Error messages

The Create Output Queue (CRTOUTQ) command creates a new output queue for spooled files. An entry is placed on the output queue for each spooled file. The order in which the files are written to the output device is determined by the output priority of the spooled file and the value specified on the **Order of files on queue (SEQ)** parameter.

Top

Parameters

Keyword	Description	Choices	Notes
OUTQ	Output queue	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Output queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
MAXPAGES	Maximum spooled file size	Single values: *NONE Other values (up to 5 repetitions): <i>Element list</i>	Optional
	Element 1: Number of pages	<i>Integer</i>	
	Element 2: Starting time	<i>Time</i>	
	Element 3: Ending time	<i>Time</i>	
SEQ	Order of files on queue	*FIFO, *JOBNBR	Optional
RMTSYS	Remote system	<i>Character value, *INTNETADR, *NONE, *PASTHR, *NWSA</i>	Optional
RMTprtQ	Remote printer queue	<i>Character value, *USER, *SYSTEM</i>	Optional
AUTOSTRWTR	Writers to autostart	1-10, *NONE	Optional
MSGQ	Queue for writer messages	<i>Qualified object name</i>	Optional
	Qualifier 1: Queue for writer messages	<i>Name, QSYSOPR</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
CNNType	Connection type	<i>Character value, *SNA, *IP, *USRDFN</i>	Optional
DESTType	Destination type	<i>Character value, *OS400, *OS400V2, *PSF2, *S390, *NDS, *OTHER</i>	Optional
TRANSFORM	Host print transform	*YES, *NO	Optional
USRDTATFM	User data transform	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: User data transform	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
MFRTypeMDL	Manufacturer type and model	<i>Character value, *IBM42011, *WSCST</i>	Optional
WSCST	Workstation customizing object	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Workstation customizing object	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	

Keyword	Description	Choices	Notes
IMGCFG	Image configuration	Character value, <u>*NONE</u>	Optional
INTNETADR	Internet address	Character value	Optional
CLASS	VM/MVS class	A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9	Optional
FCB	Forms Control Buffer	Character value, <u>*NONE</u> , *USRDTA, *PRTF	Optional
DESTOPT	Destination options	Character value, <u>*NONE</u> , *USRDFNTXT, *NOWAIT	Optional
SEPPAGE	Print separator page	<u>*YES</u> , *NO	Optional
USRDFNOPT	User defined option	Single values: <u>*NONE</u> Other values (up to 4 repetitions): Character value	Optional
USRDFNOBJ	User defined object	Single values: <u>*NONE</u> Other values: Element list	Optional
	Element 1: Object	Qualified object name	
	Qualifier 1: Object	Name	
	Qualifier 2: Library	Name, <u>*LIBL</u> , *CURLIB	
	Element 2: Object type	*DTAARA, *DTAQ, *FILE, *PSFCFG, *USRIDX, *USRQ, *USRSPC	
USRDRVPGM	User driver program	Single values: <u>*NONE</u> Other values: Qualified object name	Optional
	Qualifier 1: User driver program	Name	
	Qualifier 2: Library	Name, <u>*LIBL</u> , *CURLIB	
SPLFASP	Spooled file ASP	<u>*SYSTEM</u> , *OUTQASP	Optional
TEXT	Text 'description'	Character value, <u>*BLANK</u>	Optional
DSPDTA	Display any file	<u>*NO</u> , *YES, *OWNER	Optional, Positional 2
JOBSEP	Job separators	0-9, <u>0</u> , *MSG	Optional, Positional 3
OPRCTL	Operator controlled	<u>*YES</u> , *NO	Optional, Positional 4
DTAQ	Data queue	Single values: <u>*NONE</u> Other values: Qualified object name	Optional
	Qualifier 1: Data queue	Name	
	Qualifier 2: Library	Name, <u>*LIBL</u> , *CURLIB	
AUTCHK	Authority to check	<u>*OWNER</u> , *DTAAUT	Optional
AUT	Authority	Name, <u>*USE</u> , *ALL, *CHANGE, *EXCLUDE, *LIBCRTAUT	Optional

Top

Output queue (OUTQ)

Specifies the output queue being created.

This is a required parameter.

Qualifier 1: Output queue

name Specify the name of the output queue being created.

Qualifier 2: Library

***CURLIB**

The current library for the job is used to locate the output queue. If no current library entry exists in the library list, QGPL is used.

name Specify the name of the library where the output queue is to be located.

Note: The temporary library QTEMP is not a valid library name. Output queues must be in permanent libraries.

Top

Maximum spooled file size (MAXPAGES)

Specifies the maximum spooled file size in pages that will be allowed to print between a starting and ending time. If a spooled file exceeds the page limit it will be deferred (DFR status) until the ending time expires. For files where the exact number of pages is not known, the estimated number of pages is used. (You can use the Work with Spooled File Attributes (WRKSPLFA) command to find out the estimated number of pages.) Time must be specified in hhmmss format, on a 24 hour clock.

Single values

***NONE**

There is no limit on the size of spooled files allowed to print from this output queue.

Other values (up to 5 repetitions)

Element 1: Number of pages

integer

Specify the largest spooled file, in pages, that is allowed to print.

Element 2: Starting time

time Specify the time of day that the maximum spooled file size limit is to start.

Element 3: Ending time

time Specify the time of day that the maximum spooled file size limit is to end.

Top

Order of files on queue (SEQ)

Specifies the order of the spooled files on the output queue.

***FIFO** The queue is first-in first-out within priority for each file. That is, new spooled files are placed after all other entries on the queue of the same priority.

***JOBNBR**

The queue entries for spooled files are sorted in priority sequence using the job number (actually, the date and time that the job entered the system is used) of the job that created the spooled file.

Top

Remote system (RMTSYS)

Specifies the remote system to send files to when a remote writer is started (using the STRRMTWTR command) to the output queue. This is referred to as the "address" by SNADS, and the "host" by TCP/IP.

*NONE

The output queue is used only for local printing. The STRRMTWTR command cannot be used when this output queue is specified on the OUTQ parameter.

*PASTHR

The system a user passed through (using the STRPASTHR command) is used when sending spooled files created by the user job. If a spooled file was not created by a job that had passed through from another system, the spooled file will be held (HLD status).

*INTNETADR

The INTNETADR parameter is used to identify the system when a remote writer is started to the output queue. If you have a host table or a domain name server on your TCP/IP network, you can use the remote-system-name instead of this parameter.

Note: This value is valid only when *IP has been specified for the CNNTYPE parameter.

*NWSA

The RMTprtQ parameter is used to identify the system when a remote writer is started to the output queue. This value is valid only when *NDS has been specified for the DESTTYPE parameter.

remote-system-name

Specify a name for the remote system. Only the first 8 characters will be used when the connection type (CNNTYPE parameter) is specified as *SNA. If the name of the remote system needs to be lower case, the name must be enclosed in apostrophes. If you do not use apostrophes, the operating system changes the name to upper case.

Top

Remote printer queue (RMTprtQ)

Specifies the printer queue on the remote system (RMTSYS parameter) to which the remote writer sends spooled files.

*USER

The user profile that created the spooled file determines the user ID on the remote system. This value is valid only when the connection type (CNNTYPE parameter) is specified as *SNA or *USRDFN.

*SYSTEM

The default system printer on the remote system is used to determine the printer queue. For a remote IBM System i, the output queue associated with the printer device specified in the QPRTDEV system value is used as the printer queue.

Note: This value is valid only when the connection type (CNNTYPE parameter) is specified as *SNA or *USRDFN and the DESTTYPE is *OS400 or *S390.

name Specifies the name for the printer queue on the remote system. For a remote IBM System i, this is the name of an output queue on which the spooled file is created.

If the name of the remote system needs to be lower case, the name must be enclosed in apostrophes. If you do not use apostrophes, the operating system changes the name to upper case.

For a destination system that is not an IBM System i, this name is system-dependent, and can be either the actual name of the device or the name of a printer queue.

This output queue is usually specified as library name/output queue name. If a library name qualifier is not specified, the value *LIBL is used as the default.

Top

Writers to autostart (AUTOSTRWTR)

Specifies the number of remote writers that will be started automatically by the system. For user created output queues with the remote system (RMTSYS parameter) specified as *NONE, this parameter will be ignored.

*NONE

There will be no writers auto-started by the system to this output queue.

1-10 Specify the number of writers to be auto-started to this output queue.

Top

Queue for writer messages (MSGQ)

Specifies the message queue to which messages are sent when created by the remote writer started to this output queue.

Qualifier 1: Queue for writer messages

QSYSOPR

Messages are sent to the QSYSOPR message queue.

name Specify the name of the message queue to which messages created by the remote writer are sent.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

name Specify the name of the library to be searched.

Top

Connection type (CNNTYPE)

Specifies the type of connection with the remote system.

***SNA** The spooled files are sent using SNADS. This is similar to the Send Network Spooled File (SNDNETSPLF) command and requires that SNADS be configured.

***IP** The spooled files will be sent using TCP/IP. This is similar to the Send TCP/IP Spooled File (SNDTCPSPLF) command and requires that the TCP/IP product be installed.

***USRDFN**

The spooled files are sent using a user-defined connection.

Top

Destination type (DESTTYPE)

Specifies the type of the remote system (RMTSYS parameter). This parameter, along with the type of data contained in the spooled file (DEVTYPE parameter on the CRTPRTF command), is used by a remote writer to determine the format used to send the spooled file. The spooled file will be held by the remote writer if the type of data in the spooled file is not supported by the system.

*OS400

The spooled files are to be sent to an IBM System i, when the connection type (CNNTYPE) has been specified as *SNA. This value can be specified for all releases which support TCP/IP (V2R3 and later) when CNNTYPE is *IP or when CNNTYPE is *USRDFN.

Note: This value should be specified when possible, to allow the greatest flexibility when selecting values for other parameters.

*OS400V2

The spooled files are sent to a system running i5/OS (OS/400) V2R3 or earlier. This value is valid only when CNNTYPE is *SNA.

*S390 The spooled files are sent to a System z. This value is valid only when CNNTYPE is *SNA or when CNNTYPE is *USRDFN.

*PSF2 The spooled files are sent to a personal computer running the PSF/2 product. This value is valid only when the CNNTYPE is *IP.

*NDS The spooled files are to be sent to NETWARE4. This value is valid only when the CNNTYPE is *USRDFN.

*OTHER

The spooled files are sent to a system not matching any of the other special values. This includes systems running i5/OS (OS/400) V1R3 or earlier, as well as System/36 and System/38 systems.

Top

Transform SCS to ASCII (TRANSFORM)

Specifies whether or not to make use of the host print transform function to transform a spooled file of device type *SCS into ASCII data when the file is sent to a remote printer queue.

Note: This parameter is not valid when the CNNTYPE is specified as *SNA or *NONE.

*YES The SCS data streams are transformed.

*NO The SCS data streams are not transformed.

Top

Data transform program (USRDTATFM)

Specifies the user-defined data program that is used to transform the spooled file data.

Note: This parameter is valid only when RMTSYS is not *NONE.

Single values

*NONE

No user-defined data transform program name is specified.

Qualifier 1: User data transform

name Specify the name of the data transform program to be used by the driver program.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

name Specify the name of the library to be searched.

Top

Manufacturer type and model (MFRTYPMDL)

Specifies the manufacturer, type, and model for a printer using the host print transform function or user data transform program. This parameter is only prompted when TRANSFORM(*YES) is specified or a user data transform program is specified.

If *WSCSTxxx is specified for MFRTYPMDL, a workstation customizing object must be specified.

*IBM42011

The IBM 4201-1 Proprinter is used.

*WSCST

The value of the WSCST parameter is used.

character-value

Specify the manufacturer, type, and model for a printer using the host print transform function.

Manufacturer Type and Model Table

*IBM2380	IBM 2380 Personal Printer Series II IBM 2380 Plus Printer
*IBM2381	IBM 2381 Personal Printer Series II IBM 2381 Plus Printer
*IBM2390	IBM 2390 Personal Printer Series II IBM 2390 Plus Printer
*IBM2391	IBM 2391 Personal Printer Series II IBM 2391 Plus Printer
*IBM3112	IBM 3112 Page Printer
*IBM3116	IBM 3116 Page Printer
*IBM3130	IBM 3130 Advanced Function Printer
*IBM3812	IBM 3812 Pageprinter
*IBM3816	IBM 3816 Pageprinter
*IBM3912HP	IBM 3912 Page Printer (HP Mode)
*IBM3916HP	IBM 3916 Page Printer (HP Mode)
*IBM39302	IBM 39302 IBM 3930-02S Page Printer IBM 39302 IBM 3930-02D Page Printer
*IBM39303	IBM 39303 IBM 3930-03S Page Printer IBM 39303 IBM 3930-03D Page Printer
*IBM4019	IBM 4019 LaserPrinter IBM 4019E LaserPrinter E
*IBM4019HP	IBM 4019 LaserPrinter (HP Mode) IBM 4019E LaserPrinter E (HP Mode)
*IBM4029	IBM 4029-010 LaserPrinter 5E IBM 4029-020 LaserPrinter 6 IBM 4029-030 LaserPrinter 10 IBM 4029-040 LaserPrinter 10L
*IBM4029HP	IBM 4029-010 LaserPrinter 5E (HP Mode) IBM 4029-020 LaserPrinter 6 (HP Mode) IBM 4029-030 LaserPrinter 10 (HP Mode) IBM 4029-040 LaserPrinter 10L (HP Mode)
*IBM4037	IBM 4037 5E Printer
*IBM4039HP	IBM 4039 LaserPrinter 10D (HP Mode) IBM 4039 LaserPrinter 10D Plus (HP Mode) IBM 4039 LaserPrinter 10R (HP Mode)

IBM 4039 LaserPrinter 10R Plus
 (HP Mode)
 IBM 4039 LaserPrinter 12R (HP Mode)
 IBM 4039 LaserPrinter 12R Plus
 (HP Mode)
 IBM 4039 LaserPrinter 12L (HP Mode)
 IBM 4039 LaserPrinter 12L Plus
 (HP Mode)
 IBM 4039 LaserPrinter 16L (HP Mode)
 IBM 4039 LaserPrinter 16L Plus
 (HP Mode)
 *IBM4070 IBM 4070 IJ (IBM Mode)
 *IBM4070EP IBM 4070 IJ (Epson Mode)
 *IBM4072 IBM 4072 ExecJet
 *IBM4076 IBM 4076 ExecJet II Printer (HP Mode)
 *IBM42011 IBM 4201-1 Proprinter
 *IBM42012 IBM 4201-2 Proprinter II
 *IBM42013 IBM 4201-3 Proprinter III
 *IBM42021 IBM 4202-1 Proprinter XL
 *IBM42022 IBM 4202-2 Proprinter II XL
 *IBM42023 IBM 4202-3 Proprinter III XL
 *IBM42071 IBM 4207-1 Proprinter X24
 *IBM42072 IBM 4207-2 Proprinter X24E
 *IBM42081 IBM 4208-1 Proprinter XL24
 *IBM42082 IBM 4208-2 Proprinter XL24E
 *IBM4212 IBM 4212 Proprinter 24P
 *IBM4216 IBM 4216-10 Personal Pageprinter
 *IBM4226 IBM 4226-302 Printer
 *IBM4230 IBM 4230-4S3 Printer (IBM Mode)
 IBM 4230-4I3 Printer (IBM Mode)
 *IBM4232 IBM 4232-302 Printer (IBM Mode)
 *IBM4244ASF IBM 4244 Printer (single tractor feed
 and ASF)
 *IBM4244DUAL IBM 4244 Printer (dual tractor feeds)
 *IBM4244MAN IBM 4244 Printer (single form feed or
 manual selection)
 *IBM4247ASF IBM 4247 Printer (single tractor feed
 and ASF)
 *IBM4247DUAL IBM 4247 Printer (dual tractor feeds)
 *IBM4247MAN IBM 4247 Printer (single form feed or
 manual selection)
 *IBM4308 IBM Infoprint Color 8
 *IBM4312 IBM Network Printer 12
 *IBM4317 IBM Network Printer 17
 *IBM4320 IBM Infoprint 20
 *IBM4322 IBM Infoprint 21
 *IBM4324 IBM Network Printer 24
 *IBM4332 IBM Infoprint 32
 *IBM4340 IBM Infoprint 40
 *IBM47121 IBM 4712-1 Transaction Printer
 *IBM47122 IBM 4712-2 Transaction Printer
 *IBM47221 IBM 4722-1 Document Printer
 *IBM47222 IBM 4722-2 Document Printer
 *IBM4770 IBM 4770 InkJet Transaction Printer
 *IBM4912 IBM Infoprint 12
 *IBM5152 IBM 5152 Graphics Printer
 *IBM5201 IBM 5201-2 Quietwriter
 *IBM5202 IBM 5202-1 Quietwriter III
 *IBM5204 IBM 5204-1 Quickwriter
 *IBM5216 IBM 5216 Wheelprinter
 *IBM5575 IBM 5579-H02 Printer
 IBM 5579-K02 Printer
 IBM 5577-T02 Printer
 IBM 5579-S02 Printer
 IBM 5577-K02 Printer
 IBM 5577-J02 Printer
 IBM 5577-G02 Printer

IBM 5577-H02 Printer
 IBM 5577-F02 Printer
 IBM 5577-B02 Printer
 IBM 5575-H02 Printer
 IBM 5575-F02 Printer (with SBCS
 Cartridge)
 IBM 5575-B02 Printer (with SBCS
 Cartridge)
 IBM 5573-K02 Printer
 IBM 5573-J02 Printer
 IBM 5573-H02 Printer
 IBM 5573-G02 Printer
 IBM 5572-B02 Printer
 IBM 5417-011 Printer
 IBM 5407-011 Printer
 IBM 5327-011 Printer
 IBM 4208-502 Printer
 *IBM6400 IBM 6400 Printers (IBM Mode)
 *IBM6400EP IBM 6400 Printers (Epson Mode)
 *IBM6404 IBM 6404 Printers (IBM Mode)
 *IBM6404EP IBM 6404 Printers (Epson Mode)
 *IBM6408 IBM 6408-A00 Printer (IBM Mode)
 IBM 6408-CTA Printer (IBM Mode)
 *IBM6408EP IBM 6408-A00 Printer (Epson Mode)
 IBM 6408-CTA Printer (Epson Mode)
 *IBM6412 IBM 6412-A00 Printer (IBM Mode)
 IBM 6412-CTA Printer (IBM Mode)
 *IBM6412EP IBM 6412-A00 Printer (Epson Mode)
 IBM 6412-CTA Printer (Epson Mode)
 *IBMPAGES IBM 5589-H01 Printer
 IBM 5588-H02 Printer
 IBM 5587-H01 Printer
 IBM 5586-H02 Printer
 IBM 5585-H01 Printer
 IBM 5584-K02 Printer
 IBM 5584-H02 Printer
 IBM 5584-G02 Printer
 *IBMPAGESNPB Same as *IBMPAGES, but without text
 positioning adjustments for a no-print
 border
 *IBMPAGES300 IBM Network Printer 12 (with PAGES
 feature)
 IBM Network Printer 17 (with PAGES
 feature)
 IBM Network Printer 24 (with PAGES
 feature)
 IBM Infoprint 20 (with PAGES feature)
 IBM Infoprint 32 (with PAGES feature)
 IBM Infoprint 40 (with PAGES feature)
 *IBMPAGES300NPB Same as *IBMPAGES300, but without text
 positioning adjustments for a no-print
 border
 *INFOPRINT8C IBM Infoprint Color 8
 *INFOPRINT12 IBM Infoprint 12
 *INFOPRINT20 IBM Infoprint 20
 *INFOPRINT21 IBM Infoprint 21
 *INFOPRINT32 IBM Infoprint 32
 *INFOPRINT40 IBM Infoprint 40
 *INFOPRINT70 IBM Infoprint 70
 *INFOPRINT85 IBM Infoprint 2085
 *INFOPRINT105 IBM Infoprint 2105
 *INFOPRINT1116 IBM Infoprint 1116
 *INFOPRINT1120 IBM Infoprint 1120
 *INFOPRINT1125 IBM Infoprint 1125
 *INFOPRINT1130 IBM Infoprint 1130
 *INFOPRINT1140 IBM Infoprint 1140
 *INFOPRINT1145 IBM Infoprint 1145

```

*INFOPRINT1220C IBM Infoprint Color 1220
*INFOPRINT1222 IBM Infoprint 1222
*INFOPRINT1226 IBM Infoprint 1226
*INFOPRINT1228C IBM Infoprint Color 1228
*INFOPRINT1312 IBM Infoprint 1312
*INFOPRINT1332 IBM Infoprint 1332
*INFOPRINT1334C IBM Infoprint Color 1334
*INFOPRINT1352 IBM Infoprint 1352
*INFOPRINT1354C IBM Infoprint Color 1354
*INFOPRINT1357C IBM Infoprint Color 1357
*INFOPRINT1372 IBM Infoprint 1372
*INFOPRINT1400C IBM Infoprint Color 14xx Series
Printer
*INFOPRINT1410 IBM Infoprint 1410 MFP
*INFOPRINT1412 IBM Infoprint 1412
*INFOPRINT1422 IBM Infoprint 1422
*INFOPRINT1500 IBM Infoprint 15xx Series Printer
*INFOPRINT1500C IBM Infoprint Color 15xx Series
Printer
*INFOPRINT1600 IBM Infoprint 16xx Series Printer
*INFOPRINT1600C IBM Infoprint Color 16xx Series
Printer
*INFOPRINT2000 IBM Infoprint 2000
*INFOPRINT2085 IBM Infoprint 2085
*INFOPRINT2105 IBM Infoprint 2105
*INFOPRINT2190 IBM Infoprint 2190
*INFOPRINT2210 IBM Infoprint 2210
*INFOPRINT2235 IBM Infoprint 2235
*INFOPRINT2705 IBM Infoprint 2105
*INFOPRINT2706 IBM Infoprint 2105ES
*INFOPRINT2761 IBM Infoprint 2060ES
*INFOPRINT2775 IBM Infoprint 2075ES
*INFOPRINT2785 IBM Infoprint 2085
*INFOPRINT2790 IBM Infoprint 2090ES
*INFOPRINT6500 IBM Infoprint 6500 (Epson Mode)
*CANLIPS3 Canon LIPS3 DBCS Printers
*CANLIPS3NPB Same as *CANLIPS3, but without text
positioning adjustments for a no-print
border
*CPQPM15 COMPAQ PageMark 15 (HP Mode)
*CPQPM20 COMPAQ PageMark 20 (HP Mode)
*EPAP2250 Epson ActionPrinter 2250
*EPAP3250 Epson ActionPrinter 3250
*EPAP5000 Epson ActionPrinter 5000
*EPAP5500 Epson ActionPrinter 5500
*EPDFX5000 Epson DFX-5000
*EPDFX8000 Epson DFX-8000
*EPEPL7000 Epson EPL-7000
*EPEPL8000 Epson EPL-8000
*EPFX850 Epson FX-850
*EPFX870 Epson FX-870
*EPFX1170 Epson FX-1170
*EPLQ510 Epson LQ-510
*EPLQ570 Epson LQ-570
*EPLQ860 Epson LQ-860
*EPLQ870 Epson LQ-870
*EPLQ1070 Epson LQ-1070
*EPLQ1170 Epson LQ-1170
*EPLQ2550 Epson LQ-2550
*EPLX810 Epson LX-810
*EPSQ870 Epson SQ-870
*EPSQ1170 Epson SQ-1170
*ESCPDBCS Epson ESC/P DBCS Printers
*HPII HP LaserJet Series II
*HPIID HP LaserJet IID
*HPIIP HP LaserJet IIP
*HPIII HP LaserJet III

```

*HP1100	HP LaserJet 1100 series
*HP1200C	HP DeskJet 1200C
*HP1600C	HP DeskJet 1600C
*HP4000	HP LaserJet 4000 series
*HP5000	HP LaserJet 5000 series
*HP8000	HP LaserJet 8000 series
*HPCOLORLJ	HP Color LaserJet 5
*HPDBCS	HP LaserJet-compatible printers for Double Byte Character Set (DBCS) input
*HPPAINT	HP PaintJet HP PaintJet XL HP PaintJet XL300
*LEX2380	Lexmark Forms Printer 2380 Plus
*LEX2381	Lexmark Forms Printer 2381 Plus
*LEX2390	Lexmark Forms Printer 2390 Plus
*LEX2391	Lexmark Forms Printer 2391 Plus
*LEX4227	Lexmark 4227 Forms Printer
*LEXMARKC	Lexmark C Series Printer
*LEXMARKC510	Lexmark C510 Color Printer
*LEXMARKC750	Lexmark C750 Color Printer
*LEXMARKC752	Lexmark C752 Color Printer
*LEXMARKC910	Lexmark C910 Color Printer
*LEXMARKC912	Lexmark C912 Color Printer
*LEXMARKE	Lexmark E Series Printer
*LEXMARKE322	Lexmark E322 Printer
*LEXMARKE323	Lexmark E323 Printer
*LEXMARKE330	Lexmark E330 Printer Lexmark E332n Printer
*LEXMARKT	Lexmark T Series Printer
*LEXMARKT420	Lexmark T420 Printer
*LEXMARKT520	Lexmark T520 Printer
*LEXMARKT522	Lexmark T522 Printer
*LEXMARKT620	Lexmark T620 Printer
*LEXMARKT622	Lexmark T622 Printer
*LEXMARKT630	Lexmark T630 Printer
*LEXMARKT632	Lexmark T632 Printer
*LEXMARKT634	Lexmark T634 Printer
*LEXMARKW	Lexmark W Series Printer
*LEXMARKW812	Lexmark W812 Printer
*LEXMARKW820	Lexmark W820 Printer
*LEXMARKX422	Lexmark X422 MFP
*LEXOPTRA	Lexmark Optra Family (HP Mode)
*LEXOPTRAC	Lexmark Optra C Color Printer
*LEXOPTRAN	Lexmark Optra N Printer
*LEXOPTRAS	Lexmark Optra S Printer family
*LEXOPTRASC	Lexmark Optra SC Color Printer Lexmark Optra Color 1200 Printer
*LEXOPTRAT	Lexmark Optra T Printer series
*LEXOPTRAW	Lexmark Optra W Printer series
*NECP2	NEC P2 Pinwriter
*NECP2200	NEC P2200 Pinwriter
*NECP2200XE	NEC P2200 XE Pinwriter
*NECP5200	NEC P5200 Pinwriter

*NECP5300 NEC P5300 Pinwriter
 *NECP6200 NEC P6200 Pinwriter
 *NECP6300 NEC P6300 Pinwriter
 *NECPCPR201 NEC PC-PR101 DBCS Printer
 NEC PC-PR201 DBCS Printer
 *NONE Printer supports page-descriptor
 language generated by the CVTIMG API.
 NOTE: Spoolfiles with device type of
 *SCS or *AFPDS cannot be processed by
 the Host Print Transform function for
 these printers.

*OKI184IBM Okidata Microline 184 Turbo (IBM Mode)
 *OKI320IBM Okidata Microline 320 (IBM Mode)
 *OKI321IBM Okidata Microline 321 (IBM Mode)
 *OKI390IBM Okidata Microline 390 Plus (IBM Mode)
 *OKI391IBM Okidata Microline 391 Plus (IBM Mode)
 *OKI393IBM Okidata Microline 393 Plus (IBM Mode)
 *OKI590IBM Okidata Microline 590 (IBM Mode)
 *OKI591IBM Okidata Microline 591 (IBM Mode)
 *OKI400 Okidata OL400 LED Page Printer
 *OKI800 Okidata OL800 LED Page Printer
 *OKI810 Okidata OL810 LED Page Printer
 *OKI820 Okidata OL820 LED Page Printer
 *OKI3410 Okidata Pacemark 3410
 *PAN1123EP Panasonic KX-P1123 (Epson Mode)
 *PAN1124EP Panasonic KX-P1124 (Epson Mode)
 *PAN1124IEP Panasonic KX-P1124i (Epson Mode)
 *PAN1180EP Panasonic KX-P1180 (Epson Mode)
 *PAN1180IEP Panasonic KX-P1180i (Epson Mode)
 *PAN1191EP Panasonic KX-P1191 (Epson Mode)
 *PAN1624EP Panasonic KX-P1624 (Epson Mode)
 *PAN1654EP Panasonic KX-P1654 (Epson Mode)
 *PAN1695EP Panasonic KX-P1695 (Epson Mode)
 *PAN2123EP Panasonic KX-P2123 (Epson Mode)
 *PAN2124EP Panasonic KX-P2124 (Epson Mode)
 *PAN2180EP Panasonic KX-P2180 (Epson Mode)
 *PAN2624EP Panasonic KX-P2624 (Epson Mode)
 *PAN4410HP Panasonic KX-P4410 (HP Mode)
 *PAN4420HP Panasonic KX-P4420 (HP Mode)
 *PAN4430HP Panasonic KX-P4430 (HP Mode)
 *PAN4450IHP Panasonic KX-P4450i (HP Mode)
 *PAN4451HP Panasonic KX-P4451 (HP Mode)
 *PANASONIC2310 Panasonic DP-2310 Printer
 *PANASONIC3010 Panasonic DP-3010 Printer
 *PANASONIC3510 Panasonic DP-3510 Printer
 *PANASONIC3520 Panasonic DP-3520 Printer
 *PANASONIC4510 Panasonic DP-4510 Printer
 *PANASONIC4520 Panasonic DP-4520 Printer
 *PANASONIC6010 Panasonic DP-6010 Printer
 *PANASONIC6020 Panasonic DP-6020 Printer
 *PDF Portable Document Format
 *PDFEMBDDTT Portable Document Format. All TrueType
 font references are embedded in the
 output document.
 *PDFIBMWT Portable Document Format. References
 to IBM WorldType fonts shipped with
 the system are mapped to standard PDF
 font references.

*RICOH1515 Ricoh Aficio 1515 Printer Series
 *RICOH2015 Ricoh Aficio 2015 Printer Series
 *RICOH2018 Ricoh Aficio 2018 Printer Series
 *RICOH2022 Ricoh Aficio 2022 Printer Series
 *RICOH2027 Ricoh Aficio 2027 Printer Series
 *RICOH2032 Ricoh Aficio 2032 Printer Series
 *RICOH2035 Ricoh Aficio 2035 Printer Series
 *RICOH2045 Ricoh Aficio 2045 Printer Series
 *RICOHAP400 Ricoh Aficio AP400 Printer Series

*RICOHAP600N Ricoh Aficio AP600N Printer Series
 *RICOHAP900 Ricoh Aficio AP900 Printer Series
 *RICOHAP3200 Ricoh Aficio AP3200 Printer Series
 *RICOHAP4510 Ricoh Aficio AP4510 Printer Series
 *RICOHCL2000 Ricoh Aficio CL2000 Color Printer Series
 *RICOHCL3100 Ricoh Aficio CL3000e Color Printer Series
 Ricoh Aficio CL3100N Color Printer Series
 *RICOHCL4000 Ricoh Aficio CL4000 Color Printer Series
 *RICOHCL5000 Ricoh Aficio CL5000 Color Printer Series
 *RICOHCL7000 Ricoh Aficio CL7000 Color Printer Series
 *RICOHCL7100 Ricoh Aficio CL7100 Color Printer Series
 *RICOHMP1100 Ricoh Aficio MP1100 Printer Series
 *RICOHMP1350 Ricoh Aficio MP1350 Printer Series
 *RICOHMP9000 Ricoh Aficio MP9000 Printer Series
 *RICOHSP4100N Ricoh Aficio SP4100N Printer Series
 Ricoh Aficio SP4110N Printer Series
 *RICOHSP9100DN Ricoh Aficio SP9100DN Printer Series
 *RICOHSPC811DN Ricoh Aficio SPC811DN Color Printer Series
 *WORKIO_BL Panasonic WORKiO DP-23xx Series Printer
 Panasonic WORKiO DP-30xx Series Printer
 *WORKIO_BM Panasonic WORKiO DP-35xx Series Printer
 *WORKIO_CR Panasonic WORKiO DP-Cxxx Series Color Printer
 *XRX4215MRP Xerox 4215/MRP (HP Mode)
 *XRX4219MRP Xerox 4219/MRP (HP Mode)
 *XRX4220MRP Xerox 4220/MRP (HP Mode)
 *XRX4230MRP Xerox 4230/MRP (HP Mode)
 *XRX4235 Xerox 4235 LaserPrinting (HP Mode)
 *XRX4700II Xerox 4700 II Color Document Printer (HP Mode)
 *WSCSTA3 Printer not listed (A3-sized paper)
 *WSCSTA4 Printer not listed (A4-sized paper)
 *WSCSTA5 Printer not listed (A5-sized paper)
 *WSCSTB4 Printer not listed (B4-sized paper)
 *WSCSTB5 Printer not listed (B5-sized paper)
 *WSCSTCONT80 Printer not listed (8 inch continuous forms)
 *WSCSTCONT132 Printer not listed (13.2 inch continuous forms)
 *WSCSTEXECUTIVE Printer not listed (executive-sized paper)
 *WSCSTLEDGER Printer not listed (ledger-sized paper)
 *WSCSTLEGAL Printer not listed (legal-sized paper)
 *WSCSTLETTER Printer not listed (letter-sized paper)
 *WSCSTNONE Printer not listed (paper size not specified)
 *WSCST Printer not listed

Top

Workstation customizing object (WSCST)

Specifies an object that consists of a table of attributes used to customize a given ASCII device, such as a workstation or printer. Character presentation, font specifications and control key sequences are examples of characteristics that can be customized.

This parameter is only prompted when TRANSFORM(*YES) is specified, or when a user data transform program is used.

Single values

*NONE

No workstation customizing object is specified.

Qualifier 1: Workstation customizing object

name Specify the name of a workstation customizing object, which has been created with the Create Work Station Customizing Object (CRTWSCST) command.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

name Specify the name of the library to be searched.

Top

Image configuration (IMGCFG)

Specifies the image configuration for this output queue. An image configuration object provides transform services for a variety of image and print datastream formats. This parameter is only used with remote writers.

See the Image Configuration Object (IMGCFG Parameter) table below for a list of the image configuration objects provided.

See the Recommended Image Configuration Objects by Printer table below for the suggested IMGCFG object for many popular printers.

*NONE

No image configuration specified.

character-value

Specify the image configuration to be used for this output queue.

Image Configuration Object Table

	HP PCL Datastream
*IMGA01	PCL 300-dpi printer
*IMGA02	PCL 600-dpi printer
*IMGA03	PCL 1200-dpi printer
*IMGA04	PCL 300-dpi color printer
*IMGA05	PCL 600-dpi color printer
*IMGA06	PCL 1200-dpi color printer
*IMGA07	PCL 75-dpi printer (No compression)
*IMGA08	PCL 600-dpi color printer with larger no-print border

```

*IMGA09    PCL 300-dpi printer (No compression)
----- Postscript Datastream -----
*IMGB01    Postscript 300-dpi printer
*IMGB02    Postscript 600-dpi printer
*IMGB03    Postscript 1200-dpi printer
*IMGB04    Postscript 300-dpi color printer
*IMGB05    Postscript 600-dpi color printer
*IMGB06    Postscript 1200-dpi color printer
*IMGB07    Postscript 600x300-dpi color printer
*IMGB08    Postscript 1200x300-dpi color printer
*IMGB09    Postscript 360-dpi color printer
*IMGB10    Postscript 720-dpi color printer
*IMGB11    Postscript 1440x720-dpi color printer
*IMGB12    Postscript 400-dpi printer
*IMGB13    Postscript 800-dpi color printer
*IMGB14    Postscript 600-dpi color printer
           with larger no-print border
*IMGB15    Postscript 300-dpi color printer
           with larger no-print border
----- IPDS Datastream -----
*IMGC01    IPDS 240-dpi printer
*IMGC02    IPDS 300-dpi printer
*IMGC03    IPDS 600-dpi printer
*IMGC04    IPDS 1200-dpi printer
*IMGC05    IPDS 240-dpi printer with no-print border
*IMGC06    IPDS 300-dpi printer with no-print border
*IMGC07    IPDS 600-dpi printer with no-print border
*IMGC08    IPDS 1200-dpi printer with no-print border
*IMGC09    IPDS 240-dpi printer (IM/1 image only)
*IMGC10    IPDS 240-dpi printer with no-print border
           (IM/1 image only)
*IMGC11    IPDS 240-dpi printer (CCITT G4 compression)
----- PCL and Postscript Datastreams -----
*IMGD01    PCL/Postscript 300-dpi printer
*IMGD02    PCL/Postscript 600-dpi printer
*IMGD03    PCL/Postscript 1200-dpi printer
*IMGD04    PCL/Postscript 300-dpi color printer
*IMGD05    PCL/Postscript 600-dpi color printer
*IMGD06    PCL/Postscript 1200-dpi color printer
*IMGD07    PCL 300-dpi/Postscript 600-dpi printer
*IMGD08    PCL 300-dpi/Postscript 1200-dpi printer
*IMGD09    PCL 600-dpi/Postscript 300-dpi printer
*IMGD10    PCL 600-dpi/Postscript 1200-dpi printer
*IMGD11    PCL/Postscript 600-dpi color printer
           with larger no-print border

```

Recommended Image Configuration Objects by Printer Table

Compaq Pagemarc 20	*IMGD01
Epson EPCL-4 Printer	*IMGA01
Epson EPCL-5 Printer	*IMGA02
Epson Stylus Photo with Postscript	*IMGB10
Epson Stylus Color 600, 800 with Postscript	*IMGB11
HP Color Laserjet 5	*IMGA04
HP Color Laserjet 5M	*IMGD04
HP Deskjet 560C, 820C, 1200C	*IMGA04
HP Deskjet 500, 600, 1200	*IMGA01
HP Deskjet 1600C, 1600CN	*IMGA04
HP Deskjet 1600CM	*IMGD04
HP Laserjet II, IID, IIP	*IMGA09
HP Laserjet II, IID, IIP with Postscript	*IMGB01
HP Laserjet III, IIID, IIISi, 4L	*IMGA01
HP Laserjet III, IIID, IIISi, 4L with Postscript	*IMGD01
HP Laserjet 4, 4P, 4V, 4Si, 4 Plus	*IMGA02
HP Laserjet 4M, 4MP, 4MV, 4Si MX, 4M Plus	*IMGD02

HP Laserjet 5, 5P, 5Si	*IMGA02
HP Laserjet 5M, 5MP, 5Si MX	*IMGD02
HP Laserjet 6, 6P, 6L	*IMGA02
HP Laserjet 6M, 6MP	*IMGD02
IBM 3112, 3116 Page Printer with IPDS feature	*IMGD02
IBM 3112, 3116 Page Printer (ASCII/LAN)	*IMGA02
IBM 3112, 3116 Page Printer with Postscript	*IMGD02
IBM 3130, 3160-1 AF Printer (240-pel mode)	*IMGC01
IBM 3130 AF Printer (300-pel mode)	*IMGC02
IBM Infoprint 20 with IPDS feature	*IMGC02
IBM Infoprint 20 (ASCII)	*IMGA02
IBM Infoprint 32 with IPDS feature	*IMGC02
IBM Infoprint 32 (ASCII)	*IMGA02
IBM Infoprint 60	*IMGC03
IBM Infoprint 62 Model 2	*IMGC05
IBM Infoprint 62 Model 3	*IMGC06
IBM InfoColor 70	*IMGB05
IBM Infoprint 4000	*IMGC05
IBM Infoprint 4000 High Resolution	*IMGC06
IBM 3825, 3827, 3828 AF Printer	*IMGC09
IBM 3825, 3827, 3828 AF Printer (with AFIG)	*IMGC01
IBM 3829 AF Printer	*IMGC01
IBM 3835-001 AF Printer	*IMGC10
IBM 3835-001 AF Printer (with AFIG)	*IMGC05
IBM 3835-002, 3900 AF Printer	*IMGC05
IBM 3912, 3916 Page Printer (ASCII/LAN)	*IMGA01
IBM 3912, 3916 Page Printer with IPDS feature (twinax)	*IMGC06
IBM 3930-02 Page Printer (IPDS diskette)	*IMGC01
IBM 3930-03 Page Printer	*IMGA01
IBM 3930-03 Page Printer with Postscript	*IMGD01
IBM 3935 AF Printer	*IMGC02
IBM 4019 LaserPrinters (HP mode)	*IMGA09
IBM 4019 LaserPrinters with Postscript	*IMGB01
IBM 4028 LaserPrinters	*IMGC06
IBM 4029 LaserPrinters	*IMGA01
IBM 4029 LaserPrinters with Postscript	*IMGB02
IBM 4039 LaserPrinters	*IMGA01
IBM 4039 LaserPrinters with Postscript	*IMGD07
IBM 4049 LaserPrinters	*IMGA02
IBM 4049 LaserPrinters with Postscript	*IMGD02
IBM 4079 Color Jetprinter PS	*IMGB09
IBM 4303 Network Color Printer	*IMGB05
IBM 4312, 4317, 4324 NP with IPDS feature (twinax)	*IMGC06
IBM 4312, 4317, 4324 NP with IPDS feature (LAN)	*IMGC06
IBM 4312, 4317, 4324 NP (ASCII/LAN)	*IMGA02
IBM 4312, 4317, 4324 NP with Postscript (ASCII/LAN)	*IMGD02
Lexmark 4039Plus	*IMGB02
Lexmark Optra C Color Printer	*IMGD11
Lexmark Optra E, E+	*IMGA02
Lexmark Optra N	*IMGD02
Lexmark Optra R+, Rx+, Lx+, Lxn+	*IMGD02
Lexmark Optra S Printers	*IMGD02
Lexmark Optra SC Color Printer	*IMGD05
Okidata OL400 LED Page Printer	*IMGA01
Okidata OL800, OL810 LED Page Printers	*IMGA02
QMS 2025, 3225	*IMGB12
QMS Magicolor CX	*IMGD04
Tektronix Phaser 140	*IMGB09
Tektronix Phaser 300	*IMGB04
Tektronix Phaser 400	*IMGB05
Tektronix Phaser 540, 550	*IMGB05
Tektronix Phaser 560	*IMGB06
Xerox 4219/MRP	*IMGA01
Xerox 4220/MRP	*IMGA02
Xerox 4230 DocuPrinter	*IMGA02
Xerox 4512, 4517 Network Printer	*IMGA02
Xerox 4520mp Printer	*IMGB13

Xerox 4700 II Color Document Printer
Xerox 4915 Color Laser Printer
Xerox 4920, 4925 Color Laser Printer

*IMGD04
*IMGB08
*IMGB05

Top

Internet address (INTNETADR)

Specifies the internet address of the remote system to which the print request will be sent.

Note: This parameter is valid only when RMTSYS(*INTNETADR) and CNNTYPE(*IP) or CNNTYPE(*USRDFN) are specified.

internet-address

The internet address is specified in the form **nnn.nnn.nnn.nnn**, where **nnn** is a decimal number ranging from 0 through 255. (An internet address having all binary ones or zeros in the bits of the network or host identifier portions of the address is not valid.)

Values must be enclosed in apostrophes (') when entered from the command line.

Top

VM/MVS class (CLASS)

Specifies the VM/MVS SYSOUT class for files sent to a VM/MVS host system.

Note: This parameter is valid only when CNNTYPE(*SNA) and DESTTYPE(*S390) are specified.

A The class is A.

character-value

Specify a distribution class value. Valid values range from A through Z and 0 through 9.

Top

Forms Control Buffer (FCB)

Specifies the forms control buffer for files sent to a VM/MVS host system.

Note: This parameter is valid only when CNNTYPE(*SNA) and DESTTYPE(*S390) are specified.

*NONE

No forms control buffer is used.

*USRDTA

The first 8 characters of the user data (USRDTA) spooled file attribute is the name of the forms control buffer. If the user data is blank, no forms control buffer is used.

***PRTF** The first 8 characters of the printer file used to spool the file is the name of the forms control buffer.

name Specify the name of the forms control buffer to be used.

Top

Destination options (DESTOPT)

Specifies destination-dependent options. When CNNTYPE(*IP) is specified, the destination-dependent options are added to the control file which is sent to the LPD server. When CNNTYPE(*SNA) is specified, this field is used to determine how spooled files are handled once they are sent to the remote system.

*NONE

No destination options are specified.

*USRDFNTXT

The user-defined text of the user profile when the spooled file was created is used. This value is ignored if CNNTYPE(*SNA) is specified.

*NOWAIT

When CNNTYPE(*SNA) is specified, a value of *NOWAIT indicates that the operating system will no longer keep track of spooled files once they have been sent.

'destination-options'

Specify no more than 128 characters, enclosed in apostrophes.

Top

Print separator page (SEPPAGE)

Specifies whether or not to request a separator page when printing on a remote system.

*YES A separator page is requested.

*NO A separator page is not requested.

Top

User-defined options (USRDFNOPT)

Specifies, for spooled output only, one or more user-defined options to be used by user applications or user-specified programs that process spooled files. A maximum of four user-defined options can be specified.

Single values

*NONE

No user-defined option is specified.

Other values (up to 4 repetitions)

character-value

Specify the user-defined option to be used by user applications that process spooled files. All characters are acceptable.

Top

User-defined object (USRDFNOBJ)

Specifies, for spooled output only, the user-defined object to be used by user applications or user-specified programs that process spooled files.

Single values

***NONE**

No user-defined object name is specified.

name Specify the name of the user-defined object to be used by user applications or user-specified programs that process spooled files.

Element 1: Object

Qualifier 1: Object

name Specify the name of the user-defined object.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

name Specify the name of the library to be searched.

Element 2: Object type

object-type

The user object type can be one of the following:

- *DTAARA (Data Area)
- *DTAQ (Data Queue)
- *FILE (File)
- *PSFCFG (PSF Configuration)
- *USRIDX (User Index)
- *USRQ (User Queue)
- *USRSPC (User Space)

Top

User-defined driver program (USRDRVPGM)

Specifies the user-defined driver program.

Note: This parameter is valid only when RMTSYS is not *NONE.

Single values

***NONE**

No user-defined driver program is specified.

Qualifier 1: User driver program

name Specify the name of the user-specified driver program to process spooled files.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

name Specify the name of the library to be searched.

Top

Spooled file ASP (SPLFASP)

Specifies the auxiliary storage pool (ASP) where the spooled files physically reside.

***OUTQASP**

The spooled files reside in the same ASP that the output queue resides in.

***SYSTEM**

The spooled files reside in the system ASP. This value is not allowed if the output queue is in a library on a primary or secondary ASP.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

***BLANK**

No text is specified.

'description'

Specify no more than 50 characters, enclosed in apostrophes.

Top

Display any file (DSPDTA)

Specifies whether users who have authority to read the output queue can display the data of any spooled file on the queue or only the data in their own files.

***NO** Users authorized to use the queue can display, copy, or send the data from their own files only, unless they have some special authority.

***YES** Any user having authority to read the queue can display, copy, or send the data of any file on the queue.

***OWNER**

The owner of the file or a user with spool control (*SPLCTL) special authority can display, copy, or send the spooled files on the queue.

Top

Job separators (JOBSEP)

Specifies, for each job with files on the output queue, the number of separators placed at the beginning of the output for the job. Each separator contains information that identifies the job, such as the name of the job, the job user's name, the job number, and the time and date when the job is run.

This parameter is used only by printer writers, all other types of writers will ignore the value specified for this parameter.

0 No job separators are printed before each job's output.

***MSG** A message is sent to a message queue notifying the operator of the end of each job. This message queue is identified by the **Message queue (MSGQ)** parameter of the Start Printer Writer (STRPRTWTR) command.

0-9 Specify the number of separators to be placed before each job's output.

Top

Operator controlled (OPRCTL)

Specifies whether a user who has job control authority is allowed to manage or control the files on this output queue.

***YES** A user with job control authority can control the queue and make changes to the files on the queue.

***NO** This queue and its entries cannot be controlled or changed by users with job control authority unless they also have some other special authority.

Top

Data queue (DTAQ)

Specifies the data queue associated with the output queue. Entries are logged in the data queue when spooled files are in ready (RDY) status on the output queue. A user program can determine when a spooled file is available on an output queue using the Receive Data Queue API (QRCVDTAQ) to receive information from a data queue.

Each time a spooled file on the output queue reaches RDY status, an entry is sent to the data queue. A spooled file can have several changes in status (for example, RDY to held (HLD) to release (RLS) to RDY again) before it is taken off the output queue. These status changes result in entries in the data queue for a spooled file each time the spooled file goes to RDY status.

When the data queue is created using the Create Data Queue (CRTDTAQ) command, the maximum message length (MAXLEN parameter) value should be at least 128 and the sequence (SEQ parameter) value should be *FIFO or *LIFO. More information about data queues on output queues is in the Printing category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Single values

***NONE**
No data queue is associated with the output queue.

Qualifier 1: Data queue

name Specify the name of the data queue associated with the output queue.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

name Specify the name of the library where the data queue is located.

Authority to check (AUTCHK)

Specifies what type of authorities to the output queue allow the user to control all the files on the queue. Users with some special authority may also be able to control the spooled files.

*OWNER

The requester must have ownership authority to the output queue in order to pass the output queue authorization test. The requester can have ownership authority by being the owner of the output queue, sharing a group profile with the queue owner, or running a program that adopts the owner's authority.

*DTAAUT

Any user with add, read, and delete authority to the output queue can control all spooled files on the queue.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*USE Use authority allows the user to perform basic operations on the output queue, such as place spooled files on the queue. *USE authority provides object operational authority, read authority, and execute authority.

*CHANGE

Change authority allows the user to change the output queue description and to control files created by other users if the queue was created with *DTAAUT specified on the **Authority to check (AUTCHK)** parameter.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

*EXCLUDE

The user cannot access the object.

*LIBCRTAUT

The authority for the object is the same as the value specified on the **Create authority (CRTAUT)** parameter of the library in which the object is being created. If the value specified on the CRTAUT parameter is changed, the new value will not affect any existing objects.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

```
CRTOUTQ  OUTQ(DEPTAPRT) AUT(*EXCLUDE) SEQ(*FIFO)
          TEXT('SPECIAL PRINTER FILES FOR DEPTA')
```

This command creates an output queue named DEPTAPRT and puts it in the current library. Because AUT(*EXCLUDE) is specified and OPRCTL(*YES) is assumed, the output queue can be used and controlled only by the user who created the queue and users who have job control authority or spool control authority. Because SEQ(*FIFO) is specified, spooled files are placed in first-in first-out order on the queue. If users in Department A are authorized to use this output queue, the Grant Object Authority (GRTOBJAUT) command must be used to grant them the necessary authority. Data contained in files on this queue can be displayed only by users who own the files, by the owner of the queue, by users with job control authority, or by users with spool control authority. By default, no job separator is printed at the beginning of the output for each job.

Top

Error messages

*ESCAPE Messages

CPF2182

Not authorized to library &1.

CPF2192

Object &1 cannot be created into library &3.

CPF2207

Not authorized to use object &1 in library &3 type *&2.

CPF2212

Not able to allocate library &1.

CPF2402

Library &1 not found

CPF2799

Message queue &1 in library &2 not found.

CPF33F1

Data queue &1 in library &2 not found.

CPF3352

Temporary library &1 invalid for output queue &2.

CPF3353

Output queue &1 in &2 already exists.

CPF3354

Library &1 not found.

CPF3356

Cannot allocate library &1.

CPF3371

Spool user profile QSPL damaged or not found.

CPF34D6

Output queue &1 in &2 not created due to errors.

CPF9818

Object &2 in library &3 not created.

Top

Create Overlay (CRTOVL)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Overlay (CRTOVL) command creates an overlay resource from a physical file. The physical file contains the overlay resource information. The overlay resource information, can, for example, come from a S/370 host system and be in the Systems Application Architecture (SAA) format.

Top

Parameters

Keyword	Description	Choices	Notes
OVL	Overlay	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Overlay	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
FILE	File	<i>Qualified object name</i>	Required, Positional 2
	Qualifier 1: File	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
MBR	Member	<i>Name, *OVL</i>	Optional, Positional 3
DATATYPE	Data type	<i>*AFPDS, *AFPU</i>	Optional
TEXT	Text 'description'	<i>Character value, *MBRTXT, *BLANK</i>	Optional
REPLACE	Replace overlay	<i>*YES, *NO</i>	Optional
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional

Top

Overlay (OVL)

Specifies the overlay that is being created.

This is a required parameter.

Qualifier 1: Overlay

name Specify the name of the overlay.

Qualifier 2: Library

*CURLIB

The current library for the job is used to store the overlay. If no library is specified as the current library for the job, QGPL is used.

name Specify the name of the library where you want to store the overlay.

Top

Source file (FILE)

Specifies the file containing the overlay records sent to this system.

This is a required parameter.

Qualifier 1: File

name Specify the name of the file to be used.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is used to locate the file. If no library is specified as the current library for the job, QGPL is used.

name Specify the library where the file is located.

Top

Source file member (MBR)

Specifies the name of the file member containing the overlay records.

***OVL** The name of the file member is specified by the **Overlay (OVL)** parameter of this command.

name Specify the name of the member in the file specified by the **Source file (FILE)** parameter.

Top

Data type (DATATYPE)

Specifies the source-type of the input file.

***AFPDS**

The input is a database file which contains a pre-built Advanced Function Printing Data Stream (AFPDS).

***AFPU**

The input is a source file created with Advanced Function Printing Utilities for i5/OS (AFP Utilities).

Note: This value is valid only if AFP Utilities is installed on your system.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

***MBRTXT**

The text is taken from the file member being used to create the overlay resource. You can add or change text for a database source member by using the Source Entry Utility (STRSEU) command, or by using either the Add Physical File Member (ADDPFM) command or the Change Physical File Member (CHGPFM) command. If the file is an inline file or a device file, the text is blank.

***BLANK**

No text is specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Replace overlay (REPLACE)

Specifies whether an existing overlay with the same name as the one being created is replaced.

***YES** The existing overlay is replaced.

***NO** If an overlay with same name exists on the system, the create operation fails. The existing overlay is not replaced.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*LIBCRTAUT

The system determines the authority for the object by using the value specified on the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified on the **Create authority (CRTAUT)** parameter is changed, the new value will not affect any existing objects.

***CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

name Specify the name of an authorization list. Users included on the authorization list are granted authority to the object as specified by the list. The authorization list must exist when the object is created.

Top

Examples

```
CRTOVL  OVL(MYLIB/MYSIGNTR)
        FILE(MYLIB/MYSIGNTR) MBR(MYSIGNTR)
        AUT(*EXCLUDE) TEXT('representation of my signature')
```

This command creates the overlay MYSIGNTR into MYLIB. File name MYSIGNTR in library MYLIB with member MYSIGNTR, is used as input. Specifying *EXCLUDE does not allow any other user access to the signature. The text describes the overlay.

Top

Error messages

*ESCAPE Messages

CPF2283

Authorization list &1 does not exist.

CPF8056

File &1 in &2 not a physical file.

CPF88C1

Printer resource type &1 &2 was not created in library &3.

CPF88C2

Data type parameter value of *AFPUP incorrect for &1 command.

CPF9809

Library &1 cannot be accessed.

CPF9810

Library &1 not found.

CPF9812

File &1 in library &2 not found.

CPF9822

Not authorized to file &1 in library &2.

CPF9845

Error occurred while opening file &1.

CPF9846

Error while processing file &1 in library &2.

CPF9847

Error occurred while closing file &1 in library &2.

CPF9870

Object &2 type *&5 already exists in library &3.

Top

Create Page Definition (CRTPAGDFN)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Page Definition (CRTPAGDFN) command creates a page definition by copying a user-supplied database file to an internal space object. The user must load the source data into the database from a remote system (such as a System/370) or external medium (usually tape) and put it in the SAA format that can be processed by the operating system.

Restrictions: If networking spooled files to a System/370 system, the first two characters of the page definition name must be 'P1'.

Top

Parameters

Keyword	Description	Choices	Notes
PAGDFN	Page definition	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Page definition	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
FILE	File	<i>Qualified object name</i>	Required, Positional 2
	Qualifier 1: File	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
MBR	Member	<i>Name, *PAGDFN</i>	Optional, Positional 3
TEXT	Text 'description'	<i>Character value, *MBRTXT, *BLANK</i>	Optional
REPLACE	Replace page definition	<i>*YES, *NO</i>	Optional
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional

Top

Page definition (PAGDFN)

Specifies the page definition to be created.

This is a required parameter.

Qualifier 1: Page definition

name Specify up to eight characters for the name of the page definition.

Qualifier 2: Library

*CURLIB

The current library for the job is used to locate the page definition. If no library is specified as the current library for the job, QGPL is used.

name Specify the name of the library where the page definition is located.

File (FILE)

Specifies the data file that contains the page definition records sent to this system.

This is a required parameter.

Qualifier 1: File

name Specify the name of the file to be used.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is used to locate the data file. If no library is specified as the current library for the job, QGPL is used.

name Specify the name of the library where the data file is located.

Top

Member (MBR)

Specifies the data file member containing the page definition records.

***PAGDFN**

The name of the data file member is the same as the name specified on the **Page definition (PAGDFN)** parameter of this command.

name Specify the name of the data file member.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

***MBRTXT**

The text is taken from the data file member used to create the page definition.

***BLANK**

No text is specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Replace page definition (REPLACE)

Specifies whether an existing page definition with the same name as the one being created is replaced.

***YES** The existing page definition is replaced.

***NO** If a page definition with same name exists on the system, the create operation fails. The existing page definition is not replaced.

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*LIBCRTAUT

The system determines the authority for the object by using the value specified on the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified on the **Create authority (CRTAUT)** parameter is changed, the new value will not affect any existing objects.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

*EXCLUDE

The user cannot access the object.

name Specify the name of an authorization list. Users included on the authorization list are granted authority to the object as specified by the list. The authorization list must exist when the object is created.

Examples

```
CRTPAGDFN  PAGDFN(*CURLIB/P1DFLT)  FILE(*CURLIB/PAGDFNS)
           MBR(*PAGDFN)  AUT(*EXCLUDE)
           TEXT('Default page definition')
```

This command creates page definition P1DFLT in the current library or in library QGPL if there is no current library. Input is taken from source file PAGDFNS with member P1DFLT in the current library. Specifying *EXCLUDE for authority restricts use of the object to the owner. The text describes the page definition.

Error messages

*ESCAPE Messages

CPF2283

Authorization list &1 does not exist.

CPF8056

File &1 in &2 not a physical file.

CPF88C1

Printer resource type &1 &2 was not created in library &3.

CPF9822

Not authorized to file &1 in library &2.

CPF9809

Library &1 cannot be accessed.

CPF9810

Library &1 not found.

CPF9812

File &1 in library &2 not found.

CPF9845

Error occurred while opening file &1.

CPF9846

Error while processing file &1 in library &2.

CPF9847

Error occurred while closing file &1 in library &2.

CPF9870

Object &2 type *&5 already exists in library &3.

Top

Create Page Segment (CRTPAGSEG)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Page Segment (CRTPAGSEG) command creates a page segment space object by copying a user-supplied database file to an internal space object. The user must load the page segment resource into the database from a remote system (such as a System/370) or from an external medium (such as a tape) and must put the resource in the SAA format that can be processed by the operating system.

Top

Parameters

Keyword	Description	Choices	Notes
PAGSEG	Page segment	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Page segment	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
FILE	File	<i>Qualified object name</i>	Required, Positional 2
	Qualifier 1: File	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
MBR	Member	<i>Name, *PAGSEG</i>	Optional, Positional 3
TEXT	Text 'description'	<i>Character value, *MBRTXT, *BLANK</i>	Optional
REPLACE	Replace page segment	<i>*YES, *NO</i>	Optional
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional

Top

Page segment (PAGSEG)

Specifies the page segment being created.

This is a required parameter.

Qualifier 1: Page segment

name Specify the name of the page segment.

Qualifier 2: Library

*CURLIB

The current library is used to locate the page segment. If no library is specified as the current library for the job, QGPL is used.

name Specify the library name used to locate the page segment.

Top

Source file (FILE)

Specifies the file containing the page segment records sent to this system.

This is a required parameter.

Qualifier 1: File

name Specify the name of the file to be used.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is used to locate the file. If no library is specified as the current library for the job, QGPL is used.

name Specify the library where the file is located.

Top

Source file member (MBR)

Specifies the file member containing the page segments records.

***PAGSEG**

The name of the file member is specified in the **Page segment (PAGSEG)** parameter.

name Specify the name of the member in the file specified by the **Source file (FILE)** parameter.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

***MBRTXT**

The text is taken from the file member being used to create the page segment. You can add or change text for a database source member by using the Source Entry Utility (STRSEU) command, or by using either the Add Physical File Member (ADDPFM) command or the Change Physical File Member (CHGPFM) command. If the file is an inline file or a device file, the text is blank.

***BLANK**

No text is specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Replace page segment (REPLACE)

Specifies whether an existing page segment with the same name as the one being created is replaced.

***YES** The existing page segment is replaced.

***NO** If a page segment with same name exists on the system, the create operation fails. The existing page segment is not replaced.

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*LIBCRTAUT

The system determines the authority for the object by using the value specified on the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified on the **Create authority (CRTAUT)** parameter is changed, the new value will not affect any existing objects.

***CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

name Specify the name of an authorization list. Users included on the authorization list are granted authority to the object as specified by the list. The authorization list must exist when the object is created.

Examples

```
CRTPAGSEG  PAGSEG(MYLIB/PAGSEG1)  FILE(*LIBL/PAGSGMTS)
           MBR(*PAGSEG)
           AUT(*ALL)  TEXT('canned paragraph 1')
```

This command creates the page segment PAGSEG1 in MYLIB and uses the PAGSGMTS member, PAGSEG1 as input to the command. Specifying *ALL for the AUT parameter allows any user to perform most object-oriented commands against it. The text contains the description of the object.

Error messages

*ESCAPE Messages

CPF2283
Authorization list &1 does not exist.

CPF8056
File &1 in &2 not a physical file.

CPF88C1
Printer resource type &1 &2 was not created in library &3.

CPF9809
Library &1 cannot be accessed.

CPF9810
Library &1 not found.

CPF9812
File &1 in library &2 not found.

CPF9822
Not authorized to file &1 in library &2.

CPF9845
Error occurred while opening file &1.

CPF9846
Error while processing file &1 in library &2.

CPF9847
Error occurred while closing file &1 in library &2.

CPF9870
Object &2 type *&5 already exists in library &3.

Top

Create Print Descriptor Group (CRTPDG)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Print Descriptor Group (CRTPDG) command creates an object of type *PDG into which information about a print descriptor group and its associated print descriptor names can be stored.

Top

Parameters

Keyword	Description	Choices	Notes
PDG	Print descriptor group	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Print descriptor group	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
TEXT	Text 'description'	<i>Character value, *BLANK, X''</i>	Optional
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional

Top

Print descriptor group (PDG)

Specifies the name and library of the print descriptor group (PDG) to be created.

print-descriptor-group-name

Specify the name of the PDG to be created.

The possible library values are:

*CURLIB

The current library for the job is used to locate the PDG. If no library is specified as the current library for the job, QGPL is used.

library-name

Specify the library name where the created PDG will be stored.

This is a required parameter.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

The possible values are:

*BLANK

The text description is left blank.

'description'

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

*EXCLUDE

The user cannot access the object.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

```
CRTPDG PDG(LETTERS)
```

This command creates print descriptor group LETTERS.

Top

Error messages

*ESCAPE Messages

CPF2283

Authorization list &1 does not exist.

CPF6D81

Print descriptor group &1 not created in library &2.

Top

Create PEX Data (CRTPEXDTA)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Performance Data (CRTPEXDTA) command creates the Performance Explorer database files based on the data in a Performance Explorer management collection object (object type *MGTCOL).

Additional information about the Performance Explorer tool can be found in the Performance Management information at <http://www.ibm.com/servers/eserver/series/perfmgmt/resource.html>.

Restrictions:

1. This command is shipped with public *EXCLUDE authority.
2. The user must have *ADD and *EXECUTE authority to the specified TOLIB library, and *READ and *EXECUTE authority to the FROMLIB library.
3. The user must have *READ authority to the management collection object.
4. To use this command you must have *SERVICE special authority, or be authorized to the Service Trace function of i5/OS through iSeries Navigator's Application Administration support. The Change Function Usage (CHGFCNUSG) command, with a function ID of QIBM_SERVICE_TRACE, can also be used to change the list of users that are allowed to perform trace operations.
5. The following user profiles have private authorities to use the command:
 - QPGMR
 - QSRV

Top

Parameters

Keyword	Description	Choices	Notes
FROMMGTCOL	From collection	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: From collection	<i>Name</i>	
	Qualifier 2: Library	<i>Name, <u>QPEXDATA</u></i>	
TOMBR	To member	<i>Name, <u>*FROMMGTCOL</u></i>	Optional, Positional 2
TOLIB	To library	<i>Name, <u>*FROMMGTCOL</u></i>	Optional, Positional 3
NBRTHD	Number of threads	1-256, <u>*CALC</u>	Optional
RPLDTA	Replace data	<u>*YES</u> , <u>*NO</u>	Optional
TEXT	Text 'description'	<i>Character value, <u>*BLANK</u></i>	Optional

Top

From collection (FROMMGTCOL)

Specifies the name of the Performance Explorer management collection object. The data in this object will be stored in the Performance Explorer database files in the specified member.

This is a required parameter.

name Specify the name of the management collection object.

The possible library values are:

QPEXDATA

The QPEXDATA library is the recommended library for storing data collected by the Performance Explorer tool. The first time the Performance Explorer tool is used, this library is created for the user.

name Specify the name of the library where the management collection object exists.

Top

To member (TOMBR)

Specifies the member name used to store the data in the Performance Explorer database files.

*FROMMGTCOL

The name of the management collection object is used as the member name.

name Specify the name of the member for the database used to store the Performance Explorer data.

Top

To library (TOLIB)

Specifies the library used to store the data in the Performance Explorer database files.

*FROMMGTCOL

The library specified for the management collection object is used.

name Specify the name of the library for the database used to store the Performance Explorer data.

Top

Number of threads (NBRTHD)

Specifies the number of concurrent threads that the CRTPEXDTA command uses to process the data. Specifying a number greater than 1 allows the CRTPEXDTA command to take advantage of available CPU cycles, especially on a multi-processor system. While this may speed up the command processing, it may also degrade the performance of other jobs on the system. You can minimize this impact by changing the priority of the job that runs the CRTPEXDTA command to a higher number. You should also verify the disk subsystem can handle the additional threads. Typically, the CRTPEXDTA command requires one disk arm for each active thread.

*CALC

The system will calculate a reasonable number of threads to do the CRTPEXDTA processing which will not use excessive CPU or disk resources. Usually this is one or two threads for each available processor.

number-of-threads

Specify the number of threads for CRTPEXDTA to use to process the collected data.

Replace data (RPLDTA)

Specifies whether to replace the data in an existing set of file members with new performance data.

- *NO** If a member already exists with the same name, an error message is sent to the user. This prevents the user from inadvertently writing over existing data.
- *YES** If a member already exists with the same name, the old data is lost and is replaced by the new data.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the type of data collected.

- *BLANK** Text is not specified.

'description'
Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Examples

Example 1: Creating PEX Data

```
CRTPEXDTA FROMMGTCOL(QPEXDATA/MYCOL) TOMBR(TEST)
          TOLIB(QPEXDATA) NBRTHD(2)
```

This command creates Performance Explorer (PEX) data in member name TEST in library QAPEXDATA. The collected data exists in the management collection object MYCOL found in library QAPEXDTA. Two threads will be used to process the data.

Top

Error messages

None

Top

Create Physical File (CRTPF)

Where allowed to run: All environments (*ALL)
Threadsafe: Conditional

Parameters
 Examples
 Error messages

The Create Physical File (CRTPF) command creates a physical file from the information specified on this command and (optionally) from the data description specifications (DDS) contained in a source file.

A physical file is a database file that contains data records. The data records are grouped into physical file members and each member has its own access path to the data. Normally, database files have only one member which, by default, is added to the file when the file is created. If the desired physical file has a record format with only one character field in arrival sequence or if the file is a source file, a DDS source file is not needed. To override attributes of the file after it has been created, use the Override Database File (OVRDBF) command before the file is opened. To change attributes of the file after it has been created, use the Change Physical File (CHGPF) command.

Restrictions:

- This command is conditionally threadsafe. In multithreaded jobs, this command is not threadsafe for distributed files and fails for distributed files that use relational databases of type *SNA.

Top

Parameters

Keyword	Description	Choices	Notes
FILE	File	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: File	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
SRCFILE	Source file	<i>Qualified object name</i>	Optional, Positional 2
	Qualifier 1: Source file	<i>Name, QDDSSRC</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
SRCMBR	Source member	<i>Name, *FILE</i>	Optional, Positional 3
RCDLEN	Record length, if no DDS	<i>Integer</i>	Optional, Positional 4
GENLVL	Generation severity level	0-30, <u>20</u>	Optional
FLAG	Flagging severity level	0-30, <u>0</u>	Optional
FILETYPE	File type	<i>*DATA, *SRC</i>	Optional
MBR	Member, if desired	<i>Name, *FILE, *NONE</i>	Optional
IGCDTA	User specified DBCS data	<i>*NO, *YES</i>	Optional
TEXT	Text 'description'	<i>Character value, *SRCMBRTXT, *BLANK</i>	Optional
OPTION	Source listing options	Values (up to 4 repetitions): *SRC, *NOSRC, *SOURCE, *NOSOURCE, *LIST, *NOLIST, *SECLVL, *NOSECLVL, *EVENTE, *NOEVENTF	Optional, Positional 5
SYSTEM	System	<i>*LCL, *RMT, *FILETYPE</i>	Optional
EXPDTE	Expiration date for member	<i>Date, *NONE</i>	Optional
MAXMBRS	Maximum members	<i>Integer, 1, *NOMAX</i>	Optional
ACCPHSIZ	Access path size	<i>*MAX1TB, *MAX4GB</i>	Optional

Keyword	Description	Choices	Notes
PAGESIZE	Access path logical page size	*KEYLEN, 8, 16, 32, 64, 128, 256, 512	Optional
MAINT	Access path maintenance	*IMMED, *DLY, *REBLD	Optional
RECOVER	Access path recovery	*NO, *AFTIPL, *IPL	Optional
FRCACPTH	Force keyed access path	*NO, *YES	Optional
SIZE	Member size	Single values: *NOMAX Other values: <i>Element list</i>	Optional
	Element 1: Initial number of records	1-2147483646, <u>10000</u>	
	Element 2: Increment number of records	<i>Integer</i> , <u>1000</u>	
	Element 3: Maximum increments	<i>Integer</i> , <u>3</u>	
ALLOCATE	Allocate storage	*NO, *YES	Optional
CONTIG	Contiguous storage	*NO, *YES	Optional
UNIT	Preferred storage unit	1-255, *ANY	Optional
FRCRATIO	Records to force a write	<i>Integer</i> , *NONE	Optional
WAITFILE	Maximum file wait time	<i>Integer</i> , <u>30</u> , *IMMED, *CLS	Optional
WAITRCD	Maximum record wait time	<i>Integer</i> , <u>60</u> , *IMMED, *NOMAX	Optional
SHARE	Share open data path	*NO, *YES	Optional
DLTPCT	Max % deleted records allowed	1-100, *NONE	Optional
REUSEDLT	Reuse deleted records	*YES, *NO	Optional
SRTSEQ	Sort sequence	Single values: *SRC, *JOB, *LANGIDSHR, *LANGIDUNQ, *HEX Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Sort sequence	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
LANGID	Language ID	<i>Character value</i> , *JOB	Optional
CCSID	Coded character set ID	<i>Integer</i> , *JOB, *HEX	Optional
ALWUPD	Allow update operation	*YES, *NO	Optional
ALWDLT	Allow delete operation	*YES, *NO	Optional
LVLCHK	Record format level check	*YES, *NO	Optional
NODGRP	Node group	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Node group	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
PTNKEY	Partitioning Key	Values (up to 300 repetitions): <i>Name</i>	Optional
AUT	Authority	<i>Name</i> , *LIBCRTAUT, *ALL, *CHANGE, *EXCLUDE, *USE	Optional

Top

File (FILE)

Specifies the physical file to be created.

This is a required parameter.

Qualifier 1: File

name Specify the name of the physical file to be created.

Qualifier 2: Library

*CURLIB

The current library for the job is where the file is to be located. If no library is specified as the current library for the job, QGPL is used.

name Specify the library where the file is to be located.

Top

Source file (SRCFILE)

Specifies the source file that contains the data description specifications (DDS) that describe the record format and its fields, and the access path for the file and its members. The specifications that are made in DDS are described in the Database category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/> and the DDS topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Note: If a value is specified for this parameter, a value cannot be specified for the **Record length (RCDLEN)** parameter.

Qualifier 1: Source file

QDDSSRC

The DDS source file named QDDSSRC contains the source descriptions used to create the physical file.

name Specify the name of the source file that contains the DDS used to create the physical file.

Qualifier 2: Library

*CURLIB

The current library for the job is where the file is located. If no library is specified as the current library for the job, QGPL is used.

name Specify the library where the file is located.

Top

Source member (SRCMBR)

Specifies the name of the source file member that contains the DDS for the physical file being created; the member is in the source file specified in the SRCFILE parameter (or its default, QDDSSRC). If SRCMBR is specified, RCDLEN cannot be specified.

*FILE The source file member name is the same as that of the physical file specified for the **File (FILE)** parameter.

name Specify the name of the member in the source file.

Top

Record length (RCDLEN)

Specifies the length (in bytes) of the records stored in the physical file. If RCDLEN and FILETYPE(*DATA) are specified, the physical file is created with a record format that has only one field. The file is then restricted to an arrival sequence access path. The record format and the field are both assigned the same name as that of the file, specified in the FILE parameter. A value ranging from 1 through 32766 bytes can be specified for the record length.

If RCDLEN and FILETYPE(*SRC) are specified, the record format has three fields: source sequence number, date, and source statement. The RCDLEN parameter must provide six positions for the source sequence number, six positions for the date field, and one position for source start, which are required in each record. These fields are defined with fixed attributes and names. If records are copied into the file by the CPYF command and the records are longer than the length specified, the records are truncated on the right.

If RCDLEN is specified, SRCFILE and SRCMBR cannot be specified; RCDLEN is used to specify a fixed record length for the record format when a source file is not needed (when only one field exists in each record or when the file being created is a source file). The high-level language program that processes the file must describe the fields in the record in the program.

Double-Byte Character Set Considerations

If IGCDDTA(*NO) is specified, the field is assigned the data type of character whose length is the same as the record length specified. A value ranging from 1 to 32766 bytes can be specified for the record length. If IGCDDTA(*YES) is specified, the field is assigned the data type of DBCS-open and a value ranging from 4 to 32766 can be specified.

The RCDLEN parameter must provide six positions for the source sequence number, six positions for the date field, and four positions for source start when FILETYPE(*SRC) and IGCDDTA(*YES) are specified.

integer

Specify the number of bytes in each record.

Top

Generation severity level (GENLVL)

Specifies the severity level at which the create operation fails. If errors occur that have a severity level greater than or equal to this value, the operation ends.

This parameter applies only to messages created while processing DDS source files.

20 If errors occur in the DDS source file processing with a severity level greater than or equal to 20, the file is not created.

0-30 Specify the desired severity level value. If 0 is specified, the file is not created. The value specified must be greater than or equal to the value specified for the **Flagging severity level (FLAG)** parameter.

Top

Flagging severity level (FLAG)

Specifies the minimum severity level of messages to be listed.

0 All messages are listed.

0-30 Specify a number indicating the minimum severity of messages to be listed. The value specified must be greater than or equal to the value specified for the **Generation severity level (GENLVL)** parameter.

Top

File type (FILETYPE)

Specifies whether each member of the physical file being created contains data records or contains source records (statements) for a program or another file. The file can contain, for example, RPG source statements for an RPG program or DDS source statements for another physical, logical, or device file.

*DATA

The physical file will contain data records.

***SRC** The physical file will contain source records.

Top

Member (MBR)

Specifies the name of the physical file member added when the physical file is created.

***FILE** The name of the member will be the same as the physical file to be created.

***NONE**

No physical file member is added when the file is created.

name Specify the name of the physical file member to be added to the new file.

Top

User specified DBCS data (IGCDTA)

Specifies, for program-described files, whether the file processes double-byte character set (DBCS) data. Specifies, for externally described files, the DBCS attributes of the file.

Note: This parameter has no meaning for physical files created using DDS, because the use of DBCS data is specified in the DDS.

***NO** The file does not contain double-byte character set (DBCS) data.

***YES** The file contains DBCS data.

Double-Byte Character Set Considerations

If the user creates a physical file and specifies the RCDLEN parameter, the system creates a default record format.

- If IGCDTA(*YES) is specified, the default record format can contain DBCS data (as if the record were specified with the DBCS-open (O in column 35 of DDS specification) data type).
- If IGCDTA(*NO) is specified, the default record format cannot contain DBCS data (as if the record were specified with the character (A or blank in column 35 of DDS specification) data type).

The system ignores the IGCDTA parameter value if a value for the RCDLEN parameter is not specified.

The user cannot override the IGCDTA value for a physical file.

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

*SRCMBRTXT

The text is taken from the source file member being used to create the physical file. If the source file is a database file, the text is taken from the source file member. Text can be added or changed for a database source member by using the Source Entry Utility or by using either the Add Physical File Member (ADDPFM) command or the Change Physical File Member (CHGPFM) command. If the source file is an inline file or a device file, the text is blank.

*BLANK

No text is specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Source listing options (OPTION)

Specifies the type of output produced when the file is created. A maximum of four of the following values can be specified in any order on this parameter. If neither or both of the values on an option are specified, the first value is used.

Note: The first values on each option are similar to, but are not actually default values, and therefore, cannot be changed with the CHGCMDDFT (Change Command Default) command.

Source Listing Option

*SRC or *SOURCE

A printout of the source statements, including a list of errors, is created.

*NOSRC or *NOSOURCE

No printout of the source statements is created unless errors are detected. If errors are detected, they are listed along with the keyword or record format that caused the error.

Program Listing Option

*LIST An expanded source printout is created, showing a detailed list of the file specifications and the references to other file descriptions.

*NOLIST

The expanded source printout is not created.

Second-Level Message Text Option

*NOSECLVL

The messages section of the data description specifications (DDS) printout does not contain the online help information for messages issued during DDS processing.

*SECLVL

The online help information appears in the DDS printout.

Event File Creation Option

***NOEVENTF**

The compiler does not produce an event file for the CoOperative Development Environment for i5/OS (CODE for i5/OS)

***EVENTF**

The compiler produces an event file that can be used by the CODE for i5/OS product. The event file is created as a member in the file EVFEVENT in your object library. The CODE for i5/OS product uses this file to offer error feedback integrated with the CODE for i5/OS editor. This value is normally specified by the CODE for i5/OS product on your behalf.

Top

System (SYSTEM)

Specifies whether the physical file is created on the local system or the remote system.

***LCL** The physical file is created on the local system.

***RMT** The physical file is created on a remote system. The file specified for the **File (FILE)** parameter must be the name of a distributed data management (DDM) file that identifies the remote system and the name of the physical file being created.

***FILETYPE**

If the file specified for the FILE parameter does not exist on the system, the physical file is created on the local system. Otherwise, the file must be a DDM file, and the physical file is created on a remote system. The DDM file identifies the remote system and the name of the physical file being created.

Top

Expiration date for member (EXPDATE)

Specifies the expiration date for members of the physical file.

***NONE**

No expiration date is specified.

date Specify the date after which the file member cannot be used. The date must be enclosed in apostrophes if date separator characters are used in the value.

Top

Maximum members (MAXMBRS)

Specifies the maximum number of members that the physical file can contain.

1 Only one member can be contained in the physical file.

***NOMAX**

The number of members that can be contained in the file is the system maximum of 32,767 members.

1-32767

Specify the maximum number of members that can be contained in the physical file.

Top

Access path size (ACCPHSIZ)

Specifies the maximum size of auxiliary storage that can be occupied by the following kinds of access paths:

- The access paths that are associated with a physical file that has a keyed sequence access path.
- The access paths that are created for referential or unique constraints, and that can be added to this file with the Add Physical File Constraint (ADDPFCST) command.

This parameter does not apply to access paths that are created for logical files or for queries that refer to the data in a physical file.

*MAX1TB

The access paths associated with this file can occupy a maximum of one terabyte (1,099,511,627,776 bytes) of auxiliary storage.

*MAX4GB

The access paths associated with this file can occupy a maximum of four gigabytes (4,294,966,272 bytes) of auxiliary storage.

Top

Access path logical page size (PAGESIZE)

Specifies the access path logical page size that is used when the access path is created.

The access path logical page size is used by the system to determine the size of each page of the index. This logical page size is the amount of bytes of the access path that can be moved into the job's storage pool from the auxiliary storage for a page fault.

*KEYLEN

The access path logical page size will be determined by the total length of the key, or keys.

- | | |
|-----|----------------------------|
| 8 | Logical page size of 8k. |
| 16 | Logical page size of 16k. |
| 32 | Logical page size of 32k. |
| 64 | Logical page size of 64k. |
| 128 | Logical page size of 128k. |
| 256 | Logical page size of 256k. |
| 512 | Logical page size of 512k. |

Top

Access path maintenance (MAINT)

Specifies, for files with key fields, the type of access path maintenance used for all members of the physical file.

*IMMED

The access path is updated each time a record is changed, added, or deleted from a member.
*IMMED must be specified for files that require unique keys.

***REBLD**

The access path is completely rebuilt each time a file member is opened. The access path is maintained until the member is closed; then the access path is deleted. *REBLD cannot be specified for files that require unique keys.

***DLY** The maintenance of the access path is delayed until the physical file member is opened for use. Then, the access path is changed only for records that have been added, deleted, or changed since the file was last opened. While the file is *open*, changes made to its members are immediately reflected in the access paths of those members, no matter what is specified for MAINT. To prevent a lengthy rebuild time when the file is opened, *DLY should be specified only when the number of changes to the access path between successive opens are small; that is, when the file is opened frequently or when the key fields in records for this access path change infrequently. *DLY is not valid for access paths that require unique key values.

If the number of changes between a close and the next open reaches approximately 10 percent of the access path size, the system stops saving changes and the access path is completely rebuilt the next time the file is opened.

Top

Access path recovery (RECOVER)

Specifies, for files with immediate or delayed access path maintenance, when recovery processing of the file is performed if the access path is being changed when a system failure occurs. This parameter is valid only for a file with a keyed access path.

If *IMMED is specified for the **Access path maintenance (MAINT)** parameter, the access path can be rebuilt during initial program load (IPL) (before any user can run a job), or after IPL has ended (during jobs running at the same time), or when the file is next opened. While the access path is being rebuilt, the file cannot be used by any job.

During the IPL, an Override Access Path Recovery display lists those access paths that must be recovered and the RECOVER parameter value for each access path. The user can override the RECOVER parameter value on this display. More information on access paths is in the Recovering your system book, SC41-5304.

If *REBLD is specified for the MAINT parameter, the access path is rebuilt the next time its file is opened.

***NO** The access path of the file is rebuilt when the file is opened. *NO is the default for all files that do not require unique keys. The file's access path, if not valid, is rebuilt when the file is next opened.

Note: *NO is the default for all files that do not require unique keys.

***AFTIPL**

The access path of the file is rebuilt after the initial program load (IPL) operation is completed. This option allows other jobs not using this file to start processing immediately after the completion of the IPL. If a job tries to allocate the file while its access path is being rebuilt, a file open exception occurs.

Note: *AFTIPL is the default for all files that require unique keys.

***IPL** The access path of the file is rebuilt during the IPL operation. This ensures that the file's access path is rebuilt before the first user program tries to use it; however, no jobs can start running until after all files that specify RECOVER(*IPL) have their access paths rebuilt.

Top

Force keyed access path (FRCACCPH)

Specifies, for files with key fields, whether access path changes are forced to auxiliary storage along with the associated records in the file. FRCACCPH(*YES) minimizes (but does not remove) the possibility that an abnormal job end may cause damage to the access path that requires it to be rebuilt.

***NO** The access path and associated records are not forced to be written to auxiliary storage when the access path is changed.

***YES** The access path and associated records are forced to be written to auxiliary storage when the access path is changed. *YES cannot be specified if *REBLD is specified on the **Access path maintenance (MAINT)** parameter.

FRCACCPH(*YES) slows the response time of the system if the access path is changed in an interactive job. If the access path is changed frequently, the overall performance of the system is decreased.

Top

Member size (SIZE)

Specifies the *initial* number of records in each member of the file, the number of records for each increment added to the member, and the number of times the increment is automatically applied. The number of records for each file member is specified as the number of records that can be placed in it (this number includes any deleted records).

When the maximum number of records has been reached, a message (stating that the member is full) is sent to the system operator, giving the choice of ending the request or extending the member's number of records. When the operator chooses to extend the member, the maximum number of records for the member will be increased by the increment number of records times the number of increments specified. However, this increase in maximum number of records will not always have the same effect on the actual member size (in bytes).

Single values

***NOMAX**

The number of records that can be added to each member of the file is not limited by the user. The maximum number of records for each member is determined by the system. If *NOMAX is specified, *NO must be specified for the **Allocate storage (ALLOCATE)** parameter.

Element 1: Initial number of records

Specify the *initial* number of records in each member.

10000 Initially, up to 10000 records can be written to each member of the file.

1-2147483646

Specify the number of records that can be written to each member of the file before the member is automatically extended.

Element 2: Increment number of records

Specify the number of additional records that are added to the member when the number of records in the member will exceed the initial number of records, or will exceed the current increment's number of records.

1000 The maximum number of records is increased by 1000 records.

integer

Specify the number of additional records which are to be added to the member.

If 0 is specified for the increment number of records value, the member is not automatically extended. This value must be 0 if the value for the maximum increments is 0.

Element 3: Maximum increments

Specify the maximum number of increments that can be automatically added to the member(s).

3 A maximum of 3 increments is automatically added to the member(s).

integer

Specify the maximum number of increments automatically added to the member(s). Valid values range from 0 through 32767. If 0 is specified, the member is not automatically extended.

Top

Allocate storage (ALLOCATE)

Specifies whether *initial* storage space is allocated to each physical file member added to the file. The allocation provides enough space to hold the number of records specified for the **Member size (SIZE)** parameter. Allocations that occur when a record cannot be added to a member without exceeding its capacity are determined by the system and by the SIZE parameter values.

*NO The system determines the amount of storage space to allocate to each member added to the file.

*YES The amount of storage space specified in the first value of the SIZE parameter is allocated each time a new member is added. If *YES is specified, *NOMAX must not be specified for the SIZE parameter.

Top

Contiguous storage (CONTIG)

Specifies, for each physical file member added to the file, whether all of the records in the initial storage allocation must be stored next to each other.

*NO Storage of the records next to each other is not required.

*YES The space containing the records allows the records to be stored next to each other. If the records must be separated, the member is added and a message is sent to the user indicating that storage of the records next to each other is not available.

Top

Preferred storage unit (UNIT)

This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 3 Release 6 Modification 0 of the i5/OS. For information on using auxiliary storage pools (ASPs), refer to the Recovering your system book, SC41-5304.

You can specify the value *ANY or a value ranging from 1 through 255 on this parameter.

Top

Records to force a write (FRCRATIO)

Specifies the number of inserted or updated records that are processed before the records are forced into auxiliary storage. If this physical file is being journaled, either a large number or *NONE should be used. *NONE may cause long synchronization of the journal and physical files.

*NONE

There is no specified force ratio. The system determines when the records are written to auxiliary storage.

integer

Specify the number of inserted or updated records that are processed before the records are written to auxiliary storage.

Top

Maximum file wait time (WAITFILE)

Specifies the number of seconds that the program waits for the file resources to be allocated when the file is opened, or the device or session resources to be allocated when an acquire operation is performed to the file. If the file resources cannot be allocated in the specified wait time, an error message is sent to the program.

30 The program waits for 30 seconds for file resources to be allocated.

*IMMED

The program does not wait. Immediate allocation of file resources is required.

*CLS The job default wait time is used as the wait time for the file resources to be allocated.

1-32767

Specify the number of seconds to wait for file resources to be allocated.

Top

Maximum record wait time (WAITRCD)

Specifies the number of seconds that the program waits for a record being changed or deleted. If the record cannot be allocated within the specified wait time, an error message is sent to the program.

60 The program waits for 60 seconds for a record being changed or deleted.

*IMMED

The program does not wait; when a record is locked, an immediate allocation of the record is required.

*NOMAX

The wait time is the maximum allowed by the system (32,767 seconds).

1-32767

Specify the number of seconds that the program waits for a record being changed or deleted.

Top

Share open data path (SHARE)

Specifies whether the open data path (ODP) is shared with other programs in the same routing step. When an ODP is shared, the programs accessing the file share facilities such as the file status and the buffer.

Note: This parameter cannot be specified when *NONE is specified for the **Member (MBR)** parameter.

***NO** The ODP is not shared with other programs in the routing step. A new ODP for the file is created and used every time a program opens the file.

A new ODP for the file is created and used every time a program opens the file with *NO specified for this parameter.

***YES** The same ODP is shared with each program in the job that also specifies *YES when it opens the file.

Top

Max % deleted records allowed (DLTPCT)

Specifies the maximum allowed percentage of deleted records for each member in the physical file. The percentage check is made when the member is closed. If the percentage of deleted records is greater than the value specified on this parameter, a message is sent to the system history log (QHST) to inform the user.

***NONE**

The percentage of deleted records in the file members is not checked.

1-100 Specify the largest allowed percentage of deleted records for any member in the file.

Top

Reuse deleted records (REUSEDLT)

Specifies whether the space used by deleted data entries should be reclaimed by future insert requests.

Notes:

- If *YES is specified on this parameter, the key ordering attribute for the physical file in the Data Description Specifications (DDS) source cannot be "FIFO" or "LIFO".
- If a *YES value is specified for this parameter, the arrival order becomes meaningless for a file that reuses deleted record space. Records might not be added at the end of the file.

***NO** The file does not reclaim space used by deleted data entries.

***YES** The file reclaims space used by deleted data entries.

Top

Sort sequence (SRTSEQ)

Specifies the sort sequence used for this file. The sort sequence is used with the LANGID and CCSID parameters to determine which sort sequence table is used.

Single values

***SRC** The table specified in the data description specification (DDS) on the ALTSEQ keyword is used. If ALTSEQ is not used in the DDS, use the value specified for *JOB on this parameter.

***JOB** The sort sequence value used is the value for the job issuing this command to create the physical file.

***LANGIDSHR**

The sort sequence table can contain the same weight for multiple characters, and is the shared weighted table associated with the language specified in the LANGID parameter.

***LANGIDUNQ**

The sort sequence table must contain a unique weight for each character in the code page.

***HEX** A sort sequence table is not used, and the hexadecimal values of the characters are used to determine the sort sequence.

Qualifier 1: Sort sequence

name Specify the name of the sort sequence table.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library to be searched.

Top

Language ID (LANGID)

Specifies the language identifier used when *LANGIDSHR or *LANGIDUNQ is specified on the SRTSEQ parameter. The language identifier is used with the SRTSEQ and CCSID parameters to determine which sort sequence table the file will use.

***JOB** The language identifier specified for the job is used.

character-value

Specify a language identifier. To see a complete list of identifiers when prompting this command, position the cursor on the field for this parameter and press F4 (Prompt).

Top

Coded character set ID (CCSID)

Specifies the coded character set identifier (CCSID) being used to describe character data in the fields of the file.

This parameter is applicable only if no value is specified for the **Source file (SRCFILE)** parameter and if a value is specified for the **Record length (RCDLEN)** parameter. If you specify a value other than the default value (*JOB) on this parameter, the SRCFILE parameter is not used, and a value must be specified for the RCDLEN parameter.

Note: A file created with no DDS when FILETYPE(*DATA) is specified has a CCSID of 65535, regardless of the job CCSID value.

***JOB** The current job's default CCSID is used.

***HEX** The CCSID 65535 is used, which indicates that character data in the fields is treated as bit data and is not converted.

integer

Specify the CCSID to be used. More information about CCSIDs is in the i5/OS globalization topic collection in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Top

Allow update operation (ALWUPD)

Specifies whether records in this physical file can be updated.

*YES Records in this physical file can be updated.

*NO Records in this physical file, or in any logical file that accesses the records in this physical file, cannot be updated.

Top

Allow delete operation (ALWDLT)

Specifies whether records in this physical file can be deleted. Records in a logical file can be deleted only when the records in each physical file on which the logical file is based can be deleted.

*YES Records in this physical file can be deleted.

*NO Records in this physical file, or in any logical file that accesses the records in this physical file, cannot be deleted.

Top

Record format level check (LVLCHK)

Specifies whether the level identifiers of the record formats in the physical file are checked when the file is opened by a program.

*YES The level identifiers of the record formats are checked. If the level identifiers do not all match, an open error message is sent to the program requesting the open operation.

*NO The level identifiers are not checked when the file is opened.

Top

Node group (NODGRP)

Specifies a node group across which the file is to be distributed.

Single values

*NONE

The file is not a distributed file. All data associated with the file is on the local system.

Qualifier 1: Node group

name Specify the name of a node group associated with this file.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

name Specify the name of the library to be searched.

Top

Partitioning Key (PTNKEY)

Specifies the field, or set of fields, that is used as the partition key for distributing data. Up to 300 field names can be specified.

Note: This parameter is not valid if *NONE is specified for the **Node group (NODGRP)** parameter. If a node group name is specified for the NODGRP parameter, one or more field names must be specified.

name Specify the name of a field to be included in the partition key.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

***LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

***CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

Example 1: Creating a Physical File

```
CRTPF FILE(PAYLIB/PAYTXS) SRCFILE(SRCLIB/PAYTXS)
      MBR(*NONE) MAXMBRS(5)
```

This command creates a physical file named PAYTXS in the PAYLIB library. The source descriptions in the member PAYTXS in source file PAYTXS in the SRCLIB library are used to create the physical file. The file is created without members (*NONE was specified); therefore, no data can be put into the file until a member is added later. As many as five members can be contained in the file.

By default, each file member added later will contain data records. The access path of each member is continuously maintained. Each member can have up to 10,000 records before automatic extensions (three increments maximum) occur that add 1000 records to the capacity of the member. Storage space for each member is allocated only as needed, with no restrictions on whether the space is contiguous; there is no initial storage allocation. The public has object operational, read, add, delete, and update authority for the file.

Example 2: Creating a Physical File and Member

```
CRTPF FILE(ORDERCTL/ORDERS) SRCFILE(ORDERCTL/ORDERSRC)
      SRCMBR(MFGORD) MAXMBRS(5) SIZE(1000 100 5)
      ALLOCATE(*YES)
```

This command creates a physical file and physical file member, both named ORDERS in the ORDERCTL library. The file and its member are created from the MFGORD source member of the ORDERSRC source file in the same library. Storage space for the records placed in the file need not be contiguous. Up to 50 members can be contained in the file. The initial allocation of storage provides for up to 1000 records, and up to five increments of additional space for 100 records each can be added automatically. These allocation values also apply to each member of this physical file that is added later.

Top

Error messages

*ESCAPE Messages

CPF3204

Cannot find object needed for file &1 in &2.

CPF323C

QRECOVERY library could not be allocated.

CPF5702

File either not DDM file or not found.

CPF7302

File &1 not created in library &2.

Top

Create Performance Data (CRTPFRDTA)

Where allowed to run: All environments (*ALL)
 Threadsafte: No

Parameters
 Examples
 Error messages

The Create Performance Data (CRTPFRDTA) command creates a set of performance database files from performance information stored in a management collection (*MGTCOL) object. For more information about the database files, see the Performance topic in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Performance database files and file members will be created as needed based on the data contained in the management collection object and the information requested on this command. If database files already exist and the requested member exists in any of them, the member will be cleared before the collection is generated.

Top

Parameters

Keyword	Description	Choices	Notes
FROMMGTCOL	From collection	Single values: *ACTIVE Other values: <i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: From collection	<i>Name</i> , *SELECT	
	Qualifier 2: Library	<i>Name</i> , <u>QPFRTDATA</u>	
TOMBR	To member	<i>Name</i> , * <u>FROMMGTCOL</u>	Optional
TOLIB	To library	<i>Name</i> , * <u>FROMMGTCOL</u>	Optional
TEXT	Text 'description'	<i>Character value</i> , *SAME, *FROMMGTCOL, *GEN, *BLANK	Optional
CGY	Categories to process	Single values: * <u>FROMMGTCOL</u> Other values (up to 28 repetitions): <i>Name</i> , *APPN, *CMNBASE, *CMNSAP, *CMNSTN, *DISK, *DOMINO, *DPS, *HDWCFCG, *HTTP, *IOPBASE, *IPCS, *JOBMI, *JOBOS, *JAVA, *LCLRSP, *LPAR, *POOL, *POOLTUNE, *SNA, *SNADS, *SUBSYSTEM, *SYSBUS, *SYSCPU, *SYSLVL, *TCPBASE, *TCPIFC, *USRTNS, *WAS	Optional
INTERVAL	Time interval (in minutes)	* <u>FROMMGTCOL</u> , 0.25, 0.5, 1.0, 5.0, 15.0, 30.0, 60.0	Optional
FROMTIME	Starting date and time	Single values: * <u>FROMMGTCOL</u> Other values: <i>Element list</i>	Optional
	Element 1: Starting date	<i>Date</i>	
	Element 2: Starting time	<i>Time</i>	
TOTIME	Ending date and time	Single values: * <u>FROMMGTCOL</u> , *ACTIVE Other values: <i>Element list</i>	Optional
	Element 1: Ending date	<i>Date</i>	
	Element 2: Ending time	<i>Time</i>	

Top

From collection (FROMMGTCOL)

Specifies the management collection from which a set of performance database files is to be created.

Single values

***ACTIVE**

The currently active collection object will be used.

***SELECT**

Lists all the collection objects available in the specified library so the user can select which collection object to process. This is only Allowed if the command is run in an interactive job.

Qualifier 1: From collection

name Specify the name of the management collection object that is to be used.

Qualifier 2: Library

QPFRDATA

IBM-supplied performance data library QPFRDATA is to be used to locate the management collection.

name Specify the name of the library for the management collection.

Top

To member (TOMBR)

Specifies the database file member to which the output data is to be written. If a member by this name does not exist in each performance database file, one will be created with the specified name.

***FROMMGTCOL**

The name of the management collection object is used as the performance database file member name.

name Specify the name of the member to which the output should be written.

Top

To library (TOLIB)

Specifies the library where the database files for performance data are to exist. Each file that is not found in the specified library is automatically created in that library.

***FROMMGTCOL**

The performance database files are located or created in the same library as the management collection object (FROMMGTCOL parameter).

name Specify the name of the library where the performance database files are located or should be created.

Top

Text 'description' (TEXT)

Specifies the text to be used for each member across the set of performance data base files associated with the collection.

***SAME**

The value does not change.

***FROMMGTCOL**

Text associated with the management collection object is used as the member text.

***GEN** The following text will be generated - "Created from <collection name> in library <library name>". If the member already exists, no change is made.

***BLANK**

No text is specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Categories to process (CGY)

Specifies the categories in the management collection object which will be processed into database files.

Single values

***FROMMGTCOL**

All of the categories present in the management collection object will be processed into database files.

Other values (up to 28 repetitions)

category-name

Specify the name of the category of performance information to be processed from the management collection object. Multiple category names may be specified. Valid category names are:

Name	Description
-----	-----
*APPN	APPN
*CMNBASE	Communications (Base)
*CMNSAP	Communications (SAP)
*CMNSTN	Communications (Station)
*DISK	Disk
*DOMINO	Domino for IBM System i
*DPS	Data port services
*HDWCFG	Hardware
*HTTP	HTTP Server (powered by Apache)
*IOPBASE	Input/output processors (Base)
*IPCS	Network server
*JOBMI	Jobs (MI tasks and threads)
*JOBOS	Jobs (operating system)
*JAVA	Java
*LCLRSP	Local response time
*LPAR	Logical partition
*POOL	Pool
*POOLTUNE	Pool tuning
*SNA	SNA
*SNADS	SNADS
*SUBSYSTEM	Subsystem
*SYSBUS	System Bus
*SYSCPU	System CPU
*SYSLVL	System-level data
*TCPBASE	TCP/IP (base)
*TCPIFC	TCP/IP (interface)
*USRTNS	User-defined transaction data
*WAS	Websphere Application Server

Time interval (in minutes) (INTERVAL)

Specifies the time interval between successive entries in the database file(s). Within the database, these collection intervals will be identified by interval number and interval time.

Interval numbers will begin with 1 and increment with each interval. Interval time will be based on time at the end of the interval synchronized to the clock time (e.g. if INTERVAL(15) is specified, intervals could be generated as 01:00:00, 01:15:00, 01:30:00, and 01:45:00).

*FROMMGTCOL

The default interval from the management collection object will be used.

number-of-minutes

Specify an interval value ranging from 0.25 (15 seconds) through 60 minutes.

Starting date and time (FROMTIME)

Specifies the starting date and time of the performance data in the management collection object which will be used to create the performance database file(s). This time combined with the interval value will determine the date and time for each data base interval.

Single values

*FROMMGTCOL

The starting date and time is the date and time that the management collection object was created.

Element 1: Starting date

date Specify the starting date for which collection data is generated. The date must be entered in the format specified by the system values QDATFMT and, if separators are used, QDATSEP.

Element 2: Starting time

time Specify the starting time on the specified starting date for generating the database intervals.

If the starting date is specified and the starting time is not, the starting time will default as follows:

- If the starting date specifies the first date of the collection, the starting time will be set to the start time of the collection.
- If the starting date does not specify the first date of the collection, the starting time will be set to midnight (00:00:00).

Ending date and time (TOTIME)

Specifies the ending date and time of the last performance data in the management collection object which will be used to create the performance database file(s).

Single values

*FROMMGTCOL

The date and time of the end of the collection in the management collection object will be the ending date and time for data base generation.

***ACTIVE**

The generation of the data base will continue until the currently active collection ends.

This option causes the data base to be generated concurrently with the active collection. The data base will be generated based on the start time specified for any data currently in the management collection object. Additional data will be processed as it is added to the collection object. This will continue until the current collection ends.

Because this option can result in processing for a very long time, it is recommended that TOTIME(*ACTIVE) be specified only when running CRTPFRTDA in a batch job.

Element 1: Ending date

date Specify the ending date for which data from the collection object is used to generate the data base files. The date must be entered in the format specified by the system values QDATFMT and, if separators are used, QDATSEP.

Element 2: Ending time

time Specify the time for the specified ending date for which data from the collection object is used to generate the data base files.

See the description of the **Starting time** element of the **Starting date and time (FROMTIME)** parameter for details about how time values can be specified.

If the ending date is specified and the ending time is not, the ending time will default as follows:

- If the ending date specifies the last date of the collection, the ending time will be set to the ending time of the collection.
- If the ending date does not specify the last date of the collection, the ending time will be set to 23:59:59.

Top

Examples

Example 1: Generating All Data

```
CRTPFRTDA FROMMGTCOL(Q099365001) TOMBR(JAN1) TOLIB(MYLIB)
```

In this example, the database is generated for all categories contained within the management collection object Q099365001 in library QPFRDATA. The performance database files will be created into library MYLIB and the collection member name will be JAN1.

Data is generated from the start of data collection within this management collection object to the end of that collection. The database interval is the default collection interval that was specified at the time the collection was started.

Example 2: Selecting Specific Data

```
CRTPFRTDA FROMMGTCOL(Q099364002) TOMBR(JAN1J) TOLIB(MYLIB)
          CGY(*JOBMI) INTERVAL(15)
          FROMTIME(('01/01/98' '14:00:00'))
          TOTIME(('01/01/98' '16:00:00'))
```

In this example, only the database file QAPMJOBMI is generated using *JOBMI category information from management collection Q099364002 in library QPFRDATA. The database interval will be 15 minutes even if the data was collected more frequently (for example, the management collection object may contain data collected every 5 minutes). The generated file will contain only data that was collected between 2:00 PM and 4:00 PM even though the collection object may contain data for a larger time interval.

Top

Error messages

*ESCAPE Messages

CPF0A0E

CRTPFRDTA ended. No files changed.

CPF0A1A

No active collection.

CPF0A2B

Not able to process management collection object &1 in library &2.

CPF9801

Object &2 in library &3 not found.

CPF9810

Library &1 not found.

Top

Create Performance Summary (CRTPFRSUM)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Performance Summary (CRTPFRSUM) command creates additional performance database files containing summary information for an existing collection services performance database file collection.

The existing collection (as created by the CRTPFRDTA command) is processed and the summarized data is placed in these special files. This data facilitates quicker processing of the performance database data by tools such as the Performance Viewer. For more information about the database files, see the Performance topic in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Performance database files and file members (each collection is a file member) will be created as needed based on the specified collection. If database files already exist and the requested member exists in any of them, the member will be cleared before this additional data is generated.

Top

Parameters

Keyword	Description	Choices	Notes
COL	Collection	Name, <u>*SELECT</u>	Optional, Positional 1
LIB	Library	Name, <u>QPFRDATA</u>	Optional

Top

Collection (COL)

Specifies the name of the performance database file collection to process.

*SELECT

All collections available in the specified library are listed on the Select Performance Collections display. This option is only valid when running in an interactive job.

name Specify the name of the collection containing the performance data to summarize.

Top

Library (LIB)

Specifies the library where the performance database files are located.

QPFRDATA

The IBM-supplied performance data library, QPFRDATA, is used to locate the database files.

name Specify the name of the library where the database files are located.

Top

Examples

Example 1: Generating Data

```
CRTPFRSUM COL(JAN1) LIB(MYLIB)
```

In this example, which is based on example 1 from CRTPFRTA, the collection JAN1 in library MYLIB is processed to generate summary data. Additional database files are created in library MYLIB with a collection member name of JAN1 that contains this summary data.

[Top](#)

Error messages

*ESCAPE Messages

CPF0A03

Performance data files are not upward compatible.

CPF0A04

Performance data files are not downward compatible.

CPF0A76

Performance collection &1 not found.

CPF9810

Library &1 not found.

CPF9820

Not authorized to use library &1.

CPF9899

Error occurred during processing of command.

[Top](#)

Create Program (CRTPGM)

Where allowed to run: All environments (*ALL)
 Threadsafes: No

Parameters
 Examples
 Error messages

The Create Program (CRTPGM) command creates a bound program from a set of modules and binding directories.

Restrictions:

- You must have read (*READ) and add (*ADD) authorities for the library where the program is to be created.
- You must have use (*USE) authority to the specified modules, service programs, and binding directories.

Top

Parameters

Keyword	Description	Choices	Notes
PGM	Program	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Program	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
MODULE	Module	Single values: *PGM Other values (up to 300 repetitions): <i>Qualified object name</i>	Optional
	Qualifier 1: Module	<i>Generic name, name, *ALL</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB, *USRLIBL</i>	
TEXT	Text 'description'	<i>Character value, *ENTMODTXT, *BLANK</i>	Optional
ENTMOD	Program entry procedure module	Single values: *FIRST, *ONLY, *PGM Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Program entry procedure module	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB, *USRLIBL</i>	
BNDSRVPGM	Bind service program	Single values: *NONE Other values (up to 300 repetitions): <i>Element list</i>	Optional
	Element 1: Service program	<i>Qualified object name</i>	
	Qualifier 1: Service program	<i>Generic name, name, *ALL</i>	
	Qualifier 2: Library	<i>Name, *LIBL</i>	
	Element 2: Activation	*IMMED, *DEFER	
BNDDIR	Binding directory	Single values: *NONE Other values (up to 300 repetitions): <i>Qualified object name</i>	Optional
	Qualifier 1: Binding directory	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB, *USRLIBL</i>	
ACTGRP	Activation group	<i>Name, *ENTMOD, *NEW, *CALLER</i>	Optional
OPTION	Creation options	Values (up to 5 repetitions): *GEN, *NOGEN, *NODUPPROC, *DUPPROC, *NODUPVAR, *DUPVAR, *WARN, *NOWARN, *RSLVREF, *UNRSLVREF	Optional
DETAIL	Listing detail	*NONE, *BASIC, *EXTENDED, *FULL	Optional

Keyword	Description	Choices	Notes
ALWUPD	Allow update	<u>*YES</u> , *NO	Optional
ALWLIBUPD	Allow *SRVPGM library update	*YES, <u>*NO</u>	Optional
USRPRF	User profile	<u>*USER</u> , *OWNER	Optional
REPLACE	Replace program	<u>*YES</u> , *NO	Optional
AUT	Authority	<i>Name</i> , <u>*LIBCRTAUT</u> , *CHANGE, *ALL, *USE, *EXCLUDE	Optional
TGTRLS	Target release	<i>Character value</i> , <u>*CURRENT</u> , *PRV	Optional
ALWRINZ	Allow reinitialization	<u>*NO</u> , *YES	Optional
STGMDL	Storage model	<u>*SINGLVL</u> , *TERASPACE, *INHERIT	Optional
ARGOPT	Argument optimization	<u>*NO</u> , *YES	Optional
IPA	Interprocedural analysis	*YES, <u>*NO</u>	Optional
IPACTLFILE	IPA control file	<i>Path name</i> , <u>*NONE</u>	Optional

Top

Program (PGM)

Specifies the program object to be created.

This is a required parameter.

Qualifier 1: Program

name Specify the name of the program to be created.

Qualifier 2: Library

*CURLIB

The program object is created in the current library for the job. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library where the program object is created.

Top

Module (MODULE)

Specifies the list of modules that are copied and bound together to create the program object. If duplicate module and library specifications are found, only the first instance of the duplicate module and library is used. Modules in this list are copied into the final program object. Up to 300 names can be specified.

Single values

*PGM The name specified for the **Program (PGM)** parameter is used as the module object name.

Qualifier 1: Module

*ALL Find all module objects in the specified library or libraries.

generic-name

Specify all module objects starting with the characters preceding the * in the specified library or libraries.

name Specify the name of the module that is copied to create the program object.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

***USRLIBL**

Only the libraries in the user portion of the job's library list are searched.

name Specify the name of the library to be searched.

Top

Text 'description' (TEXT)

Specifies text that briefly describes the program object.

***ENTMODTXT**

The text description of the module specified for the **Program entry procedure module (ENTMOD)** parameter is used.

***BLANK**

Text is not specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Program entry procedure module (ENTMOD)

Specifies the module name that contains the program entry procedure specification to be used for this program.

Single values

***FIRST**

The first module found, from the list of modules, that has a program entry procedure specification is selected as the program entry procedure.

***ONLY**

Only one module, from the list of modules, can have a specification as the program entry procedure. An error is issued if more than one module is found to have a program entry procedure specification.

***PGM** The name and library specified on the **Program (PGM)** parameter will be the name and library of the module which has the program entry procedure specification.

Qualifier 1: Program entry procedure module

name Specify the name of the module containing the program entry procedure specification. If this module is not in the list of modules to be included in this program, it is added to the list of modules. If this module does not have a program entry procedure specification, the program is not created.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

***USRLIBL**

Only the libraries in the user portion of the job's library list are searched.

name Specify the name of the library to be searched.

Top

Bind service program (BNDSRVPGM)

Specifies the list of service program exports to examine at bind time to ensure they satisfy any module import requests. The service program exports are checked only if there are unresolved module import requests not satisfied by the set of module exports. Any service program specified on the BNDSRVPGM parameter that satisfies a module import request will be bound to the program being created. The service program name and the library specified on the BNDSRVPGM parameter are saved to be used at run time. Up to 300 names can be specified.

You can control the activation of each service program. You can specify whether the referenced service program is activated at the same time as the program program being created, or is deferred until a procedure exported from the referenced service program is called. Deferring activation may improve your application's performance.

Single values

***NONE**

No service program is specified.

Element 1: Service program

Qualifier 1: Service program

***ALL** Find all service program objects in the specified library or libraries.

Note: This value should only be specified in a user-controlled environment when you know exactly what is getting bound to your program. Specifying *LIBL with *ALL may give you unpredictable results at program run time. Specify the generic service program name or specific libraries to better control what gets bound to your program.

generic-name

Specify all service program objects starting with the characters preceding the * in the specified library or libraries.

name Specify the name of the service program to be examined during symbol resolution.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

name Specify the name of the library to be searched.

Note: QTEMP is not a valid library name for this parameter.

Element 2: Activation

*IMMED

Activation of the bound service program takes place immediately when the program being created is activated.

*DEFER

Activation of the bound service program may be deferred until a function it exports is called.

Top

Binding directory (BNDDIR)

Specifies the list of binding directories that are used in symbol resolution. The exports of the modules and service programs in the binding directory are only checked if there are unresolved module import requests that the exports from the modules and service programs (specified in the MODULE or BNDSRVPGM parameters) could not satisfy. Up to 300 names can be specified.

Single values

*NONE

No binding directory is specified.

Qualifier 1: Binding directory

name Specify the name of the binding directory used in symbol resolution.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

*USRLIBL

Only the libraries in the user portion of the job's library list are searched.

name Specify the name of the library to be searched.

Top

Activation group (ACTGRP)

Specifies the activation group this program is associated with when it is called. An activation group provides:

- Run-time data structures to support the running of programs
- Addressing protection
- A logical boundary for message creation
- A logical boundary for application cleanup processing

*ENTMOD

When ACTGRP(*ENTMOD) is specified, the program entry procedure module (ENTMOD parameter) is examined. If the module attribute is RPGLE, CBLLE, or CLLE, then ACTGRP(QILE) or ACTGRP(QILETS) is used. QILE is used when STGMDL(*SNGLVL) is specified, and QILETS is used when STGMDL(*TERASPACE) is specified. If the module attribute is not RPGLE, CBLLE, or CLLE, then ACTGRP(*NEW) is used.

*NEW When this program gets called, a new activation group is created. This called program is then associated with the newly created activation group.

***CALLER**

When this program gets called, the program is activated into the caller's activation group.

name Specify the name of the activation group to be used when this program is called.

Top

Creation options (OPTION)

Specifies options to be used when the program object is created.

You can specify up to 5 values for this parameter.

Program Objects

***GEN** A program object is generated.

***NOGEN**

A program object is not generated.

Duplicate Procedure Names

***NODUPPROC**

During the symbol resolution phase of the binding process, each procedure name that is exported from the modules and programs must be unique.

***DUPPROC**

During the symbol resolution phase of the binding process, the procedure names that are exported from the modules and service programs do not have to be unique. When multiple duplicate procedures are allowed, the first exported procedure in the list of specified modules and service programs that matches the import request is the procedure that is selected.

Duplicate Variable Names

***NODUPVAR**

During the symbol resolution phase of the binding process, each variable name that is exported from the modules and service programs must be unique.

***DUPVAR**

During the symbol resolution phase of the binding process, the variable names that are exported from the modules and service programs do not have to be unique. When multiple duplicate variables are allowed, the first exported variable in the list of specified modules and service programs that matches the import request is the variable that is selected.

Issuing Diagnostic Messages

***WARN**

If duplicate variables or procedures are found, a diagnostic message is issued indicating what duplicates were found.

***NOWARN**

If duplicate variables or procedures are found, diagnostic messages are not issued.

Resolving References (Imports)

***RSLVREF**

All imports must be resolved to exports for the program to be created.

***UNRSLVREF**

All imports do not need to resolve to exports for the program to be created. If the program tries to use one of these unresolved imports at run time, a MCH4439 run-time exception is issued.

Listing detail (DETAIL)

Specifies the level of detail to be printed.

*NONE

A listing is not generated.

*BASIC

Contains a listing of the options passed to CRTPGM, and processing statistics. This listing also contains the Brief Summary Table.

*EXTENDED

In addition to the information provided in the *BASIC listing, this listing contains the Extended Summary Table and the Binding Information Listing.

***FULL** This listing contains the *EXTENDED listing and the Cross-Reference Listing.

Note: If a printed listing is requested, the printer file *LIBL/QSYSPRT is used to generate the listing.

Top

Allow update (ALWUPD)

Specifies whether to allow an update, using the Update Program (UPDPGM) command, of the program being created.

***YES** The program can be updated using the UPDPGM command.

***NO** The UPDPGM command cannot be used to update the program being created.

Top

Allow *SRVPGM library update (ALWLIBUPD)

Specifies whether to allow the bound service program library name of the program being created to be changed when updated using the Update Program (UPDPGM) command.

***NO** The UPDPGM command is not allowed to update the bound service program library names of the program being created, even if *YES is specified for the **Allow update (ALWUPD)** parameter.

***YES** The UPDPGM command is allowed to update the bound service program library names of the program being created when ALWUPD(*YES) is specified.

Top

User profile (USRPRF)

Specifies whether the authority checking done while this program is running includes only the user who is running the program (*USER) or both the user running the program and the program owner (*OWNER). The profiles of the program user or both the program user and the program owner are used to control which objects can be used by the program, including the authority the program has for each object.

*USER

The program runs under the user profile of the program's user.

*OWNER

The user profiles of both the program owner and the program user are used when the program is run.

Top

Replace program (REPLACE)

Specifies whether the existing program is replaced if a program by the same name already exists in the specified library.

***YES** Replace the existing program by moving it to the QRPLOBJ library. Current activations of the program will continue running, using the version of the program in the QRPLOBJ library.

Note: Both programs must be owned by the same user for the replace to work.

***NO** No replacement occurs. An error message is issued if a program already exists with the name and library specified for the **Program (PGM)** parameter.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

*EXCLUDE

The user cannot access the object.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Target release (TGTRLS)

Specifies the release of the operating system on which you intend to use the object being created.

When specifying the **target-release** value, the format VxRxMx is used to specify the release, where Vx is the version, Rx is the release, and Mx is the modification level. For example, V5R3M0 is version 5, release 3, modification 0.

Valid values depend on the current version, release, and modification level of the operating system, and they change with each new release. You can press F4 while prompting this command parameter to see a list of valid target release values.

*CURRENT

The object is to be used on the release of the operating system currently running on your system. The object can also be used on a system with any subsequent release of the operating system installed.

***PRV** The object is to be used on the previous release with modification level 0 of the operating system. The object can also be used on a system with any subsequent release of the operating system installed.

character-value

Specify the release in the format VxRxMx. The object can be used on a system with the specified release or with any subsequent release of the operating system installed.

Top

Allow reinitialization (ALWRINZ)

Specifies if the static storage of the program is allowed to be reinitialized while it is still active.

***NO** The static storage of the program can not be reinitialized while it is still active.

***YES** The static storage of the program is allowed to be reinitialized while the program is still active.

Top

Storage model (STGMDL)

Specifies the storage model attribute of the program.

*SINGLVL

The program is created with single-level storage model. When a single-level storage model program is activated and run, it is supplied single-level storage for automatic and static storage. A single-level storage program runs only in a single-level storage activation group.

***TERASPACE**

The program is created with teraspace storage model. When a teraspace storage model program is activated and run, it is supplied teraspace storage for automatic and static storage. A teraspace storage program runs only in a teraspace storage activation group.

***INHERIT**

The program is created with inherit storage model. When activated, the program adopts the storage model of the activation group into which it is activated. An equivalent view is that it inherits the storage model of its caller. When the ***INHERIT** storage model is selected, ***CALLER** must be specified for the **Activation group (ACTGRP)** parameter.

Top

Argument optimization (ARGOPT)

Specifies whether argument optimization (ARGOPT) is to be done during program creation. Argument optimization is a technique for passing arguments (parameters) to ILE procedures to improve performance of call intensive applications. This option may cause an increase in the amount of time required to create the program.

***NO** Argument optimization will not be performed during program creation.

***YES** Argument optimization will be performed during program creation.

Top

Interprocedural analysis (IPA)

Specifies whether interprocedural analysis (IPA) is to be used during the program creation. For more information on IPA, refer to the ILE Concepts book, SC41-5606.

***NO** Interprocedural analysis will not be performed.

***YES** Interprocedural analysis will be performed.

Top

IPA control file (IPACTLFILE)

Gives the path name of a file which contains interprocedural analysis (IPA) suboption information. This parameter is allowed only when IPA(*YES) is specified.

***NONE**

No IPA control file information is to be used when IPA(*YES) is specified.

path-name

Specifies the path name of the IPA control file to use when IPA(*YES) is specified. If the name is qualified it must be enclosed in apostrophes. An example of a qualified IPA control file name is `'/directory1/directory2/myipactlname'`

Top

Examples

```
CRTPGM PGM(STAR)
```

This command creates a program object named STAR in the current library for the job, or library QGPL if there is no current library. The program will be created from one module object that is also named STAR and is located using the current library for the job.

Top

Error messages

***ESCAPE Messages**

CPF223E

Authority check for use adopted authority attribute failed.

CPF3C50

Program &1 not created.

CPF5D12

Error encountered during program or service program preparation.

[Top](#)

Create Panel Group (CRTPNLGRP)

Where allowed to run: All environments (*ALL)
 Threadsafte: No

Parameters
 Examples
 Error messages

The Create Panel Group (CRTPNLGRP) command creates panel groups that contain online help information, which can be shown in conjunction with your data description specifications (DDS) displays, CL commands, or a search index.

Restrictions:

- You must have read (*READ) and add (*ADD) authorities for the library where the panel group is to be created.
- If the panel group already exists, you must have object existence (*OBJEXIST), object management (*OBJMGT) and read (*READ) authorities for the panel group.

Top

Parameters

Keyword	Description	Choices	Notes
PNLGRP	Panel group	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Panel group	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
SRCFILE	Source file	<i>Qualified object name</i>	Optional, Positional 2
	Qualifier 1: Source file	<i>Name, QPNLSRC</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
SRCMBR	Source member	<i>Name, *PNLGRP</i>	Optional, Positional 3
TEXT	Text 'description'	<i>Character value, *SRCMBRTXT, *BLANK</i>	Optional
OPTION	Source listing options	Values (up to 3 repetitions): *SOURCE, *NOSOURCE, *SRC, *NOSRC, *NOSECLVL, *SECLVL, *NOEVENTF, *EVENTF	Optional, Positional 4
INCFILE	Include file	Single values: *SRCFILE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Include file	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
CHRID	Character identifier	Single values: *DEVLD, *SYSVAL, *JOBCCSID, *CHRIDCTL Other values: <i>Element list</i>	Optional
	Element 1: Graphic character set	<i>Integer</i>	
	Element 2: Code page	<i>Integer</i>	
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional
REPLACE	Replace panel group	<i>*YES, *NO</i>	Optional

Top

Panel group (PNLGRP)

Specifies the panel group to be created.

This is a required parameter.

Qualifier 1: Panel group

name Specify the name of the panel group to be created.

Qualifier 2: Library

*CURLIB

The current library for the job is used to locate the panel group. If no library is specified as the current library for the job, QGPL is used.

name Specify the name of the library where the panel group is located.

Top

Source file (SRCFILE)

Specifies the source file that contains the panel group description source statements. Valid source file record length values range from 13 through 92.

Qualifier 1: Source file

QPNSRC

Source file QPNSRC contains the panel group description source statements.

name Specify the name of the source file that contains the panel group description source statements.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the job is used to locate the source file. If no library is specified as the current library for the job, QGPL is used.

name Specify the name of the library where the source file is located.

Top

Source member (SRCMBR)

Specifies the member of the source file that contains the panel group description.

*PNLGRP

The member containing the panel group description has the same name as the name specified for the **Panel group (PNLGRP)** parameter.

name Specify the name of the member that contains the panel group description.

Top

Text 'description' (TEXT)

Specifies text that briefly describes the panel group.

***SRCMBRTXT**

The text associated with the specified source file member is used.

***BLANK**

No text is used.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Source listing options (OPTION)

Specifies options for the output produced during the compile. Multiple option values can be specified in any order on this parameter. If neither or both of the values in each group are specified, the underlined value will be used.

Note: The underlined values for this parameter are similar to, but not actually default values, and therefore, cannot be changed with the Change Command Default (CHGCMDDFT) command.

Source Listing Option

***SRC or *SOURCE**

A source listing is produced.

***NOSRC or *NOSOURCE**

No source listing is produced unless errors are detected.

Second-Level Message Text Option

***NOSECLVL**

Second-level text is not provided with the first-level text when the messages are printed at the end of the listing.

***SECLVL**

Second-level text is provided with the first-level text when the messages are printed at the end of the listing.

Event File Creation Option

***NOEVENTF**

The compiler does not produce an event file for the CoOperative Development Environment for i5/OS (CODE for i5/OS).

***EVENTF**

The compiler produces an event file that can be used by the CODE for i5/OS product. The event file is created as a member in the file EVFEVENT in your object library. The CODE for i5/OS product uses this file to offer error feedback integrated with the CODE for i5/OS editor. This value is normally specified by the CODE for i5/OS product on your behalf.

Top

Include file (INCFILE)

Specifies the source file containing the members to be included.

Note: If the coded character set identifier (CCSID) of the source file is different than the CCSID of the primary source file specified for the **Source file (SRCFILE)** parameter, the CCSID is changed to the CCSID of the primary source file. The CCSID must be the same for all source members used to create the object.

Single values

*SRCFILE

The include file is the same file as the file specified for the SRCFILE parameter.

Qualifier 1: Include file

name Specify the name of the source file containing the members to be included.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the job is used to locate the source file. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library where the source file is located.

Top

Character identifier (CHRID)

Specifies whether character identifier (graphic character set and code page) of the dialog variables of the panel group is changed when the panel group is displayed.

Single values

*DEV

No change occurs. The character identifier of the dialog variables and the panel group is the same as the character identifier of the device.

*SYSVAL

The character identifier of the dialog variables is changed to the default QCHRID system value for the device. The character identifier of the panel group is the same as the character identifier of the device.

*JOBCCSID

The character identifier of the dialog variables is changed from the CCSID of the job to the character identifier of the device. The character identifier of panel group is changed from the CCSID of the source file on the SRCFILE parameter to the character identifier of the device.

*CHRIDCTL

The system checks the CHRIDCTL job attribute to determine whether to use *JOBCCSID or *DEV on the CHRID parameter for this panel group.

Element 1: Graphic character set

integer

Specify the graphic character set to be used. Valid values range from 1 through 32767.

Element 2: Code page

integer

Specify the code page to be used. Valid values range from 1 through 32767.

Note: Conversion may be necessary depending on the character identifier of the work station or printer.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

***LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

***CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Replace (REPLACE)

Specifies whether an existing panel group of the same name in the specified library is replaced.

Note: The panel group cannot be replaced if it is in use by this job or another job.

***YES** The existing panel group is replaced by moving it to the system library QRPLOBJ.

***NO** The existing panel group is not replaced. If such a panel group exists, the create operation fails.

Top

Examples

```
CRTPNLGRP  PNLGRP(PAYLIB/PAYROLL)
           SRCFILE(QPNLSRC)  OPTION(*SECLVL)
```


This command creates a panel group named PAYROLL in library PAYLIB, uses source file QPNLSRC in the library list, and prints the second-level message text in the listing.

[Top](#)

Error messages

*ESCAPE Messages

CPF5A02

Panel group &1 not created in library &2.

[Top](#)

Create Printer File (CRTPRTF)

Where allowed to run: All environments (*ALL)
 Threadsafte: No

Parameters
 Examples
 Error messages

The Create Printer File (CRTPRTF) command creates a printer device file from the information specified on this command and, optionally, from the data description specifications (DDS) contained in a source file.

A printer device file is used to send records to a printer device. The printer device file identifies the printer device used and the spooling requirements; it does not contain data.

Top

Parameters

Keyword	Description	Choices	Notes
FILE	File	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: File	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
SRCFILE	Source file	Single values: *NONE Other values: <i>Qualified object name</i>	Optional, Positional 2
	Qualifier 1: Source file	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
SRCMBR	Source member	<i>Name, *FILE</i>	Optional, Positional 3
GENLVL	Generation severity level	0-30, 20	Optional
FLAG	Flagging severity level	0-30, 0	Optional
DEV	Device	<i>Element list</i>	Optional
	Element 1: Printer	<i>Name, *JOB, *SYSVAL</i>	
DEVTYPE	Printer device type	*SCS, *IPDS, *LINE, *AFPDSLIN, *USERASCII, *AFPDS	Optional
IGCDTA	User specified DBCS data	*NO, *YES	Optional
IGCEXNCHR	DBCS extension characters	*YES, *NO	Optional
TEXT	Text 'description'	<i>Character value, *SRCMBRTXT, *BLANK</i>	Optional
OPTION	Source listing options	Values (up to 4 repetitions): *SRC, *NOSRC, *SOURCE, *NOSOURCE, *LIST, *NOLIST, *SECLVL, *NOSECLVL, *EVENTF, *NOEVENTF	Optional, Positional 4
PAGESIZE	Page size	<i>Element list</i>	Optional
	Element 1: Length—lines per page	0.001-255.0, 66	
	Element 2: Width—positions per line	0.001-378.0, 132	
	Element 3: Measurement method	*ROWCOL, *UOM	
LPI	Lines per inch	6, 6.0, 3.0, 4.0, 7.5, 7.5, 8.0, 9.0, 12.0	Optional
CPI	Characters per inch	10, 10.0, 5.0, 12.0, 13.3, 13.3, 15.0, 16.7, 16.7, 18.0, 20.0	Optional

Keyword	Description	Choices	Notes
FRONTMGN	Front margin	Single values: *DEVD Other values: <i>Element list</i>	Optional
	Element 1: Offset down	0.0-57.79	
	Element 2: Offset across	0.0-57.79	
BACKMGN	Back margin	Single values: *FRONTMGN , *DEVD Other values: <i>Element list</i>	Optional
	Element 1: Offset down	0.0-57.79	
	Element 2: Offset across	0.0-57.79	
OVRFLW	Overflow line number	1-255, 60	Optional
FOLD	Fold records	*NO , *YES	Optional
RPLUNPRT	Unprintable character action	Single values: *NO Other values: <i>Element list</i>	Optional
	Element 1: Replace character	*YES	
	Element 2: Replacement character	X'40'-X'FE', *BLANK	
ALIGN	Align page	*NO , *YES	Optional
CTLCHAR	Control character	*NONE , *FCFC , *MACHINE	Optional
CHLVAL	Channel values	Single values: *NORMAL Other values (up to 12 repetitions): <i>Element list</i>	Optional
	Element 1: Channel	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	
	Element 2: Line number for channel	<i>Element list</i>	
	Element 1: Line	1-255	
FIDELITY	Fidelity	*CONTENT , *ABSOLUTE	Optional
PRTQLTY	Print quality	*STD , *DEVD , *DRAFT , *NLQ , *FASTDRAFT	Optional
FORMFEED	Form feed	*DEVD , *AUTOCUT , *CONT , *CUT , *CONT2	Optional
DRAWER	Source drawer	1-255, 1 , *E1 , *FORMDF	Optional
OUTBIN	Output bin	1-65535, *DEVD	Optional
FONT	Font	Single values: *CPI , *DEVD Other values: <i>Element list</i>	Optional
	Element 1: Identifier	<i>Character value</i> , 2, 002, 3, 003, 5, 005, 8, 008, 10, 010, 11, 011, 12, 012, 13, 013, 18, 018, 19, 019, 20, 020, 21, 021, 25, 025, 26, 026, 30, 030, 31, 031, 36, 036, 38, 038, 39, 039, 40, 040, 41, 041, 42, 042, 43, 043, 44, 044, 46, 046, 49, 049, 50, 050, 51, 051, 52, 052, 55, 055, 61, 061, 62, 062, 63, 063, 64, 064, 66, 066, 68, 068, 69, 069, 70, 070, 71, 071, 72, 072, 74, 074, 75, 075, 76, 076, 78, 078, 80, 080, 84, 084, 85, 085, 86, 086, 87, 087, 91, 091, 92, 092, 95, 095, 96, 096, 98, 098, 99, 099, 101, 102, 103, 109, 110, 111, 112, 154, 155, 157, 158, 159, 160, 162, 163, 164, 167, 168, 173, 174, 175, 178, 179, 180, 181, 182, 183, 186, 187, 188, 189, 190, 191, 194, 195, 204, 205, 211, 212, 221, 222, 223, 225, 226, 229, 230, 232, 233, 234, 244, 245, 247, 248, 249, 252, 253, 254, 255, 256, 258, 259, 279, 281, 282, 285, 290, 300, 304, 305, 306, 307, 318, 319, 400, 404, 416, 420, 424, 428, 432, 434, 435, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 1051, 1053, 1056, 1351, 1653, 1803, 2103, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 4407, 4427, 4535, 4919, 4939, 5047, 5067, 5687, 5707, 5815, 5835, 5943, 6199, 6219, 6327, 6347, 8503, 8523, 8631, 8651, 8759, 8779, 8887, 8907, 12855, 12875, 16951, 16971, 17079, 17099, 33335, 33355, 33463, 33483, 33591, 33601, 33719, 33729, 34103, 34123, 34231, 34251, 37431, 41783, 41803	
	Element 2: Point size	0.1-999.9, *NONE	

Keyword	Description	Choices	Notes
CHRID	Character identifier	Single values: <u>*DEV</u> D, *SYSVAL, *JOBCCSID, *CHRIDCTL Other values: <i>Element list</i>	Optional
	Element 1: Graphic character set	<i>Integer</i>	
	Element 2: Code page	<i>Integer</i>	
DECfmt	Decimal format	*FILE, <u>*JOB</u>	Optional
FNTCHRSET	Font character set	Single values: <u>*FONT</u> Other values: <i>Element list</i>	Optional
	Element 1: Character set	<i>Qualified object name</i>	
	Qualifier 1: Character set	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <u>*LIBL</u> , *CURLIB	
	Element 2: Code page	<i>Qualified object name</i>	
	Qualifier 1: Code page	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <u>*LIBL</u> , *CURLIB	
	Element 3: Point size	0.1-999.9, <u>*NONE</u>	
CDEFNT	Coded font	Single values: <u>*FNTCHRSET</u> Other values: <i>Element list</i>	Optional
	Element 1: Coded font	<i>Qualified object name</i>	
	Qualifier 1: Coded font	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <u>*LIBL</u> , *CURLIB	
	Element 2: Point size	0.1-999.9, <u>*NONE</u>	
TBLREFCHR	Table Reference Characters	*YES, <u>*NO</u>	Optional
PAGDFN	Page definition	Single values: <u>*NONE</u> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Page definition	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
FORMDF	Form definition	Single values: <u>*NONE</u> , *DEV D Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Form definition	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
AFPCHARS	AFP Characters	Single values: <u>*NONE</u> Other values (up to 4 repetitions): <i>Character value</i>	Optional
PAGRIT	Degree of page rotation	<u>*AUTO</u> , *DEV D, *COR, 0, 90, 180, 270	Optional
MULTIUP	Pages per side	1-4, <u>1</u>	Optional
REDUCE	Reduce output	<u>*TEXT</u> , *NONE	Optional
PRTTXT	Print text	<i>Character value</i> , <u>*JOB</u> , *BLANK, X''	Optional
JUSTIFY	Hardware justification	<u>0</u> , 50, 100	Optional
DUPLEX	Print on both sides	<u>*NO</u> , *YES, *TUMBLE, *FORMDF	Optional
UOM	Unit of measure	<u>*INCH</u> , *CM	Optional
FRONTOVL	Front side overlay	Single values: <u>*NONE</u> Other values: <i>Element list</i>	Optional
	Element 1: Overlay	<i>Qualified object name</i>	
	Qualifier 1: Overlay	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <u>*LIBL</u> , *CURLIB	
	Element 2: Offset down	0.0-57.79, <u>0</u>	
	Element 3: Offset across	0.0-57.79, <u>0</u>	

Keyword	Description	Choices	Notes
BACKOVL	Back side overlay	Single values: *FRONTOVL, *NONE Other values: <i>Element list</i>	Optional
	Element 1: Overlay	<i>Qualified object name</i>	
	Qualifier 1: Overlay	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
	Element 2: Offset down	0.0-57.79, <u>0</u>	
	Element 3: Offset across	0.0-57.79, <u>0</u>	
	Element 4: Constant back	*NOCONSTANT, *CONSTANT	
CVTLINDTA	Convert line data	*NO, *YES	Optional
IPDSPASTHR	IPDS pass through	*DEVVD, *NO, *YES	Optional
USRRSCLIBL	User resource library list	Single values: *DEVVD, *NONE, *JOBLIBL, *CURLIB Other values (up to 4 repetitions): <i>Name</i>	Optional
CORNERSTPL	Corner staple	*NONE, *BOTRIGHT, *TOPRIGHT, *TOPLEFT, *BOTLEFT, *DEVVD	Optional
EDGESTITCH	Edge stitch	Single values: *NONE Other values: <i>Element list</i>	Optional
	Element 1: Reference edge	*BOT, *RIGHT, *TOP, *LEFT, *DEVVD	
	Element 2: Reference edge offset	0.0-57.79, *DEVVD	
	Element 3: Number of staples	1-122, *DEVVD	
	Element 4: Staple offsets	Single values: *DEVVD Other values (up to 122 repetitions): 0.0-57.79	
SADLSTITCH	Saddle stitch	Single values: *NONE Other values: <i>Element list</i>	Optional
	Element 1: Reference edge	*TOP, *LEFT, *DEVVD	
	Element 2: Number of staples	1-122, *DEVVD	
	Element 3: Staple offsets	Single values: *DEVVD Other values (up to 122 repetitions): 0.0-57.79	
FNTRSL	Font resolution for formatting	*DEVVD, *SEARCH, 240, 300	Optional
DFRWRT	Defer write	*YES, *NO	Optional
SPOOL	Spool the data	*YES, *NO	Optional
OUTQ	Spooled output queue	Single values: *JOB, *DEV Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Spooled output queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
FORMTYPE	Form type	<i>Character value</i> , *STD	Optional
COPIES	Copies	1-255, <u>1</u>	Optional
EXPDATE	Expiration date for file	<i>Date</i> , *NONE, *DAYS	Optional
DAYS	Days until file expires	1-366	Optional
PAGERANGE	Page range to print	<i>Element list</i>	Optional
	Element 1: Starting page	<i>Integer</i> , <u>1</u> , *ENDPAGE	
	Element 2: Ending page	<i>Integer</i> , *END	
MAXRCDS	Max spooled output records	1-999999, <u>100000</u> , *NOMAX	Optional
FILESEP	File separators	0-9, <u>0</u>	Optional
SCHEDULE	Spooled output schedule	*FILEEND, *IMMED, *JOBEND	Optional
HOLD	Hold spooled file	*NO, *YES	Optional

Keyword	Description	Choices	Notes
SAVE	Save spooled file	*NO, *YES	Optional
OUTPTY	Output priority (on OUTQ)	*JOB, 1, 2, 3, 4, 5, 6, 7, 8, 9	Optional
USRDTA	User data	Character value, *SOURCE	Optional
SPLFOWN	Spool file owner	*CURUSRPRF, *JOB, *CURGRPPRF, *JOBGRPPRF	Optional
USRDFNOPT	User Defined Option	Single values: *NONE Other values (up to 4 repetitions): Character value	Optional
USRDFNDDTA	User Defined Data	Character value, *NONE	Optional
USRDFNOBJ	User Defined Object	Single values: *NONE Other values: Element list	Optional
	Element 1: Object	Qualified object name	
	Qualifier 1: Object	Name	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
	Element 2: Object type	*DTAARA, *DTAQ, *FILE, *PSFCFG, *USRIDX, *USRQ, *USRSPC	
IGCCHRRIT	DBCS character rotation	*NO, *YES	Optional
IGCCPI	DBCS characters per inch	*CPI, *CONDENSED, 5, 6, 10	Optional
IGCSOSI	DBCS SO/SI spacing	*YES, *NO, *RIGHT	Optional
IGCCDEFNT	DBCS coded font	Single values: *SYSVAL Other values: Element list	Optional
	Element 1: DBCS coded font	Qualified object name	
	Qualifier 1: DBCS coded font	Name	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
	Element 2: Point size	0.1-999.9, *NONE	
TOSTMF	To stream file	Path name, *NONE	Optional
WSCST	Workstation customizing object	Single values: *NONE, *PDF Other values: Qualified object name	Optional
	Qualifier 1: Workstation customizing object	Name	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
WAITFILE	Maximum file wait time	Integer, *IMMED, *CLS	Optional
SHARE	Share open data path	*NO, *YES	Optional
LVLCHK	Record format level check	*YES, *NO	Optional
AUT	Authority	Name, *LIBCRTAUT, *ALL, *CHANGE, *EXCLUDE, *USE	Optional
REPLACE	Replace file	*YES, *NO	Optional

Top

File (FILE)

Specifies the printer device file to be created.

If the file is used in a high-level language program, the file name should be consistent with the naming rules of that language; otherwise, the file must be renamed in the program itself.

This is a required parameter.

Qualifier 1: File

name Specify the name of the printer device file.

Qualifier 2: Library

*CURLIB

The current library for the job is used to locate the printer device file. If no library is specified as the current library for the job, QGPL is used.

name Specify the library where the file is located.

Top

Source file (SRCFILE)

Specifies the source file (if one is specified) containing the data description specifications (DDS) source file used to create the printer device file. More information on the specifications that can be made in DDS is in the Printing category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/> and the DDS topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Single values

*NONE

There is no DDS source file for this printer device file.

Qualifier 1: Source file

name Specify the name of the source file that contains the DDS for this printer file.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library to be searched.

Top

Source member (SRCMBR)

Specifies the source file member that contains the data description specifications (DDS) source for the printer file being created.

*FILE The source file member name is the same as the name specified for the **File (FILE)** parameter.

name Specify the name of the member in the source file.

Top

Generation severity level (GENLVL)

Specifies the severity level of data description specifications (DDS) messages that cause file creation to fail. This parameter applies only to messages created while processing DDS source files.

20 If errors occur in the DDS source file processing with a severity level greater than or equal to 20, the file is not created.

- 0-30** Specify the desired severity level value. If 0 is specified, the file is not created. The value specified must be greater than or equal to the value specified for the **Flagging severity level (FLAG)** parameter.

Top

Flagging severity level (FLAG)

Specifies the minimum severity level of messages to be listed.

0 All messages are listed.

- 0-30** Specify a number indicating the minimum severity of messages to be listed. The value specified must be greater than or equal to the value specified for the **Generation severity level (GENLVL)** parameter.

Top

Device (DEV)

Specifies the name of a printer device description. For nonspoiled output, this identifies the printer device used to produce the printed output. For spooled output, the file is placed on the output queue determined by the OUTQ parameter. If OUTQ(*DEV) is used, the file is placed on the output queue with the same name as the device.

***JOB** The printer associated with the job is the printer device.

***SYSVAL**

The printer device specified by the system value QPRTDEV at the time the job is started is the printer device.

name Specify the name of the printer device used with the printer file.

Top

Printer device type (DEVTYPE)

Specifies the type of data stream created for the printer device file.

***SCS** An SNA character stream (SCS) is created. This parameter must be specified when using the 3287, 3812 SCS, 3816 SCS, 4214, 4234 SCS, 4245, 5219, 5224, 5225, 5256, 5262, 6252, or 6262 work station printers.

- If *SCS is specified and the spooled printer file is directed to an IPDS* printer, the SCS printer file is converted to emulate an IPDS printer file. More information is in the Printing category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Double-Byte Character Set Consideration

When using the 5553 and 5583 DBCS-capable printers, DEVTYPE(*SCS) must be specified. An SNA Character Stream (SCS) data stream is created.

***IPDS** An Intelligent Printer Data Stream (IPDS) is created. This parameter can be specified when using an IPDS printer.

***USERASCII**

An ASCII data stream is placed on a spooled output queue. You are responsible for placing the entire hexadecimal data stream in the buffer, since the System i5 does not change or validate the values that are passed.

***AFPDS**

An advanced function print data stream (AFPDS) is created. Some systems refer to this data stream as MODCA-P.

***AFPDSLIN**

Mixed data (line data and AFPDS data) is created. This value can be specified when using any printer supported by PSF. The printer must be configured with AFP(*YES).

***LINE** Line data is created. This value can be specified when using any printer supported by PSF. The printer must be configured with AFP(*YES).

Top

User specified DBCS data (IGCDTA)

Specifies, for program-described files, whether the file processes double-byte character set (DBCS) data. Specifies, for externally described files, the DBCS attributes of the file.

For program-described files

***NO** The file does not process double-byte character set (DBCS) data.

***YES** The file processes double-byte character set (DBCS) data.

For externally-described files

***NO** The double-byte character set (DBCS) attributes of the file are specified in the field descriptions.

***YES** DBCS attributes in addition to those specified in the field descriptions include: (1) putting the data description specification (DDS) keyword for alternative data type (IGCALTTYP) into effect, and (2) identifying DBCS attributes of fields, values, or messages.

Top

DBCS extension characters (IGCEXNCHR)

Specifies whether the system processes double-byte character set (DBCS) extended characters. When processing DBCS extended characters, the device requires the assistance of the system. The system must tell the device what the character looks like before the device can display or print the character. Extended characters are stored in a DBCS font table, not in the DBCS device. Extended character processing is a function of the operating system that is required to make characters stored in a DBCS font table available to a DBCS device.

***YES** The system processes DBCS extended characters.

***NO** The system does not process DBCS extended characters; it prints extended characters as the undefined character.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

***SRCMBRTXT**

If the source file is a database file, the text is taken from the source file member used to create the file. If the source file is an inline file or a device file, the text is blank.

***BLANK**

No text is specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Source listing options (OPTION)

Specifies the type of output produced when the file is created. A maximum of four of the following values can be specified in any order on this parameter. If neither or both of the values on an option are specified, the first value listed for the option is used.

Note: The first values on each option are similar to, but are not actually default values, and therefore, cannot be changed with the CHGCMDDFT (Change Command Default) command.

Source Listing Option

***SRC or *SOURCE**

A printout of the source statements, including a list of errors, is created.

***NOSRC or *NOSOURCE**

No printout of the source statements is created unless errors are detected. If errors are detected, they are listed along with the keyword or record format that caused the error.

Program Listing Option

***LIST** An expanded source printout is created, showing a detailed list of the file specifications and the references to other file descriptions.

***NOLIST**

The expanded source printout is not created.

Second-Level Message Text Option

***NOSECLVL**

The messages section of the data description specifications (DDS) printout does not contain the online help information for messages issued during DDS processing.

***SECLVL**

The online help information appears in the DDS printout.

Event File Creation Option

***NOEVENTF**

The compiler does not produce an event file for the CoOperative Development Environment for i5/OS (CODE for i5/OS) product.

***EVENTF**

The compiler produces an event file that can be used by the CODE for i5/OS product. The event file is created as a member in the file EVFEVENT in your object library. The CODE for i5/OS product uses this file to offer error feedback integrated with the CODE for i5/OS editor. This value is normally specified by the CODE for i5/OS product on your behalf.

Top

Page size (PAGESIZE)

Specifies the length and width of the printer forms used by this device file. The length is specified in lines per page or by the units specified for the UOM parameter. The width is specified in print positions (characters) per line or by the units specified for the **Unit of measure (UOM)** parameter.

The page size must be specified with reference to the way the data is printed on the page. For example, if using 8.5 inch wide by 11.0 inch long forms and printing at 6 lines per inch with a 10-pitch font, specify PAGESIZE(66 85) PAGRTT(0). However, to rotate the page, specify the page size for an 11.0 inch wide by 8.5 inch long page and enter PAGESIZE(51 110) PAGRTT(90).

Note: Specify PAGRTT(*AUTO) or PAGRTT(*DEVD) and PRTQLTY(*DRAFT) on this command to enable automatic reduction or rotation if the data does not fit on the paper.

Specify PAGRTT(*COR) on this command to enable automatic reduction whether or not the data fits on the paper.

Element 1: Length—lines per page

66 The page length is 66 print lines per page.

0.001-255.0

Specify the page length that is used by this printer file. The value specified must not exceed the actual length of the forms used.

Element 2: Width—positions per line

132 The page width is 132 printed characters per line.

0.001-378.0

Specify the page width that is used by this printer file. The value specified must not exceed the actual width of the forms used.

Element 3: Measurement method

*ROWCOL

Page length and page width are measured as numbers of rows and columns.

*UOM

Page length and page width are measured in the units specified for the UOM parameter.

Top

Lines per inch (LPI)

Specifies the line spacing setting on the printer, in lines per inch, to be used by this device file.

The line spacing on the 5256 printer must be set manually. When the lines per inch (LPI) value on this parameter changes (from the value on the previous printer file), an inquiry message is sent to the message queue associated with the printer that requests a change to the LPI value.

The line spacing on the 4214, 4224, 4230, 4234, 4245, and 5262 Printers is set by a print command. These also allow setting the lines per inch spacing on the control panel of the printer. The lines per inch value must not be set at the printer. If the LPI value is overridden at the control panel, the system overrides the value set with the LPI value of the next printer file received.

6 The line spacing on the printer is 6 lines per inch.

- 3 The line spacing on the printer is 3 lines per inch. This value is valid only for double-byte character set (DBCS) printers.
- 4 The line spacing on the printer is 4 lines per inch.
- 7.5 The line spacing on the printer is 7.5 lines per inch. This value is valid only for double-byte character set (DBCS) printers.
- 8 The line spacing on the printer is 8 lines per inch.
Note: When printing double-byte character set (DBCS) data for a file specified with LPI(8), use double spacing. Otherwise, the DBCS data does not print correctly. Alphanumeric data, however, prints correctly in single spacing when LPI(8) is specified.
- 9 The line spacing on the printer is 9 lines per inch.
- 12 The line spacing on the printer is 12 lines per inch.

Top

Characters per inch (CPI)

Specifies the printer character density, in characters per inch.

For the printers that support fonts, the value specified in the font special value implies the CPI. If FONT(*CPI) is specified, the font used is based on the CPI value. The following diagram describes the default font ID for each CPI value:

CPI	FONT ID DEFAULT
5	245
10	011
12	087
13.3	204
15	222
16.7	400
18	252
20	281

- 10 Character density is 10 characters per inch.
- 5 Character density is 5 characters per inch.
- 12 Character density is 12 characters per inch.
- 13.3 Character density is 13.3 characters per inch. This value is valid only for double-byte character set (DBCS) printers.
- 15 Character density is 15 characters per inch.
- 16.7 Character density is 16.7 characters per inch.
- 18 Character density is 18 characters per inch. This value is valid only for double-byte character set (DBCS) printers.
- 20 Character density is 20 characters per inch. This value is valid only for double-byte character set (DBCS) printers.

Top

Front margin (FRONTMGN)

Specifies the offset, down and across, of the origin from the edge on the front side of the paper. The offsets are in the units of measure specified on the UOM parameter. This parameter can only be used for printer files with DEVTYPE(*AFPDS) specified.

Single values

*DEV

The no-print border from the printer is used to place the text on the page when printing to a printer configured with AFP(*YES). A margin of 0 is used for IPDS printers without a no-print border, or which are configured with AFP(*NO).

Element 1: Offset down

0.0-57.79

Specify the offset of the origin from the top of the page. If *CM (centimeter) is specified for the **Unit of measure (UOM)** parameter, valid values range from 0 through 57.79. If *INCH is specified for the UOM parameter, valid values range from 0 through 22.75.

Element 2: Offset across

0.0-57.79

Specify the offset of the origin from the left side of the page. If *CM (centimeter) is specified for the **Unit of measure (UOM)** parameter, valid values range from 0 through 57.79. If *INCH is specified for the UOM parameter, valid values range from 0 through 22.75.

Top

Back margin (BACKMGN)

Specifies the offset, down and across, of the origin from the edge on the back side of the paper. The offsets are in the units of measure specified on the UOM parameter. This parameter can only be used for printer files with DEVTYPE(*AFPDS) specified.

Single values

*FRONTMGN

The offsets specified for the **Front margin (FRONTMGN)** parameter are used.

*DEV

The no-print border from the printer is used to place the text on the page when printing to a printer configured with AFP(*YES). A margin of 0 is used for IPDS printers without a no-print border, or which are configured with AFP(*NO).

Element 1: Offset down

0.0-57.79

Specify the offset of the origin from the top of the page. If *CM (centimeter) is specified for the **Unit of measure (UOM)** parameter, valid values range from 0 through 57.79. If *INCH is specified for the UOM parameter, valid values range from 0 through 22.75.

Element 2: Offset across

0.0-57.79

Specify the offset of the origin from the left side of the page. If *CM (centimeter) is specified for the **Unit of measure (UOM)** parameter, valid values range from 0 through 57.79. If *INCH is specified for the UOM parameter, valid values range from 0 through 22.75.

Overflow line number (OVRFLW)

Specifies the line number on the page at which printer overflow to a new page occurs. Overflow is signaled when the specified line number becomes the current line, whether or not printing has occurred on that line.

60 After line 60 has been reached or printed, the printer overflows to a new page.

1-255 Specify the overflow line number. The value specified must not exceed the page length specified in the **Page size (PAGESIZE)** parameter. Margins specified for the printer file are ignored when determining overflow.

Fold records (FOLD)

Specifies whether all positions in a record are printed when the record length is greater than the page width. If *IPDS is specified on the **Printer device type (DEVTYPE)** parameter, this parameter is ignored.

When folding is specified and a record exceeds the page width, any portion of the record that cannot be printed on the first line continues (is folded) on the next line or lines until the entire record has been printed.

The FOLD parameter is ignored under the following conditions:

- When DEVTYPE(*SCS) is not specified.
- When printing through OfficeVision.
- When in the S/36 execution environment.

Double-Byte Character Set Considerations

The system ignores this parameter when printing double-byte character set (DBCS) files. The system assumes that DBCS records fit on a printed line. If the record exceeds the page width, the system continues printing the record on the next line.

***NO** Records are not folded; if a record is longer than the page width, only the first part of the record that fits on one line is printed.

***YES** Records whose length is greater than the page width are folded on the following lines.

Unprintable character action (RPLUNPRT)

Specifies whether *unprintable* characters are replaced and which substitution character (if any) is used for unprintable characters. An *unprintable* character is a character that the printer is not able to print.

Double-Byte Character Set Considerations

For double-byte character set (DBCS) data, an unprintable character is one that cannot be processed. When using DBCS-capable printers, consider the following:

- If IGCEXNCHR(*YES) is also specified, the system replaces unprintable extension characters with DBCS underline characters. There may be some cases in which the system is unable to replace an unprintable character with a DBCS underline character. In this case, the undefined character is printed.

- If IGCEXNCHR(*NO) is also specified, the device replaces all extension characters with the undefined character. Choosing a blank as the replacement character for alphanumeric characters might improve system performance.

More information is in the Printing category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Single values

***NO** Unprintable characters are not replaced. When an unprintable character is detected, a message is sent to the program.

Element 1: Replace character

***YES** Unprintable characters are replaced. The program is not notified when unprintable characters are detected.

Element 2: Replacement character

***BLANK**

A blank (X'40') is used as the substitution character when an unprintable character is detected.

X'40'-X'FE'

Specify the replacement character that is used each time an unprintable character is detected. This character is used only if *YES is also specified in this parameter. Valid values range from 40 through 99 and A1 through FE.

Top

Align page (ALIGN)

Specifies whether each page must be aligned in the printer before printing is started. If ALIGN(*YES) and SPOOL(*NO) are specified, and forms alignment is required, the system sends a message to the message queue specified in the printer device description and waits for a reply to the message. When spool (*YES) is specified on the CRTPRTF command and ALIGN(*FILE) is specified on the STRPRTWTR command, then this parameter is used to determine whether an alignment message is sent by the system.

This parameter is ignored when cut sheets are used (spooled and direct output). Page alignment can be done only for text-only files. Page alignment cannot be done for print jobs containing graphics or bar codes.

***NO** Page alignment is not required.

***YES** Page alignment is required before the output is printed.

Top

Control character (CTLCHAR)

Specifies whether the printer device file supports input with print control characters.

***NONE**

No print control characters are passed in the printed data.

***FCFC** The first character of every record contains an American National Standards Institute (ANSI) forms control character. If *FCFC is specified, the record length must include one position for the first-character forms-control code, which is passed in the printed data.

*MACHINE

The first character of every record contains a machine code control character. If *MACHINE is specified, the record length must include one extra position for the first character forms control code. This value is not valid for externally described printer files.

If TBLREFCHR(*YES) is also specified, then the record length must include two extra positions for the control character and the table reference character.

Top

Channel values (CHLVAL)

Specifies a list of channel numbers with their assigned line numbers. Use this parameter only if *FCFC is specified for the **Control character (CTLCHAR)** parameter.

Single values

*NORMAL

The default values for skipping to channel identifiers are used. The default values are found in the following table:

Code	Action before Printing a Line
' '	Space one line (blank code)
0	Space two lines
-	Space three lines
+	Suppress space
1	Skip to line 1
2-11	Space one line
12	Skip to overflow line (OVRFLW parameter)

Element 1: Channel

1-12 Specify an American National Standard channel number to be associated with a corresponding 'skip to' line number. Valid values for this parameter range from 1 through 12, corresponding to channels 1 through 12. The CHLVAL parameter associates the channel number with a page line number. For example, if you specify CHLVAL(2 20), channel identifier 2 is allocated with line number 20; therefore, if you place the forms-control 2 in the first position of a record, the printer skips to line 20 before printing the line.

Note: If the printer stops and the next record processed has a channel value forms-control number that is the same value as the line number the printer is on, the printer advances to that value (line number) on the next page. However, if the printer is positioned at the top of the page (line number one) and the channel value forms-control value is associated with line number one, the printer does not advance to a new page.

If no line number is specified for a channel identifier, and that channel identifier is encountered in the data, a default of 'space one line' before printing is used. Each channel number can be specified only once.

Element 2: Line number for channel

1-255 Specify the line number assigned for the channel number in the same list. Valid line numbers range from 1 through 255. If no line number is assigned to a channel number, and that channel number is encountered in the data, a default of 'space one line' before printing is used.

Top

Fidelity (FIDELITY)

Specifies whether printing continues when print errors are found for printers configured with AFP(*YES).

*CONTENT

Printing continues when errors are found.

*ABSOLUTE

Printing stops when errors are found.

Top

Print quality (PRTQLTY)

Specifies, for the 3812 SCS, 3816 SCS, 4214, 4224, 4230, 4234, and 5219 printers, the quality of print produced.

Some non-impact IPDS printers support a toner miser feature. This feature is device dependent. Specifying *DRAFT for the PRTQLTY value will activate the toner miser feature on those printers that support it.

For the 5219 Printer, different print qualities are produced by varying the speed at which the print ribbon advances. Quality mode (*STD or *NLQ) results in normal print ribbon advancement. In draft mode (*DRAFT), the ribbon advances at a rate of one-third the distance it advances in quality mode. The 5219 Printer has a conserve ribbon switch that overrides the value of *DRAFT specified by this parameter.

For the 3812 SCS and 3816 SCS Printers, the automatic hardware selection of computer output reduction printing selected through soft switches on the printers occurs only when *DRAFT is specified for PRTQLTY and PAGRTT is *DEVVD. If PAGRTT(*COR) is specified, the PRTQLTY parameter does not affect the printed output.

For the 4224, 4230, and 4234 Printers, standard print quality is produced by varying the density of the dot matrix pattern used to create printable characters. Standard mode (*STD) is the normal mode. Quality mode (*NLQ) requires multiple passes by the printer to produce a line of data. Draft mode (*DRAFT) results in high-speed printing.

For the 4214 printer, only draft (*DRAFT), quality (*NLQ), and device default (*DEVVD) modes are supported. Other values are set to quality (*NLQ) mode.

More information about the valid values for the 4214, 4224, 4230, 4234, and 5219 Printers is in the Printer Device Programming Manual.

Notes:

- For the 4214 Printer, quality mode (*STD or *NLQ) is only supported for 10 and 12 characters per inch. If PRTQLTY(*STD or *NLQ) and 5, 15, or 16.7 characters per inch is specified, the data is printed in draft mode.
- For the 4234 Printer, only a limited character set (62 characters) is supported when PRTQLTY(*DRAFT) is specified. A description of the character set supported with draft print quality is in the 4234 Printer Operator's Guide.
- For the 4224 and 4230 printers, the fonts supported are not available for all three print qualities. The OCR-A and OCR-B fonts are supported only with PRTQLTY(*NLQ). The Courier and Essay fonts are available only with PRTQLTY(*NLQ) and PRTQLTY(*STD). The Gothic font is available only with PRTQLTY(*DRAFT) or PRTQLTY(*FASTDRAFT). If there is a mismatch between the print quality and the font selected, the font is changed to match the print quality.

- Specify PAGRTT(*DEV D) and PRTQLTY(*DRAFT) on this command to enable automatic rotation if the data does not fit on the paper.

Top

Form feed (FORMFEED)

Specifies the form feed attachment used by this printer device file.

*DEV D

The forms are fed into the printer as specified in the printer device description.

*CONT

Continuous forms are used by the printer. The tractor feed attachment must be on the printer device.

*CONT2

Continuous forms are used by the printer. The form is fed from the secondary tractor feed attachment. The secondary tractor feed attachment must be on the printer device.

*CUT Single-cut sheets are used by the printer. Each sheet must be manually loaded.

*AUTOCUT

Single-cut sheets are semiautomatically fed into the printer. The sheet-feed attachment must be on the printer device.

Top

Source drawer (DRAWER)

Specifies the source drawer used when cut sheets are fed into the printer (specified by FORMFEED(*AUTOCUT)).

1 The paper is fed from the first drawer on the sheet-feed paper handler.

*E1 The envelopes are fed from the envelope drawer on the sheet feed paper handler.

*FORMDF

The paper is fed from the source drawer specified in the form definition. If a form definition is not specified, then source drawer 1 is used.

1-255 Specify the drawer from which the paper is fed.

Top

Output bin (OUTBIN)

Specifies the destination of the output on printers capable of multiple output bins.

*DEV D

The destination of the output is the device default output bin.

1-65535

Specify the output bin for the destination of the output.

Top

Font identifier (FONT)

Specifies the font identifier and point size used with this printer device file.

More information about the valid font identifiers, the display value, the characters per inch value implied with each font style, a description of each font style, and whether the font is supported on a particular printer is in the Printer Device Programming Manual..

Note: Some fonts can be substituted by the printer. Consult the various printer reference guides for details.

Single values

***CPI** The identifier of the font with the specified pitch (characters per inch (CPI)) is used.

***DEV**

The font identifier and point size specified in the device description are used.

Element 1: Identifier

identifier

Specify the numeric font identifier to be used with this printer device file.

Element 2: Point size

***NONE**

No point size is specified; the system selects one based on the type of printer used.

0.1-999.9

Specify a point size.

Top

Character identifier (CHRID)

Specifies the character identifier (graphic character set and code page) for the printer file. This parameter allows you to print text that has different character identifier coding. The value specified for this parameter is used to instruct the printer device to interpret the hexadecimal byte string to print the same characters that were intended when the text was created. More information about the character identifier is in the Printing category in the i5/OS Information Center at <http://www.ibm.com/systems/i5/infocenter/>.

Single values

***DEV**

The default value from the **Character identifier (CHRID)** parameter that the device is designed to handle is used. The *DEV value means character selection is normal because the file has the same character identifier as the printer device default.

***SYSVAL**

The value on the **Character identifier (CHRID)** parameter specified for the system on which the application runs is used.

***JOBCCSID**

The character identifier for the printer file is taken from the coded character set identifier (CCSID) of the job.

Note: The *JOBCCSID special value, either specified directly on the CHRID command parameter or on the CHRIDCTL job attribute when the *CHRIDCTL special value is specified for the CHRID command parameter, is not allowed if the file was created on a system at an earlier release level

than V2R3M0. A file created prior to V2R3M0 will not be tagged with a CCSID and cannot be used in combination with the *JOBCCSID support.

***CHRIDCTL**

The system checks the CHRIDCTL job definition attribute to determine whether to use *JOBCCSID or *DEVVD on the CHRID command parameter for this file.

Element 1: Graphic character set

integer

Specify the graphic character set value that matches the printer.

Element 2: Code page

integer

Specify the code page value that matches the printer. Valid values range from 1 through 32767.

Top

Decimal format (DECFMT)

Specifies which decimal format value is used when editing numeric fields with the EDTCDE DDS keyword. The decimal format value determines the use of commas and periods for the decimal position and three digit positional separators on edited fields.

***JOB** Use the decimal format value from the DECFMT job attribute when the file is opened.

***FILE** Use the decimal format value stored with the file when the file was created.

Top

Font character set (FNTCHRSET)

Specifies a downloaded font consisting of a character set and code page. This parameter can only be used for printer files with DEVTYPE(*AFPDS) specified.

Single values

***FONT**

The value specified for the **Font identifier (FONT)** parameter is used.

Element 1: Character set

Qualifier 1: Character set

name Specify the name of the font character set.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is used to locate the font character set. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library where the font character set is located.

Element 2: Code page

Qualifier 1: Code page

name Specify the name of the code page.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the job is used to locate the code page name. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library where the code page object is located.

Element 3: Point size

*NONE

The point size is supplied by the system and is determined by the specified font character set.

0.1-999.9

Specify the point size to be used.

Note: The point size parameter is only used when an outlined font is named, in other cases it is ignored.

Top

Coded font (CDEFNT)

Specifies the coded font that the system uses for single-byte character set (SBCS) printing. This parameter can only be used for printer files with DEVTYPE(*AFPDS) specified.

Single values

*FNTCHRSET

The font specified for the **Font character set (FNTCHRSET)** parameter is used.

Element 1: Coded font

Qualifier 1: Coded font

name Specify the name of the coded font.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is used to locate the coded font object. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library where the coded font object is located.

Element 2: Point size

***NONE**

The point size is supplied by the system and is determined by the specified font character set.

0.1-999.9

Specify the point size to be used.

Note: The point size parameter is only used when an outlined font is named, in other cases it is ignored.

Top

Table Reference Characters (TBLREFCHR)

Specifies whether table reference characters are present in the line data.

***NO** No table reference character is present in line data.

***YES** Table reference characters are present in line data.

If forms control characters are used with the data, the table reference character follows the forms control character but precedes the data bytes. If forms control characters are not used, the table reference character is the first byte of the data record. As with forms control character, if table reference characters are used, every data record must contain a TRC byte.

Top

Page definition (PAGDFN)

Specifies the page definition to be used to format line data.

You can specify a page definition with *LINE, *AFPDSLIN, or *USERASCII data. PSF for i5/OS will convert the line data and page definition to IPDS.

When you specify a page definition on the printer file, some printer file parameters will be ignored when the spooled file is printed by PSF for i5/OS. The following print file parameters will be ignored

- CDEFNT
- CHRID
- CPI
- FNTCHRSET
- FOLD
- FONT
- LPI
- MULTIUP
- PAGESIZE
- PAGRTT
- REDUCE

Single values

*NONE

No page definition is specified.

Because PSF for i5/OS requires a page definition when *LINE or *AFPSDLINE is specified, an inline page definition is built from the print file parameters and passed to PSF for i5/OS when *NONE is specified.

Qualifier 1: Page definition

name Specify the name of the page definition that must exist in the library specified. Valid values range from 1 to 8 characters. Device type *AFPSDLINE, *LINE, or *USERASCII must be specified when using a page definition.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

name Specify the name of the library to be searched.

Top

Form definition (FORMDF)

Specifies the form definition to use when printing the file. A form definition is a resource object that defines the characteristics of the form, including overlays, position of page data on the form, and number of copies of pages and modifications to pages. The form definition is located inline with the file being printed, or in a library.

When you specify a form definition (*DEVDF or form definition name) on the printer file, some printer file parameters will be ignored when the spooled file is printed by PSF for i5/OS. The following print file parameters will be ignored:

- DUPLEX (If *FORMDF specified)
- DRAWER (If *FORMDF specified)
- PAGRTT
- PRTQLTY
- FORMFEED
- FRONTMGN
- BACKMGN
- MULTIUP
- REDUCE
- CORNERSTPL
- EDGESTITCH
- SADLSTITCH

Single values

*NONE

No form definition is used.

Because PSF for i5/OS requires a form definition, an inline form definition is built from the print file parameters and passed to PSF for i5/OS when *NONE is specified.

***DEV D**

The name of the form definition is specified in the printer device description.

Qualifier 1: Form definition

name Specify the name of the form definition that must exist in the library specified. Valid values range from 1 to 8 characters.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

name Specify the name of the library to be searched.

Top

AFP Characters (AFPCHARS)

Specifies one or more AFP characters (coded fonts) to be used with line data and a page definition.

Single values

***NONE**

No AFP characters (coded fonts) specified.

Other values (up to 4 repetitions)

character-value

Specify up to four 4-byte names of coded fonts to be specified with the line data and a page definition. The 4-byte names are concatenated to X0 to identify up to four coded fonts which are to be used when TBLREFCHR is being used within the data.

Top

Degree of page rotation (PAGRTT)

Specifies the degree of rotation of the text on the page with respect to the way the page is loaded into the printer. See the note under the PAGESIZE parameter for directions on specifying page size when rotating the page.

Specify *AUTO or *DEV D for this parameter and PRTQLTY(*DRAFT) on this command to enable automatic rotation if the data does not fit on the paper.

***AUTO**

Indicates that automatic rotation of output is done to fit the printed data on the form. If rotation does not accomplish this, computer output reduction is performed automatically (regardless of the print quality being used). This parameter is valid only for printers supporting rotation.

***COR** Computer output reduction (COR) is used. COR allows printed output intended for a 13.2 inch wide by 11.0 inch long page to be printed on an 11.0 inch wide by 8.5 inch long page.

For computer output reduction printing, the following operations are done for cut-sheet IPDS printers:

- Automatic rotation to *COR is not done if the file contains graphics, bar codes, variable LPI, variable font, variable page rotations, or variable drawer.
- The text is rotated 90 degrees clockwise from the 0 degree rotation position (lower left corner of the first edge loaded into the printer).

Note: For landscape paper on non-impact continuous form printers, the rotation is counter-clockwise from the 0 degree rotation position (upper right corner of the first edge loaded into the printer).

- A top and left margin of 0.5 inches is added to the printed output.
- The 12-pitch fonts are changed to a 15-pitch font and 15-pitch fonts are changed to a 20-pitch font. All other font widths are changed to a 13.3-pitch font, except for the 4028 printer where they are changed to a 15-pitch font.
- Vertical spacing (specified by the LPI parameter) is 70 percent of the normal spacing.
- The page size is set to 8.5 inches wide by 11 inches long.

*DEV D

The operating system sends a device default rotation value to the printer. Page rotation is dependent on your printer's specifications. See your printer or printer emulation documentation to determine how page rotation is affected.

- | | |
|-----|--|
| 0 | No rotation is done. |
| 90 | The text is rotated 90 degrees clockwise. |
| 180 | The text is rotated 180 degrees clockwise. |
| 270 | The text is rotated 270 degrees clockwise. |

Top

Pages per side (MULTIUP)

Specifies, for spooled output only, whether or not multiple pages of output are printed on 1 physical page.

Note: Overlays are not reduced when more than one page is printed on a side.

For more information and examples see the Printing category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

- | | |
|----------|---|
| <u>1</u> | One page of output is printed on one physical sheet of paper. |
| 2 | Two pages of output are printed on 1 physical sheet of paper. |
| 3 | Three pages of output are printed on 1 physical sheet of paper. |
| 4 | Four pages of output are printed on 1 physical sheet of paper. |

Top

Reduce output (REDUCE)

Specifies whether or not to reduce the output when doing multiple up printing.

For more information and examples see the Printing category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

***TEXT**

The text output is reduced when doing multiple up printing.

***NONE**

The output is not reduced when doing multiple up printing.

Top

Print text (PRTTXT)

Specifies the text that is printed at the bottom of each page of printed output and on separator pages.

***JOB** The value from the current job is used.

***BLANK**

No text is printed.

character-value

Specify no more than 30 characters of text, enclosed in apostrophes.

Top

Hardware justification (JUSTIFY)

Specifies the printing positions of the characters on a page to control the degree of print alignment at the right-hand margin. Justification is done to the record length on the printer file opened.

Note: The JUSTIFY parameter is supported only on the 3812 SCS, 3816 SCS, and 5219 Printers.

0 No justification occurs.

50 Spaces are added to the blanks in the text so that the right margin is more closely aligned but not flush.

100 The text is expanded by spaces (added where the blanks already exist) until the right margin is flush.

Top

Print on both sides (DUPLEX)

Specifies whether output is printed on one side or two sides of the paper.

***NO** The output is printed on one side of the paper.

***YES** The output is printed on both sides of the paper, with the top of each printed page at the same end of the sheet of paper. This is usually done for output that is bound at the side.

***TUMBLE**

The output is printed on both sides of the paper, with the top of one printed page at the opposite end from the top of the other printed page. This is usually done for output that is bound at the top.

***FORMDF**

The output is printed on both sides of the paper if the duplex value is specified in the form definition. If a form definition is not specified, then the output is printed on one side of the paper.

Top

Unit of measure (UOM)

Specifies the unit of measurement to be used.

*INCH

The inch is used as the unit of measurement.

***CM** The centimeter is used as the unit of measurement.

Top

Front side overlay (FRONTOVL)

Specifies the object that contains both the overlay that is printed on the front side of the page and the offset, down and across, from the point of origin used when the overlay is printed.

Single values

*NONE

No overlay is used.

Element 1: Overlay

Qualifier 1: Overlay

name Specify the name of the overlay.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is used to locate the overlay. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library where the overlay is located.

Element 2: Offset down

0 No offset down from the point of origin is used.

0.0-57.79

Specify the offset down from the point of origin at which to begin printing the overlay. If UOM(*CM) is specified, valid values range from 0 through 57.79, and if UOM(*INCH) is specified, valid values range from 0 through 22.75.

Element 3: Offset across

0 No offset across from the point of origin is used.

0.0-57.79

Specify the offset across from the point of origin at which to begin printing the overlay. If UOM(*CM) is specified, valid values range from 0 through 57.79, and if UOM(*INCH) is specified, valid values range from 0 through 22.75.

Top

Back side overlay (BACKOVL)

Specifies the object that contains both the overlay that is printed on the **back** side of the page and the offset, down and across, from the point of origin used when the overlay is printed.

The constant back function allows you to print overlays on blank pages without adding blank pages to the print application. Specifying the constant back function would cause, for each page generated by the application program, a blank page to be generated onto which the specified back overlay could be printed. The generated blank pages are called constant forms because no variable data from the user's program is printed on the pages. The constant back function is only supported for duplex printing. It is ignored when DUPLEX(*NO) is specified on the printer file.

Note that the offset down and offset across values are ignored when *CONSTANT is specified for constant back. An offset of 0.0 is assumed for these values.

Single values

*FRONTOVL

The values specified for the **Front side overlay (FRONTOVL)** parameter are used.

*NONE

No overlay is used.

Element 1: Overlay

Qualifier 1: Overlay

name Specify the name of the overlay.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the job is used to locate the overlay. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library where the overlay is located.

Element 2: Offset down

0 No offset down from the point of origin is used.

0.0-57.79

Specify the offset down from the point of origin at which to begin printing the overlay. If UOM(*CM) is specified, valid values range from 0 through 57.79, and if UOM(*INCH) is specified, valid values range from 0 through 22.75.

Element 3: Offset across

0 No offset across from the point of origin is used.

0.0-57.79

Specify the offset across from the point of origin at which to begin printing the overlay. If UOM(*CM) is specified, valid values range from 0 through 57.79, and if UOM(*INCH) is specified, valid values range from 0 through 22.75.

Element 4: Constant back

*NOCONSTANT

No constant back is specified.

*CONSTANT

Constant back is specified.

Top

Convert line data (CVTLINDTA)

Specifies whether line data and a page definition should be converted to AFPDS before the data is spooled.

*NO No AFPDS conversion is done.

*YES Specifies that AFPDS conversion is to be done on the line data and page definition before the data is spooled.

Top

IPDS pass through (IPDSPASTHR)

Specifies whether IPDS (intelligent printer data stream) pass-through is done for the spooled file.

*DEV

The value specified for IPDSPASTHR in the PSF configuration object specified for a printer device description is used. If no PSF configuration object is specified for the device, a value of *NO is used.

*NO No IPDS pass-through is done.

*YES Specifies that IPDS pass-through is to be done if the spooled file is eligible for IPDS pass-through.

Note: Not all SCS or IPDS spooled files are eligible for IPDS pass-through. They may contain special functions that require transform to AFPDS for correct printing. Specifying IPDS pass-through on the printer file allows only those spooled files eligible for IPDS pass-through to bypass the extra transforms. Those spooled files not eligible for IPDS pass-through will still undergo the transforms to AFPDS and back to IPDS.

IPDS pass-through will not be valid for all PSF for i5/OS supported printers. Any printer (or attachment) that does not support resident fonts can not support IPDS pass-through. This is because the resident font references in the data stream must be mapped to host fonts which are downloaded to the printer. All IBM IPDS printers, except for the following, can be supported with IPDS pass-through: 3820, 3825, 3827, 3828, 3829, 3831, 3835, 3900-001 and any printer attached to a system using the Distributed Print Function provided by either InfoPrint Manager or Print Services Facility for OS/2.

For V3R7, V4R1 and V4R2, IPDSPASTHR can be specified with the USRDFNDDTA parameter in a printer file. You may continue using this support with existing printer files and PSF configuration objects by specifying IPDSPASTHR(*DEV) in the printer file. If you specify a value of anything other than *DEV for the IPDSPASTHR parameter, any IPDS pass-through value in the USRDFNDDTA parameter is ignored.

Top

User resource library list (USRRSCLIBL)

Specifies the list of user resource libraries to be used for searching for AFP resources for a spooled file. If the AFP resource is not found in the user resource libraries, then the library list specified in the DEVRSCLIBL parameter of the PSF configuration object is searched. If no PSF configuration object is specified for the device, then libraries QFNTCPL, QFNT01-QFNT19, and QFNT61-69 are searched.

Single values

*DEVD

The value specified for USRRSCLIBL in the PSF configuration object specified for a printer device description is used. If no PSF configuration object is specified for the device, a value of *JOBLIBL is used.

*NONE

No user libraries are specified.

*JOBLIBL

Specifies that the library list of the job that created the spool file is used in searching for AFP resources. This library list is saved with the spool file when it is created.

*CURLIB

Specifies that the current library of the job that created the spool file is used for searching for AFP resources. If no library is specified as the current library for the job, then library QGPL is used.

Other values (up to 4 repetitions)

name Specify the name of a library that will be used to search for AFP resources. Up to four library names may be specified.

For V3R7, V4R1 and V4R2, USRRSCLIBL can be specified with the USRDFNDDTA parameter in a printer file. PSF for i5/OS uses that value if USRRSCLIBL(*PRTF) is specified in a PSF configuration object which is specified in the printer device description. You may continue using this support with existing printer files and PSF configuration objects by specifying USRRSCLIBL(*DEVD) in the printer file. If you specify a value of anything other than *DEVD for the USRRSCLIBL parameter, any user resource library value in the USRDFNDDTA parameter is ignored.

Top

Corner staple (CORNERSTPL)

Specifies the reference corner to be used for a corner staple. A staple is driven into the media at the reference corner. Refer to your printer's documentation for information as to which reference corners are supported. Page rotation does not affect the placement of a corner staple.

*NONE

A corner staple is not specified.

*DEVD

The reference corner is the default reference corner used by the device.

*BOTRIGHT

The reference corner is the bottom right corner of the media.

*TOPRIGHT

The reference corner is the top right corner of the media.

*TOPLEFT

The reference corner is the top left corner of the media.

*BOTLEFT

The reference corner is the bottom left corner of the media.

Top

Edge stitch (EDGESTITCH)

Specifies where one or more staples are driven into the media along the finishing operation axis. Refer to your printer's documentation for information about which elements of this parameter are supported and which values for each element are supported. If specification of a value for an element is not supported by a printer, specify a value of *DEV D for that element. Page rotation does not affect the placement of an edge stitch.

Single values

*NONE

An edge stitch is not specified.

Element 1: Reference edge

Specifies the reference edge to be used for an edge stitch. An edge stitch is formed by having one or more staples driven into the media along the finishing operation axis.

*DEV D

The reference edge is the default reference edge used by the device.

*BOTTOM

The reference edge is the bottom edge of the media.

*RIGHT

The reference edge is the right edge of the media.

*TOP The reference edge is the top edge of the media.

*LEFT The reference edge is the left edge of the media.

Element 2: Reference edge offset

Specifies the offset of the edge stitch from the reference edge toward the center of the media.

*DEV D

The reference edge offset is the default reference edge offset used by the device.

0.0-57.79

Specify the offset of the edge stitch from the reference edge. If UOM(*CM) is specified, valid values range from 0 through 57.79, and if UOM(*INCH) is specified, valid values range from 0 through 22.75. This value is converted to millimeters for the printer. Fractional millimeters are not supported and are discarded when conversion to millimeters is performed.

Element 3: Number of staples

Specifies the number of staples that are to be applied along the finishing operation axis.

*DEV D

The number of staples depends on the value of the Staple Offsets element of this parameter. If *DEV D is also specified or defaulted for the Staple Offsets element value, then the number of staples is the default number of staples used by the device. If one or more offsets are specified for Staple Offsets, the number of staples is the same as the number of staple offsets specified.

1-122 Specify the number of staples to be used for the edge stitch. If you specify the number of staples, then *DEVD must be specified for staple offsets. The device default for the spacing of each staple will be used.

Element 4: Staple offsets

Specifies the offset of the staples along the finishing operation axis. The offset is measured from the point where the finishing operation axis intersects either the bottom edge or the left edge of the media, toward the center of the media. Each consecutive value is used to position a single finishing operation centered on the specified point on the finishing operation axis.

Single values

***DEVD**

The staple offsets are the default staple positions used by the device. If a value was specified for the Number of Staples element, the staple position of each staple will be calculated automatically by the printer.

Other values (up to 122 repetitions)

0.0-57.79

Specify the staple offset for each staple in the edge stitch. Up to 122 staple offsets may be specified. If one or more staple offsets values are specified, then *DEVD must be specified for the number of staples. If UOM(*CM) is specified, valid values range from 0 through 57.79, and if UOM(*INCH) is specified, valid values range from 0 through 22.75. This value is converted to millimeters for the printer. Fractional millimeters are not supported and are discarded when conversion to millimeters is performed.

Top

Saddle stitch (SADLSTITCH)

Specifies where one or more staples are driven into the media along the finishing operation axis, which is positioned at the center of the media parallel to the reference edge. Refer to your printer's documentation for information about which elements of this parameter are supported and which values for each element are supported. If specification of a value for an element is not supported by a printer, specify a value of *DEVD for that element. Page rotation does not affect the placement of an edge stitch.

Single values

***NONE**

A saddle stitch is not specified.

Element 1: Reference edge

Specifies the reference edge to be used for a saddle stitch. A saddle stitch is formed by having one or more staples driven into the media along the finishing operation axis, which is positioned at the center of the media parallel to the reference edge.

***DEVD**

The reference edge is the default reference edge used by the device.

***TOP** The reference edge is the top edge of the media.

***LEFT** The reference edge is the left edge of the media.

Element 2: Number of staples

Specifies the number of staples that are to be applied along the finishing operation axis.

***DEVD**

The number of staples depends on the value of the Staple Offsets element of this parameter. If *DEVD is also specified or defaulted for the Staple Offsets element value, then the number of staples is the default number of staples used by the device. If one or more offsets are specified for Staple Offsets, the number of staples is the same as the number of staple offsets specified.

1-122 Specify the number of staples to be used for the saddle stitch. If you specify the number of staples, then *DEVD must be specified for staple offsets. The device default for the spacing of each staple will be used.

Element 3: Staple offsets

Specifies the offset of the staples along the finishing operation axis. The offset is measured from the point where the finishing operation axis intersects either the bottom edge or the left edge of the media, toward the center of the media. Each consecutive value is used to position a single finishing operation centered on the specified point on the finishing operation axis.

Single values

***DEVD**

The staple offsets are the default staple positions used by the device. If a value was specified for the Number of Staples element, the staple position of each staple will be calculated automatically by the printer.

Other values (up to 122 repetitions)

0.0-57.79

Specify the staple offset for each staple in the saddle stitch. Up to 122 staple offsets may be specified. If one or more staple offsets values are specified, then *DEVD must be specified for the number of staples. If UOM(*CM) is specified, valid values range from 0 through 57.79, and if UOM(*INCH) is specified, valid values range from 0 through 22.75. This value is converted to millimeters for the printer. Fractional millimeters are not supported and are discarded when when conversion to millimeters is performed.

Top

Font resolution for formatting (RNTRSL)

Specifies the resolution PSF for i5/OS uses when printing to a multiple resolution printer configured to report multiple resolutions, but the spooled file does not specify the font metrics and resolution or the font is not available at the resolution that is contained in the spooled file.

For more information regarding the algorithm used for searching a library list for a font resource, see the Printer Device Programming manual section entitled User and Device Resource Library Lists in the chapter called Working With PSF configuration objects.

***DEVD**

The value specified in the FNTRSL parameter of the PSF configuration object for the device is used. If no PSF configuration object is specified for the device, a value of *SEARCH is used.

***SEARCH**

Specifies to search the library list for the first occurrence of a host font with a name match. The resolution of that font is used to print the spool file. Message PQT3546 is sent to specify the resolution of the font that was selected.

240 The font resolution is 240 pels per inch.

Defer write (DFRWRT)

Specifies whether output is held in the system buffer before being sent to the printer.

***YES** The system controls the amount of output that is held in the buffer before it is sent to the printer.

***NO** If *NO is specified for this parameter and *NO is specified for the **Spool the data (SPOOL)** parameter, output is not held in the buffer. Instead, output is sent immediately to the printer once the program has performed a write operation.

If *NO is specified for this parameter and *YES is specified for the SPOOL parameter, and if *IMMED is specified for the **Spooled output schedule (SCHEDULE)** parameter, output is held in the buffer until a page of output is available or until the system buffer is full.

If *IMMED is not specified for the SCHEDULE parameter, specifying *NO on this parameter has no effect.

Spool the data (SPOOL)

Specifies whether the output data for the printer device file is spooled. If *NO is specified, the other parameters on this command related to spooling are ignored. This parameter is ignored when the **To stream file (TOSTMF)** parameter is not *NONE.

***YES** The data is spooled.

***NO** The data is not spooled. It is sent to the printer device and printed as the output becomes available.

Spooled output queue (OUTQ)

Specifies, for spooled output files only, the name of the output queue for the printer file.

Single values

***JOB** The output queue specified in the job description is used.

***DEV** The output queue associated with the printer specified for the DEV parameter is used. The output queue has the same name as the printer.

Qualifier 1: Spooled output queue

name Specify the name of the output queue to which the output data is spooled.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current job library list is used to locate the output queue. If no library is specified as the current library for the job, QGPL is used.

name Specify the library where the output queue is located.

Form type (FORMTYPE)

Specifies the type of form on which the output is printed. The identifiers used to indicate the type of forms are user-defined and can be a maximum of 10 characters in length.

***STD** The standard printer form for your computer system is used.

character-value

Specify the identifier of the form type used with this printer device file for printed output.

Top

Copies (COPIES)

Specifies, for spooled output only, the number of copies of the output being printed.

1 Only one copy of the output is printed.

1-255 Specify the number of copies to print.

Top

Expiration date for file (EXPDATE)

Specifies the expiration date for the spooled file. The spooled file will expire at 23:59:59, system local time on the date specified.

***NONE**

No expiration date is specified.

***DAYS**

The expiration date is to be calculated using the value specified for the **Days until file expires (DAYS)** parameter.

date Specify the date after which the spooled file will be eligible for removal from the system by the Delete Expired Spooled Files (DLTEXPSPLF) command. The date must be enclosed in apostrophes if date separator characters are used in the value.

Top

Days until file expires (DAYS)

Specifies the number of days to keep the spooled file.

Note: A value must be specified for this parameter if the **Expiration date for file (EXPDATE)** parameter has a value of ***DAYS**. If the **EXPDATE** parameter has a value other than ***DAYS**, no value is allowed for this parameter.

1-366 Specify an interval in days after which the spooled file will be eligible for removal from the system by the Delete Expired Spooled Files (DLTEXPSPLF) command. The actual expiration date applied to the spooled file is calculated by adding the number of days specified to the date the printer file is opened.

Top

Page range to print (PAGERANGE)

Specifies, for spooled output files only, the starting and ending pages to print.

Element 1: Starting page

1 Printing begins at page 1.

*ENDPAGE

Use the end page value as the starting page.

integer

Specify the starting page number.

Element 2: Ending page

*END Printing continues until the end of the spooled file.

integer

Specify the ending page number.

Top

Max spooled output records (MAXRCDS)

Specifies, for spooled output only, the maximum number of records that can be in the spooled file for jobs using this printer file. If this maximum is reached, an inquiry message is sent to the program message queue.

100000 A maximum of 100000 records can be contained in the spooled output file for each job that uses this printer device file.

*NOMAX

There is no maximum on the number of records that can be in the spooled file.

1-999999

Specify the maximum number of records allowed.

Top

File separators (FILESEP)

Specifies, for spooled output files only, the number of separator pages placed at the start of each printed file, including those between multiple copies of the same output.

0 No separator pages are used.

0-9 Specify the number of separator pages to be placed between printed files. If 0 is specified, no separator pages are printed for the file. In this case, the printed output for each file (or copy of a file) starts at the top of a new page.

Top

Spooled output schedule (SCHEDULE)

Specifies, for spooled output files only, when the spooled output file is available to a writer.

*FILEEND

The spooled output file is available to the writer as soon as the file is closed.

***JOBEND**

The spooled output file is available to the writer after the job is completed.

***IMMED**

The spooled output file is made available to the writer as soon as the file is opened in the program.

Top

Hold spooled file (HOLD)

Specifies, for spooled output only, whether the spooled file is held. The spooled file can be released by using the Release Spooled File (RLSSPLF) command.

***NO** The spooled output file is not held by the output queue.

***YES** The spooled output file is held until it is released by the Release Spooled File (RLSSPLF) command.

Top

Save spooled file (SAVE)

Specifies, for spooled output files only, whether the spooled file is saved (left on the output queue) after the output has been produced.

***NO** The spooled file data is not saved on the output queue.

***YES** The spooled file data is saved on the output queue until the spooled file is deleted.

Top

Output priority (on OUTQ) (OUTPTY)

Specifies the output priority for spooled output files that are produced by this job. The highest priority is 1 and the lowest priority is 9.

***JOB** The output priority associated with the job that created the spooled file is used.

1-9 Specify a number ranging from 1 (high) through 9 (low).

Top

User data (USRDTA)

Specifies, for spooled files only, some user-specified data that identifies the file.

***SOURCE**

If the spooled file was created by an application program, the name of the program is used. Otherwise, blanks are used.

character-value

Specify no more than 10 characters of text, enclosed in apostrophes.

Top

Spool file owner (SPLFOWN)

Specifies, for spooled output only, who the owner of the spooled file is.

*CURUSRPRF

The spooled file is owned by the current effective user of the current job or thread. See the Printing category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/> for more detailed information on how the SPLFOWN parameter is affected when using any of the following APIs:

- QWTSETP - Set Profile
- `qsytuid()` - Set User ID
- `qsytuid()` - Set Effective User ID
- `qsytuid()` - Set Real and Effective User ID

***JOB** The spooled file is owned by the original user profile of the job. If the job has switched to a new user profile, the original user profile is still the owner of the spooled file.

*CURGRPPRF

The spooled file is owned by the current effective group profile of the current job or thread. If there is no current effective group profile, ownership of the spooled file is determined in the same manner as *CURUSRPRF. See the Printing category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/> for more detailed information on how the SPLFOWN parameter is affected when using any of the following APIs:

- QWTSETP - Set Profile
- `qsytgid()` - Set Group ID
- `qsytgid()` - Set Effective Group ID
- `qsytgid()` - Set Real and Effective Group ID

*JOBGRPPRF

The spooled file is owned by the group profile of the original user profile of the job. If the job has switched to a new user profile, the group profile of the original user profile is still the owner of the spooled file. If no group profile exists, ownership of the spooled file is determined the same way as *JOB.

Top

User Defined Option (USRDFNOPT)

Specifies, for spooled output only, one or more user-defined options to be used by user applications or user-specified programs that process spooled files. A maximum of four user-defined options can be specified.

Single values

*NONE

No user-defined options specified.

Other values (up to 4 repetitions)

character-value

Specify a user-defined option to be used by user applications or user-specified programs that process spooled files. All characters are acceptable.

Top

User Defined Data (USRDFNDDTA)

Specifies, for spooled output only, the user-defined data to be used by user applications or user-specified programs that process spooled files.

*NONE

No user-defined data specified.

character-value

Specify a user-defined data to be used by user applications or user-specified programs that process spooled files. All characters are acceptable.

Top

User Defined Object (USRDFNOBJ)

Single values

*NONE

No user-defined object specified.

Element 1: Object

Qualifier 1: Object

name Specify the user-defined object to be used by user applications or user-specified programs that process spooled files.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

name Specify the name of the library to be searched.

Element 2: Object type

object-type

The user object type can be one of the following:

*DTAARA

Data Area

*DTAQ

Data Queue

*FILE File

*PSFCFG

PSF Configuration Object

*USRIDX

User Index

- *USRQ
User Queue
- *USRSPC
User Space

Top

DBCS character rotation (IGCCHRRTT)

Specifies whether the printer rotates double-byte character set (DBCS) characters 90 degrees counterclockwise when printing. The system prints rotated DBCS characters so that they appear in a vertical reading sequence. Alphanumeric characters are not rotated.

- *NO The system does not rotate DBCS characters when printing.
- *YES The system rotates DBCS characters 90 degrees counterclockwise when printing. The printer rotates each character individually.

Top

DBCS characters per inch (IGCCPI)

Specifies the printer character density of double-byte character set (DBCS) characters, in characters per inch (CPI).

Note: This parameter does not specify the printer character density of alphanumeric characters. Alphanumeric characters are printed with the value specified for the CPI parameter.

- *CPI DBCS character density is based on the values specified for the **Characters per inch (CPI)** parameter. The system prints one double-byte character for every two alphanumeric characters.
- For CPI(10), DBCS characters print at 5 characters per inch.
 - For CPI(12), DBCS characters print at 6 characters per inch.
 - For CPI(13.3), DBCS characters print at 6.7 characters per inch (same as IGCCPI(*CONDENSED)).
 - For CPI(15), DBCS characters print at 7.5 characters per inch.
 - For CPI(18), DBCS characters print at 9 characters per inch.
 - For CPI(20), DBCS characters print at 10 characters per inch.

5 DBCS character density is 5 characters per inch.

6 DBCS character density is 6 characters per inch.

10 DBCS character density is 10 characters per inch.

*CONDENSED

Condensed printing, in which the system prints 20 DBCS characters every 3 inches, is used. This value is valid for the 5553 or 5583 printers only.

Top

DBCS SO/SI spacing (IGCSOSI)

Specifies how the system prints shift control characters.

- *YES The system prints shift control characters as blanks.

***NO** The system does not print shift control characters. These characters do not occupy a position on the printer output.

***RIGHT**

The system prints two blanks when printing shift-in characters, but it does not print shift-out characters.

Top

DBCS coded font (IGCCDEFNT)

Specifies the coded font that the system uses for double-byte character set (DBCS) printing.

Single values

***SYSVAL**

The DBCS coded font specified in the system value QIGCCDEFNT is used.

Element 1: DBCS coded font

Qualifier 1: DBCS coded font

name Specify name of the DBCS coded font to use.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is used to locate the coded font name. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library where the coded font name is located.

Element 2: Point size

***NONE**

The point size is supplied by the system and is determined by the specified font character set.

0.1-999.9

Specify a point size.

Note: The point size parameter is only used when an outlined font is named, in other cases it is ignored.

Top

To stream file (TOSTMF)

Specifies the directory or stream file where the output data is to be written. All directories in the path name must exist. New directories are not created. This parameter is only valid when the **Workstation customizing object (WSCST)** parameter is not *NONE, or the **Printer device type (DEVTYPE)** parameter is *AFPDS.

If the TOSTMF value refers to a directory, the system will create a stream file in that directory with a unique name derived from the printer file name. If the TOSTMF value is a file name, a stream file by that name must not already exist.

***NONE**

The output is written to a spooled file if the **SPOOL** parameter is *YES, or directly to the printer device (**DEV**) if the **SPOOL** parameter is *NO.

path-name

Specify the path name for the directory or stream file where you want the output data to be written.

Top

Workstation customizing object (WSCST)

Specifies the workstation customizing object to use to transform the printer file output to final form before writing it to a stream file. This parameter is only valid when the **To stream file (TOSTMF)** parameter is not *NONE.

Single values

***NONE**

The output is not transformed to final form before writing to a stream file.

***PDF** The output is transformed to Portable Document Format (PDF) before it is written into a stream file.

Qualifier 1: Workstation customizing object

name Specify the name of the customizing object.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

name Specify the name of the library to be searched.

Top

Maximum file wait time (WAITFILE)

Specifies the number of seconds that the program waits for the file resources to be allocated when the file is opened, or the device or session resources to be allocated when an acquire operation is performed to the file. If the file resources cannot be allocated in the specified wait time, an error message is sent to the program.

***IMMED**

The program does not wait. Immediate allocation of file resources is required.

***CLS** The job default wait time is used as the wait time for the file resources to be allocated.

1-32767

Specify the number of seconds to wait for file resources to be allocated.

Top

Share open data path (SHARE)

Specifies whether the open data path (ODP) is shared with other programs in the same routing step. When an ODP is shared, the programs accessing the file share facilities such as the file status and the buffer.

- *NO** The ODP is not shared with other programs in the routing step. A new ODP for the file is created and used every time a program opens the file.
- *YES** The same ODP is shared with each program in the job that also specifies *YES when it opens the file.

Top

Record format level check (LVLCHK)

Specifies whether the level identifiers of the record formats in the printer device file are checked when the file is opened by a program. If so, the record format identifiers in the program must match those in the device file. Because the same record format name can exist in more than one file, each record format is given an internal system identifier when it is created.

- *YES** The level identifiers of the record formats are checked. If the level identifiers do not all match, an open error message is sent to the program requesting the open operation.
- *NO** The level identifiers of the record formats are not checked.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

***LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

***CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

- *ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

- *USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Replace file (REPLACE)

Specifies whether an existing file, other than a save or database file, is replaced.

Note: The authority value for the file is determined by the user profile of the user. If an existing file is replaced, the authority value for the new file is copied from the replaced file.

***YES** An existing file with the same name and library is replaced if the creation of the new printer device file is successful.

***NO** The creation of a new printer device file is not allowed if there is an existing file with the same name and library.

Top

Examples

Example 1: Creating a Printer File

```
CRTPRTF FILE(DSPHIST) SRCFILE(PRSNNL/JOBHIST) FILESEP(3)
```

This command creates a printer file named DSPHIST using the DDS source file named JOBHIST that is stored in the PRSNNL library. The defaults for the other parameters are assumed, except for FILESEP.

The printer uses standard forms that are 66 lines long and 132 print positions wide. An SCS data stream is used. It prints 6 lines per inch and overflows to a new page after line 60 is printed. The print image specified in the device description is used. Output is spooled to the output queue specified for the job and cannot be printed until the file is closed. The spooled file is not held or saved after printing. One copy of the output is printed, preceded by three separator pages, each containing the file name, the spooled number, and the job name and number. The print text specified in the current job is used.

Example 2: Creating a Printer File Containing DBCS Data

```
CRTPRTF FILE(IGCLIB/IGCPRT) IGCDA(*YES)  
FORMFEED(*AUTOCUT) IGCCHRRTT(*YES)
```

This command creates a printer file, IGCPRT (stored in library IGCLIB) that contains DBCS data. Cut sheets are automatically fed, and double-byte characters are rotated when printing.

Example 3: Creating a Printer File to Generate a Stream File.

```
CRTPRTF FILE(QGPL/MYFAXPRT) TOSTMF(' . ') WSCST(QWPTIFFPB)  
DEVTYPE(*AFPDS)
```

This command creates a printer file, MYFAXPRT (stored in library QGPL) that will generate a stream file containing TIFF image format (with packbit compression) in the current working directory. The operating system will generate a random name for the stream file beginning with the printer file name MYFAXPRT.

Error messages

*ESCAPE Messages

CPF339F

Expiration date must be today or a date in the future.

CPF7302

File &1 not created in library &2.

Create Proxy Command (CRTPRXCMD)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Proxy Command (CRTPRXCMD) command creates a new user-defined proxy command definition object. The proxy command definition object will have an object type of *CMD.

Once created, the proxy command can be changed by the Change Proxy Command (CHGPRXCMD) command. Other command-specific interfaces that reference a proxy command will actually operate on the command specified for the **Target command (TGTCMD)** parameter. The target command can be a regular command or another proxy command. Up to 5 proxy commands can be chained together. The last target command in the chain must be a regular command. Using the Change Command (CHGCMD) command or the Change Command Default (CHGCMDDFT) command against the proxy command will change the target command. Prompting or running a proxy command will cause the target command to be prompted or run.

Other object operations not specific to commands will operate on the proxy command and will not affect the target command. For example, moving a proxy command to another library, saving a proxy command, or deleting a proxy command will only affect the proxy *CMD object; the target *CMD object is not affected.

Top

Parameters

Keyword	Description	Choices	Notes
CMD	Command	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Command	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
TGTCMD	Target command	<i>Qualified object name</i>	Required, Positional 2
	Qualifier 1: Target command	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB, *SYSTEM, *NLVLIBL</i>	
TEXT	Text 'description'	<i>Character value, *TGTCMD, *CMDPMT, *BLANK</i>	Optional
AUT	Authority	<i>Name, *LIBCRTAUT, *USE, *ALL, *CHANGE, *EXCLUDE</i>	Optional
REPLACE	Replace command	<i>*YES, *NO</i>	Optional

Top

Command (CMD)

Specifies the proxy command to be created.

This is a required parameter.

Qualifier 1: Command

name Specify the name of the proxy command to be created.

Qualifier 2: Library

*CURLIB

The proxy command is created in the current library for the job. If no library is specified as the current library for the job, QGPL is used.

name Specify the name of the library where the proxy command is to be located.

Top

Target command (TGTCMD)

Specifies the target command used to process the command. This command is not needed until the command is used in prompting, compiling, or running the proxy command. The parameters specified for the proxy command are passed to the target command for validation and interpretation. The target command can be a regular command or another proxy command. Up to 5 proxy commands can be chained together. The last target command in the chain must be a regular command.

This is a required parameter.

Qualifier 1: Target command

name Specify the name of the target command for this proxy command.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the job is used to locate the command. If no library is specified as the current library for the job, QGPL is used.

*SYSTEM

Only the QSYS library is used to locate the command. If an exit program is registered for the QIBM_QCA_CHG_COMMAND exit point, the exit program will be allowed to change the command.

*NLVLIBL

Only the national language version (NLV) libraries in the library list and the QSYS library will be searched for the command. If an exit program is registered for the QIBM_QCA_CHG_COMMAND exit point, the exit program will be allowed to change the command.

name Specify the name of the library where the command is located.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

*TGTCMD

The text description of the target command will be used as the text description of the proxy command. If the target command does not exist when this command is run, the text description of the proxy command will be the qualified name of the target command.

*CMDPMT

The text description will be the same as the command title shown when the command is prompted.

***BLANK**

No text is specified.

character-value

Specify no more than 50 bytes of text, enclosed in apostrophes.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

***USE** The user can perform basic operations on the object, such as prompting or running the command. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***LIBCRTAUT**

The system determines the authority for the object by using the value specified on the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified on the **Create authority (CRTAUT)** parameter is changed, the new value will not affect any existing objects.

***CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***EXCLUDE**

The user cannot access the object.

name Specify the name of an authorization list. Users included on the authorization list are granted authority to the object as specified by the list. The authorization list must exist when the object is created.

Top

Replace command (REPLACE)

Specifies whether or not an existing command object with the same name and library as the command being created should be replaced.

If you specify *YES and a command object already exists with the same name and in the same library, the existing command is renamed and moved to library QRPLOBJ, and will be deleted the next time an IPL of the operating system occurs.

***YES** If the create operation is successful, the existing command is replaced by the new command.

***NO** An existing command is not replaced, and the creation of a new command with the same name and library as an existing command is not allowed.

Examples

```
CRTPRXCMD CMD(QGPL/WJ) TGTCMD(WRKJOB)
          TEXT('WRKJOB Shortcut')
```

The proxy command named WJ is created into library QGPL. When the WJ command is run or prompted, the target command WRKJOB in the library list will be used to process the WJ command parameters.

Error messages

*ESCAPE Messages

CPF0201

Command &2 not created in library &3.

Create PSF Configuration (CRTPSF CFG)

Where allowed to run: All environments (*ALL)
 Threadsafes: No

Parameters
 Examples
 Error messages

Use the Create PSF Configuration (CRTPSF CFG) command to create a Print Services Facility (PSF) configuration object from the information specified on this command.

A PSF configuration object allows you to specify additional parameters for an AFP printer that are not supported on the Create Device Description (Printer) CRTDEVPRT command, such as setting the device release timer. The object type for a PSF configuration object is *PSFCFG.

Restrictions:

- The PSF feature is required to use this command.
- You must have input/output system configuration (*IOSYSCFG) special authority to use this command.

Top

Parameters

Keyword	Description	Choices	Notes
PSFCFG	PSF configuration	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: PSF configuration	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *CURLIB	
USRRSCLIBL	User resource library list	*JOBLIBL, *CURLIB, *NONE	Optional
DEVRSCLIBL	Device resource library list	Single values: *DFT Other values (up to 30 repetitions): <i>Name</i>	Optional
IPDSPASTHR	IPDS pass through	*NO, *YES	Optional
ACTRLSTMR	Activate release timer	*NORDYF, *IMMED, *PRTNORDYF, *PRTIMMED	Optional
RLSTMR	Release timer	1-1440, *NOMAX, *SEC15, *SEC30	Optional
RESTRTMR	Restart timer	1-1440, *IMMED	Optional
RETRY	APPC and TCP/IP retry count	1-99, 15, *NOMAX	Optional
RETRYDLY	Delay between APPC retries	0-999, 90	Optional
ACKFRQ	Acknowledgment frequency	1-32767, 100	Optional
PRTRSPTMR	Printer response timer	5-3600, *NOMAX	Optional
PDFGEN	Generate PDF output	Single values: *NONE Other values (up to 3 repetitions): *SPLF, *STMF, *MAIL	Optional
PDFDEVTYPE	PDF device emulation type	*IP40240, *IP40300, *P4028, *P3812	Optional
PDFPPRDWR1	PDF paper size drawer 1	*LETTER, *LEGAL, *STATEMENT, *EXECUTIVE, *LEDGER, *A5, *A4, *A3, *B5, *B4	Optional
PDFPPRDWR2	PDF paper size drawer 2	*LETTER, *LEGAL, *STATEMENT, *EXECUTIVE, *LEDGER, *A5, *A4, *A3, *B5, *B4	Optional

Keyword	Description	Choices	Notes
PDFMULT	Multiple PDF files	Single values: *NO Other values: <i>Element list</i>	Optional
	Element 1: Acknowledge multiple groups	*YES	
	Element 2: Process option	*SPLIT , *INDEX	
PDFINCFNT	PDF fonts inline	*YES , *NO	Optional
PDFDTAQ	PDF data queue	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: PDF data queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
PDFMAILSVR	PDF mail server name	Single values: *SNDDST Other values (up to 4 repetitions): <i>Character value</i> , *LOCAL	Optional
PDFSENDER	Sender of electronic mail	<i>Name</i> , *SPLFOWN , QSPLJOB	Optional
PDFADMIN	PDF administrator	<i>Character value</i> , *NONE	Optional
PDFMPPGM	PDF user program	Single values: *NONE , *IBMPGM Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: PDF user program	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
PDFMAP	PDF mapping object	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: PDF mapping object	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
PDFOUTQ	PDF output queue	<i>Qualified object name</i>	Optional
	Qualifier 1: PDF output queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
PDFDIR	PDF directory	<i>Character value</i>	Optional
AFPSAVE	Save AFP data	*NO , *YES	Optional
AFPOUTQ	AFP output queue	<i>Qualified object name</i>	Optional
	Qualifier 1: AFP output queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
AUTOSSNRCY	Automatic session recovery	Single values: *NO Other values: <i>Element list</i>	Optional
	Element 1: Enabled	*YES	
	Element 2: Message option	*INFO , *INQ	
BLANKPAGE	Blank page	*YES , *NO	Optional
PAGSIZCTL	Page size control	*NO , *YES	Optional
RESFONT	Resident fonts	*YES , *NO	Optional
RSCRET	Resource retention	*YES , *NO	Optional
EDGEORIENT	Edge orient	*YES , *NO	Optional
USEOUTLFNT	Use outline fonts	*YES , *NO	Optional
PSDFNOPT	PSF defined option	Single values: *NONE Other values (up to 6 repetitions): <i>Character value</i> , *NONE	Optional
FNTSUBMSG	Font substitution messages	*YES , *NO	Optional
FNTCAPTURE	Capture host fonts at printer	*NO , *YES	Optional

Keyword	Description	Choices	Notes
FNTRSL	Font resolution for formatting	<u>*SEARCH</u> , 240, 300	Optional
FNTTBL	Font mapping table	Single values: <u>*NONE</u> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Font mapping table	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
CSEMODE	Cut sheet emulation mode	<u>*NONE</u> , *CHKFIRST, *CHKALL	Optional
MAPIGCFNT	Use DBCS simulation fonts	*YES, <u>*NO</u>	Optional
REPLACE	Replace	<u>*YES</u> , *NO	Optional
AUT	Authority	<i>Name</i> , <u>*LIBCRTAUT</u> , *CHANGE, *ALL, *USE, *EXCLUDE	Optional

Top

PSF configuration (PSFCFG)

Specifies the Print Services Facility (PSF) configuration object to be created.

This is a required parameter.

Qualifier 1: PSF configuration

name Specify the name of the PSF configuration object to be created.

Qualifier 2: Library

*CURLIB

Store the PSF configuration object in the current library. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library where you want to store the PSF configuration object.

Top

User resource library list (USRRSCLIBL)

Specifies the user resource library list to use when searching for AFP resources. When searching for an AFP resource specified with a spooled file, Print Services Facility (PSF) first searches the libraries in the user resource library list and then those in the device resource library list.

*PRTF has been removed as a valid value for the USRRSCLIBL parameter. PSF configuration objects migrated from other releases that were created with USRRSCLIBL(*PRTF) will be supported exactly as in prior releases as long as the new USRRSCLIBL parameter on the printer file has the a value of *DEVLD. When a CHGPSFCFG command is run in this environment, a value of *SAME will be displayed where a value of *PRTF would have been displayed on a prior release.

*JOBLIBL

Use the library list for the job that created the spooled file when searching for AFP resources. Each time the user creates a new spooled file, the job library list at that point in time is saved.

*CURLIB

Use the current library for the job that created the spooled file when searching for AFP resources. If no library is specified as the current library for the job, then the QGPL library is used.

***NONE**

No user resource library list is used for searching for AFP resources. Only the device resource library list is used.

Top

Device resource library list (DEVRSCLIBL)

Specifies the device resource library list to use when searching for AFP resources. When searching for an AFP resource specified with a spooled file, Print Services Facility (PSF) first searches the libraries in the user resource library list and then the libraries in the device resource library list.

Single value

***DFT** PSF searches these libraries, if they exist, when searching for AFP resources:

- QFNTCPL
- QFNT01 - QFNT19
- QFNT61 - QFNT69

Note: If not all the system libraries in the above list have been created, a user can create libraries using the names of the missing system libraries. If this occurs and you specify *DFT on the DEVRSCLIBL parameter, the resources in those user-created libraries could be mistakenly found by other users. To prevent this, the system administrator should create all of the missing system libraries with PUBLIC *USE authority.

Other values

name Specify up to 30 names of libraries PSF will use to search for AFP resources.

Top

IPDS pass through (IPDSPASTHR)

Specifies whether IPDS pass-through is done for the device. IPDS pass-through is a mechanism by which unnecessary datastream conversions can be eliminated, thus improving throughput and decreasing CPU utilization. Full page-level error recovery is supported.

IPDS pass-through can be used for SCS and IPDS files which do not specify any AFP processing features, such as a front or back overlay on the printer file. SCS data is transformed to a generic IPDS. Specifying IPDS pass-through on the device configuration or printer file allows only those spooled files eligible for IPDS pass-through to bypass the extra transforms. Those spooled files not eligible for IPDS pass-through will still undergo the transforms to AFPDS and back to IPDS.

***NO** No IPDS pass-through is done.

***YES** IPDS pass-through is performed for the device for all spooled files that are eligible for IPDS pass-through.

IPDS pass-through is not valid for all Print Services Facility (PSF) supported printers. Only printers that support resident fonts can be used with IPDS pass-through. If a printer does not support resident fonts, font references in the data stream must be mapped to host fonts, which are then downloaded to the printer. This requires the transform to AFPDS and back to IPDS.

The following IPDS printers cannot support IPDS pass-through:

- 3820, 3825, 3827, 3828, 3829, 3831, 3835, 3900-001

- Any Distributed Print Function (DPF)-attached printer. DPF is a function supported by Infoprint Manager for Windows NT and Windows 2000, which blocks the use of printer-resident fonts.

Top

Activate release timer (ACTRLSTMR)

Specifies the point at which the release timer is activated. The value specified for **Release timer (RLSTMR)** determines the length of time the writer will "keep" the printer before releasing the session.

***NORDYF**

The release timer is activated when there are no ready (RDY) spooled files in the printer's output queue and the last page of the last spooled file processed has printed. If the release timer expires, the session to the printer is released but the writer does not end. When the session is released, another Print Services Facility (PSF) can start a session to the printer.

Use this value when you want the writer to print all ready spooled files before releasing the session.

*NORDYF is supported only for printers and devices attached to the system using APPC or TCP/IP. For an APPC connection, use this value only with the PSF Direct support provided by Infoprint Manager for AIX or Infoprint Manager for Windows NT and Windows 2000. For a TCP/IP connection, this value can be used for any printer. This value is not supported for twinaxial-attached printers.

***IMMED**

The release timer is activated immediately after PSF has successfully linked to the printer. If the release timer expires, the session to the printer is released but the writer does not end. If a file is being printed when the release timer expires, the writer releases the session after all pages of the spooled file have printed. When the session is released, another PSF can start a session to the printer.

Use this value when you want the writer to share the printer with another print writer.

*IMMED is supported only for printers and devices attached to the system using APPC or TCP/IP. For an APPC connection, use this value only with the PSF Direct support provided by Infoprint Manager for AIX or Infoprint Manager for Windows NT and Windows 2000. For a TCP/IP connection, this value can be used for any printer. This value is not supported for twinaxial-attached printers.

***PRTNORDYF**

This value can be specified if you are using a printer that allows control over the exchange of IPDS data (the IPDS dialog). Refer to Printer Information, S544-5750 to determine if your printer supports this feature.

This value specifies that the release timer is to be activated after all of these conditions are met:

- The writer receives an indication from the printer to release the IPDS dialog.
- There are no ready spooled files in the printer's output queue.
- The last page of the last spooled file processed has printed.

If the release timer expires, the writer releases the IPDS dialog with the printer. The session is not released and the port in use by the writer is not available to another PSF. Another printer driver can start a dialog with the printer on a different printer port.

If the writer detects that the printer is not capable of controlling the IPDS dialog, then the value is ignored and PSF behaves as if RLSTMR(*NOMAX) was specified.

Use this value when you want the writer to print all ready spooled files with before releasing the IPDS dialog.

*PRTNORDYF is supported on a twinaxial, TCP/IP or APPC connection.

*PRTIMMED

This value can be specified if you are using a printer that allows control over the exchange of IPDS data (the IPDS dialog). Refer to Printer Information, S544-5750 to determine if your printer supports this feature.

This value specifies that the release timer is to be activated immediately after the writer receives an indication from the printer to release the IPDS dialog. If the release timer expires, the writer releases the IPDS dialog with the printer, but the session is not released. The port in use by the writer is not available for use by another PSF, however another printer driver can start a dialog with the printer on a different printer port. If a file is being printed when the release timer expires, the writer releases the dialog after all pages of the spooled file have printed.

Use this value when you want to specify the length of time the writer controls the printer after the printer has indicated that it is needed by a printer driver at another printer port.

If the writer detects that the printer is not capable of telling the writer to stop the flow of data, then this value is ignored, and PSF behaves as if RLSTMR(*NOMAX) was specified.

*PRTIMMED is supported on a twinaxial, TCP/IP or APPC connection.

Top

Release timer (RLSTMR)

Specifies the amount of time to wait after the release timer has been activated and the last page of the last ready spooled file has printed before releasing the printer. Print Services Facility (PSF) does not end, but releases the connection or IPDS dialog with the printer. See the **Activate release timer (ACTRLSTMR)** parameter description for additional information on the release timer.

When a spooled file becomes ready, PSF attempts to establish a session with the printer. See the **Restart timer (RESTRTMR)** parameter description for additional information.

*NOMAX

The printer is not released unless the End Writer (ENDWTR) command is run.

*SEC15

PSF waits 15 seconds before releasing the printer.

*SEC30

PSF waits 30 seconds before releasing the printer.

1-1440 Specify the number of minutes the printer writer waits before releasing the printer or IPDS dialog.

Top

Restart timer (RESTRTMR)

Specifies the amount of time to wait before the printer writer attempts to re-establish either a session or dialog. To determine whether a session or dialog is to be re-established, the printer writer considers the following:

- The value specified for ACTRLSTMR.
- Whether the printer supports IPDS dialog management.
- The type of link: twinaxial, APPC or TCP/IP.

If ACTRLSTMR(*NORDYF) or ACTRLSTMR(*IMMED) are specified, the session is restarted if the printer is attached using APPC or TCP/IP.

If ACTRLSTMR(*PRTNORDYF) or ACTRLSTMR(*PRTIMMED) are specified, the dialog is restarted if the printer supports dialog management.

See the **Activate release timer (ACTRLSTMR)** parameter description for additional information about session and dialog management control.

***IMMED**

The printer writer attempts to re-establish the session or dialog as soon as a spooled file has a status of RDY.

1-1440 Specify the number of minutes the printer writer waits, after a session or dialog have been released and a spooled file has a status of RDY, before attempting to connect.

Top

APPC and TCP/IP retry count (RETRY)

Specifies the number of times to retry a session start request when attempting to establish a session with a printer. This parameter applies to printers and devices configured for either TCP/IP or APPC.

15 Fifteen retry attempts are made to establish a session. If after fifteen retries Print Services Facility (PSF) still cannot establish a session, the printer writer ends.

***NOMAX**

No limit is put on the number of retries. PSF continues issuing session start requests until the session is established or the printer writer is ended using ENDWTR OPTION(*IMMED).

1-99 Specify the number of retry attempts to establish a session.

Top

Delay between APPC retries (RETRYDLY)

Specifies the number of seconds Print Services Facility (PSF) pauses after it receives notification that a session start request has failed. After the specified time has elapsed, another session start request is issued. The number of retries performed by PSF is controlled by parameter RETRY. This parameter applies to printers and devices configured for APPC.

90 A 90-second delay will be used between retry attempts.

0-999 Specify the number of seconds to pause between retry attempts to establish a session.

Top

Acknowledgment frequency (ACKFRQ)

Specifies the frequency, in pages, with which Print Services Facility (PSF) sends IPDS acknowledgment requests to a printer. The acknowledgment request responses from the printer contain information about the status of pages sent to the printer.

If a spooled file contains fewer pages than specified for ACKFRQ, an acknowledgment is requested after the last page of the spooled file is sent.

Consider adjusting this value when specifying AUTOSSNRCY(*YES). When a connection with a printer is abnormally ended, PSF may reprint pages because the printer was unable to return the status of pages printed. By increasing the frequency with which acknowledgments are sent, the number of pages which might be reprinted is decreased when a severed connection is restored. However, if acknowledgments are requested with great frequency, such as once per page, you may notice a performance degradation.

Acknowledgment frequency is supported on all attachments: twinaxial, APPC and TCP/IP. Note that AUTOSSNRCY is supported on APPC and TCP/IP attachments only.

100 Specifies that an acknowledgment request is sent to the printer after every 100 pages.

1-32767

Specifies the number of pages after which PSF sends an acknowledgment request to the printer.

Top

Printer response timer (PRTRSPTMR)

Specifies the time, in seconds, to wait for a response from a TCP/IP attached printer.

***NOMAX**

The printer writer will wait for a response from the printer until one is received. If the writer does not receive a message, it is never ended.

5-3600 Specifies the time, in seconds, the printer writer should wait for a response from the printer. The writer is ended if the printer does not respond within the specified amount of time. If this happens, the writer ends and a message is sent to the message queue.

Top

Generate PDF output (PDFGEN)

Specifies whether to generate a PDF output file through an IPDS to PDF transform when processing the spooled file. You can spool the generated PDF file, store it as a stream file, send it as electronic mail, or any combination of those. You must have Infoprint Server installed to support this feature.

In order to generate PDF, the remote location name for the printer device description must either be a valid loopback address or a name associated with a valid loopback address. An Internet address representing a valid loopback address must have 127 as the first octet of the Internet address.

Single value

***NONE**

Do not generate a PDF output file.

Other values (up to 3 repetitions)

***SPLF** Place the generated PDF output file in a spooled file. The value specified for the **PDF output queue (PDFOUTQ)** parameter identifies the output queue to be used.

***STMF**

Place the generated PDF output file in a stream file. The value specified for the **PDF directory (PDFDIR)** parameter identifies the integrated file system (IFS) directory to be used.

***MAIL**

Electronically mail the PDF output file.

Top

PDF device emulation type (PDFDEVTYPE)

Specifies the type of device that the IPDS to PDF transform's virtual printer should emulate.

***IP40240**

Emulate an IP40 printer device configured at 240 pel resolution.

***IP40300**

Emulate an IP40 printer device configured at 300 pel resolution.

***P4028**

Emulate a 4028 printer device.

***P3812**

Emulate a 3812 printer device.

Top

PDF paper size drawer 1 (PDFPPRDWR1)

Specifies the size of paper in drawer one of the device associated with the IPDS to PDF transform. This information is used to determine the generated PDF page size.

***LETTER**

North American letter size media (8.5 x 11 inches).

***LEGAL**

North American legal size media, (8.5 x 14 inches).

***STATEMENT**

North American statement size media (5.5 x 8.5 inches).

***EXECUTIVE**

North American executive size media (7.5 x 10.5 inches).

***LEDGER**

North American ledger size media (11 x 17 inches).

***A5** ISO A5 size media (148.5 x 210 mm).

***A4** ISO A4 size media (210 x 297 mm).

***A3** ISO A3 size media (297 x 420 mm).

***B5** ISO B5 size media (176 x 250 mm).

***B4** ISO B4 size media (257 x 364 mm).

Top

PDF paper size drawer 2 (PDFPPRDWR2)

Specifies the size of paper in drawer two of the device associated with the IPDS to PDF transform. This information is used to determine the generated PDF page size.

***LETTER**

North American letter size media (8.5 x 11 inches).

***LEGAL**

North American legal size media, (8.5 x 14 inches).

***STATEMENT**

North American statement size media (5.5 x 8.5 inches).

***EXECUTIVE**

North American executive size media (7.5 x 10.5 inches).

***LEDGER**

North American ledger size media (11 x 17 inches).

***A5** ISO A5 size media (148.5 x 210 mm).

- *A4 ISO A4 size media (210 x 297 mm).
- *A3 ISO A3 size media (297 x 420 mm).
- *B5 ISO B5 size media (176 x 250 mm).
- *B4 ISO B4 size media (257 x 364 mm).

Top

Multiple PDF files (PDFMULT)

Specifies the action the IPDS to PDF transform should take when encountering multiple groups within the input data.

Single value

*NO Ignore group boundaries and create a single output file.

Element 1: Acknowledge multiple groups

*YES Process multiple groups with the IPDS to PDF transform based on the value specified for element 2 of this parameter.

Element 2: Process option

*SPLIT

Multiple PDF output files will be generated. The file will be split at group boundaries.

*INDEX

An index tag or bookmark will be placed at the group boundaries in a single output file.

If *INDEX is requested, bookmarks will be labeled according to:

- the group name on the DDS STRPAGGRP keyword or
- index entries generated by CRTAFPDTA or
- BNG tags inserted by Toolbox

If characters in the group name are not available in the standard PDF encoding they will be presented as a space.

Top

PDF fonts inline (PDFINCFNT)

Specifies whether the PDF output generated by the IPDS to PDF transform carries the necessary fonts inline. Including the fonts inline guarantees font fidelity but increases the PDF file size.

If the user chooses not to have the fonts embedded, the IPDS Type 1 font name character string is moved to the PDF font controls. When the document is viewed the Acrobat Reader will map IBM's core font names to the equivalent Adobe or client environment set of core fonts. For any font name character strings that Adobe Acrobat does not have an equivalent for, Adobe Acrobat will use the Adobe multi-master font substitution program to select the available font that will constitute the "best fit".

*YES The fonts should be carried inline with the PDF output.

*NO The fonts should not be carried inline with the PDF output.

Top

PDF data queue (PDFDTAQ)

Specifies the name of the data queue where Print Services Facility (PSF) will log the IPDS to PDF transformation completion notifications.

This parameter is optional, but if a data queue is specified, the data queue must exist when this command is run.

Single value

*NONE

IPDS to PDF transformation completion notifications will not be logged to any data queue.

Qualifier 1: PDF data queue

name Specify the name of the data queue to be used.

Qualifier 2: Library

name Specify the name of the library where the data queue is located.

Top

PDF mail server name (PDFMAILSVR)

Specifies which mail server to use for electronically mailing the resulting PDF file from the IPDS to PDF transform. This parameter is only valid if PDFGEN(*MAIL) is specified.

Single value

*SNDDST

Use the Send Distribution (SNDDST) command to e-mail the PDF output.

Other values (up to 4 repetitions)

*LOCAL

Use the local machine as the mail server. The SMTP protocol is used for sending the e-mail. You can specify *LOCAL in any position in the list of mail servers.

character-value

Specify the domain name or Internet address of the mail server to use to electronically mail the PDF output.

You can specify up to 4 mail servers. The writer uses the mail servers in the order in which they are listed. If the writer detects that the first mail server cannot be used, the writer will attempt to use the additional servers that have been specified in the list. Print Services Facility (PSF) internally reorganizes the list of servers, making certain to always first attempt to use the last server that was working.

If no usable server can be found in the list, the action taken is determined by the value specified for the PRTERMSG parameter of the printer device description. If PRTERMSG(*INFO) is specified, the writer is ended. If PRTERMSG(*INQ) is specified, then an inquiry message is issued.

Top

Sender of electronic mail (PDFSENDER)

Specifies the name to use as the sender for a PDF file sent by electronic mail.

***SPLFOWN**

Print Services Facility (PSF) uses the user profile for the spooled file's owner to obtain the sender of the electronic mail.

QSPLJOB

The electronic mail is being sent from PSF.

name Specify a valid user profile. PSF uses this user profile to obtain the sender of the electronic mail.

When PSF uses a user profile to determine the electronic mail sender, the user profile must exist on the system and must have an entry in the System Distribution Directory with a user ID specified. If you are using an SMTP mail server to send the mail, the directory entry must also have an SMTP user ID. If the profile has an SMTP User ID, that User ID is used as the sender, even if you use SNDDST to send the mail. Otherwise, if you use SNDDST to send the mail and there is no SMTP User ID, the profile's User ID is used.

For example, if user profile MY_PROFILE has a User ID of JIM and an SMTP User ID of JIMJ, the electronic mail sender is JIMJ, regardless of the mail server used. If the user profile had no SMTP User ID and you use SNDDST to send the mail, the electronic mail sender is JIM.

Top

PDF administrator (PDFADMIN)

Specifies the e-mail address for the designated PDF administrator. The administrator will be notified when files cannot be delivered to the designated destination. Not all failures will be recoverable, as some errors occur after control of the delivery has passed to other components of the system. For example, the PDF administrator is not notified of undeliverable e-mails.

***NONE**

No PDF administrator is specified. If e-mail notification was to be sent to a PDF administrator, the notification will not be sent.

'character-value'

Specify no more than 80 characters of text that constitutes a valid e-mail address, enclosed in apostrophes.

Top

PDF user program (PDFMAPPING)

Specifies the name of a mapping program that Print Services Facility (PSF) will call to customize the PDF transform, such as specifying encryption or, when the PDF is being sent as e-mail, resolving one or more mail tags in the spooled file. If a mapping program is not specified, PSF assumes that the mail tag is a valid electronic mail address and will attempt to send the file using the information in the mail tag.

The PSF configuration object will not be created if the mapping program specified does not exist. If the mapping program is deleted before the spooled file is processed, the PDF output file will be deleted, an error message will be issued to the message queue associated with the printer writer, and the original spooled file will be held.

Single values

***NONE**

No mapping program will be used to customize the PDF transform.

***IBMPGM**

The default IBM-supplied mapping program will be used to customize the PDF transform. If the value *IBMPGM is specified, you must also specify a value for the PDFMAP parameter.

Qualifier 1: PDF user program

name Specify the name of the user mapping program to be used.

Qualifier 2: Library

name Specify the name of the library where the user mapping program is located.

Top

PDF mapping object (PDFMAP)

Specifies the name of a mapping object that Print Services Facility (PSF) will pass to the PDF mapping program. If no mapping object is specified, PSF assumes that the mapping program does not require one. A mapping object is required if *IBMPGM is specified as the mapping program on the PDFMAPPGM parameter. Also, if you specify a mapping object, you must specify *IBMPGM on the PDFMAPPGM parameter.

The PSF configuration object will not be created if the mapping object specified does not exist. If the mapping object is deleted before the spooled file is processed, the PDF output file will be deleted, an error message will be issued to the message queue associated with the printer writer, and the original spooled file will be held.

Single value

***NONE**

No mapping object will be passed to the specified mapping program to resolve file destination.

Qualifier 1: PDF mapping object

name Specify the name of the user mapping object.

Qualifier 2: Library

name Specify the name of the library where the user mapping object is located.

Top

PDF output queue (PDFOUTQ)

Specifies the output queue to be used when *SPLF is specified for the **Generate PDF output (PDFGEN)** parameter. A value is required for this parameter when *SPLF is specified for the PDFGEN parameter.

Qualifier 1: PDF output queue

name Specify the name of the output queue to be used.

Qualifier 2: Library

name Specify the name of the library where the output queue is located.

Top

PDF directory (PDFDIR)

Specifies the path where the PDF file should be stored. An integrated file system directory must be specified when *STMF is specified for the PDFGEN parameter. The name must begin with a /. The directory name in the path cannot contain any of the following characters: \ < > " ? : * |

The subdirectories created by the transform will be owned by QSPLJOB. These subdirectories will have public data authority of *RX and public object authority of *NONE. The files created by the transform will be owned by the original spooled file owner. QSPLJOB will have data authority of *RWX and object authority of *ALL. The public authority will be *EXCLUDE.

If you want to e-mail this file later, specify **QDLS/directory-name** for the PDF directory. This will cause your file to be stored in the following location:

/QDLS/directory-name/job-name/job-number/job-user-name/file-number/date/sequence-number/

For storage in the root file system, simply specify the subdirectory where the file should be stored (directory-name). This will cause your file to be stored in the following location:

/directory-name/job-name/job-number/job-user-name/job-number_file-number_date_sequence-number/

Note: The last subdirectory is a concatenation of a number of values to guarantee a unique file name.

The file name components are explained below:

- **job-name** The ten character job name of the original spooled file
- **job-number** The job number assigned to the original spooled file, prefixed by the last two characters of the job name
- **job-user-name** The ten character name of the original spooled file owner
- **file-number** The file number of the original spooled file, prefixed by the last two characters of the job-user-name
- **date** The two digit month appended to the two digit day appended to the four digit year when the PDF transform completed
- **sequence-number** A six character sequence number. It will be set to 000001 if PDFMULT is *NO. If PDFMULT is *YES, the sequence number is incremented to uniquely identify each PDF file generated for the job.

'character-value'

Specify the name of the integrated file system (IFS) directory to be used.

Top

Save AFP data (AFPSAVE)

Specifies whether the Print Services Facility (PSF) product should activate the capability to retain the generated AFPDS file on an output queue upon completion of processing. This parameter specifies that PSF should generate an AFPDS file from an SCS, AFPDS, IPDS, PostScript, PCL, or PDF input data stream and place the AFPDS on an output queue. The output queue will be determined by a user exit program in the case of segmented print requests, or by the value provided by the AFPOUTQ parameter in the PSF configuration object. The AFPOUTQ parameter is required if AFPSAVE is set to *YES.

This setting will be ignored for input data streams of line and mixed mode data and when IPDS passthrough is active. You must have Infoprint Server installed to support PostScript, PCL, and PDF input data streams.

Note: If you are not processing segmented print requests using a PDF mapping program, you must also specify a value for the AFPRESPOOL argument to the USRDFNDTA parameter when submitting your print request for this function to be performed. Refer to Printer Device Programming, SC41-5713 for more information on using the USRDFNDTA parameter.

***NO** The file should not be saved after processing has been completed.

***YES** The generated AFPDS file may be saved after processing has been completed. For the AFPDS file to be saved, the input data stream must support the saving of AFPDS data and must meet one of these conditions:

- The print request is segmented and the PDF mapping program requests that the segment be respooled.
- The print request is not segmented and the user has specified the AFPRESPOOL argument in the USRDFNDTA parameter on the print request.

Top

AFP output queue (AFPOUTQ)

Specifies the output queue to use when *YES is specified for the **Save AFP data (AFPSAVE)** parameter. A value is required for this parameter when *YES is specified for the AFPSAVE parameter. Segmented print requests using a PDF mapping program can override this value.

Qualifier 1: PDF output queue

name Specify the name of the output queue to use.

Qualifier 2: Library

name Specify the name of the library where the output queue is located.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the Print Services Facility (PSF) configuration object.

***BLANK**

No text is specified.

'text description'

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Automatic session recovery (AUTOSSNRCY)

Specifies whether Print Services Facility (PSF) will automatically attempt to resume printing when a session has been unexpectedly ended by a device. This parameter applies to devices configured in a printer device description for an APPC or TCP/IP attachment.

Single value

***NO** Specifies that PSF ends when a session has been unexpectedly ended by a device.

Element 1: Enabled

***YES** Specifies that PSF attempts to re-establish a session which has been unexpectedly ended by a device.

If you are using a printer device description which specifies an APPC attachment, note the following:

- PSF configuration object parameters RETRY and RETRYDLY are used when PSF is attempting to re-establish a session.
- You must use an APPC controller description and an APPC device description that specifies APPN(*YES). Additionally, the APPC controller description must have MINSWTSTS(*VRYONPND) specified.

If you are using a printer device description which specifies a TCP/IP connection, then PSF configuration object parameter RETRY is used when PSF is attempting to re-establish a session.

To avoid reprinting pages, you may want to specify *INQ for this parameter's second element or decrease the value specified for the **Acknowledgment frequency (ACKFRQ)** parameter.

If you decrease the Acknowledgment frequency, PSF will be able to track printed pages more closely. However, there could be some degradation in performance. This depends on your network and your perception of the performance.

If you select inquiry message notification (*INQ), then you can be very specific about the page at which printing should resume.

Element 2: Message option

*INFO

An informational message is sent to the message queue associated with the writer when PSF is performing automatic session recovery.

*INQ

An inquiry message is sent to the message queue associated with the writer when PSF is performing automatic session recovery. This message lets you specify the page number from which a writer should begin printing the last spooled file being processed.

Top

Blank page (BLANKPAGE)

Specifies whether Print Services Facility (PSF) issues a blank page after every separator page and spooled file copy that contains an odd number of pages. The blank pages assure that the printer output is placed into the output stacker in a manner suitable for bursting. This parameter only applies to the following continuous forms printers:

- 3831
- 3835
- 3900-001
- All AFCCU continuous forms printers.

***YES** PSF issues a blank page after every separator page and spooled file copy that contains an odd number of pages.

***NO** PSF does not issue a blank page after every separator page and spooled file copy that contains an odd number of pages.

Top

Page size control (PAGSIZCTL)

Specifies whether the page size (forms) in the printer is set by Print Services Facility (PSF). This parameter only applies to IPDS printers which support the Set Media Size (SMS) operation. Refer to Printer Information, S544-5750 for new device support, but the list includes:

- Impact printers: 4224, 4230, 4234, 4247, 6400, 6408, 6412
- Workgroup printers: 3112, 3116, 3812, 3816, 3912, 3916, 3930, 4028, Network printer 12/17/24, Infoprint 20/21/32/40/70/70+/2085/2105
- Lexmark printers: Infoprint 1120/1125/1130/1140/1145/1226, Infoprint Color 1220/1228 4224, 4230, 4234, 4247, 4028, 6404, 6408, 6412 and IBM Network Printers.
- Thermal printer: 4400

***NO** The page size (forms) in the printer is not set by PSF.

***YES** The page size (forms) in the printer is set by PSF.

Top

Resident fonts (RESFONT)

Specifies whether Print Services Facility (PSF) supports resident fonts on a printer that has resident fonts. Not supporting resident fonts causes PSF to map the resident font reference to its equivalent host font and then download the host font to the printer.

***YES** Resident fonts for the printer are supported by PSF.

***NO** Resident fonts for the printer are not supported by PSF. PSF maps the resident font referenced in the spooled file to its equivalent host font and then downloads the host font to the printer.

Top

Resource retention (RSCRET)

Specifies whether resource retention across spooled files is supported by Print Services Facility (PSF).

***YES** PSF stores page segments and overlays in the printer across spooled file boundaries. This minimizes data transfers, especially when printing multiple spooled files that reference the same resources.

***NO** PSF does not store page segments and overlays in the printer across spooled file boundaries. They are deleted after each spooled file.

Note: The page segments and overlays are deleted in the printer when the printer writer is ended.

Top

Edge orient (EDGEORIENT)

Specifies whether additional page rotation should be performed. When the page rotation value of a spooled file is *COR or *AUTO and the system rotates the output, 90 degree rotation is normally used.

***NO** The output remains at its original orientation.

***YES** *COR and *AUTO output of 90 degrees is rotated an additional 180 degrees before printing.

Top

Use outline fonts (USEOUTLFNT)

Specifies whether the requested downloadable AFP raster fonts should be replaced with the equivalent downloadable outline fonts.

***NO** The raster fonts will be used.

***YES** If the equivalent downloadable outline font exists, it will be used in place of the raster font.

Top

PSF defined option (PSFDFNOPT)

Specifies a value as defined by IBM.

***NONE**

No Print Services Facility (PSF) defined options are specified.

character-value

Specify a value as defined by IBM. One or more values may be made available between releases of the operating system. If a value is made available, a PTF cover letter will contain the required syntax.

Top

Font substitution messages (FNTSUBMSG)

Specifies whether Print Services Facility (PSF) will issue messages indicating that a successful font substitution was performed.

***YES** Messages indicating that a successful font substitution was performed are issued.

***NO** Messages indicating that a successful font substitution was performed are not issued. Messages indicating that a font substitution attempt failed will still be issued.

Top

Capture host fonts at printer (FNTCAPTURE)

Specifies whether the printer should capture host downloaded fonts.

***NO** The printer should not capture host fonts.

***YES** The font character set or code page is eligible to be captured after downloading to the printer. If the printer does not support font capturing, this information is ignored and the font is downloaded.

Top

Font resolution for formatting (FNTRSL)

Specifies the resolution Print Services Facility (PSF) should use under these conditions:

- you are printing to a multiple-resolution printer
- the printer is configured to report support of multiple resolutions
- the spooled file does not specify the font metrics and resolution with which to print the spooled file or the font is not available at that resolution

If the printer is configured to report support of either 240 pels per inch or 300 pels per inch only, then PSF will produce the same results as if going to a single resolution printer.

Refer to Printer Device Programming, SC41-5713 for more information regarding the algorithm used for searching a library list for a font resource.

***SEARCH**

Search the library list for the first occurrence of a host font with a name match. The resolution of that font will be used to print the spooled file. Message PQT3546 will be issued when this value is selected to indicate to the user the resolution of the font that was finally selected.

240 The font resolution used to print the spooled file should be 240 pels per inch.

300 The font resolution used to print the spooled file should be 300 pels per inch.

Top

Font mapping table (FNTTBL)

Specifies the name of a printer-resident to printer-resident font mapping table. Print Services Facility (PSF) uses this font mapping table when printing to a printer which supports printer-resident fonts but the spooled file specifies a printer-resident font that the printer does not support.

For the printer-resident to printer-resident font substitution table, the following processing is done by the system:

- If the printer-resident font specified in the print job is supported by the printer, then it is used. The printer-resident to printer-resident font substitution table is not searched.
- If the printer-resident font specified in the print job is not supported by the printer, then the printer-resident to printer-resident font substitution table is searched.
 - If a matching entry is found in the printer-resident font substitution table and the entry is supported by the printer, then the specified substitute font in the printer-resident font substitution table is used.
 - If a matching entry is not found in the printer-resident font substitution table or if the specified substitute font is not supported by the printer, then the system will use its internal font substitution tables to perform the font substitution.

Refer to Printer Device Programming, SC41-5713 for more information on supported printer-resident fonts. See the CRTFNTTBL, DSPFNTTBL, ADDFNTTBLE, CHGFNTTBLE, and RMVFNTTBLE commands for more information on user font tables.

Single value

***NONE**

No printer-resident to printer-resident font table is specified. For a print job that references a printer-resident font, if the font is not supported by the printer, the system will substitute another resident font.

Qualifier 1: Font mapping table

name Specify the name of the printer-resident to printer-resident font table.

Qualifier 2: Library

name Specify the name of the library where the font table is located.

Top

Cut sheet emulation mode (CSEMODE)

Specifies to what degree Print Services Facility (PSF) will do size checking of the document when using Cut Sheet Emulation.

*NONE

No checking will be done to verify that the document page will fit on half the continuous forms physical page.

*CHKFIRST

The first page of each copy group will be checked to determine if the page will fit on half the continuous forms page.

*CHKALL

The front side page will be checked to determine if the page will fit on half the continuous forms page.

Top

Use DBCS simulation fonts (MAPIGCFNT)

Specifies to use DBCS simulation fonts instead of the DBCS raster fonts specified in the data stream when printing the spooled file.

DBCS simulation fonts are outline fonts that are positioned like raster fonts. This allows the use of outline fonts to print applications that use DBCS raster fonts without changing the application or the appearance of the printed output. Outline fonts are scalable, so it is not necessary to store font character sets for each point size on your system, and neither is it necessary to download a different font to the printer for every change in point size. This increases your system storage space and enhances printing performance.

*NO Do not substitute DBCS simulation fonts for DBCS raster fonts.

*YES Substitute DBCS simulation fonts for DBCS raster fonts.

Top

Replace (REPLACE)

Specifies whether an existing Print Services Facility (PSF) configuration object with the same name as the one being created, is replaced.

*YES The existing PSF configuration object is replaced.

*NO If a PSF configuration object with same name exists in the library specified, the create operation fails. The existing PSF configuration object is not replaced.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority to the object, who are not on an authorization list, and whose group profile has no specific authority to the object.

*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the CRTAUT value for a library is changed by running the Change Library (CHGLIB) command, the new CRTAUT value will not affect any existing objects.

***CHANGE**

Change authority allows the user to change and perform basic functions on the object. Change authority provides object operational authority and all data authorities.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, perform basic functions on the object, and change ownership of the object.

***USE** Use authority provides object operational authority, read authority, and execute authority.

***EXCLUDE**

The user cannot access the object.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

```
CRTPSFCFG PSFCFG(QGPL/P5001) PDFGEN(*MAIL)
          PDFDEVTYPE(*P4028) PDFPPRDWR1(*LETTER)
          PDFPPRDWR2(*LEGAL) PDFMULT(*YES *INDEX)
          PDFDTAQ(*NONE) PDFINCFNT(*YES)
          PDFMAILSVR(*SNDDST)
          PDFSENDER(QSPLJOB) PDFMAPPGM(*NONE)
```

This command creates a Print Services Facility (PSF) configuration object named P5001 in the QGPL library. The PDFGEN parameter specifies that the spooled file is to be transformed to PDF and e-mailed by the SNDDST command. The transform is told to emulate a 4028 printer with paper sizes in drawers 1 and 2 to be letter and legal, respectively.

The requested output will have PDF index tags at the group boundaries, the necessary fonts will be placed inline with the output file, the sender is PSF. Since there is no mapping program, the mail tag information associated with the file is assumed to be valid e-mail addresses.

There will be no completion message logged to a data queue because this parameter has a value of *NONE.

Top

Error messages

***ESCAPE Messages**

CPF2283

Authorization list &1 does not exist.

CPF88C1

Printer resource type &1 &2 was not created in library &3.

CPF9810

Library &1 not found.

CPF9820

Not authorized to use library &1.

CPF9845

Error occurred while opening file &1.

Top

Create Query Management Form (CRTQMFORM)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Query Management Form (CRTQMFORM) command allows you to create a query management form from a specified source file member. The query management form defines how a report is to look when data from running a query is displayed or printed.

Top

Parameters

Keyword	Description	Choices	Notes
QMFORM	Query management report form	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Query management report form	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
SRCFILE	Source file	<i>Qualified object name</i>	Optional, Positional 2
	Qualifier 1: Source file	<i>Name, <u>QQMFORMSRC</u></i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
SRCMBR	Source member	<i>Name, *QMFORM</i>	Optional, Positional 3
TEXT	Text 'description'	<i>Character value, *SRCMBRTXT, *BLANK</i>	Optional
AUT	Authority	<i>Name, *USE, *CHANGE, *ALL, *EXCLUDE, *LIBCRTAUT</i>	Optional
REPLACE	Replace object	<i>*YES, *NO</i>	Optional

Top

Query management report form (QMFORM)

Specifies the query management form to be created.

This is a required parameter.

This is a required parameter.

Qualifier 1: Query management report form

name Specify the name of the form to be created.

Qualifier 2: Library

*CURLIB

The current library for the job is used to locate the form. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library where the form is located.

Source file (SRCFILE)

Specifies the source file containing the source for the form being created. The form is identified by the name specified on the QMFORM parameter.

Qualifier 1: Source file

QQMFORMSRC

IBM-supplied source file QQMFORMSRC contains the source for the form to be created.

name Specify the name of the file containing the source for the form to be created.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library to be searched.

Top

Source member (SRCMBR)

Specifies the source file member containing the form source to be created.

*QMFORM

The member name is the same as the form name specified on the QMFORM parameter.

name Specify the name of the member that contains the form source.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the query management form.

*SRCMBRTXT

The descriptive text for the object being created is the same as the text description of the source member. If the source member has no text description, or if it is blank, the comment inside the externalized form is used if one exists; otherwise *BLANK is assumed.

***BLANK**

No text is specified. If this command causes an object to be replaced, any existing text for the object is replaced with blank text.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes. The apostrophes are not part of the 50-character string.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

*EXCLUDE

The user cannot access the object.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Replace object (REPLACE)

Specifies whether an existing object with the same name and type in the library to receive the output is replaced with the output of this command.

***YES** An existing object is replaced with the output of this command.

***NO** An existing object is not replaced with the output of this command.

Top

Examples

```
CRTQMFORM QMFORM(FORMEMP) SRCFILE(RPTLIB/FORMSRC)
```

This command creates a form named FORMEMP in the current library. The form source is in member FORMEMP, which is located in source file FORMSRC in library RPTLIB.

Top

Error messages

*ESCAPE Messages

QWM2701

&1 command failed.

QWM2703

&1 command ended.

QWM2705

Source file &1 in &2 not available.

QWM2706

&1 in &2 not replaced.

[Top](#)

Create Query Management Query (CRTQMQR)

Where allowed to run: All environments (*ALL)
 Threadsafes: No

Parameters
 Examples
 Error messages

The Create Query Management Query (CRTQMQR) command allows you to create a query management query from a specified source file member. The source for a query is a single Structured Query Language (SQL) statement that can contain variable substitution values and embedded comments. It can be spread over multiple records in a source file member.

Top

Parameters

Keyword	Description	Choices	Notes
QMQR	Query management query	Qualified object name	Required, Positional 1
	Qualifier 1: Query management query	Name	
	Qualifier 2: Library	Name, *CURLIB	
SRCFILE	Source file	Qualified object name	Optional, Positional 2
	Qualifier 1: Source file	Name, QMQRYSRC	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
SRCMBR	Source member	Name, *QMQR	Optional, Positional 3
TEXT	Text 'description'	Character value, *SRCMBRTXT, *BLANK	Optional
SRTSEQ	Sort sequence	Qualified object name	Optional
	Qualifier 1: Sort sequence	Name, *SRC, *JOB, *JOB, *HEX, *LANGIDSHR, *LANGIDUNQ	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
LANGID	Language ID	Character value, *SRC, *JOB, *JOB	Optional
AUT	Authority	Name, *USE, *CHANGE, *ALL, *EXCLUDE, *LIBCRTAUT	Optional
REPLACE	Replace object	*YES, *NO	Optional

Top

Query management query (QMQR)

Specifies the query management query to be created.

This is a required parameter.

Qualifier 1: Query management query

name Specify the name of the query to be created.

Qualifier 2: Library

***CURLIB**

The current library for the job is used to locate the query. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library where the query is located.

Top

Source file (SRCFILE)

Specifies the source file containing the source for the query being created. The query is identified by the name specified on the QMQRY parameter.

Qualifier 1: Source file

QQMQRYSRC

IBM-supplied source file QQMQRYSRC contains the source for the query to be created.

name Specify the name of the file containing the source for the query to be created.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library to be searched.

Top

Source member (SRCMBR)

Specifies the member of the source file member that contains source for the query to be created.

***QMORY**

The member name is the same as the query name specified on the QMQRY parameter.

name Specify the name of the member that contains the query source.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the query management query.

***SRCMBRTXT**

The descriptive text for the object being created is the same as the text description of the source member. If the source member has no text description, or if it is blank, then TEXT(*BLANK) is assumed.

***BLANK**

No text is specified. If this command causes an object to be replaced, any existing text for the object is replaced with blank text.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes. The apostrophes are not part of the 50-character string.

Sort sequence (SRTSEQ)

Specifies the sort sequence table to be used for string comparisons in this query.

Note: This parameter is valid only when creating a query. This parameter is not valid when creating a FORM.

Qualifier 1: Sort sequence

***SRC** The source file member contains the sort sequence to be used when creating the query.

***JOBRUN**

The SRTSEQ value for the job at the time the query is run is used.

***JOB** The SRTSEQ value for the job at the time the query is created is used.

***HEX** A sort sequence table is not used, and the hexadecimal values of the characters are used to determine the sort sequence.

***LANGIDUNQ**

The unique-weight sort table for the language specified on the LANGID parameter is used.

***LANGIDSHR**

A shared-weight sort table for the language specified on the LANGID parameter is used.

name Specify the name of the sort sequence table to be used when this query is created.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library to be searched.

Language ID (LANGID)

Specifies the language identifier to be used when SRTSEQ(*LANGIDUNQ) or SRTSEQ(*LANGIDSHR) is specified.

***SRC** The source file member contains the language ID to be used when the query is created.

***JOBRUN**

The LANGID value for the job is determined when the query is run.

***JOB** The LANGID value for the job is determined when the query is created.

language-ID

Specify the language identifier to be used for the query.

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

*EXCLUDE

The user cannot access the object.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Replace object (REPLACE)

Specifies whether an object with the same name and type in the library to receive the output is replaced with the output of this command.

***YES** An existing object is replaced with the output of this command.

***NO** An existing object is not replaced with the output of this command.

Top

Examples

```
CRTQMQR  QMQR (NEWQR)  SRCFILE (RPTLIB/QRYSRC)
```

This command creates a query named NEWQR in the current library. The query source is in member NEWQR, which is located in source file QRYSRC in library RPTLIB.

Top

Error messages

*ESCAPE Messages

QWM2701

&1 command failed.

QWM2703

&1 command ended.

QWM2705

Source file &1 in &2 not available.

QWM2706

&1 in &2 not replaced.

Top

Create Q/A Database (CRTQSTDB)

Where allowed to run: Interactive environments (*INTERACT
*IPGM *IREXX *EXEC)
Threadsafe: No

Parameters
Examples
Error messages

The Create Question-and-Answer Database (CRTQSTDB) command allows you to create a new question-and-answer (Q & A) database. More information is available in the Basic system operations topic collection in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Restrictions:

1. This command is shipped with public *EXCLUDE authority.
2. The user of this command must have *ADD authority to the library in which the database files are located.

Top

Parameters

Keyword	Description	Choices	Notes
QSTDB	Q/A database	Name, <u>*SELECT</u>	Optional, Positional 1
LIB	Lib containing Q/A database	Name, <u>QUSRSYS</u>	Optional, Positional 2

Top

Q/A database (QSTDB)

Specifies the Q & A database to create. When selecting a Q & A database name, the name must be 10 characters or less and must begin with a letter.

The possible values are:

*SELECT

You are asked to specify a Q & A database. If only one Q & A database exists on the system, it is the default.

question-database

Specify the name of the Q & A database in which to create.

Top

Lib containing Q/A database (LIB)

Specifies the name of an existing library that will contain the new Q & A database.

The possible library values are:

QUSRSYS

The Q & A database is created in the QUSRSYS library.

library-name

Specify name of the library to be searched.

Note: The library must exist on the system.

[Top](#)

Examples

CRTQSTDB

This command shows the Create a Q & A Database display.

[Top](#)

Error messages

None

[Top](#)

Create Q/A Database Load (CRTQSTLOD)

Where allowed to run: Interactive environments (*INTERACT
*IPGM *IREXX *EXEC)
Threadsafe: No

Parameters
Examples
Error messages

The Create Q & A Database Load (CRTQSTLOD) command allows you to create for distribution a Q & A database load on an alternative medium, such as tape. More information is available in the Basic system operations topic collection in the i5/OS Information Center at <http://www.ibm.com/systems/i5infocenter/>.

Restrictions:

1. This command is shipped with public *EXCLUDE authority.
2. The user must have *READ authority to the Q & A database file referred to by the command.

Top

Parameters

Keyword	Description	Choices	Notes
QSTDB	Q/A database	Name, * <u>SELECT</u>	Optional, Positional 1
LIB	Lib containing Q/A database	Name, * <u>QSTLIB</u>	Optional, Positional 2

Top

Q/A database (QSTDB)

Specifies the Q & A database to distribute.

*SELECT

You are asked to specify a Q & A database. If only one Q & A database exists on the system, it is the default.

question-database

Specify the name of the Q & A database that you want to distribute.

Top

Lib containing Q/A database (LIB)

Specifies the name of the library that contains the Q & A database to be used to create the load.

*QSTLIB

The library containing the specified Q & A database is searched. If *SELECT is specified on the QSTDB parameter, any Q & A database in any library to which you are authorized can be selected.

library-name

Specify the name of the library to be searched. If *SELECT is specified on the QSTDB parameter, any Q & A database in the library to which you are authorized can be selected.

Examples

CRTQSTLOD

This command shows the Create a Database Load display.

Error messages

None

Create RNDCCFG Configuration (CRTRNDCCFG)

Where allowed to run: All environments (*ALL)
Threadsafe: Yes

Parameters
Examples
Error messages

The Create RNDCCFG Configuration (CRTRNDCCFG) command generates configuration files for RNDCCFG. It can be used as a convenient alternative to writing the rndc.conf file and the corresponding controls and key statements in named.conf.

Restrictions:

- You must have execute (*X) authority to the directories in the path of the entropy source.
- You must have read (*R) authority to the entropy source.
- You must have execute (*X) authority to the directories in the path of the key file.
- You must have write (*W) authority to the key file if it already exists.
- You must have read, write and execute (*RWX) authority to the key file's parent directory if the output file does not already exist.
- You must have execute (*X) authority to the directories in the path of the output file.
- You must have write (*W) authority to the output file if it already exists.
- You must have read, write and execute (*RWX) authority to the output file's parent directory if the output file does not already exist.

Top

Parameters

Keyword	Description	Choices	Notes
AUTOCFG	Automatic configuration	*NO, *YES	Optional
KEYFILE	Key file	Path name, *DFT	Optional
RNDCCADR	Server RNDCCFG IP address	Character value, *DFT, *ANY4, *LOOPBACK4, *ANY6, *LOOPBACK6	Optional
RNDCCPORT	Server RNDCCFG port	1-65535, 953	Optional
KEYNAME	Key name	Character value, *DFT	Optional
KEYSIZE	Key size	1-512, 128	Optional
ENTROPYSRC	Entropy source	Path name, *DFT	Optional
TOSTMF	Output file	Path name, *STDOUT	Optional

Top

Automatic configuration (AUTOCFG)

Specifies whether or not to do automatic RNDCCFG configuration. This creates a /QIBM/UserData/OS400/DNS/_DYN/rndc-key._KID file that is read by both RNDCCFG and the DNS server on startup. The rndc-key._KID file defines a default command channel and authentication key allowing RNDCCFG to communicate with any DNS server on the local host.

If a more elaborate configuration than that generated by AUTO(*YES) is required, for example if RNDC is to be used remotely, you should run CRTRNDCCFG with AUTO(*NO) and set up rndc.conf and named.conf as directed by the output.

This parameter can only be used with the KEYFILE and TOSTMF parameters.

***NO** Do not create an automatic configuration. Instead, display a sample /QIBM/UserData/OS400/DNS/_DYN/rndc.conf file. This sample will also show the corresponding lines that need to be included into a named.conf for the configuration to work.

***YES** Create an automatic configuration that works for any local server, using a /QIBM/UserData/OS400/DNS/_DYN/rndc-key._KID file. You will also need to add a controls statement to the named.conf file to enable loopback addresses using the key "rndc-key". This can be done by inserting the following into named.conf:

```
include "/QIBM/UserData/OS400/DNS/_DYN/rndc-key._KID";
controls {
  inet 127.0.0.1
    port 953 allow {127.0.0.1;} keys {"rndc-key"};
  inet ::1
    port 953 allow {::1;} keys {"rndc-key"};
};
```

If this file already exists, it will be overwritten.

If you originally created your RNDC key file using this method, you can periodically re-create the RNDC key file again using this method to change the key. If you do this, you may also need to reload your local DNS servers so they pick up the new key.

Top

Key file (KEYFILE)

Specifies, when *YES is specified for the AUTOCFG parameter, an alternate directory location for the rndc-key._KID file.

***DFT** The key file will be located in directory /QIBM/UserData/OS400/DNS/_DYN/.

path-name

Specify the path name for the directory which contains the rndc-key._KID file to use. If this file exists, it will be overwritten.

Top

Server RNDC IP address (RNDCADR)

Specifies the IP address where the DNS server listens for command channel connections from RNDC. This IP address should match the IP address listed in the **controls** statement in named.conf.

***DFT** Use loopback address 127.0.0.1 for IPv4 and loopback address '::1' for IPv6.

***ANY4**

The IP address will be the IPv4 wildcard address. The wildcard address is '*'.

***LOOPBACK4**

The IP address will be the IPv4 loopback address. The loopback address is 127.0.0.1.

***ANY6**

The IP address will be the IPv6 wildcard address. The wildcard address is '::'.

*LOOPBACK6

The IP address will be the IPv6 loopback address. The loopback address is '::1'.

character-value

Specify a valid IPv4 or IPv6 internet address. Do not use a domain name.

Top

Domain name server port (RNDCPORT)

Specifies the command channel port where the DNS server listens for connections from RNDC. The default is 953. This port number should match the port number specified in any **controls** statement in `named.conf`.

953 Listen on port 953.

1-65535

Specify a valid port number.

Top

Key name (KEYNAME)

Specifies the key name of the RNDC authentication key. This must be a valid domain name.

*DFT Use key name `rndc-key`.

character-value

Specify a key name that is a valid domain name.

Top

Key size (KEYSIZE)

Specifies the size of the authentication key, in bits.

128 Sets the size of the key to 128 bits.

1-512 Specify the length for the authentication key, in bits.

Top

Entropy source (ENTROPYSRC)

Specifies a source of random data for generating the authorization. If for some reason the default entropy file is not large enough, this parameter allows you to change the entropy source to one that is larger.

*DFT The default entropy file will be used. A new entropy file is generated each time the command is invoked. The size of the default entropy file is 4096 bytes.

path-name

Specify the path for a stream file to serve as an entropy source.

Top

Output file (TOSTMF)

Specifies the name of a stream file where all command output is written.

***STDOUT**

All command output goes to the standard output device (normally the display).

path-name

Specify the path for a stream file where output should be written.

Top

Examples

Example 1: Creating an Automatic RNDCCFG File

```
CRTNRNDCCFG AUTOCFG(*YES)
```

This command creates an automatic configuration. The file `/QIBM/UserData/OS400/DNS/_DYN/rndc-key._KID` is created.

The text seen between the "Start of named.conf" and "End of named.conf" lines are meant to be inserted into the named.conf file. For example, if your server is called "NS", this text would be inserted into the file `/QIBM/UserData/OS400/DNS/NS/named.conf`. Since these lines are commented out by the '#' character, you would also need to remove the comment characters to enable the key.

Sample output:

```
wrote key file "/QIBM/UserData/OS400/DNS/_DYN/rndc-key._KID"
# Start of named.conf
# include "/QIBM/UserData/OS400/DNS/_DYN/rndc-key._KID";
# End of named.conf
```

Example 2: Creating an RNDCCFG File

```
CRTNRNDCCFG RNDCCFG(953)
             KEYNAME('rndc-key')
             KEYSIZE(128)
```

This command displays a sample rndc.conf file on the display. The text seen between the "Start of rndc.conf" and "End of rndc.conf" lines are meant to be inserted into the file `/QIBM/UserData/OS400/DNS/_DYN/rndc.conf`.

Likewise, the text seen between the "Start of named.conf" and "End of named.conf" lines are meant to be inserted into the named.conf file. For example, if your server is called "NS", this text would be inserted into the file `/QIBM/UserData/OS400/DNS/NS/named.conf`. Since these lines are commented out by the '#' character, you would also need to remove the comment characters to enable the key and controls statements.

Sample output:

```
# Start of rndc.conf
key "rndc-key" {
    algorithm hmac-md5;
    secret "AQMjHsUaR3f0TUoA2Jcc2Q==";
};
options {
    default-key "rndc-key";
    default-server localhost;
```

```
    default-port 953;
};
# End of rndc.conf
# Start of named.conf
# key "rndc-key" {
#     algorithm hmac-md5;
#     secret "AQMjHsUaR3f0TUoA2Jcc2Q==";
# };
#
# controls {
#     inet 127.0.0.1
#     port 953 allow { 127.0.0.1; } keys { "rndc-key"; };
#     inet ::1
#     port 953 allow { ::1; } keys { "rndc-key"; };
# };
# End of named.conf
```

Top

Error messages

*ESCAPE Messages

DNS0013

Error processing command parameters.

DNS0065

Option 33 of i5/OS is required, but is not installed.

TCP7124

Program &1 in library &2 type *PGM ended abnormally.

Top

Create S/36 Display File (CRTS36DSPF)

Where allowed to run: All environments (*ALL)
 Threadsafes: No

Parameters
 Examples
 Error messages

The Create System/36 Display File (CRTS36DSPF) command creates a display file from a System/36 source file and adds, deletes, or updates formats in existing display files. Using the TOFILE and TOMBR parameters, you can convert the System/36 SFGR source to data description specifications (DDS) source.

Note: The data description specifications (DDS) source is saved in the DDS source file QS36DDSSRC, in the same library as the display file. If the QS36DDSSRC source file does not exist, this source file is created with a record length of 92.

Restriction: Option 5 of the operating system must be installed to run this command. This command can be run either natively or in the System/36 environment.

Top

Parameters

Keyword	Description	Choices	Notes
DSPFILE	Display file	<i>Qualified object name</i>	Optional, Positional 1
	Qualifier 1: Display file	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *CURLIB	
OPTION	Option	Single values: *CREATE Other values (up to 32 repetitions): *UPDATE, *ADD, *DELETE	Optional, Positional 2
SRCMBR	S/36 SFGR source member	Single values: *DSPFILE Other values (up to 32 repetitions): <i>Name</i>	Optional, Positional 3
SRCFILE	S/36 source file	<i>Qualified object name</i>	Optional, Positional 4
	Qualifier 1: S/36 source file	<i>Name</i> , QS36SRC	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
REPLACE	Replace display file	*NO, *YES	Optional
PRINT	Print SFGR listing	*YES, *NO, *PARTIAL	Optional
MAXDEV	Maximum devices	1-256, *SRCATR	Optional
AUT	Authority	<i>Name</i> , *USE, *ALL, *CHANGE, *EXCLUDE, *LIBCRTAUT	Optional
GENOPT	Generation option	*GEN, *NOGEN, *CONVERT	Optional
SYNTAX	Check SFGR source syntax	*YES, *NO	Optional
TOFILE	To DDS source file	<i>Qualified object name</i>	Optional
	Qualifier 1: To DDS source file	<i>Name</i> , QDDSSRC	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
TOMBR	To DDS source member	<i>Name</i> , *NONE, *SRCMBR, *DSPFILE	Optional
HALT	Issue msg if error occurs	*YES, *NO	Optional
DFRWRT	Defer write	*SRCATR, *YES, *NO	Optional
TGTRLS	Target Release	<i>Character value</i> , *CURRENT, *PRV	Optional

Display file (DSPFILE)

Specifies the name and the library of the created display file.

This is a required parameter.

display-file-name

Specify the display file name.

Note: A display file is not created if the file has the same name and library as an existing program, message file, or other type of file.

The possible library values are:

***CURLIB**

The current library for the job is used to locate the file. If no library is specified as the current library for the job, the QGPL library is used.

library-name

Specify the name of the library where the display file is located.

Top

Option (OPTION)

Specifies what to do with the specified display file. A maximum of 32 options can be specified. The given option applies to the corresponding name on the **S/36 SFGR source member (SRCMBR)** parameter.

***CREATE**

A display file is created using the specified display file name as defined by the specified source members. If *CREATE is specified, no other options can be specified.

***ADD** One or more display formats are added to the specified display file, as defined by the corresponding names specified on the **S/36 SFGR source member (SRCMBR)** parameter.

***UPDATE**

One or more display formats are updated in the specified display file as defined by the corresponding names specified on the SRCMBR parameter.

***DELETE**

A display format is deleted from the specified display file. The format that is deleted is defined by the corresponding names specified on the SRCMBR parameter. If all formats in the display file are deleted, the entire display file is deleted and a source file member is not produced.

Top

S/36 SFGR source member (SRCMBR)

Specifies the member used in the source file when performing a create, add, or update option. For a delete option specify the name of the format being deleted.

***DSPFILE**

A member with the same name as the display file is specified.

source-member-name

Specify the source member name. A maximum of 32 source member names can be specified.

S/36 source file (SRCFILE)

Specifies the name of the source file in which the screen format generator (SFGR) source members are found.

QS36SRC

The source file, QS36SRC, is used.

file-name

Specify the name of the source file.

The possible library values are:

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is used to locate the file. If no library is specified as the current library for the job, the QGPL library is used.

library-name

Specify the name of the library where the source file is located.

Top

Replace display file (REPLACE)

Specifies whether an existing display file is replaced. When OPTION(*CREATE) is not specified, this parameter is ignored.

***NO** An existing display file is not replaced.

***YES** An existing display file is replaced. Other types of files are not replaced.

Note: A display file is not created if the file has the same name and library as a program or message file.

If terminating errors are encountered, the existing display file is not replaced. If the display file already exists, the **Authority (AUT)** parameter is ignored and the authorities for the old display file are copied to the new display file that replaces it. REPLACE(YES) is assumed when OPTION (*ADD) (*UPDATE) or (*DELETE) is specified.

Top

Print SFGR listing (PRINT)

Specifies whether the compile listings are printed.

***YES** Full listings for the SFGR source syntax checking and the DDS compile steps are printed.

***NO** No listing is printed for the SFGR source syntax checking step. *PARTIAL is assumed for the DDS compile step.

***PARTIAL**

If errors are found in any step, the compile listing is printed for that step, along with the error or warning messages. If no messages are issued, no listing is printed.

Top

Maximum devices (MAXDEV)

Specifies the number of devices that can use the display file at one time.

*SRCATR

The maximum number of devices is taken from the first attributes of the source member. The Change System/36 Source Attributes (CHGS36SRCA) and Edit System/36 Source Attributes (EDTS36SRCA) commands can be used to set this value in the source member.

number-of-devices

Specify the maximum number of devices. The valid values range from 1 through 256.

Top

Authority (AUT)

Specifies the authority you are giving the users who do not have specific authority to the object, who are not on the authorization list, and whose user group has no specific authority to the object.

If REPLACE(*YES) is specified and the display file already exists, the AUT parameter is ignored and the authorities for the old display file are copied to the new display file that replaces it. REPLACE(*YES) is assumed when OPTION *ADD, *UPDATE or *DELETE is specified.

*LIBCRTAUT

The authority for the object is the same as the value specified on the **Create authority (CRTAUT)** parameter of the library in which the object is being created. If the value specified on the CRTAUT parameter is changed, the new value will not affect any existing objects.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***EXCLUDE**

The user cannot access the object.

authorization-list-name

Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Generation option (GENOPT)

Specifies the compile options that are used.

***GEN** If *YES is specified on the **Check SFGR source syntax (SYNTAX)** parameter, the SFGR source syntax is checked, the display file is converted to data description specifications (DDS), and a display file (*FILE) object is created. If *NO is specified on the SYNTAX parameter, the SFGR source syntax is not checked.

***NOGEN**

If *YES is specified on the SYNTAX parameter, the SFGR source syntax is checked.

***CONVERT**

The display file is converted to data description specifications (DDS), but no display file is created. Specify a member name on the **To DDS source member (TOMBR)** parameter to save the DDS results. If terminating errors are found when syntax checking the SFGR source, no conversion to DDS is performed. If *YES is specified on the SYNTAX parameter, SFGR syntax checking is performed.

Top

Check SFGR source syntax (SYNTAX)

Specifies whether the SFGR source syntax is checked.

***YES** The source syntax is checked.

***NO** The source syntax is not checked.

Top

To DDS source file (TOFILE)

Specifies the name of the source file in which to store the DDS source that is used to create the display file. The file need not already exist. If the user is authorized to the CRTSRCPF (Create Source Physical File) command, and the file does not exist, a new source file is created.

QDDSSRC

The source file, QDDSSRC, is used.

file-name

Specify the name of the source file. The file should have a record length of 92 bytes.

The possible library values are:

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is used to locate the file. If no library is specified as the current library for the job, the QGPL library is used.

library-name

Specify the name of the library where the source file is located.

Top

To DDS source member (TOMBR)

Specifies the name of the source file member in which to store the DDS source. The source file member is added if it does not exist, and is replaced if it exists. When the member name is the same as that of the display file name, and the to-file is QS36DDSSRC in the same library as the display file being created, the DDS is saved in this member only if the compile operation of the display file is successful. To guarantee that the DDS is saved, specify the name of some other source file, library, or member.

*NONE

The DDS source is not stored in the source file specified on the **To DDS source file (TOFILE)** parameter. The source is saved in the Q36DDSSRC source file.

*SRCMBR

The first name specified on the **S/36 SFGR source member (SRCMBR)** parameter is used as the member name.

*DSPFILE

The display file name is used as the member name.

member-name

Specify the name of the source file member in which to store the DDS source. If the member does not exist, it is added. If it already exists, it is replaced. If any terminating errors are encountered, the member is not added or changed.

Top

Issue msg if error occurs (HALT)

Specifies whether an error message is issued when an SFGR syntax error is detected.

*YES The request ends with an error message.

*NO The request ends with a diagnostic message and a return code of 1008 is set.

Top

Defer write (DFRWRT)

Specifies that data is not written to the display file until a read request is made. Control is returned to the requesting program immediately after the data is received for output. This may result in improved performance.

*SRCATR

The defer write option is taken from the DFRWRT attribute of the first source member. If there is no source member, or the DFRWRT source attribute has not been set, *YES is used.

*YES When the write request is made to the display file, control is returned after the buffer is processed. The actual display of the data may take place after a read or combined write/read operation is performed. The program buffer is immediately available for the next read or combined write/read operation.

*NO When the write request is made to the display file, control is not returned to the requesting program until the input/output request is completed including displaying the data and making input/output information available.

Top

Target Release (TGTRLS)

Specifies the release level of the operating system on which you intend to use the object being saved.

When specifying the **target-release** value, the format VxRxMx is used to specify the release, where Vx is the version, Rx is the release, and Mx is the modification level. For example, V5R3M0 is version 5, release 3, modification 0.

Valid values depend on the current version, release, and modification level of the operating system, and they change with each new release. You can press F4 while prompting this command parameter to see a list of valid target release values.

***CURRENT**

The object is to be restored to, and used on, the release of the operating system currently running on your system. The object can also be restored to a system with any subsequent release of the operating system installed.

***PRV** The object is to be restored to the previous release with modification level 0 of the operating system. The object can also be restored to a system with any subsequent release of the operating system installed.

character-value

Specify the release in the format VxRxMx. The object can be restored to a system with the specified release or with any subsequent release of the operating system installed.

Top

Examples

```
CRTS36DSPF  DSPFILE(MYLIB/MYDISPLAY)  OPTION(*CREATE)
            SRCMBR(SFGRMBR1 SFGRMBR2)
            SRCFILE(MYLIB/QS36SRC)  GENOPT(*NOGEN)
```

This command checks the SFGR source (producing a printer list named QPUTSFGR). No DDS is built, and the display file is not created.

Top

Error messages

***ESCAPE Messages**

SSP4464

Member &3 in file &1 in use, cannot be shared.

SSP5003

Source member &1 not found.

SSP5004

&1—This load member exists, but is not a \$SFGR member.

SSP5005

&1 display file already exists.

SSP5007

Source member &1 already given.

SSP5009

Display file &1 not found in library &2.

SSP5010

&1 not System/36 display file.

SSP5011

&1 not allowed for display file name.

SSP5012

Format &1 not found in display file

- SSP5015**
Source file library &1 not found.
- SSP5016**
Display file library &1 not found.
- SSP5017**
TOFILE library &1 not found.
- SSP5019**
Terminating errors in \$SFGR input specifications.
- SSP5027**
TGTRLS(*PRV) allowed with changes only when existing display file created for previous release.
- SSP5451**
Existing file &1 is not a display file.
- SSP6124**
Unexpected error occurred.
- SSP7375**
Error &1 received by &2 utility.
- SSP8663**
User not authorized to access &1.
- SSP8679**
Not authorized to access member &1.
- SSP9080**
Object &1 in use; it cannot be shared.

Top

Create S/36 Menu (CRTS36MNU)

Where allowed to run: All environments (*ALL)
 Threadsafte: No

Parameters
 Examples
 Error messages

The Create System/36 Menu (CRTS36MNU) command creates a menu (display file and command message file) from your source members. You can specify that this menu be created either in a fixed-format, with options 1 through 24 arranged in two columns, or in free-format.

Restriction: Option 5 of the operating system must be installed to run this command. This command can be run either natively or in the System/36 environment.

Top

Parameters

Keyword	Description	Choices	Notes
CMDTXTMBR	Command text source member##	Name	Required, Positional 1
OPTTXTMBR	Option text source member	Name, *NONE	Optional, Positional 2
CMDTXTSRC	Command text source file	Qualified object name	Optional, Positional 3
	Qualifier 1: Command text source file	Name, <u>QS36SRC</u>	
	Qualifier 2: Library	Name, *CURLIB	
OPTTXTSRC	Option text source file	Qualified object name	Optional, Positional 4
	Qualifier 1: Option text source file	Name, <u>QS36SRC</u>	
	Qualifier 2: Library	Name, *CMDLIB, *CURLIB	
MNULIB	Menu library (LOADLIB)	Name, *CMDLIB, *CURLIB	Optional, Positional 5
REPLACE	Replace menu	*NO, *YES	Optional
FREEFORM	Free form menu	*NO, *YES	Optional
KEEP	Keep option text msg file	*NO, *YES	Optional
DDSLIST	DDS listing	*PARTIAL, *FULL	Optional
MAXDEV	Maximum devices	1-256, <u>5</u>	Optional
AUT	Authority	Name, *USE, *ALL, *CHANGE, *EXCLUDE, *LIBCRTAUT	Optional
TOFILE	To DDS source file	Qualified object name	Optional
	Qualifier 1: To DDS source file	Name, <u>QDDSSRC</u>	
	Qualifier 2: Library	Name, *MNULIB, *CMDLIB, *CURLIB	
TOMBR	To DDS source member	Name, *NONE	Optional
IGCDTA	User specified DBCS data	*NO, *YES	Optional
TGTRLS	Target Release	Character value, *CURRENT, *PRV	Optional

Top

Command text source member## (CMDTXTMBR)

Specifies the source member that contains the System/36 message source that is used to create the command text message file. This message file defines the commands that are used when an option is selected. The message IDs must begin with USR.

This is a required parameter.

member-name-##

Specify the name of the source file member to use for the command text message file being created. The trailing ## symbols are required. The menu (display file) name is the same as the member name without the ## symbols.

Note: The message file name specified within the source member must be the same as the source member name.

Top

Option text source file (OPTTXTMBR)

Specifies the source member that is used to create the option text message file, or a screen format generator (SFGR) source member used to create the menu display file.

*NONE

The option text is taken from the command text message file. If OPTTXTMBR(*NONE) is specified, FREEFORM(*NO) must also be specified.

member-name

Specify the name of the source member to use for the descriptions of the options on the menu you are creating. The member can contain either the SFGR or the System/36 message source. A source member must be specified when *YES is specified on the **Free form menu (FREEFORM)** parameter.

Top

Command text source file (CMDTXTSRC)

Specifies the source file in which the command text member is located.

QS36SRC

The source file, QS36SRC, is used.

file-name

Specify the name of the source file that contains the member specified on the **Command text source member## (CMDTXTMBR)** parameter.

The possible library values are:

*CURLIB

The current library for the job is used to locate the file. If no library is specified as the current library for the job, the QGPL library is used.

library-name

Specify the name of the library where the file is located.

Top

Option text source file (OPTTXTSRC)

Specifies the name and library of the source file in which the option text member is located.

QS36SRC

The source file, QS36SRC, is used.

file-name

Specify the name of the source file that contains the member specified on the **Option text source member (OPTTXTMBR)** parameter.

The possible library values are:

*CMDLIB

The library specified on the **Command text source file (CMDTXTSRC)** parameter is used to locate the file.

*CURLIB

The current library for the job is used to locate the file. If no library is specified as the current library for the job, the QGPL library is used.

library-name

Specify the name of the library where the file is located.

Top

Menu library (LOADLIB) (MNULIB)

Specifies the menu library that is used to store the created menu.

*CMDLIB

The library specified on the **Command text source file (CMDTXTSRC)** parameter is used to store the file.

*CURLIB

The current library for the job is used to store the file. If no library is specified as the current library for the job, the QGPL library is used.

library-name

Specify the name of the library where the menu is located.

Top

Replace menu (REPLACE)

Specifies whether an existing display file is replaced.

***NO** An existing display file is not replaced.

***YES** An existing display file is replaced by the one being created.

Note: The menu is not created if it has the same name and library as an existing program or message file.

If terminating errors are encountered, the existing display file is not replaced. If the display file already exists, the AUT parameter is ignored, and the authorities for the old display file are copied to the new display file that replaces it.

Top

Free form menu (FREEFORM)

Specifies whether the menu is created in free-format or in a fixed-format.

- *NO** Free-format is not used. The menu is created using a fixed-format with two-columns. The message number corresponds to the option number.
- *YES** The menu is created using free-format. If *YES is specified, a value must be specified on the **Option text source member (OPTTXTMBR)** parameter. Option text message numbers correspond to the row numbers on the screen.

Top

Keep option text msg file (KEEP)

Specifies whether the option text message file is kept when the compilation is complete.

- *NO** The option text message file is not kept.
- *YES** The option text message file is kept. If the option text source member contains the screen format generator (SFGR) source and has the same name as the menu, then KEEP(*YES) is required.

Top

DDS listing (DDSLIST)

Specifies whether a partial or full DDS compile listing is provided.

- *PARTIAL**
A partial listing is provided.
- *FULL** A full DDS listing and cross-reference are provided.

Top

Maximum devices (MAXDEV)

Specifies the maximum number of devices that can use the menu at one time.

- 5** The maximum number of devices is five.

number-of-devices

Specify the maximum number of devices. Valid values range from 1 through 256.

Top

Authority (AUT)

Specifies the authority you are giving the users who do not have specific authority to the object, who are not on the authorization list, and whose user group has no specific authority to the object.

If REPLACE(*YES) is specified and the display file already exists, the **Authority (AUT)** parameter is ignored and the authorities for the old display file are copied to the new display file that replaces it.

***LIBCRTAUT**

The authority for the object is the same as the value specified on the **Create authority (CRTAUT)** parameter of the library in which the object is being created. If the value specified on the CRTAUT parameter is changed, the new value will not affect any existing objects.

- *USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.
- *ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.
- *CHANGE**
The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.
- *EXCLUDE**
The user cannot access the object.

authorization-list-name

Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

To DDS source file (TOFILE)

Specifies the name of the source file in which to store the DDS source that is used to create the menu. The file need not already exist. If you are authorized to the CRTSRCPF (Create Source Physical File) command, and the file does not exist, a new source file is created.

QDDSSRC

The source file, QDDSSRC, is used.

file-name

Specify the name of the source file in which to store the DDS source.

The possible library values are:

***MNULIB**

The menu library is used to locate the source file.

***CMDLIB**

The command library is used to locate the source file.

***CURLIB**

The current library for the job is used to locate the source file. If no library is specified as the current library for the job, the QGPL library is used.

library-name

Specify the name of the library where the source file is located.

Top

To DDS source member (TOMBR)

Specifies the name of the source file member in which to store the DDS source. When the member name is the same as that of the display file name, and the to-file is QS36DDSSRC in the same library as the display file being created, the DDS is saved in this member only if the compile operation of the display file is successful. To guarantee that the DDS is saved, specify the name of some other source file, library, or member.

*NONE

The DDS source is not stored in the source file specified on the **To DDS source file (TOFILE)** parameter.

member-name

Specify the name of the source file member in which to store the DDS source. If the member does not exist, it is added. If it already exists, it is replaced.

Top

User specified DBCS data (IGCDTA)

Specifies whether the display file contains double-byte character data.

*NO The display file contains no double-byte character data. Option text message IDs must begin with USR.

*YES The display file or the message files contain double-byte character data. Option text message IDs may begin with USZ. To get the full benefit of this function, an IGC version of the operating system must be installed.

Top

Target Release (TGTRLS)

Specifies the release level of the operating system on which you intend to use the object being saved.

When specifying the **target-release** value, the format VxRxMx is used to specify the release, where Vx is the version, Rx is the release, and Mx is the modification level. For example, V5R3M0 is version 5, release 3, modification 0.

Valid values depend on the current version, release, and modification level of the operating system, and they change with each new release. You can press F4 while prompting this command parameter to see a list of valid target release values.

*CURRENT

The object is to be restored to, and used on, the release of the operating system currently running on your system. The object can also be restored to a system with any subsequent release of the operating system installed.

*PRV The object is to be restored to the previous release with modification level 0 of the operating system. The object can also be restored to a system with any subsequent release of the operating system installed.

character-value

Specify the release in the format VxRxMx. The object can be restored to a system with the specified release or with any subsequent release of the operating system installed.

Top

Examples

```
CRTS36MNU  CMDTXTMBR(MENU##)  OPTTXTMBR(SFGRMBR)
           CMDTXTSRC(MYLIB/QS36SRC)  OPTTXTSRC(MYLIB/QS36SRC)
           MNULIB(WORKLIB)  REPLACE(*YES)
           FREEFORM(*YES)  KEEP(*YES)
```

This command creates a free format menu display from the specified SFGR source member, placing the resulting menu into library WORKLIB. Since the SFGR source is being used, FREEFORM(*YES) and KEEP(*YES) are required. The layout of the menu display is controlled by the format definition located in the SFGR source member. No special checking is done to ensure that the display file defined by this source is valid when used by the system as a menu.

Top

Error messages

*ESCAPE Messages

SSP4464

Member &3 in file &1 in use, cannot be shared.

SSP5004

&1—This load member exists, but is not a \$SFGR member.

SSP5005

&1 display file already exists.

SSP5011

&1 not allowed for display file name.

SSP5017

TOFILE library &1 not found.

SSP5019

Terminating errors in \$SFGR input specifications.

SSP5027

TGTRLS(*PRV) allowed with changes only when existing display file created for previous release.

SSP5451

Existing file &1 is not a display file.

SSP5750

Command message file messages 1-24 contain only blank text.

SSP5751

Command text message file name must end with ##.

SSP5755

Unable to create \$BMENU work file.

SSP5756

Command message file name must be longer than 2 characters.

SSP5758

Command text source member &1 not found.

SSP5759

Option text source member &1 not found.

- SSP5760**
Command text message file has wrong name.
- SSP5761**
Option text message file has wrong name.
- SSP5763**
Option text member name should not be same as menu name.
- SSP5766**
Option text source library &1 was not found.
- SSP5767**
Menu library &1 not found.
- SSP5768**
Command text source library &1 not found.
- SSP5772**
Option text source member required for free format menu.
- SSP5773**
Command and option text member names must not be the same.
- SSP6124**
Unexpected error occurred.
- SSP7375**
Error &1 received by &2 utility.
- SSP8663**
User not authorized to access &1.
- SSP8679**
Not authorized to access member &1.
- SSP9080**
Object &1 in use; it cannot be shared.

Top

Create S/36 Message File (CRTS36MSGF)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create System/36 Message File (CRTS36MSGF) command creates a message file from your System/36 message source member. This enables you to convert your System/36 message source to the message source on this system.

System/36 message source consists of 3 types of statements:

1. The message control statement must be the first record in the source. Only one control statement is allowed. The control statement has the following syntax:

```
name<,level> <comment>
```

where: **name** is the name of the message file being created or changed. The name must start in column 1 of the source record. Level must be a 1 or 2 or a blank, and is separated from the name by a comma. A level 1 indicates that the source is for message text (first-level messages); a level 2 indicates that the source is for online help information (second-level messages). If level is omitted or blank, a first level message is assumed. Anything after the first blank in the control statement is considered to be a comment and is ignored.

2. Comment records that start with an asterisk (*) in column 1. All comment records are ignored.
3. One or more message text statements may be defined. The message text statement has the following syntax:

```
mmm text
```

where: **mmm** is the System/36 Message Identification Code (MIC) and must start in column 1 and consist of 4 digits (0-9). All 4 digits are required. The 7-character message identifier is created by adding the message prefix specified by the MSGPFX parameter in front of the MIC. Column 5 is ignored and should be left blank. Text is the text of the message being defined and starts in column 6. The message text statements must be arranged so that the MICs are not in descending order. If there is insufficient room to define the entire message in a single record, the MIC can be repeated in column 1 of the next record and the text can be continued starting in column 6.

A first level message is restricted to a maximum of 75 characters, and a second level message is restricted to a maximum of 225 characters unless RESTRICT(*NO) is specified. Trailing blanks on the last record for each MIC are not counted. The record length used when processing the SRCMBR is the RCDLEN source attribute for that member. This attribute defaults to the source file record length, but can be set or changed when using the CHGS36SRCA, EDTS36SRCA, or RSTS36LIBM commands. The RCDLEN source attribute is the member's logical record length. If the RCDLEN source attribute is less than the record length of the source file, all characters after the logical record length are ignored. If any record contains any non-blank characters after the logical record length, a diagnostic message is issued as a warning.

Restriction: Option 5 of the operating system must be installed to run this command. This command can be run either natively or in the System/36 environment.

Top

Parameters

Keyword	Description	Choices	Notes
SRCMBR	S/36 message source member	<i>Name</i>	Required, Positional 1
SRCFILE	S/36 source file	<i>Qualified object name</i>	Optional, Positional 2
	Qualifier 1: S/36 source file	<i>Name</i> , <u>QS36SRC</u>	
	Qualifier 2: Library	<i>Name</i> , * <u>LIBL</u> , *CURLIB	
MSGLIB	Message file library	<i>Name</i> , * <u>CURLIB</u>	Optional, Positional 3
REPLACE	Replace message file	* <u>NO</u> , *YES	Optional
MSGPFX	Message identifier prefix	<i>Name</i> , <u>USR</u>	Optional
OPTION	Option	* <u>CREATE</u> , *ADD, *CHANGE	Optional
SUBST	Allow # substitution fields	* <u>YES</u> , *NO	Optional
RESTRICT	Enforce S/36 restrictions	* <u>YES</u> , *NO	Optional
AUT	Authority	<i>Name</i> , *USE, *ALL, *CHANGE, *EXCLUDE, * <u>LIBCRTAUT</u>	Optional
TOFILE	To CL source file	<i>Qualified object name</i>	Optional
	Qualifier 1: To CL source file	<i>Name</i> , <u>QCLSRC</u> , *NONE	
	Qualifier 2: Library	<i>Name</i> , * <u>CURLIB</u>	
TOMBR	To CL source member	<i>Name</i> , * <u>NONE</u> , *SRCMBR	Optional
HALT	Issue msg if error occurs	* <u>YES</u> , *NO, *IGNORE	Optional

Top

S/36 message source member (SRCMBR)

Specifies the source member that is used to create the message file. The first record that is not a comment record in the source member specifies the name of the message file being created or changed. The first record that is not a comment record also specifies whether the text in this source member is for the first-level or second-level message text.

This is a required parameter.

Top

S/36 source file (SRCFILE)

Specifies the source file that is used to create the message file.

QS36SRC

The source file QS36SRC is used.

file-name

Specify the name of the source file that contains the member specified on the **S/36 message source member (SRCMBR)** parameter.

The possible library values are:

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the job is used to locate the file. If no library is specified as the current library for the job, the QGPL library is used.

library-name

Specify the name of the library where the source file is located.

Top

Message file library (MSGLIB)

Specifies the library that is used to store the message file being created.

***CURLIB**

The current library for the job is used to store the message file. If no library is specified as the current library for the job, the QGPL library is used.

***SRCLIB**

The source library is used to store the message file.

library-name

Specify the name of the library where the created message file is stored.

Top

Replace message file (REPLACE)

Specifies whether or not an existing message file is replaced. This parameter is ignored if OPTION(*CREATE) is not specified.

***NO** An existing message file is not replaced.

***YES** An existing file is replaced by the one being created.

Note: The message file is not created if it has the same name and library as an existing program or display file.

If any terminating errors are encountered, the existing message file is not replaced. If the message file already exists, the **Authority (AUT)** parameter is ignored and all of the authorities for the old message file are copied to the new message file that replaces it.

Top

Message identifier prefix (MSGPFX)

Specifies the message prefix that is used to create messages. The default prefix of USR must be used if the message is used to build a menu.

USR The message prefix USR is used.

message-prefix

Specify the three-character message prefix to use with message identifiers.

Top

Option (OPTION)

Specifies what to do with the message file that is specified in the source member.

***CREATE**

A message file is created with the specified name.

***ADD** Messages are added to the specified message file.

*UPDATE

Messages are changed in the specified message file. If a message does not exist, it is created and added to the message file.

Top

Allow # substitution fields (SUBST)

Specifies that System/36 text replacement fields are converted into the notation that represents text replacement fields in message file (*MSGF) objects. Although *YES is the default, not everyone uses text replacement fields and *NO is a way to make sure that a field is not converted by mistake. Replacement fields are represented by a pair of trailing ## symbols in the S/36 source.

*YES The replacement text fields are converted. A string of # symbols in the message text source is converted to a replacement text field only when the string occurs at the start or end of the message text, or when the string is preceded and followed by one of the following delimiter characters:

' '	blank
.	period
<	less than
(left parenthesis
+	plus
&	ampersand
*	asterisk
)	right parenthesis
;	semicolon
-	minus
,	comma
>	greater than
?	question
:	colon
'	apostrophe
=	equal
"	double quote

*NO The replacement text fields are not converted.

Top

Enforce S/36 restrictions (RESTRICT)

Specifies whether System/36 restrictions on message text length are enforced.

*YES System/36 restrictions are enforced. Message text is limited to 75 characters. Online help for messages is limited to 225 characters.

*NO System/36 restrictions are not enforced.

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority to the object, who are not on the authorization list, and whose users' group has no specific authority to the object.

If OPTION(*CREATE) and REPLACE(*YES) is specified and the message file already exists, the **Authority (AUT)** parameter is ignored and all of the authorities for the old message file are copied to the new message file that replaces it. The AUT parameter is always ignored when OPTION (*ADD) or (*UPDATE) is specified.

*LIBCRTAUT

The authority for the object is the same as the value specified on the **Create authority (CRTAUT)** parameter of the library in which the object is being created. If the value specified on the CRTAUT parameter is changed, the new value will not affect any existing objects.

- *USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.
- *ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***EXCLUDE**

The user cannot access the object.

authorization-list-name

Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

To CL source file (TOFILE)

Specifies the name and library of the source file in which to store the CL source that was used to create the message file. If the file does not already exist, a new source file is created if the user is authorized to the CRTSRCPF (Create Source Physical File) command.

QCLSRC

The source file, QCLSRC, is used.

file-name

Specify the name of the source file in which the source is stored.

The possible library values are:

*CURLIB

The current library for the job is used to locate the file. If no library is specified as the current library for the job, the QGPL library is used.

library-name

Specify the name of the library where the source file is located.

Top

To CL source member (TOMBR)

Specifies the name of the source file member in which to store the data description specifications (DDS) source. If the member does not exist, it is created. When the member name is the same as that of the display file name, and the to-file is QS36DDSSRC in the same library as the display file being created, the DDS is saved in this member only if the compile operation of the display file is successful. To guarantee that the DDS is saved, specify the name of some other source file, library, or member.

*NONE

The CL source is not stored in the source file specified on the **To CL source file (TOFILE)** parameter.

*SRCMBR

If no member name is specified, the member name specified on the **S/36 message source member (SRCMBR)** parameter is used. The same name and library should **not** be specified for both the TOFILE parameter and the SRCFILE parameter, since this would destroy your original System/36 message source.

member-name

Specify the name of the source file member in which to store the CL source. The specified member is replaced if it exists. If it does not exist, it is created. If any terminating errors are encountered, the member is not added or changed.

Top

Issue msg if error occurs (HALT)

Specifies whether processing stops when an error is detected.

*YES The request ends with an error message.

*NO The request ends with a diagnostic message, and a return code of 2034 is set.

*IGNORE

If an error that can be ignored is detected in the source, a diagnostic message is issued, and the current source statement is ignored. Processing continues with the next source statement. If the error cannot be ignored, processing stops and an error message is issued.

Top

Examples

```
CRTS36MSGF SRCMBR(MYMSGSRC) SRCFILE(MYLIB/QS36SRC)
           MSGLIB(WORKLIB) REPLACE(*YES)
```

This command creates a message file named MYMSGSRC in library WORKLIB. If a message file with the same name already exists, this new message file replaces the existing one.

Error messages

***ESCAPE Messages**

SSP1727

Message file &1 not found in library &2.

SSP5017

TOFILE library &1 not found.

SSP6124

Unexpected error occurred.

SSP7375

Error &1 received by &2 utility.

SSP8663

User not authorized to access &1.

Create Save File (CRTSAVF)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Save File (CRTSAVF) command creates a save file.

A save file can be used with save and restore commands to contain data that would otherwise be written to tape or optical media. A save file can also be used like a database file to read or write records that contain save or restore information. A save file can also be used to send objects to another user on the Systems Network Architecture distribution services (SNADS) network.

Restrictions:

- An online save file should only be used for save/restore data. When restoring objects from the save file, the data in the file must have been produced by a save command. When records are written to a save file by using a high-level language program, the records must contain data produced by saving objects into the save file.
- The records retrieved from a save file contain sequencing checksum information that is validated by the system when records are inserted into a save file. An attempt to insert records that are either out of sequence or have been changed since retrieval from a save file are rejected.
- A save file can contain the output of only one save operation and one library, and all objects in the save file must have been saved from the same library. If the Send Network File (SNDNETF) command is used to send a save file, the maximum size of the save file is approximately 2 billion bytes. The number of objects saved in a save file is identical to the number of objects saved when saving to tape or optical media, as long as the file's maximum size is not exceeded. The exact number of objects saved into a save file depends on the object types and the object contents.
- You must have object operational (*OBJOPR) authority to the CRTSAVF command in order to create a duplicate save file object or to restore a save file object.
- You must have add (*ADD) and read (*READ) authority to the library in which the save file is to be created.

Top

Parameters

Keyword	Description	Choices	Notes
FILE	Save file	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Save file	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
MAXRCDS	Maximum records	1-4293525600, *NOMAX	Optional
ASP	ASP number	1-32, *LIBASP	Optional
WAITFILE	Maximum file wait time	<i>Integer, *IMMED, *CLS</i>	Optional
SHARE	Share open data path	*NO, *YES	Optional
AUT	Authority	<i>Name, *EXCLUDE, *ALL, *CHANGE, *LIBCRTAUT, *USE</i>	Optional

Top

Save file (FILE)

Specifies the save file to be created.

If the file is used in a high-level language program, the file name must be consistent with the naming rules of that language. Otherwise, the file must be renamed in the program.

This is a required parameter.

Qualifier 1: Save file

name Specify the name of the save file to be created.

Qualifier 2: Library

*CURLIB

The current library for the job is used to locate the save file. If no library is specified as the current library for the job, QGPL is used.

name Specify the library where the save file is located.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

*BLANK

No text is specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Maximum records (MAXRCDS)

Specifies the maximum number of records the save file can contain. The number of bytes of space in the save file is estimated at $8192 + (512 \times \text{the number of records in the save file})$. There is room for approximately two thousand 512-byte records in 1 megabyte of space. If you wanted to ensure that the save file would not exceed approximately 20 megabytes you would specify 40000 records (20 megabytes \times 2000 records/megabyte).

Note: The maximum amount of data that a save file can contain is approximately 2 terabytes. A message appears when the file is full.

*NOMAX

The maximum value of 4293525600 records is used.

1-4293525600

Specify the maximum number of records the save file can contain.

Top

Auxiliary storage pool ID (ASP)

Specifies the auxiliary storage pool (ASP) from which the system allocates storage for the save file.

*LIBASP

The storage space for the save file is allocated from the same auxiliary storage pool that the save file's library is allocated from.

1-32 Specify the identifier of the auxiliary storage pool.

Top

Maximum file wait time (WAITFILE)

Specifies the number of seconds that the program waits for the file resources to be allocated when the file is opened, or the device or session resources to be allocated when an acquire operation is performed to the file. If the file resources cannot be allocated in the specified wait time, an error message is sent to the program.

*IMMED

The program does not wait. Immediate allocation of file resources is required.

*CLS The job default wait time is used as the wait time for the file resources to be allocated.

1-32767

Specify the number of seconds to wait for file resources to be allocated.

Top

Share open data path (SHARE)

Specifies whether the open data path (ODP) is shared with other programs in the same routing step. When an ODP is shared, the programs accessing the file share facilities such as the file status and the buffer.

*NO The ODP is not shared with other programs in the routing step. A new ODP for the file is created and used every time a program opens the file.

*YES The same ODP is shared with each program in the job that also specifies *YES when it opens the file.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*EXCLUDE

The user cannot access the object.

*ALL The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

name Specify the name of an authorization list. Users included on the authorization list are granted authority to the object as specified by the list. The authorization list must exist when the object is created.

Top

Examples

```
CRTSAVF FILE(ONLINE) TEXT('Online save file')
```

This command creates an online save file named ONLINE in the current library. The save file is in the system ASP with no maximum number of records. The public has no authority to this file; only the object owner and users that have the object owner user profile as their group profile can use this save file.

Top

Error messages

***ESCAPE Messages**

CPF7302

File &1 not created in library &2.

Top

Create Subsystem Description (CRTSBSD)

Where allowed to run: All environments (*ALL)
 Threadsafes: No

Parameters
 Examples
 Error messages

The Create Subsystem Description (CRTSBSD) command creates a subsystem description that defines the operational attributes of a subsystem. After the subsystem description is created, it can be specialized by commands that add, change, and remove work entries and routing entries in the subsystem description.

Restrictions:

- To use this command, you must have:
 - read (*READ) and add (*ADD) authority to the library where the subsystem description is to be created.
 - all object (*ALLOBJ) and security administration (*SECADM) special authority to specify a value other than *NONE for a system library list entry.
 - use (*USE) authority to all auxiliary storage pool (ASP) device descriptions in the ASP group to specify an ASP group name.
- Only a user with all object (*ALLOBJ) special authority is allowed to specify an ASP group name when the ASP device description does not exist.

Top

Parameters

Keyword	Description	Choices	Notes
SBSD	Subsystem description	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Subsystem description	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
POOLS	Storage pools	Values (up to 10 repetitions): <i>Element list</i>	Required, Positional 2
	Element 1: Pool identifier	1-10	
	Element 2: Storage size	<i>Integer, *BASE, *NOSTG, *INTERACT, *SPOOL, *SHRPOOL1, *SHRPOOL2, *SHRPOOL3, *SHRPOOL4, *SHRPOOL5, *SHRPOOL6, *SHRPOOL7, *SHRPOOL8, *SHRPOOL9, *SHRPOOL10, *SHRPOOL11, *SHRPOOL12, *SHRPOOL13, *SHRPOOL14, *SHRPOOL15, *SHRPOOL16, *SHRPOOL17, *SHRPOOL18, *SHRPOOL19, *SHRPOOL20, *SHRPOOL21, *SHRPOOL22, *SHRPOOL23, *SHRPOOL24, *SHRPOOL25, *SHRPOOL26, *SHRPOOL27, *SHRPOOL28, *SHRPOOL29, *SHRPOOL30, *SHRPOOL31, *SHRPOOL32, *SHRPOOL33, *SHRPOOL34, *SHRPOOL35, *SHRPOOL36, *SHRPOOL37, *SHRPOOL38, *SHRPOOL39, *SHRPOOL40, *SHRPOOL41, *SHRPOOL42, *SHRPOOL43, *SHRPOOL44, *SHRPOOL45, *SHRPOOL46, *SHRPOOL47, *SHRPOOL48, *SHRPOOL49, *SHRPOOL50, *SHRPOOL51, *SHRPOOL52, *SHRPOOL53, *SHRPOOL54, *SHRPOOL55, *SHRPOOL56, *SHRPOOL57, *SHRPOOL58, *SHRPOOL59, *SHRPOOL60</i>	
	Element 3: Activity level	<i>Integer</i>	

Keyword	Description	Choices	Notes
MAXJOBS	Maximum jobs	0-1000, <u>*NOMAX</u>	Optional, Positional 3
TEXT	Text 'description'	Character value, <u>*BLANK</u>	Optional
SGNDSPF	Sign-on display file	Single values: <u>*QDSIGNON</u> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Sign-on display file	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <u>*LIBL</u> , <u>*CURLIB</u>	
SYSLIBL	Subsystem library	<i>Name</i> , <u>*NONE</u>	Optional
AUT	Authority	<i>Name</i> , <u>*LIBCRTAUT</u> , <u>*CHANGE</u> , <u>*ALL</u> , <u>*USE</u> , <u>*EXCLUDE</u>	Optional
ASPGRP	ASP group	<i>Name</i> , <u>*NONE</u>	Optional

Top

Subsystem description (SBSD)

Specifies the name and library of the subsystem description being created. The subsystem description is stored in the specified library.

This is a required parameter.

Qualifier 1: Subsystem description

name Specify the name of the subsystem description being created.

Qualifier 2: Library

*CURLIB

The current library of the thread is used. If no current library exists for the thread, library QGPL is used.

name Specify the library where the subsystem description will be created.

For more information on subsystem descriptions, see the Work Management Guide.

Top

Storage pools (POOLS)

Specifies one or more storage pool definitions that are in this subsystem description. Each definition specifies for one storage pool:

- Pool definition identifier: The identifier **inside** the subsystem description, of the storage pool definition. The same identifiers (1 through 10) can be used for pool definitions in different subsystem descriptions.
- Size: The size of the storage pool, expressed in kilobyte (1K = 1024 bytes) multiples. This is the amount of main storage that can be used by the pool.
- Activity level: The maximum number of threads that can run at the same time in the pool.

A maximum of 10 storage pool definitions can be specified for the subsystem description being created. Although each subsystem description can have as many as 10, there is an operational limitation on how many active storage pools can be in the **system**. In the system, no more than 64 storage pools can be active at any time, including the base storage pool and the machine storage pool. (A storage pool for which *NOSTG has been specified is not considered active, and it is not allocated to any subsystem.)

If a subsystem is started for which all of its storage pools cannot be allocated without exceeding the 64-pool system maximum, the pools that can be allocated (up to the limit) are allocated and the remainder are not. Then, for each routing step started by that subsystem that normally is routed into one of the pools that was not allocated, the base pool is used instead.

This is a required parameter.

You can specify 10 values for this parameter.

Element 1: Pool identifier

1-10 Specify the pool identifier of the storage pool definition to be in this subsystem. The attributes of the pool also must be specified by one of the following values. As many as 10 sets of values can be specified here to define as many as 10 storage pools in the subsystem.

Element 2: Storage size

***BASE**

The specified pool definition is defined to be the base system pool, which can be shared with other subsystems. The minimum size and activity level of the base pool are specified in the system values QBASPOOL and QBASACTLVL.

***NOSTG**

No storage and no activity level are assigned to the pool at first. (It is inactive.)

***INTERACT**

The specified pool definition is defined to be the shared pool used for interactive work. The size and activity level of the shared pool are specified using the Change Shared Storage Pool (CHGSHRPOOL) command.

***SPOOL**

The specified pool definition is defined to be the shared pool used for spooled writers. The size and activity level of the shared pool are specified using the CHGSHRPOOL command.

***SHRPOOLnn**

The specified pool definition is defined to be a general-purpose shared pool. There are sixty general-purpose shared pools, identified by special values *SHRPOOL1 to *SHRPOOL60. The size and activity level of a shared pool are specified using the CHGSHRPOOL command.

integer-number

Specify the storage size (in kilobytes) of the specified storage pool. A value of at least 256 (meaning 256K) must be specified.

Element 3: Activity level

integer-number

Specify the maximum number of threads that can run at the same time in the pool.

Top

Maximum jobs (MAXJOBS)

Specifies the maximum number of jobs that can be active at the same time in the subsystem controlled by this subsystem description. The maximum applies to all jobs that are started and are waiting or running, except for jobs on the job queue or jobs that have finished running.

***NOMAX**

There is no maximum number of jobs in this subsystem.

0-1000 Specify the maximum number of jobs allowed in this subsystem.

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

*BLANK

No text is specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Sign-on display file (SGNDSPF)

Specifies the name and library of the sign-on display file that is used when showing sign-on displays at work stations allocated to the subsystem. If the specified sign-on display file does not exist when the subsystem description is created or changed, you must specify a library qualifier because the qualified sign-on display file name is kept by the system. The sign-on display file must contain a record format named SIGNON.

Note: The sign-on display file can be changed when the subsystem is active. However, the new sign-on display file is not used until the next time the subsystem is started.

Note: If the user invoking this command has use (*USE) authority to the display file and execute (*EXECUTE) authority to its library, format checks of the display file can be made. This helps predict that the display will work correctly when the subsystem is started. Otherwise, those format checks will not be performed.

Single values

*QDSIGNON

The sign-on display file value QDSIGNON in QSYS is used when showing sign-on displays at work stations that are allocated to the subsystem.

Qualifier 1: Sign-on display file

name Specify the name of the sign-on display file that is used.

Qualifier 2: Library

*LIBL All libraries in the thread's library list are searched until a match is found.

*CURLIB

The current library for the thread is used to locate the object. If no library is specified as the current library for the thread, the QGPL library is used.

name Specify the library where the sign-on display file is located.

Subsystem library (SYSLIBL)

Specifies a library that is entered ahead of other libraries in the system portion of the library list. This parameter allows you to use a secondary language library.

Restrictions:

1. The secondary language library should not be specified in the QSYSLIBL or QUSRLIBL system values. QSYSLIBL must contain fewer than 15 libraries to allow the secondary language library to be added to the system portion of the library list.
2. You must have *ALLOBJ and *SECADM special authority to specify a value other than *NONE for a system library list entry.

*NONE

The system library list is not changed.

name Specify the name of the library being added to the system library list.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*LIBCRTAUT

The authority to the object is the same as the value specified on the **Create authority (CRTAUT)** parameter of the library in which the object is being created. If the value specified on the CRTAUT parameter is changed, the new value will not affect any existing objects.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as displaying its contents. The user cannot change the object. *USE authority provides object operational authority, read authority, and execute authority.

*EXCLUDE

The user cannot access the object.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

ASP group (ASPGRP)

Specifies the name of an auxiliary storage pool (ASP) group to be included in the library name space of the subsystem monitor job. The ASP group name is the name of the primary ASP device within the ASP group.

When the subsystem monitor job creates a user job, the job description is found using the library name space of the subsystem monitor job. Job queues, the sign-on display file, and the subsystem library are found in the library name space of the subsystem monitor job.

When the subsystem monitor job is doing work on behalf of a user job, the subsystem uses the library name space of the user job. The program and class are found in the library name space of the user job. For these objects, the ASPGRP parameter in the subsystem description has no effect.

When a subsystem monitor job uses an ASP group, the jobs in that subsystem should use the same ASP group. Use the Initial ASP group (INLASPGRP) parameter for the job description so that the ASP group is set during job creation and can be used to find other objects during job creation. Consistency between the subsystem monitor job and the user job is particularly important for prestart job entries because there are times the subsystem must find the program in order to determine which job description to use.

Restrictions:

1. The library name space of the subsystem monitor job for the controlling subsystem cannot include an ASPGRP. If a value other than *NONE is specified in the subsystem description for the controlling subsystem, it is ignored.
2. The library name space of the subsystem monitor job for the QSYSWRK subsystem cannot include an ASPGRP. If a value other than *NONE is specified in the subsystem description for the QSYSWRK subsystem, it is ignored.
3. The ASP group must be varied on and have a status of 'Available' before the subsystem is started.
4. The subsystem must be ended before the ASP group can be varied off.
5. This parameter cannot be changed while the subsystem is active.

*NONE

The library name space of the subsystem monitor job will not include an ASP group.

name Specify the name of the ASP group to be included in the library name space of the subsystem monitor job.

Top

Examples

Example 1: Creating a Description With a Signon Display File

```
CRTSBSD  SBSD(BAKER)  POOLS((1 *BASE)(2 2000 4))
          SGNDSPF(*LIBL/NEWSGNON)
          TEXT ('Subsystem for running Baker Department jobs')
```

This command creates a subsystem description named BAKER and stores it in the current library. If there is no current library, then it is stored in the general purpose library (QGPL). Storage pool definition 1 specifies that pool 1 is to share the base system pool; the definition of storage pool 2 is to have 2000K of storage and an activity level of 4. There is no limit in this subsystem description on the number of jobs that can be active at the same time. The activity levels in the subsystem may, however, be controlled by MAXACT parameters specified in work station entries, job queue entries, and routing entries that are in

the subsystem description. The sign-on display file is NEWSGNON and is used when showing sign-on displays at work stations allocated to the BAKER subsystem. The user's library list is searched for the NEWSGNON display file.

Example 2: Creating a Description that Contains Three Storage Pool Definitions

```
CRTSBSD  SBSDB(MEDLIB/MEDICAL)
          POOLS((1 1500 2) (2 *BASE) (3 *NOSTG))
          MAXJOBS(5) TEXT('Medical files inquiry and update')
```

This command creates a subsystem description named MEDICAL and stores it in the MEDLIB library. The subsystem description contains three storage pool definitions: storage pool 1 is defined to have 1500K of storage and an activity level of 2, pool 2 is to share the base system pool, and pool 3 is defined first to be inactive when the other pools are active—it has no storage and no activity level. Up to five jobs can be active at the same time in this subsystem. A text description briefly describes the subsystem.

Top

Error messages

*ESCAPE Messages

CPF1696

Subsystem description &1 not created.

Top

Create Search Index (CRTSCHIDX)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Search Index (CRTSCHIDX) command creates a search index. A search index is used to refer to the help information contained in one or more panel groups.

You can access a search index through data description specifications (DDS) by pressing the HELP key, or through the index search function using the Start Search Index (STRSCHIDX) command.

A search index created by the CRTSCHIDX command does not contain any data. Add data using the Add Search Index Entry (ADDSCHIDX) command.

Restrictions:

- You must have add (*ADD) authority for the library where the search index is to be located.
- IBM-supplied panel groups cannot be added to a search index created with the CRTSCHIDX command; only panel groups created with the Create Panel Group (CRTPNLGRP) command can be added to a search index created with the CRTSCHIDX command.

Top

Parameters

Keyword	Description	Choices	Notes
SCHIDX	Search index	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Search index	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
TITLE	Display title	<i>Character value</i>	Required, Positional 2
TEXT	Text 'description'	<i>Character value, *TITLE, *BLANK</i>	Optional
CHRID	Character identifier	Single values: <i>*SYSVAL</i> Other values: <i>Element list</i>	Optional
	Element 1: Graphic character set	<i>Integer</i>	
	Element 2: Code page	<i>Integer</i>	
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional

Top

Search index (SCHIDX)

Specifies the search index to be created.

This is a required parameter.

Qualifier 1: Search index

name Specify the name of the search index.

Qualifier 2: Library

*CURLIB

The current library for the job is used to create the search index. If no library is specified as the current library for the job, QGPL is used.

name Specify the name of the library where the search index is to be created.

Top

Display title (TITLE)

Specifies the title you want to appear at the top of the selected topics display when the search information is presented.

This is a required parameter.

character-value

Specify no more than 55 characters, enclosed in apostrophes.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

*TITLE

The first 50 characters of the title are used as the text.

*BLANK

No text is specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Character identifier (CHRID)

Specifies the graphic character set and code page values used for the search index. The value specified for this parameter must match the TXTCHRID parameter value of panel groups added to this search index.

Single values

*SYSVAL

The system determines the graphic character set and code page values for the command parameters from the QCHRID system value.

Element 1: Graphic character set

integer

Specify the graphic character set value that matches the character set of the synonyms that will be used in the search index.

Element 2: Code page

integer

Specify the code page value that matches the code page of the synonyms that will be used in the search index.

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

***CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

```
CRTSCHIDX  SCHIDX(ACCOUNTING)  TITLE('Accounting Help Index')
           TEXT('Accounting Help Index')
```

This command creates a search index named ACCOUNTING in the current library.

Top

Error messages

*ESCAPE Messages

CPF6E11

Search index &2 not created in library &3.

Top

Create Spelling Aid Dictionary (CRTSPADCT)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Spelling Aid Dictionary (CRTSPADCT) command allows the user to create a user-defined spelling aid dictionary. This dictionary is used with the Create Document (CRTDOC), Check Document (CHKDOC), Edit Document (EDTDOC), or Work with Documents (WRKDOC) commands when doing spell check functions, such as spelling aid and spelling verification.

Spelling aid dictionaries are classified into IBM language dictionaries and user dictionaries. Language dictionaries are IBM-created; user dictionaries are created with this command.

The following are IBM language dictionary names that are in library QDCT. They should not be used for user-created dictionaries.

- AFRIKAAN
- AKTUEEL
- BRASIL
- CATALA
- DANSK
- DEUTSCH
- DSCHWEIZ
- ESPANA
- FRANCAIS
- FRA2
- GREEK
- ISLENSK
- ITALIANO
- LEGAL
- MEDICAL
- NEDERLND
- NORBOK
- NORNYN
- PORTUGAL
- RUSSIAN
- SUOMI
- SVENSK
- UK
- US

This command requires a source file to contain all the words being put into the spelling aid dictionary. The source member can be created by using the Start Source Entry Utility (STRSEU) command. The dictionary source type is SPADCT.

Top

Parameters

Keyword	Description	Choices	Notes
SPADCT	Spelling aid dictionary	Single values: *USRSWL Other values: <i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Spelling aid dictionary	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *CURLIB	
SRCFILE	Source file	<i>Qualified object name</i>	Required, Positional 2
	Qualifier 1: Source file	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL , *CURLIB	
SRCMBR	Source member	<i>Name</i> , *DCT	Optional, Positional 3
TEXT	Text 'description'	<i>Character value</i> , *SRCMBRTXT , *BLANK	Optional
BASEDCT	Base dictionary	<i>Qualified object name</i>	Optional
	Qualifier 1: Base dictionary	<i>Name</i> , *NONE	
	Qualifier 2: Library	<i>Name</i> , *LIBL , *CURLIB	
VFYDCT	Verify dictionary	<i>Qualified object name</i>	Optional
	Qualifier 1: Verify dictionary	<i>Name</i> , *NONE	
	Qualifier 2: Library	<i>Name</i> , *LIBL , *CURLIB	
LNGATR	Language attribute	*VFYDCT , *NONE, *ENGLISH, *ESPANA, *FRANCAIS, *FRA2, *ITALIANO, *DANSK, *DEUTSCH, *ISLENSK, *NEDERLND, *NORSK, *SVENSK, *PORTUGAL, *DSCHWEIZ, *SUOMI, *CATALA, *AFRIKAAN, *GREEK, *BRASIL, *TURKISH, *RUSSIAN	Optional
SWLLANGID	Stop word list language ID	<i>Character value</i>	Optional
BASESWL	Base stop word list	*IBM , *NONE	Optional
OPTION	Source listing option	*SOURCE , *NOSOURCE, *SRC, *NOSRC	Optional, Positional 4
AUT	Authority	<i>Name</i> , *LIBCRTAUT , *CHANGE, *ALL, *USE, *EXCLUDE	Optional
REPLACE	Replace dictionary	*YES , *NO	Optional

Top

Spelling aid dictionary (SPADCT)

Specifies the name and library for the spelling aid dictionary being created.

This is a required parameter.

*USRSWL

A user-defined stop word list is created using an IBM-supplied name.

The possible library values are:

*CURLIB

The current library for the job is used to store the dictionary. If no library is specified as the current library for the job, QGPL is used.

library-name

Specify the name of the library where the dictionary is stored.

Source file (SRCFILE)

Specifies the name and library of the source file used when the spelling aid dictionary is created. The source file contains the source member that is used for creating the dictionary.

This is a required parameter.

The possible library values are:

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is used to locate the source file. If no library is specified as the current library for the job, QGPL is used.

library-name

Specify the name of the library in which the source file is located.

Top

Source member (SRCMBR)

Specifies the name of the source file member that contains the words for the dictionary being created. The member is located in the source file specified on the **Source file** prompt (SRCFILE parameter).

***DCT** The source file member name is the same as that of the dictionary being created.

source-file-member-name

Specify the name of the member in the source file that is used to create the spelling aid dictionary. A member name must be specified when the source file member being processed does not have the same name as the spelling aid dictionary being created.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

***SRCMBRTXT**

The text is taken from the source file member being used to create the spelling aid dictionary.

'description'

Specify no more than 50 characters of text, enclosed in apostrophes.

***BLANK**

No text is specified.

Top

Base dictionary (BASEDCT)

Specifies the name and library of the dictionary that contains words that are added to the dictionary being created. An IBM language dictionary (one created by IBM) cannot be used here.

***NONE**

No words from another dictionary are added to the dictionary being created.

dictionary-name

Specify the name and library of the dictionary that contains words to be added to the dictionary being created.

The possible library values are:

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is used to locate the dictionary. If no library is specified as the current library for the job, QGPL is used.

library-name

Specify the name of the library where the dictionary is located.

Top

Verify dictionary (VFYDCT)

Specifies the name and library of an existing dictionary that is searched for each word specified in the source member. Only those words that are not found in the existing dictionary are placed in the new dictionary to avoid duplication.

***NONE**

Every word specified in the source member is placed in the new spelling aid dictionary without verifying against another dictionary.

dictionary-name

Specify the name of the dictionary that contains words that are not to be duplicated in the dictionary being created.

The possible library values are:

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is used to locate the dictionary. If no library is specified as the current library for the job, QGPL is used.

library-name

Specify the name of the library where the dictionary is located.

Top

Language attribute (LNGATR)

Specifies the language attribute associated with the dictionary being created. The language attribute determines the processing rules that apply when the dictionary is used.

***VFYDCT**

The language attribute of the dictionary is the same as the language attribute of the dictionary that is specified on the **Verify dictionary** prompt (VFYDCT parameter).

***NONE**

The dictionary being created does not have a specific language attribute.

***AFRIKAAN**

The language attribute used by the spelling aid dictionary is Afrikaans.

***BRASIL**

The language attribute used by the spelling aid dictionary is Brazilian Portuguese.

***CATALA**

The language attribute used by the spelling aid dictionary is Catalan.

***DANSK**

The language attribute used by the spelling aid dictionary is Danish.

***DEUTSCH**

The language attribute used by the spelling aid dictionary is German.

***DSCHWEIZ**

The language attribute used by the spelling aid dictionary is Swiss-German.

***ENGLISH**

The language attribute used by the spelling aid dictionary is English.

***ESPANA**

The language attribute used by the spelling aid dictionary is Spanish.

***FRANCAIS**

The language attribute used by the spelling aid dictionary is French.

***FRA2** The language attribute used by the spelling aid dictionary is French, where accents are required on uppercase characters.

***GREEK**

The language attribute used by the spelling aid dictionary is Greek.

***ISLENSK**

The language attribute used by the spelling aid dictionary is Icelandic.

***ITALIANO**

The language attribute used by the spelling aid dictionary is Italian.

***NEDERLND**

The language attribute used by the spelling aid dictionary is Dutch.

***NORSK**

The language attribute used by the spelling aid dictionary is Norwegian.

***PORTUGAL**

The language attribute used by the spelling aid dictionary is Portuguese.

***RUSSIAN**

The language attribute used by the spelling aid dictionary is Russian.

***SUOMI**

The language attribute used by the spelling aid dictionary is Finnish.

***SVENSK**

The language attribute used by the spelling aid dictionary is Swedish.

***TURKISH**

The language attribute used by the spelling aid dictionary is Turkish.

Top

Stop word list language ID (SWLLANGID)

Specifies the language identifier (ID) for the stop word list.

Top

Base stop word list (BASESWL)

Specifies whether the IBM-supplied stop word list words are included in the user-created stop word list.

***IBM** The words from the IBM-supplied stop word list are added to the user-created stop word list.

***NONE**

No words from the IBM-supplied stop word list are added to the user-created stop word list.

Note: Word entries in the IBM-supplied stop word list source file preceded by a dash, (‐), are not added to the user-created stop word list even when BASESWL(*IBM) is specified.

Top

Source listing option (OPTION)

Specifies the type of output listing that is produced when the dictionary is created.

***SRC or *SOURCE**

A listing of the source statements that are used to create the dictionary, as well as a listing of any errors that occur, is created.

***NOSRC or *NOSOURCE**

No listing of the source statements is generated unless errors occur.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

***LIBCRTAUT**

The authority for the object is the same as the value specified on the **Create authority** prompt (CRTAUT parameter) of the library in which the object is being created. If the value specified on the **Create authority** prompt (CRTAUT parameter) is changed, the new value will not affect any existing objects.

***CHANGE**

The user can change the dictionary and use it to check the spelling of the content of a text document.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

authorization-list-name

Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Replace dictionary (REPLACE)

Specifies whether an existing dictionary is replaced when a new dictionary is created using the same name as an existing dictionary.

***YES** The dictionary being created replaces an existing dictionary with the same name.

***NO** The dictionary being created does not replace an existing dictionary with the same name.

Top

Examples

```
CRTSPADCT  SPADCT(MYLIB/MYDCT)  SRCFILE(MYLIB/SRC)
           SRCMBR(WORDS)  OPTION(*NOSRC)
           BASEDCT(QGPL/BASDCT)  VFYDCT(QDCT/US)
           LNGATR(*ENGLISH)  REPLACE(*YES)
```

This command creates a spelling aid dictionary named MYDCT in the library MYLIB. The words used in the spelling aid dictionary are from source member WORDS of the SRC source file in MYLIB. The dictionary includes words from a dictionary named BASDCT, but does not contain any words that are found in the dictionary named US. The dictionary being created has the *ENGLISH attribute. If an existing dictionary is named MYDCT, it is replaced.

Top

Error messages

*ESCAPE Messages

CPF2283

Authorization list &1 does not exist.

CPF4102

File &2 in library &3 with member &4 not found.

CPF4104

User not authorized to operation on file &2 in &3, member, device, or program device &4.

CPF411B

Shared open of member &4 not successful.

CPF9801

Object &2 in library &3 not found.

CPF9802

Not authorized to object &2 in &3.

CPF9803

Cannot allocate object &2 in library &3.

CPF9810

Library &1 not found.

CPF9820

Not authorized to use library &1.

CPF9832

Function not supported for DDM file &2.

CPF9845

Error occurred while opening file &1.

CPF9848

Cannot open file &1 in library &2 member &3.

CPF9899

Error occurred during processing of command.

[Top](#)

Create SQL Package (CRTSQLPKG)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Structured Query Language Package (CRTSQLPKG) command allows you to create (or re-create) an SQL package on a relational database from an existing distributed SQL program. A distributed SQL program is a program created by specifying the **Relational database (RDB)** parameter on a CRTSQLxxx (where xxx = CBL, CBLI, CI, CPPI, PLI, RPG or RPGI) command.

More information is in the DB2 for i5/OS SQL programming topic collection in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Top

Parameters

Keyword	Description	Choices	Notes
PGM	Program	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Program	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
RDB	Relational database	<i>Simple name, *PGM</i>	Optional, Positional 2
USER	RDB user	<i>Name, *CURRENT</i>	Optional
PASSWORD	RDB user password	<i>Character value, *NONE, ' '</i>	Optional
DFTRDBCOL	Default collection	<i>Name, *PGM, *NONE</i>	Optional
OBJTYPE	Object type	<i>*PGM, *SRVPGM</i>	Optional
MODULE	Module list	Single values: <i>*ALL</i> Other values (up to 256 repetitions): <i>Name</i>	Optional
TEXT	Text 'description'	<i>Character value, *PGMTXT, *BLANK</i>	Optional
GENLVL	Severity level	0-40, <u>10</u>	Optional
REPLACE	Replace	<i>*YES, *NO</i>	Optional
PRTFILE	Print file	<i>Qualified object name</i>	Optional
	Qualifier 1: Print file	<i>Name, QSYSPRT</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	

Top

Program (PGM)

Specifies the name of the program for which the SQL package is being created. The program must be a distributed SQL program that was created using one of the CRTSQLxxx (where xxx = CBL, CBLI, CI, CPPI, PLI, RPG or RPGI) commands.

Qualifier 1: Program

name Specify the name of the program for which the SQL package is to be created.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is used to locate the program. If no current library is specified as the current library for the job, QGPL is used.

name Specify the name of the library where the program is located.

Top

Relational database (RDB)

Specifies the relational database where the SQL package is being created.

***PGM** The relational database name specified for the **Relational database (RDB)** parameter of the CRTSQLxxx (where xxx = CBL, CBLI, CI, CPPI, PLI, RPG or RPGI) command that originally created the program is used.

name Specify the name of the relational database where the SQL package is to be created. Use the Work with Relational Database Directory Entry (WRKRDBDIRE) command to show the relational database names that are valid for this parameter.

Top

RDB user (USER)

Specifies the user name sent to the remote system when starting the conversation.

***CURRENT**

The user name associated with the current job is used.

name Specify the user name being used for the application requester job.

Top

RDB user password (PASSWORD)

Specifies the password to be used on the remote system.

***NONE**

No password is sent. The user name specified for the **RDB user (USER)** parameter is not valid if this value is specified.

character-value

Specify the password of the user name specified for the USER parameter. A password value of a blank is treated the same as specifying *NONE.

Top

Default collection (DFTRDBCOL)

Specifies the schema name to be used for unqualified names of tables, views, indexes, SQL packages, aliases, constraints, external programs, node groups, and triggers. This parameter applies only to static SQL statements in the package.

***PGM** The schema name specified for the **Default collection (DFTRDBCOL)** parameter of the

CRTSQLxxx (where xxx = CBL, CBLI, CI, CPPI, PLI, RPG or RPGI) command used to create the program for which an SQL package is being created is used.

***NONE**

The **Naming convention** option specified for the **Precompiler options (OPTION)** parameter of the CRTSQLxxx (where xxx = CBL, CBLI, CI, CPPI, PLI, RPG or RPGI) command used to precompile the program is used to determine the schema name.

name Specify the schema name that is used for unqualified tables, views, indexes, SQL packages, aliases, constraints, external programs, node groups, and triggers.

Top

Object type (OBJTYPE)

Specifies the type of program for which an SQL package is created.

***PGM** Create an SQL package from the program specified for the **Program (PGM)** parameter.

***SRVPGM**

Create an SQL package from the service program specified for the PGM parameter.

Top

Module list (MODULE)

Specifies a list of modules in a bound program.

Single values

***ALL** An SQL package is created for all modules in the program. An error message is sent if none of the modules in the program contain SQL statements or none of the modules is a distributed program.

Other values (up to 256 repetitions)

name Specify the modules in the program for which an SQL package is to be created. If more than 256 modules exist that need to be packaged, multiple CRTSQLPKG commands must be used. A maximum of 1024 modules can be in a program that has at least one module containing an SQL statement.

Duplicate module names in the same program are allowed. This command looks at each module in the program and if *ALL or the module name is specified for the MODULE parameter, processing continues to determine whether an SQL package should be created. If the module is created using SQL and the **Relational database (RDB)** parameter is specified on the precompile command, an SQL package is created for the module. The SQL package is associated with the module of the bound program.

Top

Text 'description' (TEXT)

Specifies text that briefly describes the SQL package and its function.

***PGMTXT**

The text from the program for which the SQL package is being created is used.

***BLANK**

No text is specified.

'description'

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Severity level (GENLVL)

Specifies the maximum severity level allowed for errors detected during SQL package creation. If errors occur at a level that exceeds the level you specify, the SQL package is not created.

10 The maximum severity level is 10.

0-40 Specify the maximum severity level.

Top

Replace (REPLACE)

Specifies whether an existing SQL package of the same name in the specified library is replaced by the new SQL package.

*YES An existing SQL package of the same name is replaced by the new SQL package.

*NO An existing SQL package of the same name is not replaced; a new SQL package is not created if the package already exists.

Top

Print file (PRTFILE)

Specifies the printer device file to which the create SQL package error listing is directed. If no errors are detected during the creation of the SQL package, no listing is produced.

Qualifier 1: Print file

QSYSPRT

The create SQL package error listing is directed to the IBM-supplied printer file, QSYSPRT.

name Specify the name of the printer device file to which the create SQL package error listing is directed.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the job is used to locate the printer file. If no library is specified as the current library for the job, QGPL is used.

name Specify the name of the library where the printer file is located.

Top

Examples

```
CRTSQLPKG PGM(PAYROLL) RDB(SYSTEMA) TEXT('Payroll Program')
```

This command creates an SQL package from the distributed SQL program PAYROLL on relational database SYSTEMA.

[Top](#)

Error messages

***ESCAPE Messages**

SQL9004

Create of SQL package failed.

SQL9006

DB2 Query Mgr and SQL DevKit not at same install level as the operating system.

[Top](#)

Create Source Physical File (CRTSRCPF)

Where allowed to run: All environments (*ALL)
Threadsafe: Conditional

Parameters
 Examples
 Error messages

The Create Source Physical File (CRTSRCPF) command creates a source physical file.

A source physical file contains source data needed to create objects such as control language (CL) source statements, which are used to create a CL program, or data description specifications (DDS) which (in turn) are used to create a database or device file.

A source physical file can have one or more members. The maximum number of members that can be added to the file is specified for the **Maximum members (MAXMBRS)** parameter.

Restrictions:

- This command is conditionally threadsafe. In multithreaded jobs, this command is not threadsafe and fails for Distributed Data Management (DDM) files of type *SNA, when SYSTEM(*RMT) or SYSTEM(*FILETYPE) is specified.

Top

Parameters

Keyword	Description	Choices	Notes
FILE	File	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: File	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
RCDLEN	Record length	<i>Integer, 92</i>	Optional, Positional 2
MBR	Member, if desired	<i>Name, *NONE, *FILE</i>	Optional, Positional 3
IGCDTA	User specified DBCS data	<i>*NO, *YES</i>	Optional
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
SYSTEM	System	<i>*LCL, *RMT, *FILETYPE</i>	Optional
EXPDATE	Expiration date for member	<i>Date, *NONE</i>	Optional
MAXMBRS	Maximum members	<i>Integer, *NOMAX</i>	Optional
ACCPHSIZ	Access path size	<i>*MAX1TB, *MAX4GB</i>	Optional
PAGESIZE	Access path logical page size	<i>*KEYLEN, 8, 16, 32, 64, 128, 256, 512</i>	Optional
ACCPH	Access path type	<i>*ARRIVAL, *KEYED</i>	Optional
MAINT	Access path maintenance	<i>*IMMED, *DLY, *REBLD</i>	Optional
RECOVER	Access path recovery	<i>*NO, *AFTIPL, *IPL</i>	Optional
FRCACPH	Force keyed access path	<i>*NO, *YES</i>	Optional

Keyword	Description	Choices	Notes
SIZE	Member size	Single values: *NOMAX Other values: <i>Element list</i>	Optional
	Element 1: Initial number of records	1-2147483646, <u>10000</u>	
	Element 2: Increment number of records	<i>Integer</i> , <u>1000</u>	
	Element 3: Maximum increments	<i>Integer</i> , <u>499</u>	
ALLOCATE	Allocate storage	<u>*NO</u> , *YES	Optional
CONTIG	Contiguous storage	<u>*NO</u> , *YES	Optional
UNIT	Preferred storage unit	1-255, <u>*ANY</u>	Optional
FRCRATIO	Records to force a write	<i>Integer</i> , <u>*NONE</u>	Optional
WAITFILE	Maximum file wait time	<i>Integer</i> , <u>*IMMED</u> , *CLS	Optional
WAITRCD	Maximum record wait time	<i>Integer</i> , <u>60</u> , *IMMED, *NOMAX	Optional
SHARE	Share open data path	<u>*NO</u> , *YES	Optional
DLTPCT	Max % deleted records allowed	1-100, <u>*NONE</u>	Optional
CCSID	Coded character set ID	<i>Integer</i> , <u>*JOB</u> , *HEX	Optional
ALWUPD	Allow update operation	<u>*YES</u> , *NO	Optional
ALWDLT	Allow delete operation	<u>*YES</u> , *NO	Optional
AUT	Authority	<i>Name</i> , <u>*LIBCRTAUT</u> , *ALL, *CHANGE, *EXCLUDE, *USE	Optional

Top

File (FILE)

Specifies the source physical file to be created.

If the file is used in a high-level language program, the file name must be consistent with the naming rules of that language. Otherwise, the file must be renamed in the program.

This is a required parameter.

Qualifier 1: File

name Specify the name of the source physical file.

Qualifier 2: Library

*CURLIB

The current library for the job is used to locate the file. If no library is specified as the current library for the job, QGPL is used.

name Specify the library where the file is located.

Top

Record length (RCDLEN)

Specifies the number of bytes in the length of the records stored in the source physical file. The record format contains three fields: the source sequence number, the date, and the source statement.

This parameter must provide 12 positions for the source sequence number and date fields required in each record. These fields are defined with fixed attributes and names, and they have a keyed access path over the sequence number.

92 The record length is 92 bytes. The source sequence number contains 6 bytes, the date contains 6 bytes, and the source statement contains 80 bytes.

integer

Specify the record length of each source record in the file. The value must include 6 bytes for the source sequence number and 6 bytes for the date. Valid values range from 13 through 32766 bytes.

Double-Byte Character Set Considerations

If IGCDTA(*YES) is specified, the RCDLEN parameter must provide six positions for the source sequence number, six positions for the date field, and at least four positions for source start. Valid values for a double-byte character set (DBCS) range from 16 through 32766.

Top

Member (MBR)

Specifies the source file member to be added when the file is created.

*NONE

No member is added when the file is created.

***FILE** The name of the member to be added is the same as the name specified for the **File (FILE)** parameter.

name Specify the name of the member to be added.

Top

User specified DBCS data (IGCDTA)

Specifies whether the file contains double-byte character set (DBCS) data.

*NO The file does not contain DBCS data.

***YES** The file contains DBCS data.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

*BLANK

No text is specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

System (SYSTEM)

Specifies whether the source physical file is created on the local system or the remote system.

***LCL** The source physical file is created on the local system. The file specified for the **File (FILE)** parameter must not already exist on the system.

***RMT** The source physical file is created on a remote system. The file specified for the FILE parameter must be the name of a DDM file that identifies the remote system and the name of the source physical file being created.

***FILETYPE**

If the file specified for the FILE parameter does not exist on the system, the source physical file is created on the local system. Otherwise, the file on the FILE parameter must be a DDM file, and the source physical file is created on a remote system. The DDM file identifies the remote system and the name of the source physical file being created.

Top

Expiration date for member (EXPDATE)

Specifies, if a source file member is added when the source physical file is created, the expiration date of the source file member.

***NONE**

The member being added to the file has no expiration date.

date Specify the date after which the member being added cannot be used.

Top

Maximum members (MAXMBRS)

Specifies the maximum number of members that the source physical file can contain.

***NOMAX**

The number of members that can be contained in the file is the system maximum of 32,767 members.

intefer Specify the maximum number of members that can be contained in the file. Valid values range from 1 through 32767 members.

Top

Access path size (ACCPHSIZ)

Specifies the maximum size of auxiliary storage that can be occupied by access paths that are associated with keyed source physical files. This parameter does not apply to access paths that are created for logical files or for queries that refer to the data in a source physical file.

***MAX1TB**

The access paths associated with this file can occupy a maximum of one terabyte (1,099,511,627,776 bytes) of auxiliary storage.

***MAX4GB**

The access paths associated with this file can occupy a maximum of four gigabytes (4,294,966,272 bytes) of auxiliary storage.

Top

Access path logical page size (PAGESIZE)

Specifies the access path logical page size that is used when the access path is created.

The access path logical page size is used by the system to determine the size of each page of the index. This logical page size is the amount of bytes of the access path that can be moved into the job's storage pool from the auxiliary storage for a page fault.

*KEYLEN

The access path logical page size will be determined by the total length of the key, or keys.

- 8 Logical page size of 8k.
- 16 Logical page size of 16k.
- 32 Logical page size of 32k.
- 64 Logical page size of 64k.
- 128 Logical page size of 128k.
- 256 Logical page size of 256k.
- 512 Logical page size of 512k.

Top

Access path type (ACCPH)

Specifies the type of access path used by all the members in the source physical file.

*ARRIVAL

The access path is an arrival sequence access path.

*KEYED

The access path is a keyed sequence access path.

Top

Access path maintenance (MAINT)

Specifies the type of access path maintenance used for all members of the source physical file.

*IMMED

The access path is updated each time a record is changed, added, or deleted from a member.

*REBLD

The access path is completely rebuilt each time a file member is opened. The access path is maintained until the member is closed. Then the access path is deleted.

- *DLY** The maintenance of the access path is delayed until the physical file member is opened for use. The access path is changed only for records that have been added, deleted, or changed since the file was last opened. While the file is open, all changes made to its members are immediately reflected in the access path of those members, no matter what is specified for the MAINT parameter. To prevent a lengthy rebuild time when the file is opened, *DLY should be specified only when the number of changes to the access path is small.

If the number of changes between a close and the next open reaches approximately 10 percent of the access path size, the system stops saving changes and the access path is completely rebuilt the next time the file is opened.

Top

Access path recovery (RECOVER)

Specifies, for files having immediate or delayed maintenance on their access paths, when recovery processing of the file is performed after a system failure occurs while the access path is being changed. This parameter is valid only for files with a keyed access path.

If *IMMED or *DLY is specified for the **Access path maintenance (MAINT)** parameter, the access path can be rebuilt during initial program load (IPL) (before any user can run a job), after IPL has ended (during concurrent job running), or when the file is next opened. While the access path is being rebuilt, the file cannot be used by any job.

During the IPL, an Override Access Path Recovery display lists those paths that must be recovered and what the RECOVER parameter value is for each path. The user can override the RECOVER parameter value on this display. More information is in the Recovering your system book, SC41-5304.

If *REBLD is specified for the MAINT parameter, the access path is rebuilt the next time its file is opened.

***NO** The access path of the file is rebuilt when the file is opened. *NO is the default for all files that do not require unique keys.

***AFTIPL**

The access path of the file is rebuilt after the initial program load (IPL) operation is completed. This option allows other jobs not using this file to start processing immediately after the completion of IPL. If a job tries to allocate the file while its access path is being rebuilt, a file open exception occurs. *AFTIPL is the default for files that require unique keys.

***IPL** The access path of the file is rebuilt during the IPL operation. This ensures that the file's access path is rebuilt before the first user program tries to use it; however, no jobs can start running until after all files that specify RECOVER(*IPL) have their access paths rebuilt.

Top

Force keyed access path (FRCACCPH)

Specifies whether access path changes are forced to auxiliary storage along with the associated records in the source physical file.

***NO** The access path and the associated records are not written to auxiliary storage whenever the access path is changed.

***YES** The access path and the associated records are written to auxiliary storage whenever the access path is changed. *YES cannot be specified if *REBLD is specified for the **Access path maintenance (MAINT)** parameter.

Top

Member size (SIZE)

Specifies the *initial* number of records in each member of the file, the number of records in each part added to the member size, and the number of times the part added is automatically applied. The number of records for each file member is specified as the number of records that can be placed in it (this number includes any deleted records).

When the maximum number of records has been reached, a message (stating that the member is full) is sent to the system operator, giving the choice of ending the request or extending the member size. The

operator can extend the member by 10% or by the number of records specified as the increment value, whichever is greater, each time the message is received.

Single values

***NOMAX**

The number of records that can be added to each member of the file is not limited by the user. The maximum size of each member is determined by the system. If *NOMAX is specified, *NO must be specified for the **Allocate storage (ALLOCATE)** parameter.

Element 1: Initial number of records

Specify the *initial* number of records in each member.

10000 Initially, up to 10000 records can be written to each member of the file.

1-2147483646

Specify the number of records that can be written to each member of the file before the member size is automatically extended.

Element 2: Increment number of records

Specify the number of records that are automatically added to the member when the number of records in the member is greater than the initial member size. The minimum size of an increment is 10% of the size of the member at the time the maximum number of records is reached.

1000 The file size is increased by 10% or 1000 records, whichever is greater.

integer

Specify the number of additional records which, if greater than 10% of the size of the member when the maximum number of records is reached, are automatically added to the member.

If the number specified is not greater than 10% of the member size and not equal to zero, the member size is increased by 10%.

If 0 is the specified increment value, the member is not automatically extended. This value must be 0 if the value for the number of increments is 0.

Element 3: Maximum increments

Specify the maximum number of increments that can be automatically added to the member.

499 A maximum of 499 increments is automatically added to the member size.

integer

Specify the maximum number of increments automatically added to the member size. Valid values range from 0 through 32767. If 0 is specified, the member is not automatically extended.

Top

Allocate storage (ALLOCATE)

Specifies whether *initial* storage space is allocated to each physical file member added to the file. The allocation provides enough space to hold the number of records specified for the **Member size (SIZE)** parameter. Allocations that occur when a record cannot be added to a member without exceeding its capacity are determined by the system and by the SIZE parameter values.

***NO** The system determines the amount of storage space to allocate to each member added to the file.

***YES** The amount of storage space specified in the first value of the SIZE parameter is allocated each time a new member is added. If *YES is specified, *NOMAX must not be specified for the SIZE parameter.

Top

Top

Preferred storage unit (UNIT)

This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 3 Release 6 Modification 0 of the i5/OS. For information on using auxiliary storage pools (ASPs), refer to the Recovering your system book, SC41-5304.

You can specify the value *ANY or a value ranging from 1 through 255 on this parameter.

Top

Records to force a write (FRCRATIO)

Specifies the number of inserted or updated records that are processed before the records are forced into auxiliary storage.

The force write ratio specified for a logical file cannot be less than or equal to the smallest force write ratio of its based-on files. If a larger force write ratio is specified, it is ignored and a message is sent informing the user of the action.

For example, if the force ratios of three physical files are 2, 6, and 8, the logical file force ratio that is based on these three physical files must be as restrictive as the least of them; that is 2 in this case. Two would be used even if the FRCRATIO parameter is not specified. Thus, each time a program inserts, updates, or deletes two records in the logical file (regardless of which based-on physical files are affected), those records are forced to permanent storage.

If a physical file associated with this logical file is being journaled, a large force write ratio or *NONE is specified. More information on journal management is in the Recovering your system book, SC41-5304.

***NONE**

There is no specified force ratio. The system determines when the records are written to auxiliary storage.

integer

Specify the number of inserted or updated records that are processed before the records are written to auxiliary storage.

Top

Maximum file wait time (WAITFILE)

Specifies the number of seconds that the program waits for the file resources to be allocated when the file is opened, or the device or session resources to be allocated when an acquire operation is performed to the file. If the file resources cannot be allocated in the specified wait time, an error message is sent to the program.

***IMMED**

The program does not wait. Immediate allocation of file resources is required.

***CLS** The job default wait time is used as the wait time for the file resources to be allocated.

1-32767

Specify the number of seconds to wait for file resources to be allocated.

Top

Maximum record wait time (WAITRCD)

Specifies the number of seconds that the program waits for a record being changed or deleted. If the record cannot be allocated within the specified wait time, an error message is sent to the program.

60 The program waits for 60 seconds for a record being changed or deleted.

***IMMED**

The program does not wait. Immediate allocation of file resources is required.

***NOMAX**

The wait time is the maximum allowed by the system, which is 32767 seconds.

integer

Specify the number of seconds that the program waits for a record being changed or deleted. Valid values range from 1 through 32767 seconds.

Top

Share open data path (SHARE)

Specifies whether the open data path (ODP) is shared with other programs in the same routing step. When an ODP is shared, the programs accessing the file share facilities such as the file status and the buffer.

Note: This parameter cannot be specified when *NONE is specified for the **Member (MBR)** parameter.

***NO** The ODP is not shared with other programs in the routing step. A new ODP for the file is created and used every time a program opens the file.

***YES** The same ODP is shared with each program in the job that also specifies *YES when it opens the file.

Top

Max % deleted records allowed (DLTPCT)

Specifies the maximum percentage of deleted records for each member in the source physical file. The percentage check is made when the member is closed. If the percentage of deleted records is greater than the value specified on this parameter, a message is sent to the job log.

***NONE**

The percentage of deleted records in the file members is not checked.

1-100 Specify the largest allowed percentage of deleted records for any member in the file.

Top

Coded character set ID (CCSID)

Specifies the coded character set identifier (CCSID) used to describe character data in the fields of the source file.

***JOB** The current job's default CCSID is used.

***HEX** The CCSID 65535 is used, which indicates that character data in the fields is treated as bit data and is not converted.

integer

Specify the CCSID to be used.

Top

Allow update operation (ALWUPD)

Specifies whether records in this source physical file can be updated.

***YES** Records in this source file can be updated.

***NO** Records in this source file cannot be updated.

Top

Allow delete operation (ALWDLT)

Specifies whether records in this source physical file can be deleted.

***YES** Records in this source file can be deleted.

***NO** Records in this source file cannot be deleted.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

***LIBCRTAUT**

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

***CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file.

The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

Example 1: Creating a File Without Members

```
CRTSRCPF FILE(SRCLIB/PAYTXS)
```

This command creates a source file named PAYTXS in the SRCLIB library. The file is created without any members; therefore, no data can be put into the file until a member is added later. As many as 32,767 members (*NOMAX) can be added to the file.

Each member can have up to 10000 records before automatic extensions (499 increments maximum) occur that add 1000 records to the capacity of the member. Only minimum initial storage is allocated for each member with no restrictions on whether the space is connected. The public has object operational, read, add, delete, and update authority for the file, but no object management or object existence authority.

Example 2: Creating a File With a Member

```
CRTSRCPF FILE(ORDERCTL/ORDERS) MBR(*FILE) SIZE(100 50 5)
```

This command creates a source physical file named ORDERS in the ORDERCTL library. Storage space for the records placed in the file need not be contiguous. The initial allocation of storage provides for up to 100 records, and up to five increments of additional space for 50 records each can be added automatically. These allocation values also apply to members of this source file that will be added later.

Example 3: Creating a File that Contains DBCS Data

```
CRTSRCPF FILE(IGCLIB/IGCSRC) IGCDTA(*YES)
```

This command creates a source physical file named IGCSRC, which is stored in the library IGCLIB, and can contain DBCS data.

Top

Error messages

*ESCAPE Messages

CPF323C

QRECOVERY library could not be allocated.

CPF5702

File either not DDM file or not found.

CPF7302

File &1 not created in library &2.

Top

Create Service Configuration (CRTSRVCFG)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Service Configuration (CRTSRVCFG) command creates the service configuration needed for all service and support applications: Electronic Customer Support (ECS) and Electronic Service Agent.

Connectivity options are available from either local or remote systems or logical partitions. Primary or backup configurations can be created for the service configuration.

Restrictions:

- Input/output system configuration (*IOSYSCFG) special authority is required to run this command.

Top

Parameters

Keyword	Description	Choices	Notes
ROLE	Role	*PRIMARY, *BACKUP	Required, Positional 1
CNNTYPE	Connection type	*DIRECT, *OTHERISP, *LCLDIAL, *MULTIHOP, *RMTDIAL	Required, Positional 2
CNTRYID	Country or region ID	Character value, * <u>SELECT</u>	Optional
STATE	State or province code	Character value, * <u>SELECT</u>	Optional
TELNBR1	Primary telephone number	Character value, * <u>SELECT</u>	Optional
TELNBR2	Alternate telephone number	Character value, * <u>SELECT</u>	Optional
RSRCNAME	Resource name	Name, * <u>CALC</u> , * <u>SELECT</u>	Optional
MODEM	Modem information name	Character value, * <u>RSRCNAME</u> , * <u>SELECT</u>	Optional
DIALTONE	Wait for dial tone	* <u>WAIT</u> , * <u>NOWAIT</u>	Optional
RMTSYS	Remote system	Character value	Optional
PROXY	Proxy server	Single values: *NO Other values: <i>Element list</i>	Optional
	Element 1: IP address or host name	Character value, * <u>NONE</u>	
	Element 2: Port number	1-65535, * <u>IBMSVR</u>	
	Element 3: Relative priority	* <u>TRYAFTER</u> , * <u>TRYBEFORE</u>	
	Element 4: Authentication user ID	Character value, * <u>NONE</u>	
	Element 5: Authentication password	Character value, * <u>NONE</u>	
ISPPRF	ISP profile name	Character value, * <u>SELECT</u>	Optional

Keyword	Description	Choices	Notes
CNNPNT	Connectivity for others	Single values: *NO Other values: <i>Element list</i>	Optional
	Element 1: Connection point	*YES	
	Element 2: Interfaces	Values (up to 12 repetitions): <i>Element list</i>	
	Element 1: Interface	<i>Character value</i> , *ALL , *SELECT	
	Element 2: L2TP profile name	<i>Character value</i> , *GEN , *SELECT	
CNNPNTPRX	Connection point proxy	<i>Element list</i>	Optional
	Element 1: Port number	1-65535, *IBMSVR	
	Element 2: Authentication user ID	<i>Character value</i> , *NONE	
	Element 3: Authentication password	<i>Character value</i> , *NONE	

Top

Role (ROLE)

Specifies whether this service configuration is to be the primary or backup service configuration. The system or logical partition will first attempt to connect to IBM using the primary service configuration. If the primary service configuration fails, the system or logical partition will attempt the connection using a backup service configuration.

This is a required parameter.

***PRIMARY**

The service configuration created will be the primary connection to IBM. A primary service configuration must be created before a backup service configuration can be created.

***BACKUP**

The service configuration created will be the backup connection to IBM. This value is not allowed if the primary service configuration has not been created.

Top

Connection type (CNNTYPE)

Specifies the connection type by which the system or logical partition will connect to IBM. You can connect to IBM using the current system or logical partition or through another system or logical partition.

This is a required parameter.

***DIRECT**

Connect to IBM through the current system or logical partition using a direct connection to the internet as the connection type. Use this option if the system or logical partition can access the internet using one or more active TCP/IP interfaces.

***OTHERISP**

Connect to IBM through the current system or logical partition using an internet service provider (ISP) as the connection type. Use this option if the system or logical partition can connect to an ISP using a point-to-point (PPP) connection profile.

***LCLDIAL**

Connect to IBM through the current system or logical partition with a dial connection using AT&T Global Network Services (AGNS).

***MULTIHOP**

Connect to IBM through another system or logical partition using a multi-hop connection to the internet as the connection type. Use this option if the system or logical partition providing the connection is configured to use CNNTYPE(*DIRECT), CNNTYPE(*OTHERISP), or CNNTYPE(*MULTIHOP).

***RMTDIAL**

Connect to IBM through another system or logical partition using AT&T Global Network Services (AGNS) as the connection type. Use this option if the system or logical partition providing the connection is configured to dial to IBM using AT&T Global Network Services (AGNS).

Top

Country or region ID (CNTRYID)

Specifies the country or region identifier used for the service configuration.

Note: This parameter is only valid when *PRIMARY is specified for the **Role (ROLE)** parameter.

***SELECT**

A panel is displayed that allows the selection of a country or region identifier.

Note: This value is only valid if this command is run in an interactive job.

character-value

Specify the 2-character country or region identifier to be used.

Top

State or province code (STATE)

Specifies the state or province code used for the service configuration.

Note: This parameter is only valid when *PRIMARY is specified for the **Role (ROLE)** parameter.

***SELECT**

A panel is displayed that allows the selection of a state or province code. No selection panel is displayed if the specified country or region does not have states or provinces.

Note: This value is only valid if this command is run in an interactive job.

character-value

Specify the 2-character state or province code to be used.

Top

Primary telephone number (TELNR1)

Specifies the primary telephone number that will be dialed to connect to AT&T Global Network Services (AGNS).

Note: This parameter is only valid when *LCLDIAL is specified for the **Connection type (CNNTYPE)** parameter.

***SELECT**

A panel is displayed that allows the selection of the primary telephone number. After a selection is made, an additional panel will be displayed to allow editing of the telephone number, adding any numbers or characters needed to obtain an outside line, pause while dialing, etc.

character-value

Specify the primary telephone number that will be dialed. Up to 48 characters can be specified.

Top

Alternate telephone number (TELNR2)

Specifies the alternate telephone number that will be dialed to connect to AT&T Global Network Services (AGNS), if the connection attempt using the primary telephone number is unsuccessful.

Note: This parameter is only valid when *LCLDIAL is specified for the **Connection type (CNNTYPE)** parameter.

***SELECT**

A panel is displayed that allows the selection of the alternate telephone number. After a selection is made, an additional panel will be displayed to allow editing of the telephone number, adding any numbers or characters needed to obtain an outside line, pause while dialing, etc.

character-value

Specify the alternate telephone number that will be dialed. Up to 48 characters can be specified.

Top

Resource name (RSRCNAME)

Specifies the communications resource that will be used by this service.

Note: This parameter is only valid when *LCLDIAL is specified for the **Connection type (CNNTYPE)** parameter.

***CALC**

The resource name will be determined as follows:

The internal communication resources that can use an integrated modem are determined. If only one integrated modem is defined, that resource will be used for the service configuration. The value *CALC is not valid if more than one integrated modem is defined.

If an integrated modem cannot be used, the resource cannot be calculated and it will have to be specified explicitly.

***SELECT**

A panel is displayed that allows the selection of the resource name that will be used.

name Specify the name of the communications resource that will be used.

Note: Use the Work with Hardware Resources (WRKHDWRSC) command with *CMN specified for the TYPE parameter to help determine the resource name.

Top

Modem information name (MODEM)

Specifies the name of the modem description to use for this point-to-point service configuration.

Note: This parameter is only valid when *LCLDIAL is specified for the **Connection type (CNNTYPE)** parameter.

***RSRCNAME**

The modem name will be determined based on the value specified for the **Resource name (RSRCNAME)** parameter. If the resource is defined to use an integrated modem, the appropriate internal modem description will be used. If the resource does not have a predefined modem description, MODEM(*RSRCNAME) cannot be used and the modem description must be specified explicitly.

***SELECT**

A panel is displayed that allows the selection of the modem description that will be used.

character-value

Specify the name of the modem to use.

Note: The modem name must match one of the modems defined for the system or logical partition.

Top

Wait for dial tone (DIALTONE)

Specifies whether or not the modem waits for a dial tone before dialing out.

Note: This parameter is only valid when *LCLDIAL is specified for the **Connection type (CNNTYPE)** parameter.

***WAIT**

The modem waits for a dial tone before dialing out.

***NOWAIT**

The modem dials out without waiting for a dial tone.

Top

Remote system (RMTSYS)

Specifies either the IP address or host name (up to 255 characters) of the remote system or logical partition that will be used as the remote system that provides service configuration connectivity to IBM. A valid IP address is accepted.

If the local system or logical partition has a service configuration created with CNNTYPE(*RMTDIAL) and has defined a remote system (RMTSYS) parameter, the remote system or logical partition must have a service configuration created with CNNTYPE(*LCLDIAL) and CNNPNT(*YES).

If the local system or logical partition has a service configuration created with CNNTYPE(*MULTIHOP) and has defined a remote system (RMTSYS) parameter, the remote system or logical partition must have a service configuration created with a connection type (CNNTYPE) of *DIRECT, *OTHERISP, or *MULTIHOP, and a connection point (CNNPNT) value of *YES.

character-value

Specify the IP address or host name of the remote system or logical partition that will provide the service configuration connection to IBM.

Top

Proxy server (PROXY)

Specifies the information for configuring an HTTP or Service and Support proxy connection configuration. Configuring a proxy connection is optional. The proxy connection is an alternate connection configuration to the primary or backup connection that has been previously configured. A proxy connection can be used with any connection type.

The information provides the server with the information needed to connect to the destination proxy server.

Single values

***NO** The IP address or host name is not specified. A proxy connection configuration will not be created.

Element 1: IP address or host name

*NONE

The IP address or host name is not specified. A proxy connection configuration will not be created.

character-value

Specify the IP address or host name of the proxy server through which this server will attempt to connect.

Element 2: Port number

*IBMSVR

The Service and Support proxy server will accept connections using the default port.

1-65535

Specify the port number on which the Service and Support proxy server will accept connections.

Element 3: Relative priority

*TRYAFTER

The proxy connection configuration will be attempted after the previously defined configuration.

*TRYBEFORE

The proxy connection configuration will be attempted before the previously defined configuration.

Element 4: Authentication user ID

*NONE

A user ID is not required.

character-value

If the proxy server requires authentication, specify the user ID that will be used.

Element 5: Authentication password

*NONE

A password is not required.

character-value

If the proxy server requires authentication, specify the password that will be used.

Top

ISP profile name (ISPPRF)

Specifies the internet service provider (ISP) profile that will be used.

Note: This parameter is only valid when *OTHERISP is specified for the **Connection type (CNNTYPE)** parameter.

*SELECT

A panel is displayed that allows the selection of the ISP profile that will be used.

character-value

Specify the name of the ISP profile that will be used.

Top

Connectivity for others (CNNPNT)

Specifies whether other systems or logical partitions are allowed to use the service configuration connection to IBM through this system or logical partition.

Note: This parameter is only valid when *PRIMARY is specified for the **Role (ROLE)** parameter.

Single values

*NO Other systems or logical partitions are not allowed to use the service configuration connection to IBM configured on this system or logical partition.

Element 1: Connection point

*YES Other systems or logical partitions are allowed to use the service configuration connection to IBM configured on this system or logical partition.

Element 2: Interfaces

Specifies which interfaces will listen for connections. Both the L2TP terminator profile and the Service and Support proxy, if configured, listen on the same interfaces. Up to 12 values can be specified.

Element 1: Interface

*ALL All available interfaces will listen for a connection.

*SELECT

Only selected interfaces will listen for a connection.

character-value

Specify the interface that will listen for a connection.

Element 2: L2TP profile name

*GEN Automatically generate and name an L2TP profile to use as the terminator profile.

*SELECT

Select an existing L2TP profile to use as the terminator profile.

character-value

Specify the name of an L2TP terminator profile which will be used to provide connectivity for other systems or logical partitions.

Connection point proxy (CNNPNTPRX)

Specifies the Service and Support proxy server to provide connectivity for other systems or logical partitions.

Element 1: Port number

*IBMSVR

The Service and Support proxy server will accept connections using the default port.

1-65535

Specify the port number on which the Service and Support proxy server will accept connections.

Element 2: Authentication user ID

*NONE

A user ID is not required.

character-value

If the proxy server requires authentication, specify the user ID that will be used.

Element 3: Authentication password

*NONE

A password is not required.

character-value

If the proxy server requires authentication, specify the password that will be used.

Examples

Example 1: Creating a Primary Direct Service Configuration

```
CRTSRVCFG  ROLE(*PRIMARY)  CNNTYPE(*DIRECT)  CNTRYID(US)
           STATE(MN)  CNNPNT(*YES ((*ALL)))
```

This command creates a primary direct internet service configuration used for all service and support applications: Electronic Customer Support (ECS) and Electronic Service Agent. The local system or logical partition is a connection point which listens for connection requests on all interfaces.

Example 2: Creating a Backup Service Configuration Using an Existing ISP

```
CRTSRVCFG  ROLE(*BACKUP)  CNNTYPE(*OTHERISP)  CNTRYID(US)
           STATE(MN)  ISPPRF(MYISP)
```

This command creates a backup internet service configuration using an internet service provider used for all service and support applications: Electronic Customer Support (ECS) and Electronic Service Agent. The local system or logical partition is a connection point which listens for connection requests on all interfaces.

Example 3: Creating a Primary Local Dial Service Configuration

```
CRTSRVCFG  ROLE(*PRIMARY) CNNTYPE(*LCLDIAL) CNTRYID(US)
           STATE(MN)  TELNBR1(1111111)  TELNBR2(2222222)
```

This command creates a primary local dial connection to AT&T Global Network Services (AGNS) used for all service and support applications: Electronic Customer Support (ECS) and Electronic Service Agent.

Example 4: Creating a Backup Multi-hop Service Configuration

```
CRTSRVCFG  ROLE(*BACKUP) CNNTYPE(*MULTIHOP)
           CNTRYID(US)  RMTSYS(ABCDEFGG)
```

This command creates a backup internet service configuration using another remote system or logical partition used for all service and support applications: Electronic Customer Support (ECS) and Electronic Service Agent. The configuration connects using a multi-hop connection configuration through the remote system named ABCDEFG.

Example 5: Creating a Remote Point-to-Point Service Configuration

```
CRTSRVCFG  ROLE(*PRIMARY) CNNTYPE(*RMTDIAL) CNTRYID(US)
           STATE(MN)  RMTSYS(ABCDEFGG)
```

This command creates a primary remote dial connection to AT&T Global Network Services (AGNS) used for all service and support applications: Electronic Customer Support (ECS) and Electronic Service Agent. This configuration connects using a dial connection configuration on a remote system named ABCDEFG.

Example 6: Creating a Primary Local Dial Service Configuration with a Modem that Waits for a Dial Tone Before Dialing

```
CRTSRVCFG  ROLE(*PRIMARY) CNNTYPE(*LCLDIAL) CNTRYID(US)
           STATE(MN)  DIALTONE(*WAIT)
           TELNBR1(1111111)  TELNBR2(2222222)
```

This command creates a local dial connection configured to have a modem wait for a dial tone before dialing out.

Top

Error messages

*ESCAPE Messages

CPFB040

If RSRNAME(*SELECT) is specified, MODEM(*RSRCNAME) cannot be specified.

TCP8050

*IOSYSCFG authority required to use &1.

TCP8290

No TCP/IP point-to-point modem information

CPF8813

No entries exist.

CPF9899

Error occurred during processing of command.

TCP8205

Required object &2/&1 type *&3 not found.

TCP8211

Point-to-point profile &1 not found.

[Top](#)

Create Service Program (CRTSRVPGM)

Where allowed to run: All environments (*ALL)
 Threadsafes: No

Parameters
 Examples
 Error messages

The Create Service Program (CRTSRVPGM) command creates a bound service program from a set of modules and binding directories.

Restrictions:

- You must have read (*READ) and add (*ADD) authorities to the library where the service program is to be created.
- You must have use (*USE) authority to the specified modules, service programs, and binding directories.
- You must have object operation (*OBJOPR) and *READ authorities to the file specified for the **Source file (SRCFILE)** parameter.

Top

Parameters

Keyword	Description	Choices	Notes
SRVPGM	Service program	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Service program	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
MODULE	Module	Single values: *SRVPGM Other values (up to 300 repetitions): <i>Qualified object name</i>	Optional
	Qualifier 1: Module	<i>Generic name, name, *ALL</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB, *USRLIBL</i>	
EXPORT	Export	*SRCFILE, *ALL	Optional
SRCFILE	Export source file	<i>Qualified object name</i>	Optional
	Qualifier 1: Export source file	<i>Name, <u>QSRVSRC</u></i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
SRCMBR	Export source member	<i>Name, *SRVPGM</i>	Optional
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
BNDSRVPGM	Bind service program	Single values: *NONE Other values (up to 300 repetitions): <i>Element list</i>	Optional
	Element 1: Service program	<i>Qualified object name</i>	
	Qualifier 1: Service program	<i>Generic name, name, *ALL</i>	
	Qualifier 2: Library	<i>Name, *LIBL</i>	
	Element 2: Activation	*IMMED, *DEFER	
BNDDIR	Binding directory	Single values: *NONE Other values (up to 300 repetitions): <i>Qualified object name</i>	Optional
	Qualifier 1: Binding directory	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB, *USRLIBL</i>	
ACTGRP	Activation group	<i>Name, *CALLER</i>	Optional

Keyword	Description	Choices	Notes
OPTION	Creation options	Values (up to 5 repetitions): *GEN, *NOGEN, *NODUPPROC, *DUPPROC, *NODUPVAR, *DUPVAR, *WARN, *NOWARN, *RSLVREF, *UNRSLVREF	Optional
DETAIL	Listing detail	*NONE, *BASIC, *EXTENDED, *FULL	Optional
ALWUPD	Allow update	*YES, *NO	Optional
ALWLIBUPD	Allow *SRVPGM library update	*YES, *NO	Optional
USRPRF	User profile	*USER, *OWNER	Optional
REPLACE	Replace program	*YES, *NO	Optional
AUT	Authority	Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE	Optional
TGTRLS	Target release	Character value, *CURRENT, *PRV	Optional
ALWRINZ	Allow reinitialization	*NO, *YES	Optional
STGMDL	Storage model	*SNGLVL, *TERASPACE, *INHERIT	Optional
ARGOPT	Argument optimization	*NO, *YES	Optional
IPA	Interprocedural analysis	*YES, *NO	Optional
IPACTLFILE	IPA control file	Path name, *NONE	Optional

Top

Service program (SRVPGM)

Specifies the service program object to be created.

This is a required parameter.

Qualifier 1: Service program

name Specify the name of the service program to be created.

Qualifier 2: Library

*CURLIB

The service program is created in the current library for the job. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library where the service program is to be created.

Top

Module (MODULE)

Specifies the list of modules that are copied and bound together to create the service program object. If duplicate module and library specifications are found, only the first instance of the duplicate module and library is used. Modules in this list are copied into the final service program object. Up to 300 names can be specified.

Single values

*SRVPGM

The module and library names specified for the **Service program (SRVPGM)** parameter are used.

Qualifier 1: Module

*ALL Find all module objects in the specified library or libraries.

generic-name

Specify all module objects starting with the characters preceding the * in the specified library or libraries.

name Specify the name of the module that is copied to create the service program object.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

***USRLIBL**

Only the libraries in the user portion of the job's library list are searched.

name Specify the name of the library to be searched.

Top

Export (EXPORT)

Specifies the names of the data and procedures this service program exports.

***SRCFILE**

The source file member identified by the **Source file (SRCFILE)** and **Source member (SRCMBR)** parameters contains EXPORT statements that identify the data and procedures to export from the service program.

***ALL** All data and procedures that are exported from the specified modules are also exported from the service program.

Top

Source file (SRCFILE)

Specifies the source file containing the specifications for exporting data and procedures from this service program.

Qualifier 1: Export source file

QSRVSRC

The source file containing the specifications for exporting data and procedures is named QSRVSRC.

name Specify the name of the source file containing the specifications for exporting data and procedures.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library to be searched.

Top

Source member (SRCMBR)

Specifies the name of the source file member containing the specifications for exporting data and procedures from this service program.

*SRVPGM

The source file member name is the same name as the service program name specified for the **Service program (SRVPGM)** parameter.

name Specify the name of the member in the source file containing the specifications for exporting data and procedures.

Top

Text 'description' (TEXT)

Specifies text that briefly describes the service program object.

*BLANK

Text is not specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Bind service program (BNDSRVPGM)

Specifies the list of service program exports to examine at bind time to ensure they satisfy any module import requests. The service program exports are checked only if there are unresolved module import requests not satisfied by the set of module exports. Any service program specified on the BNDSRVPGM parameter that satisfies a module import request will be bound to the service program being created. The service program name and the library specified on the BNDSRVPGM parameter are saved to be used at run time. Up to 300 names can be specified.

You can control the activation of each service program. You can specify whether the referenced service program is activated at the same time as the service program being created, or is deferred until a procedure exported from the referenced service program is called. Deferring activation may improve your application's performance.

Single values

*NONE

No service programs are provided for symbol resolution.

Element 1: Service program

Qualifier 1: Service program

***ALL** Find all service program objects in the specified library or libraries.

Note: This value should only be specified in a user-controlled environment when you know exactly what is getting bound to your service program. Specifying *LIBL with *ALL may give you unpredictable results at service program run time. Specify the generic service program name or specific libraries to better control what gets bound to your service program.

generic-name

Specify all service program objects starting with the characters preceding the * in the specified library or libraries.

name Specify the name of the service program to be examined during symbol resolution.

Qualifier 2: Library

***LIBL** Search all of the libraries in the job's library list for the specified service programs. If one of the service programs has an export that satisfies a module import, then the library list is searched at run-time to find this service program.

name Specify the name of the library where the service programs can be found. If one of the service programs has an export that satisfies a module import, and a specific library was specified, the specified library is searched at run-time to find this service program.

Note: QTEMP is not a valid library name for this parameter.

Element 2: Activation

***IMMED**

Activation of the bound service program takes place immediately when the service program being created is activated.

***DEFER**

Activation of the bound service program may be deferred until a function it exports is called.

Top

Binding directory (BNDDIR)

Specifies the list of binding directories that are used in symbol resolution. Up to 300 names can be specified.

Single values

***NONE**

No binding directory is specified.

Qualifier 1: Binding directory

name Specify the name of the binding directory used in symbol resolution.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

***USRLIBL**

Only the libraries in the user portion of the job's library list are searched.

name Specify the name of the library to be searched.

Top

Activation group (ACTGRP)

Specifies the activation group this service program is associated with when it is called. An activation group provides:

- Run-time data structures to support the running of programs
- Addressing protection
- A logical boundary for message creation
- A logical boundary for application cleanup processing

*CALLER

When this service program gets called, the service program is activated into the caller's activation group.

name Specify the name of the group that is associated with this called service program. If an activation group, by the specified name, currently exists when this service program is called, the service program is associated with the already existing activation group. If an activation group, by the specified name, does not currently exist when this service program is called, then a new activation group is created and the service program is associated with the newly created activation group.

Top

Creation options (OPTION)

Specifies options to be used when the service program object is created.

You can specify up to 5 values for this parameter.

Service Program Objects

*GEN A service program object is generated.

*NOGEN

A service program object is not generated.

Duplicate Procedure Names

*NODUPPROC

During the symbol resolution phase of the binding process, each procedure name that is exported from the modules and service programs must be unique.

*DUPPROC

During the symbol resolution phase of the binding process, the procedure names that are exported from the modules and service programs do not have to be unique. When multiple duplicate procedures are allowed, the first exported procedure in the list of specified modules and service program that matches the import request is the procedure that is selected.

Duplicate Variable Names

*NODUPVAR

During the symbol resolution phase of the binding process, each variable name that is exported from the modules and service programs must be unique.

*DUPVAR

During the symbol resolution phase of the binding process, the variable names that are exported from the modules and service programs do not have to be unique. When multiple duplicate variables are allowed, the first exported variable in the list of specified modules and service programs that matches the import request is the variable that is selected.

Issuing Diagnostic Messages

*WARN

If duplicate variables or procedures are found, then a diagnostic message is issued indicating what duplicates were found.

*NOWARN

If duplicate variables or procedures are found, diagnostic messages are not issued.

Resolving References (Imports)

*RSLVREF

All imports must be resolved to exports for the service program to be created.

*UNRSLVREF

All imports do not need to resolve to exports for the service program to be created. If the service program tries to use one of these unresolved imports at run time, a MCH4439 run-time exception is issued.

Top

Listing detail (DETAIL)

Specifies the level of detail to be printed.

*NONE

A listing is not generated.

*BASIC

Contains a listing of the options passed to CRTPGM, and processing statistics. This listing also contains the Brief Summary Table.

*EXTENDED

In addition to the information provided in the *BASIC listing, this listing contains the Extended Summary Table and the Binding Information Listing.

***FULL** This listing contains the *EXTENDED listing and the Cross-Reference Listing.

Note: If a printed listing is requested, the printer file *LIBL/QSYSPRT is used to generate the listing.

Top

Allow update (ALWUPD)

Specifies whether to allow an update of the service program being created using the Update Service Program (UPDSRVPGM) command.

***YES** The service program can be updated using the UPDSRVPGM command.

***NO** The UPDSRVPGM command cannot be used to update the service program being created.

Top

Allow *SRVPGM library update (ALWLIBUPD)

Specifies whether to allow the bound service program library name of the service program being created to be changed when updated using the UPDSRVPGM command.

- *NO** The UPDSRVPGM command is not allowed to update the bound service program library names of the service program being created, even if *YES is specified for the **Allow update (ALWUPD)** parameter.
- *YES** The UPDSRVPGM command is allowed to update the bound service program library names of the service program being created when ALWUPD(*YES) is specified.

Top

User profile (USRPRF)

Specifies whether authority checking is performed only for the user running the service program, or for both the user running the service program and the service program owner.

*USER

The user profile of the service program user is used when the service program is run.

*OWNER

The user profile of both the service program owner and the service program user is used when the service program is run.

Top

Replace program (REPLACE)

Specifies whether the existing service program is replaced if a service program by the same name already exists in the specified library.

- *YES** Replace the existing service program by moving it to the QRPLOBJ library. Current activations of the service program will continue running using the version of the service program in the QRPLOBJ library.

Note: Both service programs must be owned by the same user for the replace to work.

- *NO** No replacement occurs. An error message is issued if a service program already exists with the name and library specified for the **&Service program (SRVPGM)** parameter.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

- *ALL** The user can perform all operations except those limited to the owner or controlled by

authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Target release (TGTRLS)

Specifies the release of the operating system on which you intend to use the object being created.

When specifying the **target-release** value, the format VxRxMx is used to specify the release, where Vx is the version, Rx is the release, and Mx is the modification level. For example, V5R3M0 is version 5, release 3, modification 0.

Valid values depend on the current version, release, and modification level of the operating system, and they change with each new release. You can press F4 while prompting this command parameter to see a list of valid target release values.

***CURRENT**

The object is to be used on the release of the operating system currently running on your system. The object can also be used on a system with any subsequent release of the operating system installed.

***PRV** The object is to be used on the previous release with modification level 0 of the operating system. The object can also be used on a system with any subsequent release of the operating system installed.

character-value

Specify the release in the format VxRxMx. The object can be used on a system with the specified release or with any subsequent release of the operating system installed.

Top

Allow reinitialization (ALWRINZ)

Specifies if the static storage of the service program is allowed to be reinitialized while it is still active.

***NO** The static storage of the service program can not be reinitialized while it is still active.

***YES** The static storage of the service program is allowed to be reinitialized while the service program is still active.

Top

Storage model (STGMDL)

Specifies the storage model attribute of the service program.

***SNGLVL**

The service program is created with single-level storage model. When a single-level storage model service program is activated and run, it is supplied single-level storage for automatic and static storage. A single-level storage service program runs only in a single-level storage activation group.

***TERASPACE**

The service program is created with teraspace storage model. When a teraspace storage model service program is activated and run, it is supplied teraspace storage for automatic and static storage. A teraspace storage service program runs only in a teraspace storage activation group.

***INHERIT**

The service program is created with inherit storage model. When activated, the service program adopts the storage model of the activation group into which it is activated. An equivalent view is that it inherits the storage model of its caller. When the *INHERIT storage model is selected, *CALLER must be specified for the **Activation group (ACTGRP)** parameter.

Top

Argument optimization (ARGOPT)

Specifies whether argument optimization (ARGOPT) is to be done during service program creation. Argument optimization is a technique for passing arguments (parameters) to ILE procedures to improve performance of call intensive applications. This option may cause an increase in the amount of time required to create the service program.

***NO** Argument optimization will not be performed during service program creation.

***YES** Argument optimization will be performed during service program creation.

Top

Interprocedural analysis (IPA)

Specifies whether interprocedural analysis (IPA) is to be used during the service program creation. For more information on IPA, refer to the ILE Concepts book, SC41-5606.

***NO** Interprocedural analysis will not be performed.

***YES** Interprocedural analysis will be performed.

Top

IPA control file (IPACTLFILE)

Gives the path name of a file which contains interprocedural analysis (IPA) suboption information. This parameter is allowed only when IPA(*YES) is specified.

***NONE**

No IPA control file information is to be used when IPA(*YES) is specified.

path-name

Specify the path name of the IPA control file to use when IPA(*YES) is specified. If the name is qualified it must be enclosed in apostrophes. An example of a qualified IPA control file name is `'/directory1/directory2/myipactlname'`

Top

Examples

CRTSRVPGM SRVPGM(WORKDOC)

This command creates the service program object named WORKDOC in the current library. The service program will be created from one module object that is also named WORKDOC and is located using the current library for the job.

[Top](#)

Error messages

*ESCAPE Messages

CPF223E

Authority check for use adopted authority attribute failed.

CPF5D05

Service program &1 not created.

CPF5D07

Export source file record length greater than 240.

CPF5D12

Error encountered during program or service program preparation.

[Top](#)

Create Tape Category (CRTTAPCGY)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Tape Category (CRTTAPCGY) command creates a user defined category name and assigns it to a system name. A category may be used to "group" volume identifiers together. The following special value categories have been provided by the operating system and are defined for all library devices.

- *NOSHARE

For D/T3494 tape media libraries the volume identifier may only be used by the system that owns the rights of the *NOSHARE. Other tape media libraries can have cartridge identifiers in the *NOSHARE category, but the security of the *NOSHARE is not handled by the operating system.

- *SHARE400

The cartridge identifier may be shared by all systems that are attached to the library device.

- *IPL

This category should be used for cartridge identifiers that would be used in an alternate IPL. The management of the cartridges in the category must be done by the user.

- *NL

The cartridge identifier in this category must have no logical volume identifier in order for it to be used. If it has a logical volume identifier, an Initialize Tape (INZTAP) command must be done to initialize the tape volume to a non-labeled tape before it can be used.

- *INSERT

The cartridge identifier has been placed in the library device, but has not yet been added to the system. An Add Tape Cartridge (ADDTAPCTG) command must be done before any I/O may be done to the tape volume.

- *EJECT

The volume identifier has been removed from the system by a Remove Tape Cartridge (RMVTAPCTG) command and is no longer usable by the library device.

- *CNV

When a tape in this category is unloaded by specifying ENDOPT(*UNLOAD), the system will automatically export the tape to the convenience station.

- *SYSGEN

The cartridge ID exists in the *SYSGEN category. *SYSGEN category is used for all cartridges when the library device description is in *SYSGEN mode. A library device description is in *SYSGEN mode when the GENCTGID parameter is *SYSGEN in the device description. *SYSGEN mode is used to generate identifiers for non-bar code libraries instead of loading and reading all the logical volume identifiers directly from the tape. If the library device is in *SYSGEN mode, cartridges cannot be moved from the *SYSGEN category.

Top

Parameters

Keyword	Description	Choices	Notes
CGY	Category	<i>Element list</i>	Required, Positional 1
	Element 1: Category name	<i>Character value</i>	
	Element 2: Category system	<i>Character value, *CURRENT</i>	

Top

Category (CGY)

Specifies the category being created.

Element 1: Category name

character-value

Specify the name of the category to create.

Element 2: Category system

Identifies the system the category belongs to. The system name is obtained from the current system name field of a Display Network Attributes (DSPNETA) command.

*CURRENT

The system currently running the command.

character-value

Specify the name of the system that the category belongs to. Do not attempt to create a category and specify an owning system other than *CURRENT, unless the category has previously been defined on the system specified. For example, If system A and system B are attached to library device LIB01, then CRTTAPCGY CGY(CAT1 A) creating category CAT1 and assigning as its owner system A is required on system A before a CRTTAPCGY CGY(CAT1 A) creating category CAT1 and assigning as its owner system A can be done on system B. If both of these create commands are successful, CAT1 owned by system A is logically considered the same category and can be used for cartridges in library LIB01.

Top

Examples

```
CRTTAPCGY CGY(CAT1 RCHAS215)
```

This command creates a user defined category named CAT1 and assigns as its primary owner system RCHAS215.

Top

Error messages

*ESCAPE Messages

CPF67DD

Category not created.

CPF67E2

Category already exists

[Top](#)

Create Tape File (CRTTAPF)

Where allowed to run: All environments (*ALL)
 Threadsafte: No

Parameters
 Examples
 Error messages

The Create Tape File (CRTTAPF) command creates a tape device file. The device file contains the file description, which identifies the device to be used; it does not contain data. The tape device file is used to read and write records on tape. The same device file can be used for both input and output operations.

Note: This command is not used to create device files for use in save or restore operations. User-created device files are not needed for save or restore operations.

Tape files have no data description specifications (DDS). The information in the tape file description comes from the command that creates it. The tape file has one record format for input/output operations. The record format consists of one character field containing the input data retrieved from the device or the output data to be written to the device. The program using the device file must describe the fields in the record format so the program can arrange the data received from or sent to the device in the manner specified by the tape file description.

Top

Parameters

Keyword	Description	Choices	Notes
FILE	File	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: File	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
DEV	Tape device	Single values: *NONE Other values (up to 4 repetitions): <i>Name</i>	Optional
VOL	Volume identifier	Single values: *NONE Other values (up to 50 repetitions): <i>Character value</i>	Optional
REELS	Tape reels specifications	<i>Element list</i>	Optional
	Element 1: Label processing type	*SL, *NL, *NS, *BLP, *LTM	
	Element 2: Number of reels	1-255, <u>1</u>	
SEQNBR	Sequence number	1-16777215, <u>1</u> , *END, *NEXT	Optional
LABEL	Tape label	<i>Character value, *NONE</i>	Optional
FILETYPE	File type	*DATA, *SRC	Optional
IGCDTA	User specified DBCS data	*NO, *YES	Optional
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
RCDLEN	Record length	<i>Integer, *CALC</i>	Optional
BLKLEN	Block length	1-524288, *CALC	Optional
BUFOFSET	Buffer offset	<i>Integer, 0, *BLKDSC</i>	Optional
RCDBLKFMT	Record block format	*FB, *F, *V, *VB, *D, *DB, *VS, *VBS, *U	Optional
EXTEND	Extend	Single values: *NO Other values: <i>Element list</i>	Optional
	Element 1: Extend file	*YES	
	Element 2: Check file	*NOCHECK, *CHECK	

Keyword	Description	Choices	Notes
DENSITY	Tape density	Character value, *DEVTYPE, *CTGTYPE, *FMT3480, *FMT3490E, *FMT3570, *FMT3570E, *FMT3590, *FMT3590E, *QIC120, *QIC525, *QIC1000, *QIC2GB, *QIC2DC, *QIC4GB, *QIC4DC, *QIC3040, *QIC5010, *MLR3, *SLR60, *SLR100, *FMT2GB, *FMT5GB, *FMT7GB, *FMT20GB, *FMT60GB, *ULTRIUM1, 1600, 3200, 6250	Optional
COMPACT	Data compaction	*DEV D , *NO	Optional
CODE	Code	*EBCDIC, *ASCII	Optional
CRTDATE	Creation date	Date, *NONE	Optional
EXPDATE	File expiration date	Date, *NONE, *PERM	Optional
ENDOPT	End of tape option	*REWIND, *LEAVE, *UNLOAD	Optional
USRLBLPGM	User label program	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: User label program	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
WAITFILE	Maximum file wait time	Integer, *IMMED, *CLS	Optional
SHARE	Share open data path	*NO, *YES	Optional
AUT	Authority	<i>Name</i> , *LIBCRTAUT, *ALL, *CHANGE, *EXCLUDE, *USE	Optional
REPLACE	Replace file	*YES, *NO	Optional

Top

File (FILE)

Specifies the tape device file to be created.

If the file is used by a high-level language program, the file name must be consistent with the naming rules of that language. Otherwise, the file must be renamed in the program itself.

This is a required parameter.

Qualifier 1: File

name Specify the name of the tape device file to be created.

Qualifier 2: Library

*CURLIB

The current library for the job is used to locate the tape device file. If no library is specified as the current library for the job, QGPL is used.

name Specify the library where the tape file is located.

Top

Device (DEV)

Specifies the names of one or more tape devices, one virtual tape device, or one media library device used with this tape device file to perform reading and writing data operations. A media library device is a tape storage device that contains one or more tape drives, tape cartridges, and a part (carriage and picker assembly) for moving tape media between the cartridge storage slots and the tape drives.

Single values

*NONE

No device names are specified. They must be specified later in the Change Tape File (CHGTAPF) or Override Tape File (OVRTAPF) command, or in the high-level language program that opens the file.

Other values

name Specify the names of no more than four tape devices, one virtual tape device, or the name of one media library device used with this tape device file. The order in which the device names are specified here is the order in which tapes on those devices are processed. When the number of volumes being processed exceeds the number of devices listed on this parameter, the devices are used in the same order as specified, wrapping around to the first device as needed.

Top

Volume identifier (VOL)

Specifies one or more volume identifiers used by the file. The volumes must be installed in the same order as the identifiers are specified here (and as they are specified for the DEV parameter. If the file is opened for read backward, then the volume identifiers in the list are processed from last to first (while the devices in the device list are used in first-to-last order). If a list of volume identifiers is provided for the file, operator messages indicate the name of the required volume.

Single values

*NONE

No tape volume identifiers are specified for this file. They can be supplied before the device file is opened, either in a CHGTAPF or OVRTAPF command or in the high-level language program. If volume identifiers are not specified before the device file is opened, volume checking is not performed beyond verifying that the correct label type volume is on the device, and volume names are not provided in operator messages. The maximum number of reels processed for an *NL, *NS, *BLP, or *LTM input file when VOL(*NONE) is specified is determined by the REELS(number-of-reels) parameter value.

Other values (up to 50 repetitions)

character-value

Specify the identifiers of one or more volumes in the order in which they are placed on the device. Each volume identifier contains a maximum of 6 alphanumeric characters. Use a blank as a separator character when listing multiple identifiers. Up to 50 volume identifiers can be specified. These identifiers are used in messages sent to the operator during processing. The maximum number of reels processed for an *NL, *NS, *BLP, or *LTM input file is determined by the number of volume identifiers in the list.

Note: If the VOL parameter value used for the file specifies a list of identifiers rather than VOL(*NONE), the number-of-reels part of the REELS parameter is ignored regardless of where it is specified. A description of how the parameter values for the file are determined when overrides are used, the high-level language interface, and the device file when the file is opened is in the Files and file systems category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>. To ensure that the number-of-reels part of the REELS parameter is used (rather than a VOL identifier list) to control the volumes processed by the tape device file, specify VOL(*NONE) in the same command in which the REELS parameter is specified.

Top

Tape reels specifications (REELS)

Specifies the type of labeling used on the tape reels and the maximum number of reels processed if both a list of volume identifiers is not specified (VOL parameter) and this device file is used with either *NL, *NS, *LTM, or *BLP input files. When the number of reels is specified as the second element of this parameter, the volume identifiers on the volumes are ignored if labeled tapes are being processed; instead, the order in which the reels are installed on the device must be checked by the operator.

The number-of-reels value is not a limiting value for standard-label or output files. For a standard-label *input* file, the data file labels limit the number of volumes processed by indicating end-of-file. For an *output* file, the number-of-reels value is ignored; the system requests that additional volumes be kept on the device until the file is closed.

The system checks the first record following the load point on the tape to see (1) whether it has exactly 80 bytes for EBCDIC or at least 80 bytes for ASCII and (2) whether the first 4 bytes contain the values VOL and 1. If so, the reel contains a standard-label tape. *SL and *BLP files require standard-label tape volumes. *NL, *NS, and *LTM tape files cannot process standard-label volumes.

Note: The values *SL, *NL, and *LTM can be specified if the device file is used for either reading or writing on tapes. The values *NS and *BLP are valid only if the device file is used to read tapes.

Element 1: Label processing type

- *SL** The volumes have standard labels. If a list of volume identifiers is specified (with the VOL parameter), the system checks that the correct tape volumes are on the device in the specified sequence.
- If no volume identifier list is given and the file is opened for *output*, any standard-label volumes may be installed on the device.
 - If no volume identifier list is given and the file is opened for *input*, the first volume may have any volume identifier, but if the file is continued, the system requires the correct continuation volumes to be processed (verified by checking the data file labels). For an input file, the end-of-file message is sent to the program being used when the labels on the last volume processed indicate that it is the last volume for the data file.
- *NL** The volumes are not labeled. On a nonlabeled volume, tape marks are used to indicate the end of each data file and the end of the volume. For an *input* file, the end-of-file message is sent to the program when the number of volumes specified in the volume list have been processed, or, if no list of volume identifiers is provided, when the number of reels specified in the REELS parameter are processed.
- *NS** The volumes have nonstandard labels. Each volume must start with some kind of label information, optionally preceded by a tape marker and always followed by a tape marker. This nonstandard label information is ignored. The system spaces forward to a point beyond the tape marker that follows the nonstandard labels and positions the tape at the file's data. Each reel must have a tape marker at the end of the file's data. Information beyond this ending tape marker is ignored. Only a single data file can exist on a nonstandard tape. Standard-label volumes *cannot* be processed by using the *NS label processing.
- For an *input* file, the end-of-file message is sent to the program using the file when the number of volumes specified in the volume list have been processed, or, if no list of volume identifiers is provided, when the number of reels specified in the REELS parameter are processed.
- *BLP.** Standard-label processing is bypassed. Each reel *must* have standard labels. Although each reel is checked for a standard volume label and each file must have at least one standard header label (HDR1) and one standard trailer label (EOV1 or EOF1), most other label information (such as the data file record length or block length) is ignored. The sequence number of each file on the

volume is determined only by the number of tape markers between it and the start of tape (in contrast to *SL processing in which the file sequence number stored in the header and trailer labels of each file are used to locate a data file).

Most of the information in the data file trailer label is ignored, but if an end-of-file (EOF) trailer label is found, the end-of-file message is sent to the program using the tape file. If no end-of-file trailer label is encountered by the time the specified number of volumes or reels have been processed (volume identifier list and REELS parameter), the end-of-file message is immediately sent to the program using the tape file. Bypass label processing can be used when the user does not know the name of the file used or when some file label information is incorrect.

***LTM** The volumes have no labels but do have a single leading tape marker before the first data file. REELS(*LTM) is processed the same as REELS(*NL) except that when SEQNBR(1) is specified for an output file to create the first data file on the tape, a leading tape marker is written at the start of the tape before the first data block.

Element 2: Number of reels

1 Only one tape reel is processed for the *NL, *LTM, *NS, or *BLP tape file input operation if no list of volume identifiers is provided (VOL parameter).

1-255 Specify the maximum number of reels to be processed for an *NL, *LTM, *NS, or *BLP input tape operation when a list of volume identifiers is not specified (VOL parameter). If the next reel is not on the device when the end of the currently-processing tape is reached, a message is sent to the operator requesting that the next tape be installed on the next tape device. The number-of-reels value is ignored for a standard-label (*SL) file or for any output file.

Top

Sequence number (SEQNBR)

Specifies the sequence number of the data file on the tape being processed.

- When standard-label tapes are used, the four-position file sequence number is read from the first header label of the data file.
- When bypass label processing is used or when standard-label tapes are not used, the system counts the tape markers from the start of the tape to locate the correct sequence number data file to be processed.
- When multiple-file, multiple-volume tapes are processed using REELS(*SL), the file sequence numbers continue consecutively through the volumes; thus, each new data file has a sequence number one greater than the previous file, regardless of its volume location.

1 For standard-label tapes (not using bypass label processing), the data file having the sequence number 1 is processed. For nonlabeled tapes and for bypass label processing of standard-label tapes, the first data file on the tape is processed.

***END** The file is written on the end of the tape. This value is used only for files that are written to tape.

An error message is shown on the display when a tape device file is used to read from a tape and the *END special value is specified in the tape device file.

***NEXT**

The next file in the sequence is processed. This value is used for files read from tape. If the tape is currently in a position that is prior to the first file, the first file on the tape is processed.

An error message is shown on the display when a tape file is used to write to a tape and the *NEXT special value is specified in the tape file.

1-16777215

Specify the sequence number of the file.

Top

Tape label (LABEL)

Specifies the data file identifier of the data file processed by this tape device file. An identifier is defined only for standard-label tapes and is stored in the header label immediately before the data file.

If a data file identifier is specified for any type of label processing other than *SL, it is ignored.

An identifier is required for a standard label output file, but is optional for an input file because the sequence number uniquely identifies the data file to process.

For an input file or output file with EXTEND(*YES) specified, this parameter specifies the identifier of the data file on the tape. The specified identifier must match the one in the labels of the data file that the SEQNBR parameter specifies; otherwise, an error message is sent to the program using this device file. For output files with EXTEND(*NO) specified, this parameter specifies the identifier of the data file to be created on the tape.

*NONE

The data file identifier is not specified.

character-value

Specify the identifier (17 alphanumeric characters maximum) of the data file used with this tape device file. If this identifier is for a tape written in the basic exchange format, and is used on a system other than a System i5, up to eight characters or a qualified identifier having no more than eight characters per qualifier must be used.

Top

File type (FILETYPE)

Specifies whether the tape device file being created describes data records or source records (statements) for a program or for another file.

*DATA

The tape file describes data records.

***SRC** The tape file describes source records.

Note: If *SRC is specified, the system adds 12 bytes to the start of every record to replace the source sequence number and date fields.

Top

User specified DBCS data (IGCDTA)

Specifies, for program-described files, whether the file processes double-byte character set (DBCS) data. Specifies, for externally described files, the DBCS attributes of the file.

***NO** The file does not process double-byte character set (DBCS) data.

***YES** The file processes double-byte character set (DBCS) data.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

*BLANK

No text is specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Record length (RCDLEN)

Specifies, in bytes, the length of the records contained in the data file processed with this device file. The system always uses the record length and block length specified in the data file labels for any standard-label input file or output file with EXTEND(*YES) specified (if a second header label (HDR2) is found on the tape and *BLP label processing has not been specified).

*CALC

No record length is specified for the data file being processed. If *CALC is specified, the system will attempt to calculate an appropriate record length when the file is opened. RCDLEN(*CALC) can be used for nonlabeled tapes or when there is no HDR2 label if a BLKLEN value other than *CALC is specified for the file and RCDBLKFMFMT does not specify spanned or blocked records. In this case, the system calculates an appropriate record length from the block length, record block format, and buffer offset (for an ASCII file) specified for the file. In any other case, the actual record length must be specified by a CHGTAPF command or OVRTAPF command, or in the high-level language program that opens the device file. The system attempts to calculate an appropriate record length when the file is opened.

integer

Specify the length of each record in the data file. Valid values range from 1 through 32767 bytes.

Table 1. Figure: EBCDIC RCDLEN Ranges

RCDFBLKFMT	FILETYPE(*DATA)	FILETYPE(*SRC)
-----	-----	-----
*F *FB *U	18 - 32767	30 - 32767
*V *VB	1 - 32759	13 - 32767
*VS *VBS	1 - 32759	13 - 32767

Table 2. Figure: ASCII RCDLEN Ranges

RCDFBLKFMT	FILETYPE(*DATA)	FILETYPE(*SRC)
-----	-----	-----
*F *FB *U	18 - 32767	30 - 32767
*D *DB	1 - 9995	13 - 10007
*VS *VBS	1 - 32759	13 - 32767

Top

Block length (BLKLEN)

Specifies the number of bytes in the maximum length of the data blocks being transferred to or from the tape for reading or writing operations.

*CALC

No block length is specified for the data file being processed. The system attempts to calculate an appropriate block length when the file is opened.

1-524288

Specify the maximum length of each block in the data file to be processed. The minimum block length that can be successfully processing is determined by the tape device hardware and System i5 system machine support functions.

The maximum block length is always 524288 bytes for an input file, but is limited to 9999 bytes if block descriptors must be created for an ASCII output file.

The following table shows the minimum and maximum block length values allowed for an output file:

Table 3. Figure: Minimum and Maximum BLKLEN Values

CODE	BUFOFSET	MIN BLKLEN	MAX BLKLEN
*EBCDIC	Ignored	18	524288
*ASCII	0	18	524288
*ASCII	*BLKDSC	18	9999

Top

Buffer offset (BUFOFSET)

Specifies the buffer offset value for the start of the first record in each block in the tape data file. A buffer offset value can be used for any record block format ASCII file, and is ignored for an EBCDIC tape file. The system uses the buffer offset specified in the data file labels for any standard-label input file or output file with EXTEND(*YES) specified if a value is contained in the second header label (HDR2) on the tape, and *BLP label processing has not been specified.

The buffer offset parameter specifies the length of any information that precedes the first record in the block. For record block formats *D, *DB, *VS, and *VBS, each record or record segment is preceded by a descriptor that contains the length of the record or segment. A buffer offset value is used to indicate that there is information *ahead* of the descriptor word for the first record in each block, or *ahead* of the data of the first fixed-length record or undefined format record in each block.

This parameter is not needed for a standard-label file processed for input if the tape includes a second file header label (HDR2) that contains the buffer offset value. A buffer offset value must be provided by the Create Tape File (CRTTAPF) command, Change Tape File (CHGTAPF) command, or Override Tape File (OVRTAPF) command, or by the file labels for an input file that contains any information (such as a block descriptor) ahead of the first record in each block. If the user does not specify a buffer offset value when a tape file is created, it is not necessary to specify an offset value when the file is read.

The only buffer offset values allowed for an output file are zero and *BLKDSC. An existing standard-label data file with a buffer offset value in the HDR2 label can be extended only if the buffer offset value is either 0 or 4. A buffer offset value of 0 in the HDR2 label adds data blocks with *no* buffer offset. BUFOFSET(*BLKDSC) must be specified to extend an existing tape data file that contains an offset value of 4 in the HDR2 label.

0 No buffer offset information precedes the first record in each data block.

*BLKDSC

4-byte block descriptors are created in any tape file created by using this device file. Any input

file read by using this device file assumes 4-bytes of buffer offset information preceding the first record in each data block. This value is valid only if *D or *DB is specified for the **Record block format (RCDBLKFMNT)** parameter.

integer

Specify the length (in bytes) of the buffer offset information that precedes the first record in each data block. Valid values range from 0 through 99 bytes.

Top

Record block format (RCDBLKFMNT)

Specifies the type and blocking attribute of records in the tape data file being processed.

Record block format *V and *VB records can be processed only for an EBCDIC file; *D and *DB records can be processed only for an ASCII file. If a standard-label tape (label type *SL or *BLP) is being processed and an inconsistent record block format is specified for the volume code, the correct record type is assumed (V or D) for the volume code and a warning message is sent to the program that opens the file. If the record type and code are inconsistent for a nonlabeled volume (label type *NL, *LTM, or *NS), an error message is sent and the file is *not* opened, because there are no labels to verify the correct volume code.

If a valid record length, block length, and buffer offset value (for an ASCII file) are specified for fixed-length records but the block attribute is incorrect, the correct block attribute is assumed (changing record block format *F to *FB or record block format *FB to *F), and a warning message is sent to the program that opens the file.

If a block length is specified that is longer than required to process a maximum length record, then record block format *V, *D, or *VS is changed to *VB, *DB, or *VBS and a warning message is sent to the program that opens the file.

Note: When BUFOFSET(*BLKDSC) is specified for the file, a value of 4 should be used for the BUFOFSET part of any BLKLEN calculations, unless existing file labels on the tape specify a different value.

- *FB** Fixed length, blocked, unspanned records in either EBCDIC or ASCII code are processed.
- *F** Fixed length, deblocked, unspanned records in either EBCDIC or ASCII code are processed.
- *V** Variable length, deblocked, unspanned records in EBCDIC type V format are processed.
- *VB** Variable length, blocked, unspanned records in EBCDIC type V format are processed.
- *D** Variable length, deblocked, unspanned records in ASCII type D format are processed.
- *DB** Variable length, blocked, unspanned records in ASCII type D format are processed.
- *VS** Variable length, deblocked, spanned records in either EBCDIC or ASCII code are processed.
- *VBS** Variable length, blocked, spanned records in either EBCDIC or ASCII code are processed. The representation of spanned records on the tape is different for EBCDIC and ASCII files, but the system selects the correct format based on the file code.
- *U** Undefined format records in either EBCDIC or ASCII code are processed.

Table 4. Figure: Required RCDLEN/BLKLEN/BUFOFSET Relation

CODE	RCDLKFMT	BLKLEN1
=====	=====	=====
*EBCDIC	*F *U	= RCDLEN
*ASCII	*F *U	= RCDLEN + BUFOFSET
-----	-----	-----
*EBCDIC	*FB	= RCDLEN * n
*ASCII	*FB	= (RCDLEN * n) + BUFOFSET (where n is the number of records in a maximum-length block)
-----	-----	-----
*EBCDIC	*V	= RCDLEN * 8
*ASCII	*D	= RCDLEN * 4 + BUFOFSET
-----	-----	-----
*EBCDIC	*VB	>= RCDLEN + 8
*ASCII	*DB	>= RCDLEN + 4 + BUFOFSET
-----	-----	-----
*EBCDIC	*VS *VBS	>= 18
*ASCII	*BS *VBS	>= 6 + BUFOFSET (18 minimum)
-----	-----	-----

NOTE: Block length (BLKLEN) is a function of record length (RCDLEN) and buffer offset (BUFOFSET).

Top

Extend file (EXTEND)

Specifies, for output operations to tape, whether new records are added to the end of a data file that is currently on the tape. If the data file is extended, it becomes the last file on the tape volume.

Note: This parameter is not valid for 1/4-inch cartridge tape devices.

Single values

***NO** Records are not added to the end of the specified data file.

Element 1: Extend file

***YES** New records are added to the end of the specified data file on tape when this device file is used.

Element 2: Check file

***NOCHECK**

The file is extended without being checked to determine whether it is active.

***CHECK**

Before the file is extended, it is checked to determine whether it is active.

Top

Tape density (DENSITY)

Specifies the density of the data that is written on the tape volume when this device file is created. This parameter is used only for tape files being written to tape; it is ignored for tape files being read from the tape (in the case of files being read from tape, the density on the tape is used).

The density of a standard-label volume is specified on the INZTAP command, which initializes tapes as standard-label volumes by writing volume labels on them. If the density specified for this parameter is different than the density of a standard-labeled tape, the tape must be reinitialized to the specified density.

***DEVTYPE**

The highest capacity density or format supported by the tape device will be used.

Device
Highest capacity density or format

3480 *FMT3480

3490E *FMT3490E

3570-Bxx
*FMT3570

3570-Cxx
*FMT3570E

3580-001
*ULTRIUM1

3580-002
*ULTRIUM2

3580-003
*ULTRIUM3

3580-004
*ULTRIUM4

3590-Bxx
*FMT3590

3590-Exx
*FMT3590E

3590-Hxx
*FMT3590H

3592-E05
*FMT3592A2

3592-J1A
*FMT3592A1

4685-001
*VXA2

5755 *ULTRIUM2

6258 *DAT72

6279 *VXA3

6344 *QIC2GB

6349 *QIC2GB

6369 *QIC2GB

6380 *QIC2GB

6381 *QIC2DC

6382 *QIC4DC
 6383 *QIC5010
 6384 *SLR60
 6386 *MLR3
 6387 *SLR100
 6390 *FMT7GB
 63B0 *VRT256K
 7207-122
 *QIC4DC
 7208-002
 *FMT2GB
 7208-012
 *FMT5GB
 7208-222
 *FMT7GB
 7208-342
 *FMT20GB
 7208-345
 *FMT60GB
 9348 6250

***CTGTYPE**

The highest capacity density or format supported by the device for the mounted cartridge type will be used. If the device does not support special cartridge type information, *DEVTYPE is used.

character-value

Specify the density or format to use.

1600 The data density on the tape volume is 1,600 bits per inch, which is used for 1/2 inch reel tapes.

3200 The data density on the tape volume is 3,200 bits per inch, which is used for 1/2 inch reel tapes.

6250 The data density on the tape volume is 6,250 bits per inch, which is used for 1/2 inch reel tapes.

***DAT72**

The format of this tape is DAT72. It is used by 4mm cartridge tape devices that can store 36 gigabytes of data on a standard length cartridge.

***DDS3**

The format of this tape is DDS3. It is used by 4mm cartridge tape devices that can store 12 gigabytes of data on a standard length cartridge.

***DDS4**

The format of this tape is DDS4. It is used by 4mm cartridge tape devices that can store 20 gigabytes of data on a standard length cartridge.

***FMT3480**

The format of this tape is FMT3480. The data density on this tape volume is formatted to support a 3480 device. This density is used for 1/2 inch cartridge tapes.

***FMT3490E**

The format of this tape is FMT3490E. The data density on this tape volume is formatted to support a 3490E device. This density is used for 1/2 inch cartridge tapes.

***FMT3570**

The format of this tape is FMT3570. The data format is written on the tape volume with a 3570 device.

***FMT3570E**

The format of this tape is FMT3570E. The data format is written on the tape volume with a 3570E device.

***FMT3590**

The format of this tape is FMT3590. The data format is written on the tape volume with a 3590 device. This density is used for 1/2 inch cartridge tapes.

***FMT3590E**

The format of this tape is FMT3590E. The data format is written on the tape volume with a 3590E device. This density is used for 1/2 inch cartridge tapes.

***FMT3590H**

The format of this tape is FMT3590H. The data format is written on the tape volume with a 3590H device. This density is used for 1/2 inch cartridge tapes.

***FMT3592A1**

The format of this tape is FMT3592A1. It is used by 3592 tape devices that can store 300 gigabytes of data on a standard length cartridge.

FMT3592A1E

The format of this tape is FMT3592A1E. It is used by 3592 tape devices that can store 300 gigabytes of encrypted data on a standard length cartridge.

***FMT3592A2**

The format of this tape is FMT3592A2. It is used by 3592 tape devices that can store 500 gigabytes of data on a standard length cartridge.

FMT3592A2E

The format of this tape is FMT3592A2E. It is used by 3592 tape devices that can store 500 gigabytes of encrypted data on a standard length cartridge.

***QIC120**

The format of this tape is QIC120, which is used for 1/4 inch cartridge tapes that can hold 120 megabytes of data.

***QIC525**

The format of this tape is QIC525, which is used for 1/4 inch cartridge tapes that can hold 525 megabytes of data.

***QIC1000**

The format of this tape is QIC1000, which is used for 1/4 inch cartridge tapes that can hold 1200 megabytes of data.

***QIC2GB**

The format of this tape is QIC2GB. It is used by 1/4 inch tape devices which can store 2.5 gigabytes of data on a standard length QIC2GB cartridge.

***QIC2DC**

The format of this tape is QIC2DC. It is used to write compacted data to a 1/4 inch cartridge that supports the QIC2GB format.

***QIC4GB**

The format of this tape is QIC4GB. It is used by 1/4 inch tape devices which can store 4 gigabytes of data on a standard length QIC4GB cartridge.

***QIC4DC**

The format of this tape is QIC4DC. It is used to write compacted data to a 1/4 inch cartridge that supports the QIC4GB format.

***QIC3040**

The format of this tape is QIC3040, which is used for 1/4 inch minicartridge tapes that can hold 840 megabytes of data.

***QIC5010**

The format of this tape is QIC5010, which is used for 1/4 inch cartridge tapes that can hold 13.5 gigabytes of data.

***MLR3**

The format of this tape is MLR3. It is used by 1/4 inch tape devices which can store 25 gigabytes of data on a standard length MLR3 cartridge.

***SLR60**

The format of this tape is SLR60. It is used by 1/4 inch tape devices which can typically store 60 gigabytes of compacted data on a standard length SLR60 cartridge.

***SLR100**

The format of this tape is SLR100. It is used by 1/4 inch tape devices which can typically store 100 gigabytes of compacted data on a standard length SLR100 cartridge.

***FMT2GB**

The format of this tape is FMT2GB, which is used for 8 millimeter cartridge tapes that can hold 2 gigabytes of data.

***FMT5GB**

The format of this tape is FMT5GB, which is used for 8 millimeter cartridge tapes that can hold 5 gigabytes of data.

***FMT7GB**

The format of this tape is FMT7GB, which is used for 8 millimeter cartridge tapes that can hold 7 gigabytes of data.

***FMT20GB**

The format of this tape is FMT20GB. It is used by 8 millimeter tape devices that can store 20 gigabytes of data on a standard length cartridge.

***FMT60GB**

The format of this tape is FMT60GB. It is used by 8 millimeter tape devices that can store 60 gigabytes of data on a standard length cartridge.

***ULTRIUM1**

The format of this tape is ULTRIUM1. It is used by 1/2 inch cartridge tape devices that can store 100 gigabytes of data on a standard length cartridge.

***ULTRIUM2**

The format of this tape is ULTRIUM2. It is used by 1/2 inch cartridge tape devices that can store 200 gigabytes of data on a standard length cartridge.

***ULTRIUM3**

The format of this tape is ULTRIUM3. It is used by 1/2 inch cartridge tape devices that can store 400 gigabytes of data on a standard length cartridge.

***ULTRIUM4**

The format of this tape is ULTRIUM4. It is used by 1/2 inch cartridge tape devices that can store 800 gigabytes of data on a standard length cartridge.

***VRT32K**

The format of the volume is VRT32K. It is used to write data to a virtual volume using a maximum data block size of 32KB. Volumes written using this format can be duplicated to all supported tape devices.

***VRT64K**

The format of the volume is VRT64K. It is used to write data to a virtual volume using a maximum data block size of 64KB. Volumes written using this format can only be duplicated to tape devices that support a maximum block size of 64KB or greater.

***VRT240K**

The format of the volume is VRT240K. It is used to write data to a virtual volume using a maximum data block size of 240KB. Volumes written using this format can only be duplicated to tape devices that support a maximum block size of 240KB or greater.

***VRT256K**

The format of the volume is VRT256K. It is used to write data to a virtual volume using a maximum data block size of 256KB. Volumes written using this format can only be duplicated to tape devices that support a maximum block size of 256KB or greater.

***VXA1**

The format of this tape is VXA1. It is used by VXA cartridge tape devices that can store 33 gigabytes of data on a standard length cartridge.

***VXA2**

The format of this tape is VXA2. It is used by VXA cartridge tape devices that can store 80 gigabytes of data on a standard length cartridge.

***VXA3**

The format of this tape is VXA3. It is used by VXA cartridge tape devices that can store 160 gigabytes of data on a standard length cartridge.

Note: Self-configured tape devices may define additional valid values for the density parameter. Use System i5 Navigator (Configuration and Service) (Hardware) (Tape Devices) (Tape Libraries) (Tape Resources) (Properties) or (Configuration and Service)(Hardware) (Tape Devices) (Stand-Alone Devices) (Properties) to find additional valid density values for a specific device, or use the F4=Prompt key on the "Tape density" field of the CL command to see a list of all valid density values for the attached tape devices.

Top

Data compaction (COMPACT)

Specifies whether device data compaction is performed. If the tape devices being used do not support data compaction, this parameter will be ignored when the file is opened.

***DEV**

Device data compaction is performed if the devices being used support data compaction.

***NO** Device data compaction is not performed.

Top

Code (CODE)

Specifies the type of character code used when tape data is read or written by a job that uses this tape device file.

*EBCDIC

The EBCDIC character code is used with this tape device file.

*ASCII

The ASCII character code is used.

Top

Creation date (CRTDATE)

Specifies the date when the data file was created on (written to) tape. The data file creation date is stored in file labels on the tape. If a creation date is specified for any type of label processing other than *SL, it is ignored.

*NONE

The creation date is not specified.

date Specify the creation date of the data file used by this tape device file.

Top

File expiration date (EXPDATE)

Specifies, for tape output data files only, the expiration date of the data file used by this device file. The data file expiration date is stored in file labels on the tape. If an expiration date is specified for any type of label processing other than *SL, it is ignored. The data file is protected and cannot be written over until the specified expiration date.

*NONE

No expiration date is specified for the data file. The data file is not protected.

*PERM

The data file is protected permanently. The date written on the tape is 999999.

date Specify the date on which and after which the data file is no longer protected.

Top

End of tape option (ENDOPT)

Specifies the positioning operation performed automatically on the tape volume when the tape device file is closed. In the case of a multiple-volume data file, this parameter applies only to the *last* reel.

*REWIND

The tape is automatically rewound, but not unloaded, after the operation has ended.

*UNLOAD

The tape is automatically rewound and unloaded after the operation ends.

*LEAVE

The tape does not rewind or unload after the operation ends. It remains at the current position on the tape drive.

Note: Even if *LEAVE is specified for the ENDOPT parameter, the next tape file opened to this reel is positioned at the start or end of a data file when it is opened.

Top

User label program (USRLBLPGM)

Specifies the user program that processes user-defined tape labels. On an output file, the user label program passes the user labels that are written to tape. On an input file, the user labels are passed to the user label program.

Single values

*NONE

There is no user label program for this device file.

Qualifier 1: User label program

name Specify the name of the user program that processes the user tape labels.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

name Specify the name of the library to be searched.

Top

Maximum file wait time (WAITFILE)

Specifies the number of seconds that the program waits for the file resources to be allocated when the file is opened, or the device or session resources to be allocated when an acquire operation is performed to the file. If the file resources cannot be allocated in the specified wait time, an error message is sent to the program.

*IMMED

The program does not wait. Immediate allocation of file resources is required.

*CLS The job default wait time is used as the wait time for the file resources to be allocated.

1-32767

Specify the number of seconds to wait for file resources to be allocated.

Top

Share open data path (SHARE)

Specifies whether the open data path (ODP) is shared with other programs in the same routing step. When an ODP is shared, the programs accessing the file share facilities such as the file status and the buffer.

*NO The ODP is not shared with other programs in the routing step. A new ODP for the file is created and used every time a program opens the file.

*YES The same ODP is shared with each program in the job that also specifies *YES when it opens the file.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library command (CRTLIB) for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

*EXCLUDE

The user cannot access the object.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Replace file (REPLACE)

Specifies whether an existing file, other than a save or database file, is replaced.

***YES** An file is replaced if the creation of the new tape device file with the same name and library is successful.

***NO** The creation of a new tape device file is not allowed if there is an existing file with the same name and library.

Top

Examples

Example 1: Creating a Description of a Tape Device File

```
CRTTAPF FILE(BACKHST) DEV(QTAPE1 QTAPE2 QTAPE3)
        REELS(*BLP 10) RCDLEN(256) BLKLEN(1024)
        RCDBLKfmt(*FB) EXTEND(*YES)
        ENDOPT(*UNLOAD) WAITFILE(60)
```

This command creates a description of the tape device file named BACKHST in the current library, to be used with the tape devices QTAPE1, QTAPE2, and QTAPE3. All volumes processed on these devices with this device file must have standard-labels. Each block of data (EBCDIC character code) on the tape volumes contains four records of 256 bytes each. When records are written to the tape, they are added to the end of the data file. No creation or expiration date is specified for this tape, and both unloading and rewinding operations will occur when the device file is closed at the last tape volume processed. The program using this tape device file waits 60 seconds for file resources to be allocated when this file is opened, and this device file is used only when the current program is running.

Example 2: Creating a Tape File Containing DBCS Data

```
CRTTAPF FILE(IGCLIB/IGCTAP) LABEL(GENINF) IGCDTA(*YES)
```

This command creates the tape file IGCTAP that is stored in library IGCLIB, which is labeled GENINF, and contains DBCS data.

[Top](#)

Error messages

*ESCAPE Messages

CPF7302

File &1 not created in library &2.

[Top](#)

Create Table (CRTTBL)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Table (CRTTBL) command creates a named table. The table can be used for the translation of data that is moved between the system and a device. The table can also be used to specify an alternate collating sequence or to specify field translation functions.

You can create a table by prompting for the source information, or by specifying a source member.

To create a table using prompting support, specify *PROMPT on the SRCFILE parameter. A display is shown allowing you to view and change the table values and a new table is created based on the values chosen on the display.

To create a *CVT table using a source member, you must specify a source member that contains 8 records. Each record in this member must contain 64 hexadecimal characters (characters after position 64 are not used). This input (512 hexadecimal characters) is converted and stored internally as 256 bytes by the CRTTBL command.

The value you specify for a position within the source member is the same value that is returned by QDCXLATE (or other system program) whenever that position is encountered.

For example, if you specify "C0C1C2C3C4C5C6..." as the first part of record 1 in the source, then a hexadecimal "C0" is returned when given a hexadecimal "00", a hexadecimal "C1" is returned when given a hexadecimal "01" and so on.

To create a *UCSSRTSEQ table using a source member, you must specify a source member that contains the following layout of information.

1. column 1-4 = Hex code point to be sorted
2. column 6-10 = Weight of this code point as a decimal number
3. column 11-80 = not used, can contain such things as comments.

Top

Parameters

Keyword	Description	Choices	Notes
TBL	Table	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Table	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
SRCFILE	Source file	Single values: *PROMPT Other values: <i>Qualified object name</i>	Optional, Positional 2
	Qualifier 1: Source file	<i>Name, QTBLSRC</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
SRCMBR	Source member	<i>Name, *TBL</i>	Optional, Positional 3
TBLTYPE	Table type	<i>*CVT, *SRTSEQ, *UCSSRTSEQ</i>	Optional

Keyword	Description	Choices	Notes
BASETBL	Basing table	Single values: *HEX Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Basing table	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
BASESRTSEQ	Basing sort sequence	Single values: *LANGIDSHR, *HEX, *JOB, *LANGIDUNQ Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Basing sort sequence	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
BASELANGID	Basing language ID	<i>Character value</i> , *JOB	Optional
CCSID	Coded character set ID	1-65533, *JOB, *HEX, 65535	Optional
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
AUT	Authority	<i>Name</i> , *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE	Optional

Top

Table (TBL)

Specifies the library name and table name of the table being created.

This is a required parameter.

The possible library values are:

*CURLIB

The library for the job is used to locate the table. If no library is specified as the library for the job, QGPL is used.

name Specify the name of the library to be searched.

The possible values are:

table-name

Specify the name of the table being created.

Top

Source file (SRCFILE)

Specifies the qualified name of the source file containing the description of the table being created or that prompting support is to be used.

The possible values are:

*PROMPT

Allows the user to access and use source information.

QTBLSRC

The system source file named QTBLSRC contains the source records that are used with this command to create the table.

source-file-name

Specify the name (library-name/source-file-name) of the source file that contains the source records that are used with this command to create the table.

The possible library values are:

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is used to locate the source file. If no current library is specified as the current library for the job, QGPL is used.

name Specify the name of the library to be searched.

Top

Source member (SRCMBR)

Specifies the name of the source file member containing the description of the table being created.

The possible values are:

***TBL** The source file member name is the same as the name of the table.

source-file-member-name

Specify the name of the member in the source file specified on the **Source file** prompt (SRCFILE parameter) to create the table.

generic-table-name* Specify the generic name of the table. A generic name is a character string of one or more characters followed by an asterisk (*); for example, ABC*. If a generic name is specified, then all tables with names that begin with the generic name, and for which the user has authority, are shown. If an asterisk is not included with the generic (prefix) name, the system assumes it to be the complete table name.

Top

Table type (TBLTYPE)

Specifies the type of table object to be created.

The possible values are:

***CVT** A conversion type table is created.

***SRTSEQ**

A sort sequence type table is created.

***UCSSRTSEQ**

An ISO-10646 UCS-2 sort sequence type table is created.

Top

Basing table (BASETBL)

Specifies the base table to be used for prompting support when creating a conversion table.

The possible values are:

***HEX** A one to one mapping table is used.

The name of the table can be qualified by one of the following library values:

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name

Specify the name of the library to be searched.

table-name

Specify a table object to be used as a base.

Top

Basing sort sequence (BASESRTSEQ)

Specifies the base table to be used for prompting support when creating a sort sequence table.

The possible values are:

***JOB** The sort sequence must be resolved when the object is created.

***LANGIDSHR**

A shared weight sort table is used.

***LANGIDUNQ**

A unique weight sort table is used.

***HEX** A sort sequence table is not used. The hexadecimal values of the characters are used to determine the sort sequence. The CCSID for hexadecimal data is 65535.

The name of the table can be qualified by one of the following library values:

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name

Specify the name of the library to be searched.

table-name

Specify the name of a table object to be used as a base.

Top

Basing language ID (BASELANGID)

Specifies the base language used for prompting support when creating a sort sequence table.

The possible values are:

***JOB** The sort sequence must be resolved when the object is created.

language-ID

Specify a valid language ID to be used for the sort sequence table being created.

Top

Coded character set ID (CCSID)

Specifies the coded character set ID (CCSID) in which to store the sort sequence table information.

The possible values are:

***JOB** The sort sequence must be resolved when the object is created.

coded-character-set-ID

Specify the CCSID to be used for the sort sequence table information.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

The possible values are:

***BLANK**

No text is specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

***LIBCRTAUT**

The authority for the object is the same as the value specified on the **Create authority** prompt (CRTAUT parameter) of the library in which the object is being created. If the value specified on the **Create authority** prompt (CRTAUT parameter) is changed, the new value will not affect any existing objects.

***CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

authorization-list-name

Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

```
CRTTBL  TBL(SCRAMTBL) SRCFILE(USERTABLES) SRCMBR(SCRAMBLE)
        TEXT('Translate table for scrambling text characters')
```

This command creates a table named SCRAMTBL and (by default) stores it in the current library. The source file named USERTABLES contains the source records used when the table is created; the name of the source file member is SCRAMBLE. The TEXT parameter describes this table as being used as a translate table for scrambling text characters.

Top

Error messages

*ESCAPE Messages

CPF2207

Not authorized to use object &1 in library &3 type *&2.

CPF2614

Table &1 in &2 already exists.

CPF2623

Library &1 not found.

CPF2678

Data in source file &1 in &2 not valid.

CPF3BF7

Data in source file at line &1 is not correct

CPF3FC9

Value &1 for CCSID not valid.

CPF9820

Not authorized to use library &1.

Top

Create Time Zone Description (CRTTIMZON)

Where allowed to run: All environments (*ALL)
 Threadsafes: Yes

Parameters
 Examples
 Error messages

The Create Time Zone Description (CRTTIMZON) command creates a time zone description object that defines the properties of a time zone. The time zone description object is created in the QSYS library. These properties are used to convert time values between Coordinated Universal Time (UTC) form and local forms. These properties are also used to express time values in local forms.

Restrictions:

- You must have read (*READ) and add (*ADD) authorities to the QSYS library.

Top

Parameters

Keyword	Description	Choices	Notes
TIMZON	Time zone description	Name	Required, Positional 1
OFFSET	Offset	-779-779	Required, Positional 2
STDNAME	Standard Time	Single values: *GEN, *MSG Other values: <i>Element list</i>	Optional
	Element 1: Abbreviated name	Character value	
	Element 2: Full name	Character value	
DSTNAME	Daylight Saving Time (DST)	Single values: *NONE, *GEN, *MSG Other values: <i>Element list</i>	Optional
	Element 1: Abbreviated name	Character value	
	Element 2: Full name	Character value	
STDMSG	Standard Time message	Name	Optional
DSTMSG	Daylight Saving Time message	Name	Optional
MSGF	Message file	Qualified object name	Optional
	Qualifier 1: Message file	Name	
	Qualifier 2: Library	Name, *LIBL	
DSTSTR	Daylight Saving Time start	<i>Element list</i>	Optional
	Element 1: Month	*JAN, *FEB, *MAR, *APR, *MAY, *JUN, *JUL, *AUG, *SEP, *OCT, *NOV, *DEC	
	Element 2: Day	*MON, *TUE, *WED, *THU, *FRI, *SAT, *SUN	
	Element 3: Relative day of month	*LAST, 1, 2, 3, 4	
	Element 4: Time	Time	

Keyword	Description	Choices	Notes
DSTEND	Daylight Saving Time end	<i>Element list</i>	Optional
	Element 1: Month	*JAN, *FEB, *MAR, *APR, *MAY, *JUN, *JUL, *AUG, *SEP, *OCT, *NOV, *DEC	
	Element 2: Day	*MON, *TUE, *WED, *THU, *FRI, *SAT, *SUN	
	Element 3: Relative day of month	*LAST, 1, 2, 3, 4	
	Element 4: Time	<i>Time</i>	
DSTSHIFT	Daylight Saving Time shift	0-120, <u>60</u>	Optional
TEXT	Text 'description'	<i>Character value</i> , * BLANK	Optional
YEAROFS	Year offset	-140-140, <u>0</u>	Optional
ALTNAME	Alternate name	<i>Character value</i>	Optional
AUT	Authority	<i>Name</i> , * USE , *LIBCRTAUT, *CHANGE, *ALL, *EXCLUDE	Optional

Top

Time zone description (TIMZON)

Specifies the time zone description to be created. The time zone description is created in QSYS.

This is a required parameter.

name Specify the name of the time zone description.

Top

Offset (OFFSET)

Specifies the time difference, in minutes, between this time zone and Coordinated Universal Time (UTC). This value is subtracted from local time to obtain UTC time. A negative difference indicates that the time zone is west of UTC and a positive difference indicates that the time zone is east of UTC.

This is a required parameter.

-779 to 779

Specify the time difference, in minutes. Valid values range from -779 minutes to 779 minutes.

Top

Standard Time (STDNAME)

Specifies the abbreviated and full names of the time zone when Daylight Saving Time is not being observed.

Single values

***GEN** The system will generate the abbreviated and full names. The format of the abbreviated name will be the letters 'UTC' followed by the offset followed by the letter 'S'. The offset will appear as a formatted hour and minute value. The full name for the time zone description will be the same as the abbreviated name. For example, a time zone that has an offset of -360 minutes would have an abbreviated and a full name of 'UTC-06:00S'.

***MSG** The abbreviated and full names will be retrieved from the second-level message text of the

message specified for the **Standard Time message (STDMSG)** parameter. When this value is specified, values must also be specified for the **STDMSG** parameter and the **Message file (MSGF)** parameter.

Element 1: Abbreviated name

character-value

Specify the abbreviated or short name for this time zone. The abbreviated name has a maximum length of 10 characters.

Element 2: Full name

character-value

Specify the full or long name for this time zone. The full name has a maximum length of 50 characters.

Top

Daylight Saving Time (DST) (DSTNAME)

Specifies the abbreviated and full names of the time zone when Daylight Saving Time is being observed.

Single values

***NONE**

This time zone does not observe Daylight Saving Time.

***GEN** The system will generate the abbreviated and full names. The format of the abbreviated name will be the letters 'UTC' followed by the offset followed by the letter 'D'. The offset will appear as a formatted hour and minute value. The full name for the time zone description will be the same as the abbreviated name. For example, a time zone that has an offset of -360 minutes would have an abbreviated and a full name of 'UTC-06:00D'.

***MSG** The abbreviated and full names will be retrieved from the second-level message text of the message specified for the **Daylight Saving Time message (DSTMSG)** parameter. When this value is specified, values must also be specified for the **DSTMSG** parameter and the **Message file (MSGF)** parameter.

Element 1: Abbreviated name

character-value

Specify the abbreviated or short name for this time zone. The abbreviated name has a maximum length of 10 characters.

Element 2: Full name

character-value

Specify the full or long name for this time zone. The full name has a maximum length of 50 characters.

Top

Standard Time message (STDMSG)

Specifies the predefined message that contains the abbreviated and full names of the time zone that are used when Daylight Saving Time is not being observed. The first 10 characters of the message contain the abbreviated name and the next 50 characters contain the full name. This parameter must be specified when ***MSG** is specified for the **Standard Time (STDNAME)** parameter.

name Specify the message identifier.

Top

Daylight Saving Time message (DSTMSG)

Specifies the predefined message that contains the abbreviated and full names of the time zone that are used when Daylight Saving Time is being observed. The first 10 characters of the message contain the abbreviated name and the next 50 characters contain the full name. This parameter must be specified when *MSG is specified for the **Daylight Saving Time (DST) (DSTNAME)** parameter.

name Specify the message identifier.

Top

Message file (MSGF)

Specifies the message file from which the Standard Time message and the Daylight Saving Time message are to be retrieved. The specified message file name and library name are stored in the time zone description. When a message is used to specify the abbreviated and full names, the message is retrieved each time the abbreviated or full names are retrieved. If the message cannot be retrieved from the message file, the names will be returned as *N. This parameter must be specified when *MSG is specified for the **Standard Time (STDNAME)** parameter or the **Daylight Saving Time (DST) (DSTNAME)** parameter.

Qualifier 1: Message file

name Specify the name of the message file.

Qualifier 2: Library

***LIBL** All libraries in the thread's library list are searched for the message file when the message is retrieved. The value *LIBL is saved in the time zone description and is not resolved to a library name by this command.

name Specify the library where the message file is located.

Top

Daylight Saving Time start (DSTSTR)

Specifies when Daylight Saving Time (DST) starts. This parameter contains four elements: the month in which DST starts, the day on which DST starts, the relative day of the month on which DST starts and the time at which DST starts. If this parameter is specified, all four elements must be specified. This parameter must be specified when a value other than *NONE is specified for the **Daylight Saving Time (DST) (DSTNAME)** parameter. The values specified for this parameter cannot be identical to the values specified for the **Daylight Saving Time end (DSTEND)** parameter.

Element 1: Month

***JAN** Daylight Saving Time starts in January.

***FEB** Daylight Saving Time starts in February.

***MAR** Daylight Saving Time starts in March.

***APR** Daylight Saving Time starts in April.

***MAY** Daylight Saving Time starts in May.

- *JUN Daylight Saving Time starts in June.
- *JUL Daylight Saving Time starts in July.
- *AUG Daylight Saving Time starts in August.
- *SEP Daylight Saving Time starts in September.
- *OCT Daylight Saving Time starts in October.
- *NOV Daylight Saving Time starts in November.
- *DEC Daylight Saving Time starts in December.

Element 2: Day

- *MON Daylight Saving Time starts on a Monday.
- *TUE Daylight Saving Time starts on a Tuesday.
- *WED Daylight Saving Time starts on a Wednesday.
- *THU Daylight Saving Time starts on a Thursday.
- *FRI Daylight Saving Time starts on a Friday.
- *SAT Daylight Saving Time starts on a Saturday.
- *SUN Daylight Saving Time starts on a Sunday.

Element 3: Relative day of month

- *LAST Daylight Saving Time starts on the last occurrence of the specified day of the week.
- 1 Daylight Saving Time starts on the first occurrence of the specified day of the week.
- 2 Daylight Saving Time starts on the second occurrence of the specified day of the week.
- 3 Daylight Saving Time starts on the third occurrence of the specified day of the week.
- 4 Daylight Saving Time starts on the fourth occurrence of the specified day of the week.

Element 4: Time

- time* Specify the time of day at which Daylight Saving Time starts. The time is specified in 24-hour format and can be specified with or without a time separator.
- Without a time separator, specify a string of 4 or 6 digits (hhmm or hhmmss) where **hh** = hours, **mm** = minutes, and **ss** = seconds. Valid values for **hh** range from 00 to 23. Valid values for **mm** and **ss** range from 00 to 59.
 - With a time separator, specify a string of 5 or 8 characters where the time separator specified for your job is used to separate the hours, minutes, and seconds. If this command is entered from the command line, the string must be enclosed in apostrophes. If a time separator other than the separator specified for your job is used, this command will fail.

Top

Daylight Saving Time end (DSTEND)

Specifies when Daylight Saving Time (DST) ends. This parameter contains four elements: the month in which DST ends, the day on which DST ends, the relative day of the month on which DST ends and the time at which DST ends. If this parameter is specified, all four elements must be specified. This parameter must be specified when a value other than *NONE is specified for the **Daylight Saving Time**

(DST) (DSTNAME) parameter. The values specified for this parameter cannot be identical to the values specified for the **Daylight Saving Time start (DSTSTR)** parameter.

Element 1: Month

- *JAN Daylight Saving Time ends in January.
- *FEB Daylight Saving Time ends in February.
- *MAR Daylight Saving Time ends in March.
- *APR Daylight Saving Time ends in April.
- *MAY Daylight Saving Time ends in May.
- *JUN Daylight Saving Time ends in June.
- *JUL Daylight Saving Time ends in July.
- *AUG Daylight Saving Time ends in August.
- *SEP Daylight Saving Time ends in September.
- *OCT Daylight Saving Time ends in October.
- *NOV Daylight Saving Time ends in November.
- *DEC Daylight Saving Time ends in December.

Element 2: Day

- *MON Daylight Saving Time ends on a Monday.
- *TUE Daylight Saving Time ends on a Tuesday.
- *WED Daylight Saving Time ends on a Wednesday.
- *THU Daylight Saving Time ends on a Thursday.
- *FRI Daylight Saving Time ends on a Friday.
- *SAT Daylight Saving Time ends on a Saturday.
- *SUN Daylight Saving Time ends on a Sunday.

Element 3: Relative day of month

- *LAST Daylight Saving Time ends on the last occurrence of the specified day of the week.
- 1 Daylight Saving Time ends on the first occurrence of the specified day of the week.
- 2 Daylight Saving Time ends on the second occurrence of the specified day of the week.
- 3 Daylight Saving Time ends on the third occurrence of the specified day of the week.
- 4 Daylight Saving Time ends on the fourth occurrence of the specified day of the week.

Element 4: Time

- time* Specify the time of day at which Daylight Saving Time ends. The time is specified in 24-hour format and can be specified with or without a time separator.
- Without a time separator, specify a string of 4 or 6 digits (hhmm or hhmmss) where **hh** = hours, **mm** = minutes, and **ss** = seconds. Valid values for **hh** range from 00 to 23. Valid values for **mm** and **ss** range from 00 to 59.
 - With a time separator, specify a string of 5 or 8 characters where the time separator specified for your job is used to separate the hours, minutes, and seconds. If this command is entered

from the command line, the string must be enclosed in apostrophes. If a time separator other than the separator specified for your job is used, this command will fail.

Top

Daylight Saving Time shift (DSTSHIFT)

Specifies the number of minutes that local time moves forward when Daylight Saving Time starts or moves backward when Daylight Saving Time ends.

60 Daylight Saving Time moves forward 60 minutes when Daylight Saving Time starts or moves backward 60 minutes when Daylight Saving Time ends.

0 to 120

Specify the number of minutes that local time changes when Daylight Saving Time starts or ends.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

*BLANK

No text is specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Year offset (YEAROFS)

Specifies the number of years that the current year in the calendar system used with this time zone differs from the current Gregorian year. If your calendar year differs from the current Gregorian year, subtract the current Gregorian year from the current year in your calendar to determine the value for this parameter. For example, if the current Gregorian year is 2006 and the current year in your calendar is 1949, the year offset should be set to -57 (1949 minus 2006).

0 This time zone is used with the Gregorian calendar.

-140 to 140

Specify the difference, in years, between the current year of the calendar system used with this time zone and the current Gregorian year. The result of adding the year offset to the current Gregorian year must be a date within the system supported range of 1929 to 2061.

Top

Alternate name (ALTNAME)

Specifies the alternate name that provides additional information for describing the time zone description.

character-value

Specify the alternate name for this time zone, enclosed in apostrophes. The alternate name has a maximum length of 128 characters.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority to the object, who are not on an authorization list, and whose group profile has no specific authority to the object.

***USE** The user can perform basic operations on the time zone description, such as retrieving its contents. The user cannot change the time zone description. *USE authority provides object operational authority, read authority, and execute authority.

***LIBCRTAUT**

The authority for the object is taken from the value specified for the **Create authority (CRTAUT)** parameter of the library in which the object is being created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

***CHANGE**

Change authority allows the user to change and perform basic functions on the object. The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. Change authority provides object operational authority and all data authority.

***ALL** The user performs all operations on the object except those limited to the owner.

***EXCLUDE**

The user cannot access the object.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

Example 1: Creating a Time Zone Description

```
CRTTIMZON  TIMZON(CENTRAL) OFFSET(-360)
           STDNAME(CTZ 'Central Time Zone')
           TEXT('Central Time Zone with Standard Time Only')
```

This command creates the CENTRAL time zone description. The offset for the time zone is negative six hours (-360 minutes). The Standard Time abbreviated name of the time zone is 'CTZ' and the Standard Time full name of the time zone is 'Central Time Zone'. The text description associated with the time zone description object is 'Central Time Zone with Standard Time Only'. This time zone description does not observe Daylight Saving Time.

Example 2: Creating a Time Zone Description that Supports Daylight Saving Time

```
CRTTIMZON  TIMZON(CENTRALDST) OFFSET(-360)
           STDNAME(CTZ 'Central Time Zone')
           DSTNAME(CDTZ 'Central Daylight Time Zone')
           TEXT('Central Time Zone with Daylight Saving Time')
           DSTSTR(*MAR *SUN 2 '02:00:00')
           DSTEND(*NOV *SUN 1 '02:00:00')
           ALTNAME('America/Chicago')
```

This command creates the CENTRALDST time zone description. The offset for the time zone is negative six hours (-360 minutes). The Standard Time abbreviated name of the time zone is 'CTZ' and the

Standard Time full name of the time zone is 'Central Time Zone'. The Daylight Saving Time abbreviated name of the time zone is 'CDTZ' and the Daylight Saving Time full name is 'Central Daylight Time Zone'. The text description associated with the time zone description object is 'Central Time Zone with Daylight Saving Time'. This time zone description does observe Daylight Saving Time. Daylight Saving Time starts at 2:00 am on the second Sunday in March and ends at 2:00 am on the first Sunday in November. The alternate name of the time zone is 'America/Chicago'.

Example 3: Creating a Time Zone Description for a non-Gregorian Calendar

```
CRTTIMZON  TIMZON(SAMPLETIMZ) OFFSET(+420)
           STDNAME(*GEN) DSTNAME(*NONE)
           TEXT('Time Zone for Thai Buddhist Calendar')
           YEAROFS(-57)
```

This command creates the SAMPLETIMZ time zone description, which can be used with the Thai Buddhist calendar. The offset for the time zone is positive seven hours (+420 minutes), and the time zone description does not observe Daylight Saving Time. The Gregorian calendar year of 2006 was the year 2549 in the Thai Buddhist calendar. Therefore, many systems operated in the year 1949 when the Gregorian year was 2006. This represents a difference of negative 57 years (1949 minus 2006).

Top

Error messages

*ESCAPE Messages

CPF09A1

Time zone description &1 not created.

Top

Create User-Defined FS (CRTUDFS)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create User-Defined File System (CRTUDFS) command creates a file system that can be made visible to the rest of the integrated file system name space through the Add Mounted File System (ADDMFS) or MOUNT command.

A UDFS is represented by the object type *BLKSF, or block special file.

Restrictions:

- The user must have input/output (I/O) system configuration (*IOSYSCFG) special authority to use this command.
- The audit (*AUDIT) special authority is required when specifying a value other than *SYSVAL on the **Auditing value for objects (CRTOBJAUD)** parameter.
- The user must have all object (*ALLOBJ) and security administrator (*SECADM) special authorities to specify a value for the **Scanning option for objects (CRTOBJSCAN)** parameter other than *PARENT.
- A maximum of approximately 4,000 user-defined file systems can be created on an independent auxiliary storage pool (ASP).

Top

Parameters

Keyword	Description	Choices	Notes
UDFS	User-defined file system	<i>Path name</i>	Required, Positional 1
DTAAUT	Public authority for data	<i>Name</i> , *INDIR, *RWX, *RW, *RX, *WX, *R, *W, *X, *EXCLUDE, *NONE	Optional
OBJAUT	Public authority for object	Single values: *INDIR, *NONE, *ALL Other values (up to 4 repetitions): *OBJEXIST, *OBJMGT, *OBJALTER, *OBJREF	Optional
CRTOBJAUD	Auditing value for objects	*SYSVAL, *NONE, *USRPRF, *CHANGE, *ALL	Optional
CRTOBJSCAN	Scanning option for objects	*PARENT, *YES, *NO, *CHGONLY	Optional
RSTDRNMUNL	Restricted rename and unlink	*NO, *YES	Optional
DFTDISKSTG	Default disk storage option	*NORMAL, *MINIMIZE, *DYNAMIC	Optional
DFTMAINSTG	Default main storage option	*NORMAL, *MINIMIZE, *DYNAMIC	Optional
CASE	Case sensitivity	*MIXED, *MONO	Optional
DFTFILEFMT	Default file format	*TYPE1, *TYPE2	Optional
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional

Top

User-defined file system (UDFS)

Specifies the path name of the file system to be created. It must be in one of the following two forms:

- */dev/qaspXX/udfsname.udfs*, where *XX* is one of the valid system or basic user auxiliary storage pool (ASP) numbers on the system, and *udfsname* is the name of the user-defined file system. All other parts of the name must appear as in the example above.
- */dev/aspname/udfsname.udfs*, where *aspname* is one of the valid independent ASP names on the system, and *udfsname* is the name of the user-defined file system. All other parts of the name must appear as in the example above.

The name part of the path must be unique within the specified *qaspXX* or *aspname* directory.

This is a required parameter.

Note: This parameter is Unicode-enabled. See "Unicode support in CL" in the CL topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/> for additional information.

Top

Public authority for data (DTAAUT)

Specifies the public data authority given to the user for the new user-defined file system (UDFS), or specifies that all authorities are inherited from the directory it is to be created in.

*INDIR

The authority for the UDFS to be created is determined by the directory it is to be created in. This means the new UDFS will inherit its primary group, authorization list, and its public, private and primary group authorities from the */dev/qaspXX* or */dev/aspname* directory. If the value *INDIR is specified for either the **Public authority for object (OBJAUT)** parameter or the DTAAUT parameter, then *INDIR must be specified for both parameters.

- *RWX** The user can change the object and perform basic functions on the object except those limited to the owner or controlled by object existence (*OBJEXIST), object management (*OBJMGT), object alter (*OBJALTER) and object reference (*OBJREF) authority. Read, write, and execute (*RWX) authority provides object operational (*OBJOPR) and all data authorities.
- *RW** The user can view and change the contents of an object. Read and write (*RW) authority provides *OBJOPR and data read (*READ), add (*ADD), update (*UPD) and delete (*DLT) authorities.
- *RX** The user can perform basic operations on the object, such as run a program or display the contents of a file. The user is prevented from changing the object. Read and execute (*RX) authority provides *OBJOPR and data *READ and *EXECUTE authorities.
- *WX** The user can change the contents of an object and run a program or search a library or directory. Write and execute (*WX) authority provides *OBJOPR and data *READ, *UPD, *DLT, and *EXECUTE authorities.
- *R** The user can view the contents of an object. Read (*R) authority provides *OBJOPR and data *READ authorities.
- *W** The user can change the contents of an object. Write (*W) authority provides *OBJOPR and data *READ, *UPD, and *DLT authorities.
- *X** The user can run a program or search a library or directory. Execute (*X) authority provides *OBJOPR and data *EXECUTE authorities.

***EXCLUDE**

The user cannot access the object. The OBJAUT value must be *NONE, if this special value is used.

***NONE**

The user is given no data authorities to the object. This value cannot be used with OBJAUT value of *NONE.

authorization-list-name

The format of the authorization list name remains the current ten-character format. The OBJAUT value must be *NONE, if this special value is used.

Top

Public authority for object (OBJAUT)

Specifies the public object authority given to users for the user-defined file system, or specifies that all authorities are inherited from the directory it is to be created in.

***INDIR**

The object authority for the UDFS to be created is determined by the directory it is to be created in. This means the new UDFS will inherit its primary group, authorization list, and its public, private and primary group authorities from the */dev/qaspXX* or */dev/aspname* directory. If the value *INDIR is specified for either the OBJAUT parameter or the **Public authority for data (DTAAUT)** parameter, then *INDIR must be specified for both parameters.

***NONE**

None of the other object authorities (*OBJEXIST, *OBJMGT, *OBJALTER or *OBJREF) are given to the users. If *EXCLUDE or an authorization list is specified for the DTAAUT parameter, *NONE must be specified. This value cannot be used with the DTAAUT value of *NONE.

***ALL** All of the other object authorities (*OBJEXIST, *OBJMGT, *OBJALTER or *OBJREF) are given to the users.

The user can specify up to four of the following values:

***OBJEXIST**

The user is given object existence (*OBJEXIST) authority to the object. The user can delete the object, free storage of the object, perform save and restore operations for the object, and transfer ownership of the object.

***OBJMGT**

The user is given object management (*OBJMGT) authority to the object. With this authority the user can specify security for the object, move or rename the object and add members to database files.

***OBJALTER**

The user is given object alter (*OBJALTER) authority to the object. The user is able to alter the attributes of the objects. On a database file, the user can add and remove triggers, add and remove referential and unique constraints, and change the attributes of the database file. With this authority on an SQL package, the user can change the attributes of the SQL package. Currently, this authority is used only for database files and SQL packages.

***OBJREF**

The user is given object reference (*OBJREF) authority to objects. Used only for database files, the user can reference an object from another object such that operations on that object may be restricted by the other object. On a physical file, the user can add a referential constraint in which the physical file is the parent.

Top

Auditing value for objects (CRTOBJAUD)

Specifies the auditing value of root directory objects created in this user-defined file system.

*SYSVAL

The object auditing value for the objects in the UDFS is determined by the Create object auditing (QCRTOBJAUD) system value.

*NONE

Using or changing this object does not cause an audit entry to be sent to the security journal.

*USRPRF

The user profile of the user accessing this object is used to determine if an audit record is sent for this access. The OBJAUD parameter of the Change User Auditing (CHGUSRAUD) command is used to turn on auditing for a specific user.

*CHANGE

All change accesses to this object by all users are logged.

*ALL All change or read accesses to this object by all users are logged.

Top

Scanning option for objects (CRTOBJSCAN)

Specifies whether the root directory objects created in the user-defined file system will be scanned when exit programs are registered with any of the integrated file system scan-related exit points.

The integrated file system scan-related exit points are:

- QIBM_QP0L_SCAN_OPEN - Integrated File System Scan on Open Exit Program
- QIBM_QP0L_SCAN_CLOSE - Integrated File System Scan on Close Exit Program

For details on these exit points, see the APIs topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Even though this attribute can be set for user-defined file systems, only objects which are in *TYPE2 directories in that user-defined file system will actually be scanned, no matter what value is set for this attribute.

*PARENT

The create object scanning attribute value for this user-defined file system is copied from the create object scanning attribute value of the parent directory.

*YES After an object is created in the user-defined file system, the object will be scanned according to the rules described in the scan-related exit programs if the object has been modified or if the scanning software has been updated since the last time the object was scanned.

*NO After an object is created in the user-defined file system, the object will not be scanned by the scan-related exit programs.

Note: If the Scan file systems control (QSCANFCTL) value *NOPOSTRST is not specified when an object with this attribute is restored, the object will be scanned at least once after the restore.

*CHGONLY

After an object is created in the user-defined file system, the object will be scanned according to the rules described in the scan-related exit programs only if the object has been modified since the last time the object was scanned. It will not be scanned if the scanning software has been updated. This attribute only takes effect if the Scan file systems control (QSCANFCTL) system value has *USEOCOATR specified. Otherwise, it will be treated as if the attribute is *YES.

Note: If the Scan file systems control (QSCANFCTL) value *NOPOSTRST is not specified when an object with this attribute is restored, the object will be scanned at least once after the restore.

Top

Restricted rename and unlink (RSTDRNMUNL)

Specifies whether special restrictions apply for rename and unlink operations performed on objects within the root directory of the user-defined file system. This attribute is equivalent to the S_ISVTX mode bit for this directory.

***NO** No additional restrictions for renaming or unlinking objects from the root directory of the user-defined file system.

***YES** Objects within the root directory of the user-defined file system may be renamed or unlinked only if one or more of the following are true for the user performing the operation:

1. The user is the owner of the object.
2. The user is the owner of the directory.
3. The user has all object (*ALLOBJ) special authority.

Top

Default disk storage option (DFTDISKSTG)

Specifies how auxiliary storage will be allocated by the system for the stream files (*STMF) created in this user-defined file system. This option will be ignored for *TYPE1 stream files.

***NORMAL**

The auxiliary storage will be allocated normally. That is, as additional auxiliary storage is required, it will be allocated in logically sized extents to accommodate the current space requirement, and anticipated future requirements, while minimizing the number of disk I/O operations.

***MINIMIZE**

The auxiliary storage will be allocated to minimize the space used by the object. That is, as additional auxiliary storage is required, it will be allocated in small sized extents to accommodate the current space requirement. Accessing an object composed of many small extents may increase the number of disk I/O operations for that object.

***DYNAMIC**

The system will dynamically determine the optimal auxiliary storage allocation for the object, balancing space used versus disk I/O operations. For example, if a file has many small extents, yet is frequently being read and written, then future auxiliary storage allocations will be larger extents to minimize the number of disk I/O operations. Or, if a file is frequently truncated, then future auxiliary storage allocations will be small extents to minimize the space used. Additionally, information will be maintained on the stream file sizes for this system and its activity. This file size information will also be used to help determine the optimal auxiliary storage allocations for this object as it relates to the other objects' sizes.

Top

Default main storage option (DFTMAINSTG)

Specifies how main storage is allocated and used by the system for the stream files (*STMF) created in this user-defined file system.

***NORMAL**

The main storage will be allocated normally. That is, as much main storage as possible will be allocated and used. This minimizes the number of disk I/O operations since the information is cached in main storage.

***MINIMIZE**

The main storage will be allocated to minimize the space used by the object. That is, as little main storage as possible will be allocated and used. This minimizes main storage usage while increasing the number of disk I/O operations since less information is cached in main storage.

***DYNAMIC**

The system will dynamically determine the optimal main storage allocation for the object depending on other system activity and main storage contention. That is, when there is little main storage contention, as much storage as possible will be allocated and used to minimize the number of disk I/O operations. When there is significant main storage contention, less main storage will be allocated and used to minimize the main storage contention. This option only has an effect when the storage pool's paging option is *CALC. When the storage pool's paging option is *FIXED, the behavior is the same as *NORMAL. When the object is accessed through a file server, this option has no effect. Instead, its behavior is the same as *NORMAL.

Top

Case sensitivity (CASE)

Specifies the case sensitivity of this file system.

***MONO**

The file system will not be case sensitive. For example, the names FileA and filea refer to the same object.

***MIXED**

The file system will be case sensitive. For example, the names FileA and filea do NOT refer to the same object.

Top

Default file format (DFTFILEFMT)

Specifies the format of stream files (*STMF) created in this user-defined file system.

***TYPE2**

A *TYPE2 *STMF has high performance file access and was new in Version 4 Release 4 of i5/OS. It has a minimum object size of 4096 bytes and a maximum object size of approximately 1 terabyte. A *TYPE2 stream file is capable of memory mapping as well as the ability to specify an attribute to optimize disk storage allocation.

***TYPE1**

A *TYPE1 *STMF has the same format as *STMF objects created on releases prior to Version 4 Release 4 of i5/OS. It has a minimum size of 4096 bytes and a maximum object size of approximately 128 gigabytes.

Top

Text 'description' (TEXT)

Text description for the user-defined file system.

*BLANK

Text is not specified.

character

Specify no more than 50 characters, enclosed in apostrophes.

Top

Examples

Example 1: Create UDFS in System ASP

```
CRTUDFS  UDFS('/dev/QASP01/joe.udfs) TEXT('Joe Smith')
```

This command creates a user-defined file system (UDFS) named **joe.udfs** in the system auxiliary storage pool (ASP 1).

Example 2: Create UDFS in ASP 3

```
CRTUDFS  UDFS('/dev/QASP03/harry.udfs') CASE(*MIXED)
```

This command creates a case-sensitive user-defined file system (UDFS) named **harry.udfs** in user auxiliary storage pool (ASP) 3.

Example 3: Create UDFS selecting Storage Options

```
CRTUDFS  UDFS('/dev/IASPNAME/mary.udfs')  
         DFTDISKSTG(*DYNAMIC) DFTMAINSTG(*DYNAMIC)
```

This command creates a UDFS named **mary.udfs** in the independent auxiliary storage pool (ASP) whose name is IASPNAME. Additionally, any stream files that are created in this UDFS will have their disk and main storage options set to *DYNAMIC to optimize their disk and main storage allocations.

Top

Error messages

*ESCAPE Messages

CPFA0A2

Information passed to this operation was not valid.

CPFA09C

Not authorized to object. Object is &1.

CPFA0A9

Object not found. Object is &1.

CPFA0B1

Requested operation not allowed. Access problem.

CPFA1B8

*IOSYSCFG authority required to use &1.

Top

Create User Profile (CRTUSRPRF)

Where allowed to run: All environments (*ALL)
 Threadsafes: No

Parameters
 Examples
 Error messages

The Create User Profile (CRTUSRPRF) command identifies a user to the system and allows you to customize the way the system appears. When the profile is created, the profile is given *CHANGE and *OBJMGT authorities for the profile itself. The system relies on the profile having these authorities to itself and they should not be removed.

Restrictions: The user of this command must have:

- Security administrator (*SECADM) special authority
- Use (*USE) authority to the initial program, initial menu, job description, message queue, output queue, and attention-key-handling program (if specified)
- Change (*CHANGE) and object management (*OBJMGT) authorities to the group profile and supplemental group profiles (if specified).

Top

Parameters

Keyword	Description	Choices	Notes
USRPRF	User profile	<i>Simple name</i>	Required, Positional 1
PASSWORD	User password	<i>Character value</i> , *USRPRF, *NONE	Optional, Positional 2
PWDEXP	Set password to expired	*NO, *YES	Optional
STATUS	Status	*ENABLED, *DISABLED	Optional
USRCLS	User class	*USER, *SYSOPR, *PGMR, *SECADM, *SECOFR	Optional
ASTLVL	Assistance level	*SYSVAL, *BASIC, *INTERMED, *ADVANCED	Optional
CURLIB	Current library	<i>Name</i> , *CRTDFT	Optional
INLPGM	Initial program to call	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Initial program to call	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
INLMNU	Initial menu	Single values: *SIGNOFF Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Initial menu	<i>Name</i> , MAIN	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
LMTCPB	Limit capabilities	*NO, *PARTIAL, *YES	Optional
TEXT	Text 'description'	<i>Character value</i> , *BLANK	Optional
SPCAUT	Special authority	Single values: *USRCLS, *NONE Other values (up to 8 repetitions): *ALLOBJ, *AUDIT, *IOSYSCFG, *JOBCTL, *SAVSYS, *SECADM, *SERVICE, *SPLCTL	Optional, Positional 3
SPCENV	Special environment	*SYSVAL, *NONE, *S36	Optional
DSPSGNINF	Display sign-on information	*SYSVAL, *NO, *YES	Optional

Keyword	Description	Choices	Notes
PWDEXPITV	Password expiration interval	1-366, <u>*SYSVAL</u> , *NOMAX	Optional
PWDCHGBLK	Block password change	1-99, <u>*SYSVAL</u> , *NONE	Optional
LCLPWDMGT	Local password management	<u>*YES</u> , *NO	Optional
LMTDEVSSN	Limit device sessions	<u>*SYSVAL</u> , *YES, *NO, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9	Optional
KBDBUF	Keyboard buffering	<u>*SYSVAL</u> , *NO, *TYPEAHEAD, *YES	Optional
MAXSTG	Maximum allowed storage	Integer, <u>*NOMAX</u>	Optional
PTYLMT	Highest schedule priority	0-9, <u>3</u>	Optional
JOB	Job description	Qualified object name	Optional
	Qualifier 1: Job description	Name, <u>QDFTJOB</u>	
	Qualifier 2: Library	Name, <u>*LIBL</u> , *CURLIB	
GRPPRF	Group profile	Name, <u>*NONE</u>	Optional
OWNER	Owner	<u>*USRPRF</u> , *GRPPRF	Optional
GRPAUT	Group authority	<u>*NONE</u> , *ALL, *CHANGE, *USE, *EXCLUDE	Optional
GRPAUTYP	Group authority type	<u>*PRIVATE</u> , *PGP	Optional
SUPGRPPRF	Supplemental groups	Single values: <u>*NONE</u> Other values (up to 15 repetitions): Name	Optional
ACGCDE	Accounting code	Character value, <u>*BLANK</u>	Optional
DOCPWD	Document password	Name, <u>*NONE</u>	Optional
MSGQ	Message queue	Single values: <u>*USRPRF</u> Other values: Qualified object name	Optional
	Qualifier 1: Message queue	Name	
	Qualifier 2: Library	Name, <u>*LIBL</u> , *CURLIB	
DLVRY	Delivery	<u>*NOTIFY</u> , *BREAK, *HOLD, *DFT	Optional
SEV	Severity code filter	0-99, <u>0</u>	Optional
PRTDEV	Print device	Name, <u>*WRKSTN</u> , *SYSVAL	Optional
OUTQ	Output queue	Single values: <u>*WRKSTN</u> , *DEV Other values: Qualified object name	Optional
	Qualifier 1: Output queue	Name	
	Qualifier 2: Library	Name, <u>*LIBL</u> , *CURLIB	
ATNPGM	Attention program	Single values: *NONE, <u>*SYSVAL</u> , *ASSIST Other values: Qualified object name	Optional
	Qualifier 1: Attention program	Name	
	Qualifier 2: Library	Name, <u>*LIBL</u> , *CURLIB	
SRTSEQ	Sort sequence	Single values: <u>*SYSVAL</u> , *HEX, *LANGIDSHR, *LANGIDUNQ Other values: Qualified object name	Optional
	Qualifier 1: Sort sequence	Name	
	Qualifier 2: Library	Name, <u>*LIBL</u> , *CURLIB	
LANGID	Language ID	Character value, <u>*SYSVAL</u>	Optional
CNTRYID	Country or region ID	Character value, <u>*SYSVAL</u>	Optional
CCSID	Coded character set ID	Integer, <u>*SYSVAL</u> , *HEX	Optional
CHRIDCTL	Character identifier control	<u>*SYSVAL</u> , *DEVD, *JOBCCSID	Optional
SETJOBATR	Locale job attributes	Single values: <u>*SYSVAL</u> , *NONE Other values (up to 6 repetitions): *CCSID, *DATFMT, *DATSEP, *DECFMT, *SRTSEQ, *TIMSEP	Optional
LOCALE	Locale	Path name, <u>*SYSVAL</u> , *NONE, *C, *POSIX	Optional

Keyword	Description	Choices	Notes
USROPT	User options	Single values: *NONE Other values (up to 7 repetitions): *CLKWD, *EXPERT, *ROLLKEY, *NOSTMSG, *STMSG, *HLPFULL, *PRTMSG	Optional
UID	User ID number	1-4294967294, *GEN	Optional
GID	Group ID number	1-4294967294, *NONE, *GEN	Optional
HOMEDIR	Home directory	Path name, *USRPRF	Optional
EIMASSOC	EIM association	Single values: *NOCHG Other values: <i>Element list</i>	Optional
	Element 1: EIM identifier	Character value, *USRPRF	
	Element 2: Association type	*TARGET, *SOURCE, *TGTSRC, *ADMIN, *ALL	
	Element 3: Association action	*REPLACE, *ADD, *REMOVE	
	Element 4: Create EIM identifier	*NOCRTEIMID, *CRTEIMID	
AUT	Authority	*ALL, *CHANGE, *USE, *EXCLUDE	Optional

Top

User profile (USRPRF)

Specifies the user profile to be created. A numeric user profile can be specified. If the user profile is numeric, it must begin with a Q.

This is a required parameter.

name Specify the name of the user profile to be created.

Top

User password (PASSWORD)

Specifies the password that allows the user to sign on the system. The password is associated with a user profile and is used by the system to represent the user in the system. The passwords should be known only to the individual user. A numeric password can be specified.

When the system is operating at password level 0 or 1 and the password is numeric, then the password must begin with a Q, for example, Q1234 where 1234 is the password used for signing on the system.

Note: The password level is controlled by the Password Level (QPWDLVL) system value.

Note: The new password is not checked against the password validation rules. The password validation rules are defined by i5/OS system values. For a description of the password validation rules, see the System i Security Reference, SC41-5302 book.

*USRPRF

The password for this user is the same as the user name specified on the USRPRF parameter.

When the system is operating at password level 2 or 3 and the *USRPRF value was specified for the user profile password, the user must enter their password using upper case characters.

*NONE

No password is associated with this user profile. Users cannot sign on a system with a profile that has PASSWORD(*NONE) specified.

user-password

When the system is operating at password level 0 or 1, specify an alphanumeric character string of 10 characters or less. The first character must be alphabetic and the other characters must be alphanumeric.

When the system is operating at password level 2 or 3, specify a character string of 128 characters or less. Passwords are case sensitive at password level 2 or 3.

If the local password management (LCLPWDMGT) parameter is *NO, the local i5/OS password will be set to *NONE, so the user would have the same restrictions as specifying *NONE for the password. The password value specified will be sent to other IBM products or solutions that do password synchronization (for example, System i integration with BladeCenter and System x at <http://www.ibm.com/systems/i/bladecenter/>). See the documentation for the product or solution for information on managing the passwords when LCLPWDMGT(*NO) is specified for the user profile.

Top

Set password to expired (PWDEXP)

Specifies whether the password for this user is set to expired. If the password is set to expired, the user is required to change the password to sign on the system. When the user attempts to sign on the system, the sign-on information display is shown and the user has the option to change this password.

*NO The password is not set to expired.

*YES The password is set to expired.

Top

Status (STATUS)

Specifies the status of the user profile.

The system will disable a user profile if the number of failed password verification attempts reaches the limit specified on the QMAXSIGN system value and option 2 or 3 has been specified on the QMAXSGNACN system value.

*ENABLED

The user profile is valid for sign-on.

*DISABLED

The user profile is not valid for sign-on until an authorized user enables it again. Batch jobs can be submitted under a disabled user profile.

Top

User class (USRCLS)

Specifies the type of user associated with this user profile: security officer, security administrator, programmer, system operator, or user. The user class controls the options that are shown on a menu. Special authorities are given only if *USRCLS is specified for the **Special authority (SPCAUT)** parameter. If SPCAUT(*USRCLS) is specified, the special authorities granted will differ depending on the QSECURITY value.

*USER

At QSECURITY level 10 or 20, the user has *ALLOBJ and *SAVSYS authority.

At QSECURITY level 30 or above, the user has no special authorities.

***SECOFR**

At all levels of security, the security officer is granted the following special authorities:

- *ALLOBJ
- *SAVSYS
- *JOBCTL
- *SERVICE
- *SPLCTL
- *SECADM
- *AUDIT
- *IOSYSCFG

***SECADM**

At QSECURITY level 10 or 20, the security administrator has *ALLOBJ, *SAVSYS, *SECADM, and *JOBCTL special authorities.

At QSECURITY level 30 or above, the user has *SECADM special authority.

***PGMR**

At QSECURITY level 10 or 20, the programmer has *ALLOBJ, *SAVSYS, and *JOBCTL special authorities.

At QSECURITY level 30 or above, the user has no special authorities.

***SYSOPR**

At QSECURITY level 10 or 20, the system operator has *ALLOBJ, *SAVSYS, and *JOBCTL special authorities.

At QSECURITY level 30 or above, the user has *SAVSYS and *JOBCTL special authorities.

Top

Assistance level (ASTLVL)

Specifies which user interface to use.

***SYSVAL**

The assistance level defined in the system value QASTLVL is used.

***BASIC**

The Operational Assistant user interface is used.

***INTERMED**

The system interface is used.

***ADVANCED**

The expert system interface is used. To allow for more list entries, option keys and function keys are not displayed. If a command does not have an advanced (*ADVANCED) level, the intermediate (*INTERMED) level is used.

Top

Current library (CURLIB)

Specifies the name of the current library associated with the job being run.

Specifies the name of the library to be used as the current library for this user. If *PARTIAL or *YES is specified for the **Limit capabilities (LMTCPB)** parameter of the Create User Profile (CRTUSRPRF) or Change User Profile (CHGUSRPRF) command, the user cannot change the current library at sign-on or with the Change Profile (CHGPRF) command.

*CRTDFT

This user has no current library. The library QGPL is used as the default current library.

name Specify the name of the library to use as the current library for this user.

Top

Initial program to call (INLPGM)

Specifies, for an interactive job, the program called whenever a new routing step is started that has QCMD as the request processing program. If *PARTIAL or *YES is specified for the **Limit capabilities (LMTCPB)** parameter, the program value cannot be changed at sign on or by using the Change Profile (CHGPRF) command. No parameters can be passed to the program.

A System/36 environment procedure name can be specified as the initial program if the procedure is a member of the file QS36PRC (in the library list or specified library) and if either of the following conditions are true:

- *S36 is specified on the SPCENV parameter.
- *SYSVAL is specified on the SPCENV parameter and the system value, QSPCENV, is *S36.

Single values

*NONE

No program is called when the user signs on. If a menu name is specified in the **Initial menu (INLMNU)** parameter, that menu is displayed.

Qualifier 1: Initial program to call

name Specify the name of the program that is called when the user signs on.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the job is used to locate the program. If no library is specified as the current library for the job, QGPL is used.

name Specify the name of the library where the initial program is located.

Top

Initial menu (INLMNU)

Specifies the initial menu displayed when the user signs on the system if the user's routing program is the command processor QCMD. If *YES is specified for the **Limit capabilities (LMTCPB)** parameter, the user cannot change the menu either at sign-on or with the Change Profile (CHGPRF) command.

A System/36 environment menu can be specified as the initial menu if either of the following conditions are true:

- *S36 is specified for the **Special environment (SPCENV)** parameter.
- *SYSVAL is specified on the SPCENV parameter and the system value, QSPCENV, is *S36.

Single values

MAIN The menu named MAIN is located and shown.

*SIGNOFF

The system signs off the user when the program completes. This is intended for users authorized only to run the program.

Qualifier 1: Initial menu

name Specify the name of the initial menu called after the user signs on the system.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the job is used to locate the menu. If no library is specified as the current library for the job, QGPL is used.

name Specify the name of the library where the initial menu is located.

Top

Limit capabilities (LMTCPB)

Specifies the limit to which the user can control the program, menu, current library, and the ATTN key handling program values. It also determines whether the user can run commands from a command line. This parameter is ignored when the security level is 10.

Note: When creating or changing other users' user profiles, you cannot specify values on this parameter that grant greater capabilities to other users than your own user profile grants to you. For example, if *PARTIAL is specified for the **Limit capabilities (LMTCPB)** parameter in your user profile, you can specify *PARTIAL or *YES for another user. You cannot specify *NO for another user.

***NO** The program, menu, and current library values can be changed when the user signs on the system. Users may change the program, menu, current library, or ATTN key handling program values in their own user profiles with the Change Profile (CHGPRF) command. Commands can be run from a command line.

*PARTIAL

The program and current library cannot be changed on the sign-on display. The menu can be changed and commands can be run from a command line. A user can change the menu value with the Change Profile (CHGPRF) command. The program, current library, and the ATTN key handling program cannot be changed using the CHGPRF command.

***YES** The program, menu, and current library values cannot be changed on the sign-on display. Commands cannot be run when issued from a command line or by selecting an option from a command grouping menu such as CMDADD, but can still be run from a command entry screen. The user cannot change the program, menu, current library, or the ATTN key program handling values by using the CHGPRF command.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

*BLANK

No text is specified.

'description'

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Special authority (SPCAUT)

Specifies the special authorities given to a user. Special authorities are required to perform certain functions on the system. Special authorities cannot be removed from many of the system-supplied user profiles, including QSECOFR and QSYS.

The following special authorities are usually given:

- Save system (*SAVSYS) special authority to users who need to operate the system.
- Input/output system configuration (*IOSYSCFG) special authority to users who need to change system I/O configurations.
- Job control (*JOBCTL) special authority is given to the user. The user is given the authority to change, display, hold, release, cancel, and clear all jobs that are running on the system or that are on a job queue or output queue that has OPRCTL (*YES) specified. The user also has the authority to load the system, to start writers, and to stop active subsystems.
- Security administrator (*SECADM) special authority to users who need to create, change, or delete user profiles.
- All object (*ALLOBJ) special authority to users who need to work with system resources.
- Service (*SERVICE) special authority to users who need to perform service functions.
- Spool control (*SPLCTL) special authority to users who need to perform all spool-related functions.
- Audit (*AUDIT) special authority to users who need to perform auditing functions.

Restrictions:

- The user profile creating or changing another user profile must have all of the special authorities being given. All special authorities are needed to give all special authorities to another user profile.
- A user must have *ALLOBJ and *SECADM special authorities to give a user *SECADM special authority when using the CHGUSRPRF command.
- The user must have *ALLOBJ, *SECADM, and *AUDIT special authorities to give a user *AUDIT special authority when using the CHGUSRPRF command.

Single values

***USRCLS**

Special authorities are granted to this user based on the value specified on **User class (USRCLS)** parameter.

***NONE**

No special authorities are granted to this user.

Other values

***ALLOBJ**

All object authority is given to the user. The user can access any system resource with or without private user authorizations.

***AUDIT**

Audit authority is granted to this user. The user is given the authority to perform auditing functions. Auditing functions include turning auditing on or off for the system and controlling the level of auditing on an object or user.

***JOBCTL**

Job control authority is given to the user. The user has authority to change, display, hold, release, cancel, and clear all jobs that are running on the system or that are on a job queue or output queue that has OPRCTL (*YES) specified. The user also has the authority to start writers and to stop active subsystems.

***SAVSYS**

Save system authority is given to the user profile. This user has the authority to save, restore, and free storage for all objects on the system, with or without object management authority.

***IOSYSCFG**

Input/output (I/O) system configuration authority is given to the user. The user has authority to change system I/O configurations.

***SECADM**

Security administrator authority is given to the user. The user can create, change, or delete user profiles if authorized to the Create User Profile (CRTUSRPRF), Change User Profile (CHGUSRPRF), or Delete User Profile (DLTUSRPRF) commands and is authorized to the user profile. This authority does not allow giving special authorities that this user profile does not have. To give *SECADM special authority to another user, a user must have both *ALLOBJ and *SECADM special authorities.

***SERVICE**

Service authority is given to this user. The user can perform service functions.

***SPLCTL**

Spool control authority is given to this user. The user can perform all spool functions.

Top

Special environment (SPCENV)

Specifies the special environment in which the user operates after signing on.

***SYSVAL**

The system value, QSPCENV, is used to determine the system environment after the user signs on the system.

***NONE**

The user operates in the i5/OS system environment after signing on the system.

***S36** The user operates in the System/36 environment after signing on the system.

Top

Display sign-on information (DSPSGNINF)

Specifies whether the sign-on information display is shown.

***SYSVAL**

The system value QDSPSGNINF is used to determine whether the sign-on information display is shown.

***NO** The sign-on information display is not shown.

***YES** The sign-on information display is shown.

Top

Password expiration interval (PWDEXPITV)

Specifies the password expiration interval (in days).

*SYSVAL

The system value QPWDEXPITV is used to determine the password expiration interval.

*NOMAX

The password does not expire.

1-366 Specify the number of days between the date when the password is changed and the date when the password expires. Valid values range from 1 through 366.

Top

Block password change (PWDCHGBLK)

Specifies the time period during which a password is blocked from being changed following the prior successful password change operation. This value can be used to prevent users from reusing the same expired password value by simply changing their password numerous times to get back to the expired password value (and defeating the purpose of the QPWDRQDDIF system value). This parameter does not restrict a security administrator from using a command like Change User Profile (CHGUSRPRF) to change the password.

In addition, this parameter will not block the user from changing their profile's password when the set to expired (PWDEXP) value is *YES. This allows a security administrator to create a user profile with an expired password and still permit the user to sign-on and change the password (once) without being prevented by the block password change value.

*SYSVAL

The system value QPWDCHGBLK is used to determine the block password change value.

*NONE

The password can be changed at any time.

1-99 Indicates the number of hours a user must wait after the prior successful password change operation before they are able to change the password again.

Top

Local password management (LCLPWDMGT)

Specifies whether the user profile password should be managed locally.

***YES** Password will be managed on the local system.

***NO** Password will not be managed on the local system. Specifying this value will cause the local i5/OS password to be set to *NONE. The password value specified in the password parameter will be sent to other IBM products or solutions that do password synchronization (for example, System i integration with BladeCenter and System x at <http://www.ibm.com/systems/i/bladecenter/>).

The user will not be able to change their own password using the Change Password (CHGPWD) command. They also will not be able to sign on to the system directly.

Specifying this value will affect other IBM products or solutions that do password synchronization, like System i integration with BladeCenter and System x at <http://www.ibm.com/systems/i/bladecenter/>. See the documentation for the product or solution for details.

This value should be used if the user only needs to access the system through some other platform, such as Windows.

Top

Limit device sessions (LMTDEVSSN)

Specifies if the number of device sessions allowed for a user is limited. This does not limit SYSREQ and second sign-on.

*SYSVAL

The system value QLMTDEVSSN is used to determine whether the user is limited to a specific number of device sessions.

***NO** The user is not limited to a specific number of device sessions.

***YES** The user is limited to a single device session.

0 The user is not limited to a specific number of device sessions. This value has the same meaning as ***NO**.

1 The user is limited to a single device session. This value has the same meaning as ***YES**.

2-9 The user is limited to the specified number of device sessions.

Top

Keyboard buffering (KBDBUF)

Specifies the keyboard buffering value to be used when a job is initialized for this user profile. If the type-ahead feature is active, you can buffer your keyboard strokes. If the attention key buffering option is active, the attention key is buffered as any other key. If it is not active, the attention key is not buffered and is sent to the system even if the display station is input-inhibited. This value can also be set by a user application. More information is in the APIs topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

*SYSVAL

The system value, QKBDBUF, is used to determine the keyboard buffering value.

***NO** The type-ahead feature and attention key buffering option are not active.

***TYPEAHEAD**

The type-ahead feature is active, but the attention key buffering option is not.

***YES** The type-ahead feature and attention key buffering option are active.

Top

Maximum allowed storage (MAXSTG)

Specifies the maximum amount of auxiliary storage (in kilobytes) assigned to store permanent objects owned by this user profile (1 kilobyte equals 1024 bytes). If the maximum is exceeded when an interactive user tries to create an object, an error message is displayed, and the object is not created. If the maximum is exceeded when an object is created in a batch job, an error message is sent to the job log (depending on the logging level of the job), and the object is not created.

Storage is allocated in 4K increments. Therefore, if you specify MAXSTG (9), the profile is allocated 12K of storage.

When planning maximum storage for user profiles, consider the following system actions:

- A restore operation assigns the storage to the user doing the restore, and then transfers the object to the owner. For a large restore, specify MAXSTG(*NOMAX).
- The user profile that creates a journal receiver is assigned the required storage as the receiver size grows. If new receivers are created using JRNRCV(*GEN), the storage continues to be assigned to the user profile that owns the active journal receiver. If a very active journal receiver is owned, specify MAXSTG(*NOMAX).
- User profiles that transfer created objects to their group profile must have adequate storage in the user profiles to contain created objects before the objects are transferred to the group profile.
- The owner of the library is assigned the storage for the descriptions of objects which are stored in a library, even when the objects are owned by another user profile. Examples of such objects are text and program references.

*NOMAX

As much storage as is required is assigned to this profile.

number

Specify the maximum amount of storage for the user, in kilobytes (1 kilobyte equals 1024 bytes).

Top

Highest schedule priority (PTYLMT)

Specifies the highest scheduling priority the user is allowed to have for each job submitted to the system. This value controls the job processing priority and output priority for any job running under this user profile; that is, values specified in the JOBPTY and OUTPTY parameters of any job command cannot exceed the PTYLMT value of the user profile under which the job is run. The scheduling priority can have a value ranging from 0 through 9, where 0 is the highest priority and 9 is the lowest priority.

3 The user named in this profile can have a priority value no higher than 3 for scheduling jobs on the system.

0-9 Specify a value ranging from 0 through 9 for the highest scheduling priority that the user is allowed.

Top

Job description (JOBBD)

Specifies the job description used for jobs that start through subsystem work station entries. If the job description does not exist when the user profile is created or changed, a library qualifier must be specified, because the job description name is kept in the user profile.

Qualifier 1: Job description

QDFTJOBBD

The default system-supplied job description found in library QGPL is used.

name Specify the name of job description used for the work station entries whose job description parameter values indicate the user JOBBD(*USRPRF).

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is used.

name Specify the name of the library to be searched.

Top

Group profile (GRPPRF)

Specifies the user's group profile name whose authority is used if no specific authority is given for the user. The current user of this command must have object management (*OBJMGT) and change (*CHANGE) authority to the profile specified for the **Group profile (GRPPRF)** parameter. The required *OBJMGT authority cannot be given by a program adopt operation.

Note:

1. When a group profile is specified, the user is automatically granted *CHANGE and *OBJMGT authority to the group profile.
2. The following IBM-supplied objects are not valid on this parameter.
QANZAGENT, QAUTPROF, QCLUMGT, QCLUSTER, QCOLSRV, QDBSHR, QDBSHRDO, QDFTOWN, QDIRSRV, QDLFM, QDOC, QDSNX, QEJB, QFNC, QGATE, QIBMHELP, QIPP, QLPAUTO, QLPINSTALL, QMGTC, QMSF, QNETSPLF, QNFSANON, QNTP, QPEX, QPM400, QRJE, QSNADS, QSPL, QSPLJOB, QSRV, QSRVAGT, QSRVBAS, QSYS, QTCM, QTCP, QTFTP, QTSTRQS, QYCMCIMOM, QYPSJSVR

*NONE

This user profile has no group profile.

name Specify the name of the group profile used with this user profile.

Top

Owner (OWNER)

Specifies the user profile that is to be the owner of objects created by this user.

*USRPRF

The user profile associated with the job is the owner of the object.

*GRPPRF

The group profile is made the owner of newly created objects and has all authority to the object. The user profile associated with the job does not have any specific authority to the object. If *GRPPRF is specified, a user profile name must be specified for the **Group profile (GRPPRF)** parameter, and the **Group authority (GRPAUT)** parameter cannot be specified.

Top

Group authority (GRPAUT)

The specific authority given to the group profile for newly created objects. If *GRPPRF is specified for the **Owner (OWNER)** parameter, specification of this parameter is not allowed.

*NONE

No group authority is given.

- *ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

***EXCLUDE**

The user cannot access the object.

Top

Group authority type (GRPAUTTYP)

Specifies the type of authority to be granted to the group profile for newly-created objects. If *NONE is specified for the **Group authority (GRPAUT)** parameter, specification of this parameter is ignored.

***PRIVATE**

The group profile is granted private authority to newly-created objects, with the authority value determined by the GRPAUT parameter. If the authority value in the GRPAUT parameter is *NONE, this value is ignored.

***PGP** The group profile will be the primary group for newly-created objects, with the authority value determined by the GRPAUT parameter. If the authority value in the GRPAUT parameter is *NONE, this value is ignored.

Top

Supplemental groups (SUPGRPPRF)

Specifies the user's supplemental group profiles. The profiles specified here, along with the group profile specified for the **Group profile (GRPPRF)** parameter, are used to determine what authority the user has if no specific user authority is given for the job. If profiles are specified for this parameter, a group profile name must be specified on the GRPPRF parameter for this user profile (either on this command or on a previous Create User Profile (CRTUSRPRF) or Change User Profile (CHGUSRPRF) command. The current user of this command must have object management (*OBJMGT) and change (*CHANGE) authority to the profiles specified for this. The required *OBJMGT authority cannot be given by a program adopt operation.

Notes:

1. When a group profile is specified, the user is automatically granted *CHANGE and *OBJMGT authority to the group profile.
2. The following IBM-supplied user profiles are not valid for this parameter:

QANZAGENT, QAUTPROF, QCLUMGT, QCLUSTER, QCOLSRV, QDBSHR, QDBSHRDO, QDFTOWN, QDIRSRV, QDLFM, QDOC, QDSNX, QEJB, QFNC, QGATE, QIBMHELP, QIPP, QLPAUTO, QLPINSTALL, QMGTC, QMSF, QNETSPLF, QNFSANON, QNTP, QPEX, QPM400, QRJE, QSNADS, QSPL, QSPLJOB, QSRV, QSRVAGT, QSRVBAS, QSYS, QTCM, QTCP, QTFTP, QTSTROS, QYCMCIMOM, QYPSJSVR

***NONE**

No supplemental group profiles are used with this user profile.

name Specify a maximum of 15 group profile names used with this user profile and the group profile specified on the GRPPRF parameter to determine a job's eligibility for getting access to existing objects and special authority.

Top

Accounting code (ACGCDE)

Specifies the accounting code that is associated with this user profile.

*BLANK

An accounting code consisting of 15 blanks is assigned to this user profile.

character-value

Specify the 15-character accounting code to be used by jobs that get their accounting code from this user profile. If less than 15 characters are specified, the string is padded on the right with blanks.

Top

Document password (DOCPWD)

Specifies the document password that allows Document Interchange Architecture (DIA) document distribution services users protect personal distributions from being used by people who work on their behalf.

*NONE

No document password is used by this user.

name Specify the document password to be assigned to this user. The password must range from 1 through 8 alphanumeric characters (letters A through Z and numbers 0 through 9). The first character of the document password must be alphabetic; the remaining characters can be alphanumeric. Embedded blanks, leading blanks, and special characters are not valid.

Top

Message queue (MSGQ)

Specifies the message queue to which messages are sent.

Note: The message queue is created, if it does not already exist. The user profile specified for the **User profile (USRPRF)** parameter is the owner of the message queue.

Single values

*USRPRF

A message queue with the same name as that specified for the USRPRF parameter is used as the message queue for this user. This message queue is located in the QUSRSYS library.

Qualifier 1: Message queue

name Specify the name of the message queue to be used with this profile.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is used.

name Specify the name of the library to be searched.

Top

Delivery (DLVRY)

Specifies how messages are sent to the message queue for this user are to be delivered.

***NOTIFY**

The job to which the message queue is assigned is notified when a message arrives at the message queue. For interactive jobs at a work station, the audible alarm is sounded (if the alarm feature is set) and the Message Waiting light is turned on. The delivery mode cannot be changed to *NOTIFY if the message queue is also being used by another job.

***HOLD**

The messages are held in the message queue until they are requested by the user or program.

***BREAK**

The job to which the message queue is assigned is interrupted when a message arrives at the message queue. If the job is an interactive job, the audible alarm is sounded (if the alarm feature is set). The delivery mode cannot be changed to *BREAK if the message queue is also being used by another job.

***DFT** The default reply to the inquiry message is sent. If no default reply is specified in the message description of the inquiry message, the system default reply, *N, is used.

Top

Severity code filter (SEV)

Specifies the lowest severity code that a message can have and still be delivered to a user in break or notify mode. Messages arriving at the message queue whose severities are lower than the severity code specified for this parameter do not interrupt the job or turn on the audible alarm or the message-waiting light; they are held in the queue until they are requested by using the Display Message (DSPMSG) command. If *BREAK or *NOTIFY is specified for the **Delivery (DLVRY)** parameter, and is in effect when a message arrives at the queue, the message is delivered if the severity code associated with the message is equal or greater than the value specified here. Otherwise, the message is held in the queue until it is requested.

0 If a severity code is not specified, 0 is used.

0-99 Specify a severity code ranging from 00 through 99.

Top

Print device (PRTDEV)

Specifies the default printer device for this user. If the printer file used to create printed output specifies to spool the data, the spooled file is placed on the device's output queue, which is named the same as the device.

Note: This assumes the defaults are specified for the **Output queue (OUTQ)** parameter for the printer file, job description, user profile and workstation.

*WRKSTN

The printer assigned to the user's work station is used.

*SYSVAL

The value specified in the system value QPRTDEV is used.

name Specify the name of a printer that is to be used to print the output for this user.

Top

Output queue (OUTQ)

Specifies the output queue to be used by this user profile. The output queue must already exist when this command is run.

Single values

*WRKSTN

The output queue assigned to the user's work station is used.

***DEV** The output queue associated with the printer specified for the **Print device (PRTDEV)** parameter is used. The output queue has the same name as the printer. (The printer file DEV parameter is determined by the CRTPRTF, CHGPRTF, or the OVRPRTF command).

Note: This assumes the defaults are specified for the **Output queue (OUTQ)** parameter for the printer file, job description, user profile and workstation.

Qualifier 1: Output queue

name Specify the name of the output queue to be used by this user profile.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is used.

name Specify the name of the library to be searched.

Top

Attention program (ATNPGM)

Specifies the program to be used as the Attention (ATTN) key handling program for this user. The ATTN key handling program is called when the ATTN key is pressed during an interactive job. The program is active only when the user routes to the system-supplied QCMD command processor. The ATTN key handling program is set on before the initial program (if any) is called and it is active for both program and menu. If the program changes the ATNPGM (by using the SETATNPGM command), the new program remains active only for the duration of the program. When control returns and QCMD calls the menu, the original ATTN key handling program becomes active again. If the SETATNPGM command is run from the menus or an application is called from the menus, the new ATTN key handling program that is specified overrides the original ATTN key handling program. If *YES or *PARTIAL is specified for the **Limit capabilities (LMTCPB)** parameter on the Create User Profile (CRTUSRPRF) or Change User Profile (CHGUSRPRF) command, the ATTN key handling program cannot be changed.

Single values

*SYSVAL

The system value QATNPGM is used.

*NONE

No ATTN key handling program is used by this user.

*ASSIST

The Operational Assistant ATTN key handling program, QEZMAIN, is used.

Qualifier 1: Attention program

name Specifies the name of the ATTN key handling program to be used for this user profile.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is used.

name Specify the name of the library to be searched.

Top

Sort sequence (SRTSEQ)

Specifies the sort sequence table to be used for string comparisons for this profile.

Single values

*SYSVAL

The system value QSRTSEQ is used.

*HEX A sort sequence table is not used. The hexadecimal values of the characters are used to determine the sort sequence.

*LANGIDUNQ

A unique-weight sort table is used.

*LANGIDSHR

A shared-weight sort table is used.

Qualifier 1: Sort sequence

name Specify the name of the sort sequence table to be used with this profile.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is used.

name Specify the name of the library to be searched.

Top

Language ID (LANGID)

Specifies the language identifier to be used for this user.

*SYSVAL

The system value QLANGID is used.

language-identifier

Specify the language identifier to be used. More information on valid language identifiers is in the i5/OS globalization topic collection in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Top

Country or region ID (CNTRYID)

Specifies the country or region identifier to be used for this user.

*SYSVAL

The system value QCNTRYID is used.

character-value

Specify a country or region identifier. To see a complete list of identifiers when prompting this command, position the cursor on the field for this parameter and press F4 (Prompt).

Top

Coded character set ID (CCSID)

Specifies the coded character set identifier (CCSID) to be used for this user.

A CCSID is a 16-bit number identifying a specific set of encoding scheme identifiers, character set identifiers, code page identifiers, and additional coding-related information that uniquely identifies the coded graphic representation used.

Note: If the value for CCSID is changed, the change does not affect jobs that are currently running.

*SYSVAL

The system value QCCSID is used.

***HEX** The CCSID 65535 is used.

identifier

Specify the CCSID to be used for this user profile. More information on valid CCSIDs is in the Globalization information in the iSeries Information Center at <http://www.ibm.com/eserver/series/infocenter>.

Top

Character identifier control (CHRIDCTL)

Specifies the character identifier control (CHRIDCTL) for the job. This attribute controls the type of coded character set identifier (CCSID) conversion that occurs for display files, printer files and panel groups. The *CHRIDCTL special value must be specified for the **Character identifier (CHRID)** parameter on the create, change, or override commands for display files, printer files, and panel groups before this attribute will be used.

*SYSVAL

The system value QCHRIDCTL is used.

*DEV

The *DEV special value performs the same function as on the CHRID command parameter for display files, printer files, and panel groups.

*JOBCCSID

The *JOBCCSID special value performs the same function as on the CHRID command parameter for display files, printer files, and panel groups.

Top

Locale job attributes (SETJOBATR)

Specifies which job attributes are to be taken from the locale specified for the **Locale (LOCALE)** parameter when the job is initiated.

Single values

*SYSVAL

The system value, QSETJOBATR, is used to determine which job attributes are taken from the locale.

*NONE

No job attributes are taken from the locale.

Other values

*CCSID

The coded character set identifier from the locale is used. The CCSID value from the locale overrides the user profile CCSID.

*DATFMT

The date format from the locale is used.

*DATSEP

The date separator from the locale is used.

*DECfmt

The decimal format from the locale is used.

*SRTSEQ

The sort sequence from the locale is used. The sort sequence from the locale overrides the user profile sort sequence.

*TIMSEP

The time separator from the locale is used.

Top

Locale (LOCALE)

Specifies the path name of the locale that is assigned to the LANG environment variable for this user.

Note: This parameter is Unicode-enabled. See "Unicode support in CL" in the CL topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/> for additional information.

*SYSVAL

The system value QLOCALE is used to determine the locale path name to be assigned for this user.

***NONE**

No locale path name is assigned for this user.

***C**

The C locale path name is assigned for this user.

***POSIX**

The POSIX locale path name is assigned for this user.

'path-name'

Specify the path name of the locale to be assigned for this user.

Top

User options (USROPT)

Specifies the level of help information detail to be shown and the function of the Page Up and Page Down keys by default. The system shows several displays that are suitable for the inexperienced user. More experienced users must perform an extra action to see detailed information. When values are specified for this parameter, the system presents detailed information without further action by the experienced user.

Single values

***NONE**

Detailed information is not shown.

Other values

***CLKWD**

Parameter keywords are shown instead of the possible parameter values when a control language (CL) command is prompted.

***EXPERT**

More detailed information is shown when the user is performing display and edit options to define or change the system (such as edit or display object authority).

***ROLLKEY**

The actions of the Page Up and Page Down keys are reversed.

***NOSTMSG**

Status messages are not displayed when sent to the user.

***STMSG**

Status messages are displayed when sent to the user.

***HLPFULL**

Help text is shown on a full display rather than in a window.

***PRTMSG**

A message is sent to this user's message queue when a spooled file for this user is printed or held by the printer writer.

Top

User ID number (UID)

Specifies the user ID number (uid number) for this user profile. The uid number is used to identify the user when the user is using the directory file system. The uid number for a user cannot be changed if there are one or more active jobs for the user.

***GEN** The uid number is generated for the user. The system generates a uid number that is not already assigned to another user. The uid number generated is greater than 100.

number

Specify the uid number to be assigned to the user profile. A value from 1 to 4294967294 can be entered. The uid number assigned must not already be assigned to another user profile.

Top

Group ID number (GID)

Specify the group ID number (gid number) for this user profile. The gid number is used to identify the group profile when a member of the group is using the directory file system. The gid number for a user may not be changed if:

- The user profile is the primary group of an object in a directory.
- There are one or more active jobs for the user.

***NONE**

The user does not have a gid number or an existing gid number is removed.

***GEN** The gid number will be generated for the user. The system generates a gid number that is not already assigned to another user. The gid number generated is greater than 100.

number

Specify the gid number to be assigned to the user profile. A value from 1 to 4294967294 can be entered. The gid number assigned must not already be assigned to another user profile.

Top

Home directory (HOMEDIR)

Specifies the path name of the home directory for this user profile. The home directory is the user's initial working directory. The working directory, associated with a process, is used during path name resolution in the directory file system for path names that do not begin with a slash (/). If the home directory specified does not exist when the user signs on, the user's initial working directory is the root (/) directory.

Note: This parameter is Unicode-enabled. See "Unicode support in CL" in the CL topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/> for additional information.

***USRPRF**

The home directory assigned to the user will be /home/USRPRF, where USRPRF is the name of the user profile.

'path-name'

Specify the path name of the home directory to be assigned to this user.

For more information on specifying path names, refer to "Object naming rules" in the CL topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Top

EIM association (EIMASSOC)

Specifies whether an EIM (Enterprise Identity Mapping) association should be added to an EIM identifier for this user.

Note.

1. This information is not stored in the user profile. This information is not saved or restored with the user profile.
2. If this system is not configured for EIM, then no processing is done. Not being able to perform EIM operations does not cause the command to fail.

Single values

*NOCHG

EIM association will not be added.

Element 1: EIM identifier

Specifies the EIM identifier for this association.

*USRPRF

The name of the EIM identifier is the same name as the user profile.

character-value

Specify the name of the EIM identifier.

Element 2: Association type

Specifies the type of association. It is recommended that a target association is added for an i5/OS user.

Target associations are primarily used to secure existing data. They will be found as the result of a mapping lookup operation (that is, `eimGetTargetFromSource()`), but cannot be used as the source identity for a mapping lookup operation.

Source associations are primarily for authentication purposes. They can be used as the source identity of a mapping lookup operation, but will not be found as the target of a mapping lookup operation.

Administrative associations are used to show that an identity is associated with an EIM identifier, but cannot be used as the source for, and will not be found as the target of, a mapping lookup operation.

*TARGET

Process a target association.

*SOURCE

Process a source association.

*TGTSRC

Process both a target and a source association.

*ADMIN

Process an administrative association.

*ALL Process all association types.

Element 3: Association action

*REPLACE

Associations of the specified type will be removed from all EIM identifiers that have an association for this user profile and local EIM registry. A new association will be added to the specified EIM identifier.

***ADD** Add an association.

***REMOVE**

Remove an association.

Element 4: Create EIM identifier

Specifies whether the EIM identifier should be created if it does not already exist.

***NOCRTEIMID**

EIM identifier does not get created.

***CRTEIMID**

EIM identifier gets created if it does not exist.

Top

Authority (AUT)

Specifies the authority you are giving to users who do not have specific authority for the object, who are not on an authorization list, and whose group profile or supplemental group profiles do not have specific authority for the object.

***EXCLUDE**

The user cannot access the object.

***ALL** The user performs all operations on the object except those limited to the owner.

***CHANGE**

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

Top

Examples

Example 1: Creating a User Profile

```
CRTUSRPRF  USRPRF(JJADAMS)  PASSWORD(S1CR2T)  SPCAUT(*SAVSYS)
           INLPGM(ARLIB/DSPMENU)
```

This command creates a user profile with the user name of JJADAMS and a password of S1CR2T. After sign-on, a program called DSPMENU in the ARLIB library is called. The user is granted the save system special authority. Because the other parameters were not specified: (1) The profile has no limit on the amount of storage assigned to it for owned permanent objects; (2) A scheduling priority of 3 is the highest priority that any of the user's jobs can have; (3) The user-defined description text is blank; (4) There is no group profile associated with this user profile; and (5) No authority is granted for the user profile to other users.

Example 2: Creating a User Profile with the Same User Name and Password

```
CRTUSRPRF  USRPRF(TMSMITH)  MAXSTG(12)  INLPGM(PROGMR/CALC)
           TEXT('Ted Smith, Dept 410, Application Programs')
```

This command creates a user profile with the user name of TMSMITH; the password is also TMSMITH because the password was not specified. The maximum permanent storage space the user can use for all objects is 12K (or 12,288 bytes). The initial program called following sign-on is CALC, which is located in the library named PROGMR. The text parameter provides the user's name, department, and department name. Default values are assigned to the other parameters.

Top

Error messages

*ESCAPE Messages

CPF22CE

The &1 value &2 is used by another user profile.

CPF22CF

User profile not allowed to be a group profile.

CPF22DB

The user profile being changed must have a GID.

CPF22DF

Unable to process request for user profile &1.

CPF22EB

Unable to process request for user profile &1.

CPF22E1

USROPT parameter cannot specify *STSMMSG and *NOSTSMMSG.

CPF22F1

Coded character set identifier &1 not valid.

CPF22F3

&1 specified a LMTCPB value that is not permitted.

CPF22F5

Value for new password not allowed at password level &2.

CPF2202

Do not have authority to create user profile.

CPF2209

Library &1 not found.

CPF2213

Not able to allocate user profile &1.

CPF2214

User profile &1 already exists.

CPF2225

Not able to allocate internal system object.

CPF224A

User profile &1 cannot have a GID and be a member of a group.

CPF2242

Object &1 type *&2 not found in library list.

CPF2244
Object &1 type *&2 cannot be found.

CPF225A
User profile name specified on both USRPRF and SUPGRPPRF parameters.

CPF2259
Group profile &1 not found.

CPF2260
User profile &2 was not created or changed. Reason code &3.

CPF2261
OWNER or GRPAUT value not permitted.

CPF2262
Value for GRPAUT not correct.

CPF2269
Special authority *ALLOBJ required when granting *SECADM or *AUDIT.

CPF2272
Cannot allocate user profile &1.

CPF2291
User profile does not have all special authorities being granted.

CPF2292
*SECADM required to create or change user profiles.

CPF2293
Storage limit exceeded for user profile &1.

CPF9802
Not authorized to object &2 in &3.

CPF9820
Not authorized to use library &1.

CPF9825
Not authorized to device &1.

Top

Create Validation List (CRTVLDL)

Where allowed to run: All environments (*ALL)
Threadsafe: Yes

Parameters
Examples
Error messages

The Create Validation List (CRTVLDL) command creates a validation list. Validation lists contain entries consisting of an identifier, data that will be encrypted by the system when it is stored, and free-form data. Entries can be added, changed, removed, found, and validated. Entries are validated by providing the correct entry identifier and data that is encrypted. See the APIs topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>. for information on how to use validation lists.

Top

Parameters

Keyword	Description	Choices	Notes
VLDL	Validation list	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Validation list	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
AUT	Authority	<i>Name, *EXCLUDE, *USE, *CHANGE, *ALL</i>	Optional

Top

Validation list (VLDL)

Specifies the validation list to be created.

This is a required parameter.

Qualifier 1: Validation list

name Specify the name to be given to the validation list object.

Qualifier 2: Library

***CURLIB**

The validation list is created in the current library. If no library is specified as the current library for the job, QGPL is used.

name Specify the name of the library where the validation list is created.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the validation list to be created.

***BLANK**

No text is specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

Authority (AUT)

The authority you are giving to users who do not have specific authority to the object, who are not on an authorization list, and whose group profile or supplemental group profiles have no specific authority to the object.

*EXCLUDE

Exclude authority prevents the user from accessing the object.

***USE** Use authority allows the user to perform finds and validate entries in the validation list.

***CHANGE**

Change authority allows the user to add, change, remove, find, and validate entries in the validation list.

***ALL** All authority allows the user to add, change, remove, find, and validation entries in the validation list, and delete the validation list.

name The name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Examples

```
CRTVLDL  VLDL(WEBLIB/WEBUSRS)  AUT(*EXCLUDE)
          TEXT('My WEB users')
```

This command creates a validation list (WEBUSRS) in the WEBLIB library.

Top

Error messages

*ESCAPE Messages

CPF2108

Object &1 type *&3 not added to library &2.

CPF2112

Object &1 in &2 type *&3 already exists.

CPF2113

Cannot allocate library &1.

CPF2151

Operation failed for &2 in &1 type *&3.

CPF2182

Not authorized to library &1.

CPF2183

Object &1 cannot be moved into library &3.

CPF9802

Not authorized to object &2 in &3.

CPF9803

Cannot allocate object &2 in library &3.

CPF9810

Library &1 not found.

CPF9818

Object &2 in library &3 not created.

CPF9819

Object &2 in library &3 not created.

Top

Create WSCST (CRTWSCST)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Create Work Station Customizing Object (CRTWSCST) command allows the user to create a work station customizing object in a library.

Top

Parameters

Keyword	Description	Choices	Notes
WSCST	Workstation customizing object	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Workstation customizing object	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
SRCMBR	Source member	<i>Name, *WSCST</i>	Optional, Positional 3
TEXT	Text 'description'	<i>Character value, *BLANK, *SRCMBRTEXT</i>	Optional
SRCFILE	Source file	<i>Qualified object name</i>	Optional, Positional 2
	Qualifier 1: Source file	<i>Name, QXTSRC</i>	
	Qualifier 2: Library	<i>Name, *CURLIB</i>	
AUT	Authority	<i>Name, *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE</i>	Optional
REPLACE	Replace object	<i>*YES, *NO</i>	Optional

Top

Workstation customizing object (WSCST)

Specifies the name of a work station customizing object to be created.

The possible library values are:

*CURLIB

The work station customizing object is created in the current library for the job. If no library is specified as the current library for the job, the QGPL library is used.

library-name

Specify the name of the library where the work station customizing object is created.

The possible values are:

object-name

Specify the name of the object that is created.

Top

Source member (SRCMBR)

Specifies the name of the source file member containing the table attributes.

The possible values are:

*WSCST

Specifies that the work station customizing object name is used as the source member name.

source-file-member-name

Specify the name of the member in the source file specified on the SRCFILE parameter that is used to create the work station customizing object.

Top

Text 'description' (TEXT)

Specifies text that briefly describes the object. More information on this parameter is in "Appendix A, Expanded Parameter Descriptions" in the CL Reference.

The possible values are:

*SRCMBRTXT

The text is taken from the source file member used to create the work station customizing object.

*BLANK

Text is not specified.

'description'

Specify a description of the object.

Top

Source file (SRCFILE)

Specifies the name of the source file in which a source file member containing the customizing table attributes resides. If the source file does not exist, an error message is displayed. The coded character set identifier for the source file should be *HEX.

The possible library values are:

*CURLIB

The current library for the job is used to locate the source file. If no library is specified as the current library for the job, the QGPL library is used.

library-name

Specify the name of the library where the source file is located.

The possible values are:

QTXTSRC

The IBM-supplied source file QTXTSRC is used.

source-file-name

Specify the name of the source file.

Top

Authority (AUT)

Specifies the authority given to users who do not have specific authority to the object, who are not on the authorization list, and whose user group has no specific authority to the object.

The possible values are:

*LIBCRTAUT

The public authority for the object is taken from the CRTAUT value of the target library (the library that is to contain the object). This value is determined when the object is created. If the CRTAUT value for the library changes after the object is created, the new value does not affect any existing objects.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management authority. The user can control the file's existence, specify the security for the file, change the file, and perform basic functions on the file. The user can transfer ownership of the file.

***USE** The user can perform basic operations, such as run a program or read a file. The user is prevented from changing the object. *USE authority provides object operational authority, read authority and execute authority.

*EXCLUDE

The user is prevented from accessing the object.

Top

Replace object (REPLACE)

Indicates whether an existing object is replaced.

The possible values are:

***YES** Replace the existing work station customizing object.

***NO** Do not replace the existing work station customizing object.

Top

Examples

```
CRTWSCST WSCST(MYLIB/MYWSCOBJ)
```

This command creates a work station customizing object named MYWSCOBJ in library MYLIB.

Top

Error messages

None

Convert CL Source (CVTCLSRC)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Convert CL Source (CVTCLSRC) command is used to convert Control Language (CL) source code from System/38 syntax to the syntax used on the i5/OS. The following are converted:

- System/38 *object-name.library name* to
– *library-name/object-name*
- System/38 *job-name.user-name.job-number* to
– *job-number/user-name/job-name*
- Starting comment delimiters: (/*) to (/*)
- Command names
- Keyword names and values
- Missing required parameters for commands may need to be added.

Conversion of user-defined commands is limited to the reordering of qualified names and adjusting comment syntax.

The CVTCLSRC command creates a report indicating the success or failure of the source file conversion. This report is contained in a printer file with the name 'CVTCLSRC'. Successful conversions of System/38 source are noted in the report with the message:

```
CPF0786 Member has been converted.
```

Error messages are printed for unsuccessful conversions. Some examples of functions which cannot be converted and may be printed as error messages in the report are:

```
stmt# CPF0785 Command cannot be converted  
stmt# CPF0789 Keyword cannot be converted
```

The user may write a program, perhaps by using the Copy Spooled File (CPYSPLF) command, to process the report based on the success or failure of the conversion.

Restrictions: Library QSYS38 must exist on the system to support the conversions and to detect unsupported functions. Commands with unsupported command name, keyword names, or keyword values are not converted.

Top

Parameters

Keyword	Description	Choices	Notes
FROMFILE	From file	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: From file	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	

Keyword	Description	Choices	Notes
TOFILE	To file	<i>Qualified object name</i>	Required, Positional 2
	Qualifier 1: To file	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
FROMMBR	From member	Single values: *ALL Other values (up to 50 repetitions): <i>Generic name, name</i>	Required, Positional 3

Top

From file (FROMFILE)

Specifies the System/38 CL source file to have its syntax converted.

This is a required parameter.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the thread is used to locate the source file. If no library is specified as the current library for the thread, the QGPL library is used.

name Specify the name of the library to be searched.

Top

To file (TOFILE)

Specifies the file to contain the converted CL source. It must be different than the name specified for the FROMFILE parameter.

This is a required parameter.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the thread is used to locate the source file. If no library is specified as the current library for the thread, the QGPL library is used.

name Specify the name of the library to be searched.

Top

Member (FROMMBR)

Specifies the members of the file specified for the **From file (FROMFILE)** parameter that are to be converted.

***ALL** All members of the specified source file are to be converted.

generic-name

Specify the generic name of the members to be converted.

name Specify the names of the members to be converted. Specify no more than fifty names. Note that

the member name of the *converted* source member is the same as the member name of the unconverted source member in the file specified for the FROMFILE parameter.

Top

Examples

```
CVTCLSRC FROMFILE(OLDLIB/FILEA) TOFILE(NEWLIB/FILEB)
          FROMMBR(PGM1 PGM2 PGM3)
```

This command converts three members (PGM1, PGM2, PGM3) of a System/38 source file (FILEA) located in library OLDLIB, to a System i5 source file. The converted source file members are located in FILEB, in library NEWLIB. The converted members keep their original member names, PGM1, PGM2, and PGM3.

Top

Error messages

*ESCAPE Messages

CPF0781

File &1 in library &2 not a source file.

CPF0784

Specified to-file same as from-file.

Top

Convert Date (CVTDAT)

Where allowed to run: Compiled CL program or interpreted REXX (*BPGM *IPGM *BREXX *IREXX)
Threadsafe: Yes

Parameters
Examples
Error messages

The Convert Date (CVTDAT) command converts the format of a date value from one format to another, without changing its value. The command ignores any date separators used in the old format, but if separators are included in the converted result, a separator character can be specified on the command.

Only valid dates can be converted. If either the from-format or the to-format use only 2 digits to specify the year (for example, *MDY, *DMY, *YMD, or *JUL), valid dates are in the range of January 1, 1940, to December 31, 2039. Otherwise, valid dates are in the range of August 24, 1928, to May 9, 2071. If the year is specified with only 2 digits, years in the range of 40 to 99 are assumed to be 1940 to 1999; years in the range 00 to 39 are assumed to be 2000 to 2039. The command works in conjunction with the QLEAPADJ system value.

Restrictions: This command is valid only within a CL program or ILE CL procedure.

Top

Parameters

Keyword	Description	Choices	Notes
DATE	Date to be converted	<i>Character value</i>	Required, Positional 1
TOVAR	CL var for converted date	<i>Character value</i>	Required, Positional 2
FROMFMT	From date format	*SYSVAL, *MDY, *DMY, *YMD, *JUL, *JOB, *MDYY, *DMYY, *YYMD, *CYMD, *ISO, *USA, *EUR, *JIS, *LONGJUL	Optional, Positional 3
TOFMT	To date format	*SYSVAL, *MDY, *DMY, *YMD, *JUL, *JOB, *MDYY, *DMYY, *YYMD, *CYMD, *ISO, *USA, *EUR, *JIS, *LONGJUL	Optional, Positional 4
TOSEP	To date separator	*SYSVAL, *NONE, *JOB, *BLANK, '/', '-', '.', ','	Optional, Positional 5

Top

Date to be converted (DATE)

Specifies the constant or CL variable containing the date to be converted. When a constant is specified that contains separator characters, it must be enclosed in single quotation marks (the separator characters are ignored in the conversion). If separators are used in a constant, leading zeros in each part of the date can be omitted (3/3/88 or 03/03/88 are both valid). If a variable is specified, it must be long enough to contain the date type and its date separators, if used. The valid date separators are the slash (/), hyphen (-), period (.), and comma (,). A variable containing all blanks (X'40') is considered to have a date of length zero, and is not valid.

This is a required parameter.

CL var for converted date (TOVAR)

Specifies the name of the CL variable that contains the converted date value.

For every format except Julian, the month and day subfields in the converted result are each 2 bytes in length, are right-justified, and (if necessary) a leading zero is used as a padding character to fill each 2-byte field.

For the Julian and long Julian formats, the day field is 3 bytes long and padded with leading zeros (if necessary). The year field is 2 bytes long for Julian and 4 bytes long for long Julian.

Use the following tables to determine the required minimum length of the variable.

Field Size and Minimum Variable Length

TO FMT	TO SEP	Minimum Variable Length
-----	-----	-----
*JUL	*NONE	5
*JUL	Any	6
*MDY, *DMY, *YMD	*NONE	6
*MDY, *DMY, *YMD	Any	8
*MDYY, *DMYY, *YYMD	*NONE	8
*MDYY, *DMYY, *YYMD	Any	10
*CYMD	*NONE	7
*CYMD	Any	9
*LONGJUL	*NONE	7
*LONGJUL	Any	8
*ISO, *USA, *EUR, *JIS		10
*JOB		Depends on job date format
*SYSVAL		Depends on value of QDATFMT

TO FMT	Field Size		
	Month	Day	Year
-----	---	---	----
*JUL	N/A	3	2
*MDY, *DMY, *YMD	2	2	2
*MDYY, *DMYY, *YYMD	2	2	4
*ISO, *USA, *EUR, *JIS	2	2	4
*CYMD	2	2	2 (+1 byte century field)

This is a required parameter.

From date format (FROMFMT)

Specifies the current format of the date to be converted.

***JOB** The date has the format specified by the job attribute, DATFMT.

***SYSVAL**

The date has the format specified by the system value, QDATFMT.

***MDY** The date has the month, day, year format, **mmddy**.

- *MDYY** The date has the month, day, year format, **mmddyyyy**.
- *DMY** The date has the day, month, year format, **ddmmyy**.
- *DMYY** The date has the day, month, year format, **ddmmyyyy**.
- *YMD** The date has the year, month, day format, **yymmdd**.
- *YYMD** The date has the year, month, day format, **yyyymmdd**.
- *CYMD** The date has the century, year, month, day format, **cyymmdd**, where c is 0 for years 1928 through 1999 and is 1 for years 2000 through 2071.
- *JUL** The date has the Julian format, **yyddd**.
- *ISO** The date has the International Organization for Standardization (ISO) date format, **yyyy-mm-dd**.
- *USA** The date has the United States date format, **mm/dd/yyyy**.
- *EUR** The date has the European date format, **dd.mm.yyyy**.
- *JIS** The date has the Japanese Industrial Standard date format, **yyyy-mm-dd**.
- *LONGJUL** The date has the long Julian format, **yyyyddd**.

Top

To date format (TOFMT)

Specifies the format to which the date is to be converted.

- *JOB** The date format is converted to the format specified by the job attribute, DATFMT.
- *SYSVAL** The date format is converted to the format specified by the system value, QDATFMT.
- *MDY** The date format is converted to the month, day, year format, **mmddy**.
- *MDYY** The date format is converted to the month, day, year format, **mmddyyyy**.
- *DMY** The date format is converted to the day, month, year format, **ddmmyy**.
- *DMYY** The date format is converted to the day, month, year format, **ddmmyyyy**.
- *YMD** The date format is converted to the year, month, day format, **yymmdd**.
- *YYMD** The date format is converted to the year, month, day format, **yyyymmdd**.
- *CYMD** The date format is converted to the century, year, month, day format, **cyymmdd**, where c is 0 for years 1928 through 1999 and is 1 for years 2000 through 2071. If the year in the current format is only 2 digits, c will be set to 0 for years 40 through 99 and to 1 for years 00 through 39.
- *JUL** The date format is converted to the Julian format, **yyddd**.
- *ISO** The date format is converted to the International Organization for Standardization (ISO) date format, **yyyy-mm-dd**.
- *USA** The date format is converted to the United States date format, **mm/dd/yyyy**.

*EUR The date format is converted to the European date format, **dd.mm.yyyy**.

*JIS The date format is converted to the Japanese Industrial Standard date format, **yyyy-mm-dd**.

*LONGJUL

The date has the long Julian format, **yyyyddd**.

Top

To date separator (TOSEP)

Specifies the type of date separators (if any) used in the converted date.

*JOB The converted date has the separators specified by the job attribute, DATSEP.

*SYSVAL

The converted date has the separators specified by the system value, QDATSEP.

*NONE

No separator characters are contained in the converted date.

*BLANK

A blank space is used as the date separator in the converted date.

separator-character

Specify the character that is used as the date separator in the converted date. The valid separator characters are the slash (/), hyphen (-), period (.), and comma (,).

Top

Examples

Example 1: Converting to DMY Format

```
DCL VAR(&DATE) TYPE(*CHAR) LEN(8)
:
CVTDAT DATE('12-24-88') TOVAR(&DATE) TOFMT(*DMY)
```

This command converts the date 12-24-88, which is in the MDY format. Because the FROMFMT parameter was not specified, its default, *JOB, indicates that the job attribute DATFMT contains the MDY format. The date is converted to the DMY format, and the separator character specified in the job attribute DATSEP is inserted. If DATSEP contains a slash, the converted result is 24/12/88.

Example 2: Converting to Format Specified by Job Attribute

```
DCL &PAYDAY *CHAR 6
DCL &NEWPDAY *CHAR 6
:
CVTDAT DATE(&PAYDAY) TOVAR(&NEWPDAY)
FROMFMT(*YMD) TOSEP(*NONE)
```

This command converts the format of the date stored in &PAYDAY from year, month, day to the format specified by the job attribute DATFMT. If, for example, DATFMT contains the MDY format, the format of the converted date is month, day, and year. The converted date is stored in the variable &NEWPDAY. Because &NEWPDAY was declared as a 6-character variable, TOSEP(*NONE) is required; the converted result cannot include separator characters.

Example 3: Converting to CYMD format

```
DCL &NEWDAY1 *CHAR 7
DCL &NEWDAY2 *CHAR 7
:
CVTDAT DATE('01/24/1939') TOVAR(&NEWDAY1)
      FROMFMT(*MDYY) TOFMT(*CYMD) TOSEP(*NONE)
CVTDAT DATE('01/24/39') TOVAR(&NEWDAY2)
      FROMFMT(*MDY) TOFMT(*CYMD) TOSEP(*NONE)
```

The first CVTDAT command converts the date specified on the DATE parameter from the month, day, 4-digit year format to the century, year, month, day format. Because the year was specified with 4 digits and the first 2 digits are "19", the century digit is set to "0", so the value of "NEWDAY1 is "0390124".

The second CVTDAT command converts the date specified on the DATE parameter from the month, day, year format to the century, year, month, day format. Because the year was specified with only 2 digits and the year is less than 40, the century digit is set to "1", so the value of "NEWDAY2 is "1390124".

Top

Error messages

*ESCAPE Messages

CPF0550

Date too short for specified format.

CPF0551

Separators in date are not valid.

CPF0552

Date contains misplaced or extra separators.

CPF0553

Date contains too many or too few numeric characters.

CPF0554

Variable specified too short for converted date format.

CPF0555

Date not in specified format or date not valid.

CPF0556

Date contains two or more kinds of separators.

CPF0557

Date outside allowed range.

Top

Convert Directory (CVTDIR)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Convert Directory (CVTDIR) command works with the conversion of integrated file system directories from the *TYPE1 format to the *TYPE2 format. Directories in the "root" (/), QOpenSys, and user-defined file systems support *TYPE2 directories. *TYPE2 directories are optimized for performance, size, and reliability as compared to directories having the *TYPE1 format.

The CVTDIR command can provide the current directory format of the file systems, or can change the priority of the convert directory function.

Restrictions:

- The user must have all object (*ALLOBJ) special authority to use this command.

Top

Parameters

Keyword	Description	Choices	Notes
OPTION	Option	*CHECK, *CHGPTY	Required, Positional 1
RUNPTY	Run priority	1-99, *SAME, *DFT	Optional
FILESYS	File system	*NONE, *ROOT, *QOPENSYS, *UDFS, *ALL	Optional
FORMAT	Format	*TYPE2, *TYPE1	Optional
DETAIL	Detail	*BASIC, *EXTENDED	Optional
ASP	Auxiliary storage pool ID	1-32	Optional

Top

Option (OPTION)

Specifies the function to be performed.

*CHECK

The file systems which are currently on the system are checked to determine their current directory format. Message CPIA084 is sent for the "root" (/), and QOpenSys file systems, and for all active auxiliary storage pools on the system identifying their current directory format.

*CHGPTY

Change the run priority of the convert directory function.

Top

Run priority (RUNPTY)

Specifies the new run priority for the convert directory function. This must be specified if OPTION(*CHGPTY) is used.

Note: There may be a delay before the new priority takes effect for the convert directory function.

*SAME

The run priority does not change.

***DFT** The run priority will be reset to the system default.

1-99 Specify the run priority for the convert directory function.

Top

File system (FILESYS)

This parameter is no longer supported and will be ignored. It has been kept strictly for syntactic compatibility with releases prior to Version 5 Release 4 Modification 0 of the i5/OS.

Top

Format (FORMAT)

This parameter is no longer supported and will be ignored. It has been kept strictly for syntactic compatibility with releases prior to Version 5 Release 4 Modification 0 of the i5/OS.

Top

Detail (DETAIL)

This parameter is no longer supported and will be ignored. It has been kept strictly for syntactic compatibility with releases prior to Version 5 Release 4 Modification 0 of the i5/OS.

Top

Auxiliary storage pool ID (ASP)

This parameter is no longer supported and will be ignored. It has been kept strictly for syntactic compatibility with releases prior to Version 5 Release 4 Modification 0 of the i5/OS.

Top

Examples

Example 1: Checking Directory Format Information

```
CVTDIR OPTION(*CHECK)
```

This command displays the current directory formats for the file systems.

Example 2: Changing the Run Priority of the Convert Directory Function

CVTDIR OPTION(*CHGPTY) RUNPTY(50)

This command changes the run priority of the convert directory function.

[Top](#)

Error messages

*ESCAPE Messages

CPF9890

Function not supported, request rejected.

CPFA099

The requested convert directory option cannot be performed.

CPFA09A

Errors occurred during directory conversion.

[Top](#)

Convert DLS Name (CVTDLSNAM)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Convert Document Library Services Name (CVTDLSNAM) command is used before or after a change in the CCSID assumed for EBCDIC object names by QDLS (the document library services file system). The command can help identify QDLS object names that may be different because of the CCSID change, and it can rename QDLS objects so they retain their original names. It can also correct the names of objects whose names changed when they were copied between QDLS and another file system. The command prints a report with the job's spooled output that lists selected objects and any actions taken on those objects.

When converting object names to or from EBCDIC, QDLS uses the job default CCSID unless data area QUSRSYS/QODEC500 exists, in which case QDLS uses CCSID 500 (the data area allows reversion to the behavior of early versions of QDLS). The CCSID used by QDLS is therefore changed by creating or deleting the data area, or by changing the job default CCSID when the data area does not exist.

The CCSID affects the view of QDLS object names by integrated file system clients of QDLS, which must convert object names to and from EBCDIC. Those clients include:

- Integrated file system commands such as DSPLNK, CPY, MOV, and RNM
- UNIX-type APIs provided by the integrated file system, such as access, open, rename, and unlink
- IBM System i Access for Windows

The CCSID does not affect clients of QDLS that work directly with EBCDIC object names, which include:

- Document and folder commands, such as CRTDOC, CPYDOC, WRKDOC, CRTFLR, WRKFLR, DLTDL0, and RNMDL0
- Hierarchical file system (HFS) APIs, such as QHFDLTSE, QHFOPNDR, QHFOPNSF, and QHFRNMSF

Even for integrated file system clients of QDLS, the CCSID doesn't matter except for objects that are also used by EBCDIC clients. In that case, QDLS object names may appear different to the clients if the names contain variant characters and the clients are using different CCSIDs (integrated file system clients use the CCSID as described earlier, and EBCDIC clients likely use the job default CCSID).

Restrictions:

- You must have read (*R) authority to the directory containing the object links and execute (*X) to the other directories in the path.
- The additional authority restrictions from the RNM command apply when renaming objects.

Top

Parameters

Keyword	Description	Choices	Notes
OBJ	Object	Values (up to 300 repetitions): <i>Path name</i>	Required, Positional 1
SUBTREE	Directory subtree	*OBJ, *DIR, *ALL	Optional
ACTION	Action	*LIST, *RENAME	Optional
PREVIEW	Preview results	*NO, *YES	Optional

Keyword	Description	Choices	Notes
FROMCCSID	From CCSID	1-65535, <u>500</u> , *JOB, *SYSVAL, *HEX	Optional
TOCCSID	To CCSID	1-65535, *JOB, *SYSVAL, *HEX	Optional

Top

Object (OBJ)

Specifies the objects to process. A maximum of 300 path names can be specified; however, all paths must be for the same file system. Each path name can be either a simple name or a name that is qualified with the name of the directory in which the object is located. A pattern can be specified in the last part of the path name: an asterisk (*) matches any number of characters and a question mark (?) matches any single character. If a path name is qualified or contains a pattern, it must be enclosed in apostrophes (').

For more information on specifying path names, refer to "Object naming rules" in the CL topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

The CVTDLSNAM command is an integrated file system client of QDLS. As such, its view of object names can be different than that of EBCDIC clients. So, use care in specifying object names. It is generally safer to use generic characters in place of variant characters (for example, specify X?X as an object name rather than X!X).

Top

Directory subtree (SUBTREE)

Specifies whether directory subtrees are processed.

- *OBJ** Only the objects that match the given path names are processed. If a path name specifies a directory, objects in the directory are not processed.
- *DIR** Objects in the first level of each directory that matches a given path name are processed.
- *ALL** The entire subtree of each directory that matches a given path name is processed.

Top

Action (ACTION)

Specifies the action to perform on the selected objects.

- *LIST** For QDLS, this value lists the selected objects that might appear to have different names if the CCSID assumed by QDLS for EBCDIC object names is changed from the specified old value to the specified new value. For other file systems, this value lists the selected objects that might have an unexpected name after having been copied from QDLS, and neither specified CCSID is used in this case.

*RENAME

Corrects the names of the selected objects. If *RENAME is used more than once on an object, the results will probably not be meaningful.

Some objects may fail to be renamed when requested, such as if the new name already exists. However, the command will not fail immediately; it will continue to process any remaining objects.

For QDLS, *RENAME will change the names such that, after changing the CCSID assumed by QDLS for EBCDIC object names from the specified old value to the specified new value, the object names will appear the same as before the change to integrated file system clients of QDLS.

For other file systems, the specified objects are presumed to have been created with the specified old CCSID and implicitly renamed as they were copied from QDLS by an integrated file system client of QDLS using the specified new CCSID. *RENAME will change the names of the objects to be the same as those of the original QDLS objects.

Note: The effect of a rename can be undone by another rename with the CCSIDs reversed. For example, if a rename is done using FROMCCSID(500) and TOCCSID(273), the original name(s) can be restored by a rename using FROMCCSID(273) and TOCCSID(500).

Top

Preview results (PREVIEW)

Selects whether to preview the results of the selected action.

***NO** Perform the selected action.

***YES** Inhibit the selected action and report what the results would be. This value is allowed only when ACTION(*RENAME) is specified.

Top

From CCSID (FROMCCSID)

Specifies the original coded character set identifier (CCSID) of the EBCDIC object name. This value is ignored when processing objects in file systems other than QDLS if ACTION is *LIST.

500 CCSID 500 is used. That is the CCSID used by early versions of QDLS.

***JOB** The current job's default CCSID is used.

***SYSVAL**

The CCSID specified in the system value QCCSID is used.

***HEX or 65535**

The CCSID currently assumed by QDLS for EBCDIC object names is used.

1-65535

Specify the CCSID to be used. More information on valid CCSIDs is in the i5/OS globalization topic collection in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Top

To CCSID (TOCCSID)

Specifies the coded character set identifier (CCSID) assumed by QDLS for EBCDIC object names. This value is ignored when processing objects in file systems other than QDLS if ACTION is *LIST.

***JOB** The current job's default CCSID is used.

***SYSVAL**

The CCSID specified in the system value QCCSID is used.

***HEX or 65535**

The new CCSID is unknown, such as when different jobs will be using different CCSIDS. This value may not be used with ACTION(*RENAME).

Specify the CCSID to be used. More information on valid CCSIDs is in the i5/OS globalization topic collection in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Top

Examples

Example 1: List QDLS Objects Affected by a CCSID Change

A new release of the operating system is installed and QDLS now assumes the job default CCSID instead of CCSID 500 for EBCDIC object names. The job CCSID is currently set to 37. The following command is used to identify the objects that effectively have new names for integrated file system clients of QDLS. Note that the ACTION, FROMCCSID, and TOCCSID parameters could all have been omitted from the command, since they specify the default values in this case.

```
CVTDLNAM  OBJ('/QDLS')  SUBTREE(*ALL)  ACTION(*LIST)
          FROMCCSID(500)  TOCCSID(37)
```

Output similar to this might be produced:

```
/QDLS/FLRA/X] --> X!
/QDLS/FLRB/X! --> X|
```

Each line shows two names for an object, as it would be seen by clients using CCSID 500 and CCSID 37 (the second name won't be shown if TOCCSID is *HEX). The output shows that two objects are affected by the change of the assumed CCSID. The object known before the change as X] by integrated file system clients is known as X! afterward, and X! is renamed to X|.

The name X! seems more reasonable than either X] or X|, so we assume X! is the correct name in both cases. In the first case the new name is desirable; we surmise the object was created as X! by a client using CCSID 37. In the second case the new name is undesirable; the object was presumably created by a client using CCSID 500.

Example 2: Rename QDLS Object to Adjust for a CCSID Change

The second object name from the example above is corrected using the following command. For this example the job CCSID is 500 (necessary to guarantee correct recognition of the object name X!). It is likely that a generic name (such as * or X? instead of X!) would be used in similar situations, eliminating the need to adjust the job CCSID.

```
CVTDLNAM  OBJ('/QDLS/FLRB/X!')  ACTION(*RENAME)
          FROMCCSID(500)  TOCCSID(37)
```

This output might be produced:

```
/QDLS/FLRB/X! --> X]
```

Each line again shows two names for an object, but this time both names are what a CCSID 500 client would see. The output indicates that X! is renamed to X]. The new name may appear incorrect to a CCSID 500 client (X]), but it will appear as desired to a CCSID 37 client (X!).

Error messages

*STATUS Messages

CPI8A22

Processing &1.

*ESCAPE Messages

CPF8AC0

&1 command failed.

Convert Education (CVTEDU)

Where allowed to run: All environments (*ALL)
Threading: No

Parameters
Examples
Error messages

The Convert Education (CVTEDU) command converts the online education courses that are stored in a library into a format that can be used on the System i5. This command converts course modules from ASCII to EBCDIC.

Top

Parameters

Keyword	Description	Choices	Notes
COURSE	Course ID	Name, *ALLADDED	Required, Positional 1
LNG	Language ID	*SYSVAL, 2922, 2923, 2924, 2925, 2926, 2928, 2929, 2931, 2932, 2933, 2937, 2938, 2939, 2940, 2942, 2950, 2956, 2957, 2958, 2962, 2963, 2961, 2966, 2980, 2981, 2984, 2986, 2987, 2989, 2996	Optional

Top

Course ID (COURSE)

Specifies which course you want to convert.

The possible values are:

course-ID

Specify a specific course you want to convert using the name of the library where the course modules are stored.

***ALLADDED**

All courses previously added to the system are converted.

Top

Language ID (LNG)

Specifies the language ID that you want to use to convert the courses.

The possible values are:

***SYSVAL**

The current primary language setting for the system is used.

language-ID

Specify a language ID for the system. This language ID is a 4-digit number assigned to each specific language. To view the list of languages and their identifying numbers, move the cursor to the Language ID parameter field and press the F4 (Prompt) key when you are on the command prompt display.

Examples

CVTEDU COURSE(*ALLADDED)

This command converts all of the courses previously added through the education administration system from ASCII to EBCDIC.

Error messages

*ESCAPE Messages

CPF1D47

Not authorized to use CVTEDU command.

CPF1D49

Errors occurred during command processing.

Convert IP Address (CVTIPSIFC)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Convert IP over SNA Interface (CVTIPSIFC) command converts an IP (Internet Protocol) address into its associated SNA network identifier and location name. The location entries defined with the Add IP over SNA Location Entry (ADDIPSLOC) CL command are searched to find the SNA location name and SNA network identifier associated with the input internet address (INTNETADR).

Top

Parameters

Keyword	Description	Choices	Notes
INTNETADR	Internet address	<i>Character value</i>	Required, Positional 1
OUTPUT	Output	*, *PRINT _	Optional, Positional 2

Top

Internet address (INTNETADR)

Specifies the internet address of the local host or a remote host to be converted. The internet address is specified in the form *nnn.nnn.nnn.nnn*, where *nnn* is a decimal number ranging from 0 through 255. An internet address is not valid if it has a value of all binary ones or all binary zeros for the network identifier (ID) portion or the host ID portion of the address. If the internet address is entered from a command line, the address must be enclosed in apostrophes.

This is a required parameter.

Restrictions:

1. The internet address cannot begin with 0 (for example, 0.nnn.nnn.nnn).
2. The internet address cannot begin with 127 (for example, 127.nnn.nnn.nnn). This address range is reserved for TCP/IP loopback addresses.
3. The internet address cannot be a class D or class E address. Valid class D addresses range from 224.nnn.nnn.nnn to 239.nnn.nnn.nnn. Valid class E addresses range from 240.nnn.nnn.nnn to 255.nnn.nnn.nnn.

Top

Output (OUTPUT)

Specifies where the result should be returned.

The possible values are:

*
_ The output is displayed (if requested by an interactive job) or printed with the job's spooled output (if requested by a batch job).

***PRINT**

The output is printed with the job's spooled output.

Top

Examples

Example 1: Printing a Converted IP Address

```
CVTIPSIFC  INTNETADR('128.1.2.3')  OUTPUT(*PRINT)
```

This command finds the SNA network identifier and location name associated with IP address 128.1.2.3 and puts the result in the job's spooled output.

Example 2: Displaying a Converted IP Address

```
CVTIPSIFC  INTNETADR(128.2.3.4)
```

This command finds the SNA Network Identifier and Location Name associated with IP address 128.2.3.4 and puts the result to the display for an interactive job.

Top

Error messages

*ESCAPE Messages

CPFA111

Internet address not converted.

CPFA118

No associated SNA network identifier and location name found.

Top

Convert Network ID / Location (CVTIPSLOC)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Convert IP over SNA Location Entry (CVTIPSLOC) command is used to convert a specified SNA network identifier and location name into one or more associated IP addresses. The location entries defined with the ADD IP over SNA Location Entry (ADDIPSLOC) CL command are searched to find one or more IP addresses that are associated with the input SNA location name (LOC) and SNA network identifier (NETID).

Top

Parameters

Keyword	Description	Choices	Notes
NETID	Network identifier	<i>Communications name</i> , <u>*NETATR</u>	Optional, Positional 1
LOC	Location name	<i>Communications name</i>	Optional, Positional 2
OUTPUT	Output	<u>*</u> , *PRINT	Optional, Positional 3

Top

Network identifier (NETID)

Specifies the SNA network identifier for the local host or a remote host.

The possible values are:

*NETATR

The network identifier in the network attributes for this host is used.

network-identifier

Specify the network identifier for the local host or a remote host. The network identifier can be one to eight characters in length. The first character must be A (or a) through Z (or z), or special characters \$, #, or @ followed by 0 through 9, A (or a) through Z (or z), \$, #, or @.

Top

Location name (LOC)

Specifies the SNA location name to be converted.

This is a required parameter.

The possible values are:

location-name

Specify the SNA location name for the local host or a remote host. This name can be one to eight

characters in length. The first character must be A (or a) through Z (or z), or special characters \$, #, or @ followed by 0 through 9, A (or a) through Z (or z), \$, #, or @.

Top

Output (OUTPUT)

Specifies where the results are returned.

The possible values are:

* The output is displayed (if requested by an interactive job) or printed with the job's spooled output (if requested by a batch job).

***PRINT**

The output is printed with the job's spooled output.

Top

Examples

```
CVTIPSLOC  LOC(LUNAMEX)  OUTPUT(*PRINT)
```

This command converts the location name LUNAMEX with the default network identifier specified in the network attributes and places the results in the job's spooled output.

Top

Error messages

*ESCAPE Messages

CPFA115

SNA network identifier and location name not converted.

CPFA119

No associated internet address found.

Top

Convert Optical Backup (CVTOPTBKU)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Convert Optical Backup (CVTOPTBKU) command converts an optical backup volume to an optical primary volume. User applications and programs can then write to the converted volume.

Note: Once an optical volume is converted from a backup volume to a primary volume, you must initialize the optical volume to convert it to a backup volume again. Initializing an optical volume results in losing all existing information on the optical volume.

Restriction: To use this command you must have *ALL authority to the authorization list securing the volume to be converted.

Top

Parameters

Keyword	Description	Choices	Notes
BKUVOL	Backup volume identifier	<i>Character value</i>	Required, Positional 1
PRIVOL	Primary volume identifier	<i>Character value, *PRVPRIVOL</i>	Optional, Positional 2

Top

Backup volume identifier (BKUVOL)

Specifies the volume identifier of the optical backup volume being converted to a primary volume.

Top

Primary volume identifier (PRIVOL)

Specifies the identifier of the optical volume after it is converted to a primary volume.

Note: The identifier must be unique within the system you are using. More information about optical volume names can be found in the Optical Support, SC41-4310 book.

*PRVPRIVOL

The identifier of the new primary optical volume is the same as the identifier of the primary optical volume for which this volume previously was a backup.

When an optical backup volume is first used, the system records the volume identifier of the primary volume on the media. This is done to ensure that no other primary volume can use the same backup volume identifier. This also ensures that the original name of the primary volume is known at the time the optical backup volume is converted.

primary-volume-identifier

Specify a new volume identifier. This is the identifier of the volume after this command completes successfully.

Top

Examples

```
CVTOPTBKU BKUVOL(VOL01BACKUP) PRIVOL(VOL02)
```

This command converts the optical backup volume VOL01BACKUP to a primary optical volume. VOL02 is the identifier of the optical volume after it is converted.

Top

Error messages

*ESCAPE Messages

OPT1305

Optical volume &1 is read only.

OPT1315

Optical volume &1 is write protected.

OPT1320

Optical volume &1 in use.

OPT1325

Optical volume format not recognized.

OPT1330

Optical volume not found or not useable.

OPT1331

Optical volume &1 not found.

OPT1340

Optical volume &1 not initialized.

OPT1342

Invalid volume identifier specified.

OPT1345

No free space available on media.

OPT1350

Write operation failed to optical volume &1.

OPT1360

Media directory corrupted on optical volume &1.

OPT1375

Optical volume &1 already exists.

OPT1460

Optical volume &1 is not in an optical device.

OPT1462

Operation not completed, optical volume is not a backup volume.

- OPT1530**
&1 does not represent a valid optical device.
- OPT1605**
Media or device error occurred.
- OPT1790**
Operation not allowed or conflicts with another request.
- OPT1805**
Error accessing optical volume index file.
- OPT1810**
Error accessing optical directory index file.
- OPT1815**
Internal program error occurred.
- OPT1820**
Internal error occurred on optical device &1.
- OPT1825**
Optical indexes are incorrect for optical device &1.
- OPT1860**
Request to optical device &1 failed.
- OPT1861**
No device description configured for resource &1.
- OPT1862**
No active device description for resource &1.
- OPT1863**
Optical libraries need to be reclaimed.
- OPT1872**
Optical request timed out or was cancelled.
- OPT2030**
Error during Convert Optical Backup.
- OPT2301**
Internal system object in use.
- OPT7740**
User not authorized to object &2 in library &3 type &4.

Top

Convert Performance Collection (CVTPFCOL)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Convert Performance Collection (CVTPFCOL) command converts performance data from a previous release to the format needed for processing by the current release of Performance Tools for i5/OS (TM).

The command first determines the release level at which the data was collected. Then the members of all necessary files are converted. The conversion may be done in the same library where the current data resides. To avoid the risk of destroying the old data if the command ends abnormally, convert the data into a different library (TOLIB), and later, delete the data from the old library (FROMLIB).

If the conversion is done in a different library, the old data remains in the current library (FROMLIB) and the new data resides in the new library (TOLIB). If a new library is specified for the newly converted data, all files are copied to the new library, including those files which do not need to be converted.

Top

Parameters

Keyword	Description	Choices	Notes
FROMLIB	From library	<i>Name</i>	Required, Positional 1
TOLIB	To library	<i>Name</i>	Required, Positional 2
COLTYPE	Collection type	<i>Character value, *CSFILE, *DWFILE, *PEXFILE</i>	Optional

Top

From library (FROMLIB)

Specifies the library that contains the files to be converted.

This is a required parameter.

name Specify the name of the library where the files to be converted are located.

Top

To library (TOLIB)

Specifies the library where the converted files will be located.

This is a required parameter.

name Specify the name of the library where the converted files are to be located.

Top

Collection type (COLTYPE)

Specifies the type of collections to be converted.

*CSFILE

Only the Collection Services file-based collections located in the **From library (FROMLIB)** are to be converted.

*PEXFILE

Only the Performance Explorer file-based collections located in the **From library (FROMLIB)** are to be converted.

type Specify the type of collections to be converted.

Valid values depend on the performance collections supported by the system. You can press F4 while prompting this command parameter to see a list of valid collection type values.

Top

Examples

Example 1: Converting Performance Data Interactively

```
CVTPFRCOL FROMLIB(MIKE) TOLIB(TERESA)
```

This command converts the performance data in library MIKE and places it in the library TERESA after conversion is complete. This conversion occurs interactively while the user waits.

Top

Error messages

*ESCAPE Messages

CPF0A0B

Performance tools files did not convert.

CPF22F7

Number of authorities must be between 1 and &1.

CPF22FA

Authority value &1 not valid.

CPF22FB

Must specify *EXCLUDE or *AUTL as only authority value.

CPF2817

Copy command ended because of error.

CPF4102

File &2 in library &3 with member &4 not found.

CPF8122

&8 damage on library &4.

CPF9801

Object &2 in library &3 not found.

CPF9802

Not authorized to object &2 in &3.

CPF9803

Cannot allocate object &2 in library &3.

CPF9807

One or more libraries in library list deleted.

CPF9808

Cannot allocate one or more libraries on library list.

CPF9810

Library &1 not found.

CPF9811

Program &1 in library &2 not found.

CPF9812

File &1 in library &2 not found.

CPF9820

Not authorized to use library &1.

CPF9830

Cannot assign library &1.

Top

Convert Pfr Thread Data (CVTPFRTHD)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Convert Performance Thread (CVTPFRTHD) command converts job performance data records. It supports data collected by the STRPFRMON (Start Performance Monitor) command or data generated by the CRTPFRTA (Create Performance Data) command.

The specified member (MBR parameter) of file QAPMJOBS or QAPMJOB� contains records with thread-level performance data. You can use CVTPFRTHD to convert this data and write the resulting records to a member by the same name (MBR parameter) in file QAPMTJOB. The output file member will contain records with job-level performance data which are a total of the performance information for all threads running within the job.

The input file (QAPMJOBS or QAPMJOB�) must exist in the library specified on the LIB parameter. If file QAPMTJOB does not exist in the specified library (LIB parameter), it will be created automatically. A file member by the name specified (MBR parameter) will be automatically added to file QAPMTJOB if it did not already exist.

Top

Parameters

Keyword	Description	Choices	Notes
MBR	Member	<i>Name</i>	Required, Positional 1
LIB	Library	<i>Name</i> , <u>QPFRTA</u>	Optional
REPLACE	Replace	<u>*YES</u> , *NO	Optional

Top

Member (MBR)

Specifies the member of file QAPMJOBS or file QAPMJOB� that contains the collections to be processed. This member will be created, if it does not already exist, or replaced in QAPMTJOB file.

name Specify the name of the member containing thread-level performance data.

Top

Library (LIB)

Specifies the library where the input file resides, and where the QAPMTJOB file either resides or will be created.

QPFRTA

IBM-supplied performance data library QPFRTA is to be used to locate the input database file.

name Specify the name of the library where the input database file is located.

Replace (REPLACE)

Specifies whether the specified member in file QAPMTJOB will be replaced.

***YES** If the member did not exist before, it is created. If the member already exists, the data contained in it is replaced.

***NO** If the member did not exist before, it is created. If the member already exists, the data contained in it is not replaced and an error message is signalled.

Top

Examples

```
CVTPFRTHD MBR(MYDATA)
```

This command converts performance data records. Member MYDATA in file QAPMJOB1 or file QAPMJOBS in library QPFRDATA contains the collections to be processed.

Top

Error messages

*ESCAPE Messages

CPF0A83

Performance thread data not converted.

CPF0A84

Member already exists.

CPF0A85

User profile &1 is not authorized to library &2.

CPF2110

Library &1 not found.

CPF2817

Copy command ended because of error.

CPF5030

Partial damage on member &4.

CPF9810

Library &1 not found.

CPF9812

File &1 in library &2 not found.

CPF9845

Error occurred while opening file &1.

CPF9846

Error while processing file &1 in library &2.

Top

Convert RPC Source (CVTRPCSRC)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Convert RPC Source (CVTRPCSRC) command generates C code from an input file written in the Remote Procedure Call (RPC) Language. The generated C code can be used to implement an RPC protocol.

This command is equivalent to running the **rpcgen** utility on a UNIX system.

This command can also be issued using the following alternative command name:

- RPCGEN

Restrictions:

- The user must have execute (*X) authority to each directory in the path for both the input and output files.
- The user must have read (*R) authority to the input file.
- The user must have write and execute (*WX) authority to the output file directory.

Top

Parameters

Keyword	Description	Choices	Notes
FROMFILE	From file	<i>Path name</i>	Required, Positional 1
OPTION	Option	*ALL, *XDR, *HDR, *CLTSTUB, *SVRSTUB, *CLTSAMP, *SVRSAMP, <u>*NOSAMP</u>	Optional
PROTOCOL	Protocol	Values (up to 2 repetitions): <u>*NONE</u> , *TCP, *UDP	Optional
TOFILE	To file	<i>Path name</i>	Optional

Top

From file (FROMFILE)

Specifies the path name of the input source file written in the Remote Procedure Call (RPC) Language. The input source file must be a file in the "root" (/) or QOpenSys file system.

For more information on specifying path names, refer to "Object naming rules" in the CL topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Top

Option (OPTION)

Specifies the compile options.

***NOSAMP**

All file types except the sample files (*CLTSAMP and *SVRSAMP) are generated.

***ALL** All file types are generated.

***XDR** The input file is compiled into XDR (eXternal Data Representation) routines.

***HDR** The input file is compiled into C data-definitions (a header file).

***CLTSTUB**

The input file is compiled into client-side stub procedures.

***SVRSTUB**

The input file is compiled into server-side stub procedures. However, no "main" routine is generated.

***CLTSAMP**

Sample client code that uses remote procedure calls is generated. The file can be customized for the application.

***SVRSAMP**

Sample server code that uses remote procedure calls is generated. The file can be customized for the application.

Top

Protocol (PROTOCOL)

Compiles into server-side stub procedures for the transport that is specified. The specified value must be present in the /etc/netconfig file at the time the server application is run. This parameter is only valid when OPTION(*SVRSTUB) is specified. One or more of the following options may be specified:

***NONE**

Compile server-side stub procedures for all transports that are in the /etc/netconfig file.

***TCP** Compile server-side stub procedures for the TCP transport.

***UDP** Compile server-side stubs for the UDP transport.

Top

To file (TOFILE)

Specifies the path name of the output file. This option is only allowed if OPTION(*ALL) or OPTION(*NOSAMP) is not specified. When OPTION(*ALL) or OPTION(*NOSAMP) is specified, or if the TOFILE parameter is not specified when using another option, the **From file (FROMFILE)** parameter is used to generate the TOFILE name as follows, where filename is the name of the input file name from the FROMFILE parameter.

- filename.h for a header file
- filename_xdr.c for an XDR file
- filename_clnt.c for client-side stubs
- filename_svc.c for server-side stubs
- filename_client.c for client-side sample files
- filename_server.c for server-side sample files

The output file or files for sample code must not exist; if any of the sample output files exist, the command will fail. Other output files will be overwritten if they exist.

'to-file-path name'

Specify a path name to be used to generate the TOFILE name or names.

For more information on specifying path names, refer to "Object naming rules" in the CL topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Top

Examples

Example 1: Convert RPC Source to Default Files

```
CVTRPCSRC FROMFILE('/myrpc') OPTION(*ALL)
```

This converts the RPC language file `'/myrpc'` into all four file types, `*XDR`, `*HDR`, `*CLTSTUB` and `*SVRSTUB`. The default `PROTOCOL(*TCP)` is used to generate the server-side stub programs. The files are placed into the following file names:

- `myrpc.h` for a header file
- `myrpc_xdr.c` for an XDR file
- `myrpc_clnt.c` for client-side stubs
- `myrpc_svc.c` for server-side stubs

Example 2: Convert RPC Source to Client Stubs Only

```
CVTRPCSRC FROMFILE('/myrpc2') OPTION(*CLTSTUB)
          TOFILE('/myclnt.c')
```

This converts the RPC language file `'/myrpc2'` into client-side stub procedures. The results are placed into the file `'/myclnt.c'` as specified.

Top

Error messages

*ESCAPE Messages

CPFB416

CVTRPCSRC or RPCGEN command failed.

Top

Convert TCP/IP CL Source (CVTTCPCL)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Convert TCP/IP CL Source (CVTTCPCL) command is used to convert TCP/IP commands from releases prior to Version 3 Release 1 Modification 0 (V3R1M0) to the command syntax for the current release. The pre-V3R1M0 TCP/IP CL commands to be converted must exist in a source physical file.

The following commands are converted based on their specified parameter values. In some cases you may need to manually update the commands after conversion. Messages are issued to help identify the command statements that require manual updates.

- ADDTCPLNK
- CHGTCPLNK
- RMVTCPLNK
- STRTCPLNK
- ENDTCPLNK
- ADDTCP RTE
- CHGTCPRTE
- RMVTCPRTE
- ADDTCP PORT
- RMVTCPPORT
- ADDTCP RSI
- RMVTCPRSI
- CHGTCPA
- ENDTCPCNN
- STRTCP TELN
- CHGVT1MAP
- SETVT1MAP
- DSPVT1MAP
- ENDSBS SBS(QTCP)
- STRSBS SBS(QTCP/QTCP)

The CVTTCPCL command creates a printer file with the name CVTTCPCL. This printer file contains a report that indicates the success or failure of the source file conversion.

If a printer device file with the name CVTTCPCL is found in the job's library list when the CVTTCPCL command is issued, that printer device file is used to create the printer file. Otherwise, the CVTTCPCL command uses the Override with Printer File (OVRPRTF) command to use printer device file QSYS/QSYSPRT to create the printer file.

Note: Use the Create Printer File (CRTPRTF) command to create a printer device file.

Successful conversions of TCP/IP command source are noted in the report with the message:

TCP1E08 Member has been converted.

Informational messages are printed for unsuccessful command conversions. (Informational messages are also sent to the job log during conversion, and a single escape message is sent when the CVTTCPL command has completed if any informational messages have been sent.) Some examples of functions that cannot be converted and may be printed as informational messages in the report are:

```
TCP1E07 Command &1 cannot be converted
TCP1E10 Parameter keyword cannot be converted in command &1
```

The user can write a program, perhaps by using the Copy Spooled File (CPYSPLF) command, to process the report based on the success or failure of the conversion.

Top

Parameters

Keyword	Description	Choices	Notes
FROMFILE	From file	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: From file	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
TOFILE	To file	<i>Qualified object name</i>	Required, Positional 2
	Qualifier 1: To file	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
FROMMBR	From member	Single values: *ALL Other values (up to 50 repetitions): <i>Generic name, name</i>	Required, Positional 3

Top

From file (FROMFILE)

Specifies the CL source file containing TCP/IP commands to be converted.

Qualifier 1: From file

name Specify the name of the CL source file to convert.

Qualifier 2: Library

***LIBL** All libraries in the job's library list are searched until the first match is found.

*CURLIB

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library to be searched.

Top

To file (TOFILE)

Specifies the file in which the converted source is placed. It must be different than the name of the FROMFILE parameter.

Qualifier 1: To file

name Specify the name in which the converted source file is placed.

Qualifier 2: Library

***LIBL** All libraries in the job's library list are searched until the first match is found.

***CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

name Specify the name of the library to be searched.

Top

From member (FROMMBR)

Specifies the member of the source file member to convert.

***ALL** All members of the specified source file are converted to V3R1M0 TCP/IP command syntax if possible.

generic-name

Specify the generic name of the source file members to convert. A generic name is a character string of one or more characters followed by an asterisk (*); for example, ABC*. The asterisk substitutes for any valid characters. A generic name specifies all objects with names that begin with the generic prefix for which the user has authority. If an asterisk is not included with the generic (prefix) name, the system assumes it to be the complete object name. If the complete object name is specified and multiple libraries are searched, multiple objects can be converted only if *ALL or *ALLUSR library values can be specified for the name. Only the first 50 members matching the generic name's criteria will be converted.

name Specify the names of the source file members to convert. Specify no more than 50 names.

Note that the only source members that are processed are those with a member type of CL, CLP, or TXT. Members in the FROMFILE with any other value for the member type are ignored by the CVTTCPCCL command. If a source member is processed, the name of the converted source member in the TOFILE will be the same as the member name in the FROMFILE.

Top

Examples

```
CVTTCPCCL FROMFILE(OLDLIB/QCLSRC) TOFILE(NEWLIB/QCLSRC)
          FROMMBR(TCPPGM1 TCPPGM2 TCPPGM3)
```

This command converts all TCP/IP commands in the three members (TCPPGM1, TCPPGM2, TCPPGM3) of a CL source file (QCLSRC) located in library OLDLIB, to their new command names and formats. The converted source file members are located in QCLSRC, in library NEWLIB. The converted members keep their original member names, TCPPGM1, TCPPGM2, and TCPPGM3.

Top

Error messages

*ESCAPE Messages

CPF9801

Object &2 in library &3 not found.

CPF9810

Library &1 not found.

TCP1E02

File &1 in library &2 not found.

TCP1E03

File &1 in library &2 not a source file.

TCP1E06

Specified TOFILE same as FROMFILE.

Top

Convert To Folder (CVTTOFLR)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Convert To Folder (CVTTOFLR) command converts a virtual disk into a folder and PC documents. The files and directories on the virtual disk are copied into the specified folder, which becomes the root directory.

Note: Do not precede an entry with an asterisk unless that entry is a "special value" that is shown (on the display itself or in the help information) with an asterisk.

Error messages for CVTTOFLR

*ESCAPE Messages

IWS1613

Virtual disk converted. Errors occurred.

IWS1614

Unable to convert virtual disk to folder.

*STATUS Messages

IWS1621

Converting virtual disk to folder.

Top

Parameters

Keyword	Description	Choices	Notes
FROMVDSK	From virtual disk	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: From virtual disk	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
TOFLR	To folder	<i>Character value</i>	Required, Positional 2
REPLACE	Replace documents	*NO , *YES	Optional, Positional 3

Top

From virtual disk (FROMVDSK)

Specifies the name and library of the virtual disk that is converted.

This is a required parameter.

The possible library values are:

***LIBL** The library list is used to locate the virtual disk.

***CURLIB**

The current library for the job is used to locate the virtual disk. If no current library entry exists in the library list, QGPL is used.

library-name

Specify the library where the virtual disk is located.

Top

To folder (TOFLR)

Specifies the name of the folder that the virtual disk is converted to. This can be a fully qualified path name.

All the files and directories in the virtual disk are converted. All folders except the last folder in the path must already exist. If the last folder does not exist, it is created.

This is a required parameter.

Top

Replace documents (REPLACE)

Specifies if an existing document should be replaced when a file on the virtual disk has the same name as the document.

***NO** It is not replaced.

***YES** The existing document is replaced by the file from the virtual disk.

Warning:

All documents that have the same name as files on the virtual disk will be replaced without any error messages being sent.

Top

Examples

None

Top

Error messages

***ESCAPE Messages**

IWS1613

Virtual disk converted. Errors occurred.

IWS1614

Unable to convert virtual disk to folder.

***STATUS Messages**

IWS1621

Converting virtual disk to folder.

Convert User Certificate (CVTUSRCERT)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Convert User Certificate (CVTUSRCERT) command allows converting of user certificates from being stored and mapped locally on the system to using Enterprise Identity Mapping (EIM) for mapping and Lightweight Directory Access Protocol (LDAP) for storage.

Restrictions:

- You must have all object (*ALLOBJ) and security administrator (*SECADM) special authorities.
- Prior to running this command, the digital ID configuration must have been set using the Set Digital ID Configuration Information (QsySetDigitalIDConfig) API or Digital Certificate Manager (DCM).
- You must have configured this system to participate in an EIM domain.
- You must have set the system connection information using the Set EIM Connect Information (QsySetEIMConnectInfo) API or the EIM configuration GUI.
- For the user profile specified on the command, there must be a target association to an EIM identifier for the local registry that was specified when the system was configured to participate in an EIM domain.

Top

Parameters

Keyword	Description	Choices	Notes
USRPRF	User profile	<i>Simple name</i>	Required, Positional 1
OPTION	Option	<i>*CVTRMV, *RMV, *CVT</i>	Optional, Positional 2

Top

User profile (USRPRF)

Specifies the user profile whose certificates are to be converted.

This is a required parameter.

simple-name

Specify the user profile name.

Top

Option (OPTION)

Specifies the option to be performed on the user certificate.

*CVTRMV

Convert the mapping information to use EIM and move the certificates themselves into LDAP. The existing certificates and mapping information will be removed from the user profile.

*RMV Remove the mapping information and certificates from the user profile.

*CVT Copy the mapping information to EIM and certificates into LDAP. The existing certificates and mapping information will remain in the user profile.

Top

Examples

```
CVTUSRCERT USRPRF(JOHNSON) OPTION(*CVTRMV)
```

This command converts all digital certificates for user profile JOHNSON to use EIM for mapping information and LDAP for storing the certificates. The certificates and mapping information currently stored with the user profile will be removed.

Top

Error messages

*ESCAPE Messages

CPF2204

User profile &1 not found.

CPF2213

Not able to allocate user profile &1.

CPF2225

Not able to allocate internal system object.

CPF222E

&1 special authority is required.

CPF4AB9

User certificate function not successful.

Top

Data (DATA)

Where allowed to run:

- Batch job (*BATCH)

Threadsafe: No

Parameters
Examples
Error messages

The Data (DATA) command must be used in an input stream to indicate the beginning of an inline data file. This input stream is read by a spooling reader. The Data (DATA) command also specifies what delimiter must be used to indicate the end of the data file. Inline data files exist only during this job, after the job is finished, they are destroyed. Unnamed inline files can be used only once in the job.

Restrictions

1. The DATA command cannot be run from a work station.
2. The DATA command must have two slashes (//) in positions 1 and 2 of the data record.
3. Blanks can separate the slashes from the command name (//DATA).

Top

Parameters

Keyword	Description	Choices	Notes
FILE	Input file	<i>Name</i> , <u>QINLINE</u>	Optional, Positional 1
FILETYPE	File type	<u>*DATA</u> , *SRC	Optional, Positional 2
ENDCHAR	Characters for end of data	<i>Character value</i> , <u>'//'</u>	Optional, Positional 3
IGCDTA	User specified DBCS data	<u>*NO</u> , *YES	Optional

Top

Input file (FILE)

Specifies the name of the inline data file. This name is also specified in the program that processes the file.

QINLINE

The name of the inline data file is QINLINE. The file is processed as an unnamed inline file. An unnamed file can be processed if the program specifies QINLINE as the file name, or if the device file that specifies *YES on the **Spool the data (SPOOL)** parameter is opened for input. Unnamed inline files can be used only once by the job.

name Specify the name of the inline data file used by one or more programs in the job. The file is connected to the program when the program opens the file by specifying its file name. Named inline data files can be accessed more than once by the job.

Top

File type (FILETYPE)

Specifies whether the inline data following this command is put in the standard format for source files or in the data file format. The standard source file format is a sequence number (a 6-character source number) followed by the 6-character system date that goes before the data.

*DATA

The inline data is not in the standard format for source files. The data file is passed to the program, which uses it in the data format.

***SRC** The inline data is numbered in sequence; it is a source file that can be used to create another file or a program.

Top

Characters for end of data (ENDCHAR)

Specifies a string of characters used to indicate the end of an inline data file. To be recognized, the character string must begin in position 1 of the record. If you specify a character string other than // (the default value) as the delimiter, all records up to the end-of-file record (the record containing the specified character string starting in column 1) are treated as data. This allows you to embed reader commands in the data stream. The end-of-file record for ENDCHAR values (which are not default values) is not put to the data file, and it is not checked to see if it is a valid reader command. It is used only to determine the end of the data stream and then it is discarded.

///
The default value is two slashes. The command works the same way whether two slashes are coded into the parameter or the parameter itself is defaulted. Using the default, the slashes in positions 1 and 2 of a record (in either a data file or a source file) identify the first record beyond the file.

character-value

A character string (up to 25 characters long and enclosed in apostrophes) can be entered to identify the last record in the file. The character string can contain both alphanumeric and special characters. If a character combination other than '///
is specified on the **Characters for end of data (ENDCHAR)** parameter, reader commands can be safely embedded in the data. The reader ignores all other data while searching for the specified string, including reader commands.

Top

User specified DBCS data (IGCDTA)

Specifies whether the inline data following this command may contain double-byte character set (DBCS) data.

*NO The inline file does not contain any DBCS data.

***YES** The inline file may contain DBCS data.

Top

Examples

Example 1: Inline Data File in Data File Format

```
//DATA FILE(FILE1)
```

This command assigns the name FILE1 to the data that follows it, until an end of inline data condition is found (two slashes in positions 1 and 2).

Example 2: Specifying an End Character String

```
//DATA FILE(FILE2) ENDCHAR('STOPIT')
```

This command assigns the name FILE2 to the data following it; the file continues until a record is found that contains the characters STOPIT in positions 1 through 6. This delimiter allows the //BCHJOB, //ENDBCHJOB, and //DATA commands and records with // in positions 1 and 2 to be embedded in an inline file.

Example 3: Specifying a File Containing DBCS Data

```
//DATA FILE(FILE3) IGCDTA(*YES)
```

This command assigns the name FILE3 to the data that follows it. This file can contain DBCS data.

[Top](#)

Error messages

*ESCAPE Messages

CPF1753

Command cannot be run.

[Top](#)

Copy To LDIF (DB2LDIF)

Where allowed to run: All environments (*ALL)
Threadsafe: Yes

Parameters
Examples
Error messages

The Copy To LDIF (DB2LDIF) command is used to copy the directory contents of a Directory Server instance to a LDAP Data Interchange Format (LDIF) file. The Directory Server provides a Lightweight Directory Access Protocol (LDAP) server on i5/OS.

Restriction: You must do or satisfy one of the following conditions to use this command:

- Have all object (*ALLOBJ) and input/output system configuration (*IOSYSCFG) special authorities.
- Supply the administrator distinguished name and password.
- Be a Directory Services administrator. The caller is a Directory Services administrator if the Directory Services server has been configured to grant administrator access to authorized users and the caller is authorized to the 'Directory Services Administrator' function of the operating system.

Top

Parameters

Keyword	Description	Choices	Notes
INSTANCE	Instance	Name, <u>QUSRDIR</u>	Optional, Positional 2
LDIFSTMF	LDIF stream file	Path name	Required, Positional 1
ADMIN	Administrator	Element list	Optional
	Element 1: Distinguished name	Character value	
	Element 2: Password	Character value	
SUBTREE	Subtree distinguished name	Character value, * <u>ALL</u>	Optional
LOCALHOST	Copy cn=localhost	* <u>NOCOPY</u> , *COPY	Optional
PWDPOLICY	Copy cn=pwdpolicy	* <u>NOCOPY</u> , *COPY	Optional
NESTRPLC	Copy nested replication	* <u>COPY</u> , *NOCOPY	Optional
OPRATR	Copy operational attributes	* <u>COPY</u> , *NOCOPY	Optional
PASSPHRASE	Passphrase	Character value	Optional
ENCSALT	Encryption salt	Character value	Optional

Top

Instance (INSTANCE)

Specifies the Directory Server instance whose directory entries are to be copied.

QUSRDIR

The name of the system default Directory Server instance.

name Specify the Directory Server instance name. The name has a minimum of one character and a maximum of eight characters.

LDIF stream file (LDIFSTMF)

Specifies the integrated file system path to the LDAP Data Interchange Format (LDIF) stream file.

This is a required parameter.

path-name

Specify the path name of the LDIF stream file to contain the copy of the Directory Server instance directory entries.

Top

Administrator (ADMIN)

Specifies the Directory Server administrator. If not specified, the user must have all object (*ALLOBJ) and input/output system configuration (*IOSYSCFG) special authorities.

Element 1: Distinguished name

character-value

Specify the distinguished name for the Directory Server administrator, for example, cn=administrator. A maximum of 50 characters is allowed.

Element 2: Password

character-value

Specify the password for the Directory Server administrator. The password is case sensitive and must be enclosed in apostrophes. A maximum of 50 characters is allowed.

Top

Subtree distinguished name (SUBTREE)

Specifies the distinguished name (DN) of the root of a directory subtree to copy to the LDAP Data Interchange Format (LDIF) stream file. This object, and all descendant objects will be copied.

***ALL** To copy the entire directory tree.

character-value

Specify the subtree distinguished name to be copied. A maximum of 50 characters is allowed.

Top

Copy cn=localhost (LOCALHOST)

Specifies whether data located under the distinguished name cn=localhost is copied to the LDAP Data Interchange Format (LDIF) stream file.

***NOCOPY**

The contents of cn=localhost are not copied to the LDIF stream file.

***COPY**

The contents of cn=localhost are copied to the LDIF stream file.

Top

Copy cn=pwdpolicy (PWDPOLICY)

Specifies whether data located under the distinguished name cn=pwdpolicy is copied to the LDAP Data Interchange Format (LDIF) stream file.

*NOCOPY

The contents of cn=pwdpolicy are not copied to the LDIF stream file.

*COPY

The contents of cn=pwdpolicy are copied to the LDIF stream file. This can only be specified when *ALL is used for the subtree DN (SUBTREE) parameter.

Top

Copy nested replication (NESTRPLC)

Specifies whether nested replication contexts are copied to the LDAP Data Interchange Format (LDIF) stream file. For example, if a directory contains the replication contexts o=acme and cn=external users,o=acme, this option can be used to copy data under the distinguished name o=acme while excluding all entries under the distinguished name cn=external users,o=acme.

*COPY

Data from nested replication contexts is copied to the LDIF stream file.

*NOCOPY

Data from nested replication contexts is not copied to the LDIF stream file. This can only be specified if a subtree DN (SUBTREE) is specified.

Top

Copy operational attributes (OPRATR)

Specifies whether the following four operational attributes are copied to the LDAP Data Interchange Format (LDIF) stream file:

- creatorsName
- createTimestamp
- modifiersName
- modifyTimestamp.

*COPY

The operational attributes are copied to the LDIF stream file.

*NOCOPY

The operational attributes are not copied to the LDIF stream file.

Top

Passphrase (PASSPHRASE)

Specifies the Advanced Encryption Standard (AES) passphrase to be used to encrypt any encrypted information stored in the LDAP Data Interchange Format (LDIF) stream file. This passphrase must match the passphrase used by the Directory Server instance that will copy the information from this LDIF stream file. This should only be specified if the target Directory Server instance is using AES encryption to encrypt data.

character-value

Specify the passphrase. A minimum of 12 characters and maximum of 1016 characters is allowed. The passphrase is case sensitive, therefore characters must be enclosed in apostrophes. Valid characters are:

```
! # $ % & ' ( ) * + , - . / ? > = < ; : _  
" % & ' ( ) * + , - . / ? > = < ; : _  
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z  
a b c d e f g h i j k l m n o p q r s t u v w x y z  
0 1 2 3 4 5 6 7 8 9
```

Top

Encryption salt (ENCSALT)

Specifies the Advanced Encryption Standard (AES) salt to be used to encrypt any encrypted information stored in the LDAP Data Interchange Format (LDIF) stream file. The encryption salt must match the encryption salt used by the Directory Server instance that will copy the information from the LDIF stream file created by the command. This should only be specified if the target Directory Server instance is using AES encryption to encrypt data.

character-value

Specify the encryption salt. Exactly 12 characters must be used. The encryption salt is case sensitive, therefore characters must be enclosed in apostrophes. Valid characters are:

```
! # $ % & ' ( ) * + , - . / ? > = < ; : _  
" % & ' ( ) * + , - . / ? > = < ; : _  
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z  
a b c d e f g h i j k l m n o p q r s t u v w x y z  
0 1 2 3 4 5 6 7 8 9
```

Top

Examples

Example 1: Copy Entire QUSRDIR Directory

```
DB2LDIF      INSTANCE(QUSRDIR) LDIFSTMF('/ldap/qusrdir.ldif')
```

This command copies the entries from the Directory Server directory for the QUSRDIR instance to the **qusrdir.ldif** stream file in the **ldap** directory. The user running the command this way must have all object (*ALLOBJ) and input/output system configuration (*IOSYSCFG) special authorities.

Example 2: Copy the o=ibm Subtree Only

```
DB2LDIF      INSTANCE(QUSRDIR) LDIFSTMF('/ldap/ibmsubtree.ldif')  
              SUBTREE('o=ibm') ADMIN('cn=admin' 'secret')
```

This command copies the o=ibm subtree entries from the Directory Server directory for the QUSRDIR instance to the **ibmsubtree.ldif** stream file in the **ldap** directory.

Example 3: Copy the cn=localhost Entries

```
DB2LDIF      INSTANCE(DOGGIES)  
              LDIFSTMF('/ldap/include/local.ldif')  
              SUBTREE(*ALL) LOCALHOST(*COPY)  
              ADMIN('cn=fluffy' 'poodle')
```

This command copies the entries from the Directory Server directory for the DOGGIES instance including the entries in cn=localhost to the **includelocal.ldif** stream file in the **ldap** directory.

[Top](#)

Error messages

***ESCAPE Messages**

GLD0202

Administrator DN or password not correct.

GLD0213

Error opening or creating file.

GLD0215

Directory server instance &1 not found.

GLD0218

Not enough authority or incorrect distinguished name and password specified.

GLD022B

Cannot find object &1.

GLD0234

Export subtree is not a replication context.

GLD0413

Validation list entry error occurred.

[Top](#)

Declare CL Variable (DCL)

Where allowed to run:

- Batch program (*BPGM)
- Interactive program (*IPGM)

Parameters
Examples
Error messages

Threadsafe: Yes

The Declare CL Variable (DCL) command defines the Control Language (CL) program variables that are used in a CL program or ILE CL procedure. CL variables are used to store and update data and to receive parameters from another program on a call. CL variables are known by name only within the program that declares them. They cannot be used outside a CL program or ILE CL procedure except when they are referred to by some commands (such as the DSPPGMVAR command) used for debugging programs. However, the value in the variable can be passed to another program as a parameter. If a variable is declared, but not referred to by another command in a CL program or ILE CL procedure, the variable is not included in the program when it is compiled. Each DCL command defines the attributes of one CL variable and declares its name in the program in which it is used.

Each CL variable in a program must be identified by one of the two declare commands. The Declare File (DCLF) command declares CL variables for display device files and database files. The DCL command declares all other CL variables.

Restrictions: The DCL command is valid only within a CL program or ILE CL procedure. All declare commands (DCL, COPYRIGHT, DCLF, and DCLPCOPT) must follow the PGM (Program) command and must precede all other commands in the program. The four types of declare commands can be intermixed in any order.

Top

Parameters

Keyword	Description	Choices	Notes
VAR	CL variable name	<i>CL variable name</i>	Required, Positional 1
TYPE	Type	*DEC, *CHAR, *LGL, *INT, *UINT, *PTR	Required, Positional 2
STG	Storage	* AUTO , *BASED, *DEFINED	Optional
LEN	Length of variable	<i>Element list</i>	Optional, Positional 3
	Element 1: Length	<i>Integer</i>	
	Element 2: Decimal positions	<i>Integer</i>	
VALUE	Initial value	<i>Character value</i>	Optional, Positional 4
BASPTR	Basing pointer variable	<i>CL variable name</i>	Optional
DEFVAR	Defined on variable	<i>Element list</i>	Optional
	Element 1: CL variable name	<i>CL variable name</i>	
	Element 2: Position	1-32767, <u>1</u>	
ADDRESS	Address	<i>Element list</i>	Optional
	Element 1: CL variable name	<i>CL variable name</i>	
	Element 2: Offset	0-32766, <u>0</u>	

CL variable name (VAR)

Specifies the CL variable to be declared in the CL program or ILE CL procedure. The variable exists only within the program in which it is defined. It can be passed as a parameter on a call to another program, in which case it can be processed by the called program. The name must start with an ampersand (&).

This is a required parameter.

Top

Type (TYPE)

Specifies the type of value contained in the CL variable to be declared. The value for this parameter cannot be specified by a CL variable.

This is a required parameter.

***DEC** A decimal variable that contains a packed decimal value.

***CHAR**

A character variable that contains a character string value.

***LGL** A logical variable that contains a logical value of either '1' or '0'.

***INT** An integer variable that contains a signed binary value.

***UINT**

An integer variable that contains a unsigned binary value.

***PTR** A pointer variable that contains an address.

Top

Storage (STG)

Specifies the storage type of the variable. The value for this parameter cannot be specified by a CL variable.

***AUTO**

The storage for this variable is allocated in automatic storage.

***BASED**

The storage for this variable is based on the pointer variable specified on the **Basing pointer variable (BASPTR)** parameter. A based CL variable cannot be used unless the basing pointer variable has been set to a valid address.

***DEFINED**

The storage for this variable is provided by the CL variable specified on the **Defined on variable (DEFVAR)** parameter.

Top

Length of variable (LEN)

Specifies the length of the CL variable to be declared. If the variable is a decimal value, the number of decimal digits to the right of the decimal point can be optionally specified. The value for this LEN parameter cannot be specified by a CL variable.

Note: If *PTR is specified for the TYPE parameter, you cannot specify a value for this parameter. Pointers have a fixed length of 16 bytes.

Element 1: Length

length For character or integer CL variables, specify the number of bytes for the CL variable. For decimal CL variables, specify the maximum number of digits for the CL variable. The length cannot be greater than the maximum for this type of variable. The length must be either 2 or 4 for integer CL variables.

Element 2: Decimal positions

decimal-positions

This element is valid only for *decimal* variables. The length of the value in the variable includes the number of decimal positions in the value. The maximum length of the decimal value is 15 digits, including the digits to the right of the decimal point. Up to nine decimal positions can be specified. If nine decimal positions are specified, the value to the *left* of the decimal point can never be greater than 999,999 because only 6 of the 15 digits are left for the integer value.

If a length (in digits) is specified for a decimal variable and the number of decimal positions is not specified, 0 decimal positions is assumed.

The maximum lengths for each of the five types are:

- Decimal — 15 digits, 9 decimal positions
- Character — 32767 bytes

Note: The initial value (specified for the VALUE parameter) of a CL variable can be no greater than 5000 characters.

- Logical — 1 byte
- Integer — 4 bytes
- Unsigned integer — 4 bytes

The default lengths for each of the five types are:

- Decimal — 15 digits, 5 decimal positions
- Character — 32 bytes
- Logical — 1 byte
- Integer — 4 bytes
- Unsigned integer — 4 bytes

Note: For decimal and character types, the default length is the same as the length of the initial value, if one is specified in the VALUE parameter.

Top

Initial value (VALUE)

Specifies the initial value that is assigned to the CL variable when it is declared in the program. The value must be of the type specified by the TYPE parameter. If no value is specified, a character variable is set to blanks, a decimal, integer, or unsigned integer variable is set to a value of zero, and a logical variable is set to '0'. The value for the VALUE parameter cannot be specified by a CL variable.

The VALUE parameter may not be specified for *PTR CL variables, or CL variables declared with *DEFINED or *BASED specified for the **Storage (STG)** parameter.

If the name of the declared variable is specified for the PARM parameter of the PGM command in the same program in which the variable is declared, an initial value *cannot* be specified for the variable. In that case, the variable receives its value from the calling program.

Top

Basing pointer variable (BASPTR)

Specifies the basing pointer for a CL variable declared with storage of *BASED.

Note: This parameter must be specified if *BASED is specified for the **Storage (STG)** parameter.

CL-variable-name

Specify the name of a CL variable declared as TYPE(*PTR) which will serve as the basing pointer for the based CL variable being declared. This pointer must be initialized to a value before the based variable can be used.

The name must start with an ampersand (&).

Top

Defined on (DEFVAR)

Specifies the CL variable that the variable being declared is to be defined on.

Note: This parameter must be specified if *DEFINED is specified for the **Storage (STG)** parameter.

Note: A variable declared as STG(*DEFINED) cannot extend beyond the last byte of of the CL variable that it is defined on.

Element 1: CL variable name

CL-variable-name

Specify the name of the CL variable that the variable being declared is defined on.

Element 2: Starting position

1 The variable being declared starts at the beginning of the defined-on variable.

1-32767

Specify the starting position of the variable being declared from the beginning of the defined-on variable.

Top

Address (ADDRESS)

Specifies the initial address for a CL variable declared with *PTR as the TYPE value.

Note: A value cannot be specified for this parameter unless the variable being declared is a pointer variable and *AUTO is specified for the STG parameter.

Element 1: CL variable name

CL-variable-name

Specifies the name of a CL variable which is to be the initial address for the pointer variable.

The name must start with an ampersand (&).

Element 2: Offset

0 The pointer variable is set to the first byte of the CL variable being addressed.

0-32766

Specify the number of bytes from the beginning of the variable being address that the pointer is to be set.

Top

Examples

Example 1: Specifying the CL Variable Length

```
DCL &ABLE *DEC LEN(5 2)
```

This command declares a CL variable named &ABLE that contains a decimal value. The value can never be greater than 999.99 because LEN specifies up to 5 digits, of which two are to the right of the decimal point. Because the VALUE parameter was not specified, and it is a numeric value, &ABLE is set to a value of zero (000.00).

Example 2: Specifying a Logical Value

```
DCL &SWITCH *LGL
```

This command declares a CL variable named &SWITCH to contain a logical value. Because the type parameter specifies logical, the variable is one character long and it is set to '0'.

Example 3: Specifying Initial Value of CL Variable

```
DCL &FILNAM *CHAR VALUE(FILEA)
```

This command declares a CL variable named &FILNAM whose value is FILEA. Because the value contains 5 characters and the LEN parameter was not specified, the length of the variable is also 5 characters.

Example 4: Specifying Defined CL Variables

```
DCL &QUALOBJ *CHAR LEN(20)
DCL &OBJ *CHAR LEN(10) STG(*DEFINED) DEFVAR(&QUALOBJ 1)
DCL &LIB *CHAR LEN(10) STG(*DEFINED) DEFVAR(&QUALOBJ 11)
```

The first DCL command declares a 20-character variable in the program's automatic storage. The second DCL command declares a variable named &OBJ which refers to the first 10 characters of the &QUALOBJ variable. The last DCL command declares a variable named &LIB which can be used to reference the last 10 characters of the &QUALOBJ variable.

Example 5: Specifying Pointer CL Variables

```
DCL &CHAR *CHAR LEN(10)
DCL &PTR *PTR ADDRESS(&CHAR)
```

The second DCL command declares a pointer variable which is initialized to point to the &CHAR variable in the program's automatic storage.

Example 6: Specifying Based CL Variables

```
DCL &PTR *PTR
DCL &CHAR *CHAR LEN(10) STG(*BASED) BASPTR(&PTR)
```

The second DCL command declares a character variable which is found at the location addressed by the &PTR variable. Before the &CHAR variable can be used, the &PTR variable must be initialized to a valid address by using the %ADDRESS built-in function.

Example 7: Specifying Defined Pointer CL Variables

```
DCL &CHAR *CHAR LEN(48)
DCL &PTR *PTR STG(*DEFINED) DEFVAR(&CHAR 17)
```

The second DCL command declares a pointer variable in bytes 17 through 32 of the variable &CHAR.

[Top](#)

Error messages

None

[Top](#)

Declare File (DCLF)

Where allowed to run:

- Batch program (*BPGM)
- Interactive program (*IPGM)

Threadsafe: Yes

Parameters
Examples
Error messages

The Declare File (DCLF) command declares one file (by name) to a Control Language (CL) program. Up to five DCLF commands are allowed in a CL program or ILE CL procedure. Each DCLF command specifies the name of a display file or database file, the file record formats to be used in the program, and an optional **open file identifier** which is used to uniquely identify the declared instance of the file within the CL program or ILE CL procedure. Multiple DCLF commands can reference the same file, so long as the value specified for the **Open file identifier (OPNID)** parameter is unique. Following the DCLF command for a file, the CL program or ILE CL procedure can contain data manipulation commands. For display files, the following commands can be used to send data to a workstation and receive data from a workstation: Send File (SNDF), Receive File (RCVF), Send/Receive File (SNDRCVF), End Receive (ENDRCV), and Wait (WAIT). For database files, the RCVF command can be used to read records from the file.

When the CL program or ILE CL procedure is compiled, a CL variable is automatically declared for each field in each record format used in the program. If the file is a record-level database file, the record format contains one field with the name of that record format. If the value specified for the OPNID parameter is *NONE, the variable name is the field name prefixed with an ampersand (&). If the OPNID parameter value is not *NONE, the variable name is the field name prefixed with an ampersand (&), the value specified for the OPNID parameter, and an underscore.

For example, if a declared file has a record format with field CUSTNAME and the open file identifier specified on the DCLF command was FILE1, the declared variable would be:

```
&FILE1_CUSTNAME
```

The attributes of each declared field are the same as the attributes of the field in the file record format. Fields defined in the record format as numeric are defined as decimal variables. Indicators defined in the referenced file record format are declared as logical variables with a variable name in the form INnn, where 'nn' is the indicator number.

Variables automatically declared by the DCLF command can be used in the program the same as the variables declared by a DCL command. For example, indicators can be used in expressions and IF statements because they are declared as logical variables.

The content of the variables, not the variable names, are seen by the user; the display shows one, some, or all of the fields in the record format that can be filled in by the user. DDS determines the display format.

Restrictions:

- This command is valid only within a CL program or ILE CL procedure. All declare commands (DCL, COPYRIGHT, DCLF, and DCLPCOPT) must follow the PGM (Program) command and must precede all other commands in the program. The four types of declare commands can be intermixed in any order.
- The file must either be a database file with only one record format or be a display file.

- The file cannot be a mixed file, even if only display devices are defined for that mixed file.
- The database file can be either physical or logical, and can be either field-level or nonfield level.
- The referenced file must exist before the program is created.

Because CL variables are automatically declared for each field in a referenced file's record formats, the following restrictions apply:

- If the file is changed (and the file description specifies that level checking is to be performed), the CL program or ILE CL procedure must be recompiled to match the new file description. More information on level checking is in the Database category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/> and the Application Display Programming book, SC41-5715.
- If any field name is defined in more than one record format of the display file, the attributes in each record format for the commonly named field must match.
- Any CL variable declared in the program by a DCL command with the same name as an automatically declared CL variable (for a referenced field) must also have the same attributes specified in DDS for the referenced field.
- The variables used in the file must have data types supported for CL variables. Fields defined as packed decimal format or zoned decimal format are declared as decimal variables. Fields defined as binary format are declared as decimal variables by default, but will be declared as integer variables only if all of the following conditions are true:
 - *INT is specified for the **Declare binary fields (DCLBINFLD)** parameter.
 - The field size is less than 10 digits.
 - The field precision is 0.

The variables used in the file must have attributes that are valid for CL variables. For decimal variables, the limits are 15 digits and 9 decimal positions. For variables with more than 15 digits, CL will declare a character variable that is the number of digits, divided by 2, plus 1 ($n / 2 + 1$) in length. A CPI0306 message will be issued stating that the conversion has taken place, which can be seen in the program listing. For character variables, the limit is 32767 bytes.

Additional Considerations:

File processing is handled differently in a CL program or ILE CL procedure, depending on whether the file specified in the DCLF command is a display file or a database file.

The following statements apply if the file is a **display device file** at compile time:

- The file must be a display device file at run time.
- The program may contain any or all of the following commands: SNDF, RCVF, SNDRCVF, ENDRCV, and WAIT.
- The file is opened for input and output.

The following statements apply if the file is a **database file** at compile time:

- The file must be a database file with a single record format at run time.
- The program may contain only RCVF commands; SNDF, SNDRCVF, ENDRCV, and WAIT commands are not allowed.
- The file is opened for input only.
- The file is implicitly opened when the RCVF command is run, not by using the Open Database File (OPNDBF) command.
- The file is implicitly closed when the CL program or ILE CL procedure ends, or explicitly closed by using the Close Database File (CLOSE) command within the same CL program or ILE CL procedure.

Top

Parameters

Keyword	Description	Choices	Notes
FILE	File	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: File	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
RCDFMT	Record format	Single values: <u>*ALL</u> Other values (up to 50 repetitions): <i>Name</i>	Optional, Positional 2
OPNID	Open file identifier	<i>Simple name, *NONE</i>	Optional
ALWVARLEN	Allow variable length fields	<u>*NO</u> , *YES	Optional
ALWNULL	Allow field value of null	<u>*NO</u> , *YES	Optional
ALWGRAPHIC	Allow graphic fields	<u>*NO</u> , *YES	Optional
DCLBINFLD	Declare binary fields	<u>*DEC</u> , *INT	Optional

Top

File (FILE)

Specifies the file to be used by the CL program or ILE CL procedure.

This is a required parameter.

Qualifier 1: File

name Specify the name of the file.

Qualifier 2: Library

*LIBL All libraries in the library list for the current thread are searched until the first match is found.

*CURLIB

The current library for the job is used to locate the file. If no current library entry exists in the library list, QGPL is used.

name Specify the library where the file is located.

Top

Record format (RCDFMT)

Specifies the names of one or more record formats contained in the file. These record formats are used by the Send File (SND F), Receive File (RCVF), and Send/Receive File (SNDRCVF) commands in the CL program or ILE CL procedure. Database files can be processed only by RCVF. CL variable names cannot be specified in RCDFMT; only names of record formats can be used. For every field and indicator in each record format specified in RCDFMT, one CL variable is automatically declared in the program.

Note: A physical file can contain only one record format. A logical file which has multiple record formats defined in DDS may be used if it is defined over only one physical file member. If the physical file contains more than one record format, an error message is sent and the compile procedure fails.

Single values

*ALL Every record format in the file, up to a maximum of 99, is to have its fields declared in the CL program as variables. If there are more than 99 record formats in the file, only the first 99 are used.

Other values (up to 50 repetitions)

name Specify the name of the file record format whose fields are to be declared as variables in the CL program or ILE CL procedure. CL variables cannot be used to specify the names.

Top

Open file identifier (OPNID)

Specifies the open file identifier to be associated with the file specified for the **File (FILE)** parameter. This identifier must be unique for all files declared in the CL program.

*NONE

The file does not have an open file identifier. Only one file can be declared in a CL program or ILE CL procedure with *NONE as the open file identifier.

simple-name

Specify the name to be used as the open file identifier for the file.

Top

Allow variable length fields (ALWVARLEN)

Specifies whether variable length fields are allowed in record formats.

*NO Variable length fields are not allowed in record formats.

*YES Variable length fields are allowed in record formats. CL variables declared for variable-length fields are handled as type *CHAR with length equal to 2 bytes plus the maximum field length. Following a RCVF on a variable-length field, the first 2 bytes in the CL variable contain the length of the data. The data received from the field is padded on the right with blanks to the maximum length allowed (32765 bytes).

Top

Allow field value of null (ALWNULL)

Specifies whether a field value of null is allowed.

*NO Values of null are not allowed. For each field containing a null value at RCVF time, a diagnostic message is sent with a single escape message for the entire record. Default values are placed in the CL variables.

*YES Values of null are allowed.

Top

Allow graphic fields (ALWGRAPHIC)

Specifies whether graphic data fields are allowed in record formats.

*NO Record formats cannot contain graphic data fields. A diagnostic message is sent at compile time if graphic data fields are supported in the file.

*YES Record formats can contain graphic data fields. CL variables declared for graphic data fields are handled as type *CHAR with length equal (in bytes) to the graphic data field length.

Top

Declare binary fields (DCLBINFLD)

Specifies whether variables declared for binary fields in the record format should be packed decimal or integer.

***DEC** CL variables declared for binary fields in the record format will use TYPE(*DEC).

***INT** CL variables declared for binary fields, with precision of zero and a length of 9 or less in the record format, will use TYPE(*INT).

Top

Examples

Example 1: Declaring Fields of All Record Formats as Variables

```
DCLF FILE(ABLE) RCDFMT(*ALL)
```

This command specifies that the file named ABLE is used by the CL program to pass data between the user and the program. Because no library was specified, the library list is used to locate the file. All the fields and indicators in all the record formats are automatically declared as variables, and data from any field in any record format (up through the first 99) in the file can be passed between the program and the user.

Example 2: Using Multiple Record Formats

```
DCLF FILE(BAKER) RCDFMT(REC2 REC6)
```

Display file BAKER is used by the CL program or ILE CL procedure to pass data between the user and the program. Assuming the library qualifier for FILE defaults to *LIBL, the library list is used to locate the file. Both the REC2 and REC6 record formats are used.

Example 3: Using an Open File Identifier

```
DCLF FILE(MYLIB/CHARLES) OPNID(CTLFIL1)
```

File CHARLES in library MYLIB is used by the the CL program or ILE CL procedure to read records from the database file. If the record format contains a field named CUSTNUMBER, the following variable will be declared:

```
&CTLFIL1_CUSTNUMBER
```

Top

Error messages

None

Top

Declare Processing Options (DCLPRCOPT)

Where allowed to run:

- Batch program (*BPGM)
- Interactive program (*IPGM)

Parameters
Examples
Error messages

Threadsafe: Yes

The Declare Processing Options (DCLPRCOPT) command lets you define compiler processing options. These options can control the behavior of the compiler or modify the attributes of the program or module object generated by the CL compiler.

You can use the DCLPRCOPT command to set compiler parameters in your CL source program instead of specifying the same parameters on the CL command used to invoke the CL compiler (CRTCLPGM, CRTCLMOD or CRTBNDCL).

- These parameters on DCLPRCOPT do not have default values. If no value is specified, the CL compiler uses the value specified or defaulted on the CL command used to invoke the CL compiler.
- Setting a parameter value on DCLPRCOPT will override any value specified or defaulted for the corresponding parameter on the CRTCLPGM, CRTCLMOD, or CRTBNDCL command.
- If a compiler listing is generated, the first page will show the compiler parameters passed in from the CL command used to invoke the CL compiler. Any of these parameters overridden by a DCLPRCOPT command will affect the generated CL program or CL module, but will not be reflected on the first page of the compiler listing.
- Some parameters and parameter values only apply to the original program model (OPM) CL compiler or the integrated language environment (ILE) CL compiler. For example, the ALWRTVSRC parameter is only applicable to the OPM CL compiler invoked by the CRTCLPGM command. Parameters or values specified on DCLPRCOPT which are not applicable to the CL compiler invoked to compile the CL source program are ignored.

Restrictions:

- This command is valid only within a CL program or ILE CL procedure. All declare commands (DCL, COPYRIGHT, DCLF, and DCLPRCOPT) must follow the PGM (Program) command and must precede all other commands in the program. The four types of declare commands can be intermixed in any order.
- Only one DCLPRCOPT command is allowed by the CL compiler; if multiple DCLPRCOPT commands are specified in the CL source program, message CPD0323 is sent and the compile fails.

Top

Parameters

Keyword	Description	Choices	Notes
SUBRSTACK	Subroutine stack depth	20-9999, <u>99</u>	Optional, Positional 1
LOG	Log commands	*JOB, *YES, *NO	Optional
ALWRTVSRC	Allow RTVCLSRC	*YES, *NO	Optional
TEXT	Text 'description'	<i>Character value</i> , *SRCMBRTEXT, *BLANK	Optional
USRPRF	User profile	*USER, *OWNER	Optional
AUT	Authority	<i>Name</i> , *LIBCRTAUT, *CHANGE, *ALL, *USE, *EXCLUDE	Optional

Keyword	Description	Choices	Notes
SRTSEQ	Sort sequence	Single values: *HEX, *JOB, *JOBRUN, *LANGIDUNQ, *LANGIDSHR Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Sort sequence	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
LANGID	Language ID	<i>Character value</i> , *JOBRUN, *JOB	Optional
STGMDL	Storage model	*SINGLVL, *TERASPACE	Optional
DFACTGRP	Default activation group	*YES, *NO	Optional
ACTGRP	Activation group	<i>Name</i> , *STGMDL, *NEW, *CALLER	Optional
BNDSRVPGM	Bind service program	Single values: *NONE Other values (up to 300 repetitions): <i>Element list</i>	Optional
	Element 1: Service program	<i>Qualified object name</i>	
	Qualifier 1: Service program	<i>Generic name, name</i> , *ALL	
	Qualifier 2: Library	<i>Name</i> , *LIBL	
	Element 2: Activation	*IMMED, *DEFER	
BNDDIR	Binding directory	Single values: *NONE Other values (up to 300 repetitions): <i>Qualified object name</i>	Optional
	Qualifier 1: Binding directory	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB, *USRLIBL	

Top

Subroutine stack depth (SUBRSTACK)

Specifies how many entries you want to allow on the subroutine stack. Each time a CALLSUBR (Call Subroutine) command is run, an entry is added on the subroutine stack. The entry is removed when a RTNSUBR (Return from Subroutine) or ENDSUBR (End Subroutine) command is run. The subroutine stack can have multiple entries when CALLSUBR commands are run from within a subroutine; a subroutine can invoke another subroutine or recursively invoke itself.

99 The maximum number of subroutine stack entries allowed when this CL program is run is 99.

20-9999

Specify the maximum number of subroutine stack entries allowed when this CL program is run.

Top

Log commands (LOG)

Specifies the logging options for a created CL program or module.

***JOB** Logging of commands in a running CL program depends on the status of the job's logging flag (see the LOGCLPGM parameter of the Change Job (CHGJOB) command). To list the logged commands, the logging level of the jobs must be 3 or 4.

A *YES or *NO value takes precedence over any value specified in the CHGJOB command.

***YES** The commands are logged in all cases.

***NO** The commands are not logged.

Top

Allow RTVCLSRC (ALWRTVSRC)

Specifies whether source for the CL program is saved with the program. Source that is saved can be retrieved later by using the Retrieve CL Source (RTVCLSRC) command.

Note: This parameter is only applicable if the CL source is compiled using the CRTCLPGM command. For CRTBNDCL and CRTCLMOD, any value specified for this parameter is ignored.

***YES** Source for the CL program is saved with the program.

***NO** Source for the CL program is not saved with the program.

Top

Text 'description' (TEXT)

Specifies text that briefly describes the compiled CL program or module object.

***SRCMBRTXT**

The text is taken from the source file member used to create the CL program or module. If the source file is an inline data file or a device file, the text is blank.

***BLANK**

Text is not specified.

character-value

Specify no more than 50 characters of text, enclosed in apostrophes.

Top

User profile (USRPRF)

Specifies whether the authority checking done while this program is running includes only the user who is running the program (*USER) or both the user running the program and the program owner (*OWNER). The profiles of the program user or both the program user and the program owner are used to control which objects can be used by the program, including the authority the program has for each object. Only the program owner or a user with all object (*ALLOBJ) special authority can change the user profile attribute after the program is created.

Note: This parameter is ignored if REPLACE(*YES) is specified and a program already exists with the name specified by the PGM parameter on the CRTCLPGM or CRTBNDCL command.

Note: This parameter is only applicable if the CL source is compiled using the CRTCLPGM or CRTBNDCL command. For CRTCLMOD, any value specified for this parameter is ignored.

***USER**

The program runs under the user profile of the program's user.

***OWNER**

The user profiles of both the program's owner and the program's user are used when the program is processed. The collective sets of object authority in both user profiles are used to find and access objects during program processing. Authority from the owning user profile's group profile is not included in the authority for the running program.

Top

Authority (AUT)

Specifies the authority you are granting to the users who do not have specific authority for the object, who are not on the authorization list, and whose user group has no specific authority for the object.

Note: This parameter is ignored when REPLACE(*YES) is specified and an object by the specified name already exists in the specified library.

*LIBCRTAUT

The system determines the authority for the object by using the value specified for the **Create authority (CRTAUT)** parameter on the Create Library (CRTLIB) command for the library containing the object to be created. If the value specified for the CRTAUT parameter is changed, the new value will not affect any existing objects.

*CHANGE

The user can perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. The user can change and perform basic functions on the object. *CHANGE authority provides object operational (*OBJOPR) authority and all data authority. If the object is an authorization list, the user cannot add, change, or remove users.

***ALL** The user can perform all operations except those limited to the owner or controlled by authorization list management (*AUTLMGT) authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user also can change ownership of the object.

***USE** The user can perform basic operations on the object, such as running a program or reading a file. The user cannot change the object. Use (*USE) authority provides object operational (*OBJOPR), read (*READ), and execute (*EXECUTE) authorities.

*EXCLUDE

The user cannot access the object.

name Specify the name of an authorization list to be used for authority to the object. Users included in the authorization list are granted authority to the object as specified in the list. The authorization list must exist when the object is created.

Top

Sort sequence (SRTSEQ)

Specifies the sort sequence table to be used for string comparisons for this CL program or module. The sort sequence value is used with the language identifier and the coded character set identifier of the job to determine the sort sequence table to use.

Single values

***HEX** A sort sequence table is not used. The hexadecimal values of the characters are used to determine the sort sequence.

***JOB** The sort sequence used is the SRTSEQ associated with the job when the CL program or module is created.

*JOBRUN

The sort sequence used is the SRTSEQ associated with the job when the CL program or module is run.

*LANGIDUNQ

The sort sequence table uses a unique weight for each character, and is the unique-weight sort table for the language specified for the LANGID parameter.

***LANGIDSHR**

The sort sequence table uses the same weight for multiple characters, and is the shared-weight sort sequence table associated with the language specified for the LANGID parameter.

Qualifier 1: Sort sequence

name Specify the name of the sort sequence table to be used with this CL program or module.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

name Specify the name of the library to be searched.

Top

Language ID (LANGID)

Specifies the language identifier to be used when SRTSEQ(*LANGIDUNQ) or SRTSEQ(*LANGIDSHR) is specified.

***JOBRUN**

The language ID used is the LANGID associated with the job when the CL program or module is run.

***JOB** The language ID used is the LANGID associated with the job when the CL program or module is created.

language-ID

Specify the language identifier to be used by the job.

Top

Storage model (STGMDL)

Specifies the storage model attribute of the ILE CL program.

Note: This parameter is only applicable if the CL source is compiled using the CRTBNDCCL command. For CRTCLPGM and CRTCLMOD, any value specified for this parameter is ignored.

***SNGLVL**

The program is created with single-level storage model. When a single-level storage model program is activated and run, it is supplied single-level storage for automatic and static storage. A single-level storage program runs only in a single-level storage activation group.

***TERASPACE**

The program is created with teraspace storage model. When a teraspace storage model program is activated and run, it is supplied teraspace storage for automatic and static storage. A teraspace storage program runs only in a teraspace storage activation group. STGMDL(*TERASPACE) cannot be specified if DFTACTGRP(*YES) is specified.

Top

Default activation group (DFACTGRP)

Specifies whether the ILE CL program is associated with the default activation group.

Note: This parameter is only applicable if the CL source is compiled using the CRTBNDCL command. For CRTCLPGM and CRTCLMOD, any value specified for this parameter is ignored.

***YES** The program is associated with the default activation group.

Note: If this value is specified, the ACTGRP parameter cannot be specified.

***NO** The program is not associated with the default activation group.

Top

Activation group (ACTGRP)

Specifies the activation group that the ILE CL program is associated with when it is called. The activation group provides:

- Run-time data structures to support the running of programs
- Addressing protection
- A logical boundary for message creation
- A logical boundary for application cleanup processing

Note: This parameter is only applicable if the CL source is compiled using the CRTBNDCL command. For CRTCLPGM and CRTCLMOD, any value specified for this parameter is ignored.

***STGMDL**

IF STGMDL(*SNGLVL) is specified, this program will be activated into the QILE activation group when it is called. If STGMDL(*TERASPACE) is specified, the program will be activated into the QILETS activation group when it is called.

***CALLER**

When this program gets called, the program is activated into the caller's activation group.

***NEW** When this program gets called, the system creates a new activation group.

name Specify the name of the activation group to be used when this program is called.

Top

Bind service program (BNDSRVPGM)

Specifies the list of service program exports to examine at bind time to ensure they satisfy any module import requests. The service program exports are checked only if there are unresolved module import requests not satisfied by the set of module exports. Any service program specified on the BNDSRVPGM parameter that satisfies a module import request will be bound to the program being created. The service program name and the library specified on the BNDSRVPGM parameter are saved to be used at run time. Up to 300 names can be specified.

You can control the activation of each service program. You can specify whether the referenced service program is activated at the same time as the program is being created, or is deferred until a procedure exported from the referenced service program is called. Deferring activation may improve your application's performance.

Note: This parameter is only applicable if the CL source is compiled using the CRTBNDCL command. For CRTCLPGM and CRTCLMOD, any value specified for this parameter is ignored.

Single values

*NONE

No service program is specified.

Element 1: Service program

Qualifier 1: Service program

***ALL** Find all service program objects in the specified library or libraries.

Note: This value should only be specified in a user-controlled environment when you know exactly what is getting bound to your program. Specifying *LIBL with *ALL may give you unpredictable results at program run time. Specify the generic service program name or specific libraries to better control what gets bound to your program.

generic-name

Specify all service program objects starting with the characters preceding the * in the specified library or libraries.

name Specify the name of the service program to be examined during symbol resolution.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

name Specify the name of the library to be searched.

Note: QTEMP is not a valid library name for this parameter.

Element 2: Activation

*IMMED

The referenced service program is activated when the program being created is activated.

*DEFER

The referenced service program is activated when a procedure it exports is called.

Top

Binding directory (BNDDIR)

Specifies the list of binding directories that are used in symbol resolution. The exports of the modules and service programs in the binding directory are only checked if there are unresolved module import requests that the exports from the modules and service programs (specified in the MODULE or BNDSRVPGM parameters) could not satisfy. Up to 300 names can be specified.

Note: This parameter is only applicable if the CL source is compiled using the CRTBNDCCL command. For CRTCLPGM and CRTCLMOD, any value specified for this parameter is ignored.

Single values

*NONE

No binding directory is specified.

Qualifier 1: Binding directory

name Specify the name of the binding directory used in symbol resolution.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

***USRLIBL**

Only the libraries in the user portion of the thread's library list are searched.

name Specify the name of the library to be searched.

Top

Examples

Example 1: Declaring the Subroutine Stack Depth

```
DCLPRCOPT  SUBRSTACK(50)
```

This command sets the maximum number of subroutine stack entries to 50. When the CL program is run, if the subroutine stack depth exceeds 50, escape message CPF0822 will be sent.

Example 2: Declaring Compiler Options to Override CRTCLPGM

```
DCLPRCOPT  ALWRTVSRC(*NO)  USRPRF(*OWNER)
```

This command will override the Allow RTVCLSRC (ALWRTVSRC) and User profile (USRPRF) values specified on the Create CL Program (CRTCLPGM) command. The resulting CL program will not allow the CL source code to be retrieved from the *PGM object and when the program object is called it will adopt the authorities of the user profile that owns the *PGM object.

Example 3: Declaring Compiler Options to Override CRTCLMOD

```
DCLPRCOPT  LOG(*NO)  AUT(*USE)
```

This command will override the Log commands (LOG) and Authority (AUT) values specified on the CRTCLMOD command. Once the resulting ILE CL module is bound into an ILE program or service program and the ILE CL procedure is called, CL commands run from this procedure will not be logged in the job log. The public authority for the *MODULE object created by the Create CL Module (CRTCLMOD) command will be *USE.

Example 4: Declaring Compiler Options to Override CRTBNDCL

```
DCLPRCOPT  DFTACTGRP(*NO)  ACTGRP(MYAPP)  +  
           BNDDIR(MYAPPLIB/MYBNDDIR)
```

This command will override the Default activation group (DFTACTGRP), Activation group (ACTGRP) and Binding directory (BNDIR) values specified on the Create Bound CL Program (CRTBNDCL) command. The resulting ILE CL program will run in the MYAPP named activation group. When

CRTBNDCL runs the Create Program (CRTPGM) command, it will add binding directory MYBNDDIR in library MYAPPLIB on the Binding directory (BINDIR) parameter. This will make the service programs and ILE modules referenced by that binding directory available to resolve ILE procedures used in the ILE CL program.

[Top](#)

Error messages

None

[Top](#)

Decompress Object (DCPOBJ)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Decompress Object (DCPOBJ) command allows you to permanently decompress programs, panel groups, menus, display files, printer files, modules, and service programs.

- Compressed objects use less storage space than decompressed objects. When a compressed object is used or a compressed program is called, a decompressed version of the object automatically becomes available to the user.
- Decompressed objects use the system storage space allocated to them and are in a final, ready-to-use state.
- Temporarily Decompressed Objects are temporarily decompressed copies of compressed objects. The system allocates storage space for the temporary copies until the system or the user determines that the temporary storage space needs to be reclaimed.

Temporary storage is automatically reclaimed when:

- The RCLTMPSTG command is run
- The next initial program load (IPL) is run
- The object is used often enough to cause the system to permanently decompress it

When an object is permanently decompressed, the compressed version of the object is destroyed as well as any temporary forms of the object; however, compressed versions remain intact as long as the objects are temporarily decompressed.

Restriction: The user must have *USE authority to the objects specified on the command and execute authority to the library containing the objects.

Top

Parameters

Keyword	Description	Choices	Notes
OBJ	Object	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Object	<i>Generic name, name, *ALL</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB, *ALL, *ALLUSR, *USRLIBL</i>	
OBJTYPE	Object type	Values (up to 6 repetitions): *ALL, *FILE, *MENU, *MODULE, *PGM, *PNLGRP, *SRVPGM	Required, Positional 2
PGMOPT	Program option	<u>*ALL</u> , *INS	Optional

Top

Object (OBJ)

Specifies the name and library of the object to be decompressed.

This is a required parameter.

The possible values are:

***ALL** All objects in the specified library of the object type specified on the **Object type** prompt (OBJTYPE parameter) are decompressed.

generic*-object-name

Specify the generic name of the object to be decompressed. A generic name is a character string that contains one or more characters followed by an asterisk (*).

object-name

Specify the name of the object to be decompressed.

The possible library values are:

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***USRLIBL**

If a current library entry exists in the library list for the current thread, the current library and the libraries in the user portion of the library list are searched. If there is no current library entry, only the libraries in the user portion of the library list are searched.

***CURLIB**

Only the current library is searched. If no current library entry exists in the library list, QGPL is used.

***ALL** All libraries in the system, including QSYS, are searched.

***ALLUSR**

All user libraries are searched. All libraries with names that do not begin with the letter Q are searched except for the following:

#CGULIB	#DSULIB	#SEULIB
#COBLIB	#RPGLIB	
#DFULIB	#SDALIB	

Although the following Qxxx libraries are provided by IBM, they typically contain user data that changes frequently. Therefore, these libraries are considered user libraries and are also searched:

QDSNX	QRCLxxxxx	QUSRDIRDB	QUSRVI
QGPL	QSRVAGT	QUSRIJS	QUSRVRxMx
QGPL38	QSYS2	QUSRINFSKR	
QMGTC	QSYS2xxxxx	QUSRNOTES	
QMGTC2	QS36F	QUSROND	
QMPGDATA	QUSER38	QUSRPOSGS	
QMOMDATA	QUSRADSM	QUSRPOSSA	
QMOMPROC	QUSRBRM	QUSRPYMSVR	
QPFRDATA	QUSRDIRCF	QUSRDRARS	
QRCL	QUSRDIRCL	QUSRSYS	

1. 'xxxxx' is the number of a primary auxiliary storage pool (ASP).
2. A different library name, in the format QUSRVRxMx, can be created by the user for each previous release supported by IBM to contain any user commands to be compiled in a CL program for the previous release. For the QUSRVRxMx user library, VxRxBx is the version, release, and modification level of a previous release that IBM continues to support.

library-name

Specify the name of the library to be searched.

Top

Object type (OBJTYPE)

Specifies the type of object to be decompressed. You can specify *ALL, or you can specify one or more of the other possible values.

This is a required parameter.

The possible values are:

- ***ALL** All compressed menus, panel groups, display and printer device files, programs, modules, and service programs with the name and library specified on the **Object** prompt (OBJ parameter) are decompressed.
- ***FILE** Display and printer device files with the name and library specified on the **Object** prompt (OBJ parameter) are decompressed.
- ***MENU**
Menus with the name and library specified on the **Object** prompt (OBJ parameter) are decompressed.
- ***MODULE**
Modules with the name and library specified on the **Object** prompt (OBJ parameter) are decompressed.
- ***PGM** Programs with the name and library specified on the **Object** prompt (OBJ parameter) are decompressed.
- ***PNLGRP**
Panel groups with the name and library specified on the **Object** prompt (OBJ parameter) are decompressed.
- ***SRVPGM**
Service programs with the name and library specified on the **Object** prompt (OBJ parameter) are decompressed.

Top

Program option (PGMOPT)

Specifies whether the entire program or service program or only the instruction stream is decompressed. This parameter is valid only when *PGM, *SRVPGM, or *ALL is specified on the **Object type** prompt (OBJTYPE parameter).

The possible values are:

- ***ALL** The entire program or service program (instruction stream and observability tables) is decompressed.
- ***INS** Only the instruction stream of the program or service program is decompressed.

Top

Examples

```
DCPOBJ OBJ(QGPL/*ALL) OBJTYPE(*FILE)
```

This command decompresses all compressed display and printer files in library QGPL.

Error messages

*ESCAPE Messages

CPF2110

Library &1 not found.

CPF2113

Cannot allocate library &1.

CPF2176

Library &1 damaged.

CPF3B01

Cannot compress or decompress object &1 in &2.

CPF3B02

Cannot compress or decompress file &1 in &2.

CPF3B05

No objects decompressed.

CPF3B06

&1 objects decompressed; &3 not decompressed; &8 not included.

CPF3B08

Cannot allocate object &1 in &2.

CPF8108

Device file or save file &4 in &9 damaged.

CPF812E

Module &4 in &9 damaged.

CPF8129

Program &4 in &9 damaged.

CPF813D

Service program &4 in &9 damaged.

CPF8150

Panel group &4 in &9 damaged.

CPF8151

Menu &4 in &9 damaged.

CPF9570

Error occurred creating or accessing debug data.

CPF9802

Not authorized to object &2 in &3.

CPF9803

Cannot allocate object &2 in library &3.

CPF9804

Object &2 in library &3 damaged.

CPF9806

Cannot perform function for object &2 in library &3.

CPF9807

One or more libraries in library list deleted.

CPF9808
Cannot allocate one or more libraries on library list.

CPF9811
Program &1 in library &2 not found.

CPF9812
File &1 in library &2 not found.

CPF9821
Not authorized to program &1 in library &2.

CPF9822
Not authorized to file &1 in library &2.

CPF9838
User profile storage limit exceeded.

Top

Remove Link (DEL)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Remove link (DEL) command removes the link to the specified object. If this is the only hard link to the object, the object is removed when no longer in use. The object can be removed even if a symbolic link to it exists. The symbolic link remains until it is removed.

This command is an alias for the Remove link (RMVLNK) command and can also be issued using the following alternative command names:

- ERASE
- RMVLNK

For more information about integrated file system commands, see the Integrated file system topic collection in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Restrictions:

- In the "root" (/), QOpenSys, and user-defined file systems, the user must have write and execute (*WX) authority to the directory containing the object. If a hard link is to be unlinked, the user must also have object existence (*OBJEXIST) authority to the object.
- In the QDLS file system, the user must have all (*ALL) authority to the object and execute (*X) authority to the parent directory.
- The user must have *X authority to each directory in the path.
- See the System i Security Reference, SC41-5302 book for the authority requirements for other file systems.
- A user cannot unlink an object within a "root" (/), QOpenSys, or user-defined file system directory that has the "restricted rename and unlink" attribute set on (this attribute is equivalent to the S_ISVTX mode bit) unless one or more of the following are true:
 - The user is the owner of the object.
 - The user is the owner of the directory.
 - The user has all object (*ALLOBJ) special authority.
- A directory cannot be unlinked.
- The link to a file cannot be removed if the file is a DataLink column in an SQL table and where a row in that SQL table references this file.
- The restrictions listed above are for the i5/OS objects of the types *DDIR, *DSTMF, *SOCKET, *STMF, and *SYMLNK.

QSYS.LIB and independent ASP QSYS.LIB File System Differences

- If this command is to be used to remove links for an object that is in these file systems, additional restrictions may apply. To identify these restrictions, see the delete command for the object to be removed. In general, the name of this command is formed using the i5/OS object type value, from the character * is removed, and add the verb DLT to the beginning. For example, to delete an alert table, which has the object type value of *ALRTBL, see the Delete Alert Table (DLTALRTBL) command for any additional restrictions.

However, there are exceptions to this rule. For example, to delete a compiler unit, which has the object type value of *MODULE, see the Delete Module (DLTMOD) command for any additional restrictions.

For a description of the object types, see the CL topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

- In these file systems, libraries and database files cannot be deleted using the Remove Link (RMVLNK or alias DEL or ERASE) command. However, these objects can be deleted using the Remove Directory (RMVDIR or alias RMDIR or RD) command.
- The following object types cannot be deleted using another command: *EXITRG, *IGCSRT, *JOBSCD, *PRDAVL, *QRYDFN, *RCT.

QDLS File System Differences

- If this command is to be used to remove links for an object that is in this file system, additional restrictions may apply. To identify these restrictions, see the description of the Delete Document Library Object (DLTDLO) command.

Top

Parameters

Keyword	Description	Choices	Notes
OBJLNK	Object link	<i>Path name</i>	Required, Positional 1

Top

Object link (OBJLNK)

Specifies the path name of the object to unlink. Multiple links can be removed with a name pattern.

The object path name can be either a simple name or a name that is qualified with the name of the directory in which the object is located. A pattern can be specified in the last part of the path name. An asterisk (*) matches any number of characters and a question mark (?) matches a single character. If the path name is qualified or contains a pattern, it must be enclosed in apostrophes.

For more information on specifying path names, refer to "Object naming rules" in the CL topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Note: This parameter is Unicode-enabled. See "Unicode support in CL" in the CL topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/> for additional information.

Top

Examples

The alternative command name for DEL is RMVLNK. The following examples use the alternative command name, but DEL can be replaced directly for RMVLNK in all of them.

Example 1: Removing an Object Link

```
RMVLNK OBJLNK('PAY')
```

This command removes a link named PAY.

[Top](#)

Error messages

*ESCAPE Messages

CPFA085

Home directory not found for user &1.

CPFA093

Name matching pattern not found.

CPFA09C

Not authorized to object. Object is &1.

CPFA0A1

An input or output error occurred.

CPFA0A7

Path name too long.

CPFA0A9

Object not found. Object is &1.

CPFA0AB

Operation failed for object. Object is &1.

CPFA0B1

Requested operation not allowed. Access problem.

CPFA0B2

No objects satisfy request.

CPFA0BD

&1 links removed. &2 links failed.

[Top](#)

Dependent Definition (DEP)

Parameters
Examples
Error messages

The Dependent Definition (DEP) command definition statement defines a required relationship between parameters and parameter values that must be checked. This relationship can refer to either the specific value of a parameter or parameters, or to the required presence of parameters.

DEP statements provide a second level of parameter syntax checking for a CL command. The first level is provided by the PARM, QUAL, and ELEM statements that define the type of value (like *NAME or *DATE), as well as parameter value restrictions such as a the range of valid values or a list of valid values. DEP statements allow you to verify that combinations of parameter values are syntactically correct within the command string.

DEP statements can only check the first value of a specified parameter. If you want to do syntax checking for a parameter that accepts a list of values or a parameter with multiple elements or qualifiers, a validity checking exit program can be written to do a third level of syntax check for the command string. Doing syntax checking in the PARM, QUAL, ELEM or DEP statements, or in a validity checking program, can remove or greatly simplify parameter syntax checking code in your command processing program.

If a parameter has a default value and the parameter is not specified, the checking differs depending on whether the DEP statement is performing a specification check or a relational check. If a *specification* check is made on an unspecified parameter (checking for the presence of a value for that parameter), the system assumes that no value was specified, and the default value is *not* used. If a *relational* check is made on an unspecified parameter, the default value is used as the parameter value in the relational check.

Top

Parameters

Keyword	Description	Choices	Notes
CTL	Controlling conditions	Single values: *ALWAYS Other values: <i>Element list</i>	Required, Positional 1
	Element 1: Keyword or keyword reference	<i>Character value</i>	
	Element 2: Relational operator	*GT, *EQ, *GE, *NL, *LT, *NE, *LE, *NG	
	Element 3: Value or keyword reference	<i>Character value</i>	
PARM	Dependent parameter	Values (up to 25 repetitions): <i>Element list</i>	Required, Positional 2
	Element 1: Keyword or keyword reference	<i>Character value</i>	
	Element 2: Relational operator	*GT, *EQ, *GE, *NL, *LT, *NE, *LE, *NG	
	Element 3: Value or keyword reference	<i>Character value</i>	

Keyword	Description	Choices	Notes
NBRTRUE	Number of true dependencies	Single values: *ALL Other values: <i>Element list</i>	Optional, Positional 3
	Element 1: Relational operator	*GT, *EQ, *GE, *NL, *LT, *NE, *LE, *NG	
	Element 2: Number to be true	0-25	
MSGID	Message identifier	<i>Name</i> , *NONE	Optional, Positional 4

Top

Controlling conditions (CTL)

Specifies the controlling conditions that must be true before the parameter dependencies defined in the PARM statement must be true. The first keyword specified identifies the controlling parameter. The controlling condition can be specified by a keyword name only, or by a keyword name and a test relationship that determines whether the controlling condition requires the presence of the parameters it depends on. The relationship between the controlling parameter and a specified value can be tested to determine if the condition specified is met. If it is, the parameters that the controlling parameter depends on must meet the requirements specified in the PARM and NBRTRUE keywords.

Single values

***ALWAYS**

The parameter dependency is always checked, regardless of the form of the command.

Other values

keyword-name

Specify the keyword name of the parameter for which a value must be specified to control dependency. The keyword name is the name of the parameter that was specified by the **Keyword (KWD)** parameter on the PARM statement defining it. If the keyword was specified, the parameter dependency is checked. The keyword name cannot refer to a command parameter defined with TYPE(*NULL).

&keyword-name relational-operator value

Specify the keyword name of the controlling parameter followed by a relational operator (such as *LE or *EQ) and a value to be tested. If the tested condition is met, the parameters that the controlling parameter depends on must meet the requirements specified for the PARM keyword. The value must be no longer than 32 bytes. The keyword name cannot refer to a command parameter defined with TYPE(*NULL).

If the value being tested against has been specified as a special value or single value, using the SPCVAL parameter or the SNGVAL parameter of the PARM statement, the to-value must be used rather than the from-value.

The keyword name must be preceded by an ampersand (&) to indicate that the value of the keyword is tested if the relational operator and value are specified; the ampersand must not be used if the relational operator and value are not specified.

(&keyword-name relational-operator &keyword-name)

Specify the keyword name of the controlling parameter followed by a relational operator (such as *EQ) and the keyword name of another parameter whose value is compared with the value of the controlling parameter. The keyword names cannot refer to command parameters defined with TYPE(*NULL) or PASSVAL(*NULL).

Dependent parameter (PARM)

Specifies the parameter dependencies that must be tested if the controlling conditions defined by the CTL parameter are true. The dependencies can be the names of one or more parameters that are tested for their presence, or one or more test relationships of keyword values to other keyword values or constant values. A maximum of 25 parameter dependencies can be specified for this parameter. Keyword names cannot refer to command parameters defined with TYPE(*NULL).

keyword-name

Specify the keyword name of each parameter that must have a value specified for it.

&keyword-name relational-operator value

Specify the keyword name of each parameter followed by a relational operator and a value to be tested. An ampersand must precede the keyword name to indicate that the value of the keyword is tested. The value must be no longer than 32 bytes.

If the value being tested against has been specified as a special value or single value, using the **Special values (SPCVAL)** parameter or the **Single values (SNGVAL)** parameter of the PARM statement, the to-value must be used rather than the from-value.

&keyword-name relational-operator &keyword-name

Specify the keyword name of one parameter followed by a relational operator and the keyword name of another parameter whose value is compared with the value of the first parameter. The keyword names cannot refer to command parameters defined with PASSVAL(*NULL).

Top

Number of true dependencies (NBRTRUE)

Specifies the number of parameter dependencies (defined in the PARM parameter on this DEP statement) that must be true. Otherwise, a diagnostic message (defined in the MSGID parameter on this DEP statement) is sent and the command is not run.

CL variables cannot be coded for either element of this parameter.

Single values

***ALL** All the parameter dependencies must be true. This is the same as specifying NBRTRUE(*EQ n), where n is the number of parameter dependencies defined in the PARM parameter.

Element 1: Relational operator

relational-operator

Specify a relational operator. Valid values are *GT, *EQ, *GE, *NL, *LT, *NE, *LE, and *NG.

Element 2: Number to be true

0-25 Specify the number of parameter dependencies that must be true to satisfy the specified relationship.

Top

Message identifier (MSGID)

Specifies the diagnostic message that is to be sent to the user if the logical expression specified by the NBRTRUE parameter evaluates as **false**.

*NONE

No specific diagnostic message is sent. Instead, generic message CPD0150 is sent. Depending on the number of parameters on the command, it can be very difficult to determine the cause of the interparameter syntax error from the generic message text.

message-identifier

Specify the message identifier of the diagnostic message sent to the user.

Messages whose identifiers begin with the 3-character prefixes *CPF* or *CPD* are retrieved from the IBM-supplied message file QCPFMSG. All other messages specified here are retrieved from the message file identified by the MSGF parameter on the CRTCMD command which is used to create the command being defined with these dependencies. Variables cannot be coded for this parameter.

Top

Examples

Example 1: Checking the Presence of a Parameter

```
DEP CTL(&TYPE *EQ LIST) PARM(ELEMLIST)
```

If TYPE(LIST) is specified, the ELEMLIST parameter must be specified. If TYPE(LIST) and no value is specified for the ELEMLIST parameter, generic diagnostic message CPD0150 is sent and the command is not run.

Example 2: Checking the Presence of Multiple Parameters

```
DEP CTL(FILE) PARM(VOL LABEL) +  
    NBRTRUE(*EQ 2) MSGID(USR1234)
```

If the FILE parameter is specified, both the VOL and LABEL parameters must be specified. If only one of the VOL and LABEL parameters have a value specified, or if neither parameter is specified, diagnostic message USR1234 is sent and the command is not run. Command analyzer will look for message USR1234 in the message file specified for the MSGF parameter on the CRTCMD command.

Example 3: Checking for Mutually Exclusive Parameters

```
DEP CTL(*ALWAYS) PARM(J1 D J2) NBRTRUE(*EQ 1)
```

A value must be specified for one (and only one) of the J1, D, and J2 parameters. If zero or two or three of these parameters are specified, generic diagnostic message CPD0150 is sent and the command is not run.

Example 4: Checking One or More Conditions are True

```
DEP CTL(&LIB *EQ MYLIB) +  
    PARM((&PASSWORD *EQ XYZ5) (&USRPRF *EQ B0BJ)) +  
    NBRTRUE(*GE 1) MSGID(MSG1001)
```

If the LIB parameter value is MYLIB, the PASSWORD parameter value must be XYZ5, or the USRPRF parameter value must be BOBJ, or both PASSWORD(XYZ5) and USRPRF(BOBJ) must be specified. If LIB(MYLIB) and neither of the dependency conditions specified are true, diagnostic message MSG1001 is sent and the command is not run.

Example 5: Checking for a Conditionally Required Parameter

```
DEP CTL(&OUTPUT *EQ *OUTFILE) PARM((&OUTFILE *NE ' ')) +
    NBRTRUE(*EQ 1) MSGID(CPD9861)
DEP CTL(&OUTPUT *NE *OUTFILE) PARM((&OUTFILE *EQ ' ')) +
    NBRTRUE(*EQ 1) MSGID(CPD9862)
DEP CTL(&OUTMBR *NE *FIRST) PARM((&OUTFILE *EQ ' ')) +
    NBRTRUE(*EQ 0) MSGID(CPD9867)
```

Three related interparameter checks will be made:

1. If the OUTPUT parameter has a value of *OUTFILE, the OUTFILE parameter must have a non-blank value specified. Otherwise, message CPD9861 is sent. Since the message identifier starts with 'CPD', the operating system will look for the message in message file QCPFMSG. Assuming the OUTFILE parameter is a qualified object name, only the value of the first QUAL will be checked.
2. If the OUTPUT parameter has a value other than *OUTFILE, the OUTFILE parameter must be blank, assuming that the OUTFILE parameter was coded as MIN(0) and with no default (DFT) value. Otherwise, message CPD9862 is sent.
3. If the OUTMBR parameter has any value other than *FIRST, the OUTFILE parameter must have a non-blank value specified. Otherwise, message CPD9867 is sent. Assuming the OUTMBR parameter is a list of two elements, only the value of the first ELEM will be checked.

Top

Error messages

None

Top

Start DIG Query (DIG)

Where allowed to run: All environments (*ALL)
Threadsafe: Yes

Parameters
Examples
Error messages

The Start DIG Query (STRDIGQRY) command, or its alias DIG, starts the Domain Information Groper tool.

DIG is a powerful query tool that allows you to retrieve information from or test the response of a Domain Name System (DNS) server. You can verify that a DNS server is responding correctly before you configure your system to use it. You can also retrieve DNS information about hosts, domains, and other DNS servers.

Unless it is told to query a specific name server, DIG will try each of the servers listed in CHGTCPDMN.

Restrictions:

- You must have execute (*X) authority to the directories in the path of the batch input file.
- You must have read (*R) authority to the batch input file.
- You must have execute (*X) authority to the directories in the path of the key file.
- You must have read (*R) authority to the key file.
- You must have execute (*X) authority to the directories in the path of the trusted keys file.
- You must have read (*R) authority to the trusted keys file.
- You must have execute (*X) authority to the directories in the path of the output file.
- You must have write (*W) authority to the output file if it already exists.
- You must have read, write and execute (*RWX) authority to the output file's parent directory if the output file does not already exist.

Top

Parameters

Keyword	Description	Choices	Notes
HOSTNAME	Query name	Character value, <u>*DFT</u>	Optional, Positional 1
TYPE	Query type	<u>*A</u> , *AAAA, *ANY, *AXFR, *CNAME, *MX, *NS, *PTR, *SOA, *SRV, *TXT	Optional, Positional 2
CLASS	Query class	<u>*IN</u> , *CH, *HS, *ANY	Optional
REVERSE	Reverse lookup	<u>*NO</u> , *YES, *IP6INT	Optional
DMNNAMSVR	Domain name server	Character value, <u>*CFG</u>	Optional
PORT	Domain name server port	1-65535, <u>53</u>	Optional
TIMEOUT	Query timeout	1-100, <u>5</u>	Optional
USEDMNSCHL	Use domain search list	*YES, <u>*NO</u>	Optional
DMNSCHLIST	Domain search list	Character value, <u>*CFG</u> , *NONE	Optional
SRCADR	Source address	Character value, <u>*DFT</u> , *ANY4, *LOOPBACK4, *ANY6, *LOOPBACK6	Optional
BCHFILE	Batch input file	Path name, <u>*NONE</u>	Optional
IPVSN	IP Version	<u>*ALL</u> , *IPV4ONLY, *IPV6ONLY	Optional

Keyword	Description	Choices	Notes
PROTOCOL	Network protocol	<u>*UDP</u> , *TCP	Optional
SETRDFLAG	Recursion desired	<u>*YES</u> , *NO	Optional
SETAAFLAG	Authoritative answers only	<i>Character value</i> , <u>*NO</u> , *YES	Optional
SETADFLAG	Authentic data	<u>*NO</u> , *YES	Optional
SETCDFLAG	Disable DNSSEC checking	<u>*NO</u> , *YES	Optional
MULTILINE	Print multiple lines	<u>*NO</u> , *YES	Optional
SHORT	Print short answer	<u>*NO</u> , *YES	Optional
IDENTIFY	Print server in short answer	<u>*NO</u> , *YES	Optional
PRTQRY	Print query	<u>*NO</u> , *YES	Optional
PRTCLASS	Print RR class	<u>*YES</u> , *NO	Optional
PRTTTL	Print RR TTL	<u>*YES</u> , *NO	Optional
PRTALL	Print all query detail	<u>*YES</u> , *NO	Optional
CMD	Print query command	<u>*DFT</u> , *YES, *NO	Optional
COMMENTS	Print query comments	<u>*DFT</u> , *YES, *NO	Optional
STATS	Print query statistics	<u>*DFT</u> , *YES, *NO	Optional
QUESTION	Print question section	<u>*DFT</u> , *YES, *NO	Optional
ANSWER	Print answer section	<u>*DFT</u> , *YES, *NO	Optional
AUTHORITY	Print authority section	<u>*DFT</u> , *YES, *NO	Optional
ADDITIONAL	Print additional section	<u>*DFT</u> , *YES, *NO	Optional
KEYFILE	Key file	<i>Path name</i> , <u>*NONE</u>	Optional
KEYNAME	Key name	<i>Character value</i> , <u>*NONE</u>	Optional
STOPFAIL	Stop on SERVFAIL	<u>*YES</u> , *NO	Optional
UDPTRUNC	Ignore truncated responses	<u>*RETRY</u> , *IGNORE	Optional
NSSCH	List authoritative servers	<u>*NO</u> , *YES	Optional
TRACE	Trace delegation path	<u>*NO</u> , *YES	Optional
UDPTRIES	Times to try UDP query	1-100, <u>3</u>	Optional
UDPNBRRTY	UDP retry	0-100, <u>2</u>	Optional
NBRDOTS	Number of dots	0-10, <u>1</u>	Optional
BUFSIZE	UDP buffer size for EDNS	0-65535, <u>0</u>	Optional
EDNS	Set EDNS version	0-255, <u>0</u>	Optional
NOEDNS	Clear EDNS version	<u>*NO</u> , *YES	Optional
BESTEFFORT	Best effort display	<u>*NO</u> , *YES	Optional
DNSSEC	Request DNSSEC records	<u>*NO</u> , *YES	Optional
SIGCHASE	Chase DNSSEC chains	<u>*NO</u> , *YES	Optional
TRUSTEDKEY	Trusted keys file	<i>Path name</i> , <u>*NONE</u>	Optional
TOPDOWN	DNSSEC top down validation	<u>*NO</u> , *YES	Optional
TOSTMF	Output file	<i>Path name</i> , <u>*STDOUT</u>	Optional

Top

Query name (HOSTNAME)

Specifies the name that you want the Domain Name System (DNS) server to supply information about. You can use either a name or an IP address to identify the resource record. For example, a name could be 'mycomputer.mycompany.com'. An IP address could be an IPv4 address like '10.0.1.100' or an IPv6 address like '2001:D88::1'. You can use either the name to obtain the address, or the address to obtain the name.

***DFT** Query the root '.' servers.

domain-name

Specify the name to use for the DNS server query. This is usually a hostname (like mycomputer.mycompany.com) or domain (like mycompany.com) that you want to query.

internet-address

Specify the IPv4 address in dotted-decimal notation or a colon-delimited IPv6 address. If you use an IP address, consider using the REVERSE(*YES) parameter to simplify PTR (pointer) type queries. See the examples for this command for more information.

Top

Query type (TYPE)

Specifies the type of the query. The default type is *A. The list of supported query types changes with time, and not all servers support all the types that exist. This list provides some common query types for convenience and is not a complete list. If you do not see a query type you want in this list, you can still type in a character string that represents that query type. If the type is unknown by this BIND version, the query will default to an *A query with any corresponding results.

***A** IPv4 Address record. This is the character string 'a'.

***AAAA**

IPv6 address record. This is the character string 'aaaa'.

***ANY** Any resource record. This is the character string 'any'.

***AXFR**

Zone transfer. This is the character string 'axfr'.

***CNAME**

Canonical name record. Returns a list of aliases for the true (canonical) host name, if any exist. This is the character string 'cname'.

***MX** Mail exchange record. This is the character string 'mx'.

***NS** Name server (DNS server) information for the zone. This is the character string 'ns'.

***PTR** Pointer record. Returns a name for an IP address. This is the character string 'ptr'.

***SOA** Start of authority record. This is the character string 'soa'.

***SRV** Services location selection. This is the character string 'srv'.

***TXT** Text record. This is the character string 'txt'.

Top

Query class (CLASS)

Specifies the protocol group of the information.

***IN** The Internet class.

100.1.0.10.in-addr.arpa.). The notation for IPv6 is a bit different, it is also the IP address written backwards with dots as separators, but it is separated at every 4-bit boundary (a 'nibble' boundary) and the delegation is done within the zone ip6.arpa. (e.g. 8.8.d.0.1.0.0.2.ip6.arpa.). In the past, the delegation for IPv6 addresses was done in the zone ip6.int, therefore today it might still be common and often necessary to query a delegation like 8.8.d.0.1.0.0.2.ip6.int.

***NO** No reverse lookup will be performed.

***YES** A reverse lookup will be performed.

***IP6INT**

An IPv6 address reverse lookup in the zone ip6.int will be performed. This zone is deprecated, but may still be required to query IPv6 backbone prefixes.

Top

Domain name server (DMNNAMSVR)

Specifies the name or the IP address of the DNS server that DIG will use as its current server for the query session. You can specify any DNS server to which your TCP/IP network has access.

DIG retrieves information from DNS servers. It needs an active DNS server to send its queries to. If you do not specify a DNS server with DMNNAMSVR when you start the tool, it will attempt to set one of the following as its default DNS server for the session:

1. DNS server your system is configured to use (*CFG), or
2. The DNS server that is running on your local system.

***CFG** Try all the DNS servers currently designated for use by this system. These server internet addresses can be seen by prompting the Change TCP/IP Domain (CHGTCPDMN) command and looking at the values shown for the INTNETADR parameter.

server-domain-name

Specify the name of a DNS server.

server-internet-address

Specify the IP address of a DNS server.

Top

Domain name server port (PORT)

Specifies the default TCP/UDP name server port to use.

53 The default port is 53.

1-65535

Specify a valid port number.

Top

Query timeout (TIMEOUT)

Specifies the timeout interval, in seconds, to wait for a response.

5 A timeout value of 5 seconds is used.

1-100 Specify a valid timeout value in seconds.

Top

Use domain search list (USEDMNSCHL)

Specifies whether or not to use the search list defined by the **Domain search list (DMNSCHLIST)** parameter. The search list is not used by default.

***NO** Do not use a search list.

***YES** Use the search list specified by the DMNSCHLIST parameter.

Top

Domain search list (DMNSCHLIST)

Specifies a single domain name for the search list. The default search list is set by running the Change TCP/IP Domain (CHGTCPDMN) command and specifying the DMNSCHLIST parameter. If more than one domain name is found, only the first domain name is used.

If DMNSCHLIST is specified, USEDMNSCHL(*YES) must also be specified.

***CFG** Use the first domain name found in the search list specified for the DMNSCHLIST parameter on the CHGTCPDMN command.

***NONE**

Do not specify a search list.

character-value

Specify a valid domain name string to use. Only one domain name can be specified.

Top

Source address (SRCADR)

Specifies the source IP address to use when sending the query. Some DNS servers are configured to only allow queries from certain source addresses. This parameter allows you use a specific source address if your system has multiple network interfaces.

***DFT** Uses the default supplied by the stack.

***ANY4**

Any IPv4 address, or '0.0.0.0'.

***LOOPBACK4**

IPv4 loopback, or '127.0.0.1'.

***ANY6**

Any IPv6 address, or '::'.

***LOOPBACK6**

IPv6 loopback, or '::1'.

character-value

Specify an IP address to use as the source IP address for the query.

Top

Batch input file (BCHFILE)

Specifies the file containing a list of query requests to be used as batch input. The file contains a number of queries, one per line. Each entry in the file should be organized in the same way they would be presented as queries to DIG using the PASE command-line interface. The purpose of using a file is to allow batch mode or scripting operation.

*NONE

Do not specify a batch query file.

path-name

Specify the path for a stream file from which input is read. The contents of the stream file lines are as follows:

```
Format: [@global-server] [domain] [q-type] [q-class] {q-opt}
        or
        {global-d-opt} domain [@local-server] {local-d-opt}
        or
        [domain [@local-server] {local-d-opt} [...]]
```

Where:

```
domain  is in the Domain Name System
q-type  is one of (a,any,mx,ns,soa,...) [default:a]
        (Use ixfr=version for type ixfr)
q-class is one of (in,hs,ch, ...) [default: in]
q-opt   is one of:
        -x dot-notation      (shortcut for in-addr lookups)
        -i                   (IP6.INT reverse IPv6 lookups)
        -f filename          (batch mode)
        -b address[#port]    (bind to source address/port)
        -p port               (specify port number)
        -q name               (specify query name)
        -t type               (specify query type)
        -c class              (specify query class)
        -k keyfile            (specify tsig key file)
        -y [hmac:]name:key    (specify named base64 tsig key)
        -4                   (use IPv4 query transport only)
        -6                   (use IPv6 query transport only)
d-opt   is of the form +keyword[=value], where keyword is:
        +[no]vc              (TCP mode)
        +[no]tcp              (TCP mode, alternate syntax)
        +time=###            (Set query timeout) [5]
        +tries=###           (Set number of UDP attempts) [3]
        +retry=###           (Set number of UDP retries) [2]
        +domain=###          (Set default domainname)
        +bufsize=###         (Set EDNS0 Max UDP packet size)
        +ndots=###           (Set NDOTS value)
        +edns=###            (Set EDNS version)
        +[no]search           (Set whether to use searchlist)
        +[no]showsearch       (Search with intermediate results)
        +[no]defname          (Ditto)
        +[no]recurse          (Recursive mode)
        +[no]all              (Set or clear all display flags)
        +[no]qr               (Print question before sending)
        +[no]nssearch         (Search authoritative nameservers)
        +[no]identify         (ID responders in short answers)
        +[no]trace            (Trace delegation down from root)
        +[no]dnssec           (Request DNSSEC records)
        +[no]sigchase         (Chase DNSSEC signatures)
        +trusted-key=####     (Trusted Key chasing DNSSEC sigs)
        +[no]topdown          (Do DNSSEC validation top down)
        +[no]multiline        (Print records in expanded format)
```

global d-opts and servers (before domain) affect all queries

local d-opts and servers (after domain) affect only that query

For example, you could put these lines into a file:

```
ibm.com aaaa in
```

```
aol.com mx
-q microsoft.com -t aaaa -c in
+recurse cisco.com @10.0.0.1 @10.0.0.2
@10.0.0.1 aa.com
```

Top

IP Version (IPVSN)

Specifies whether to limit the query to IPv4 or IPv6 networks.

***ALL** Do not limit queries to IPv4 or IPv6.

***IPV4ONLY**

Only send queries out IPv4 network interfaces.

***IPV6ONLY**

Only send queries out IPv6 network interfaces.

Top

Network protocol (PROTOCOL)

Specified whether to use TCP or UDP when sending requests to the server.

***UDP** Use UDP to send the query. However, TCP will be automatically selected for queries that require it, such as zone transfer (AXFR) requests.

***TCP** Use TCP to send the query.

Top

Recursion desired (SETRDFLAG)

Specifies whether or not to set the Recursion Desired (RD) flag in the query. This tells the current DNS server to query other DNS servers if the current server does not have the information.

***YES** Set the RD flag.

***NO** Do not set the RD flag.

Top

Authoritative answers only (SETAAFLAG)

Specifies whether or not to set the Authoritative Answers (AA) flag in the query. This indicates that you want the response to be from an authoritative server and not from the cache of a non-authoritative server. Authoritative servers own the domain being queried.

***NO** Do not set the AA flag.

***YES** Set the AA flag.

Top

Authentic data (SETADFLAG)

Specifies whether or not to set the Authentic Data (AD) flag in the query. The AD bit currently has a standard meaning only in responses, not in queries, but the ability to set the bit in the query is provided for completeness.

*NO Do not set the AD flag.

*YES Set the AD flag.

Top

Disable DNSSEC checking (SETCDFLAG)

Specifies whether or not to set the Checking Disabled (CD) flag in the query. This requests the server to not perform DNSSEC validation of responses.

*NO Do not set the CD flag.

*YES Set the CD flag.

Top

Print multiple lines (MULTILINE)

Specifies whether or not to print records, like the SOA record, in a verbose multi-line format with human-readable comments.

*NO Do not use multi-line format. Print each record on a single line, which can facilitate machine parsing of the output.

*YES Use multi-line format.

Top

Print short answer (SHORT)

Specifies whether or not DIG should provide a terse answer.

*NO Do not print a terse answer. Print the answer in a verbose form.

*YES Print a terse answer.

Top

Print server in short answer (IDENTIFY)

Specifies whether or not to display the IP address and port number of the server that supplied the answer when the SHORT(*YES) parameter is specified.

Note: This parameter is ignored if SHORT(*NO) is specified.

*NO Do not print the IP address and port number of the server providing the answer.

*YES Print the IP address and port number of the server providing the answer.

Top

Print query (PRTQRY)

Specifies whether or not to print the query as it is sent.

*NO Do not print the query as it is sent.

*YES Print the query as it is sent.

Top

Print RR class (PRTCLASS)

Specifies whether or not to print the CLASS when printing the record.

*YES Print the CLASS in the record output.

*NO Do not print the CLASS in the record output.

Top

Print RR TTL (PRTTTL)

Specifies whether or not to print the Time To Live (TTL) in the record output.

*YES Print the TTL in the record output.

*NO Do not print the TTL in the record output.

Top

Print all query detail (PRTALL)

Specifies whether to set or clear all print flags. You use this parameter in conjunction with other print parameters. This allows you to print only the output you are interested in. The shipped default is *YES for the CMD, COMMENTS, STATS, QUESTION, ANSWER, AUTHORITY and ADDITIONAL parameters.

*YES Set all print flags.

*NO Clear all print flags.

For example, you could use the PRTALL parameter as follows:

```
DIG PRTALL(*NO) QUESTION(*YES) ANSWER(*YES)
```

The PRTALL(*NO) parameter turns off all print flags, and the QUESTION(*YES) and ANSWER(*YES) flags override the PRTALL(*NO) parameter to print only the question and answer sections of the DIG output.

Top

Print query command (CMD)

Specifies whether to print the initial comment in the output identifying the version of DIG and the query options that have been applied.

*DFT Use the value specified for the **Print all query detail (PRTALL)** parameter.

*YES Print the initial comment.

*NO Do not print the initial comment.

Top

Print query comments (COMMENTS)

Specifies whether to print comment lines in the output.

***DFT** Use the value specified for the **Print all query detail (PRTALL)** parameter.

***YES** Print the comment lines.

***NO** Do not print the comment lines.

Top

Print query statistics (STATS)

Specifies whether to print query statistics, like when the query was made or the size of the reply.

***DFT** Use the value specified for the **Print all query detail (PRTALL)** parameter.

***YES** Print the query statistics.

***NO** Do not print the query statistics.

Top

Print question section (QUESTION)

Specifies whether to print the question section of a reply.

***DFT** Use the value specified for the **Print all query detail (PRTALL)** parameter.

***YES** Print the question section of a reply.

***NO** Do not print the question section of a reply.

Top

Print answer section (ANSWER)

Specifies whether to print the answer section of a reply.

***DFT** Use the value specified for the **Print all query detail (PRTALL)** parameter.

***YES** Print the answer section of a reply.

***NO** Do not print the answer section of a reply.

Top

Print authority section (AUTHORITY)

Specifies whether to print the authority section of a reply.

***DFT** Use the value specified for the **Print all query detail (PRTALL)** parameter.

***YES** Print the authority section of a reply.

***NO** Do not print the authority section of a reply.

Print additional section (ADDITIONAL)

Specifies whether to print the additional section of a reply.

***DFT** Use the value specified for the **Print all query detail (PRTALL)** parameter.

***YES** Print the additional section of a reply.

***NO** Do not print the additional section of a reply.

Top

Key file (KEYFILE)

Specifies a Transaction Signature (TSIG) key file to sign the DNS queries. The DNS server that is queried needs to be configured with the TSIG key and algorithm that is being used or the transaction will fail.

This key must be a base-64 encoding of an HMAC-MD5 key.

Note: If this parameter is specified, the KEYNAME parameter cannot be specified.

***NONE**

Do not specify a key path name.

path-name

Specify the path name of a stream file which contains the keys to be used. For example, '/QIBM/UserData/OS400/DNS/_DYN/my-tsig-key_KID'.

The DNS server being queried needs to include this key name and algorithm in its configuration in order to accept this TSIG key from clients.

Top

Key name (KEYNAME)

Specifies a Transaction Signature (TSIG) key to sign the DNS queries. The key is a base-64 encoded string. The DNS server that is queried needs to be configured with the TSIG key and algorithm that is being used or the transaction will fail.

Note: If this parameter is specified, the KEYFILE parameter cannot be specified.

***NONE**

Do not specify a key name.

character-value

Specify the Transaction Signature key to use. The format is *name:key* where *name* is the key name, and *key* is the actual key as a base-64 encoded string. Example:

```
my-tsig-key:JNvcpxysbJ2hsdOqQ5qrQ==
```

The key name in this case is 'my-tsig-key' and the base-64 encoded key is 'JNvcpxysbJ2hsdOqQ5qrQ=='.

The DNS server being queried needs to include this key and algorithm in its configuration in order to accept this TSIG key from clients.

Stop on SERVFAIL (STOPFAIL)

Specifies whether to stop or try the next server if you receive a SERVFAIL response. The default is to not try the next server, which is the reverse of normal stub resolver behaviour.

***YES** Do not try the next server if a SERVFAIL response is received. This is the reverse of normal stub resolver behaviour.

***NO** Try the next server if a SERVFAIL response is received.

Top

Ignore truncated responses (UDPTRUNC)

Specifies whether to ignore truncation in UDP responses or retry with TCP.

***RETRY**
Retry queries using TCP if UDP responses are truncated.

***IGNORE**
Ignore truncation in UDP responses. Do not retry queries using TCP if UDP responses are truncated.

Top

List authoritative servers (NSSCH)

Specifies whether or not DIG should attempt to find the authoritative DNS servers for the zone containing the name being looked up (HOSTNAME parameter) and print the Start of Authority (SOA) record that each name server has for the zone.

***NO** Do not search for the SOA records of all DNS servers for the zone containing the HOSTNAME.

***YES** Search for the SOA records of all DNS servers for the zone containing the HOSTNAME.

Top

Trace delegation path (TRACE)

Specifies whether or not to tracing the delegation path from the root name servers for the name being looked up. When tracing is enabled, DIG makes iterative queries to resolve the name being looked up. It will follow referrals from the root servers, showing the answer from each server that was used to resolve the lookup. You must have access to the root servers for this option.

***NO** Do not trace the delegation path from the root servers for the name being looked up (HOSTNAME parameter).

***YES** Trace the delegation path from the root servers for the name being looked up (HOSTNAME parameter).

Top

Times to try UDP query (UDPTRIES)

Specifies how many times to try UDP queries to the current DNS server before attempting TCP queries.

- 3 Try UDP queries three times before attempting TCP queries.
- 1-100** Specify the number of times to try UDP queries before attempting TCP queries. If you use this parameter, you do not need to use the UDPNBRRTY parameter.

Top

UDP retry (UDPNBRRTY)

Specifies the number of times to retry UDP queries to the current DNS server before attempting TCP queries.

- 2 Two UDP retries will be used. This is in addition to the initial query.
- 0-100** Specify the number of UDP retries. You normally only need to retry a query 3 to 5 times. If you use this parameter, you do not need to use the UDPTRIES parameter.

Top

Number of dots (NBRDOTS)

Specifies the number of dots (period characters) that have to appear in a domain name for it to be considered absolute.

Names with fewer dots are interpreted as relative names and will be searched for in the domains listed in the DMNSCHLIST parameter.

- 1 If the domain name contains one dot it is considered an absolute name.
- 0-10** Specify the number of dots that must be in a domain name for the domain name to be considered to be an absolute name.

Top

UDP buffer size for EDNS (BUFSIZE)

Specifies the UDP message buffer size advertised using EDNS(0).

- 0 The UDP message buffer size is 0.
- 0-65535** Specify the number of bytes to use as the UDP message buffer size. You typically want to set this buffer size to avoid truncated packets in UDP. By default, UDP sends a maximum packet size of 512 bytes unless overridden by this option. This is useful if TCP connections are blocked by firewalls.

Top

Set EDNS version (EDNS)

Specifies the EDNS version to use with queries. Setting the EDNS version will cause an EDNS query to be sent. The **Clear EDNS version (NOEDNS)** parameter clears the remembered EDNS version.

If EDNS is specified, the NOEDNS parameter must not be specified.

- 0 Version 0 is traditionally used to allow UDP packets larger than 512 bytes for clients and servers that support it.

0-255 Values other than 0 have uses in DNSSEC zones.

Resolvers and servers can negotiate with other servers to set a UDP message size larger than the 512 byte default. Typically, they will attempt to negotiate a 4096 byte UDP packet size with a remote server. This negotiation requires the remote server to support EDNS. If the remote server does not support EDNS, then the original 512 byte limit remains the UDP default.

You can use the BUFSIZE parameter to control the size of the negotiated UDP packets.

Top

Clear EDNS version (NOEDNS)

Specifies that the value set by a previous DIG invocation with the **Set EDNS version (EDNS)** parameter specified is to be cleared.

If NOEDNS is specified, the EDNS parameter must not be specified.

***NO** Do not clear the remembered EDNS version.

***YES** Clear the remembered EDNS version.

Top

Best effort display (BESTEFFORT)

Specifies whether or not to attempt to print the contents of messages which are malformed.

***NO** Do not print malformed answers.

***YES** Attempt to print malformed answers.

Top

Request DNSSEC records (DNSSEC)

Specifies whether or not to request DNSSEC records be sent by setting the DNSSEC OK bit (DO) in the OPT record in the additional section of the query.

***NO** Do not request any DNSSEC records.

***YES** Request any DNSSEC records.

Top

Chase DNSSEC chains (SIGCHASE)

Specifies whether or not to chase DNSSEC signature chains. This attempts to verify SIG records that belong to the record and further will try to verify them recursively for all the keys and DS that form the chain of trust all the way up to any self-signed or unsigned key.

***NO** Do not chase DNSSEC signature chains.

***YES** Chase DNSSEC signature chains.

If SIGCHASE(*YES) is specified, DNSSEC(*YES) must also be specified.

Top

Trusted keys file (TRUSTEDKEY)

Specifies a file containing trusted keys to be used with the SIGCHASE parameter. Each DNSKEY record must be on its own line.

If a value other than *NONE is specified, SIGCHASE(*YES) must also be specified.

*NONE

Do not specify a trusted key.

path-name

Specify the path name for a stream file with the trusted keys.

Top

DNSSEC top down validation (TOPDOWN)

Specifies, when chasing DNSSEC signature chains, whether or not to perform a top down validation (from the root '.' to the leaf nodes).

If TOPDOWN(*YES) is specified, SIGCHASE(*YES) must also be specified.

*NO Do not do top down validation.

*YES Do top down validation.

Top

Output file (TOSTMF)

Specifies the name of a stream file where all command output is written.

*STDOUT

All command output goes to the standard output device (normally the display).

path-name

Specify the path for a stream file where output should be written.

Top

Examples

Example 1: Forward Lookup Example - Long

```
STRDIGQRY  HOSTNAME('ibm.com')
           DMNNAMSVR(*CFG)
```

This command illustrates a simple query for a domain named 'ibm.com'. It will use the configured DNS server on the system. By default it will look up record type *A and class *IN. The output from this command might look like this:

```
; <<>> DiG 9.4.1.i5/OS.V6R1M0 <<>> ibm.com @10.0.1.100
; (1 server found)
;; global options: printcmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 510
;; flags: qr rd ra; QUERY: 1, ANSWER: 3, AUTHORITY: 3, ADDITIONAL: 3
;; QUESTION SECTION:
```

```

;ibm.com.                IN      A
;; ANSWER SECTION:
ibm.com.                9559   IN      A      129.42.18.103
ibm.com.                9559   IN      A      129.42.16.103
ibm.com.                9559   IN      A      129.42.17.103
;; AUTHORITY SECTION:
ibm.com.                9559   IN      NS     leda2.ibm.com.
ibm.com.                9559   IN      NS     castor.ibm.com.
ibm.com.                9559   IN      NS     pollux.ibm.com.
;; ADDITIONAL SECTION:
leda2.ibm.com.          9559   IN      A      9.14.1.3
castor.ibm.com.         9559   IN      A      9.78.1.2
pollux.ibm.com.         9559   IN      A      9.46.1.2
;; Query time: 13 msec
;; SERVER: 10.0.1.100#53(10.0.1.100)
;; WHEN: Sat Aug 5 11:11:18 2006
;; MSG SIZE rcvd: 183

```

Example 2: Forward Lookup Example - Short

```

DIG  HOSTNAME('ibm.com')
      DMNNAMSVR(*CFG)
      SHORT(*YES)
      IDENTIFY(*YES)

```

This command illustrates a the same query as in example 1, but with shorter output.

```

129.42.18.103 from server 10.0.1.100 in 1 ms.
129.42.16.103 from server 10.0.1.100 in 2 ms.
129.42.17.103 from server 10.0.1.100 in 2 ms.

```

Example 3: Reverse Lookup Example

```

DIG  HOSTNAME('10.0.1.100')
      REVERSE(*YES)

```

This command illustrates a simple reverse query for a host with IPv4 address '10.0.1.100'. It will use the configured DNS server on the system (seen with the CHGTCPDMN command). By default it will look up name '100.1.0.10.in-addr.arpa.' and record type PTR and class *IN. This is equivalent to the following command:

```

DIG  HOSTNAME('100.1.0.10.in-addr.arpa')
      TYPE(*PTR)
      CLASS(*IN)

```

The output from this type of query might look like this:

```

; <<>> DiG 9.4.1.i5/OS.V6R1M0 <<>> -x 10.0.1.100 @10.0.1.100
; (1 server found)
;; global options: printcmd
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 609
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1
;; QUESTION SECTION:
;100.1.0.10.in-addr.arpa.      IN      PTR
;; ANSWER SECTION:

```



```

100.1.0.10.in-addr.arpa.  86400 IN      PTR    mydns1.i5os.ibm.com.
;; AUTHORITY SECTION:
0.10.in-addr.arpa.      86400 IN      NS     mydns1.i5os.ibm.com.
;; ADDITIONAL SECTION:
mydns2.i5os.ibm.com.    47409 IN      A      10.0.2.200
;; Query time: 994 msec
;; SERVER: 10.0.1.100#53(10.0.1.100)
;; WHEN: Sat Aug 5 11:32:16 2006
;; MSG SIZE rcvd: 119

```

Example 4: DIG with Searchlist

```

STRDIGQRY  HOSTNAME(time)
           TYPE(*ANY)
           CLASS(*IN)
           USESCHDMNL(*YES)
           DMNSCHLIST(nist.gov)

```

This command queries for any records associated with the name 'time'. If this query fails, then DIG will retry the query by appending the domain 'ibm.com' from the searchlist to the name.

The output from this type of query might look like this:

```

; <<>> DiG 9.4.1.i5/OS.V6R1M0 <<>> -q time -t any -c in @10.0.1.100
+search +domain=nist.gov
; (1 server found)
;; global options: printcmd
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 1336
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 2, ADDITIONAL: 2
;; QUESTION SECTION:
time.nist.gov.          IN      ANY
;; ANSWER SECTION:
time.nist.gov.         287    IN      A      192.43.244.18
;; AUTHORITY SECTION:
nist.gov.              65982  IN      NS     ns1.nist.gov.
nist.gov.              65982  IN      NS     dns-x.boulder.nist.gov.
;; ADDITIONAL SECTION:
ns1.nist.gov.         283    IN      A      129.6.13.2
dns-x.boulder.nist.gov. 40652  IN      A      132.163.4.9
;; Query time: 1038 msec
;; SERVER: 10.0.1.100#53(10.0.1.100)
;; WHEN: Sat Aug 5 11:36:18 2006
;; MSG SIZE rcvd: 125

```

Example 5: Suppression of Response Sections

```

DIG  HOSTNAME(time.nist.gov)
     TYPE(*ANY)
     CLASS(*IN)
     PRTALL(*NO)
     QUESTION(*YES)
     ANSWER(*YES)

```

This command is similar to Example 4, except we suppressed most of the response sections using the PRTALL(*NO) parameter, and then overrode that setting for the question section using QUESTION(*YES) and the answer section using ANSWER(*YES).

The output from this type of query might look like this:

```
;time.nist.gov.      IN      ANY
time.nist.gov.      673     IN      A       192.43.244.18
```

[Top](#)

Error messages

*ESCAPE Messages

DNS0013

Error processing command parameters.

DNS0065

Option 33 of i5/OS is required, but is not installed.

TCP7124

Program &1 in library &2 type *PGM ended abnormally.

[Top](#)

Deallocate Object (DLCOBJ)

Where allowed to run: All environments (*ALL)
Threadsafe: Conditional

Parameters
Examples
Error messages

The Deallocate Object (DLCOBJ) command releases the allocations of the specified objects. The objects, allocated earlier by one or more Allocate Object (ALCOBJ) commands, are freed for use by other jobs, or threads. If the DLCOBJ command is used when a lock does not exist, no error occurs.

If the DLCOBJ command is not used, the objects may be automatically deallocated. Allocated job-scoped locks are automatically released when the job ends. Allocated thread-scoped locks are automatically released when the thread ends. If a thread received a job-scoped lock, the job will continue to hold that lock after the requesting thread ends. Lock-space-scoped locks are not automatically released.

The DLCOBJ command should not be issued for an object that was not explicitly allocated by the ALCOBJ command. If the DLCOBJ command is used this way, internal locks on the object are released, making the object capable of being deleted.

To release more than one lock for an object with a single DLCOBJ command, the object name, type, and lock state must be repeated in the list for each lock you want to release.

NOTES:

1. When deallocating distributed data management (DDM) files and distributed files, additional time is required for the command to complete because of the time required for establishing communication and for deallocating files on remote systems.
2. Allocating an object by specifying *LIBL for the object's library, changing the thread's library list, and then attempting to deallocate the object by specifying *LIBL for the object's library can result in issuing the deallocate against the wrong object. This could release internal locks.

Restrictions:

1. This command cannot be used to deallocate a device description, *DEVDD, for an advanced program-to-program communications (APPC) device or for an intrasystem (INTRA) device.
2. This command can be used to deallocate only the following database *FILE types:
 - Physical files
 - Logical files
 - Distributed files
This deallocates the piece of the file on each node in the node group.
 - DDM files
This deallocates both the DDM file on the local system and the file on the remote system that is identified in the DDM file.
3. In multithreaded jobs, this command is not threadsafe for distributed files. This command is also not threadsafe for distributed data management (DDM) files of type *SNA.

Top

Parameters

Keyword	Description	Choices	Notes
OBJ	Object specifications	Values (up to 50 repetitions): <i>Element list</i>	Required, Positional 1
	Element 1: Object	<i>Qualified object name</i>	
	Qualifier 1: Object	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
	Element 2: Object type	*AUTL, *BNDDIR, *CLD, *CRQD, *CSI, *CSPMAP, *CSPTBL, *DEVD, *DTAARA, *DTADCT, *DTAQ, *FCT, *FILE, *FNTRSC, *FNTTBL, *FORMDF, *IMGCLG, *IPXD, *LIB, *LOCALE, *MEDDFN, *MENU, *MGTCOL, *MODULE, *MSGQ, *NODL, *NTBD, *NWSCFG, *NWSL, *OVL, *PAGDFN, *PAGSEG, *PDFMAP, *PDG, *PGM, *PNLGRP, *PSFCFG, *QMFORM, *QMQR, *QRYDFN, *SBSD, *SCHIDX, *SQLPKG, *SRVPGM, *SSND, *S36, *TIMZON, *USRIDX, *USRQ, *USRSPC, *VLDL, *WSCST	
	Element 3: Lock state	*SHRRD, *SHRNUP, *SHRUPD, *EXCLRD, *EXCL	
Element 4: Member, if data base file	<i>Name, *FIRST</i>		
SCOPE	Lock scope	<i>*JOB, *THREAD, *LCKSPC</i>	Optional

Top

Object specifications (OBJ)

Specifies the qualified name of one or more objects that are deallocated from the job, thread, or lock space, the type of each object specified, the lock state of each object, and the member name (if the object is a database file or DDM file).

Only some object types can be specified on the Deallocate Object (DLCOBJ) command. Of these, some cannot use all of the lock states.

This is a required parameter.

You can specify 50 values for this parameter.

Element 1: Object

Qualifier 1: Object

name Specify the name of the object.

Qualifier 2: Library

**LIBL* All libraries in the thread's library list are searched until a match is found.

**CURLIB*

The current library for the thread is used to locate the object. If no library is specified as the current library for the thread, the QGPL library is used.

name Specify the name of the library where the object is located.

Element 2: Object type

object-type

Specify the type of object to be deallocated. Refer to the figure Valid Lock States by Object Type for more information.

Element 3: Lock state

***SHRRD**

The lock state is shared for read.

***SHRNUP**

The lock state is shared, no update.

***SHRUPD**

The lock state is shared for update.

***EXCLRD**

The lock state is exclusive, allow read.

***EXCL**

The lock state is exclusive, no read.

Element 4: Member, if data base file

Note: The following values can only be specified if the object type is a database file.

***FIRST**

The first member of the database file is deallocated.

name Specify the name of the member to be allocated. If the specified file is a logical file, the physical file members associated with the members of the logical file are also deallocated.

An explanation of how to specify multiple locks on an object, locking device descriptions, or the type objects that can be allocated, is in the CL topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

If a database file member is deallocated, the first occurrence of the file in the library list is found and that file is searched for the specified member. If a file of the same name farther down on the library list contains the member, but the first file does not, the member is not found. If the member name is not specified for a database file, the member name defaults to *FIRST and the member that was created first in the file is deallocated.

Table 5. Figure: Valid Lock States by Object Type

Object Type	Object Type Definition	Lock States				
		*EXCL	*EXCLRD	*SHRUPD	*SHRNUP	*SHRRD
*AUTL	Authorization List	x	x	x	x	x
*BNDDIR	Binding directory	x	x			x
*CLD	C Locale description	x	x	x	x	x
*CRQD	Change request description	x	x	x	x	x
*CSI	Communications side information	x	x	x	x	x
*DEVD	Device Description		x	x		
*DTAARA	Data area	x	x	x	x	x
*DTADCT	Data dictionary	x	x	x	x	x
*DTAQ	Data queue	x	x	x	x	x
*FCT	Forms control table	x	x	x	x	x
*FILE	File	x	x	x	x	x
*FNTRSC	Font resource	x	x	x	x	x
*FNTTBL	Font mapping table	x	x	x	x	x
*FORMDF	Form definition	x	x	x	x	x
*IMGCLG	Image catalog	x	x	x	x	x
*IPXD	Internet packet exchange description	x	x	x	x	x
*LIB	Library		x	x	x	x
*LOCALE	Locale space object	x	x	x	x	x
*MEDDFN	Media definition	x	x	x	x	x
*MENU	Menu	x	x	x	x	x
*MGTCOL	Management collection	x	x	x	x	x
*MODULE	Module	x	x			x
*MSGQ	Message queue	x				x
*NODL	Node list	x	x	x	x	x
*NTBD	NetBIOS description	x	x	x	x	x
*NWSCFG	Network server configuration	x	x	x	x	x
*NWS	Network server description	x	x	x	x	x
*OVL	Overlay	x	x	x	x	x
*PAGDFN	Page definition	x	x	x	x	x
*PAGSEG	Page segment	x	x	x	x	x
*PDFMAP	PDF Map	x	x	x	x	x
*PDG	Print descriptor group	x	x	x	x	x
*PGM	Program	x	x			x
*PNLGRP	Panel group	x	x	x	x	x
*PSFCFG	Print service facility configuration	x	x	x	x	x
*QMFORM	Query management form	x	x	x	x	x
*QMQR	Query management query	x	x	x	x	x
*QRYDFN	Query definition	x	x	x	x	x
*S36	S/36 machine description	x	x	x	x	x
*SBSD	Subsystem description	x				
*SCHIDX	Search index	x	x	x	x	x
*SQLPKG	Structured Query Language package	x	x	x	x	x
*SRVPGM	Service program	x	x	x	x	x
*SSND	Session description	x	x	x	x	x
*TIMZON	Time zone description	x	x	x	x	x
*USRIDX	User index	x	x	x	x	x
*USRQ	User queue	x	x	x	x	x
*USRSPC	User space	x	x	x	x	x
*VLDL	Validation list object	x	x	x	x	x
*WSCST	Workstation customizing object	x	x	x	x	x

'x' indicates the lock state is allowed for the object type.

Top

Lock scope (SCOPE)

Specify the scope for this lock request.

***JOB** The lock is scoped to the job.

***LCKSPC**

The lock is scoped to the lock space attached to the current thread. If no lock space is attached, the lock is scoped to the job.

***THREAD**

The lock is scoped to the thread.

All objects types supported by the OBJ parameter support job-scoped locks. All object types supported by the OBJ parameter support lock-space-scoped locks. For DDM objects with a lock-space-scope, the lock on the remote system is scoped to the job. To determine if an object type supports thread-scoped locks refer to the figure Object Types that Support Thread Scope Locks.

The lock scope must match the scope of the locks currently allocated for the job or thread.

Table 6. Figure: Object Types that Support Thread Scope Locks

Object Type	Object Type Definition	Thread Scope
*AUTL	Authorization list	
*BNDDIR	Binding directory	
*CLD	C Locale description	
*CRQD	Change request description	
*CSI	Communications side information	
*DEVD	Device Description	x
*DTAARA	Data area	x
*DTADCT	Data dictionary	x
*DTAQ	Data queue	x
*FCT	Forms control table	
*FILE	File	x
*FNTRSC	Font resource	
*FNTTBL	Font mapping table	
*FORMDF	Form definition	
*IMGCLG	Image catalog	x
*IPXD	Internet packet exchange description	x
*LIB	Library	x
*LOCALE	Locale space object	x
*MEDDFN	Media definition	
*MENU	Menu	
*MGTCOL	Management collection	x
*MODULE	Module	
*MSGQ	Message queue	x
*NODL	Node list	
*NTBD	NetBIOS description	x
*NWSCFG	Network server configuration	
*NWS	Network server description	x
*OVL	Overlay	
*PAGDFN	Page definition	
*PAGSEG	Page segment	
*PDFMAP	PDF Map	x
*PDG	Print descriptor group	
*PGM	Program	x
*PNLGRP	Panel group	
*PSFCFG	Print service facility configuration	
*QMFORM	Query management form	
*QMORY	Query management query	
*QRYDFN	Query definition	
*S36	S/36 machine description	
*SBSD	Subsystem description	x
*SCHIDX	Search index	
*SQLPKG	Structured Query Language package	
*SRVPGM	Service program	x
*SSND	Session description	
*TIMZON	Time zone description	x
*USRIDX	User index	x
*USRQ	User queue	x
*USRSPC	User space	x
*VLDL	Validation list object	x
*WSCST	Workstation customizing object	

'x' indicates a thread-scoped lock is allowed for the object type.

Top

Examples

Example 1: Deallocate a File for the Job

```
DLCOBJ OBJ((LIBB/FILEA *FILE *SHRRD))
```

This command releases the shared-for-read allocation of the first member of file FILEA in library LIBB that was held by the job.

Example 2: Deallocate a Data Area for the Thread

```
DLCOBJ OBJ((LIBY/DATAAREAX *DTAARA *SHRRD )) SCOPE(*THREAD)
```

This command releases the shared-for-read allocation of the data area DATAAREAX in library LIBY that was held by the thread.

Example 3: Deallocate File for Lock Space

```
DLCOBJ OBJ((LIBB/FILEA *FILE *EXCL MEMBERA))  
SCOPE(*LCKSPC)
```

This command deallocates member MEMBERA of file FILEA in library LIBB from the lock space attached to the current thread.

[Top](#)

Error messages

*ESCAPE Messages

CPF1005

Objects not deallocated.

[Top](#)

Delete Alert (DLTALR)

Where allowed to run: All environments (*ALL)
Threatsafe: No

Parameters
Examples
Error messages

The Delete Alert (DLTALR) command allows you to delete one or more alerts from the alert database.

Top

Parameters

Keyword	Description	Choices	Notes
DLTOPT	Delete option	<u>*ALL</u> , *RCV, *LOCAL, *HELD	Optional, Positional 1
DAYS	Days	0-999, <u>30</u>	Optional, Positional 2
ALRTYPE	Alert type	Single values: <u>*ALL</u> Other values (up to 5 repetitions): <i>Character value</i> , *TEMP, *PERM, *PERF, *IMPEND, *UNKNOWN	Optional
ALRRSC	Alert resource	Single values: <u>*ALL</u> Other values (up to 50 repetitions): <i>Name</i>	Optional
ALRRSCTYPE	Alert resource type	Single values: <u>*ALL</u> Other values (up to 50 repetitions): <i>Character value</i>	Optional
ASNUSER	User assigned	Single values: <u>*ALL</u> Other values (up to 50 repetitions): <i>Character value</i> , *NONE	Optional
GROUP	Group	Single values: <u>*ALL</u> Other values (up to 50 repetitions): <i>Name</i> , *NONE, *DEFAULT	Optional

Top

Delete option (DLTOPT)

Specifies which alerts are to be deleted.

***ALL** All alerts that meet the selection criteria in the remaining keywords are deleted. If the remaining keywords are defaulted, all of the alerts over 30 days old are deleted.

***RCV** Only alerts received from other systems are deleted. Selection criteria for the received alerts can be further specified in the remaining keywords. If the remaining keywords are defaulted, all of the received alerts over 30 days old are deleted.

***LOCAL**

Only locally created alerts are deleted. Selection criteria for the local alerts can be further specified in the remaining keywords. If the remaining keywords are defaulted, all of the locally created alerts over 30 days old are deleted.

***HELD**

All alerts that cannot be sent to the system's focal point and are marked HELD are deleted. Selection criteria for the held alerts can be further specified in the remaining keywords. If the remaining keywords are defaulted, all of the held alerts over 30 days old are deleted.

Note: There is a distinction between held alerts that are sent or forwarded by this system, and held alerts that are received by another system. DLTOPT(*HELD) deletes only held alerts that could not be sent or forwarded by this system (or are currently being held based on the ALRHLDCNT network attribute).

Top

Days (DAYS)

Specifies that alerts older than this value are deleted. Alerts that are more recent than this value are not deleted. This value can be 0 or any number of days. Selection criteria can be further specified in the remaining keywords.

30 All alerts over 30 days old are deleted.

0-999 Specify the number of days.

Top

Alert type (ALRTYPE)

Specifies which types of alerts are deleted. The alert type indicates the severity of the alert.

Single values

*ALL All types of alerts are deleted.

Other values (up to 5 repetitions)

*TEMP
All alerts reporting a temporary problem are deleted.

*PERM
All alerts reporting a permanent problem are deleted.

*PERF All alerts reporting a performance problem are deleted.

*IMPEND
All alerts reporting an impending problem are deleted.

*UNKNOWN
All alerts reporting a problem with unknown severity are deleted.

character-value

Specify the code point for the alert type. The code point is specified by two (2) hexadecimal digits.

Top

Alert resource (ALRRSC)

Specifies the name of resources that are reporting problems. Up to 50 alert resource names can be specified.

Single values

*ALL Alerts about all failing resources.

Other values (up to 50 repetitions)

name Specify the name of resources that are reporting problems.

Alert resource type (ALRRSCTYPE)

Specifies the type of resources that are reporting problems. A maximum of 50 resource types can be specified. Each resource name has a resource type associated with that resource. For example, resource types are diskette (DKT) or tape (TAP).

Single values

***ALL** Alerts for all resource types.

Other values (up to 50 repetitions)

character-value

Specify the resource type of alerts that are reporting problems associated with the assigned resource type.

Top

User assigned (ASNUSER)

Specifies the user to which the alerts being deleted are assigned. This value is taken from the value on the ASNUSER parameter in the Add Alert Action Entry (ADDALRACNE) command.

Single values

***ALL** All alerts are deleted.

Other values (up to 50 repetitions)

***NONE**

The alerts not assigned to a user are deleted.

character-value

Specify the name of the user to which the alerts being deleted are assigned.

Top

Group (GROUP)

Specifies the group to which the alerts being deleted are assigned. This value is taken from the value on the GROUP parameter in the Add Alert Selection Entry (ADDALRSLTE) command.

Single values

***ALL** All alerts are deleted.

Other values (up to 50 repetitions)

***DEFAULT**

The alerts assigned to the default group are deleted.

***NONE**

The alerts not assigned to a group are deleted.

name Specify the name of the group to which the alerts being deleted are assigned.

Examples

Example 1: Deleting Temporary and Permanent Alert Types

```
DLTALR  DLTOPT(*LOCAL) DAYS(10) ALRTYPE(*TEMP *PERM)
        ALRRSCTYPE(DKT)
```

This command deletes temporary and permanent locally created alerts in the alert database. The alerts that are deleted are reporting problems about diskettes. Alerts more than 10 days old that match these criteria are deleted.

Example 2: Deleting Alerts Associated with Diskette Resources

```
DLTALR  DLTOPT(*RCV) DAYS(0) ALRRSCTYPE(DKT)
```

This command deletes received alerts associated with diskette resources.

Error messages

*ESCAPE Messages

CPF9807

One or more libraries in library list deleted.

CPF9808

Cannot allocate one or more libraries on library list.

CPF9812

File &1 in library &2 not found.

CPF9822

Not authorized to file &1 in library &2.

CPF9845

Error occurred while opening file &1.

CPF9846

Error while processing file &1 in library &2.

CPF9847

Error occurred while closing file &1 in library &2.

Delete Alert Table (DLTALRTBL)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Delete Alert Table (DLTALRTBL) command deletes an alert table from the specified library. More information on deleting alert tables is in the Alerts Support book, SC41-5413.

Top

Parameters

Keyword	Description	Choices	Notes
ALRTBL	Alert table	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Alert table	<i>Generic name, name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB, *USRLIBL, *ALL, *ALLUSR</i>	

Top

Alert table (ALRTBL)

Specifies the qualified name of the alert table being deleted.

The possible values are:

alert-table-name

Specify the name of the alert table being deleted.

generic*-alert-table-name

Specify the generic name of the alert table being deleted. A generic name is a character string that contains one or more characters followed by an asterisk (*). If a generic name is specified for the ALRTBL parameter, all alert tables that have names with the same prefix as the generic alert table name are deleted.

The possible library values are:

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***USRLIBL**

If a current library entry exists in the library list for the current thread, the current library and the libraries in the user portion of the library list are searched. If there is no current library entry, only the libraries in the user portion of the library list are searched.

***CURLIB**

The current library list is searched to locate the alert table. If no library is specified as the current library for the job, then the QGPL library is used.

***ALL** All libraries in the system, including QSYS, are searched.

***ALLUSR**

All user libraries are searched. All libraries with names that do not begin with the letter Q are searched except for the following:


```
#CGULIB    #DSULIB    #SEULIB
#COBLIB    #RPGLIB
#DFULIB    #SDALIB
```

Although the following Qxxx libraries are provided by IBM, they typically contain user data that changes frequently. Therefore, these libraries are considered user libraries and are also searched:

```
QDSNX      QRCLxxxxx  QUSRDIRDB  QUSRVI
QGPL       QSRVAGT   QUSRISJS   QUSRVRxRxMx
QGPL38     QSYS2     QUSRINFSKR
QMGTC      QSYS2xxxxx QUSRNOTES
QMGTC2     QS36F     QUSROND
QMPGDATA   QUSER38   QUSRPOSGS
QMQMDATA   QUSRADSM  QUSRPOSSA
QMQMPROC   QUSRBRM   QUSRPYMSVR
QPFRDATA   QUSRDIRCF QUSRDRARS
QRCL       QUSRDIRCL QUSRSYS
```

1. 'xxxxx' is the number of a primary auxiliary storage pool (ASP).
2. A different library name, in the format QUSRVRxRxMx, can be created by the user for each previous release supported by IBM to contain any user commands to be compiled in a CL program for the previous release. For the QUSRVRxRxMx user library, VxRxMx is the version, release, and modification level of a previous release that IBM continues to support.

library-name

Specify the library where the alert table is located.

Top

Examples

```
DLTALRTBL  ALRTBL(ALRTBLLIB/ALRTBLNBR1)
```

This command deletes alert table ALRTBLNBR1 from library ALRTBLLIB.

Top

Error messages

*ESCAPE Messages

CPF2105

Object &1 in &2 type *&3 not found.

CPF2110

Library &1 not found.

CPF2113

Cannot allocate library &1.

CPF2114

Cannot allocate object &1 in &2 type *&3.

CPF2176

Library &1 damaged.

CPF2182

Not authorized to library &1.

CPF2189

Not authorized to object &1 in &2 type *&3.

Top

Delete APAR Data (DLTAPARDTA)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Delete APAR Data (DLTAPARDTA) command deletes the Authorized Problem Analysis Report (APAR) library and any data created by the Restore APAR Data (RSTAPARDTA) command. This command also updates the problem log entry with new information and removes the referral to the APAR library.

Restrictions:

- The following user profiles have authority to this command:
 - QPGMR
 - QSYSOPR
 - QSRVBAS
 - QSRV

Top

Parameters

Keyword	Description	Choices	Notes
PRBID	Problem identifier	<i>Character value</i>	Required, Positional 1
ORIGIN	Origin	<i>Element list</i>	Optional
	Element 1: Network identifier	<i>Communications name, *NETATR</i>	
	Element 2: Control point name	<i>Communications name, *NETATR</i>	

Top

Problem identifier (PRBID)

Specifies the identifier (ID) of the problem for which APAR data is to be deleted.

This is a required parameter.

character-value

Specify the problem identifier to be used.

Top

Origin (ORIGIN)

Specifies the network ID and the control point where the problem occurred.

Element 1: Network identifier

*NETATR

The problem originated on a system with the same local network ID as the one defined on the network attributes of this system.

communications-name

Specify the network ID of the system where the problem originated.

Element 2: Control point name

*NETATR

The problem originated on a system with the same control point name as the one defined on the network attributes of this system.

communications-name

Specify the control point of the system where the problem originated.

Top

Examples

DLTAPARDTA PRBID(9202448748)

This command deletes an APAR library and the APAR data for the problem ID 9202448748.

Top

Error messages

*ESCAPE Messages

CPF2182

Not authorized to library &1.

CPF39FA

Problem &1 &2 &3 not found

CPF39FE

No APAR data associated with problem &1

CPF39F2

Cannot allocate library &1

CPF39F5

Query of problem &1 failed

CPF39F9

Problem &1 &2 &3 in use

Top

Delete Authority Holder (DLTAUTHLR)

Where allowed to run: All environments (*ALL)
Threadsafe: No

[Parameters](#)
[Examples](#)
[Error messages](#)

The Delete Authority Holder (DLTAUTHLR) command allows a user to delete an authority holder that secures an object of type *FILE.

Restrictions:

- The authority holder can be deleted by a user who has all object (*ALLOBJ) special authority or all (*ALL) authority to the object it secures.

[Top](#)

Parameters

Keyword	Description	Choices	Notes
OBJ	Object	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Object	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	

[Top](#)

Object (OBJ)

Specifies the authorization holder object to be deleted.

This is a required parameter.

Qualifier 1: Object

name Specify the name of the authorization holder object.

Qualifier 2: Library

name Specify the name of the library where the authorization holder is located.

[Top](#)

Examples

```
DLTAUTHLR OBJ(QGPL/FIL1)
```

This command deletes the authority holder for FIL1 in the QGPL library.

[Top](#)

Error messages

***ESCAPE Messages**

CPC2213

Authority holder deleted.

CPF22B1

Authority holder does not exist.

CPF22B2

Not authorized to create or delete authority holder.

CPF9803

Cannot allocate object &2 in library &3.

Top

Delete Authorization List (DLTAUTL)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Delete Authorization List (DLTAUTL) command allows a user to delete an authorization list. Authorization lists cannot be deleted if they are being used to secure an object. The user deleting an authorization list must have all object (*ALLOBJ) special authority or be the owner of the authorization list.

Top

Parameters

Keyword	Description	Choices	Notes
AUTL	Authorization list	<i>Generic name, name</i>	Required, Positional 1

Top

Authorization list (AUTL)

Specifies the authorization lists to be deleted.

This is a required parameter.

generic-name

Specify the generic name of the authorization lists to be deleted. If a generic authorization list name is specified, then all authorization lists that have names with the same prefix as the generic authorization list name and that the user has proper authority for are deleted.

A generic name is a character string of one or more characters followed by an asterisk (*); for example ABC*. The asterisk substitutes for any valid characters. A generic name specifies all objects with names that begin with the generic prefix for which the user has authority. If an asterisk is not included with the generic (prefix) name, the system assumes it to be the complete object name.

name Specify the name of the authorization list to be deleted.

Top

Examples

Example 1: Deleting an Authorization List

```
DLTAUTL  AUTL(PROGMR)
```

This command deletes the PROGMR authorization list.

Example 2: Deleting Generic Authorization Lists

This commands deletes all authorization lists starting with the letters FR.

Top

Error messages

*ESCAPE Messages

CPF2105

Object &1 in &2 type *&3 not found.

CPF2110

Library &1 not found.

CPF2113

Cannot allocate library &1.

CPF2114

Cannot allocate object &1 in &2 type *&3.

CPF2116

DATA(*YES) specified and *ALL or *FILE not in OBJTYPE list.

CPF2117

&4 objects type *&3 deleted. &5 objects not deleted.

CPF2125

No objects deleted.

CPF2160

Object type *&1 not eligible for requested function.

CPF2176

Library &1 damaged.

CPF2182

Not authorized to library &1.

CPF2189

Not authorized to object &1 in &2 type *&3.

CPF2279

Authorization list &1 cannot be deleted.

CPF2289

Unable to allocate authorization list &1.

CPF5702

File either not DDM file or not found.

CPF9801

Object &2 in library &3 not found.

Top

Delete Binding Directory (DLTBNDDIR)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Delete Binding Directory (DLTBNDDIR) command deletes a binding directory.

Restrictions

- You must have execute (*EXECUTE) authority to the library from which the binding directory is to be deleted and object existence (*OBJEXIST) authority to the binding directory.

Top

Parameters

Keyword	Description	Choices	Notes
BNDDIR	Binding directory	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Binding directory	<i>Generic name, name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB, *USRLIBL, *ALL, *ALLUSR</i>	

Top

Binding directory (BNDDIR)

Specifies a binding directory or a group of binding directories to be deleted.

This is a required parameter.

Qualifier 1: Binding directory

generic-name

Specify the generic name of the binding directories to be deleted. A generic name is a character string of one or more characters followed by an asterisk (*); for example, ABC*. If a generic name is specified, then all binding directories with names that begin with the generic name, and for which the user has authority, are deleted. If an asterisk is not included with the generic (prefix) name, the system assumes it to be the complete binding directory name.

name Specify the name of the binding directory to be deleted.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

***USRLIBL**

Only the libraries in the user portion of the job's library list are searched.

***ALL** All libraries in the system, including QSYS, are searched.

*ALLUSR

All user libraries are searched. All libraries with names that do not begin with the letter Q are searched except for the following:

#CGULIB	#DSULIB	#SEULIB
#COBLIB	#RPGLIB	
#DFULIB	#SDALIB	

Although the following Qxxx libraries are provided by IBM, they typically contain user data that changes frequently. Therefore, these libraries are considered user libraries and are also searched:

QDSNX	QRCLxxxxx	QUSRDIRDB	QUSRVI
QGGL	QSRVAGT	QUSRIS	QUSRVxRxMx
QGGL38	QSYS2	QUSRINFSKR	
QMGTC	QSYS2xxxxx	QUSRNOTES	
QMGTC2	QS36F	QUSROND	
QMPGDATA	QUSER38	QUSRPOSGS	
QMOMDATA	QUSRADSM	QUSRPOSSA	
QMOMPROC	QUSRBRM	QUSRPYMSVR	
QPFRDATA	QUSRDIRCF	QUSRDRARS	
QRCL	QUSRDIRCL	QUSRSYS	

1. 'xxxxx' is the number of a primary auxiliary storage pool (ASP).
2. A different library name, in the format QUSRVxRxMx, can be created by the user for each previous release supported by IBM to contain any user commands to be compiled in a CL program for the previous release. For the QUSRVxRxMx user library, VxRxMx is the version, release, and modification level of a previous release that IBM continues to support.

Top

Examples

```
DLTBNDIR  BNDDIR(DISPLAYS)
```

This command deletes the binding directory named DISPLAYS using the job library list to locate the binding directory.

Top

Error messages

*ESCAPE Messages

CPF2105

Object &1 in &2 type *&3 not found.

CPF2110

Library &1 not found.

CPF2113

Cannot allocate library &1.

CPF2114

Cannot allocate object &1 in &2 type *&3.

CPF2117
&4 objects type *&3 deleted. &5 objects not deleted.

CPF2125
No objects deleted.

CPF2160
Object type *&1 not eligible for requested function.

CPF2176
Library &1 damaged.

CPF2182
Not authorized to library &1.

CPF2189
Not authorized to object &1 in &2 type *&3.

CPFA030
Object already in use.

CPFE007
Error occurred processing command.

CPF9803
Cannot allocate object &2 in library &3.

Top

Delete Configuration List (DLTCFGL)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Delete Configuration List (DLTCFGL) command deletes the specified configuration list.

Top

Parameters

Keyword	Description	Choices	Notes
CFGL	Configuration list	<i>Generic name, name</i>	Required, Positional 1

Top

Configuration list (CFGL)

Specifies the name of one or more configuration list to delete. A specific configuration list or a generic configuration list can be specified.

configuration-list-name

Specify the name of the configuration list to delete.

generic-configuration-list-name*

Specify the generic name of the configuration list to delete.

Note: A generic name is specified as a character string that contains one or more characters followed by an asterisk (*). If a generic name is specified, then all objects that have names with the same prefix as the generic object name are selected.

This is a required parameter.

Top

Examples

```
DLTCFGL CFGL(CONFIG01)
```

This command deletes the configuration list CONFIG01 from the system.

Top

Error messages

*ESCAPE Messages

CPF2105

Object &1 in &2 type *&3 not found.

CPF2625

Not able to allocate object &1.

[Top](#)

Delete C Locale Description (DLTCLD)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Delete C Locale Description command deletes the C/400* locale description you specify on the CLD parameter. You can delete more than one locale by specifying a generic name as a locale name. If you specify a specific name for the C locale description, only the first occurrence of the locale is deleted when the DLTCLD is processed. The system searches for the locale based on the library specified. If the locale does not exist or is not found in the specified library, the locale is not deleted.

Error messages for DLTCLD

None

Top

Parameters

Keyword	Description	Choices	Notes
CLD	Locale name	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Locale name	<i>Generic name, name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB, *USRLIBL, *ALL, *ALLUSR</i>	

Top

Locale name (CLD)

Specifies the name of the C locale description you want to delete. You must enter a specific locale name or generic locale name.

locale-name

Specifies the name of the C locale description you want to delete.

generic-C-locale-description-name*

Specifies a generic name for the C Locale Descriptions that you want to delete. A generic name can contain a character string with one or more asterisks (*). If a generic name is specified for the CLD parameter, then all C locale descriptions that have names with the same prefix are deleted. For example, if you enter the locale name MY*, all locales beginning with MY in the specified library, are deleted. See the Control Language Reference more information on the use of generic functions.

The possible library values are:

***LIBL** Both the user and system portions of the library list are searched for the specified locale. If a specific C locale description name is specified (instead of a generic name), only the first locale found with that name is deleted.

***CURLIB**

The current library for the job is searched. If you have not specified a current library, the system will search QGPL for the specified locale.

***USRLIBL**

The user portion of the library list is searched for the specified locale. If a specific C locale description name is specified (instead of a generic name), only the first locale found with that name is deleted.

***ALL** All of the libraries in the system, including QSYS, are searched for the specified locale. If a specific C locale description name is specified (instead of a generic name), only the first locale found with that name is deleted.

***ALLUSR**

All non-system libraries, including all user-defined libraries and QGPL, are searched. This includes both libraries in your library list and those not specified there. All libraries beginning with the letter Q, other than QGPL, are not searched, as these are system libraries.

library-name

Enter the name of the library you want to search for the specified locale. This is the only library that is searched when the DLTCLD command is processed. You must have *USE authority for the specified library.

Top

Examples

None

Top

Error messages

None

Top

Delete Class (DLTCLS)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Delete Class (DLTCLS) command deletes a class object or a group of class objects from the system. Any routing steps that are running that are using the class are not affected by its deletion. However, additional routing steps using this class cannot be started. If the deleted class is referred to in any existing routing entry, either the routing entry must be changed (to refer to a different class) or another class must be created with the same name. If a subsystem routing entry specifies a deleted class, the subsystem is unable to start any jobs using that routing entry.

Restrictions:

1. To use this command, you must have object existence (*OBJEXIST) authority for the class, and execute (*EXECUTE) authority for the library.

Top

Parameters

Keyword	Description	Choices	Notes
CLS	Class	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Class	<i>Generic name, name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB, *USRLIBL, *ALL, *ALLUSR</i>	

Top

Class (CLS)

Specifies the name and library of the class being deleted. A specific class or a generic class can be specified; either type can be optionally qualified by a library name.

This is a required parameter.

Qualifier 1: Class

generic-name

Specify the generic name of the class being deleted. A generic name is a character string that contains one or more characters followed by an asterisk (*). If a generic name is specified, then all classes that have names with the same prefix as the generic class are deleted.

name Specify the name of the class.

Qualifier 2: Library

***LIBL** All libraries in the thread's library list are searched until a match is found. If a specific object name is specified (instead of a generic name), only the first object found to have that name is deleted.

*CURLIB

The current library for the thread is used to locate the object. If no library is specified as the current library for the thread, the QGPL library is used.

*USRLIBL

Only the libraries listed in the user portion of the library list are searched. If a specific object name is specified (instead of a generic name), only the first object found with that name is deleted.

***ALL** All libraries in auxiliary storage pools (ASPs) that are currently part of the thread's library name space will be searched. This includes the system ASP (ASP 1), all defined basic user ASPs (ASPs 2-32), and, if the thread has an ASP group, the primary and secondary ASPs in the thread's ASP group. Only your own QTEMP library is searched. All objects matching the specified name and object type in all libraries in the thread's name space are deleted.

*ALLUSR

All user libraries are searched. All libraries with names that do not begin with the letter Q are searched except for the following:

```
#CGULIB      #DSULIB      #SEULIB
#COBLIB      #RPGLIB
#DFULIB      #SDALIB
```

Although the following Qxxx libraries are provided by IBM, they typically contain user data that changes frequently. Therefore, these libraries are considered user libraries and are also searched:

```
QDSNX      QRCLxxxxx  QUSRDIRDB  QUSRVI
QGPL       QSRVAGT   QUSRIJS    QUSRVxRxMx
QGPL38     QSYS2     QUSRINFSKR
QMGTC      QSYS2xxxxx QUSRNOTES
QMGTC2     QS36F     QUSROND
QMPGDATA   QUSER38   QUSRPOSGS
QMQMDATA   QUSRADSM  QUSRPOSSA
QMQMPROC   QUSRBRM   QUSRPYMSVR
QPFRDATA   QUSRDIRCF QUSRDRDARS
QRCL       QUSRDIRCL QUSRSYS
```

1. 'xxxxx' is the number of a primary auxiliary storage pool (ASP).
2. A different library name, in the format QUSRVxRxMx, can be created by the user for each previous release supported by IBM to contain any user commands to be compiled in a CL program for the previous release. For the QUSRVxRxMx user library, VxRxMx is the version, release, and modification level of a previous release that IBM continues to support.

name Specify the library where the class is located.

Top

Examples

```
DLTCLS CLS(CLASS1)
```

This command deletes the class named CLASS1 from the system.

Top

Error messages

*ESCAPE Messages

CPF2105

Object &1 in &2 type *&3 not found.

CPF2110

Library &1 not found.

CPF2113

Cannot allocate library &1.

CPF2114

Cannot allocate object &1 in &2 type *&3.

CPF2117

&4 objects type *&3 deleted. &5 objects not deleted.

CPF2160

Object type *&1 not eligible for requested function.

CPF2176

Library &1 damaged.

CPF2182

Not authorized to library &1.

CPF2189

Not authorized to object &1 in &2 type *&3.

CPF5702

File either not DDM file or not found.

Top

Delete Command (DLTCMD)

Where allowed to run: All environments (*ALL)
Threadsafe: No

Parameters
Examples
Error messages

The Delete Command (DLTCMD) command deletes a user-defined command (or group of commands) from the library where it is located. Only the command definition object is removed; the command definition source, the command processing program, and the validity checker are not affected.

Restriction:

- You must have object existence (*OBJEXIST) authority to the command to be deleted.

Top

Parameters

Keyword	Description	Choices	Notes
CMD	Command	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Command	<i>Generic name, name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB, *USRLIBL, *ALL, *ALLUSR</i>	

Top

Command (CMD)

Specifies the commands to be deleted. A specific command name or a generic command name can be specified; optionally qualified by a library name.

Qualifier 1: Command

name Specify the name of the command to be deleted.

generic-name

Specify the generic name of the commands to be deleted. A generic name is a character string that contains one or more characters followed by an asterisk (*). If a generic name is specified, then all commands that have names with the same prefix as the generic name are deleted.

Qualifier 2: Library

***LIBL** All libraries in the library list for the current thread are searched until the first match is found.

***CURLIB**

The current library for the job is searched. If no library is specified as the current library for the job, QGPL is used.

***USRLIBL**

If a current library entry exists in the library list for the current thread, the current library and the libraries in the user portion of the library list are searched. If there is no current library entry, only the libraries in the user portion of the library list are searched.

If a specific command name is specified (instead of a generic name), only the first command found with that name is deleted.

***ALL** All libraries in the system, including QSYS, are searched.

***ALLUSR**

All user libraries are searched. All libraries with names that do not begin with the letter Q are searched except for the following:

#CGULIB	#DSULIB	#SEULIB
#COBLIB	#RPGLIB	
#DFULIB	#SDALIB	

Although the following Qxxx libraries are provided by IBM, they typically contain user data that changes frequently. Therefore, these libraries are considered user libraries and are also searched:

QDSNX	QRCLxxxxx	QUSRDIRDB	QUSRVI
QGGL38	QSRVAGT	QUSRIJS	QUSRVxRxMx
QGPL38	QSYS2	QUSRINFSKR	
QMGTC	QSYS2xxxxx	QUSRNOTES	
QMGTC2	QS36F	QUSROND	
QMPGDATA	QUSER38	QUSRPOSGS	
QMOMDATA	QUSRADSM	QUSRPOSSA	
QMOMPROC	QUSRBRM	QUSRPYMSVR	
QPFRRDATA	QUSRDIRCF	QUSRDRARS	
QRCL	QUSRDIRCL	QUSRSYS	

1. 'xxxxx' is the number of a primary auxiliary storage pool (ASP).
2. A different library name, in the format QUSRVxRxMx, can be created by the user for each previous release supported by IBM to contain any user commands to be compiled in a CL program for the previous release. For the QUSRVxRxMx user library, VxRxMx is the version, release, and modification level of a previous release that IBM continues to support.

name Specify the name of the library to be searched.

Top

Examples

```
DLTCMD  CMD(LIB01/PAYROLL)
```

This command deletes the command named PAYROLL from library LIB01. Any private authorities to the command are removed from the user profiles of all authorized users.

Top

Error messages

*ESCAPE Messages

CPF2105

Object &1 in &2 type *&3 not found.

CPF2110

Library &1 not found.

CPF2113

Cannot allocate library &1.

CPF2114

Cannot allocate object &1 in &2 type *&3.

CPF2117

&4 objects type *&3 deleted. &5 objects not deleted.

CPF2176

Library &1 damaged.

CPF2182

Not authorized to library &1.

CPF2189

Not authorized to object &1 in &2 type *&3.

Top

Appendix. Notices

This information was developed for products and services offered in the U.S.A.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

IBM World Trade Asia Corporation
Licensing
2-31 Roppongi 3-chome, Minato-ku
Tokyo 106-0032, Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law: INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation

Software Interoperability Coordinator, Department YBWA
3605 Highway 52 N
Rochester, MN 55901
U.S.A.

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement, IBM License Agreement for Machine Code, or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs.

Each copy or any portion of these sample programs or any derivative work, must include a copyright notice as follows:

© (your company name) (year). Portions of this code are derived from IBM Corp. Sample Programs. © Copyright IBM Corp. _enter the year or years_. All rights reserved.

If you are viewing this information softcopy, the photographs and color illustrations may not appear.

Programming interface information

This i5/OS commands publication documents intended Programming Interfaces that allow the customer to write programs to obtain the services of IBM i5/OS.

Trademarks

The following terms are trademarks of International Business Machines Corporation in the United States, other countries, or both:

Advanced Function Printing
AFP
AS/400
CICS
COBOL/400
C/400
DataPropagator
DB2
Distributed Relational Database Architecture
Domino
DRDA
IBM
Infoprint
InfoWindow
i5/OS
iSeries
Integrated Language Environment
Lotus
LPDA
OfficeVision
Print Services Facility
RPG/400
System i
System x
SystemView
System/36
TCS
Tivoli
WebSphere
z/OS

Adobe, the Adobe logo, PostScript, and the PostScript logo are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States, and/or other countries.

Intel, Intel logo, Intel Inside, Intel Inside logo, Intel Centrino, Intel Centrino logo, Celeron, Intel Xeon, Intel SpeedStep, Itanium, and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

Java and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Other company, product, or service names may be trademarks or service marks of others.

Terms and conditions

Permissions for the use of these publications is granted subject to the following terms and conditions.

Personal Use: You may reproduce these publications for your personal, noncommercial use provided that all proprietary notices are preserved. You may not distribute, display or make derivative works of these publications, or any portion thereof, without the express consent of IBM.

Commercial Use: You may reproduce, distribute and display these publications solely within your enterprise provided that all proprietary notices are preserved. You may not make derivative works of these publications, or reproduce, distribute or display these publications or any portion thereof outside your enterprise, without the express consent of IBM.

Except as expressly granted in this permission, no other permissions, licenses or rights are granted, either express or implied, to the publications or any information, data, software or other intellectual property contained therein.

IBM reserves the right to withdraw the permissions granted herein whenever, in its discretion, the use of the publications is detrimental to its interest or, as determined by IBM, the above instructions are not being properly followed.

You may not download, export or re-export this information except in full compliance with all applicable laws and regulations, including all United States export laws and regulations.

IBM MAKES NO GUARANTEE ABOUT THE CONTENT OF THESE PUBLICATIONS. THE PUBLICATIONS ARE PROVIDED "AS-IS" AND WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT, AND FITNESS FOR A PARTICULAR PURPOSE.

Code license and disclaimer information

IBM grants you a nonexclusive copyright license to use all programming code examples from which you can generate similar function tailored to your own specific needs.

SUBJECT TO ANY STATUTORY WARRANTIES WHICH CANNOT BE EXCLUDED, IBM, ITS PROGRAM DEVELOPERS AND SUPPLIERS MAKE NO WARRANTIES OR CONDITIONS EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT, REGARDING THE PROGRAM OR TECHNICAL SUPPORT, IF ANY.

UNDER NO CIRCUMSTANCES IS IBM, ITS PROGRAM DEVELOPERS OR SUPPLIERS LIABLE FOR ANY OF THE FOLLOWING, EVEN IF INFORMED OF THEIR POSSIBILITY:

1. LOSS OF, OR DAMAGE TO, DATA;
2. DIRECT, SPECIAL, INCIDENTAL, OR INDIRECT DAMAGES, OR FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES; OR
3. LOST PROFITS, BUSINESS, REVENUE, GOODWILL, OR ANTICIPATED SAVINGS.

SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF DIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, SO SOME OR ALL OF THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.



Printed in USA