



System i

Programming

i5/OS commands

Starting with CHGPFTRG (Change Physical File Trigger)

Version 6 Release 1





System i

Programming

i5/OS commands

Starting with CHGPFTRG (Change Physical File Trigger)

Version 6 Release 1

Note

Before using this information and the product it supports, be sure to read the information in "Notices," on page 693.

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

Change PF Trigger (CHGPFTRG)	1
Parameters	1
File (FILE)	1
Trigger (TRG)	2
Trigger library (TRGLIB)	2
Trigger state (STATE)	2
Examples	3
Error messages	3

Change Program (CHGPGM)	5
Parameters	5
Program (PGM)	6
Optimize program (OPTIMIZE)	6
User profile (USRPRF)	7
Use adopted authority (USEADPAUT)	8
Remove observable info (RMVOBS)	8
Profiling data (PRFDTA)	9
Force program re-creation (FRCCRT)	10
Text 'description' (TEXT)	10
Licensed Internal Code options (LICOPT)	11
Number of threads (NBRTHD)	11
Enable performance collection (ENBPFRCOL)	12
Teraspace (TERASPACE)	12
Examples	12
Error messages	13

Change Program Variable (CHGPGMVAR)	15
Parameters	15
Program variables (PGMVAR)	16
New value (VALUE)	16
Program (PGM)	16
Char output start position (START)	17
Recursion level (RCRLVL)	17
Examples	17
Error messages	18

Change Primary Group (CHGPGP)	19
Parameters	19
Object (OBJ)	20
New primary group (NEWPGP)	20
New data authorities (DTAAUT)	20
New object authorities (OBJAUT)	21
Revoke current authority (RVKOLDAUT)	22
Directory subtree (SUBTREE)	22
Symbolic link (SYMLNK)	22
Examples	23
Error messages	25

Change Prestart Job (CHGPJ)	27
Parameters	28
Output priority (on OUTQ) (OUTPTY)	28
Print text (PRTTXT)	28
Print device (PRTDEV)	28

Output queue (OUTQ)	29
Accounting code (ACGCDE)	29
Examples	29
Error messages	30

Change Prestart Job Entry (CHGPJE)	31
Parameters	31
Subsystem description (SBSD)	32
Program (PGM)	33
User profile (USER)	33
Start jobs (STRJOBS)	33
Initial number of jobs (INLJOBS)	34
Threshold (THRESHOLD)	34
Additional number of jobs (ADLJOBS)	34
Maximum number of jobs (MAXJOBS)	35
Job name (JOB)	35
Job description (JOBDESC)	35
Maximum number of uses (MAXUSE)	36
Wait for job (WAIT)	36
Pool identifier (POOLID)	36
Class (CLS)	37
Thread resources affinity (THDRSCAFN)	39
Resources affinity group (RSCAFNGRP)	39
Examples	40
Error messages	40

Change Problem (CHGPRB)	41
Parameters	41
Problem identifier (PRBID)	41
Origin (ORIGIN)	42
Severity (SEV)	42
User assigned (ASUSER)	42
Group assigned (GROUP)	43
Service number (SRVID)	43
Branch number (BRANCH)	43
Country or region number (COUNTRY)	43
Problem category (PRBCGY)	44
Text 'description' (TEXT)	44
Examples	44
Error messages	44

Change Problem Action Entry (CHGPRBACNE)	47
Parameters	47
Filter (FILTER)	47
Group (GROUP)	48
User assigned (ASUSER)	48
Send to data queue (SNDDTAQ)	48
Examples	49
Error messages	49

Change Problem Selection Entry (CHGPRBSLTE)	51
Parameters	51

Filter (FILTER)	51
Sequence number (SEQNBR)	52
Selection data (SELECT)	52
Group (GROUP)	55
Examples	55
Error messages	55

Change Profile (CHGPRF) 57

Parameters	57
Assistance level (ASTLVL)	58
Current library (CURLIB)	59
Initial program to call (INLPGM)	59
Initial menu (INLMNU)	60
Text 'description' (TEXT)	60
Keyboard buffering (KBDBUF)	60
Job description (JOBDD)	61
Document password (DOCPWD)	61
Message queue (MSGQ)	62
Delivery (DLVRY)	62
Severity code filter (SEV)	63
Print device (PRTDEV)	63
Output queue (OUTQ)	63
Attention program (ATNPGM)	64
Sort sequence (SRTSEQ)	65
Language ID (LANGID)	65
Country or region ID (CNTRYID)	65
Coded character set ID (CCSID)	66
Character identifier control (CHRIDCTL)	66
Locale job attributes (SETJOBATR)	67
Locale (LOCALE)	67
User options (USROPT)	68
Home directory (HOMEDIR)	68
Examples	69
Error messages	69

Change Printer File (CHGPRTF) 71

Parameters	71
File (FILE)	75
Device (DEV)	76
Printer device type (DEVTYPE)	77
Page size (PAGESIZE)	78
Lines per inch (LPI)	78
Characters per inch (CPI)	79
Overflow line number (OVRFLW)	80
Record format level check (LVLCHK)	80
Text 'description' (TEXT)	80
Front margin (FRONTMGN)	81
Back margin (BACKMGN)	81
Fold records (FOLD)	82
Unprintable character action (RPLUNPRT)	82
Align page (ALIGN)	83
Control character (CTLCHAR)	83
Channel values (CHLVAL)	84
Fidelity (FIDELITY)	85
Print quality (PRTQLTY)	85
Form feed (FORMFEED)	85
Source drawer (DRAWER)	86
Output bin (OUTBIN)	86
Font identifier (FONT)	86
Character identifier (CHRID)	87

Decimal format (DECfmt)	88
Font character set (FNTCHRSET)	88
Coded font (CDEFNT)	89
Table Reference Characters (TBLREFCHR)	90
Page definition (PAGDFN)	90
Form definition (FORMDF)	91
AFP Characters (AFPCHARS)	92
Degree of page rotation (PAGRRT)	92
Pages per side (MULTIUP)	93
Reduce output (REDUCE)	93
Print text (PRTTXT)	94
Hardware justification (JUSTIFY)	94
Print on both sides (DUPLEX)	94
Defer write (DFRWR)	95
Unit of measure (UOM)	95
Front side overlay (FRONTOVL)	95
Back side overlay (BACKOVL)	96
Convert line data (CVTLINDTA)	98
IPDS pass through (IPDSPASTHR)	98
User resource library list (USRRSCLIBL)	99
Corner staple (CORNERSTPL)	99
Edge stitch (EDGESTITCH)	100
Saddle stitch (SADLSTITCH)	101
Font resolution for formatting (RNTRSL)	103
Spool the data (SPOOL)	103
Spooled output queue (OUTQ)	103
Form type (FORMTYPE)	104
Copies (COPIES)	104
Expiration date for file (EXPDATE)	104
Days until file expires (DAYS)	105
Page range to print (PAGERANGE)	105
Max spooled output records (MAXRCDS)	105
File separators (FILESEP)	106
Spooled output schedule (SCHEDULE)	106
Hold spooled file (HOLD)	106
Save spooled file (SAVE)	106
Output priority (on OUTQ) (OUTPTY)	107
User data (USRDTA)	107
Spool file owner (SPLFOWN)	107
User Defined Option (USRDFNOPT)	108
User Defined Data (USRDFNDTA)	108
User Defined Object (USRDFNOBJ)	109
User specified DBCS data (IGCDTA)	110
DBCS extension characters (IGCEXNCHR)	110
DBCS character rotation (IGCCHRRTT)	110
DBCS characters per inch (IGCCPI)	111
DBCS SO/SI spacing (IGCSOSI)	111
DBCS coded font (IGCCDEFNT)	111
To stream file (TOSTMF)	112
Workstation customizing object (WSCST)	113
Maximum file wait time (WAITFILE)	113
Share open data path (SHARE)	113
Examples	114
Error messages	114

Change Proxy Command (CHGPRXCMD) 115

Parameters	115
Command (CMD)	115
Target command (TGTCMD)	116
Text 'description' (TEXT)	116

Examples	117
Error messages	117

Change PSF Configuration (CHGPSFCFG) 119

Parameters	119
PSF configuration (PSFCFG)	121
User resource library list (USRRSCLIBL)	121
Device resource library list (DEVRSCLIBL)	122
IPDS pass through (IPDSPASTHR)	122
Activate release timer (ACTRLSTMR)	123
Release timer (RLSTMR)	124
Restart timer (RESTRTMR)	125
APPC and TCP/IP retry count (RETRY)	125
Delay between APPC retries (RETRYDLY)	125
Acknowledgment frequency (ACKFRQ)	126
Printer response timer (PRTRSPMTR)	126
Generate PDF output (PDFGEN)	126
PDF device emulation type (PDFDEVTYPE)	127
PDF paper size drawer 1 (PDFPPRDWR1)	127
PDF paper size drawer 2 (PDFPPRDWR2)	128
Multiple PDF files (PDFMULT)	128
PDF fonts inline (PDFINCFNT)	129
PDF data queue (PDFDTAQ)	129
PDF mail server name (PDFMAILSVR)	130
Sender of electronic mail (PDFSENDER)	130
PDF administrator (PDFADMIN)	131
PDF user program (PDFMAPPGM)	131
PDF mapping object (PDFMAP)	132
PDF output queue (PDFOUTQ)	132
PDF directory (PDFDIR)	133
Save AFP data (AFPSAVE)	133
AFP output queue (AFPOUTQ)	134
Text 'description' (TEXT)	134
Automatic session recovery (AUTOSSNRCY)	134
Blank page (BLANKPAGE)	135
Page size control (PAGSIZCTL)	136
Resident fonts (RESFONT)	136
Resource retention (RSCRET)	136
Edge orient (EDGEORIENT)	137
Use outline fonts (USEOUTLFNT)	137
PSF defined option (PSDFNOPT)	137
Font substitution messages (FNTPSUBMSG)	137
Capture host fonts at printer (FNTPCAPTURE)	138
Font resolution for formatting (FNTPRSL)	138
Font mapping table (FNTPBL)	138
Cut sheet emulation mode (CSEMODE)	139
Use DBCS simulation fonts (MAPIGCFNT)	140
Examples	140
Error messages	140

Change Pointer (CHGPTR) 143

Parameters	143
Pointer to be changed (PTR)	144
System object (SYSOBJ)	144
Object type (OBJTYPE)	145
Address to be pointed to (ADR)	145
New offset in space (OFFSET)	146
Program (PGM)	146
Pointer type (PTRTYPE)	146

Recursion level (RCRLVL)	147
Examples	147
Error messages	147

Change Password (CHGPWD) 149

Parameters	149
Examples	149
Error messages	149

Change Power On/Off Schedule (CHGPWRSCD) 151

Parameters	151
Examples	151
Error messages	151

Change Power Schedule Entry (CHGPWRSCDE) 153

Parameters	153
Day (DAY)	153
Power on time (PWRONTIME)	154
Power off time (PWROFFTIME)	154
Day description (DAYDESC)	154
Minutes before power off (MSGITV)	155
Examples	155
Error messages	156

Change Query Attributes (CHGQRYA) 157

Parameters	157
Job name (JOB)	157
Query processing time limit (QRYTIMLMT)	158
Parallel processing degree (DEGREE)	158
Asynchronous job usage (ASYNCJ)	160
Apply CHGQRYA to remote (APYRMT)	161
Query options file library (QRYOPTLIB)	161
Query temporary storage limit (QRYSTGLMT)	162
Examples	162
Error messages	164

Change Q/A Database (CHGQSTDB) 165

Parameters	165
Q/A database (QSTDB)	165
Lib containing Q/A database (LIB)	165
Examples	166
Error messages	166

Chg Recovery for Access Paths (CHGRCYAP) 167

Parameters	167
System recovery time (SYSRCYTIME)	168
ASP recovery time (ASPRCYTIME)	168
ASP device recovery time (ASPDEVRCY)	169
Include access paths (INCACCPH)	169
Examples	170
Error messages	171

Change RDB Directory Entry (CHGRDBDIRE) 173

Parameters	173
----------------------	-----

Entry (RDB)	174
Remote location (RMTLOCNAME)	174
Text (TEXT)	175
Port number or service program (PORT)	176
Remote authentication method (RMTAUTMTH)	176
Device (DEV)	177
Local location (LCLLOCNAME)	178
Remote network identifier (RMTNETID)	178
Mode (MODE)	179
Transaction program (TNSPGM)	179
Application requester driver (ARDPGM)	179
Examples	180
Error messages	180

Change Remote Definition (CHGRMTDFN) 181

Parameters	181
System name (SYSTEM)	181
Text (TEXT)	182
Meeting notice document type (MTGNTCDOC)	182
Calendar data stream (CALDTASTM)	182
Calendar password (RMTCALPWD)	183
Remote user authority (RMTUSRAUT)	183
Remote location (RMTLOCNAME)	183
Local location (LCLLOCNAME)	184
Remote network identifier (RMTNETID)	184
Mode (MODE)	184
Examples	185
Error messages	185

Change Remote Journal (CHGRMTJRN) 187

Parameters	187
Relational database (RDB)	188
Source journal (SRCJRN)	188
Target journal (TGTJRN)	189
Journal state (JRNSTATE)	189
Delivery (DELIVERY)	189
Starting journal receiver (STRJRNRCV)	190
Data port services (DTAPORTSRV)	191
Sending task priority (SNDTSKPTY)	191
Synchronous sending time-out (SYNCTIMO)	192
Validity checking (VLDCHK)	192
How to make inactive (INACTOPT)	192
Examples	193
Error messages	194

Change Reply List Entry (CHGRPYLE) 197

Parameters	197
Sequence number (SEQNBR)	197
Message identifier (MSGID)	198
Compare data (CMPDTA)	198
Message reply (RPY)	199
Dump the sending job (DUMP)	199
Coded character set ID (CCSID)	199
Examples	200
Error messages	201

Change RouteD Attributes (CHGRTD) 203

Parameters	203
Autostart (AUTOSTART)	203
Supply (SUPPLY)	203
Examples	204
Error messages	204

Change Routing Entry (CHGRTE) 205

Parameters	205
Subsystem description (SBSD)	206
Routing entry sequence number (SEQNBR)	206
Comparison data (CMPVAL)	206
Program to call (PGM)	207
Class (CLS)	207
Maximum active routing steps (MAXACT)	208
Storage pool identifier (POOLID)	208
Thread resources affinity (THDRSCAFN)	209
Resources affinity group (RSCAFNGRP)	209
Examples	209
Error messages	210

Change RWS Controller Password (CHGRWSPWD) 211

Parameters	211
Controller description (CTLD)	211
Remote password (RMTPWD)	211
Local location (LCLLOCNAME)	211
Mode (MODE)	212
Examples	212
Error messages	212

Change S/36 Configuration (CHGS36) 215

Parameters	215
Examples	215
Error messages	215

Change S/36 Environment Attr (CHGS36A) 217

Parameters	217
Default session library (SLIB)	218
Default files library (FLIB)	218
Use library list for file (LIBL)	218
Date differentiated files (DATDIFF)	218
S/36 shared opens of files (S36ESHARE)	219
Shared file record blocking (RCDBLK)	219
Store deleted files in cache (CACHEDLTF)	219
Default lines per page (LPPAGE)	219
Forms type (FORMTYPE)	220
Default message action (DFTMSGACN)	220
Halt options (HALTOPT)	220
Evoke job initiation (EVKJOBINIT)	221
Evoke storage pool (EVKJOBPOL)	221
Evoke job priority (EVKJOBPTY)	221
Source file record length (SRCRCLEN)	221
Allow CHGS36 while active (CHGACT)	222
Add only S/36 users (ADDS36ONLY)	222
Substitute ICF procedure data (ICFSUBST)	222
MRT user profile (MRTUSRPRF)	223

Check authority to files (MRTAUT)	223
MRT delay value (MRTDLY)	223
MRT job initiation (MRTJOBINIT)	223
MRT storage pool (MRTJOBPOL)	224
MRT job priority (MRTJOBPTY)	224
Examples	224
Error messages	224

Change S/36 Message List (CHGS36MSGL) 225

Parameters	225
Message list (MSGL)	225
Default action (DFTACN)	226
Scope (SCOPE)	227
Examples	227
Error messages	228

Change S/36 Program Attributes (CHGS36PGMA) 229

Parameters	229
S/36 program (PGM)	229
Maximum MRT's (MRTMAX)	229
Never-ending program (NEP)	230
Examples	230
Error messages	230

Change S/36 Proc Attributes (CHGS36PRCA) 231

Parameters	231
S/36 procedure member (MBR)	231
Source file (FILE)	231
MRT procedure (MRT)	232
MRT delay (MRTDLY)	232
Log OCL statements (LOG)	232
Contains program data (PGMDTA)	232
Logical record length (RCDLEN)	233
Reference number (REFNBR)	233
Examples	233
Error messages	233

Change S/36 Source Attributes (CHGS36SRCA) 235

Parameters	235
S/36 source member (MBR)	235
Source file (FILE)	235
Source type (SRCTYPE)	236
Reference number (REFNBR)	237
Logical record length (RCDLEN)	237
Maximum devices (MAXDEV)	237
Defer write (DFRWRT)	238
Examples	238
Error messages	238

Change Save File (CHGSAVF) 241

Parameters	241
Save file (FILE)	241
Maximum records (MAXRCDS)	242
Text 'description' (TEXT)	242
Maximum file wait time (WAITFILE)	242

Share open data path (SHARE)	243
Examples	243
Error messages	243

Change Subsystem Description (CHGSBSD) 245

Parameters	245
Subsystem description (SBSD)	246
Storage pools (POOLS)	247
Maximum jobs (MAXJOBS)	248
Text 'description' (TEXT)	248
Sign-on display file (SGNDSPF)	248
Subsystem library (SYSLIBL)	249
ASP group (ASPGRP)	249
Examples	250
Error messages	251

Change Search Index (CHGSCHIDX) 253

Parameters	253
Search index (SCHIDX)	253
Display title (TITLE)	254
Text 'description' (TEXT)	254
Character identifier (CHRID)	254
Examples	255
Error messages	255

Change Security Attributes (CHGSECA) 257

Parameters	257
User ID number (UID)	257
Group ID number (GID)	258
Examples	258
Error messages	258

Change Security Auditing (CHGSECAUD) 259

Parameters	259
QAUDCTL system value (QAUDCTL)	259
Auditing values (QAUDLVL)	260
Initial journal receiver (INLJRNRCV)	265
Examples	266
Error messages	266

Change Shared Storage Pool (CHGSHRPOOL) 267

Parameters	267
Pool identifier (POOL)	268
Storage size (SIZE)	268
Activity level (ACTLVL)	268
Paging option (PAGING)	269
Text 'description' (TEXT)	269
Minimum page faults (MINFAULT)	269
Per thread page faults (JOBFAULT)	270
Maximum page faults (MAXFAULT)	270
Priority (PTY)	270
Minimum size % (MINPCT)	270
Maximum size % (MAXPCT)	271
Examples	271
Error messages	271

Change SNMP Attributes (CHGSNMPA) 273

Parameters	273
System contact (SYSCONTACT)	274
System location (SYSLOC)	274
Send authentication traps (SNDAUTTRP)	275
Automatic start (AUTOSTART)	275
Object access (OBJACC)	275
Log set requests (LOGSET)	276
Log get requests (LOGGET)	276
Log traps (LOGTRP)	276
Trap managers (TRPMGR)	276
Examples	277
Error messages	277

Change Spooled File Attributes (CHGSPLFA). 279

Parameters	279
Spooled file (FILE)	282
Job name (JOB)	282
Spooled file number (SPLNBR)	282
Job system name (JOBSYSNAME)	283
Spooled file created (CRTDATE)	283
Select files for (SELECT)	284
ASP device (ASPDEV)	284
Printer (DEV)	285
Print sequence (PRTSEQ)	285
Form type (FORMTYPE)	285
Copies (COPIES)	286
Restart printing (RESTART)	286
Volume (VOL)	286
File label (LABEL)	287
Output queue (OUTQ)	287
File separators (FILESEP)	288
Page range to print (PAGERANGE)	288
File becomes available (SCHEDULE)	288
Save file (SAVE)	289
Expiration date for file (EXPDATE)	289
Days until file expires (DAYS)	289
Output priority (OUTPTY)	290
User data (USRDTA)	290
Align page (ALIGN)	290
Print quality (PRTQLTY)	290
Form feed (FORMFEED)	291
Source drawer (DRAWER)	291
Print fidelity (FIDELITY)	291
Print on both sides (DUPLEX)	292
Pages per side (MULTIUP)	292
Page definition (PAGDFN)	293
Form definition (FORMDF)	293
AFP Characters (AFPCHARS)	294
Front side overlay (FRONTOVL)	294
Back side overlay (BACKOVL)	295
User Defined Option (USRDFNOPT)	297
User Defined Data (USRDFNDTA)	297
User Defined Object (USRDFNOBJ)	297
IPDS pass through (IPDSPASTHR)	298
Font resolution for formatting (FNTRSL)	299
Diskette file exchange type (EXCHTYPE)	299
Code (CODE)	300

Examples	300
Error messages	301

Change Source Physical File (CHGSRCPF) 303

Parameters	303
Physical file (FILE)	304
System (SYSTEM)	304
Expiration date for member (EXPDATE)	304
Maximum members (MAXMBRS)	305
Access path size (ACCPATHSIZ)	305
Access path maintenance (MAINT)	306
Access path recovery (RECOVER)	306
Force keyed access path (FRCACCPATH)	307
Member size (SIZE)	307
Allocate storage (ALLOCATE)	308
Preferred storage unit (UNIT)	308
Records to force a write (FRCRATIO)	308
Maximum file wait time (WAITFILE)	309
Maximum record wait time (WAITRCD)	309
Share open data path (SHARE)	309
Max % deleted records allowed (DLTPCT)	310
Text 'description' (TEXT)	310
Coded character set ID (CCSID)	310
Examples	310
Error messages	311

Change Service Attributes (CHGSRVA) 313

Parameters	313
System disabled reporting (SYSDSBRPT)	314
System disabled call back (SYSDSBCB)	314
Analyze problem automatically (ANZPRBAUTO)	315
Report problem automatically (RPTPRBAUTO)	315
Report problem to (RPTSRVPVD)	315
Service provider connection (SRVPVDCNN)	316
PTF install type (PTFINSTYP)	316
Copy PTFs (CPYPTF)	316
PTF group levels (PTFGRPLVL)	317
Send data packet (SNDDTAPKT)	317
ECS message queue (ECSMSGQ)	317
Critical messages to user (CRITMSGUSR)	318
Examples	318
Error messages	319

Change Service Agent (CHGSRVAGT) 321

Parameters	321
Type (TYPE)	322
Block reporting (BLKPRBRPT)	323
Block period (PERIOD)	324
Ignore (IGNPRB)	324
Create job logs (CRTJOBLOG)	325
Analyze immediately (ANZIMMED)	325
Analysis start date (ANZSTRDATE)	325
Analysis start time (ANZSTRTIME)	325
Enable coverage (ENBCVG)	326
Coverage start time (CVGSTRTIME)	326
Coverage end time (CVGENDTIME)	326
Call over weekends (WEEKEND)	326
Data (DATA)	327
Current password (CURPWD)	327

New password (NEWPWD)	327
Verify password (VFYPWD)	327
Subtype (SUBTYPE)	328
Action (ACTION)	328
Device (DEVICE)	328
Category (CATEGORY)	328
Sense byte format (SENSEFMT)	329
Error classes (RPTERRCLS)	329
System reference code (SYSREFCDE)	331
Active (ADDACTIVE)	331
Threshold (ADDTHRESH)	331
Group (ADDGROUP)	331
Text (ADDTEXT)	332
Active (CHGACTIVE)	332
Threshold (CHGTHRESH)	332
Group (CHGGROUP)	332
Text (CHGTEXT)	333
System reference code range (RANGE)	333
IBM ID (IBMID)	333
Examples	334
Error messages	334

Change Service Agent Attr (CHGSRVAGTA)	335
Parameters	335
Enable (ENABLE)	336
Auto report (AUTORPT)	336
Auto report retry (AUTORPRTY)	337
Product activity log analysis (PALANZ)	337
Run priority (RUNPTY)	338
Notify user ID (NOTIFYUSR)	339
Auto PTF (AUTOPTF)	339
Auto test (AUTOTEST)	340
Service information (SRVINFL)	341
Report problem to (SRVPVDID)	342
Line control (LINECTL)	342
Report remote problem (RPTRMTPRB)	343
Activation password (ACTPWD)	344
Examples	344
Error messages	344

Change Service Configuration (CHGSRVCFG)	345
Parameters	345
Role (ROLE)	346
Connection type (CNNTYPE)	346
Country or region ID (CNTRYID)	347
State or province code (STATE)	347
Primary telephone number (TELNBR1)	347
Alternate telephone number (TELNBR2)	348
Resource name (RSRCNAME)	348
Modem information name (MODEM)	348
Wait for dial tone (DIALTONE)	349
Remote system (RMTSYS)	349
Proxy server (PROXY)	350
ISP profile name (ISPPRF)	351
Connectivity for others (CNNPNT)	351
Connection point proxy (CNNPNTPRX)	352
Examples	353
Error messages	353

Change Service Program (CHGSRVPGM)	355
Parameters	355
Service program (SRVPGM)	356
Optimize service program (OPTIMIZE)	356
User profile (USRPRF)	357
Use adopted authority (USEADPAUT)	357
Remove observable info (RMVOBS)	358
Profiling data (PRFDATA)	358
Force recreation (FRCCRT)	359
Text 'description' (TEXT)	359
Licensed Internal Code options (LICOPT)	360
Number of threads (NBRTHD)	360
Enable performance collection (ENBPFRCOL)	360
Teraspace (TERASPACE)	361
Examples	361
Error messages	362

Change Session Maximum (CHGSSNMAX)	365
Parameters	366
Remote location (RMTLOCNAME)	366
Maximum sessions (MAXSSN)	366
Device (DEV)	366
Mode (MODE)	366
Local location (LCLLOCNAME)	367
Remote network identifier (RMTNETID)	367
Examples	367
Error messages	368

Change Server Auth Entry (CHGSVRAUTE)	369
Parameters	369
User profile (USRPRF)	369
Server (SERVER)	369
User ID (USRID)	370
User password (PWD)	370
Examples	370
Error messages	371

Change System Dir Attributes (CHGSYSDIRA)	373
Parameters	373
Type of search (SCHTYPE)	374
Search program (SCHPGM)	374
Verification program (VRFPGM)	375
Supplier program (SUPPGM)	375
Retry interval (RTYITV)	376
Retry limit (RTYLMT)	376
Display network user ID (ALWDSPNUI)	376
Message queue (MSGQ)	376
Shadow remote users (RMTSHD)	377
Remove shadowing job logs (RMVJOBLOG)	377
Allow search (ALWSCH)	377
User-defined fields (USRDFNFLD)	378
Examples	379
Error messages	379

Change System Job (CHGSYSJOB)	381
--------------------------------------	------------

Parameters	381
Job name (JOB).	381
Run priority (RUNPTY)	382
Examples.	382
Error messages	382

Change System Library List (CHGSYSLIBL) 383

Parameters	383
Library (LIB)	383
Option (OPTION)	383
Examples.	384
Error messages	384

Change System Value (CHGSYSVAL) 385

Parameters	387
System value (SYSVAL)	387
New value (VALUE)	417
Examples.	417
Error messages	417

Change Tape Cartridge (CHGTAPCTG) 421

Parameters	421
Library device (DEV).	421
Cartridge ID (CTG)	421
Category (CGY)	422
Examples.	422
Error messages	423

Change Tape File (CHGTAPF) 425

Parameters	425
File (FILE)	426
Device (DEV)	426
Volume identifier (VOL).	427
Tape reels specifications (REELS)	427
Sequence number (SEQNBR)	428
Tape label (LABEL)	429
Text 'description' (TEXT)	429
Record length (RCDLEN)	429
Block length (BLKLEN)	430
Buffer offset (BUFOFSET)	431
Record block format (RCDBLKFMNT).	431
Extend file (EXTEND)	432
Tape density (DENSITY).	432
Data compaction (COMPACT).	437
Code (CODE)	438
Creation date (CRTDATE)	438
File expiration date (EXPDATE)	438
End of tape option (ENDOPT).	438
User label program (USRLBLPGM)	439
User specified DBCS data (IGCDTA)	439
Maximum file wait time (WAITFILE)	439
Share open data path (SHARE)	440
Examples.	440
Error messages	440

Change TCP/IP Attributes (CHGTCPA) 441

Parameters	442
TCP keep alive (TCPKEEPALV)	443

TCP urgent pointer (TCPURGPTR)	444
TCP receive buffer size (TCPRCVBUF)	444
TCP send buffer size (TCPSNDBUF).	444
TCP R1 retransmission count (TCPR1CNT)	445
TCP R2 retransmission count (TCPR2CNT)	445
TCP minimum retransmit time (TCPMINRTM)	445
TCP time-wait timeout (TCPCLOTIMO)	446
TCP close connection message (TCPCNNMSG)	446
UDP checksum (UDPCKS)	446
Path MTU discovery (IPPATHMTU).	447
IP datagram forwarding (IPDTGFWD)	447
IP source routing (IPSRCRTG).	448
IP reassembly time-out (IPRSBTIMO)	448
IP time to live (hop limit) (IPTTL)	448
IP QoS enablement (IPQOSEN)	448
IP dead gateway detection (IPDEADGATE)	449
ARP cache timeout (ARPTIMO)	449
Enable ECN (ECN)	450
Network file cache (NFC)	450
Log protocol errors (LOGPCLERR)	451
ICMPv6 error msg burst limit (IP6ERRLMT)	451
ICMPv6 error msg send rate (IP6ERRRATE)	452
IPv6 hop limit (IP6HOPLMT)	452
IPv6 dup route load sharing (IP6DUPRTLS)	452
IPv6 temp addr valid lifetime (IP6TMPAVL)	452
IPv6 temp addr pref lifetime (IP6TMPAPL)	453
IP QoS datagram batching (IPQOSBCH)	453
IP QoS timer resolution (IPQOSTMR)	453
Examples.	453
Error messages	454

Change TCP/IP Domain (CHGTCPDMN). 457

Parameters	457
Host name (HOSTNAME)	457
Domain name (DMNNAME)	458
Domain search list (DMNSCHLIST)	458
Host name search priority (HOSTSCHPTY)	459
Internet address (INTNETADR)	459
Port (PORT)	460
Protocol (PROTOCOL)	460
Initial domain name server (INLDMNSVR)	461
Domain name server retry (DMNSVRRTY)	461
Examples.	462
Error messages	462

Change TCP/IP Host Table Entry (CHGTCPHTE) 465

Warning: Temporary Level 2 Header	466
Parameters	466
Internet address (INTNETADR)	466
Host names (HOSTNAME).	467
Text 'description' (TEXT)	469
Examples.	469
Error messages	470

Change TCP/IP Interface (CHGTCPIFC) 471

Parameters	472
Internet address (INTNETADR)	472

Line description (LIND)	473
Subnet mask (SUBNETMASK).	474
Address prefix length (ADRPFXLEN)	475
Alias name (ALIASNAME).	475
Associated local interface (LCLIFC)	475
Type of service (TOS).	476
Maximum transmission unit (MTU)	476
Autostart (AUTOSTART)	477
PVC logical channel identifier (PVCLGLCHLI)	478
X.25 idle circuit timeout (IDLVCTTIMO)	478
X.25 maximum virtual circuits (MAXSVC).	479
X.25 DDN interface (DDN)	479
TRLAN bit sequencing (BITSEQ)	479
Interface ID (IFCID)	480
DAD maximum transmits (DADMAXTRN)	480
Privacy extensions (PVYEXN)	480
Preferred interfaces (PREFIFC)	481
Preferred line descriptions (PREFLIND)	481
Text 'description' (TEXT)	481
Examples.	482
Error messages	483

Change TCP/IP Route (CHGTCPRTE) 485

Parameters	485
Route destination (RTEDEST)	486
Subnet mask (SUBNETMASK).	487
Type of service (TOS).	487
Next hop (NEXTHOP)	488
Address prefix length (ADRPFXLEN)	488
Preferred binding interface (BINDIFC)	489
Binding line description (BINDLIND)	489
Maximum transmission unit (MTU)	489
Route metric (METRIC)	490
Route redistribution (REDST)	490
Duplicate route priority (DUPRTEPTY).	491
Text 'description' (TEXT)	491
Examples.	491
Error messages	492

Change TCP/IP Server (CHGTCP SVR) 495

Parameters	495
Server special value (SVRSPCVL)	495
Program to call (PGM)	496
Server name (SVRNAME)	496
Server type (SVRTYPE)	496
Autostart (AUTOSTART)	497
Text 'description' (TEXT)	497
Examples.	497
Error messages	497

Change TFTP Attributes (CHGTFTPA) 499

Parameters	499
Autostart server (AUTOSTART)	499
Enable subnet broadcast (ENBBCAST)	500
Number of server jobs (NBR SVR)	500
Server inactivity timer (INACTTMR)	501
ASCII single byte CCSID (CCSID)	501
Maximum block size (MAXBLKSIZE)	501
Connection response timeout (RSPTIMO)	502
Allow file writes (ALWWRT)	502

Assigned directories (ALTSRCDIR)	502
Alternate target directory (ALTTGTDIR)	503
Examples.	503
Error messages	503

Change Time Zone Description (CHGTIMZON) 505

Parameters	505
Time zone description (TIMZON)	506
Offset (OFFSET)	506
Standard Time (STDNAME)	506
Daylight Saving Time (DST) (DSTNAME)	507
Standard Time message (STDMMSG)	508
Daylight Saving Time message (DSTMSG).	508
Message file (MSGF)	508
Daylight Saving Time start (DSTSTR)	509
Daylight Saving Time end (DSTEND)	510
Daylight Saving Time shift (DSTSHIFT)	511
Text 'description' (TEXT)	512
Year offset (YEAROFS)	512
Alternate name (ALTNAME)	512
Examples.	512
Error messages	513

Change User Auditing (CHGUSRAUD) 515

Parameters	515
User profile (USRPRF)	515
Object auditing value (OBJAUD)	515
User action auditing (AUDLVL)	516
Examples.	521
Error messages	521

Change User Profile (CHGUSRPRF) 523

Parameters	523
User profile (USRPRF)	525
User password (PASSWORD)	525
Set password to expired (PWDEXP)	526
Status (STATUS)	526
User class (USRCLS)	527
Assistance level (ASTLVL)	527
Current library (CURLIB)	528
Initial program to call (INLPGM).	528
Initial menu (INLMNU)	529
Limit capabilities (LMTCPB)	529
Text 'description' (TEXT)	530
Special authority (SPCAUT)	530
Special environment (SPCENV)	532
Display sign-on information (DSPSGNINF)	532
Password expiration interval (PWDEXPITV)	532
Block password change (PWDCHGBLK)	533
Local password management (LCLPWDMGT)	533
Limit device sessions (LMTDEVSSN)	533
Keyboard buffering (KBDBUF)	534
Maximum allowed storage (MAXSTG)	534
Highest schedule priority (PTYLMT)	535
Job description (JOB D)	535
Group profile (GRPPRF).	536
Owner (OWNER)	536
Group authority (GRPAUT)	536
Group authority type (GRPAUT TYP)	537

Supplemental groups (SUPGRPPRF)	537
Accounting code (ACGCDE)	538
Document password (DOCPWD)	538
Message queue (MSGQ)	539
Delivery (DLVRY)	539
Severity code filter (SEV)	540
Print device (PRTDEV)	540
Output queue (OUTQ)	540
Attention program (ATNPGM)	541
Sort sequence (SRTSEQ)	542
Language ID (LANGID)	542
Country or region ID (CNTRYID)	542
Coded character set ID (CCSID)	543
Character identifier control (CHRIDCTL)	543
Locale job attributes (SETJOBATR)	544
Locale (LOCALE)	544
User options (USROPT)	545
User ID number (UID)	545
Group ID number (GID)	546
Home directory (HOMEDIR)	546
EIM association (EIMASSOC)	547
Examples	548
Error messages	548

Change User Print Info (CHGUSRPTI) 551

Parameters	551
User (USER)	551
User defined text (TEXT)	551
Examples	552
Error messages	552

Change User Trace (CHGUSRTRC) 553

Parameters	553
Job name (JOB)	553
Clear trace buffer (CLEAR)	554
Maximum storage to use (MAXSTG)	554
Trace full (TRCFULL)	554
Examples	555
Error messages	555

Change Variable (CHGVAR) 557

Parameters	560
CL variable name (VAR)	560
New value (VALUE)	560
Examples	561
Error messages	562

Change Work Station Entry (CHGWSE) 563

Parameters	563
Subsystem description (SBSD)	564
Work station name (WRKSTN)	564
Work station type (WRKSTNTYPE)	565
Job description (JOBDD)	565
Maximum active jobs (MAXACT)	566
Allocation (AT)	566
Examples	567
Error messages	567

Change Writer (CHGWTR) 569

Parameters	569
Writer (WTR)	569
Output queue (OUTQ)	570
Form type options (FORMTYPE)	570
File separators (FILESEP)	571
Drawer for separators (SEPDRAWER)	571
When to change writer (OPTION)	572
Examples	572
Error messages	572

Check ASP Balance (CHKASPBAL) 575

Parameters	575
Examples	575
Error messages	575

Check Communications Trace (CHKCMNTRC) 577

Parameters	577
Configuration object (CFGOBJ)	577
Type (CFGTYPE)	577
Examples	578
Error messages	578

Check Document Library Object (CHKDLO) 579

Parameters	579
Document library object (DLO)	579
Folder (FLR)	580
System object name (SYSOBJNAM)	580
Object type (OBJTYPE)	580
Authority (AUT)	580
User identifier (USRID)	581
Examples	581
Error messages	581

Check DNS Configuration (CHKDNSCFG) 583

Parameters	583
Configuration file (CFGFILE)	583
Check journal files (CHKDNSJRNFB)	583
Check zone files (CHKZONEF)	584
Output file (TOSTMF)	584
Examples	584
Error messages	585

Check DNS Zone (CHKDNSZNE) 587

Parameters	587
Zone name (ZONEDMN)	588
Zone file (ZONEDTAF)	588
Show debug information (DEBUG)	588
Quiet mode (QUIET)	588
Check journal files (CHKDNSJRNFB)	588
Class (CLASS)	588
Check load integrity (CHKDITG)	589
Input format (INFMT)	589
Output format (OUTFMT)	589
Dump style (DETAIL)	590
Dump canonical names (CANONICAL)	590

Zone output file (ZONESTMF)	590
Check labels (CHKLBL)	590
Check MX for address (CHKMXADR)	591
Check MX for CNAME (CHKMXNAME)	591
Check servers (CHKNSADR)	591
Check SRV for CNAME (CHKSRVNAME).	591
Check for wildcards (CHKWLDCRD)	592
Output file (TOSTMF)	592
Examples	592
Error messages	592

Check DBCS Font Table (CHKIGCTBL) 595	
Parameters	595
DBCS font table (IGCTBL)	595
Examples	596
Error messages	596

Check In Object (CHKIN) 597	
Parameters	597
Object (OBJ)	598
Directory subtree (SUBTREE)	598
Examples	598
Error messages	599

Check Master KVV (CHKMSTKVV) . . . 601	
Parameters	601
Master key (MSTKEY)	601
Master key version (VERSION)	602
Examples	602
Error messages	602

Check Object (CHKOBJ). 603	
Parameters	603
Object (OBJ)	604
Object type (OBJTYPE)	604
Member, if data base file (MBR)	604
Authority (AUT)	605
Examples	606
Error messages	607

Check Object Integrity (CHKOBJITG) 609	
Parameters	610
User profile (USRPRF)	610
Object (OBJ)	611
File to receive output (OUTFILE)	611
Output member options (OUTMBR).	612
Check domain (CHKDMN).	612
Check program and module (CHKPGMMOD)	612
Check command (CHKCMD)	613
Check signature (CHKSIG)	613
Check library (CHKLIB)	613
Scan file systems (SCANFS)	613
Directory subtree (SUBTREE)	614
Check Licensed Internal Code (CHKLIC)	614
Examples	614
Error messages	616

Check Optical Volume (CHKOPTVOL) 617	
Parameters	617

Volume identifier (VOL).	617
Output (OUTPUT).	618
Optical device (DEV).	618
Examples	618
Error messages	619

Check Out Object (CHKOUT). 621	
Parameters	621
Object (OBJ)	621
Directory subtree (SUBTREE)	622
Examples	622
Error messages	623

Check Performance Collection (CHKPFCOL) 625	
Parameters	625
Examples	625
Error messages	625

Check Product Option (CHKPRDOPT) 627	
Parameters	627
Product identifier (PRDID)	627
Release (RLS)	627
Product option (OPTION)	628
Load identifier (LODID).	628
Check signature (CHKSIG)	628
Detail (DETAIL)	629
Examples	629
Error messages	629

Check Password (CHKPWD) 631	
Parameters	631
User password (PASSWORD)	631
Examples	631
Error messages	631

Check Record Locks (CHKRCDLCK) 633	
Parameters	633
Examples	633
Error messages	633

Check Tape (CHKTAP) 635	
Parameters	635
Device (DEV)	635
Volume identifier (VOL).	635
Sequence number (SEQNBR)	636
File label (LABEL).	636
Creation date (CRTDATE)	637
End of tape option (ENDOPT).	637
Examples	637
Error messages	638

Close File (CLOF) 639	
Parameters	639
Open file identifier (OPNID)	639
Examples	639
Error messages	639

Close Database File (CLOSE) 641	
--	--

Parameters	641
Open file identifier (OPNID)	641
Examples	641
Error messages	642

Clear Job Queue (CLRJOBQ) 643

Parameters	643
Job queue (JOBQ)	643
LOG (LOG)	643
Examples	644
Error messages	644

Clear Library (CLRLIB) 645

Parameters	645
Library (LIB)	645
ASP device (ASPDEV)	646
Examples	646
Error messages	647

Clear Message Queue (CLRMSGQ) 649

Parameters	649
Message queue (MSGQ)	649
Clear (CLEAR)	650
Examples	650
Error messages	650

Clear Master Key (CLRMSTKEY) 651

Parameters	651
Master key (MSTKEY)	651
Master key version (VERSION)	652
Examples	652
Error messages	652

Clear Output Queue (CLRROUTQ) 655

Parameters	655
Output queue (OUTQ)	655
Examples	655
Error messages	656

Clear Physical File Member (CLRPFM) 657

Parameters	657
Physical file (FILE)	657
Member (MBR)	658
Examples	658
Error messages	658

Clear Pool (CLRPOOL) 661

Parameters	661
Storage pool (POOL)	661
Examples	662
Error messages	662

Clear Save File (CLRSAVF) 663

Parameters	663
Save file (FILE)	663
Examples	664
Error messages	664

Clear Server Security Data (CLRSVRSEC) 665

Parameters	665
Examples	665
Error messages	665

Clear Trace Data (CLRTRCDTA) 667

Parameters	667
Examples	667
Error messages	667

Command Definition (CMD) 669

Parameters	669
Prompt text or message ID (PROMPT)	670
Message file for prompt text (PMTFILE)	671
Message file (MSGF)	672
Text 'description' (TEXT)	672
Maximum positional parameters (MAXPOS)	672
Where allowed to run (ALLOW)	673
Mode in which valid (MODE)	673
Allow limited users (ALWLMTUSR)	674
Threadsafe (THDSAFE)	674
Multithreaded job action (MLTTHDACN)	674
Validity checking program (VLDCKR)	675
Prompt override program (PMTOVRPGM)	675
Help identifier (HLPID)	676
Help panel group (HLPPNLGRP)	676
Help search index (HLPSCHIDX)	676
Current library (CURLIB)	677
Product library (PRDLIB)	677
Authority (AUT)	678
Examples	678
Error messages	679

Compare Journal Images (CMPJRNIMG) 681

Parameters	682
File (FILE)	683
Member (MBR)	683
Range of journal receivers (RCVRNG)	683
Starting large sequence number (FROMENTLRG)	684
Starting date and time (FROMTIME)	685
Ending large sequence number (TOENTLRG)	685
Ending date and time (TOTIME)	686
Compare option (CMPOPT)	686
Record number (RCDNBR)	686
Job name (JOB)	687
Program (PGM)	687
User profile (USRPRF)	687
Commit cycle large identifier (CCIDLRG)	688
Output format (OUTFMT)	688
Starting sequence number (FROMENT)	688
Ending sequence number (TOENT)	688
Commit cycle identifier (CMTCYCID)	689
Examples	689
Error messages	690

Appendix. Notices 693

Programming interface information	694
---	-----

Trademarks	695	Code license and disclaimer information	696
Terms and conditions.	696		

Change PF Trigger (CHGPFTRG)

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

[Parameters](#)
[Examples](#)
[Error messages](#)

The Change Physical File Trigger (CHGPFTRG) command changes the state of one or all triggers for a file. The triggers have been defined with either the SQL CREATE TRIGGER or the Add Physical File Trigger (ADDPFTRG) command.

The state of a trigger can be changed to disabled (stopped from being called during I/O operations) or, if it has been disabled, to enabled (called during I/O operations again). The alternative to changing the state of the trigger is to remove it when you do not want it to be called, and add it again when you need it.

Restrictions:

- You must have object management (*OBJMGT) or object alter (*OBJALTER) authority to the physical file.
- You must have execute (*EXECUTE) authority to the library that contains the physical file.

[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>	
TRG	Trigger	<i>Character value, *ALL</i>	Required, Positional 2
TRGLIB	Trigger library	<i>Name, *ALL, *CURLIB</i>	Optional
STATE	Trigger state	<i>*SAME, *ENABLED, *DISABLED</i>	Optional

[Top](#)

File (FILE)

Specifies the file for which a trigger is to be changed. The file must be a physical file.

This is a required parameter.

Qualifier 1: File

name Specify the name of the physical 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

Trigger (TRG)

Specifies the name of the trigger to be changed.

***ALL** All of the triggers for the file are changed.

Note: When *ALL is specified, all triggers defined for the file will be changed. Any value specified for the **Trigger library (TRGLIB)** parameter will be ignored.

character-value

Specify the name of the trigger.

Note: The case is preserved when lowercase characters are specified.

Top

Trigger library (TRGLIB)

Specifies the library for the trigger to be changed.

***ALL** All triggers in all trigger libraries will be used.

***CURLIB**

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

Note: The special value *CURLIB is the value of the job running when the trigger is changed.

name Specify the name of the library to be used.

Top

Trigger state (STATE)

Specifies the state to which the trigger is to be changed. You can use this parameter to temporarily stop a trigger from being called (disable), or to make a trigger that was previously disabled called again during I/O operations (enable).

***SAME**

The value does not change.

***ENABLED**

The trigger that was disabled will be called during I/O operations again.

***DISABLED**

The trigger will not be called during I/O operations.

Top

Examples

```
CHGPFTRG FILE(ADMN/PERSONNEL) TRG(*ALL) STATE(*DISABLED)
```

This command disables all triggers for the PERSONNEL file in the ADMN library.

The following command causes all triggers to be called again:

```
CHGPFTRG FILE(ADMN/PERSONNEL) TRG(*ALL) STATE(*ENABLED)
```

[Top](#)

Error messages

*ESCAPE Messages

CPF32C6

Trigger operation not successful.

[Top](#)

Change Program (CHGPGM)

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

Parameters
Examples
Error messages

The Change Program (CHGPGM) command changes the attributes of a program without requiring that it be recompiled. The user can also force re-creation of a program even if the attributes being specified are the same as the current attributes.

Note: When the CHGPGM command is run on OPM programs which have a DMT (Dictionary Mapping Table), were created in V3R6M0, and have all observability removed, the DMT will be removed from the program object, and a message will be issued indicating a successful change.

Restrictions:

- You must have object management (*OBJMGT) and use (*USE) authorities for the program that is to be changed.
- You must have at least *USE authority for the library where the program to be changed is located. You must also have delete (*DLT) and add (*ADD) authorities for the library in order to change the optimization attribute (OPTIMIZE parameter), performance collection attribute (ENBPFCOL parameter), profiling data attribute (PRFDTA parameter), Licensed Internal Code options (LICOPT parameter), enable teraspace storage (TERASPACE parameter), or to force program re-creation by specifying FRCCRT(*YES).
- To change the user profile attribute (USRPRF parameter) or the use adopted authority attribute (USEADPAUT parameter), you must be the owner of the program, or be a member of the group profile that owns the program, or if your user profile (or one of your group profiles) has all object (*ALLOBJ) and security administrator (*SECADM) special authorities.
- Programs in the QSYS and QGDDM libraries cannot be changed, unless you are only removing observable information (RMVOBS parameter).
- The storage model (STGMDL) attribute of the program and all bound modules must be *SNGLVL to change a program to TERASPACE(*NO).
- Other jobs running the program may fail if the **Optimize program (OPTIMIZE)** parameter, **Use adopted authority (USEADPAUT)** parameter, **Enable performance collection (ENBPFCOL)** parameter, **Profiling data (PRFDTA)** parameter, **User profile (USRPRF)** parameter, **Licensed Internal Code options (LICOPT)** parameter, or **Teraspace (TERASPACE)** parameter is changed, or program re-creation is forced by specifying FRCCRT(*YES).

Top

Parameters

Keyword	Description	Choices	Notes
PGM	Program	<i>Qualified object name</i>	Required, Key, Positional 1
	Qualifier 1: Program	<i>Generic name, name, *ALL</i>	
	Qualifier 2: Library	<i>Name, *USRLIBL</i>	
OPTIMIZE	Optimize program	*SAME , *YES, *FULL, *BASIC, *NONE, 40, 30, 20, 10, *NO	Optional
USRPRF	User profile	*SAME , *USER, *OWNER	Optional
USEADPAUT	Use adopted authority	*SAME , *YES, *NO	Optional

Keyword	Description	Choices	Notes
RMVOBS	Remove observable info	Single values: <u>*SAME</u> , *ALL, *NONE Other values (up to 4 repetitions): *CRTDTA, *DBGDTA, *BLKORD, *PCORD	Optional
PRFDTA	Profiling data	<u>*SAME</u> , *NOCOL, *COL, *CLR, *APYBLKORD, *APYPCORD, *APYALL	Optional
FRCRT	Force program re-creation	<u>*NO</u> , *YES, *NOCRT	Optional
TEXT	Text 'description'	Character value, <u>*SAME</u> , *BLANK	Optional
LICOPT	Licensed Internal Code options	Single values: <u>*SAME</u> , *NONE Other values: <i>Element list</i>	Optional
	Element 1: Options	Character value	
	Element 2: Action	<u>*REPLACE</u> , *ADD	
NBRTHD	Number of threads	1-256, <u>1</u> , *CALC	Optional
ENBPFCOL	Enable performance collection	Single values: <u>*SAME</u> , *NONE, *PEP Other values: <i>Element list</i>	Optional
	Element 1: Collection level	<u>*FULL</u> , *ENTRYEXIT	
	Element 2: Procedures	<u>*ALLPRC</u> , *NONLEAF	
TERASPACE	Teraspace	*NO, *YES, <u>*SAME</u>	Optional

Top

Program (PGM)

Specifies one or more programs whose attributes are to be changed. *USRLIBL cannot be specified or defaulted for the library qualifier when a generic name or *ALL is specified for the program qualifier.

This is a required parameter.

Qualifier 1: Program

name Specify the name of the program having its attributes changed.

generic-name

Specify the generic name of all programs having their attributes changed. All programs that satisfy the generic search value are selected for change. A generic name is specified as a character string that contains one or more characters followed by an asterisk (*).

***ALL** All programs in the specified library to which the user has some authority (except exclude (*EXCLUDE) authority) are selected to be changed.

Qualifier 2: Library

***USRLIBL**

The first program found in the user portion of the library list is changed.

name Specify the library where the program is located.

Top

Optimize program (OPTIMIZE)

Specifies whether the program is optimized by the removal of redundant instructions. Changing the current optimization level of an Integrated Language Environment (ILE) program causes the system to re-create an ILE program with the new optimization level.

The program must be re-created to change the optimization level. To be eligible for re-creation, OPM programs must have all observability and ILE programs must have all creation data, and the creation data must be observable. Use the Display Program (DSPPGM) command to determine whether a program is observable or has all creation data.

***SAME**

The program optimization attributes do not change.

***YES** The program is at the most optimized level available for the release and language the program was created for (TGTRLS parameter when the program was created). In most cases, optimized programs make more efficient use of system resources. Specifying OPTIMIZE(YES) for ILE programs has the same effect as specifying OPTIMIZE(40).

***NO** The program is not optimized. For ILE programs at this optimization level, variables can be displayed and changed while debugging.

40 This level includes all the optimizations performed at optimization level 30 (*FULL). In addition, it includes optimization that disables call and instruction tracing. Thus, tracing of modules created at this optimization level cannot be done. Specifying OPTIMIZE(40) for OPM programs has the same effect as specifying OPTIMIZE(*YES).

***FULL or 30**

More optimization is performed in addition to those performed at optimization level 20 (*BASIC). Variables cannot be changed but can be displayed while the program is being debugged. However, the displayed value of the variable during debugging may not be its actual value. Specifying OPTIMIZE(*FULL) for OPM programs has no effect; a diagnostic message will be signaled.

***BASIC or 20**

For ILE programs, some optimization is performed on ILE programs. When debugging ILE programs at this optimization level, variables may be displayed, but the displayed value may not be the current value. Variables can also be changed but using the variables changed at this level may cause unexpected results. An informational message is sent and no operation is performed when OPTIMIZE(*BASIC) is specified for original program model (OPM) programs.

***NONE or 10**

This value is identical to *NO.

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.

The program must be re-created to change the user profile. To be eligible for re-creation, OPM programs must have all observability and ILE programs must have all creation data, and the creation data must be observable. Use the Display Program (DSPPGM) command to determine whether a program is observable or has all creation data.

***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 run. The collective sets of object authority in both user profiles are used to find and access objects when the program is running. 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.

The program must be re-created to change the use adopted authority attribute. To be eligible for re-creation, OPM programs must have all observability and ILE programs must have all creation data, and the creation data must be observable. Use the Display Program (DSPPGM) command to determine whether a program is observable or has all creation data.

***SAME**

The use adopted authority attribute does not change.

***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.

***NO** Program adopted authority from previous call levels is not used when this program is running.

Top

Remove observable info (RMVOBS)

Specifies the observable program information that is removed.

***SAME**

The observable information is not removed.

***ALL** All observable program information associated with the program is removed, if possible. If the program requires the observable information to ensure that it runs correctly, that information is not removed.

NOTES:

1. If block order profiling data has previously been applied to this ILE program, specifying *ALL for the RMVOBS parameter removes *BLKORD observability.
2. *ALL cannot be specified if the ILE program is enabled to collect profiling data.
3. Removing observability from OPM programs compiled with OPTION(*LSTDBG) does not completely remove the debugging information. The program must be recompiled with OPTION(*NOLSTDBG) to completely remove all of the debugging information.
4. OPM CL programs created with ALWRTVSRC(*YES) can have their CL source retrieved using the RTVCLSRC (Retrieve CL Source) command after observability has been removed.

***NONE**

No observable information associated with the program is removed.

***DBGDTA**

Debug Information is removed from an ILE program. Debug information is needed to allow the program to be debugged. An informational message is sent and no operation is performed when RMVOBS(*DBGDTA) is specified for original program model (OPM) programs.

***CRTDTA**

Creation data observability is removed from an ILE program. Creation data observability is needed to allow the program to be re-created using CHGPGM, to change the optimization level, to change the performance collection attribute, or to change the profiling data attribute. An informational message is sent and no operation is performed when RMVOBS(*CRTDTA) is specified for original program model (OPM) programs.

NOTES:

1. *CRTDTA cannot be specified if the ILE program is enabled to collect profiling data.
2. Creation data (either observable or unobservable) is required to convert programs to a different hardware technology, for example, between CISC (Complex Instruction Set Computer) and RISC (Reduced Instructions Set Computer) technology.
3. Some programs retain unobservable creation data even when observable creation data is removed. OPM programs created for release V5R1M0 or later (TGTRLS parameter when the program was created) will always contain creation data even when *ALL observability is removed. ILE programs created only from modules created for release V5R1M0 or later will always contain creation data even when *ALL observability or *CRTDTA observability is removed.
4. If the ILE program was created for a release earlier than V3R6M0, and is currently in RISC format or FRCCRT(*YES) is specified, removing *CRTDTA will cause the ILE program to no longer be able to be saved for a release earlier than V3R6M0.

***BLKORD**

Block order profiling data is removed from the ILE program. An informational message is sent and no observability is removed when RMVOBS(*BLKORD) is specified for original program model (OPM) programs.

***PRCORD**

Procedure order profiling data is removed from the ILE program. An informational message is sent and no observability is removed when RMVOBS(*PRCORD) is specified for original program model (OPM) programs.

Top

Profiling data (PRFDTA)

Specifies the program profiling data attribute for ILE programs. Program profiling is an advanced optimization technique to reorder procedures and code within the procedures based on statistical data (profiling data). An informational message is sent and *SAME is used if a value other than *SAME is specified for the PRFDTA parameter for original program model (OPM) programs.

The program must be re-created to change the profiling data attribute. To be eligible for re-creation, the program must have all creation data, and the creation data must be observable. Use the Display Program (DSPPGM) command to determine whether the program has all creation data.

***SAME**

The value does not change.

***NOCOL**

The collection of profiling data is not enabled and profiling data is not applied.

***COL** The collection of profiling data is enabled for eligible modules.

Note: Specifying *COL will remove all applied profiling data if the ILE program has profiling data applied.

***CLR** All previously collected profiling data is discarded. The program remains enabled to collect profiling data.

***APYBLKORD**

Block order profiling data is applied to every module bound into this ILE program previously enabled to collect profiling data. The collection of profiling data is no longer enabled.

***APYPRCORD**

Block order and procedure order profiling data are applied. The collection of profiling data is no longer enabled.

***APYALL**

Block order and procedure order profiling data are applied. The collection of profiling data is no longer enabled.

Top

Force program re-creation (FRC CRT)

Specifies whether program re-creation is forced.

To be eligible for re-creation, OPM programs must have all observability and ILE programs must have all observable creation data. Use the Display Program (DSPPGM) command to determine whether a program is observable or has all observable creation data. Unobservable creation data cannot be used by CHGPGM.

***NO** Program re-creation is not forced unless the **Optimize program (OPTIMIZE)** parameter, **Use adopted authority (USEADPAUT)** parameter, **Enable performance collection (ENBPFCOL)** parameter, **Profiling data (PRFDTA)** parameter, **User profile (USRPRF)** parameter, **Licensed Internal Code options (LICOPT)** parameter, or **Teraspace (TERASPACE)** parameter has changed. This option allows the system to determine whether a change is required.

***YES** Program re-creation is forced whether or not the **Optimize program (OPTIMIZE)** parameter, **Use adopted authority (USEADPAUT)** parameter, **Enable performance collection (ENBPFCOL)** parameter, **Profiling data (PRFDTA)** parameter, **User profile (USRPRF)** parameter, **Licensed Internal Code options (LICOPT)** parameter or **Teraspace (TERASPACE)** parameter has changed.

***NOCRT**

No program re-creation is done. If you attempt to change a program attribute which would implicitly require the program to be re-created, an error message is issued and no attributes of the program are changed. Modifying one of the following parameters may cause the program to be re-created: **Optimize program (OPTIMIZE)** parameter, **Use adopted authority (USEADPAUT)** parameter, **Enable performance collection (ENBPFCOL)** parameter, **Profiling data (PRFDTA)** parameter, **User profile (USRPRF)** parameter, **Licensed Internal Code options (LICOPT)** parameter, or **Teraspace (TERASPACE)** parameter.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

***SAME**

The text is not changed.

***BLANK**

No text is specified.

'description'

Specify no more than 50 characters of text, enclosed in single quotation marks.

Top

Licensed Internal Code options (LICOPT)

Specifies individual Licensed Internal Code compile-time options to be selected, and is intended for the advanced programmer who understands the potential benefits and drawbacks of each selected compiler option. Changing the Licensed Internal Code options of an Integrated Language Environment (ILE) program to any value other than *SAME causes the system to re-create the ILE program.

The program must be re-created to change the Licensed Internal Code options. To be eligible for re-creation, the program must have all creation data, and the creation data must be observable. Use the Display Program (DSPPGM) command to determine whether the program has all creation data.

Note: Additional information about the LICOPT options can be found in the ILE Concepts book, SC41-5606.

Element 1: Options

*SAME

If the program object is re-created, the existing Licensed Internal Code compile-time options are input to object re-creation. Otherwise, the Licensed Internal Code compile-time options do not change.

*NONE

Program re-creation is forced and no Licensed Internal Code options are used.

character-value

Specifies one or more Licensed Internal Code compile-time options. Changing the Licensed Internal Code options of an Integrated Language Environment (ILE) program causes the system to re-create the ILE program.

Element 2: Action

*REPLACE

Any existing Licensed Internal Code options for the bound modules are replaced with the specified values.

***ADD** The specified Licensed Internal Code options are added to the end of the existing Licensed Internal Code options string for each of the bound modules. Any conflicts between Licensed Internal Code option values will be resolved with the last specified value taking precedence.

Top

Number of threads (NBRTHD)

Specifies the maximum number of threads to use when re-creating bound modules. Specifying a number greater than 1 allows the command to take advantage of available CPU cycles, especially on a multi-processor system.

1 A single thread is used when creating bound modules.

*CALC

The system calculates a reasonable maximum number of threads to use which will not use excessive resources. Usually this is one or two threads for each available processor.

1-256 Specify the maximum number of threads to use.

Top

Enable performance collection (ENBPFCOL)

This parameter is obsolete.

Top

Teraspace (TERASPACE)

Specifies whether the program object is enabled to work with teraspace storage. This includes teraspace storage allocated by the module object and parameters passed from other teraspace-enabled program and service program objects.

If the program being changed was created for TGTRLS(V6R1M0) or a later release, the program will be enabled for teraspace regardless of the value specified for this parameter. If the program being changed was created for a release prior to V6R1M0, the TERASPACE value specified will be stored in the program and will be used when the program is brought to a release prior to V6R1M0. However, when the program is on V6R1M0 and later releases, it is enabled for teraspace.

If the program being changed has a target release (TGTRLS) value earlier than V6R1M0, specifying a value different than the current TERASPACE attribute value will cause the program to be recreated and the specified value will be stored in the object template information.

*SAME

The teraspace storage enablement does not change.

***NO** If the program was created for a release prior to V6R1M0, then the teraspace storage enablement is changed to no. If it is a ILE program, the teraspace storage enablement of the eligible bound modules is changed to no. A bound module must be single level storage model to be changed to TERASPACE(*NO).

***YES** If the program was created for a release prior to V6R1M0, then the teraspace storage enablement is changed to yes. If it is a ILE program, the teraspace storage enablement of the eligible bound modules is changed to yes. A bound module must be at least V4R4M0 or later to be changed to TERASPACE(*YES).

Top

Examples

Example 1: Optimizing a Program

```
CHGPGM PGM(PROG1/SERVICE) OPTIMIZE(*YES) USRPRF(*OWNER)
```

The program SERVICE in library PROG1 is optimized, and the user profile under which it is processed is changed to include the program owner's user profile. Only the owner of program PROG1/SERVICE, or a user with security officer authority, can change the USRPRF attribute. The program is re-created only if the attributes specified differ from those of the current program.

Example 2: Changing Text for a Program

```
CHGPGM PGM(*USRLIBL/KNUTE) TEXT('Program description')
```

This command changes the text for program KNUTE. The user portion of the library list is used to find the program.

Example 3: Optimizing Multiple Programs

```
CHGPGM PGM(PROG1/ACE*) OPTIMIZE(*YES)
```

All programs in library PROG1 whose names begin with ACE, are optimized to their maximum optimization level.

Example 4: Changing Text of Multiple Programs

```
CHGPGM PGM(PROG2/*ALL) TEXT('Generic Text')
```

This command changes the text of all programs in library PROG2 to 'Generic Text'.

Example 5: Enabling Collection of Profiling Data

```
CHGPGM PGM(PROG1/PROFPGM) PRFDTA(*COL)
```

This command enables the collection of profiling data for program PROFPGM in library PROG1. If PROFPGM in library PROG1 had profiling data applied prior to issuing this command, all applied profiling data will be removed.

Example 6: Applying Profiling Data

```
CHGPGM PGM(PROG1/PROFPGM) PRFDTA(*APYALL)
```

This command applies block order and procedure order profiling data to program PROFPGM in library PROG1. The collection of profiling data is no longer enabled for program PROFPGM in library PROG1.

[Top](#)

Error messages

*ESCAPE Messages

CPF0540

*USRLIBL not allowed with generic name or *ALL.

CPF0541

Program &1 in &2 not changed.

CPF0542

Program &1 in library &2 not changed.

CPF0543

User &3 not authorized to change &1.

CPF0544

Programs in libraries QSYS and QGDDM cannot be changed.

CPF0545

No programs changed.

CPF0546

&1 changed. &2 did not require change. &3 not changed.

- CPF0547**
Cannot remove observable information.
- CPF0549**
User &3 not authorized to change &1.
- CPF223C**
Not authorized to change the use adopted authority (USEADPAUT) attribute for &1 in &2 type *&3.
- CPF223E**
Authority check for use adopted authority attribute failed.
- 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.
- CPF9810**
Library &1 not found.
- CPF9811**
Program &1 in library &2 not found.
- CPF9818**
Object &2 in library &3 not created.
- CPF9819**
Object &2 in library &3 not created.
- CPF9820**
Not authorized to use library &1.
- CPF9821**
Not authorized to program &1 in library &2.
- CPF9830**
Cannot assign library &1.

Top

Change Program Variable (CHGPGMVAR)

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

Parameters
Examples
Error messages

The Change Program Variable (CHGPGMVAR) command changes the value of a variable in a program being debugged. Only string (character or bit) and numeric variables can be changed using this command. A portion of a character string or bit string can be changed; the length of the data to be changed is the length of the data specified on the **New value (VALUE)** parameter.

Note: Depending on where the variable is allocated, the duration of a change varies. For a variable in machine-interface (MI) static storage, the change lasts while the program is active. For an automatic variable, the change lasts until the call of the program is ended. Static variables are allocated either in MI static storage or in spaces controlled by language-dependent rules.

Restrictions:

- You can use this command only in debug mode. To start debug mode, refer to the Start Debug (STRDBG) command.
- You cannot use this command if you are servicing another job, and that job is on a job queue, or is being held, suspended, or ended.
- You cannot use this command to change variables in a bound program.
- You cannot use this command to change variables that are write-protected or within the system domain, unless the user has service (*SERVICE) special authority.

Top

Parameters

Keyword	Description	Choices	Notes
PGMVAR	Program variables	<i>Element list</i>	Required, Positional 1
	Element 1: Program variable	<i>Character value</i>	
	Element 2: Basing pointer variable	Values (up to 5 repetitions): <i>Character value</i>	
VALUE	New value	<i>Not restricted</i>	Required, Positional 2
PGM	Program	<i>Name, *DFTPGM</i>	Optional
START	Char output start position	<i>Integer, 1</i>	Optional, Positional 3
RCRLVL	Recursion level	<i>Integer, *LAST</i>	Optional

Top

Program variables (PGMVAR)

Specifies the program variable to be changed in a high-level language (HLL) or machine instruction (MI) program.

This is a required parameter.

Element 1: Program variable

character-value

Specify the name of the program variable to be changed. If the variable name contains special characters, it must be enclosed in apostrophes.

If the program variable is an array, the subscripts representing the elements in the array can be specified. If an array name is specified without any subscripts, all of the array elements are recorded. A single-dimensional cross-section can also be specified. Up to 132 characters may be specified for this program variable entry. This includes any qualifiers, subscripts, blanks, parentheses, and commas. It does not include the enclosing apostrophes when special characters are used. An integer, machine-interface object-definition-table-vector (MI ODV) number, asterisk (single-dimensional cross-section), or a numeric variable name can be specified for a subscript.

For more information, refer to "Parameter values used for testing and debugging" in "CL concepts and reference" in the CL topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Element 2: Basing pointer variable

character-value

Specify the name of a basing pointer variable. In some languages, the program variable may be based on a pointer variable. This set of values allows you to explicitly specify as many as 5 basing pointers for the variable to be recorded. Each basing pointer name must be enclosed in apostrophes if it contains special characters.

If the basing pointer is an array, the subscripts representing an element in the array must be specified. Up to 132 characters can be specified for a basing pointer name. This includes any qualifiers, subscripts, blanks, parentheses, and commas. It does not include the enclosing apostrophes when special characters are used. An integer, MI ODV number, or a numeric variable name can be specified for a subscript.

For more information, refer to "Parameter values used for testing and debugging" in "CL concepts and reference" in the CL topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Top

New value (VALUE)

Specifies the new value for the program variable. Rules for specifying values depend on the variable type.

This is a required parameter.

Top

Program (PGM)

Specifies the name of the program that contains the program variable whose value is to change.

*DFTPGM

The program previously specified as the default program contains the variable to be changed.

name Specify the name of the program that contains the variable to change. The same name must already have been specified on the Start Debug (STRDBG) or Add Program (ADDPGM) command.

Top

Char output start position (START)

Specifies, for string variables only, the starting position in the string from which its value is to change. For a bit string, the value specifies the starting bit position; for a character string, the value specifies the starting character position.

1 The first position of the program variable is the starting position in the string to change.

integer

Specify the position number in the program variable that specifies the first position to change in the string. The starting position number must not be greater than the length of the string, except that a value of 1 for the START parameter is allowed if the maximum length for a string is zero. The length determined by the **New value (VALUE)** parameter, plus the value supplied for the START parameter minus one, must not be greater than the maximum string length.

Varying length strings have rules affecting the validity and meaning of the START parameter.

Top

Recursion level (RCRLVL)

Specifies which recursion level of the program contains the variable whose value is to be changed. Changes made to static variables automatically affect all recursion levels. Recursion level 1 is the first (or earliest) call of the program, recursion level 2 is the second call of the program, and so on to the last (most recent) recursion level in the stack. For example, if program A calls program B, then program B calls program A, a new recursion level of program A is formed. If the first call of program A contains the variable to be changed, a value of 1 must be specified for the **Recursion level (RCRLVL)** parameter. Some high-level languages also allow recursive procedures. For these programs, refer to the appropriate high-level language manual for more information.

*LAST

The last (most recent) call of the specified program contains the variable to be changed.

integer

Specify the recursion level of the program that contains the variable to be changed.

Top

Examples

Example 1: Changing the Program Variable

```
DCL VAR(&AMT) TYPE(*DEC) LEN(5 2)
:
CHGPGMVAR PGMVAR('&AMT') VALUE(16.2)
```

The first command, which is used in a CL program, declares the CL variable &AMT as a five-position decimal value having a 3-digit integer and a 2-digit fraction. The Change Program Variable

(CHGPGMVAR) command is used to change the value of &AMT to 16.20. If VALUE is coded as 16 or 16.00, the value accepted is 16.00; if -16 is coded, the value accepted is -16.00. However, if 1600 is coded, an error occurs because the system assumes that, if no decimal point is coded, it is always on the right of the last digit coded.

Example 2: Changing a Value in a Specific Position

```
CHGPGMVAR  PGMVAR(PARTNO) VALUE('56') START(4)
```

This command changes, starting in position 4, the program variable PARTNO to '56'.

[Top](#)

Error messages

*ESCAPE Messages

CPF1999

Errors occurred on command.

[Top](#)

Change Primary Group (CHGPGP)

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

Parameters
Examples
Error messages

The Change Primary Group (CHGPGP) command changes the primary group of an object or group of objects from one user to another. An object name pattern can be used to change authority for a group of related objects. The owner's and other user's private authorities to the object do not change.

The CHGPGP command can also be used to change the primary group of a directory tree where the directory, its contents, and the contents of all of its subdirectories are to have the primary group changed. If SUBTREE(*ALL) is specified, this command will attempt to change the primary group of all objects within the subtree. A diagnostic message will be sent for each object that could not have its primary group changed, and when all of the objects have been attempted, an escape message will be sent. If all of the objects had their primary group changed with no errors, a completion message will be sent.

If a symbolic link object is encountered, either specified in the **Object (OBJ)** parameter or encountered in the processing of a subtree, the value specified for the **Symbolic link (SYMLNK)** parameter will be applied to that symbolic link object. If processing a subtree, the processing of that branch of the subtree then stops because a symbolic link object itself cannot have subtrees.

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:

- To change the primary group of an object in the QSYS.LIB or independent ASP QSYS.LIB file system, you must have all of the following:
 - Object existence (*OBJEXIST) authority for the object
 - Object operational (*OBJOPR) and *OBJEXIST authorities if the object is a file, library, or subsystem description
 - All object (*ALLOBJ) special authority, or ownership, if the object is an authorization list
 - Object management (*OBJMGT) authority, and the authorities to be revoked, for the object if revoking the authority for the old primary group
 - *OBJMGT authority for the object and the authorities to be given if a value other than *PRIVATE is specified for the DTAAUT parameter
- The new primary group user cannot be the owner of the object.
- When doing subtree processing, you must have read (*R) and execute (*X) authorities to the path name and all subdirectories within that path.

Top

Parameters

Keyword	Description	Choices	Notes
OBJ	Object	<i>Path name</i>	Required, Positional 1
NEWPGP	New primary group	<i>Name</i> , *NONE	Required, Positional 2

Keyword	Description	Choices	Notes
DTAAUT	New data authorities	*OLDPGP, *PRIVATE, *RWX, *RX, *RW, *WX, *R, *W, *X, *EXCLUDE, *NONE	Optional
OBJAUT	New object authorities	Single values: *NONE, *ALL Other values (up to 4 repetitions): *OBJEXIST, *OBJMGT, *OBJALTER, *OBJREF	Optional
RVKOLDAUT	Revoke current authority	*NO, *YES	Optional
SUBTREE	Directory subtree	*NONE, *ALL	Optional
SYMLNK	Symbolic link	*NO, *YES	Optional

Top

Object (OBJ)

Specifies the object, or a pattern to match multiple objects, for which the primary group is to be changed.

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/>.

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.

path-name

Specify the path name of the objects whose primary group is to be changed.

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.

Top

New primary group (NEWPGP)

Specifies the user who is to be the new primary group for the object. The user profile must already exist when this command is run, and must have a group identifier (or **gid**) assigned to it.

This is a required parameter.

*NONE

The object does not have a primary group.

name Specify the name of the user profile who is to be the new primary group for the object.

Top

New data authorities (DTAAUT)

Specifies which of the data authorities the new primary group has to the object.

*OLDPGP

The new primary group has whatever authority the old primary group had to the object.

***PRIVATE**

The new primary group has the private authority that the user has to the object. If the user that is the new primary group does not have private authority to the object, the new primary group has no authority to the object.

***RWX** The new primary group has object operational and all of the data authorities to the object.

***RX** The new primary group has object operational and data read and execute authorities to the object.

***RW** The new primary group has object operational and data read, add, update, and delete authorities to the object.

***WX** The new primary group has object operational and data add, update, delete, and execute authorities to the object.

***R** The new primary group has object operational and data read authorities to the object.

***W** The new primary group has object operational and data add, update, and delete authorities to the object.

***X** The new primary group has object operational and data execute authorities to the object.

***EXCLUDE**

The new primary group has exclude authority to the object.

***NONE**

The new primary group does not have any of the data authorities to the object.

Top

New object authorities (OBJAUT)

Specifies which of the object authorities the new primary group has to the object.

Single values

***NONE**

None of the other object authorities (existence, management, alter, or reference) are given to the new primary group. If *OLDPGP, *PRIVATE, or *EXCLUDE are specified for the DTAAUT parameter, this value must be specified.

***ALL** All of the other object authorities (existence, management, alter, and reference) are given to the new primary group.

Other values (up to 4 repetitions)

***OBJEXIST**

The new primary group has object existence authority to the object.

***OBJMGT**

The new primary group has object management authority to the object.

***OBJALTER**

The new primary group has object alter authority to the object.

***OBJREF**

The new primary group has object reference authority to the object.

Top

Revoke current authority (RVKOLDAUT)

Specifies whether the authorities for the current primary group are revoked when the primary group is changed to the user specified for the **New primary group (NEWPGP)** parameter.

- *YES** The authorities for the current primary group are revoked when the primary group is changed to the other user.
- *NO** The authorities for the current primary group become a private authority when the primary group is changed to the other user.

Top

Directory subtree (SUBTREE)

Specifies whether or not to change the objects within the subtree if the object specified by the **Object (OBJ)** parameter is a directory or a library.

***NONE**

The objects specified by the OBJ parameter are changed. If the object is a directory or a library, it will be changed, but the directory or library contents will not be changed.

- *ALL** The objects specified by the OBJ parameter are changed. If the object is a directory or a library, it will be changed as well as the contents of the directory or library and the contents of all subdirectories.

Note: Pattern matching from the OBJ parameter only applies to the first level objects. If the first level object is a directory or a library, the pattern matching does not apply to the directory or library contents or the contents of the subdirectories.

Note: This command may run a long time when SUBTREE(*ALL) is specified if there are many subdirectories to be processed.

Once the command has begun processing a specific directory subtree, the objects which will be found and processed may be affected by operations that update the organization of objects within the specified directory tree. This includes, but is not limited to, the following:

- Adding, removing, or renaming object links
- Mounting or unmounting file systems
- Updating the effective root directory for the process calling the command
- Updating the contents of a symbolic link

In order to process the directory subtree, the system code may increase the process-scoped maximum number of file descriptors that can be opened during processing. This is done so that the command is not likely to fail due to a lack of descriptors. This process-scoped maximum value is not reset when the command completes.

Top

Symbolic link (SYMLNK)

If the object is a symbolic link, specifies whether or not to change the symbolic link or the object pointed to by the symbolic link.

- *NO** The symbolic link object is not changed. The object pointed to by the symbolic link is changed.
- *YES** If the object is a symbolic link, the symbolic link is changed. The object pointed to by the symbolic link is not changed.

Top

Examples

Example 1: Changing the primary group of a program

```
CHGPGP OBJ('/QSYS.LIB/USERLIB.LIB/PROGRAM1.PGM') NEWPGP(ANN)
```

This command changes the primary group of the program named PROGRAM1, located in the user library named USERLIB, to the group named ANN. The new primary group will have the same authority as the old primary group. The old primary group's authority is revoked.

The following examples use the chart below:

```
*          sym1 (symbolic link to dir1)
*
*
*          dir1
*          * * *
*          * * *
*          * * *
*          * * *
*          dir2.1 dir2.2 dir2.3
*          * * *
*          * * *
*          dir3.1 dir3.2 sym3.3 (symbolic link to dirA)
*
*
*          dirA
*          * * *
*          * * *
*          * * *
*          dirB.1 dirB.2 dirB.3
*
```

Example 2: Changing the primary group of a symbolic link when SYMLNK(*NO)

```
CHGPGP OBJ('/sym1') NEWPGP(SAM) SUBTREE(*ALL) SYMLNK(*NO)
```

This command will first determine if there are subtrees to process. Since the object specified in the OBJ parameter is a symbolic link, the SUBTREE parameter will be ignored because a symbolic link object does not have subtrees. Next, the object pointed to by symbolic link sym1 (dir1) will be changed because the SYMLNK parameter specifies that the symbolic link object not be changed.

In this example, the primary group of dir1 is changed to SAM and he will have the same authority as the old primary group. The old primary group's authority is revoked. It does not change the primary group of the symbolic link object (sym1) and it does not change the primary group of the contents of dir1.

Example 3: Changing the primary group of a symbolic link when SYMLNK(*YES)

```
CHGPGP OBJ('/sym1') NEWPGP(JOE) SUBTREE(*ALL) SYMLNK(*YES)
```

This command will first determine if there are subtrees to process. Since the object specified in the OBJ parameter is a symbolic link, the SUBTREE parameter will be ignored because a symbolic link object does not have subtrees. Next, the symbolic link object (sym1) will be changed because the SYMLNK parameter specifies that the symbolic link object be changed.

In this example, the primary group of sym1 is changed to JOE and he will have the same authority as the old primary group. The old primary group's authority is revoked. It does not change the primary group of the object pointed to by the symbolic link (dir1) and it does not change the primary group of the contents of dir1.

Example 4: Changing the primary group of a directory when SUBTREE(*ALL) and SYMLNK(*NO)

```
CHGPGP OBJ('/dir1') NEWPGP(PETE) SUBTREE(*ALL) SYMLNK(*NO)
```

This command will first determine if there are subtrees to process. Since the object specified in the OBJ parameter is a directory, the subtrees will be processed. When the processing of the tree encounters a *SYMLNK object, the value for the SYMLNK parameter will be applied to that *SYMLNK object. When the SYMLNK parameter is *NO, the object the symbolic link points to will be changed. The processing of that branch of the tree then stops because the *SYMLNK object itself does not have a subtree.

In this example, the primary group of dir1, dir2.1, dir2.2, dir2.3, dir3.1, dir3.2, dirA is changed to PETE and he will have the same authority as the old primary group. The old primary group's authority is revoked. The primary group of sym3.3, dirB.1, dirB.2, dirB.3 is not changed.

Example 5: Changing the primary group of a directory when SUBTREE(*ALL) and SYMLNK(*YES)

```
CHGPGP OBJ('/dir1') NEWPGP(GEORGE) SUBTREE(*ALL) SYMLNK(*YES)
```

This command will first determine if there are subtrees to process. Since the object specified in the OBJ parameter is a directory, the subtrees will be processed. When the processing of the tree encounters a *SYMLNK object, the value for the SYMLNK parameter will be applied to the *SYMLNK object. When the SYMLNK parameter is *YES, the symbolic link object will be changed. The processing of that branch of the tree then stops because the *SYMLNK object itself does not have a subtree.

In this example, the primary group of dir1, dir2.1, dir2.2, dir2.3, dir3.1, dir3.2, sym3.3 is changed to GEORGE and he will have the same authority as the old primary group. The old primary group's authority is revoked. The primary group of dirA, dirB.1, dirB.2, dirB.3 is not changed.

Example 6: Changing the primary group of a directory when SUBTREE(*NONE) and SYMLNK(*NO)

```
CHGPGP OBJ('/dir1') NEWPGP(BETTY) SUBTREE(*NONE) SYMLNK(*NO)
```

This command will not process subtrees. Since the object specified in the OBJ parameter is not a symbolic link, the SYMLNK parameter will be ignored.

The primary group of dir1 is changed to BETTY. The old primary group's authority is revoked.

NOTE:

The only way to change dirB.1, dirB.2, and dirB.3 is to specify them individually in the OBJ parameter of the change command, or to specify the change command with OBJ(dirA) and SUBTREE(*ALL).

Error messages

*ESCAPE Messages

CPE3101

A non-recoverable I/O error occurred.

CPE3408

The address used for an argument was not correct.

CPE3418

Possible APAR condition or hardware failure.

CPE3474

Unknown system state.

CPFA0AA

Error occurred while attempting to obtain space.

CPFA0AB

Operation failed for object. Object is &1.

CPFA0AD

Function not supported by file system.

CPFA0A2

Information passed to this operation was not valid.

CPFA0A3

Path name resolution causes looping.

CPFA0A4

Too many open files for process.

CPFA0A7

Path name too long.

CPFA0A9

Object not found. Object is &1.

CPFA0B1

No objects satisfy request.

CPFA0C1

CCSID &1 not valid.

CPFA0CE

Error occurred with path name parameter specified.

CPFA0DD

Function was interrupted.

CPFA0D4

File system error occurred. Error number &1.

CPFA08B

Path name cannot begin with *.

CPFA08C

Pattern not allowed in path name directory.

CPFA085

Home directory not found for user &1.

CPFA086
Matching quote not found in path name.

CPFA087
Path name contains null character.

CPFA088
Path name pattern not valid.

CPFA089
Pattern not allowed in path name.

CPFA09C
Not authorized to object. Object is &1.

CPFA09D
Error occurred in program &1.

CPFA09E
Object in use. Object is &1.

CPFA091
Pattern not allowed in user name.

CPFA092
Path name not converted.

CPFA094
Path name not specified.

CPFBC50
Path name or path names not found.

CPF220B
New primary group &1 does not have a gid.

CPF2204
User profile &1 not found.

CPF2213
Not able to allocate user profile &1.

CPF2217
Not authorized to user profile &1.

CPF223A
&1 objects changed, &2 objects not changed.

CPF22F0
Unexpected errors occurred during processing.

CPF3BF6
Path Type value is not valid.

Top

Change Prestart Job (CHGPJ)

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

Parameters
Examples
Error messages

The Change Prestart Job (CHGPJ) command changes the job attributes of the prestart job in which this command is issued to those in the job description specified in the prestart job entry, or to those in the job description specified in the user profile of the current user. When a program start request is received, the system will set the current user to the user profile specified in the program start request. The current user may subsequently be set to a different value by the Set Profile (QWTSETP) API.

Restrictions:

1. To use this command, you must have:
 - use (*USE) authority to the job description and execute (*EXECUTE) authority to the library that contains that job description.
 - read (*READ) authority to the output queue (OUTQ) and execute (*EXECUTE) authority to the library that contains that output queue.
2. This command must only be called by a prestart job that is servicing a program start request. This command will not work against batch prestart jobs.
3. This command is conditionally threadsafe. Refer to **Considerations for Attribute Thread Safety** for additional information.

Considerations for Attribute Thread Safety:

This command is intended to be used to change the job attributes for the prestart job that the command was issued in. All of the attributes are scoped to the job.

The Threadsafe column of the following table indicates whether the attributes can be changed in a manner that is threadsafe.

Yes: - Attributes marked with this value are considered to be threadsafe. These attributes can be changed safely by issuing this command from either the initial thread or from a secondary thread.

No: - Attributes marked with this value are not threadsafe. An attempt to change these attributes will be denied if multiple threads are active.

Attribute and Thread Safety Table:

Attribute	Threadsafe
Job accounting code (ACGCDE)	No
Output priority (OUTPTY)	Yes
Output queue name (OUTQ)	Yes
Print text (PRTTXT)	Yes
Printer device name (PRTDEV)	Yes

Top

Parameters

Keyword	Description	Choices	Notes
OUTPTY	Output priority (on OUTQ)	<u>*SAME</u> , *PGMSTRRQS, *PJE	Optional
PRTTXT	Print text	<u>*SAME</u> , *PGMSTRRQS, *PJE	Optional
PRTDEV	Print device	<u>*SAME</u> , *PGMSTRRQS, *PJE	Optional
OUTQ	Output queue	<u>*SAME</u> , *PGMSTRRQS, *PJE	Optional
ACGCDE	Accounting code	<u>*SAME</u> , *PGMSTRRQS, *PJE	Optional

Top

Output priority (on OUTQ) (OUTPTY)

Specifies the output priority for spooled output files that are produced by this job. Only those spooled output files which are on output queues in the library name space of the thread issuing this command will be changed.

*SAME

This value does not change.

*PGMSTRRQS

The value specified in the job description for the user profile of the current user is used.

*PJE The value specified in the job description for the prestart job entry in the subsystem description is used.

Top

Print text (PRTTXT)

Specifies the text that is printed at the bottom of each page of printed output and on separator pages.

*SAME

This value does not change.

*PGMSTRRQS

The value specified in the job description for the user profile of the current user is used.

*PJE The value specified in the job description for the prestart job entry in the subsystem description is used.

Top

Print device (PRTDEV)

Specifies the name of the default printer device for this job.

*SAME

This value does not change.

*PGMSTRRQS

The value specified in the job description for the user profile of the current user is used. If *USRPRF is specified for this parameter value in the job description, the value from the user profile of the current user is used.

*PJE The value specified in the job description for the prestart job entry in the subsystem description is

used. If *USRPRF is specified for this parameter value in the job description, the value from the user profile for the prestart job entry (USER parameter) is used.

Top

Output queue (OUTQ)

Specifies the name of the output queue that is used for spooled output produced by the prestart job. This does not affect files previously created by the prestart job.

*SAME

This value does not change.

*PGMSTRRQS

The value specified in the job description for the user profile of the current user is used. If *USRPRF is specified for this parameter value in the job description, the value specified in the user profile of the current user is used.

*PJE The value specified in the job description for the prestart job entry in the subsystem description is used. If *USRPRF is specified for this parameter value in the job description, the value specified in the user profile for the prestart job entry (USER parameter) is used.

Top

Accounting code (ACGCDE)

Specifies the accounting code that is used for this job.

*SAME

The accounting code does not change.

*PGMSTRRQS

The value specified in the job description for the user profile of the current user is used. If *USRPRF is specified for this parameter value in the job description, the value specified in the user profile of the current user is used.

*PJE The value specified in the job description for the prestart job entry in the subsystem description is used. If *USRPRF is specified for this parameter value in the job description, the value specified in the user profile for the prestart job entry (USER parameter) is used.

Top

Examples

Example 1: Changing the Output Priority

```
CHGPJ  OUTPTY(*PGMSTRRQS)
```

This command changes the output priority for spooled files produced by this job to the output priority in the job description associated with the user profile of the current user.

Example 2: Changing the Output Queue

```
CHGPJ  OUTQ(*PJE)
```

This command changes the output queue for spooled files produced by this job to the output queue in the job description specified in the prestart job entry.

Top

Error messages

*ESCAPE Messages

CPF1314

Value &1 for parameter &2 not allowed.

CPF1317

No response from subsystem for job &3/&2/&1.

CPF1321

Job &1 user &2 job number &3 not found.

CPF1332

End of duplicate job names.

CPF1334

Must be an interactive job for requested change.

CPF1336

Errors on CHGJOB command for job &3/&2/&1.

CPF1337

&3/&2/&1 not authorized to change parameters.

CPF1340

Job control function not performed.

CPF1341

Reader or writer &3/&2/&1 not allowed as job name.

CPF1343

Job &3/&2/&1 not valid job type for function.

CPF1344

Not authorized to control job &3/&2/&1.

CPF1351

Function check occurred in subsystem for job &3/&2/&1.

CPF1352

Function not done. &3/&2/&1 in transition condition.

Top

Change Prestart Job Entry (CHGPJE)

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

Parameters
 Examples
 Error messages

The Change Prestart Job Entry (CHGPJE) command changes a prestart job entry in the specified subsystem description.

The subsystem may be active when the prestart job entry is changed. Changes made to the entry when the subsystem is active are reflected over time. Any new prestart jobs started after the command is issued use the new job-related values. This command identifies prestart jobs that are started when the subsystem is started or when the Start Prestart Jobs (STRPJ) command is issued.

Restrictions:

1. To use this command, you must have:
 - object operational (*OBJOPR), object management (*OBJMGT), and read (*READ) authority to the specified subsystem description and execute (*EXECUTE) authority to the library containing that subsystem description.
 - object operational (*OBJOPR) and read (*READ) authority to the job description and execute (*EXECUTE) authority to the library containing that job description.
 - use (*USE) authority to the user profile.
2. Only a user with all object (*ALLOBJ) special authority is allowed to change an entry for which the job 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, *LIBL, *CURLIB</i>	
PGM	Program	<i>Qualified object name</i>	Required, Positional 2
	Qualifier 1: Program	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
USER	User profile	<i>Name, *SAME</i>	Optional
STRJOBS	Start jobs	<i>*SAME, *YES, *NO</i>	Optional
INLJOBS	Initial number of jobs	1-9999, <i>*SAME</i>	Optional
THRESHOLD	Threshold	1-9999, <i>*SAME</i>	Optional
ADLJOBS	Additional number of jobs	0-999, <i>*SAME</i>	Optional
MAXJOBS	Maximum number of jobs	1-9999, <i>*SAME, *NOMAX</i>	Optional
JOB	Job name	<i>Name, *SAME, *PGM</i>	Optional
JOBDD	Job description	Single values: <i>*SAME, *USRPRF, *SBSD</i> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Job description	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	

Keyword	Description	Choices	Notes
MAXUSE	Maximum number of uses	1-1000, <u>*SAME</u> , *NOMAX	Optional
WAIT	Wait for job	<u>*SAME</u> , *YES, *NO	Optional
POOLID	Pool identifier	1-10, <u>*SAME</u>	Optional
CLS	Class	<i>Element list</i>	Optional
	Element 1: Class	Single values: <u>*SAME</u> , *SBSD Other values: <i>Qualified object name</i>	
	Qualifier 1: Class	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <u>*LIBL</u> , *CURLIB	
	Element 2: Number of jobs to use class	0-32766, <u>*SAME</u> , *CALC, *MAXJOBS	
	Element 3: Class	Single values: <u>*SAME</u> , *NONE, *SBSD Other values: <i>Qualified object name</i>	
	Qualifier 1: Class	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <u>*LIBL</u> , *CURLIB	
THDRSCAFN	Thread resources affinity	Single values: <u>*SAME</u> , *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Group	*NOGROUP, *GROUP	
	Element 2: Level	*NORMAL, *HIGH	
RSCAFNGRP	Resources affinity group	<u>*SAME</u> , *NO, *YES	Optional

Top

Subsystem description (SBSD)

Specifies the name and library of the subsystem description that contains the prestart job entry being changed.

This is a required parameter.

Qualifier 1: Subsystem description

name Specify the name of the subsystem description of the prestart job entry that is being changed.

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 subsystem description's library of the prestart job entry that is being changed.

Top

Program (PGM)

Specifies the name and library of the program that identifies the prestart job entry that is changed. This program name is used to match an incoming request with an available prestart job. Two entries with the same program name can exist in a single subsystem description, but they must have different library names. If the program does not exist when the entry is added, a library qualifier must be specified because the qualified name is kept in the subsystem description.

This is a required parameter.

Qualifier 1: Program

name Specify the name of the program run by the prestart job.

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 of the program to be run by the prestart job.

Top

User profile (USER)

Specifies the user profile under which the prestart job is initiated. In addition, the current user profile of the prestart job is set to this user whenever the job waits for a request to handle.

Note: When a prestart job is given a request to handle, the current user profile of the job is updated. Refer to the Work Management guide for information on how this profile is determined. This change in current user profile is for authority checking only. None of the other attributes of the user profile, such as the current library (CURLIB) or the initial program to call (INLPGM), are given to the prestart job.

***SAME**

The value of this parameter does not change.

name Specify the name of the user profile used for the prestart job.

Top

Start jobs (STRJOBS)

Specifies whether the prestart jobs are started at the time the subsystem is started.

***SAME**

The start prestart jobs value does not change.

***YES** The prestart jobs are started at the time the subsystem is started.

***NO** The prestart jobs are not started at the time the subsystem is started. The Start Prestart Jobs (STRPJ) command is used to start these prestart jobs.

Top

Initial number of jobs (INLJOBS)

Specifies the initial number of prestart jobs that are started when the subsystem specified on the **Subsystem description (SBSD)** parameter is started.

Notes.

1. The value specified on this parameter must be less than or equal to the value specified on the **Maximum number of jobs (MAXJOBS)** parameter.
2. The value specified on this parameter must be greater than or equal to the value specified on the **Threshold (THRESHOLD)** parameter.

*SAME

The number of prestart jobs that are started when the subsystem is started does not change.

1-9999 Specify the number of prestart jobs that are started when the subsystem is started. Valid values range from 1 through 9999.

Top

Threshold (THRESHOLD)

Specifies when additional prestart jobs are started. When the pool of available jobs (jobs available to service a requests) is reduced below this number, more jobs (specified on the **Additional number of jobs (ADLJOBS)** parameter) are started and added to the available pool. This number is checked after a prestart job is attached to a procedure start request.

Note: The value specified on this parameter must be less than or equal to the value specified on the **Initial number of jobs (INLJOBS)** parameter.

*SAME

The value of this parameter does not change.

1-9999 Specify the minimum number of prestart jobs that must be available before additional prestart jobs are started. Valid values range from 1 through 9999.

Top

Additional number of jobs (ADLJOBS)

Specifies the additional number of prestart jobs that are started when the number of prestart jobs drops below the value specified on the **Threshold (THRESHOLD)** parameter.

Note: The value of this parameter must be less than the value specified on the **Maximum number of jobs (MAXJOBS)** parameter.

*SAME

The additional number of prestart jobs that are started does not change.

0-999 Specify the number of additional prestart jobs to start. Valid values range from 0 through 999.

Top

Maximum number of jobs (MAXJOBS)

Specifies the maximum number of prestart jobs that can be active at the same time for this prestart job entry.

Notes

1. The value specified on this parameter must be greater than or equal to the value specified on the **Initial number of jobs (INLJOBS)** parameter.
2. The value specified on this parameter must be greater than the value specified on the **Additional number of jobs (ADLJOBS)** parameter.
3. If the value specified on this parameter is changed, the value specified on the **Class (CLS)** parameter might also need to be changed.

*SAME

The number of prestart jobs that can be active at the same time does not change.

*NOMAX

There is no maximum number of prestart jobs that can be active at the same time.

1-9999 Specify the maximum number of prestart jobs that can be active at the same time. Valid values range from 1 through 9999.

Top

Job name (JOB)

Specifies the name of the prestart job.

*SAME

The job name does not change.

***PGM** The job name is the program name specified on the **Program (PGM)** parameter.

name Specify the name of the prestart job.

Top

Job description (JOBDESC)

Specifies the name and library of the job description that is used for the prestart job. If the job description does not exist when the entry is changed, a library qualifier must be specified because the qualified job description name is kept in the subsystem description.

Note: Only a user with all object (*ALLOBJ) special authority is allowed to add or change an entry for which the job description does not exist.

Single values

*SAME

The job description does not change.

*USRPRF

The job description name entered in the user profile specified on the **User profile (USER)** parameter is used.

*SBSD

The job description having the same name as the subsystem description named on the **Subsystem description (SBSD)** parameter is used.

Qualifier 1: Job description

name Specify the name of the job description being used for this prestart job.

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 job description's library name.

Top

Maximum number of uses (MAXUSE)

Specifies the maximum number of requests that can be handled by each prestart job before the subsystem ends the job in a controlled manner by issuing an End Job (ENDJOB) command with a value of *CNTRLD on the **How to end (OPTION)** parameter.

***SAME**

The value does not change.

***NOMAX**

There is no maximum number of program start requests that a prestart job can handle. The job is not ended by the subsystem.

1-1000 Specify the maximum number of requests that a prestart job can handle before it is ended. Valid values range from 1 through 1000.

Top

Wait for job (WAIT)

Specifies whether program start requests wait for a prestart job to become available or are rejected if a prestart job is not immediately available when the procedure start request is received.

Note: Refer to the manual for the communications type being used to determine the timing considerations for program start requests.

***SAME**

The value for this parameter does not change.

***YES** Program start requests wait until there is an available prestart job, or until a prestart job is started, to handle the request.

***NO** Program start requests are rejected if a prestart job is not immediately available when the procedure start request is received.

Top

Pool identifier (POOLID)

Specifies the subsystem pool identifier in which the prestart jobs will run.

***SAME**

The subsystem pool identifier in which prestart jobs run does not change.

- 1-10 Specify the subsystem pool identifier in which the prestart jobs run. Valid values range from 1 through 10.

Top

Class (CLS)

Specifies the name and library of the classes that the prestart jobs run under and how many prestart jobs should run using each class. Jobs start by using the first class specified until the number of jobs specified for the first class is reached. After the number of jobs specified for the first class is reached, then jobs are started using the second class. If the class does not exist when the entry is added, a library qualifier must be specified because the qualified class name is kept in the subsystem description.

Notes

1. Two classes can be specified for this parameter.
2. If the value specified on the **Maximum number of jobs (MAXJOBS)** parameter is changed, the value for the number of jobs specified on this parameter might need to be changed. If *CALC or *MAXJOBS is specified, the system recalculates the value for the number of jobs to use the specified class.

Element 1: Class

Single values

*SAME

The class does not change.

*SBSD

The class having the same name as the subsystem description, specified on the **Subsystem description (SBSD)** parameter, is used for prestart jobs.

Qualifier 1: Class

name Specify the name of the class being used for prestart jobs.

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 name of the class being used for prestart jobs.

Element 2: Number of jobs to use class

*SAME

The number of jobs to use this class does not change.

*CALC

The system calculates how many prestart jobs use this class. If only one class is specified and *CALC is specified, all of the jobs use that class. If two classes are specified and *CALC is specified for both, the first class is the value specified on the **Maximum number of jobs (MAXJOBS)** parameter divided by two, and the second class is the value of the MAXJOBS parameter minus the value calculated for the first class. If a specific number of jobs is specified

for either class and *CALC is specified for the other class, the system calculates the difference between MAXJOBS and the specific number of jobs for the *CALC designation.

***MAXJOBS**

All of the prestart jobs use the specified class.

0-32766

Specify the number of jobs that use this class. The sum of the values specified for both classes must total the value specified on the MAXJOBS parameter.

Element 3: Class

Single values

***SAME**

The second class, if previously specified, does not change.

***NONE**

Specify this value if only one class is used for this prestart job entry.

***SBSD**

The class having the same name as the subsystem description, specified on the **Subsystem description (SBSD)** parameter, is used for prestart jobs.

Qualifier 1: Class

name Specify the name of the class being used for prestart jobs.

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 name of the class being used for prestart jobs.

Element 4: Number of jobs to use class

***SAME**

The number of jobs to use the second class does not change.

***CALC**

The system calculates how many prestart jobs use this class. If only one class is specified and *CALC is specified, all of the jobs use that class. If two classes are specified and *CALC is specified for both, the first class is the value specified on the **Maximum number of jobs (MAXJOBS)** parameter divided by two, and the second class is the value of the MAXJOBS parameter minus the value calculated for the first class. If a specific number of jobs is specified for either class and *CALC is specified for the other class, the system calculates the difference between MAXJOBS and the specific number of jobs for the *CALC designation.

***MAXJOBS**

All of the prestart jobs use the specified class.

0-32766

Specify the number of jobs that use this class. The sum of the values specified for both classes must total the value specified on the MAXJOBS parameter.

Thread resources affinity (THDRSCAFN)

Specifies the affinity of threads to system resources.

Single values

*SAME

The thread resources affinity does not change.

*SYSVAL

When the prestart job is started, the thread resources affinity value from the QTHDRSCAFN system value will be used.

Element 1: Group

*NOGROUP

Prestart jobs will have affinity to a group of processors and memory. Secondary threads running under the job will not necessarily have affinity to the same group of processors and memory.

*GROUP

Prestart jobs will have affinity to a group of processors and memory. Secondary threads running under the job will all have affinity to the same group of processors and memory as the initial thread.

Element 2: Level

*NORMAL

A thread will use any processor or memory in the system if the resources it has affinity to are not readily available.

*HIGH

A thread will only use the resources it has affinity to, and will wait until they become available if necessary.

Resources affinity group (RSCAFNGRP)

Specifies whether or not prestart jobs using this entry will be grouped together having affinity to the same system resources (processors and memory). A value of *YES for this parameter will take precedence over the QTHDRSCAFN system value when set to *NOGROUP.

*SAME

The resources affinity group does not change.

*NO Prestart jobs that use this entry will not be grouped together.

*YES Prestart jobs that use this entry will be grouped together such that they will have affinity to the same system resources. Jobs that share data in memory may perform better if they have affinity to the same resources.

Examples

```
CHGPJE  SBSB(QGPL/PJSBS) PGM(QGPL/PGM1) STRJOBS(*NO)
        THRESHOLD(1) ADLJOBS(1)
```

This command changes the prestart job entry for the PGM1 program in the QGPL library in the PJSBS subsystem description contained in the QGPL library. The prestart jobs associated with this entry are not started the next time the PJSBS subsystem description in the QGPL library is started. The STRPJ command is needed to start the prestart jobs. When more jobs need to be started, one additional job is started.

[Top](#)

Error messages

*ESCAPE Messages

CPF1619

Subsystem description &1 in library &2 damaged.

CPF1691

Active subsystem description may or may not have changed.

CPF1697

Subsystem description &1 not changed.

[Top](#)

Change Problem (CHGPRB)

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

Parameters
Examples
Error messages

The Change Problem (CHGPRB) command allows you to change the values of selected fields within the problem log. The changeable fields include the service assigned number, problem severity, user name assigned to the problem log entry, and problem description.

Restriction: This command is shipped with public *EXCLUDE authority and the QPGMR, QSYSOPR, QSRV, and QSRVBAS user profiles have private authorities to use the command.

Top

Parameters

Keyword	Description	Choices	Notes
PRBID	Problem identifier	Character value	Required, Key, Positional 1
ORIGIN	Origin	Element list	Optional, Key
	Element 1: Network identifier	Communications name, *NETATR	
	Element 2: Control point name	Communications name, *NETATR	
SEV	Severity	*SAME, *NONE, 1, 2, 3, 4	Optional
ASNUSER	User assigned	Simple name, *SAME, *NONE	Optional
GROUP	Group assigned	Name, *SAME, *NONE, *DEFAULT	Optional
SRVID	Service number	Character value, *SAME, *NONE	Optional
BRANCH	Branch number	Character value, *SAME, *NONE	Optional
COUNTRY	Country or region number	Character value, *SAME, *NONE	Optional
PRBCGY	Problem category	*SAME, *REPORT, *LOGONLY	Optional
TEXT	Text 'description'	Character value, *SAME	Optional

Top

Problem identifier (PRBID)

Specifies the 10-character problem identifier of the problem log entry. Problems with different system origins can have the same identifier. This parameter can be used with the ORIGIN parameter to select a single problem from a particular system origin.

This is a required parameter.

Top

Origin (ORIGIN)

Specifies the node of the system from which the problem log entry originated. This parameter is used with the PRBID parameter to uniquely identify the problem.

Element 1: Network identifier

*NETATR

The local network identifier of this system is used.

communications-name

Specify the network identifier of the system on which the problem originated.

Element 2: Control point name

*NETATR

The local control point name of this system is used.

communications-name

Specify the control point name of the system on which the problem originated.

Top

Severity (SEV)

Specifies the severity level of the problem. Severity levels are assigned by the user when the problem is prepared for reporting. The four severity levels are:

- 1 High
- 2 Medium
- 3 Low
- 4 None

*SAME

The severity level does not change.

*NONE

No severity level is assigned to the problem.

1-4 Specify the severity level of the problem.

Top

User assigned (ASNUSER)

Specifies the user ID of the person to whom the problem is assigned.

*SAME

The user ID does not change.

*NONE

No user is assigned to the problem.

user-id

Specify the user ID assigned to the problem.

Top

Group assigned (GROUP)

Specifies the group in the filter to which the problem is assigned.

*SAME

The group name does not change.

*NONE

The problem is not assigned to a filter group.

group-name

Specify the group into which the problem entry is filtered.

Top

Service number (SRVID)

Specifies the service assigned number for the problem. This number was assigned when the problem was reported to IBM service support.

*SAME

The service assigned number does not change.

*NONE

The problem has no service assigned number.

service-assigned-number

Specify the service assigned number for the problem.

Top

Branch number (BRANCH)

Specifies the branch number for the problem log entry. This number was assigned when the problem was reported to IBM service support.

*SAME

The branch number does not change.

*NONE

The problem has no branch number.

character-value

Specify the three-digit branch number for the problem log entry. All three digits must be specified.

Top

Country or region number (COUNTRY)

Specifies the country or region number for the problem. This number was assigned when the problem was reported to IBM service support.

*SAME

The country or region number does not change.

*NONE

The problem has no country or region number.

character-value

Specify the three-digit country or region number for the problem log entry. All three digits must be specified.

Top

Problem category (PRBCGY)

Specifies whether a problem should be logged and reported to the service provider, or logged only.

*SAME

The setting does not change.

*REPORT

The problem will be logged and reported to the service provider.

*LOGONLY

The problem will be logged, but will not be reported to the service provider.

Top

Text 'description' (TEXT)

Specifies the description of the problem.

*SAME

The description does not change.

problem-description-text

Specify the problem description.

Top

Examples

```
CHGPRB PRBID(9213438081) ORIGIN(AS400 SYSTEM02) SEV(4)
        ASNUSER(JEFFREY) GROUP(CHGPROB) SRVID(PMR01)
        BRANCH(694) COUNTRY(760) TEXT('NEW PROBLEM DESCRIPTION')
```

This command changes the problem 9213438081 originating on SYSTEM02.AS400 to severity 4, changes the assigned user to JEFFREY, changes the group to CHGPROB, changes the service assigned number to PMR01, changes the branch number to 694, changes the country or region number to 760, and adds a new description.

Top

Error messages

*ESCAPE Messages

CPF7AAD

Problem &1 not changed.

CPF7AA7

Problem &1 not found or in use.

CPF7A8D

Problem &1 not changed.

CPF7A9C

Cannot work with the problem log at this time.

[Top](#)

Change Problem Action Entry (CHGPRBACNE)

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

Parameters
Examples
Error messages

The Change Problem Action Entry (CHGPRBACNE) command allows you to change a problem action entry that was added using the Add Problem Action Entry (ADDPRBACNE) command. The program QSXVLDAC is used to validate the action entry, and a prompter exit routine is used to fill in the current values.

Top

Parameters

Keyword	Description	Choices	Notes
FILTER	Filter	<i>Qualified object name</i>	Required, Key, Positional 1
	Qualifier 1: Filter	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
GROUP	Group	<i>Name, *DEFAULT</i>	Required, Key, Positional 2
ASNUSER	User assigned	<i>Simple name, *NOCHG, *NONE, *SAME</i>	Optional
SNDDTAQ	Send to data queue	Single values: <i>*NONE, *SAME</i> Other values (up to 5 repetitions): <i>Element list</i>	Optional
	Element 1: Data queue	<i>Qualified object name</i>	
	Qualifier 1: Data queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
	Element 2: Data queue key	<i>Character value, *NONE, X''</i>	

Top

Filter (FILTER)

Specifies the name of the filter.

This is a required parameter.

Qualifier 1: Filter

name Specify the name of the filter.

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 filter. 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 filter is located.

Group (GROUP)

Specifies the group for which the actions are to be applied. The group name is assigned from selection criteria from a selection entry in the filter.

*DEFAULT

The default specified when the filter was created is used.

name Specify a group name.

User assigned (ASNUSER)

Specifies the user assigned to the problem log entry.

*SAME

The value does not change.

*NOCHG

No change occurs to the problem log entry.

*NONE

No user is assigned to the problem log entry.

simple-name

Specify a user name.

Send to data queue (SNDDTAQ)

Specifies the data queue for the problem notification record. Keyed data queues are supported.

Single values

*SAME

The value does not change.

*NONE

No data queue is used.

Other values (up to 5 repetitions)

Element 1: Data queue

Qualifier 1: Data queue

name Specify the name of the data 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 job is used to locate the data queue. 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 data queue is located.

Element 2: Data queue key

***NONE**

No key is used on the data queue.

character-value

Specify the data queue key.

An 80-byte record is enqueued on the data queue specified by the user. This record is received when the QRCVDTAQ program is called. The data queue does not have to be used solely for problems; alerts and problems can share the same data queue.

If a key is specified, it is used when enqueueing the record on the queue. If the data queue is non-keyed, the record is enqueued without a key.

Note: The time stamp used is the system standard time stamp. This time is already stored in the problem record.

See the table in the SNDDTAQ parameter description for the Add Problem Action Entry (ADDPRBACNE) command for a description of the record format.

Top

Examples

```
CHGPRBACNE  FILTER(MYLIB/MYFILTER)  GROUP(IOWA)
             ASNUSER(NIGHTOPR)  SNDDTAQ(*SAME)
```

This command changes the actions for group IOWA. The assigned user is changed to NIGHTOPR.

Top

Error messages

***ESCAPE Messages**

CPF2150

Object information function failed.

CPF2151

Operation failed for &2 in &1 type *&3.

CPF7A82

Error occurred while applying the problem filter.

CPF812F

Filter damaged.

CPF91DD

Action entry for group &4 not found.

CPF91DE

Filter &1/&2 at maximum size.

CPF91EB

Filter type &3 not correct for this operation.

CPF91EC

Internal processing error occurred.

CPF91E8

Internal processing error occurred.

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.

Top

Change Problem Selection Entry (CHGPRBSLTE)

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

Parameters
Examples
Error messages

The Change Problem Selection Entry (CHGPRBSLTE) command is used to change a problem selection entry that was added using the Add Problem Selection Entry (ADDPBSLTE) command.

Top

Parameters

Keyword	Description	Choices	Notes
FILTER	Filter	<i>Qualified object name</i>	Required, Key, Positional 1
	Qualifier 1: Filter	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
SEQNBR	Sequence number	1-9999, *LAST	Required, Key, Positional 2
SELECT	Selection data	Single values: *SAME, *ANY Other values (up to 10 repetitions): <i>Element list</i>	Optional
	Element 1: Relationship	*IF, *AND, *OR	
	Element 2: Attribute	*EVENT, *ORIGIN, *ORGNETID, *ORGCPNAM, *RCVNETID, *RCVCPNAM, *PROBTYPE, *SEV, *MSGID, *ORGHDW, *RSCHDW, *RSCSFW	
	Element 3: Relational operator	*EQ, *GT, *LT, *NE, *GE, *NL, *LE, *NG, *CT	
	Element 4: Value	<i>Character value</i>	
GROUP	Group	<i>Name, *SAME, *DEFAULT</i>	Optional

Top

Filter (FILTER)

Specifies the name of the filter.

This is a required parameter.

Qualifier 1: Filter

name Specify the name of the filter.

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 filter. 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 filter is located.

Sequence number (SEQNBR)

Specifies the sequence number of the problem selection entry. Selection entries in a filter are numbered by sequence number. When a filter is applied, the selection entries with lower sequence numbers are tried first.

This is a required parameter.

***LAST**

Change the default selection entry. This entry is automatically added when the filter is created.

1-9999 Specify a sequence number.

Selection data (SELECT)

Specifies that a problem log entry is selected or not selected based on whether information in the problem log entry satisfies a specified relationship.

You can specify a single value (*ANY) or all four elements that define a relationship. When you specify the four elements, the attribute and attribute value are compared for the relationship specified by the relational operator.

Single values

***SAME**

The value does not change.

***ANY** Any problem log entry is selected.

Other values (up to 10 repetitions)

Element 1: Relationship

***IF** The specified relationship must be satisfied for a problem log entry to be selected.

***AND** The specified relationship must be satisfied in addition to the *IF relationship for a problem log entry to be selected.

***OR** The specified relationship must be satisfied in addition to or instead of the *IF relationship for a problem log entry to be selected.

Element 2: Attribute

***EVENT**

The filter is applied when the problem log entry is created (a value of 1), changed (a value of 2), or deleted (a value of 3). If the entry has been created and is changed before being committed, use the value of 1.

***ORIGIN**

The problem log entry was locally generated (a value of L) or was received from another system (a value of R).

***ORGNETID**

The network identifier (ID) of the system in which the problem log entry originated is specified.

This information is displayed using the Work with Problems (WRKPRB) command which shows the details for a specific problem. Specify the value in the following form:

'nnnnnnnnnn'

***ORGPCNAM**

The control point name of the system in which the problem log entry originated is specified. This information is displayed using the Work with Problems (WRKPRB) command which shows the details for a specific problem. Specify the value in the following form:

'cccccccccc'

***RCVNETID**

The network identifier of the remote system from which the problem log entry was received is specified. This information is displayed using the Work with Problems (WRKPRB) command which shows the details for a specific problem. Specify the value on the following form:

'nnnnnnnnnn'

***RCVCPNAM**

This attribute specifies the Remote System Control Point name in which the problem log entry received from. This information is displayed using the Work with Problems (WRKPRB) command and shows the details for a specific problem. The value specified for this attribute should be of the following form:

'cccccccccc'

***PROBTYPE**

The type of problem entry created. Possible problems are machine-detected (a value of 1), user-detected (a value of 2), PTF order (a value of 3), application-detected (a value of 4), Client machine-detected (a value of 5), or Client user-detected (a value of 6).

Note: User-Detected Remote Hardware problems are grouped with number 2 User-Detected problems.

***SEV** The severity of the problem log entry created. Possible choices are high (a value of 1), medium (a value of 2), low (a value of 3), none (a value of 4), or not assigned (a value of 5).

Note: Problems do not have a severity level when locally created.

***MSGID**

The message ID found in the problem log entry. This is usually an i5/OS message ID.

***ORGHDW**

The origin hardware resource information in the problem log entry. This information is displayed using the Work with Problems (WRKPRB) command and shows the details for a specific problem. Specify the value in the following form:

'tttt mmm ss-sssssss'
'tttt mmm ss-sssss'
'tttt mmm sssssss'
'tttt mmm sssss'

where tttt is the machine type, mmm is the model number and ssssssss is the serial number. Use this exact format to match a particular hardware resource exactly, or use a part of the hardware value with the Contains (*CT) relation to provide a partial match.

***RSCHDW**

The failing hardware resource information in the problem log entry. This information is displayed using the Work with Problems (WRKPRB) command and shows the details for a specific problem. Specify the value in the following form:

```
'tttt mmm ss-sssssss'  
'tttt mmm ss-sssss'  
'tttt mmm sssssss'  
'tttt mmm sssss'
```

where tttt is the machine type, mmm is the model number and ssssssss is the serial number. Use this exact format to match a particular hardware resource exactly, or use a part of the hardware value with the Contains (*CT) relation to provide a partial match.

***RSCSFW**

The failing software resource information in the problem log entry. This information is displayed using the Work with Problems (WRKPRB) command and shows the details for a specific problem. Specify the value in the following form:

```
'ppppppp vv rr mm'
```

where ppppppp is the licensed program ID, vv is the version number, rr is the release number, and mm is the modification level. Use this exact format to match a particular software resource exactly, or use a part of the software value with the Contains (*CT) relation to provide a partial match.

Element 3: Relational operator

The value specified for element 2 (**Attribute**) must have the following relationship to value specified for element 4 (**Value**) of this parameter.

- *EQ Equal to
- *GT Greater than
- *LT Less than
- *NE Not equal to
- *GE Greater than or equal to
- *LE Less than or equal to
- *CT Contains

Element 4: Value

attribute-value

Specify a value of up to 30 characters to compare with the contents of the attribute specified for element 2 of this parameter. The value must be specified in character format and must be enclosed in apostrophes if it contains blanks or special characters. If a CL variable is specified for the value, it must be a character variable.

generic-attribute-value

Specify the generic attribute value. A generic value is a character string of one or more characters followed by an asterisk (*); for example, ABC*. If a generic name is specified, all values that begin with the generic value are selected. If an asterisk is not included with the generic (prefix) value, the system assumes it to be the complete value.

Top

Group (GROUP)

Specifies the group to which a problem is assigned if it matches the criteria specified on the SELECT parameter.

*SAME

The value does not change.

*DEFAULT

The problem is assigned to the default group.

group-name

Specify a group name.

Top

Examples

```
CHGPRBSLTE  FILTER(MYLIB/MYFIL)  SEQNBR(1250)
             SELECT((*IF *SEV *EQ 1) (*OR *SEV *EQ 2))
             GROUP(SEVHIGH)
```

This command changes the problem selection entry with the sequence number 1250 in filter MYFIL located in library MYLIB. If the severity level equals 1 or 2, it is put in group SEVHIGH.

Top

Error messages

*ESCAPE Messages

CPF2150

Object information function failed.

CPF2151

Operation failed for &2 in &1 type *&3.

CPF7A82

Error occurred while applying the problem filter.

CPF812F

Filter damaged.

CPF91DC

Selection entry with sequence number &4 not found.

CPF91DE

Filter &1/&2 at maximum size.

CPF91DF

The SELECT keyword cannot be changed for *LAST entry.

CPF91EA

*IF relationship not in correct position.

CPF91EB

Filter type &3 not correct for this operation.

CPF91EC

Internal processing error occurred.

CPF91E6

Generic values only allowed with *EQ or *NE.

CPF91E7

Character in position &4 not valid in value specified.

CPF91E8

Internal processing error occurred.

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.

Top

Change Profile (CHGPRF)

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

Parameters
 Examples
 Error messages

The Change Profile (CHGPRF) command allows a user to change some of the values currently specified in the user profile.

Restrictions:

- You must have object management (*OBJMGT) and use (*USE) authority to the user profile being changed.
- You must have *USE authority to the current library, program, menu, job description, message queue, print device, output queue, and the ATTN key handling program if changing any of those user profile values.

Top

Parameters

Keyword	Description	Choices	Notes
ASTLVL	Assistance level	*SAME, *SYSVAL, *BASIC, *INTERMED, *ADVANCED	Optional
CURLIB	Current library	Name, *SAME, *CRTDFT	Optional
INLPGM	Initial program to call	Single values: *SAME, *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Initial program to call	Name	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
INLMNU	Initial menu	Single values: *SAME, *SIGNOFF Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Initial menu	Name	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
TEXT	Text 'description'	Character value, *SAME, *BLANK	Optional
KBDBUF	Keyboard buffering	*SAME, *SYSVAL, *NO, *TYPEAHEAD, *YES	Optional
JOBDD	Job description	Single values: *SAME Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Job description	Name, <u>QDFTJOBDD</u>	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
DOCPWD	Document password	Name, *SAME, *NONE	Optional
MSGQ	Message queue	Single values: *SAME, *USRPRF Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	Name	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
DLVRY	Delivery	*SAME, *NOTIFY, *BREAK, *HOLD, *DFT	Optional
SEV	Severity code filter	0-99, *SAME	Optional
PRTDEV	Print device	Name, *SAME, *WRKSTN, *SYSVAL	Optional

Keyword	Description	Choices	Notes
OUTQ	Output queue	Single values: *SAME , *WRKSTN, *DEV Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Output queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL , *CURLIB	
ATNPGM	Attention program	Single values: *SAME , *NONE, *SYSVAL, *ASSIST Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Attention program	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL , *CURLIB	
SRTSEQ	Sort sequence	Single values: *SAME , *SYSVAL, *HEX, *LANGIDSHR, *LANGIDUNQ 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> , *SAME , *SYSVAL	Optional
CNTRYID	Country or region ID	<i>Character value</i> , *SAME , *SYSVAL	Optional
CCSID	Coded character set ID	<i>Integer</i> , *SAME , *SYSVAL, *HEX	Optional
CHRIDCTL	Character identifier control	*SAME , *SYSVAL, *DEV, *JOBCCSID	Optional
SETJOBATR	Locale job attributes	Single values: *SAME , *SYSVAL, *NONE Other values (up to 6 repetitions): *CCSID, *DATFMT, *DATSEP, *DECfmt, *SRTSEQ, *TIMSEP	Optional
LOCALE	Locale	<i>Path name</i> , *SAME , *NONE, *SYSVAL, *C, *POSIX	Optional
USROPT	User options	Single values: *SAME , *NONE Other values (up to 7 repetitions): *CLKWD, *EXPERT, *ROLLKEY, *NOSTMSG, *STMSG, *HLPFULL, *PRTMSG	Optional
HOMEDIR	Home directory	<i>Path name</i> , *USRPRE, *SAME	Optional

Top

Assistance level (ASTLVL)

Specifies which user interface to use.

***SAME**

The value does not change.

***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.

*SAME

The value does not change.

*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

*SAME

The value does not change.

*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

*SAME

The value does not change.

*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

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

*SAME

The value does not change.

*BLANK

No text is specified.

'description'

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

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/>.

***SAME**

The value does not change.

***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

Job description (JOBD)

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.

Single values

***SAME**

The value does not change.

Qualifier 1: Job description

name Specify the name of job description used for the work station entries whose job description parameter values indicate the user JOBD(*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

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.

***SAME**

The value does not change.

***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

*SAME

The value does not change.

*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 sent to the message queue for this user are to be delivered.

*SAME

The value does not change.

*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.

*SAME

The value does not change.

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.

*SAME

The value does not change.

*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

*SAME

The value does not change.

*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

***SAME**

The value does not change.

***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

*SAME

The value does not change.

*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.

*SAME

The value does not change.

*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.

*SAME

The value does not change.

***SYSVAL**

The system value QCNTYID 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.

***SAME**

The value does not change.

***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.

***SAME**

The value does not change.

***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

*SAME

The value does not change.

*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.

*SAME

The value does not change.

*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.

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

*SAME

The value does not change.

*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

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.

*SAME

The value does not change.

*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

Examples

```
CHGPRF INLPGM(ARLIB/DSPMENU)
```

In this example, JJADAMS wants to change his user profile.

This command makes the following changes to the user profile named JJADAMS:

- Changes the first program to start, following a successful sign-on, to a program names DSPMENU, which is located in a library named ARLIB.

All the other command parameters default to *SAME and do not change.

Top

Error messages

*ESCAPE Messages

CPF22EC

Unable to process request for user profile &1.

CPF22E1

USROPT parameter cannot specify *STSMMSG and *NOSTSMMSG.

CPF22F1

Coded character set identifier &1 not valid.

CPF22F4

CCSID value &1 not compatible with the system.

CPF2209

Library &1 not found.

CPF2213

Not able to allocate user profile &1.

CPF2225

Not able to allocate internal system object.

CPF2228

Not authorized to change user profile.

CPF2242

Object &1 type *&2 not found in library list.

CPF2244

Object &1 type *&2 cannot be found.

CPF2294

Initial program value cannot be changed.

CPF2295

Initial menu value cannot be changed.

CPF2296

Attention program value cannot be changed.

CPF2297

Current library value cannot be changed.

CPF9802

Not authorized to object &2 in &3.

CPF9820

Not authorized to use library &1.

CPF9825

Not authorized to device &1.

Top

Change Printer File (CHGPRTF)

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

Parameters
 Examples
 Error messages

The Change Printer File (CHGPRTF) command changes the attributes of the specified printer device file.

Only the information specified on this command can be changed. If the data description specifications (DDS) used to create the file are changed, the printer device file must be created again before the changes can be made in the file.

Top

Parameters

Keyword	Description	Choices	Notes
FILE	File	<i>Qualified object name</i>	Required, Key, Positional 1
	Qualifier 1: File	<i>Generic name, name, *ALL</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *ALL, *ALLUSR, *CURLIB, *USRLIBL</i>	
DEV	Device	<i>Element list</i>	Optional, Positional 2
	Element 1: Printer	<i>Name, *SAME, *JOB, *SYSVAL</i>	
DEVTYPE	Printer device type	<i>*SAME, *SCS, *IPDS, *LINE, *AFPDSLIN, *USERASCII, *AFPDS</i>	Optional
PAGESIZE	Page size	<i>Element list</i>	Optional
	Element 1: Length—lines per page	0.001-255.0, <i>*SAME</i>	
	Element 2: Width—positions per line	0.001-378.0, <i>*SAME</i>	
	Element 3: Measurement method	<i>*SAME, *ROWCOL, *UOM</i>	
LPI	Lines per inch	<i>*SAME, 6.0, 3.0, 4.0, 7.5, 7.5, 8.0, 9.0, 12.0</i>	Optional
CPI	Characters per inch	<i>*SAME, 10.0, 5.0, 12.0, 13.3, 13.3, 15.0, 16.7, 16.7, 18.0, 20.0</i>	Optional
OVFLW	Overflow line number	1-255, <i>*SAME</i>	Optional
LVLCHK	Record format level check	<i>*SAME, *YES, *NO</i>	Optional
TEXT	Text 'description'	<i>Character value, *SAME, *BLANK</i>	Optional
FRONTMGN	Front margin	Single values: <i>*SAME, *DEV</i> 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: <i>*FRONTMGN, *DEV, *SAME</i> Other values: <i>Element list</i>	Optional
	Element 1: Offset down	0.0-57.79	
	Element 2: Offset across	0.0-57.79	
FOLD	Fold records	<i>*SAME, *NO, *YES</i>	Optional

Keyword	Description	Choices	Notes
RPLUNPRT	Unprintable character action	Single values: *NO Other values: <i>Element list</i>	Optional
	Element 1: Replace character	* <u>SAME</u> , *YES	
	Element 2: Replacement character	X'40'-X'FE', * <u>SAME</u> , *BLANK	
ALIGN	Align page	* <u>SAME</u> , *NO, *YES	Optional
CTLCHAR	Control character	* <u>SAME</u> , *NONE, *FCFC, *MACHINE	Optional
CHLVAL	Channel values	Single values: * <u>SAME</u> , *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	* <u>SAME</u> , *CONTENT, *ABSOLUTE	Optional
PRTQLTY	Print quality	* <u>SAME</u> , *STD, *DEVVD, *DRAFT, *NLQ, *FASTDRAFT	Optional
FORMFEED	Form feed	* <u>SAME</u> , *DEVVD, *AUTOCUT, *CONT, *CUT, *CONT2	Optional
DRAWER	Source drawer	1-255, * <u>SAME</u> , *E1, *FORMDF	Optional
OUTBIN	Output bin	1-65535, * <u>SAME</u> , *DEVVD	Optional
FONT	Font	Single values: * <u>SAME</u> , *CPI, *DEVVD 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, * <u>NONE</u>	
CHRID	Character identifier	Single values: * <u>SAME</u> , *DEVVD, *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	* <u>SAME</u> , *FILE, *JOB	Optional

Keyword	Description	Choices	Notes
FNTCHRSET	Font character set	Single values: *SAME , *FONT 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> , *LIBL , *CURLIB	
	Element 2: Code page	<i>Qualified object name</i>	
	Qualifier 1: Code page	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL , *CURLIB	
	Element 3: Point size	0.1-999.9, *NONE	
CDEFNT	Coded font	Single values: *SAME , *FNTCHRSET 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> , *LIBL , *CURLIB	
	Element 2: Point size	0.1-999.9, *NONE	
TBLREFCHR	Table Reference Characters	*SAME , *YES, *NO	Optional
PAGDFN	Page definition	Single values: *SAME , *NONE 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: *SAME , *NONE, *DEVDD 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: *SAME , *NONE Other values (up to 4 repetitions): <i>Character value</i>	Optional
PAGRIT	Degree of page rotation	*SAME , *AUTO, *DEVDD, *COR, 0, 90, 180, 270	Optional
MULTIUP	Pages per side	1-4, *SAME	Optional
REDUCE	Reduce output	*SAME , *TEXT, *NONE	Optional
PRTTXT	Print text	<i>Character value</i> , *SAME , *JOB, *BLANK, X''	Optional
JUSTIFY	Hardware justification	*SAME , 0, 50, 100	Optional
DUPLEX	Print on both sides	*SAME , *NO, *YES, *TUMBLE, *FORMMDF	Optional
DFRWRT	Defer write	*SAME , *YES, *NO	Optional
UOM	Unit of measure	*SAME , *INCH, *CM	Optional
FRONTOVL	Front side overlay	Single values: *NONE Other values: <i>Element list</i>	Optional
	Element 1: Overlay	Single values: *SAME Other values: <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, *SAME	
	Element 3: Offset across	0.0-57.79, *SAME	

Keyword	Description	Choices	Notes
BACKOVL	Back side overlay	Single values: *FRONTOVL, *NONE Other values: <i>Element list</i>	Optional
	Element 1: Overlay	Single values: *SAME Other values: <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, *SAME	
	Element 3: Offset across	0.0-57.79, *SAME	
	Element 4: Constant back	*NOCONSTANT, *CONSTANT, *SAME	
CVTLINDTA	Convert line data	*NO, *YES, *SAME	Optional
IPDSPASTHR	IPDS pass through	*DEVVD, *NO, *YES, *SAME	Optional
USRRSCLIBL	User resource library list	Single values: *DEVVD, *NONE, *JOBLIBL, *CURLIB, *SAME Other values (up to 4 repetitions): <i>Name</i>	Optional
CORNERSTPL	Corner staple	*NONE, *BOTRIGHT, *TOPRIGHT, *TOPLEFT, *BOTLEFT, *DEVVD, *SAME	Optional
EDGESTITCH	Edge stitch	Single values: *NONE Other values: <i>Element list</i>	Optional
	Element 1: Reference edge	*DEVVD, *BOT, *RIGHT, *TOP, *LEFT, *SAME	
	Element 2: Reference edge offset	0.0-57.79, *DEVVD, *SAME	
	Element 3: Number of staples	1-122, *DEVVD, *SAME	
	Element 4: Staple offsets	Single values: *DEVVD, *SAME 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, *SAME	
	Element 2: Number of staples	1-122, *DEVVD, *SAME	
	Element 3: Staple offsets	Single values: *DEVVD, *SAME Other values (up to 122 repetitions): 0.0-57.79	
FNTRSL	Font resolution for formatting	*DEVVD, *SEARCH, 240, 300, *SAME	Optional
SPOOL	Spool the data	*SAME, *YES, *NO	Optional
OUTQ	Spooled output queue	Single values: *SAME, *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> , *SAME, *STD	Optional
COPIES	Copies	1-255, *SAME	Optional
EXPDATE	Expiration date for file	<i>Date</i> , *DAYS, *NONE, *SAME	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> , 1, *SAME, *ENDPAGE	
	Element 2: Ending page	<i>Integer</i> , *SAME, *END	
MAXRCDS	Max spooled output records	1-999999, *SAME, *NOMAX	Optional
FILESEP	File separators	0-9, *SAME	Optional
SCHEDULE	Spooled output schedule	*SAME, *FILEEND, *JOBEND, *IMMED	Optional

Keyword	Description	Choices	Notes
HOLD	Hold spooled file	<u>*SAME</u> , *NO, *YES	Optional
SAVE	Save spooled file	<u>*SAME</u> , *NO, *YES	Optional
OUTPTY	Output priority (on OUTQ)	<u>*SAME</u> , *JOB, 1, 2, 3, 4, 5, 6, 7, 8, 9	Optional
USRDTA	User data	Character value, <u>*SAME</u> , *SOURCE	Optional
SPLFOWN	Spool file owner	<u>*SAME</u> , *CURUSRPRE, *JOB, *CURGRPPRF, *JOBGRPPRF	Optional
USRDFNOPT	User Defined Option	Single values: <u>*SAME</u> , *NONE Other values (up to 4 repetitions): Character value	Optional
USRDFNDTA	User Defined Data	Character value, <u>*SAME</u> , *NONE	Optional
USRDFNOBJ	User Defined Object	Single values: <u>*SAME</u> , *NONE Other values: <i>Element list</i>	Optional
	Element 1: Object	<i>Qualified object name</i>	
	Qualifier 1: Object	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
	Element 2: Object type	*SAME, *DTAARA, *DTAQ, *FILE, *PSFCFG, *USRIDX, *USRQ, *USRSPC	
IGCDTA	User specified DBCS data	<u>*SAME</u> , *NO, *YES	Optional
IGCEXNCHR	DBCS extension characters	<u>*SAME</u> , *YES, *NO	Optional
IGCCHRRTT	DBCS character rotation	<u>*SAME</u> , *NO, *YES	Optional
IGCCPI	DBCS characters per inch	<u>*SAME</u> , *CPI, *CONDENSED, 5, 6, 10	Optional
IGCSOSI	DBCS SO/SI spacing	<u>*SAME</u> , *YES, *NO, *RIGHT	Optional
IGCCDEFNT	DBCS coded font	Single values: <u>*SAME</u> , *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: DBCS coded font	<i>Qualified object name</i>	
	Qualifier 1: DBCS coded font	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
	Element 2: Point size	0.1-999.9, *NONE	
TOSTMF	To stream file	<i>Path name</i> , <u>*SAME</u> , *NONE	Optional
WSCST	Workstation customizing object	Single values: <u>*SAME</u> , *NONE, *PDF Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Workstation customizing object	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
WAITFILE	Maximum file wait time	<i>Integer</i> , <u>*SAME</u> , *IMMED, *CLS	Optional
SHARE	Share open data path	<u>*SAME</u> , *NO, *YES	Optional

Top

File (FILE)

Specifies the printer device file whose description is to be changed. A generic printer device file name may be specified.

This is a required parameter.

Qualifier 1: File

***ALL** All printer device files in the specified library are changed.

name Specify the name of the printer device file.

generic-name

Specify the generic file name of the printer device whose description is being changed. A generic name is a character string that contains one or more characters followed by an asterisk (*).

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

***CURLIB**

Only the libraries in the current library for the job are 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.

***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	QUSRVxRxMx
QGPL38	QSYS2	QUSRINFSKR	
QMGTC	QSYS2xxxxx	QUSRNOTES	
QMGTC2	QS36F	QUSROND	
QMPGDATA	QUSER38	QUSRPOSGS	
QMOMDATA	QUSRADSM	QUSRPOSSA	
QMOMPROC	QUSRBRM	QUSRPYMSVR	
QPFRDATA	QUSRDIRCF	QUSRRDARS	
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 a library name. Only the library named in this parameter is searched.

Top

Device (DEV)

Specifies the name of a printer device description. For nonspooled 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.

***SAME**

The device name (if any) does not change.

***JOB** The printer associated with the job is the printer device.

***SYSVAL**

The printer device named in the system value QPRTDEV is used.

name Specify the name of the printer device used with this printer file.

Double-byte character set considerations

When printing a printer file that has double-byte character set (DBCS) data, specify a DBCS printer.

Top

Printer device type (DEVTYPE)

Specifies the type of data stream that is used for a printer device file.

***SAME**

The data stream type does not change.

***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 considerations

When using the 5553 and 5583 DBCS-capable printers, DEVTYPE(*SCS) must be specified.

***IPDS** An intelligent printer data stream (IPDS) is created. This parameter can be specified when using an IPDS printer.

- If *IPDS is specified and the spooled printer file is directed to a printer other than an IPDS printer, the IPDS printer file is converted to an SCS printer file. More information is in the Printing category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

***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. This parameter cannot be specified with SPOOL(*NO).

***AFPDS**

An Advanced Function Printing 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

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

*SAME

The page length value does not change.

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

*SAME

The page width value does not change.

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

*SAME

This value does not change.

***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) 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, and 4234 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.

*SAME

The printer line spacing value does not change.

- 6 The line spacing on the printer is 6 lines per inch. This is the default value for this parameter on the CRTPRTF command.
- 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.

Double-byte character set considerations

- When printing double-byte character set (DBCS) data for a file specified with LPI(8), use double spacing for printing double-byte character data.
- Do not specify LPI(9) for double-byte character set printers.

Top

Characters per inch (CPI)

Specifies the printer character density (in characters per inch) used by this device file.

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

*SAME

The character density does not change.

- 10 Character density is 10 characters per inch. This is the shipped default value for this parameter on the CRTPRTF command.
- 5 Character density is 5 characters per inch. This density is valid only for the 4214 printer.
- 12 Character density is 12 characters per inch. This density is valid only for the 4214 printer.
- 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

Overflow line number (OVRFLW)

Specifies the line number on the page at which overflow to a new page begins. Generally, after the specified line is printed, the printer overflows to the next page before printing continues. Margins specified for the printer file are ignored when determining overflow. More information is in the Printing category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

*SAME

The overflow line number does not change.

- 1-255 Specify the line number of the line that signals page overflow after the line is printed. The value specified must not exceed the page length specified for the file. Margins specified for the printer file are ignored when determining overflow.

Top

Record format level check (LVLCHK)

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

*SAME

This value does not change.

- *YES The level identifiers are checked. If they do not all match, an open exception occurs, and an error message is sent to the program requesting the open.
- *NO The level identifiers are not checked when the file is opened.

Top

Text 'description' (TEXT)

Specifies text that describes the printer device file.

*SAME

The text (if any) does not change.

*BLANK

No text is specified.

character-value

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

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

*SAME

This value does not change.

*DEV D

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

SAME This value does not change.

*FRONTMGN

The offsets specified for the **Front margin (FRONTMGN)** parameter are used.

*DEV D

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

Fold records (FOLD)

Specifies whether all positions in a record are printed when the record length exceeds the page width (specified by the PAGESIZE parameter). 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 &ofc.*.
- 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.

*SAME

The value does not change.

***YES** Records whose length exceeds the page width are folded on the following lines.

***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.

Top

Unprintable character action (RPLUNPRT)

Specifies whether unprintable characters are replaced and which substitution character (if any) is used.

Note: If DEVTYPE(*IPDS) and RPLUNPRT(*YES) are specified, a hyphen (-) is printed for the unprintable character.

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

*SAME

This value does not change.

***YES** Unprintable characters are replaced. The program is not notified when unprintable characters are detected.

Element 2: Replacement character

*SAME

This value does not change.

***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. Any printable EBCDIC character can be specified.

Top

Align page (ALIGN)

Specifies whether the pages 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 Create Printer File (CRTPRTF) command and ALIGN(*FILE) is specified on the Start Print Writer (STRPRTWTR) command, 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.

*SAME

This value does not change.

***NO** No alignment of pages is required.

***YES** The pages are aligned before the output is printed.

Top

Control character (CTLCHAR)

Specifies whether the printer device file supports input with print control characters. Control characters that are not valid are ignored. Single spacing is assumed.

*SAME

This value does not change.

***NONE**

No print control characters are passed in the data that is printed.

***FCFC** The first character of every record is 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. This value is not valid for externally described printer files.

***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 up to 12 channel numbers with their assigned line numbers.

Note: If one or more channel-number plus line-number combinations are changed, all other combinations must be reentered.

Single values

***SAME**

This value does not change.

***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).

*SAME

The value does not change.

*CONTENT

Printing continues when errors are found.

*ABSOLUTE

Printing stops when errors are found.

Top

Print quality (PRTQLTY)

Specifies the quality of the print produced.

Note: See the description for this parameter on the Create Printer File (CRTPRTF) command for more details.

*SAME

This value does not change.

*STD The output is printed with standard quality.

*DEV

The print quality is set on the printer by the user. It is not set in the data stream.

*DRAFT

The output is printed with draft quality.

*NLQ The output is printed with near letter quality.

*FASTDRAFT

The output is printed at a higher speed and with lower quality than it would be if you specified *DRAFT. This value is only supported by the 4230 printer.

Note: For the 4214 printer, only draft (*DRAFT), quality (*NLQ), and device default (*DEV) modes are supported. Other values are set to quality (*NLQ) mode.

Top

Form feed (FORMFEED)

Specifies the form feed attachment used by this printer device file.

*SAME

This value does not change.

*DEV

The forms are fed into the printer in the manner specified in the device description.

***CONT**

Continuous forms are used by the printer. The tractor feed attachment must be mounted on the 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 mounted on the device.

Top

Source drawer (DRAWER)

Specifies the source drawer used when single-cut sheets are semiautomatically fed into the printer.

***SAME**

The value does not change.

***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.

***SAME**

The value does not change.

***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.

Single values

***SAME**

The font identifier does not change.

***CPI** The identifier of the font with the specified pitch (characters per inch (CPI)) is used.

***DEV D**

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 file. This parameter allows printing of text that is in different character identifier (graphic character set and code page) coding. The value specified on 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/i/infocenter/>. A list of valid CHRID values and applicable printers is in the "CHRID Values and Applicable Printers (CHRID parameter)" table in the Printing category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Single values

*SAME

This value does not change.

***DEV**

The character identifier value specified in the device description of the printer is used.

***SYSVAL**

The character identifier value specified for the system on which the application is running 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 on 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 can not be used in combination with the *JOBCCSID support.

***CHRIDCTL**

The system checks the CHRIDCTL job definition attribute to determine whether to use *JOBCCSID or *DEV 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.

Decimal format (DECFMT)

Specifies which decimal format value is used when editing numeric fields with the EDTCDE (Edit Code) 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.

*SAME

The job is submitted in the held (HLD) state.

***FILE** Use the decimal format value stored with the file when the file was created.

***JOB** Use the decimal format value from the DECFMT job attribute when the file is opened.

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

*SAME

The value does not change.

***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.

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

***SAME**

The value does not change.

***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.

Table Reference Characters (TBLREFCHR)

Specifies whether table reference characters are present in the line data.

*SAME

The value does not change.

***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.

Page definition (PAGDFN)

Specifies the page definition to be used to format line data.

You can specify a page definition with *LINE, *AFPSDLINE, 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

*SAME

The value does not change.

***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 *AFPDSLIN, *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

***SAME**

The value does not change.

***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.

***DEVDF**

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

***SAME**

The value does not change.

***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 text rotation for the 3112, 3116, 3130, 3812, 3816, 4028, 3820, 3825, 3827, 3829, 3831, 3835, 3900, 3916, 3930 and 3935 printers. This parameter allows the user to specify the degree of rotation of the text on the page with respect to the way the form 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.

***SAME**

The value does not change.

***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.

***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.

***COR** Computer output reduction is done. Computer output reduction allows output intended for a 13.2 inch wide by 11.0 inch long form to be printed on an 8.5 inch wide by 11.0 inch long form.

For computer output reduction printing, the following operations are done for the 3112, 3116, 3130, 3812, 3816, 4028, 3820, 3825, 3827, 3829, 3831, 3835, 3900, 3916, 3930 and 3935 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 a 3835 printer, 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.

0 No rotation is done. Printing starts at the edge loaded into the printer first, and is parallel to that edge.

90 Text is rotated 90 degrees clockwise from the 0-degree writing position.

180 Text is rotated 180 degrees clockwise from the 0-degree writing position.

270 Text is rotated 270 degrees clockwise from the 0-degree writing position.

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/>.

*SAME

The number of pages of output per physical page does not change.

1 One page of output is printed on each physical page.

2 Two pages of output are printed on each physical page.

3 Three pages of output are printed on 1 physical sheet of paper.

4 Four pages of output are printed on each physical page.

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/>.

***SAME**

The value does not change.

***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.

***SAME**

This value does not change.

***JOB** The text is obtained from the job attribute.

***BLANK**

No text is specified.

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 so that the right-hand margin of printing is regular. 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 SCS printers.

***SAME**

This value does not change.

0 No justification occurs. This is the default value for this parameter on the CRTPRTF command.

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 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.

***SAME**

This value does not change.

***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 used for printed output that is bound at the side of the sheet.

*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 used for printed output that is bound at the top of the sheet.

*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

Defer write (DFRWRT)

Specifies whether output is held in the system buffer before being sent to the printer.

*SAME

The value does not change.

***YES** The system controls the amount of output that is held in the buffer before it is sent to the printer.

If SPOOL(*YES) is specified along with SCHEDULE(*IMMED), output is held in the buffer until a page of output is available or until the system buffer is full.

***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.

Top

Unit of measure (UOM)

Specifies the unit of measurement to be used.

*SAME

The unit of measurement does not change.

*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

Single values

*SAME

The value does not change.

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

*SAME

The offset down from the point of origin does not change.

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

*SAME

The offset across from the point of origin does not change.

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

Single values

*SAME

The value does not change.

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

*SAME

The offset down from the point of origin does not change.

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

*SAME

The offset across from the point of origin does not change.

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

*SAME

The value does not change.

***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.

***SAME**

The value does not change.

***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 undergoes 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 using Print Services Facility for OS/2's Distributed Print Function.

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

*SAME

The value does not change.

*DEV

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(*DEV) in the printer file. If you specify a value of anything other than *DEV 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.

*SAME

The value does not change.

*NONE

A corner staple is not specified.

*DEV

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.

***SAME**

The value does not change.

***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.

***SAME**

The value does not change.

***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.

*SAME

The value does not change.

*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 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

*SAME

The value does not change.

*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.

*SAME

The value does not change.

*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.

*SAME

The value does not change.

*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

*SAME

The value does not change.

*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 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 Printing category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>. manual section entitled User and Device Resource Library Lists in the chapter called Working With PSF configuration objects.

*SAME

The value does not change.

*DEV D

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.

300 The font resolution is 300 pels per inch.

Top

Spool the data (SPOOL)

Specifies whether the output data for the printer device file is spooled. This parameter is ignored when the **To stream file (TOSTMF)** parameter value is not *NONE.

*SAME

This value does not change.

*YES The data is spooled to a diskette writer or to a printer writer queue for later processing.

*NO The data is not spooled. It is sent directly to the device and printed as the output becomes available.

Top

Spooled output queue (OUTQ)

Specifies the output queue (*OUTQ) object.

Single values

*SAME

The output queue does not change.

*JOB The output queue associated with this job is used for the spooled output.

*DEV The output queue associated with the printer specified for the **Device (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.

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 output queue. If no library is specified as the current library for the job, QGPL is used.

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

Top

Form type (FORMTYPE)

Specifies the type of forms used in the printer.

***SAME**

The type of printer form does not change.

***STD** The standard printer form for your computer system is used.

character-value

Specify the identifier of the type of printer form used with this device file for printed output.

Top

Copies (COPIES)

Specifies, for spooled output only, the number of copies of the output being printed.

***SAME**

The number of copies does not change.

1-255 Specify the number of copies to be printed.

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.

***SAME**

The expiration date does not change.

***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

*SAME

The starting page to print does not change.

*ENDPAGE

Use the end page value as the starting page.

integer

Specify the starting page number.

Element 2: Ending page

*SAME

The ending page to print does not change.

*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 spooled jobs using this printer file.

*SAME

The maximum number of records does not change.

*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. Each separator page has the following items printed on it: file name, file number, job name, user name, and job number.

*SAME

The number of separator pages does not change.

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 made available to a diskette writer.

*SAME

The time when spooled output starts does not change.

***JOBEND**

The spooled output file is made available after the job is completed.

***FILEEND**

The spooled output file is made available when the file is closed in the program.

***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 files only, whether the spooled file is held. The spooled file can be released by using the Release Spooled File (RLSSPLF) command.

*SAME

The spooled file status does not change.

***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 (kept on the output queue) after the output has been produced.

*SAME

The spooled file status does not change.

***NO** The spooled file data is not kept on the output queue.

***YES** The spooled file data is kept on the output queue until the file is deleted. After the file is produced, the number of copies (see **Copies (COPIES)** parameter) is set to 1, and its status is changed from WTR to SAV. Refer to the Release Spooled File (RLSSPLF) command for information on how to produce the spooled file again.

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.

*SAME

The output priority does not change.

***JOB** The output priority associated with the job that created the spooled file is used.

1-9 Specify the output priority with a number ranging from 1 (high) through 9 (low).

Top

User data (USRDTA)

Specifies, for spooled output, user-specified data that identifies the file.

*SAME

The value does not change.

***SOURCE**

If the spooled file was created by an application program, the name of that program is used. Otherwise, blanks are used.

character-value

Specify up to 10 characters of text.

Top

Spool file owner (SPLFOWN)

Specifies, for spooled output only, who the owner of the spooled file is.

*SAME

The value does not change.

***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
- qsyssetuid() - Set User ID
- qsysseteuid() - Set Effective User ID
- qsyssetreuid() - 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
- qsyssetgid() - Set Group ID
- qsyssetegid() - Set Effective Group ID
- qsyssetregid() - 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

***SAME**

The value does not change.

***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 (USRDFNDTA)

Specifies, for spooled output only, the user-defined data to be used by user applications or user-specified programs that process spooled files.

***SAME**

The value does not change.

***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)

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

*SAME

The value does not change.

*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

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

*SAME

The value does not change.

*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

*SAME

The value does not change.

*NO The double-byte character set (DBCS) attributes of the file are defined in the data description specifications (DDS).

*YES DBCS attributes in addition to those defined in the DDS include: (1) putting the DDS keyword for alternative data type (IGCALTTYP) into effect and (2) identifying double-byte character attributes of fields or messages not identified in the DDS.

Top

DBCS extension characters (IGCEXNCHR)

Specifies whether the system processes double-byte character set (DBCS) extension characters.

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.

*SAME

The value does not change.

*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

DBCS character rotation (IGCCHRRTT)

Specifies whether the printer rotates the 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.

*SAME

The value does not change.

*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) data 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 on the CPI parameter.

*SAME

This value does not change.

***CPI** DBCS character density is based on the values specified for the **Characters per inch (CPI)** parameter. *CPI is the default value for this parameter on the CRTPRTF command.

- 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.
- For CPI(15), DBCS characters print at 7.5 characters per inch.

5 DBCS character density is 5 CPI.

6 DBCS character density is 6 CPI.

10 DBCS character density is 10 CPI.

***CONDENSED**

Condensed printing is used in which the system prints 20 DBCS characters every 3 inches. This value is valid only for the 5553 or 5583 printers.

Top

DBCS SO/SI spacing (IGCSOSI)

Specifies how the system prints shift-in and shift-out characters.

*SAME

This value does not change.

***NO** The system does not print shift control characters. These characters do not occupy a position on printer output.

***YES** The system prints shift control characters as blanks.

***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

***SAME**

This value does not change.

***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.

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.

***SAME**

The value does not change.

***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

*SAME

The value does not change.

*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.

*SAME

This value does not change.

*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

Examples

Example 1: Changing Two Parameters

```
CHGPRTF FILE(ACCREC/PRTRPT) LPI(6) ALIGN(*YES)
```

This command changes two parameters in printer file PRTRPT stored in library ACCREC. The system operator must align the pages in the printer before the system starts printing the file. The file is printed in 6 lines per inch on the pages.

Example 2: Changing All IBM-Supplied Printer Files

```
CHGPRTF FILE(QSYS/Q*) PAGESIZE(88 132) LPI(8) OVRFLW(80)
```

This command changes all IBM-supplied printer files (that is, all printer files in library QSYS whose names start with a Q) to use 88 lines of 132 characters (8 lines per inch), but to skip to the next page after 80 lines.

Example 3: Processing DBCS Data

```
CHGPRTF FILE(IGCLIB/IGCPRT) FORMFEED(*AUTOCUT)  
IGCDTA(*YES) IGCCRRTT(*YES)
```

This command changes printer file IGCPRT stored in library IGCLIB, so that it processes double-byte character set data. The system rotates double-byte characters before printing, and cut sheets are fed automatically when printing.

Top

Error messages

*ESCAPE Messages

CPF339F

Expiration date must be today or a date in the future.

CPF7304

File &1 in &2 not changed.

CPF7308

&5 files not changed for &1 in &2. &4 files changed.

Top

Change Proxy Command (CHGPRXCMD)

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

Parameters
Examples
Error messages

The Change Proxy Command (CHGPRXCMD) command changes some of the attributes of a proxy command. Control Language (CL) programs that use the proxy command being changed do *not* have to be created again. The CHGPRXCMD command does not change the target command definition object.

Restrictions:

- You must have object management (*OBJMGT) authority for the command that is being changed.
- The CHGPRXCMD command can be used to change only the attributes that were specified on the Create Proxy Command (CRTPRXCMD) command.

Top

Parameters

Keyword	Description	Choices	Notes
CMD	Command	<i>Qualified object name</i>	Required, Key, Positional 1
	Qualifier 1: Command	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
TGTCMD	Target command	Single values: *SAME Other values: <i>Qualified object name</i>	Optional, 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, *SAME, *CMDPMT, *TGTCMD, *BLANK</i>	Optional

Top

Command (CMD)

Specifies the proxy command to be changed.

This is a required parameter.

Qualifier 1: Command

name Specify the name of the proxy command to be changed.

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.

name Specify the name of the library where the command is located.

Target command (TGTCMD)

Specifies the target command for this proxy command. All parameters specified for the proxy command will be validated and processed using the specified target command.

Single values

*SAME

The target command does not change.

Qualifier 1: Target command

name Specify the name of the target command that processes the 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.

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

*SAME

The text, if any, does not change.

*CMDPMT

The text description will be the same as the command title shown when the command is prompted.

*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.

*BLANK

No text is specified.

character-value

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

Examples

```
CHGPRXCMD CMD(QGPL/WRKJOB) TGTCMD(QSYS/DSPJOB)
          TEXT('Alias WRKJOB to DSPJOB')
```

The proxy command named WRKJOB in library QGPL is changed to use DSPJOB in QSYS as the target command. When the QGPL/WRKJOB command is run or prompted, the target command DSPJOB in the QSYS library will be used to process the WRKJOB command parameters.

Top

Error messages

*ESCAPE Messages

CPF6209

Library &1 not found.

CPF6210

Command &1 in library &2 not found.

CPF6211

Not authorized to change command &1.

CPF6212

Command &1 not changed.

CPF6213

Cannot allocate command &1 in library &2.

CPF6214

Errors detected while changing command &1.

CPF6215

Command &1 in library &2 cannot be changed.

CPF6216

Command &1 not valid for &2 command

CPF6219

Not authorized to library &2.

Top

Change PSF Configuration (CHGPSFCFG)

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

Parameters
 Examples
 Error messages

Use the Change PSF Configuration (CHGPSFCFG) command to modify an existing 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, Key, Positional 1
	Qualifier 1: PSF configuration	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
USRRSCLIBL	User resource library list	*SAME , *JOBLIBL, *CURLIB, *NONE	Optional
DEVRSCLIBL	Device resource library list	Single values: *SAME , *DFT Other values (up to 30 repetitions): <i>Name</i>	Optional
IPDSPASTHR	IPDS pass through	*SAME , *NO, *YES	Optional
ACTRLSTMR	Activate release timer	*SAME , *NORDYF, *IMMED, *PRTNORDYF, *PRTIMMED	Optional
RLSTMR	Release timer	1-1440, *SAME , *NOMAX, *SEC15, *SEC30	Optional
RESTRTMR	Restart timer	1-1440, *SAME , *IMMED	Optional
RETRY	APPC and TCP/IP retry count	1-99, *SAME , *NOMAX	Optional
RETRYDLY	Delay between APPC retries	0-999, *SAME	Optional
ACKFRQ	Acknowledgment frequency	1-32767, *SAME	Optional
PRTRSPTMR	Printer response timer	5-3600, *SAME , *NOMAX	Optional
PDFGEN	Generate PDF output	Single values: *NONE Other values (up to 3 repetitions): *SAME , *SPLF, *STMF, *MAIL	Optional
PDFDEVTYPE	PDF device emulation type	*SAME , *IP40240, *IP40300, *P4028, *P3812	Optional
PDFPPRDWR1	PDF paper size drawer 1	*SAME , *LETTER, *LEGAL, *STATEMENT, *EXECUTIVE, *LEDGER, *A5, *A4, *A3, *B5, *B4	Optional
PDFPPRDWR2	PDF paper size drawer 2	*SAME , *LETTER, *LEGAL, *STATEMENT, *EXECUTIVE, *LEDGER, *A5, *A4, *A3, *B5, *B4	Optional

Keyword	Description	Choices	Notes
PDFMULT	Multiple PDF files	Single values: *SAME , *NO Other values: <i>Element list</i>	Optional
	Element 1: Acknowledge multiple groups	*YES	
	Element 2: Process option	*SPLIT , *INDEX	
PDFINCFNT	PDF fonts inline	*SAME , *YES, *NO	Optional
PDFDTAQ	PDF data queue	Single values: *SAME , *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: *SAME , *SNDDST Other values (up to 4 repetitions): <i>Character value</i> , *SAME , *LOCAL	Optional
PDFSENDER	Sender of electronic mail	<i>Name</i> , *SAME , *SPLFOWN, QSPLJOB	Optional
PDFADMIN	PDF administrator	<i>Character value</i> , *SAME , *NONE	Optional
PDFMPPGM	PDF user program	Single values: *SAME , *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: *SAME , *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	*SAME , *NO, *YES	Optional
AFPOUTQ	AFP output queue	Single values: *SAME Other values: <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> , *SAME , *BLANK	Optional
AUTOSSNRCY	Automatic session recovery	Single values: *SAME , *NO Other values: <i>Element list</i>	Optional
	Element 1: Enabled	*YES	
	Element 2: Message option	*INFO , *INQ	
BLANKPAGE	Blank page	*SAME , *YES, *NO	Optional
PAGSIZCTL	Page size control	*SAME , *NO, *YES	Optional
RESFONT	Resident fonts	*SAME , *YES, *NO	Optional
RSCRET	Resource retention	*SAME , *YES, *NO	Optional
EDGEORIENT	Edge orient	*SAME , *YES, *NO	Optional
USEOUTLFNT	Use outline fonts	*SAME , *YES, *NO	Optional
PSDFDNOPT	PSF defined option	Values (up to 6 repetitions): <i>Character value</i> , *SAME , *NONE	Optional
FNTSUBMSG	Font substitution messages	*SAME , *NO, *YES	Optional

Keyword	Description	Choices	Notes
FNTCAPTURE	Capture host fonts at printer	<u>*SAME</u> , *NO, *YES	Optional
FNTRSL	Font resolution for formatting	<u>*SAME</u> , *SEARCH, 240, 300	Optional
FNTTBL	Font mapping table	Single values: <u>*SAME</u> , *NONE 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>*SAME</u> , *NONE, *CHKFIRST, *CHKALL	Optional
MAPIGCFNT	Use DBCS simulation fonts	<u>*SAME</u> , *YES, *NO	Optional

Top

PSF configuration (PSFCFG)

Specifies the Print Services Facility (PSF) configuration object to be changed.

This is a required parameter.

Qualifier 1: PSF configuration

name Specify the name of the PSF configuration object to be changed.

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 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 list and then those in the device 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 *DEVD. 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.

*SAME

This value does not change.

*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 values

*SAME

This value does not change.

***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 mistakenly be 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.

*SAME

This value does not change.

***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.

*SAME

This value does not change.

*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:

- 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 ready 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 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.

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.

*SAME

This value does not change.

*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.

*SAME

This value does not change.

*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.

*SAME

This value does not change.

*NOMAX

No limit is put on the number of retries. Print Services Facility (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.

*SAME

This value does not change.

0-999 Specify the number of seconds to pause between retry attempts to establish a session.

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.

*SAME

This value does not change.

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.

*SAME

This value does not change.

*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 values

***SAME**

This value does not change.

***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.

***SAME**

This value does not change.

***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.

***SAME**

This value does not change.

***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.

***SAME**

This value does not change.

***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 values

***SAME**

This value does not change.

***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".

***SAME**

This value does not change.

***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 values

***SAME**

This value does not change.

***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 values

*SAME

This value does not change.

*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.

*SAME

This value does not change.

*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.

*SAME

This value does not change.

*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 (PDFMPPGM)

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

*SAME

This value does not change.

*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 the *IBMPGM on the PDFMAPPGM parameter.

The PSF configuration object will not be modified 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 values

*SAME

This value does not change.

*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.

***SAME**

This value does not change.

***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 the following conditions:

- the print request is segmented and the PDF mapping program requests that the segment be respooled, or
- 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.

***SAME**

This value does not change.

***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 values

***SAME**

This value does not change.

***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.

***SAME**

This value does not change.

- *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

*SAME

This value does not change.

- *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.

*SAME

This value does not change.

- *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).

*SAME

This value does not change.

- *YES Print Services Facility (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)

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.

*SAME

This value does not change.

*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.

*SAME

This value does not change.

*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.

*SAME

This value does not change.

*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.

*SAME

This value does not change.

*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.

***SAME**

This value does not change.

***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.

***SAME**

This value does not change.

***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 values

*SAME

This value does not change.

*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.

*SAME

This value does not change.

*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 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.

*SAME

This value does not change.

***NO** Do not substitute DBCS simulation fonts for DBCS raster fonts.

***YES** Substitute DBCS simulation fonts for DBCS raster fonts.

Top

Examples

```
CHGPSFCFG  PSFCFG(QGPL/P5002)  PDFGEN(*MAIL)
            PDFDEVTYPE(*P3812)  PDFPPRDWR1(*LETTER)
            PDFPPRDWR2(*LEGAL)  PDFMULT(*NO)
            PDFDTAQ(QGPL/PDF)   PDFINCFNT(*NO)
            PDFMAILSVR(MAIL.EARTHLINK.NET)
            PDFSENDER(*SPLFOWN) PDFMAPPGM(*NONE)
```

This command changes a Print Services Facility (PSF) configuration object named P5002 in the QGPL library. The PDFGEN parameter specifies that the spooled file is to be transformed to PDF and e-mailed by the mail server found at mail.earthlink.net. The transform is told to emulate a 3812 printer with paper sizes in drawers 1 and 2 to be letter and legal, respectively.

There will be a single PDF output file because the PDFMULT parameter is *NO. The fonts used by the file will not be inline so the user of the output file will need access to the fonts to display or print the file. The sender is the owner of the spooled file. Since there is no mapping program, the mail tag information associated with the file is assumed to be valid e-mail addresses.

Transform completion messages will be logged to data queue PDF in the QGPL library.

Top

Error messages

*ESCAPE Messages

CPF2112

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

CPF2182

Not authorized to library &1.

CPF2283

Authorization list &1 does not exist.

CPF88D2

PSF configuration &1 in library &2 not changed.

CPF9810

Library &1 not found.

CPF9820

Not authorized to use library &1.

CPF9822

Not authorized to file &1 in library &2.

[Top](#)

Change Pointer (CHGPTR)

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

Parameters
 Examples
 Error messages

The Change Pointer (CHGPTR) command changes the value of a pointer variable in a program. The value of the program pointer specified can be changed to point to a new system object, to a new space pointer address, or to a new offset within a space object. This command is not normally used in high-level language programs.

Restrictions:

1. This command is shipped with public *EXCLUDE authority, and the QSRV user profile has private authority to use the command.
2. This command is valid only for changing program variables that are used as pointers and is valid only in debug mode. To start debug mode, refer to the STRDBG (Start Debug) command.
3. This command cannot be used if the user is servicing another job, and that job is on a job queue, or is being held, suspended, or ended.
4. This command cannot be used to change variables in a bound program.
5. This command cannot be used to change variables that are write-protected or within the system domain, unless the user has *SERVICE special authority.

Top

Parameters

Keyword	Description	Choices	Notes
PTR	Pointer to be changed	<i>Element list</i>	Required, Positional 1
	Element 1: Program variable	<i>Character value</i>	
	Element 2: Basing pointer variable	Values (up to 5 repetitions): <i>Character value</i>	
SYSOBJ	System object	Single values: *NULL Other values: <i>Qualified object name</i>	Optional, Positional 2
	Qualifier 1: System object	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
OBJTYPE	Object type	<i>Character value</i>	Optional, Positional 3
ADR	Address to be pointed to	Single values: *NULL Other values: <i>Element list</i>	Optional
	Element 1: Program variable	<i>Character value</i>	
	Element 2: Basing pointer variable	Values (up to 5 repetitions): <i>Character value</i>	
OFFSET	New offset in space	<i>Integer</i>	Optional
PGM	Program	<i>Name, *DFTPGM</i>	Optional
PTRTYPE	Pointer type	<i>*SAME, *SYP, *SPP</i>	Optional
RCRLVL	Recursion level	<i>Integer, *LAST</i>	Optional

Top

Pointer to be changed (PTR)

Specifies the pointer variable whose value is to be changed. This allows the pointer variable to point to a different address.

This is a required parameter.

Note: If the pointer variable is an HLL pointer (which was declared in the source for a high-level language program), a space or null value can be assigned to the pointer, or the offset of the pointer can be changed, but the variable cannot be set with a system pointer value. If you specify a pointer which is not a HLL pointer, or if you use the ODV number for a pointer which is an HLL pointer, this restriction does not apply. More information on testing and debugging at the machine interface level is in the CL topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Element 1: Program variable

character-value

Specify the name of the pointer variable whose value is to be changed. The name must be enclosed in apostrophes if it contains special characters.

If the pointer (program variable) is an array, the subscripts representing the element in the array to be changed must be specified. Up to 132 characters may be specified for this pointer (program variable) entry. This includes any qualifiers, subscripts, embedded blanks, parentheses, and commas. It does not include the enclosing apostrophes when special characters are not used. An integer, MI ODV number, or a numeric variable name can be specified for a subscript.

For more information, refer to "Parameter values used for testing and debugging" in "CL concepts and reference" in the CL topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Element 2: Basing pointer variable

character-value

Specify the name of a basing pointer variable. In some languages, the pointer (program variable) can be based on a pointer variable. This set of values allows you to explicitly specify up to 5 basing pointers for the pointer that is to change. Each basing pointer name must be enclosed in apostrophes if it contains special characters.

If the basing pointer is an array, the subscripts representing an element in the array must be specified. Up to 132 characters can be specified for a basing pointer name. This includes any qualification, embedded blanks, parentheses, and commas. It does not include the enclosing apostrophes when special characters are used. An integer, MI ODV number, or a numeric variable name can be specified for a subscript.

For more information, refer to "Parameter values used for testing and debugging" in "CL concepts and reference" in the CL topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Top

System object (SYSOBJ)

Specifies that the pointer is set to either a system pointer or to a space pointer that addresses a particular system object, or to a null pointer value. This parameter cannot be specified when an HLL pointer is specified for the **Pointer to be changed (PTR)** parameter.

Single values

*NULL

The system pointer is set to a null; that is, it no longer points to any system object nor does it have a pointer type. The **Object type (OBJTYPE)** parameter cannot be specified if *NULL is specified here.

Qualifier 1: System object

name Specify the name of the object to which the system pointer is set. The pointer variable is set to either a system pointer value or a space pointer value.

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 object. If no current library entry exists in the library list, QGPL is used.

name Specify the library where the object is located.

Top

Object type (OBJTYPE)

Specifies the object type of the system object specified in the **System object (SYSOBJ)** parameter to which the pointer named in the **Pointer to be changed (PTR)** parameter is set.

Top

Address to be pointed to (ADR)

Specifies the program variable (if any) to which the specified space pointer is to point (that is, the program variable's address).

Single values

*NULL

The space pointer is set to a null; it no longer points to the address of any space object nor does it have a pointer type.

Element 1: Program variable

character-value

Specify the name of the program variable to which the space pointer is set. The name must be enclosed in apostrophes if it contains special characters.

If an array is specified without any subscripts, the pointer is set to the address of the first element in the array. Up to 132 characters may be specified for this program variable entry. This includes any qualifiers, subscripts, embedded blanks, parentheses, and commas. It does not include the enclosing apostrophes when special characters are used. An integer, MI ODV number, or numeric variable name can be specified for a subscript.

For more information, refer to "Parameter values used for testing and debugging" in "CL concepts and reference" in the CL topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Element 2: Basing pointer variable

character-value

Specify the name of a basing pointer variable. In some languages, the program variable may be based on a pointer variable. This set of values allows you to explicitly specify up to 5 basing pointers for the variable that is addressed. Each basing pointer name must be enclosed in apostrophes if it contains special characters.

If the basing pointer is an array, the subscripts representing an element in the array must be specified. Up to 132 characters can be specified for a basing pointer name. This includes any qualifiers, embedded blanks, parentheses, and commas. It does not include the enclosing apostrophes when special characters are used. An integer, MI ODV number, or a numeric variable name can be specified for a subscript.

For more information, refer to "Parameter values used for testing and debugging" in "CL concepts and reference" in the CL topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Top

New offset in space (OFFSET)

Specifies the value to which the offset portion of the specified space pointer is set. Specify the number of bytes from the start of the space object that the space pointer is set to.

Top

Program (PGM)

Specifies the name of the program that contains the pointer whose value is to change.

*DFTPGM

The program previously specified as the default program contains the pointer whose value is to change.

name Specify the name of the program that contains the pointer whose value is to change. The same name must already have been specified in the Start Debug (STRDBG) or Add Program (ADDPGM) command.

Top

Pointer type (PTRTYPE)

Specifies the type of pointer named in the **Pointer to be changed (PTR)** parameter.

Note: A high level language (HLL) pointer cannot be changed to a system pointer value.

*SAME

The type of pointer remains the same.

***SYP** The pointer type is a system pointer.

***SPP** The pointer type is a space pointer.

Top

Recursion level (RCRLVL)

Specifies which recursion level of the program contains the variable whose value is to be changed. Changes made to static variables automatically affect all recursion levels. Recursion level 1 is the first (or earliest) call of the program, recursion level 2 is the second call of the program, and so on to the last (most recent) recursion level in the stack. For example, if program A calls program B, then program B calls program A, a new recursion level of program A is formed. If the first call of program A contains the variable to be changed, a value of 1 must be specified for the **Recursion level (RCRLVL)** parameter. Some high-level languages also allow recursive procedures. For these programs, refer to the appropriate high-level language manual for more information.

*LAST

The last (most recent) call of the specified program contains the variable to be changed.

integer

Specify the recursion level of the program that contains the variable to be changed.

Top

Examples

```
CHGPTR PTR(DATAFILPTR) SYSOBJ(QGPL/MYFILE) OBJTYPE(*FILE)
```

This command changes the value of the pointer DATAFILPTR that is used in the default program in the debug mode. The pointer value is changed to point to the file called MYFILE, which is stored in the QGPL library.

Top

Error messages

*ESCAPE Messages

CPF1999

Errors occurred on command.

Top

Change Password (CHGPWD)

Where allowed to run: Interactive environments (*INTERACT
*IPGM *IREXX *EXEC)
Threadsafe: No

[Parameters](#)
[Examples](#)
[Error messages](#)

The Change Password (CHGPWD) command shows the Change Password display, which allows you to change your password. The password is the security key that allows you to sign on the system.

The new password that is entered from the change password display is checked against the password validation rules. The password validation rules are defined by the system values. A description of the password validation rules is in the System i Security Reference, SC41-5302.

There are no parameters for this command.

[Top](#)

Parameters

None

[Top](#)

Examples

CHGPWD

This command shows the user the Change Password display.

[Top](#)

Error messages

None

[Top](#)

Change Power On/Off Schedule (CHGPWRSCD)

Where allowed to run: Interactive environments (*INTERACT
*IPGM *IREXX *EXEC)
Threadsafe: No

Parameters
Examples
Error messages

The Change Power On/Off Schedule (CHGPWRSCD) command allows you to change the system's power on/off schedule. When you specify the command, the Change Power On/Off Schedule display is shown. From the display, you can change power on or power off default values for the days of the week or change the values for a particular day. You can also change or set the time the system sends a message that warns users of an impending power off. The changes you make in the power on/off schedule are effective immediately.

Restrictions:

1. To use this command, you must have all object (*ALLJOB) and security administrator (*SECADM) special authorities.

There are no parameters for this command.

Top

Parameters

None

Top

Examples

CHGPWRSCD

This command displays the Change Power On/Off Schedule display.

Top

Error messages

*ESCAPE Messages

CPF1E2A

Unexpected error in QSYSSCD job.

CPF1E2B

Power scheduler and cleanup options not found.

CPF1E23

Power schedule or cleanup options in use by another user.

CPF1E27

Not authorized to change power on/off schedule.

CPF1E99

Unexpected error occurred.

[Top](#)

Change Power Schedule Entry (CHGPWRSCDE)

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

Parameters
Examples
Error messages

The Change Power On/Off Schedule Entry (CHGPWRSCDE) command is used to change the system's power on/off schedule. You can change power on or power off default values for the days of the week or change the values for a particular day. You can also change or set the time the system sends a message that warns users of an impending power off. The changes you make in the power on/off schedule are effective immediately.

Restrictions:

1. To use this command, you must have all object (*ALLJOB) and security administrator (*SECADM) special authorities.

Top

Parameters

Keyword	Description	Choices	Notes
DAY	Day	Date, *TODAY, *ALL, *SUN, *MON, *TUE, *WED, *THU, *FRI, *SAT	Required, Key, Positional 1
PWRONTIME	Power on time	Time, *SAME, *NONE, *DFT	Optional
PWROFFTIME	Power off time	Time, *SAME, *NONE, *DFT	Optional
DAYDESC	Day description	Character value, *SAME	Optional
MSGITV	Minutes before power off	0-60, *SAME, *DFT	Optional

Top

Day (DAY)

Specifies the days for which you are changing the power on/off schedule.

This is a required parameter.

*TODAY

The current date is used.

***ALL** The default values for all days of the week are changed.

***SUN** The default values for Sunday are changed.

*MON

The default values for Monday are changed.

***TUE** The default values for Tuesday are changed.

***WED** The default values for Wednesday are changed.

***THU** The default values for Thursday are changed.

***FRI** The default values for Friday are changed.

***SAT** The default values for Saturday are changed.

date Specify the date you would like to change. The date must be specified in the same format as specified by your job attributes.

Top

Power on time (PWRONTIME)

Specifies the power on time.

*SAME

The power on time does not change.

*NONE

No power on time or default power on time is set.

***DFT** The power on time for the date you are changing is set to the default value for the day of the week on which the date occurs. This value is allowed only if you specify *TODAY or a specific date on the **Day (DAY)** parameter.

time Specify the power on time in the **hhmmss** format, where **hh = hours**, **mm = minutes**, and **ss = seconds**.

Top

Power off time (PWROFFTIME)

Specifies the time you want a power off to occur.

*SAME

The power off time does not change.

*NONE

No power off time or default power off time is set.

***DFT** The power off time for the date you are changing is set to the default value for the day of the week on which the date occurs. This value is allowed only if you specify *TODAY or a specific date on the **Day (DAY)** parameter.

time Specify the power off time in the **hhmmss** format, where **hh = hours**, **mm = minutes**, and **ss = seconds**.

The time 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 through 23. Valid values for **mm** and **ss** range from 00 through 59.
- With a time separator, specify a string of 5 or 8 digits where the time separator specified for your job is used to separate the hours, minutes, and seconds. If you enter this command 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

Day description (DAYDESC)

Specifies a description of the power on/off schedule. You can use this parameter to explain why the schedule is set the way it is. This parameter is valid only if *TODAY or a specific date is specified for the **Day (DAY)** parameter.

***SAME**

The description does not change.

character-value

Specify up to 38 characters of text for an explanation of the day's power on/off schedule.

Top

Minutes before power off (MSGITV)

Specifies the number of minutes before the scheduled power off that a message is sent to all work stations warning users of the scheduled power off. This parameter is allowed only if *ALL is specified for the Day (DAY) parameter.

***SAME**

The number of minutes does not change.

***DFT** The number of minutes is set to 30.

0-60 Specify the number of minutes for the message interval.

Top

Examples

Example 1: Changing the Schedule For An Entire Week

```
CHGPWRSCDE DAY(*ALL) PWRONTIME(0800) PWROFFTIME(1800)
CHGPWRSCDE DAY(*SAT) PWRONTIME(*NONE) PWROFFTIME(*NONE)
CHGPWRSCDE DAY(*SUN) PWRONTIME(*NONE) PWROFFTIME(*NONE)
```

These commands set the power on and power off values for an entire week.

Example 2: Changing the Power-Off Time

```
CHGPWRSCDE DAY('01/22/90') PWROFFTIME(2000)
CHGPWRSCDE DAY('01/22/90') PWROFFTIME(2000) PWRONTIME(*SAME)
```

Either of these commands is used to set the power-off time to 8 p.m. on January 22, 1990.

Example 3: Changing the Power-On Time

```
CHGPWRSCDE DAY(012590) PWRONTIME(060000) PWROFFTIME(*NONE)
```

This command sets the power-on time to 6 a.m. for January 25, 1990 and sets no power-off time.

Example 4: Changing Back to the Defaults

```
CHGPWRSCDE DAY(012590) PWROFFTIME(*DFT) PWRONTIME(*DFT)
```

This command sets the power on and off times for January 25, 1990 back to the defaults for that day of the week.

Error messages

*ESCAPE Messages

CPF1E2A

Unexpected error in QSYSSCD job.

CPF1E2B

Power scheduler and cleanup options not found.

CPF1E2C

Error occurred scheduling next power on and off.

CPF1E23

Power schedule or cleanup options in use by another user.

CPF1E26

Cannot change a date or a time that has passed

CPF1E27

Not authorized to change power on/off schedule.

CPF1E99

Unexpected error occurred.

CPF2105

Object &1 in &2 type *&3 not found.

CPF9808

Cannot allocate one or more libraries on library list.

Change Query Attributes (CHGQRYA)

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

Parameters
Examples
Error messages

The Change Query Attributes (CHGQRYA) command specifies attributes for database queries and database file keyed access path builds, rebuilds, and maintenance that are run in a job. Database queries include the open of a SQL view and the running of SQL data manipulation statements.

Restrictions: You must have job control (*JOBCTL) special authority to use this command.

Top

Parameters

Keyword	Description	Choices	Notes
JOB	Job name	Single values: * Other values: <i>Qualified job name</i>	Optional, Key
	Qualifier 1: Job name	<i>Name</i>	
	Qualifier 2: User	<i>Name</i>	
	Qualifier 3: Number	000000-999999	
QRYTIMLMT	Query processing time limit	0-2147352578, *SAME, *NOMAX, *SYSVAL	Optional
DEGREE	Parallel processing degree	Single values: *SAME, *NONE, *IO, *OPTIMIZE, *MAX, *SYSVAL, *ANY Other values: <i>Element list</i>	Optional
	Element 1: Processing option	*NBRTASKS	
	Element 2: Number of tasks	2-9999	
ASYN CJ	Asynchronous job usage	*SAME, *DIST, *LOCAL, *ANY, *NONE	Optional
APYRMT	Apply CHGQRYA to remote	*SAME, *YES, *NO	Optional
QRYOPTLIB	Query options file library	<i>Name</i> , *SAME	Optional
QRYSTGLMT	Query temporary storage limit	0-2147352578, *SAME, *NOMAX	Optional

Top

Job name (JOB)

Specifies the job for which the query attributes are to be changed.

Single values

* The query attributes of the job running the CHGQRYA command are to be changed.

Qualifier 1: Job name

name Specify the name of the job whose query attributes are to be changed. If no job user name or job number qualifiers are specified, all of the jobs currently in the system are searched for the specified simple job name. If duplicates of the specified job name are found, you need to specify a job user name or job number that uniquely identifies the job to be changed.

Qualifier 2: User

name Specify the name of the user of the job whose query attributes are to be changed.

Qualifier 3: Number

000000-999999

Specify the number of the job whose query attributes are to be changed.

Top

Query processing time limit (QRYTIMLMT)

Specifies a limit for database queries allowed to be started based on the estimated number of elapsed seconds that the query requires to process.

The initial value of the QRYTIMLMT attribute for a job is *SYSVAL.

*SAME

The value does not change.

*NOMAX

There is no maximum number of estimated elapsed seconds.

*SYSVAL

The query time limit should be obtained from the system value QQRYTIMLMT.

0-2147352578

Specify the maximum value that is checked against the estimated number of elapsed seconds required to run a query. If the estimated elapsed seconds is greater than this value, the query is not started.

When 0 is specified all database queries issue a CPA4259 inquiry message or call an exit program if registered with the Query Governor Exit Point. Setting a query time limit of 0 can be useful when attempting to tune database queries for better performance. The technical description of the CPA4259 inquiry message or the database monitor, if activated using the FTRQRYGOVR parameter of the Start Database Monitor (STRDBMON) command, can be used to explain the type of access plan used by the query.

Top

Parallel processing degree (DEGREE)

Specifies the parallel processing option and, optionally, the number of tasks that can be used when running database queries and database file keyed access path builds, rebuilds, and maintenance in the job.

The specified parallel processing option determines the types of parallel processing allowed. There are two types of parallel processing:

1. **Input/Output (I/O) parallel processing**

With I/O parallel processing, the database manager uses multiple tasks for each query to do the I/O processing. The central processor unit (CPU) processing is still done serially.

2. **Symmetric Multiprocessing (SMP)**

SMP assigns both the CPU and I/O processing to tasks that will run the query in parallel. Actual CPU parallelism requires a system with multiple processors. SMP parallelism can only be used if the system feature, DB2 Symmetric Multiprocessing, is installed.

Use of SMP parallelism can affect the order in which records are returned. Applications which depend on records being returned from database queries in arrival sequence or keyed access path sequence that have not explicitly defined the ordering sequence in the query, should not be run in jobs which have specified a parallel processing option that enables SMP processing.

The initial value of the DEGREE attribute for a job is *SYSVAL.

Single values

***SAME**

The value does not change.

***NONE**

No parallel processing is allowed for database query processing or database file keyed access path build, rebuild, or maintenance.

***IO** Any number of tasks can be used when the database query optimizer chooses to use I/O parallel processing for queries. SMP parallel processing is not allowed.

***OPTIMIZE**

The query optimizer can choose to use any number of tasks for either I/O or SMP parallel processing to process the query or database file keyed access path build, rebuild, or maintenance. SMP parallel processing is used only if the system feature, DB2 Symmetric Multiprocessing, is installed. Use of parallel processing and the number of tasks used is determined with respect to the number of processors available in the system, this job's share of the amount of active memory available in the pool in which the job is run, and whether the expected elapsed time for the query or database file keyed access path build or rebuild is limited by CPU processing or I/O resources. The query optimizer chooses an implementation that minimizes elapsed time based on the job's share of the memory in the pool.

***MAX** The query optimizer chooses to use either I/O or SMP parallel processing to process the query. SMP parallel processing will only be used if the system feature, DB2 Symmetric Multiprocessing, is installed. The choices made by the query optimizer are similar to those made for parameter value *OPTIMIZE except the optimizer assumes that all active memory in the pool can be used to process the query or database file keyed access path build, rebuild, or maintenance.

***SYSVAL**

The processing option used is set to the current value of the system value, QQRYDEGREE.

***ANY** This value has the same meaning as *IO. The *ANY value is maintained for compatibility with prior releases.

Element 1: Processing option

***NBRTASKS**

The number of tasks to be used for SMP parallel processing is specified by the second element of the DEGREE parameter.

Element 2: Number of tasks

2-9999 Specify the number of tasks to be used when the query optimizer chooses to use SMP parallel processing to process a query. I/O parallelism is also allowed. SMP parallel processing is used only if the system feature, DB2 Symmetric Multiprocessing, is installed.

Using a number of tasks less than the number of processors available on the system restricts the number of processors used simultaneously for running a given query or database file keyed access path build, rebuild, or maintenance. A larger number of tasks ensures that the query or database file keyed access path build, rebuild, or maintenance is allowed to use all of the processors available on the system to run the query. Too many tasks can degrade performance because of the over-commitment of active memory and the overhead cost of managing all of the tasks.

Asynchronous job usage (ASYNCJ)

Specifies the circumstances in which asynchronous (temporary writer) jobs can be used to help process database queries in the job.

The specified usage option determines which types of database queries can use asynchronous jobs (running in parallel) to help in completing the query.

An asynchronous job is a separate job on the system that handles query requests from jobs that are running database queries. For each request, the asynchronous job processes the request and puts the results into a temporary file. This intermediate temporary file is then used by the main job to complete the database query.

The advantage of using an asynchronous job is that it can be processing its request at the same time (in parallel) that the main job is processing another step of the database query. The disadvantage of using an asynchronous job is that it may encounter a situation that it cannot handle in the same way as the main job. For example, the asynchronous job may receive an inquiry message from which it would have to cancel, whereas the main job could have chosen to ignore the message and continue.

There are two different types of database queries that can use asynchronous jobs:

1. Distributed queries

These are database queries that involve distributed files. Distributed files are provided through the system feature DB2 Multisystem.

2. Local queries

These are database queries that involve only files local to the system where the database queries are being run.

The initial value of the ASYNCJ attribute for a job is *LOCAL.

*SAME

The value does not change.

***DIST** Asynchronous jobs may be used for database queries that involve distributed files.

***LOCAL**

Asynchronous jobs may be used for database queries that involve only files local to the system where the database queries are being run.

In addition, for queries involving distributed files, this option allows the communications required to be asynchronous. This allows each system involved in the query of the distributed files to run its portion of the query at the same time (in parallel) as the other systems.

***ANY** Asynchronous jobs may be used for any database query.

***NONE**

No asynchronous jobs are allowed to be used for database query processing.

In addition, all processing for queries involving distributed files occurs synchronously. Therefore, no inter-system parallel processing will occur.

Apply CHGQRYA to remote (APYRMT)

Specifies, for database queries involving distributed files, whether or not the query attributes are applied to the jobs on the remote systems associated with this job. The query attributes applied are those from this command and those specified in the QAQQINI file in the library specified for the **Query options file library (QRYOPLIB)** parameter.

The specified option determines whether the query attributes specified for the job are applied to the associated jobs on the systems applicable to the distributed file or files.

The initial value of the APYRMT attribute for a job is *YES.

*SAME

The value does not change.

***YES** The query attributes for the job are applied to the remote jobs used in processing database queries involving distributed files. The query attributes applied are those specified on this command and those in the QAQQINI file in the library specified for the QRYOPLIB parameter. For attributes where *SYSVAL is specified, the system value on the remote system is used for the remote job. This option requires that, if CHGQRYA was used for this job, the remote jobs must have authority to use the CHGQRYA command.

***NO** The CHGQRYA attributes for the job are not applied to the remote jobs. The remote jobs will use the attributes associated to them on their systems.

Top

Query options file library (QRYOPLIB)

Specifies which library currently contains, or will contain, the query options file (QAQQINI).

The query options file is used to set or modify the attributes used by the Query Optimizer that will determine how a query will be implemented in the job specified.

The query options file uses a system-supplied trigger program associated with the file QAQQINI in order to process any changes made to the file. A template for the file is shipped in the library QSYS with the base trigger program already attached. In order to maintain and use the query options file correctly, it is recommended that Create Duplicate Object (CRTDUPOBJ) be used to create a copy of the file QAQQINI into the library specified for this parameter.

For more information, refer to the DB2 for i5/OS SQL programming topic collection in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/> or Database category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

The initial value of the QRYOPLIB attribute for a job is QUSRSYS.

*SAME

The value does not change.

name Specify the name of the library where the QAQQINI query options file is (or will be) located.

Top

Query temporary storage limit (QRYSTGLMT)

Specifies a temporary storage limit for database queries. If the query is expected to use more than the specified amount of storage, the query will not be allowed to start. The value specified is in megabytes.

The initial value of the QRYSTGLMT attribute for a job is *NOMAX.

*SAME

The value does not change.

*NOMAX

There is no maximum temporary storage limit.

0-2147352578

Specify the maximum amount of temporary storage that may be used. This value is checked against the estimated amount of temporary storage required to run the query, as calculated by the query optimizer. If the estimated amount of temporary storage is greater than this value, the query is not started. The value specified is in megabytes.

When 0 is specified most database queries will exceed the specified temporary storage limit and will issue a CPA4259 inquiry message or call an exit program if registered with the Query Governor Exit Point. Setting a query temporary storage limit of 0 can be useful when attempting to tune database queries for better performance. The technical description of the CPA4259 inquiry message or the database monitor, if activated using the FTRQRYGOVR parameter of the Start Database Monitor (STRDBMON) command, can be used to explain the type of access plan used by the query.

Top

Examples

Example 1: Changing the Query Time Limit

```
CHGQRYA  QRYTIMLMT(60)
```

This command changes the query time limit to 60 seconds.

Example 2: Controlling Query and Database Parallel Processing

```
CHGQRYA  DEGREE(*I0)
```

This command specifies that any number of tasks may be used when the database query optimizer chooses to use I/O parallel processing for queries. SMP parallel processing is not allowed.

Example 3: Controlling Query Parallel Processing

```
CHGQRYA  DEGREE(*OPTIMIZE)
```

This command specifies that the query optimizer can choose to use any number of tasks for either I/O or SMP parallel processing to process a query, database file keyed access path build or rebuild, or database file I/O keyed access path maintenance. SMP parallel processing will only be used if the system feature DB2 Symmetric Multiprocessing is installed.

Example 4: Controlling Query Parallel Processing

```
CHGQRYA  DEGREE(*MAX)
```

This command specifies that the query optimizer can assume that all active memory in the pool can be used to process a query, database file keyed access path build or rebuild, or database file I/O keyed access path maintenance and can choose to use any number of tasks for either I/O or SMP parallel processing to process a query, database file keyed access path build or rebuild, or database file I/O keyed access path maintenance. SMP parallel processing will only be used if the system feature DB2 Symmetric Multiprocessing is installed.

Example 5: Controlling Query Number of Tasks

```
CHGQRYA  DEGREE(*NBRTASKS 12)
```

This command specifies that the 12 tasks are to be used when the query optimizer chooses to use SMP parallel processing to process a query, database file keyed access path build or rebuild, or database file I/O keyed access path maintenance. I/O parallelism will also be allowed. SMP parallel processing will only be used if the system feature DB2 Symmetric Multiprocessing is installed.

Example 6: Controlling Query Parallel Processing

```
CHGQRYA  DEGREE(*SYSVAL)
```

This command specifies that the query, database file keyed access path build or rebuild, or database file I/O keyed access path maintenance, should be optimized with the current value of system value QQRYDEGREE when the query, database file keyed access path build or rebuild, or database file I/O keyed access path maintenance is run.

Example 7: Disabling Asynchronous Job Usage for Distributed File Processing

```
CHGQRYA  ASYNCJ(*LOCAL)
```

This command prevents asynchronous jobs from being used for queries involving distributed files.

Example 8: Disabling Asynchronous Job Usage

```
CHGQRYA  ASYNCJ(*NONE)
```

This command prevents asynchronous jobs from being used for any queries. In addition, for queries involving distributed files, communication to remote systems is done in a synchronous fashion.

Example 9: Specifies Query Options File Library

```
CHGQRYA  QRYOPTLIB(QUSRSYS)
```

This command specifies that library QUSRSYS is to be searched for the existence of the query options file (QAQQINI).

Note: Use this command in addition to STRDBG UPDPROD(*YES) and all optimizer debug messages (local and remote) will show up in this job's job log.

Example 10: Specifies Query Options File Library for a Different Job

```
CHGQRYA QRYOPTLIB(LIB41) JOB(134543/QPGMR/DSP01)
```

This command specifies that library LIB41 is to be searched for the existence of the query options file (QAQQINI) for job number 134543. The job name is DSP01 and was started by the user named QPGMR. This library may exist in more than one independent ASP (auxiliary storage pool); the library in the namespace of the originator's job will always be used.

Example 11: Changing the Query Resource Limit

```
CHGQRYA QRYSTGLMT(200)
```

This command changes the query temporary storage limit to 200 megabytes.

[Top](#)

Error messages

*ESCAPE Messages

CPF1321

Job &1 user &2 job number &3 not found.

CPF436E

Job &1 user &2 job number &3 is not active.

CPF9810

Library &1 not found.

[Top](#)

Change Q/A Database (CHGQSTDB)

Where allowed to run: Interactive environments (*INTERACT
*IPGM *IREXX *EXEC)
Threadsafe: No

Parameters
Examples
Error messages

The Change Question and Answer Database (CHGQSTDB) command allows you to change the characteristics, topics, or search words of a Question and Answer (Q & A) database. When you enter this command, a menu appears from which you select the part of the Q & A database you want to change. 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. A user must have authority to the command and be a Q & A coordinator for any Q & A database referred to by the command.
3. This command can only be used interactively.

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 change.

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 to change.

Top

Lib containing Q/A database (LIB)

Specifies the name of the library that contains the Q & A database.

The possible library values are:

***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 database in the library to which you are authorized can be selected.

Top

Examples

CHGQSTDB

This command shows the Change Q&A Database display.

Top

Error messages

None

Top

Chg Recovery for Access Paths (CHGRCYAP)

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

Parameters
Examples
Error messages

The Change Recovery for Access Paths (CHGRCYAP) command is used to change the target access path recovery time for the system or for one or more auxiliary storage pools (ASPs). The system uses no more than the specified target access path recovery time when recovering access paths during an initial program load (IPL) or vary on of an independent ASP after an abnormal system end. Because the access path recovery time is a target, performance may range around the target.

The time taken to rebuild access paths exposed while running the Copy File (CPYF), the Reorganize Physical File Member (RGZPFM), or the Restore Object (RSTOBJ) commands is not considered in the target access path recovery time of access paths protected with this command.

You can use this command to manage the protection of access paths that are not already protected through journaling. Changes made with this command are an immediate change in policy; however, a little time may be needed for the system to adjust its performance to meet the new target.

For more information on using this command, see the "Journal management" article in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Restrictions:

- You must have job control (*JOBCTL) special authority to use this command.
- This command is shipped with public *EXCLUDE authority, and the QPGMR and QSYSOPR user profiles have private authorities to use this command.
- If the current access path recovery state is *OFF, the user must be in a restricted state to activate system-managed access-path protection by specifying a target access path recovery time value.
- If no user auxiliary storage pools (ASPs) exist on the system, an access path recovery time for ASP 1 cannot be specified. The access path recovery time must be specified on the SYSRCYTIME parameter.

Top

Parameters

Keyword	Description	Choices	Notes
SYSRCYTIME	System recovery time	1-1440, <u>*SAME</u> , *SYSDFT, *NONE, *MIN, *OFF	Optional, Positional 1
ASPRCYTIME	ASP recovery time	Values (up to 32 repetitions): <i>Element list</i>	Optional
	Element 1: ASP number	1-32	
	Element 2: Recovery time	1-1440, *SAME, *NONE, *MIN	
ASPDEVRCY	ASP device recovery time	Values (up to 223 repetitions): <i>Element list</i>	Optional
	Element 1: ASP device	<i>Name</i>	
	Element 2: Recovery time	1-1440, *SAME, *NONE, *MIN	
INCACPTH	Include access paths	<u>*SAME</u> , *ALL, *ELIGIBLE	Optional

Top

System recovery time (SYSRCYTIME)

Specifies the target access path recovery time to be used system-wide.

Note: Changing from *OFF to another value must be done when the system is in a restricted state.

*SAME

The value does not change.

*SYSDFT

The system access path recovery time value is set to the system default value of 50 minutes.

*NONE

The time allotted to rebuild access paths is not limited. No access path protection is provided by the system. The system continues to monitor current exposure. The time it takes to rebuild the access paths is available for review through the Display Recovery for Access Paths (DSPRCYAP) or the Edit Recovery for Access Paths (EDTRCYAP) commands.

***MIN** Minimum access path recovery time for the system is used, which provides for the fastest access path recovery. All eligible access paths for the entire system are protected.

***OFF** The time allotted to rebuild the access paths is not limited. No access path protection is provided by the system. The system does not monitor current exposure.

Note: Once system managed access path protection has been turned off, the system must be brought to a restricted state to turn it back on.

system-access-path-recovery-time

Specify the time (in minutes) to be targeted for access path recovery for the entire system. Valid values range from 1 through 1440.

Note: The system may not be able to protect enough access paths to meet the target access path recovery time. You can review access path recovery status by using the DSPRCYAP command.

Reasons that the target access path recovery time may not be met:

1. Access paths cannot be protected if two of the underlying physical files are journaled to different journals.
2. If the system access path recovery time value was changed just prior to the system crash, the new time value may not be in effect.
3. Access paths were exposed due to the CPYF, RGZPFM, or RSTOBJ command being run.
4. Damage was done to the internal system environment which maintains the system-managed access-path protection (SMAPP) support.

Top

ASP recovery time (ASPRCYTIME)

Specifies the target access path recovery time per auxiliary storage pool. This parameter is valid and prompted only if the system has basic user ASPs.

Element 1: Auxiliary storage pool ID

ASP-identifier

Specify the value ranging from 1 through 32 that is the identifier of the ASP to which the target access path recovery time applies. Valid values depend on the ASPs active on the system.

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

To specify the target access path recovery time for an independent ASP, use the ASPDEVRCY parameter.

Element 2: Recovery time

*SAME

The value does not change.

*NONE

The access paths for the specified ASP are protected only if they need to be protected to reach the system access path recovery time specified.

***MIN** All of the access paths for the specified ASP are protected. The system uses the minimum time needed for access path recovery.

access-path-recovery-time

Specify the number of minutes to be targeted for access path recovery for the specified ASP. If both the system access path recovery time and an ASP access path recovery time are specified, the system uses the value specifying the lesser amount of time. Valid values range from 1 through 1440.

Top

ASP device recovery time (ASPDEVRCY)

Specifies the target access path recovery time per independent auxiliary storage pool. This parameter is valid and prompted only if the system has active or available independent ASPs.

Element 1: Auxiliary storage pool ID

ASP-device-name

Specify the name of the independent ASP that is the identifier of the ASP to which the target access path recovery time applies. Valid names depend on the ASPs active or available on the system.

Element 2: Recovery time

*SAME

The value does not change.

*NONE

The access paths for the specified ASP are protected only if they need to be protected to reach the specified system access path recovery time.

***MIN** All of the eligible access paths for the specified ASP are protected. The system uses the minimum time needed for access path recovery.

access-path-recovery-time

Specify the number of minutes to be targeted for access path recovery for the specified ASP. If both the system access path recovery time and an ASP access path recovery time are specified, the system uses the value specifying the lesser amount of time. Valid values range from 1 through 1440.

Top

Include access paths (INCACCPH)

Specifies whether the access path recovery time specification should include only those access paths which are considered eligible for protection or include all access paths. The access paths which are not eligible for protection are:

- Access paths built over physical files which are journaled to separate journals.

- Access paths built over a physical file which is journaled to a journal whose journal state is currently *STANDBY.

Note: Access paths with *REBLD maintenance are not considered for access path protection and are not included in the not eligible time since these access paths are not recovered during an IPL or during the vary on of an independent ASP.

Note: Access paths that have international components for unicode (ICU) sort sequence tables are considered for access path protection. However, some of these access paths may be too complex to be protected and will not be included in the not eligible time. Access paths with other sort sequence tables are considered.

***SAME**

The value does not change.

***ALL** The access path recovery time specification includes all access paths, both those that are and those that are not eligible.

***ELIGIBLE**

The access path recovery time specification includes only those access paths which are considered eligible for protection.

Note: Since the not eligible access paths are not considered for protection, their rebuild times will not be factored into the estimated recovery time so the actual IPL or independent ASP vary on duration may be longer than the estimated time.

Top

Examples

Example 1: Changing the System Recovery Time for Access Paths

```
CHGRCYAP  SYSRCYTIME(180)
```

This command changes the target access path recovery time for the entire system to 180. This protects enough access paths to limit the time needed at IPL to recover all eligible access paths on the system to 180 minutes.

The target access path recovery time includes access paths which are considered not eligible.

Example 2: Changing the User ASP Recovery Times for Access Paths

```
CHGRCYAP  ASPRCYTIME((2 *MIN) (3 *NONE))
          INCACCPH(*ELIGIBLE)
```

This command changes the access path recovery times for user ASPs. The user ASP 2 is changed to *MIN, which protects all access paths on the ASP. The user ASP 3 is changed to *NONE, which protects access paths on the ASP only if needed to reach the system access path recovery time.

The target access path recovery time includes only access paths which are considered eligible.

Example 3: Changing the Independent ASP Recovery Times for Access Paths

```
CHGRCYAP  ASPRCYTIME((2 *MIN))
          ASPDEVRCY((WAREHUS1 20) (ORDERDB *MIN))
          INCACCPH(*ALL)
```

This command changes the access path recovery times for one basic user ASP and two independent user ASPs. The user ASP 2 is changed to *MIN, which protects all access paths on the ASP. The independent user ASP with ASP device name WAREHUS1 is changed to 20 minutes, which protects enough access paths on the ASP to achieve a vary on access path rebuild time of 20 minutes. The independent user ASP with ASP device name ORDERDB is changed to *MIN, which protects all access paths on the independent ASP.

All target access path recovery times for the system (not just those specified on this command) will be defined to include all access paths. More eligible access paths will be protected to account for any access paths that are not eligible.

Top

Error messages

*ESCAPE Messages

CPF70E6

ASPRCYTIME parameter not valid.

CPF70E8

ASP &1 specified more than once.

CPF70E9

ASP &1 not configured or off-line.

CPF70FA

Recovery times reset before changes completed.

CPF70FB

No authority to use command.

CPF70F4

Error occurred.

CPF70F7

Restricted system required to change recovery times.

CPF70F9

Not all recovery time changes made active.

CPF700F

Access path recovery time for &1 set to *NONE.

CPF701C

Change to system access path recovery time canceled.

CPF701D

Error occurred during change of recovery times.

CPF701E

Access path protection cannot be turned *OFF.

CPF702E

Access path recovery times set to system defaults.

CPF9814

Device &1 not found.

CPF9825

Not authorized to device &1.

CPF8ED

Device description &1 not correct for operation.

[Top](#)

Change RDB Directory Entry (CHGRDBDIRE)

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

Parameters
 Examples
 Error messages

The Change Relational Database Directory Entry (CHGRDBDIRE) command allows you to change an entry in the relational database (RDB) directory. Values for any of the RDB's parameters, except its name and alias, can be changed.

Note: Changes to an entry do not affect any connections that are using the RDB directory when the change is made. Changes take effect the next time a CONNECT operation is performed.

Restrictions:

- You must have execute (*EXECUTE) authority to the program specified for the **Application requester driver (ARDPGM)** parameter.

Top

Parameters

Keyword	Description	Choices	Notes
RDB	Entry	<i>Element list</i>	Required, Key, Positional 1
	Element 1: Relational database	<i>Character value</i>	
	Element 2: Relational database alias	<i>Character value, *NONE</i>	
RMTLOCNAME	Remote location	Single values: *ARDPGM, *LOOPBACK Other values: <i>Element list</i>	Optional, Positional 2
	Element 1: Name or address	<i>Character value, *SAME, *LOCAL</i>	
	Element 2: Type	<i>*SAME, *SNA, *IP</i>	
TEXT	Text	<i>Character value, *SAME, *BLANK</i>	Optional
PORT	Port number or service program	<i>Character value, *SAME, *DRDA</i>	Optional
RMTAUTMTH	Remote authentication method	<i>Element list</i>	Optional
	Element 1: Preferred method	<i>*SAME, *USRID, *USRIDPWD, *USRENCPWD, *ENCUSRPWD, *KERBEROS, *ENCRYPTED</i>	
	Element 2: Allow lower authentication	<i>*SAME, *ALWLOWER, *NOALWLOWER</i>	
DEV	Device	<i>Element list</i>	Optional
	Element 1: APPC device description	<i>Name, *SAME, *LOC</i>	
LCLLOCNAME	Local location	<i>Communications name, *SAME, *LOC, *NETATR</i>	Optional
RMTNETID	Remote network identifier	<i>Communications name, *SAME, *LOC, *NETATR, *NONE</i>	Optional
MODE	Mode	<i>Communications name, *SAME, *NETATR</i>	Optional
TNSPGM	Transaction program	<i>Character value, *SAME, *DRDA</i>	Optional

Keyword	Description	Choices	Notes
ARDPGM	Application requester driver	Single values: *SAME, *DRDA Other values: <i>Element list</i>	Optional
	Element 1: Program	<i>Qualified object name</i>	
	Qualifier 1: Program	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	

Top

Entry (RDB)

Specifies the relational database name information.

This is a required parameter.

Note: Valid relational database names and aliases can contain any of the following: A-Z, 0-9, @, #, \$ and -.

Element 1: Relational database

character-value

Specify the relational database name as identified at the remote location. You can specify a maximum of 18 characters for the name; however, DB2 UDB for z/OS relational database names are limited to 16 characters.

Element 2: Relational database alias

*NONE

There is no local alias for the relational database.

character-value

Specify the relational database alias. The alias is used for locally identifying the relational database specified above. You can specify a maximum of 18 characters for the alias. A relational database alias name is not valid when specified with a *LOCAL remote location name.

Top

Remote location (RMTLOCNAME)

Specifies the remote location name of the system on which the relational database (RDB) is located.

Single values

*SAME

The remote location name does not change.

*ARDPGM

The RDB is accessed by using the application requester driver program specified on the ARDPGM parameter. A remote location name is not used to locate the RDB.

Note: If *ARDPGM is specified, the PORT, DEV, LCLLOCNAME, RMTNETID, MODE, and TNSPGM parameters are ignored.

*LOOPBACK

This value is an alias for the IP address of the host system.

Note: If *LOOPBACK is specified, the DEV, LCLLOCNAME, RMTNETID, MODE, TNSPGM and ARDPGM parameters are ignored, and the value of the second element is forced to *IP.

Element 1: Name or address

*LOCAL

This entry is the system database (system ASP and any basic ASPs) on this system. You can specify *LOCAL for only one entry in the RDB directory.

Note: If *LOCAL is specified, the DEV, LCLLOCNAME, RMTNETID, MODE, TNSPGM and ARDPGM parameters are ignored, and the value of the second element is forced to *IP. A relational database alias name is not valid when specified with a *LOCAL remote location name.

character-value

The first element of this parameter can be specified in several forms:

- SNA remote location name (LU name). Specify a maximum of 8 characters for the remote location name. If this form is used, the second element of this parameter must be *SNA (the default).
- SNA remote network identifier and remote location name separated by a period. Specify a maximum of 8 characters for the remote location name, and a maximum of 8 characters for the remote network identifier. If this form of the parameter is used, the second element of this parameter must be *SNA (the default), and any value specified for the RMTNETID parameter must agree. If the RMTNETID parameter is not specified, the RMTNETID value will be set to agree with the RMTLOCNAME parameter.
- IP version 4 address in dotted decimal form. Specify an internet protocol version 4 address in the form nnn.nnn.nnn.nnn where each nnn is a number in the range 0 through 255. If this form is used, the second element of this parameter must be specified as *IP.
- IP version 6 address in colon hexadecimal form. Specify an internet protocol version 6 address in the form xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx where each xxxx is a hex number in the range 0 through FFFF. If this form is used, the second element of this parameter must be specified as *IP. IP version 6 includes the IPv4-mapped IPv6 address form (for example, ::FFFF:1.2.3.4). For IP version 6, the compressed form of the address is allowed.
- IP host domain name. Specify an internet host domain name of up to 254 characters in length. If this form is used, the second element of this parameter must be specified as *IP.

If *IP is specified for the second element, the DRDA server at the remote location must support the use of TCP/IP, and the DEV, LCLLOCNAME, RMTNETID, MODE, and TNSPGM parameters will be ignored.

If *SNA is specified for the second element, the server must support SNA connectivity. More information about SNA remote location names can be found 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/>.

Element 2: Type

***SNA** The RDB system is accessed using a Systems Network Architecture (SNA) address and protocol.

***IP** The RDB system is found using a host name or an internet address over a TCP/IP connection.

Top

Text (TEXT)

Specifies the text that briefly describes the object.

*SAME

The text does not change.

***BLANK**

The text is changed to blanks.

character-value

Specify no more than 50 characters of text enclosed in single quotation marks.

Top

Port number or service program (PORT)

Specifies the TCP/IP port that is used at the remote location to communicate with the system on which the RDB is located. This parameter will be ignored if *IP is not specified in the RMTLOCNAME parameter.

***SAME**

The value does not change.

***DRDA**

The DRDA well-known port of 446 will be used.

port-number

Specify a number ranging from 1 through 65535.

service-name

Specify a maximum of 14 characters for the service name. This name must be registered in the service database file.

Top

Remote authentication method (RMTAUTMTH)

Specifies the preferred remote authentication method on a DDM/DRDA TCP/IP connection request. The actual method used depends on the outcome of the negotiation process between client and server, which depends on the cryptographic support available and the server security configuration. The CHGDDMTCPA (Change DDM TCP/IP Attributes) command can be used to configure DDM/DRDA TCP/IP security on i5/OS systems. This parameter will be ignored if *IP is not specified in the **Remote location** (RMTLOCNAME parameter).

Element 1: Preferred method

Specifies the initial authentication method proposed to the server. Based on the authentication methods supported by the server and the value specified for the **Allow lower authentication** element of this parameter, an authentication method is negotiated that is acceptable to both the client and server.

***SAME**

This value does not change.

***USRID**

User ID only is sent on a DDM connection request. This is the lowest authentication method.

***USRIDPWD**

User ID and associated password is sent on a DDM connection request. Passwords are not encrypted if this authentication method is used.

***USRENCPWD**

User ID and associated encrypted password is sent on a DDM connection request. Cryptographic support must be available on both systems for this authentication method to be used.

***ENCUSRPWD**

Encrypted user ID and associated encrypted password is sent on a DDM connection request. Cryptographic support must be available on both systems for this authentication method to be used.

***KERBEROS**

Authentication occurs using Kerberos. The RDB name must map to a target principal name in the Enterprise Identity Mapping (EIM) environment. Kerberos needs to be configured on both systems for this authentication method to be used.

Note: The following value is only supported for compatibility with the releases earlier than Version 5 Release 5 Modification 0 of the operating system.

***ENCRYPTED**

User ID and associated encrypted password is sent on a DDM connection request. Cryptographic support must be available on both systems for this authentication method to be used. It is recommended to use value *USRENCPWD in place of value *ENCRYPTED.

Element 2: Allow lower authentication

Specifies whether an authentication method lower than what was specified for the **Preferred method** element of this parameter will be accepted during negotiation with the server. If the server is configured to require a higher authentication method than the value specified for the **Preferred method** element of this parameter and the Application Requester system can support a higher authentication method, the negotiated authentication method can always be higher than the **Preferred method**. From highest to lowest, the authentication methods are:

- *KERBEROS
- *ENCUSRPWD
- *USRENCPWD or *ENCRYPTED
- *USRIDPWD
- *USRID

***SAME**

This value does not change.

***ALWLOWER**

Allow negotiation of a lower authentication method than what was specified for the **Preferred method** element of this parameter.

***NOALWLOWER**

Do not allow negotiation of a lower authentication method than what was specified for the **Preferred method** element of this parameter.

Top

Device (DEV)

Specifies the advanced program-to-program communications (APPC) device description on this system that is used with this relational database (RDB) entry.

More information 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/>.

***SAME**

The name of the device description does not change.

***LOC** If APPC is being used, the system determines which device description is used. If advanced peer-to-peer networking (APPN) is being used, the system ignores this parameter.

name Specify a maximum of 10 characters for the name of a device description.

Top

Local location (LCLLOCNAME)

Specifies the local location name by which this system is identified to the system on which the RDB is located. The local location name cannot be the same as the remote location name.

More information on local location names is in the APPC Programming book, SC41-5443.

*SAME

The local location name does not change.

***LOC** If advanced program-to-program communications (APPC) is being used, the system determines which local location name is used. If advanced peer-to-peer networking (APPN) is being used, the system uses the default local location name defined in the network attributes.

***NETATR**

The LCLLOCNAME value specified in the system network attributes is used.

communications-name

Specify a maximum of 8 characters for the local location name.

Top

Remote network identifier (RMTNETID)

Specifies the remote network identifier of the system on which the RDB is located. If this parameter is specified, the RMTLOCNAME parameter must be consistent with this RMTNETID parameter. If the RMTLOCNAME parameter specified a network ID, this parameter must agree (otherwise, an error message will be issued). If the RMTLOCNAME parameter does not specify any network ID, there is no possibility of conflict with this parameter.

More information on remote network identifiers is in the APPC Programming book, SC41-5443.

*SAME

The value does not change.

***LOC** If advanced program-to-program communications (APPC) is being used, the system determines which remote network identifier is used. If advanced peer-to-peer networking (APPN) is used, the system uses the local network identifier defined in this system's network attributes for the remote network identifier.

***NETATR**

The LCLNETID value specified in the system network attributes is used.

***NONE**

No remote network identifier (ID) is used.

communications-name

Specify a maximum of 8 characters for the remote network identifier.

More information on remote network identifiers is in the APPC Programming book, SC41-5443.

Top

Mode (MODE)

Specifies the mode name to use with the remote location name to communicate with the system on which the RDB is located.

*SAME

The mode name does not change.

*NETATR

The mode in the network attributes is used.

BLANK

A mode name of all blanks is used.

communications-name

Specify a maximum of 8 characters for the mode name.

More information on mode names is in the APPC Programming book, SC41-5443.

Top

Transaction program (TNSPGM)

Specifies the name of the transaction program to use with the RDB entry.

*SAME

The transaction program does not change.

*DRDA

The distributed relational database architecture (DRDA) transaction program name, X'07F6C4C2', is used. DRDA is a means by which RDBs communicate with each other over a network.

name Specify the name of the transaction program in one of the following formats:

- A 4-byte hexadecimal name, which is entered by enclosing the 8 hexadecimal digits in single quotation marks with a prefix of X. For example, X'07F6C4C2' is a 4-byte hexadecimal name.
- An 8-byte character name.

Top

Application requester driver (ARDPGM)

Specifies the application requester driver that is the program to be called to process SQL requests directed to the RDB. The program must exist in a library that is located in the system database (system ASP or a configured basic user ASP) on this system, and must be of the object type *PGM.

Single values

*SAME

The application requester driver program is not changed.

*DRDA

The Distributed Relational Database Architecture (DRDA) application requester is used.

Qualifier 1: Program

name Specify the name of the application requester driver program to be called to process the SQL requests.

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 program is located.

Top

Examples

Example 1: Changing an Entry for *SNA type

```
CHGRDBDIRE RDB(YOURRDB) RMTLOCNAME(NEWARK)
```

This command changes a directory entry to use Newark as the new remote location name to access YOURRDB.

Example 2: Changing an Entry for *IP type

```
CHGRDBDIRE RDB(MYRDB) RMTLOCNAME(ROCHESTER.XYZ.COM *IP)
```

This command changes a directory entry to use an internet protocol domain name to access MYRDB. The second element of RMTLOCNAME indicates that TCP/IP is to be used for connections.

Top

Error messages

*ESCAPE Messages

CPF3EC1

Change relational database directory entry failed.

Top

Change Remote Definition (CHGRMTDFN)

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

Parameters
Examples
Error messages

The Change Remote Definition (CHGRMTDFN) command changes the attributes of a remote system in the remote definition table.

Restriction: You must have *ALLOBJ authority to use this command.

Top

Parameters

Keyword	Description	Choices	Notes
SYSTEM	System name	<i>Element list</i>	Required, Key, Positional 1
	Element 1: System name	<i>Character value, *ANY</i>	
	Element 2: System group	<i>Character value</i>	
TEXT	Text	<i>Character value, *SAME, *BLANK</i>	Optional, Positional 2
MTGNTCDOC	Meeting notice document type	<i>*SAME, *FFTDCA, *EMN</i>	Optional
CALDTASTM	Calendar data stream	Single values: <i>*SAME, *NONE</i> Other values (up to 5 repetitions): <i>Communications name, *OV400</i>	Optional
RMTCALPWD	Calendar password	<i>Simple name, *SAME, *NONE</i>	Optional
RMTUSRAUT	Remote user authority	<i>*SAME, *PRIVATE, *PUBLIC, *MINIMUM, *EXCLUDE</i>	Optional
RMTLOCNAME	Remote location	<i>Communications name, *SAME, *SYSTEM</i>	Optional
LCLLOCNAME	Local location	<i>Communications name, *SAME, *LOC, *NETATR</i>	Optional
RMTNETID	Remote network identifier	<i>Communications name, *SAME, *LOC, *NETATR, *NONE</i>	Optional
MODE	Mode	<i>Communications name, *SAME, *NETATR</i>	Optional

Top

System name (SYSTEM)

Specifies the system name and system group of the remote system being changed.

This is a required parameter.

The possible values are:

***ANY** The default definition, which is used by remote systems for whom attributes are not yet defined, is changed.

The possible system name value is:

system-name

Specify the name of the remote system being changed.

The possible system group value is:

system-group

Specify the group name of the remote system being changed. The system group name is blank if this value is not specified.

Top

Text (TEXT)

Specifies text that briefly describes the remote system definition. More information on this parameter is in Appendix A of the CL Reference.

The possible values are:

***SAME**

The value does not change.

***BLANK**

Text is not specified.

'description'

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

Top

Meeting notice document type (MTGNTCDOC)

Specifies the type of meeting notice documents accepted by the remote system.

The possible values are:

***SAME**

The value does not change.

***FFTDCA**

Final-form text documents are accepted. The remote system does not accept enterprise meeting notice architecture documents.

***EMN** Enterprise meeting notice architecture documents are accepted (post-V2R1M1 AS/400 systems).

Top

Calendar data stream (CALDTASTM)

Specifies the type of calendar data stream that the local system uses when sending a request for calendar information to this remote system. Each type of calendar data stream represents a format in which remote calendar requests are made from the local system to this remote system.

The possible single values are:

***SAME**

The value does not change.

***NONE**

No calendar data stream is used.

The possible multiple values are:

***OV400**

The OfficeVision calendar data stream is used.

calendar-data-stream

Specify the name of the calendar data stream that is used. The name of the data stream can be a maximum of 10 characters.

Top

Calendar password (RMTCALPWD)

Specifies the password that is associated with user profile QRMTCAL on the remote system. This user profile is used to sign on to the remote system when processing a request for calendar information.

The possible values are:

***SAME**

The value does not change.

***NONE**

No password is used for user profile QRMTCAL.

calendar-password

Specify the password that is defined for QRMTCAL. If the password is numeric, it must begin with a Q (for example, specify Q1234 when 1234 is the password).

Top

Remote user authority (RMTUSRAUT)

Specifies the object authority for calendar objects on the local system to be used for incoming requests for calendar information from remote system users. This parameter is used by OfficeVision calendar processing to determine authority to calendars.

The possible values are:

***SAME**

The value does not change.

***PRIVATE**

Private authority is used for requests from the remote system. If private authority does not exist, public authority is used.

***PUBLIC**

Public authority is used for requests from the remote system.

***MINIMUM**

The lesser of the private or the public authority is used for requests from the remote system.

***EXCLUDE**

Local system objects cannot be accessed by users on the remote system.

Top

Remote location (RMTLOCNAME)

Specifies the remote location name of the remote system being updated.

The possible values are:

***SAME**

The value does not change.

***SYSTEM**

The name specified on the SYSTEM parameter is used for the remote location name.

remote-location-name

Specify the full name of a remote location.

Top

Local location (LCLLOCNAME)

Specifies the location name that identifies the local system to the remote system.

The possible values are:

***SAME**

The value does not change.

***LOC** The local location name associated with the remote location is used.

***NETATR**

The LCLLOCNAME value specified in the system network attributes is used.

local-location-name

Specify the name of the local location.

Top

Remote network identifier (RMTNETID)

Specifies the remote network identifier (ID) of the remote system being updated.

The possible values are:

***SAME**

The value does not change.

***LOC** The remote network ID associated with the remote location is used. If several remote network IDs are associated with the remote location, the system determines which remote network ID is used.

***NETATR**

The RMTNETID value specified in the system network attributes is used.

***NONE**

No remote network ID is used.

remote-network-ID

Specify the remote network ID.

Top

Mode (MODE)

Specifies the name of the mode that defines the device sessions used to request data from the remote system.

The possible values are:

*SAME

The value does not change.

*NETATR

The mode name specified in the network attributes is used.

mode-name

Specify the name of the mode.

Top

Examples

Example 1: Changing the Description of a Remote Definition

```
CHGFRMTDFN  SYSTEM(ABCXYZ)  TEXT('LONDON REMOTE XYZ')
```

This command changes the description of the remote system ABCXYZ to LONDON REMOTE XYZ.

Example 2: Changing the Calendar Data Stream for Undefined Systems

```
CHGRMTDFN  SYSTEM(*ANY)  CALDTASTM(*OV400)
```

This command changes the default definition for remote systems that do not have specific remote definitions. These systems are defined to support the OfficeVision data stream for remote calendar requests.

Top

Error messages

*ESCAPE Messages

CPF6DCA

SYSTEM parameter cannot be local system.

CPF6DCC

Remote definition for system &1 &2 not found.

CPF9899

Error occurred during processing of command.

Top

Change Remote Journal (CHGRMTJRN)

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

Parameters
Examples
Error messages

The Change Remote Journal (CHGRMTJRN) command is used to change the journal state for remote journals.

This command is used on the source system for a remote journal that is associated with a source-system journal, to change the state of the remote journal from *ACTIVE to *INACTIVE or from *INACTIVE to *ACTIVE. A journal state of *ACTIVE for a remote journal indicates that journal entries can be received from the associated journal on the source system. A journal state of *INACTIVE for a remote journal indicates that the journal is not ready to receive journal entries from a source journal. This command also allows additional attributes that are associated with the journal state to be set.

The Change Journal (CHGJRN) command can be used to modify the other journal attributes of remote journals, such as the journal message queue, deleting receivers, and text.

Restrictions:

- A user profile must exist on the target system by the same name as the user profile that is running this command on the source system. This restriction is irrespective of the selected communications protocol.
- Synchronous delivery mode is not supported when a remote journal is specified for the source system journal name parameter.
- The journal state of the remote journal to be activated cannot already be *ACTIVE.
- The journal state of the remote journal to be inactivated cannot already be *INACTIVE.
- If the remote journal state is *CTLINACT, then the remote journal cannot be inactivated by specifying a INACTOPT(*CNTRLD).
- The remote journal to be activated cannot already be replicating journal entries to other remote journals.
- A journal receiver that was one of a pair of dual receivers cannot be replicated.
- A journal receiver that was never attached to a journal after Version 4 Release 2 Modification 0 has been installed cannot be replicated because all of the required information is not contained within the receiver.
- The specified relational database (RDB) directory entry must meet the following rules:
 - The communications protocol used for the RDB must be supported for remote journal functions.
 - The remote location name in the RDB directory entry cannot refer to the *LOCAL database.
 - The RDB directory entry cannot use an application requester driver program (*ARDPGM) to locate the target system.

Top

Parameters

Keyword	Description	Choices	Notes
RDB	Relational database	<i>Name</i>	Required, Key, Positional 1

Keyword	Description	Choices	Notes
SRCJRN	Source journal	<i>Qualified object name</i>	Required, Key, Positional 2
	Qualifier 1: Source journal	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
TGTJRN	Target journal	Single values: *SRCJRN Other values: <i>Qualified object name</i>	Optional, Key
	Qualifier 1: Target journal	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
JRNSTATE	Journal state	*SAME, *ACTIVE, *INACTIVE	Optional, Key
DELIVERY	Delivery	*SAME, *ASYNC, *SYNC	Optional
STRJRNRCV	Starting journal receiver	Single values: *ATTACHED, *SRCSYS Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Starting journal receiver	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
DTAPORTSRV	Data port services	Single values: *SAME, *NONE Other values: <i>Element list</i>	Optional
	Element 1: Node identifier	<i>Name</i>	
	Element 2: Data port IP address	Values (up to 4 repetitions): <i>Character value</i>	
SNDTSKPTY	Sending task priority	1-99, *SAME, *SYSDFT	Optional
SYNCTIMO	Synchronous sending time-out	1-3600, *SAME, *SYSDFT	Optional
VLDCHK	Validity checking	*SAME, *DISABLED, *ENABLED	Optional
INACTOPT	How to make inactive	*CNTRLD, *IMMED	Optional

Top

Relational database (RDB)

Specifies the name of the relational database directory entry that contains the remote location name of the target system. This name should match the name of the *LOCAL relational database directory entry on the target system.

This is a required parameter.

relational-database-entry

Specify a maximum of 18 characters for the name of the relational database directory entry.

Top

Source journal (SRCJRN)

Specifies the name of the source journal that is associated with the remote journal that is being changed, and the library in which it resides.

This is a required parameter.

Qualifier 1: Source journal

source-journal-name

Specify the source journal that is associated with the remote journal that is being changed.

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.

library-name

Specify the name of the library in which the journal resides.

Top

Target journal (TGTJRN)

Specifies the remote journal on the target system that is being changed.

Single values

***SRCJRN**

The target journal name is exactly the same as the source journal name.

Qualifier 1: Target journal

target-journal-name

Specify the name of the target journal that is being changed.

Qualifier 2: Library

library-name

Specify the name of the library in which the journal resides.

Top

Journal state (JRNSTATE)

Specifies whether the remote journal is ready to receive journal entries from a source journal.

***SAME**

The value does not change.

***ACTIVE**

The remote journal is ready to receive journal entries from a source journal.

***INACTIVE**

The remote journal is not ready to receive journal entries from a source journal.

Top

Delivery (DELIVERY)

Specifies whether journal entries are replicated synchronously or asynchronously when the remote journal is activated.

Note: This parameter is only valid when JRNSTATE(*ACTIVE) is specified.

***SAME**

The value does not change.

***ASYNC**

Journal entries are replicated asynchronously.

***SYNC**

Journal entries are replicated synchronously.

Top

Starting journal receiver (STRJRNRCV)

The journal receiver where the replication of journal entries from the source system to the target system starts.

Note: This parameter is only valid when JRNSTATE(*ACTIVE) is specified.

***ATTACHED**

The replication of journal entries starts with the journal receiver that is currently attached to the remote journal on the target system. The journal entries are replicated from the corresponding journal receiver that is associated with the journal on the source system. The replication starts with the journal entries that follow the last journal entry that currently exists in the attached journal receiver on the target system. If the remote journal on the target system does not have an attached journal receiver, the journal receiver that is currently attached to the journal on the source system is created on the target system and attached to the remote journal on the target system. Then journal entries are replicated starting with the first journal entry in the journal receiver that is currently attached to the journal on the source system. If the journal on the source system does not have an attached journal receiver, which is only possible in the case of a remote journal that is associated with another remote journal, no journal entries can be replicated and an error is returned.

***SRCSYS**

The replication of journal entries starts with the journal receiver that is currently attached to the journal on the source system. If the corresponding journal receiver exists and is attached to the remote journal on the target system, journal entries are replicated starting with the journal entries that follow the last journal entry that currently exists in the attached journal receiver on the target system. Otherwise, if the corresponding journal receiver exists but is not attached to the remote journal on the target system, no journal entries can be replicated and an error is returned. If the corresponding journal receiver does not exist on the target system, the journal receiver is created on the target system and attached to the remote journal on the target system. Then journal entries are replicated starting with the first journal entry in the journal receiver that is currently attached to the journal on the source system. If the journal on the source system does not have an attached journal receiver, which is only possible in the case of a remote journal that is associated with another remote journal, no journal entries can be replicated and an error is returned.

starting-journal-receiver-name

Specify the journal receiver where the replication of journal should start. If the corresponding journal receiver exists and is attached to the remote journal on the target system, journal entries are replicated starting with the journal entries that follow the last journal entry that currently exists in the attached journal receiver on the target system. Otherwise, if the corresponding journal receiver exists but is not attached to the remote journal on the target system, no journal entries can be replicated and an error is returned. If the corresponding journal receiver does not exist on the target system, then the journal receiver is created on the target system and attached to the remote journal on the target system. Then journal entries are replicated starting with the first journal entry in the specified journal receiver on the source system.

The name of the starting journal receiver 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 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

Data port services (DTAPORTSRV)

Specifies the name of the cluster node identifier and up to four internet addresses to use as an alternate communication method when sending journal entries to a target system. Configuring clustering and data port services with multiple communication lines can provide for better communications resiliency and higher data throughput.

***SAME**

The value does not change.

***NONE**

The remote journal environment will not use data port services. The relational database will be used for all communications to the target system.

Element 1: Node identifier.

name Specify the cluster node identifier for the target system. The user is responsible for configuring a cluster environment with the target system as one of its nodes. The cluster node for the target system must be active prior to activating the remote journal.

Element 2: Internet address.

character-value

Specify up to four distinct internet addresses to the target node. The user is responsible for configuring the TCP/IP addresses. The internet addresses must be configured between the source and target systems prior to activating the remote journal. Any duplicate addresses will be ignored.

Top

Sending task priority (SNDTSKPTY)

Specifies the priority of the sending task on the source system for asynchronously maintained remote journals. The priority is a value from 1 (highest priority) through 99 (lowest priority), which represents the importance of the task when it competes with other tasks for machine resources. This value represents the relative (not absolute) importance of the task.

Note: This parameter is only valid when JRNSTATE(*ACTIVE) and DELIVERY(*ASYNCR) are specified.

***SAME**

The value does not change.

***SYSDFT**

The system chooses a value for the sending task priority that is higher than the highest priority a user may specify (higher than priority 1).

1-99 Specify the priority of the sending task on the source system.

Top

Synchronous sending time-out (SYNCTIMO)

Specifies the maximum amount of time in seconds to wait for a response from the remote system when a response is required in a synchronous remote journal environment. If a response is not received within the number of seconds specified, the remote journal environment will be inactivated.

Note: This parameter is only valid when JRNSTATE(*ACTIVE) and DELIVERY(*SYNC) are specified.

Note: While a journal is in the process of attaching a new receiver, journal entries on the source system are held up until the new receiver is attached. The time-out for the new journal entries will not start until after the new receiver is attached and the new journal entries are sent to the target system.

*SAME

The value does not change.

*SYSDFT

The system chooses the default value of 60 seconds to wait for a response from the remote system.

1-3600 Specify the maximum number of seconds to wait for a response from the remote system.

Top

Validity checking (VLDCHK)

Specifies whether or not to use communications validity checking. When communications validity checking is enabled, the remote journal environment will provide additional checking to verify that the data which is received by the target system matches the data that was sent from the source system. If the data does not match, the data will not be written to the target system, the remote journal environment will be inactivated, and messages indicating the communications failure will be issued to the journal message queue and QHST.

Note: This parameter is only valid when JRNSTATE(*ACTIVE) is specified.

*SAME

The value does not change.

*DISABLED

Communications validity checking is disabled for this remote journal environment.

*ENABLED

Communications validity checking is enabled for this remote journal environment.

Note: Communications validity checking may impact performance.

Top

How to make inactive (INACTOPT)

Specifies how the replication of journal entries should be ended when the remote journal is inactivated.

Note: This parameter is only valid when JRNSTATE(*INACTIVE) is specified.

*CNTRL

A controlled inactivate of journal entry replication is performed. A controlled inactivate means that the system should replicate all journal entries already queued to be sent from the source system to the target system before inactivating the remote journal. No additional journal entries are queued after a request to perform a controlled inactivate. A controlled inactivate is not

possible when a journal is in catch-up, or when it is being synchronously maintained. In both of these cases, the request to perform a controlled inactivate is implicitly changed by the system to an immediate inactivate request.

***IMMED**

An immediate inactivate of journal entry replication is performed. An immediate inactivate means that the system will not continue to replicate any journal entries that are already queued before inactivating the remote journal.

Top

Examples

Example 1: Activating a Remote Journal to be Maintained Asynchronously

```
CHGRMTJRN  RDB(CHICAGO)
            SRCJRN(LCLLIB/JOURNAL1)  TGTJRN(RMTLIB/JOURNAL1)
            JRNSTATE(*ACTIVE)  DELIVERY(*ASYNCR)
            SNDSKPTY(*SYSDFT)  VLDCHK(*ENABLED)
```

This command activates remote journal JOURNAL1 in library RMTLIB so that journal entries will be replicated from source journal JOURNAL1 in library LCLLIB to remote journal JOURNAL1 in library RMTLIB. The replication will occur asynchronously, the system will set the priority of the sending task, and communications validity checking will be enabled.

Example 2: Activating a Remote Journal Using Data Port Services

```
CHGRMTJRN  RDB(CHICAGO)
            SRCJRN(LCLLIB/JOURNAL1)  TGTJRN(RMTLIB/JOURNAL1)
            JRNSTATE(*ACTIVE)  DELIVERY(*SYNCR)
            DTAPORTSRV(CLUNODE1 255.255.255.001 255.255.255.002)
            SYNCTIMO(*SYSDFT)  VLDCHK(*ENABLED)
```

This command activates remote journal JOURNAL1 in library RMTLIB so that journal entries will be replicated from source journal JOURNAL1 in library LCLLIB to remote journal JOURNAL1 in library RMTLIB. The replication will occur synchronously. The data will be sent using data port services to cluster node CLUNODE1 using internet addresses 255.255.255.001 and 255.255.255.002. The synchronous sending time-out will be set to the system default of 60 seconds and communications validity checking will be enabled.

Example 3: Inactivating a Remote Journal

```
CHGRMTJRN  RDB(CHICAGO)  SRCJRN(LCLLIB/JOURNAL1)
            TGTJRN(RMTLIB/JOURNAL1)
            JRNSTATE(*INACTIVE)  INACTOPT(*IMMED)
```

This command inactivates remote journal JOURNAL1 in library RMTLIB so that journal entries will no longer be replicated from source journal JOURNAL1 in library LCLLIB to remote journal JOURNAL1 in library RMTLIB. The inactivation will occur immediately.

Top

Error messages

*ESCAPE Messages

CPF69A2

State of journal &1 in &2 not changed.

CPF69A3

State of journal &1 in &2 not changed.

CPF694D

Unexpected journal receiver &8 found.

CPF694F

Communications failed with reason code &10.

CPF696F

State of journal &1 in &2 not changed.

CPF697A

State of journal &1 in &2 not changed.

CPF697B

State of journal &1 in &2 not changed.

CPF697C

State of journal &1 in &2 not changed.

CPF697D

State of journal &1 in &2 not changed.

CPF697E

State of journal &1 in &2 not changed.

CPF697F

State of journal &1 in &2 not changed.

CPF6973

Source journal not compatible with target system.

CPF6974

State of journal &1 in &2 not changed.

CPF698A

State of journal &1 in &2 not changed.

CPF698B

Unexpected journal receiver attached to &1.

CPF698C

State of journal &1 in &2 not changed.

CPF698D

Journal &1 not a remote journal.

CPF698E

Journal &1 not associated with source journal.

CPF698F

State of journal &1 in &2 not changed.

CPF6982

Relational database directory entry &1 not valid.

CPF699A

Unexpected journal receiver &8 found.

CPF699E
State of journal &1 in &2 not changed.

CPF6993
State of journal &1 in &2 not changed.

CPF6994
State of journal &1 in &2 not changed.

CPF6995
Unexpected journal receiver &8 found.

CPF6996
Replication of journal entries ended.

CPF6997
Unexpected journal receiver &8 found.

CPF6998
State of journal &1 in &2 not changed.

CPF6999
State of journal &1 in &2 not changed.

CPF70A3
Remote journal &1 in &2 not changed.

CPF70DB
Remote journal environment ended for journal &1 in library &2.

CPF70D9
Changing journal state not allowed. Reason code &3.

CPF701B
Journal recovery of an interrupted operation failed.

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.

CPF9814
Device &1 not found.

CPF9820
Not authorized to use library &1.

CPF9830
Cannot assign library &1.

TCP1901
Internet address &2 not valid.

Top

Change Reply List Entry (CHGRPYLE)

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

Parameters
Examples
Error messages

The Change Reply List Entry (CHGRPYLE) command changes a system reply list entry. Any of the attributes of a reply list entry can be changed, except for the sequence number.

The reply list is used as a source for automatic responses to predefined inquiry messages.

The reply list is only used when an inquiry message is *sent* by a job that has the system reply list attribute INQMSGRPY(*SYSRPYL) specified. The INQMSGRPY attribute can be changed with the CHGJOB command.

New entries may be added to the reply list with the Add Reply List Entry (ADDRPYLE) command; entries can be removed with the Remove Reply List Entry (RMVRPYLE) command. The entire list of entries can be shown with the Work with Reply List Entry (WRKRPYLE) command; from the display presented you can add, change, and remove individual entries.

Restrictions:

1. This command is shipped with public *EXCLUDE authority and the QPGMR user profile has private authority to use the command.
2. To use this command, you must be signed on as QPGMR, or have *USE special authority.

Top

Parameters

Keyword	Description	Choices	Notes
SEQNBR	Sequence number	1-9999	Required, Positional 1
MSGID	Message identifier	Character value, *SAME, *ANY	Optional
CMPDTA	Compare data	Element list	Optional
	Element 1: Comparison data	Character value, *SAME, *NONE	
	Element 2: Message data start position	1-999, *SAME, *NONE	
RPY	Message reply	Character value, *SAME, *DFT, *RQD	Optional
DUMP	Dump the sending job	*SAME, *NO, *YES	Optional
CCSID	Coded character set ID	1-65535, *SAME, *HEX, *JOB	Optional

Top

Sequence number (SEQNBR)

Specifies the sequence number of the reply list entry being changed. The message identifier and message data of an inquiry message are matched against reply list entry message identifiers and comparison data in ascending sequence number order. The search ends when a match occurs or the last reply list entry is passed.

This is a required parameter.

1-9999 Specify a sequence number from 1 to 9999. Duplicate sequence numbers are not allowed.

Top

Message identifier (MSGID)

Specifies the inquiry message identifiers for which automatic system action is taken. The message identifier can be specific or generic in scope. Only predefined messages (messages known to the system by a message identifier) can be matched by reply list entries; immediate messages cannot be used for comparison.

*SAME

The message identifier is not changed.

***ANY** This reply list entry matches any message identifier. Unless this reply list entry has comparison data specified, any reply list entry with a higher sequence number than this one is ignored.

message-identifier

Specify a message identifier to compare with the message identifier of an inquiry message. The message identifier must be 7 characters in length and in the following format: *pppnnnn*

The first 3 characters (ppp) must be a code consisting of one alphabetic character followed by two alphanumeric (alphabetic or decimal) characters. The last 4 characters (nnnn) must consist of the decimal numbers 0 through 9 and the characters A through F.

Top

Compare data (CMPDTA)

Specifies the comparison data that is used to determine whether this entry matches an inquiry message. If the identifier of the inquiry message matches the message identifier of this reply list entry, then the message data specified for the inquiry message is compared to this data.

Element 1: Comparison data

*SAME

The comparison data is not changed.

***NONE**

No comparison data is specified. If the inquiry message has the specified identifier, the action specified by this reply list entry is taken.

'comparison-data'

Specify a character string of no more than 28 characters (enclosed in apostrophes if blanks or other special characters are included). This string is compared with a string of the same length in the message data of the inquiry message, beginning with the first character (if no start value has been specified).

Element 2: Message data start position

*SAME

The message data start remains the same.

message-data-start

Specify the starting character position in the message's replacement text (maximum value not to exceed 999) where the comparison data is to be compared with the replacement text. A start value is not valid without a specification of comparison data.

Coded Character Set Identifier (CCSID) Considerations

The text supplied for the CMPDTA parameter that corresponds to the *CCHAR type field is assumed to be in the CCSID of the job running this command, unless the CCSID parameter is coded. For more information about the *CCHAR type field see the Add Message Description (ADDMSGD) command.

Top

Message reply (RPY)

Specifies how to reply to an inquiry message that matches this reply list entry. The reply specified in this reply list entry is automatically sent by the system without requiring user intervention; the inquiry message does not cause any job to be interrupted or notified when the message arrives at the message queue.

*SAME

The reply action is not changed.

***DFT** The default reply to the inquiry message is sent.

***RQD** The inquiry message requires an explicit reply. No reply is automatically sent.

'message-reply'

Specify a character string of no more than 32 characters (enclosed in apostrophes if blanks or other special characters are included), sent as a reply to the inquiry message.

Top

Dump the sending job (DUMP)

Specifies whether the contents of the job that sent the inquiry message are printed (dumped) when the inquiry message matches this reply list entry.

*SAME

The dump attribute of the reply list entry is not changed.

***NO** The job is not dumped.

***YES** The job is dumped before control returns to the program sending the message.

Top

Coded character set ID (CCSID)

Specifies the coded character set identifier (CCSID) of the part of the CMPDTA that is of the type *CCHAR.

When an inquiry message is sent to a job that is using the system reply list, the *CCHAR compare data is converted from the CCSID specified by the send function to the CCSID of the CMPDTA stored on the reply list. This is done before the data is compared.

All other compare data is not converted before a comparison is made. 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/>.

Note: When specifying a CCSID other than *HEX, all the CMPDTA specified is converted from that CCSID to the job CCSID when displayed on the Work with Reply List Entries panel. This occurs even

when all CMPDTA does not correspond with *CCHAR data; therefore, when using a CCSID other than *HEX, specifying the length of the *CCHAR data or any other data field is not recommended.

***SAME**

The CCSID associated with the CMPDTA is not changed. If the CMPDTA is being changed, the part of the CMPDTA that is of type *CCHAR is assumed to be in the same CCSID as the CMPDTA being replaced.

***JOB** If the CMPDTA is being changed, the part of the CMPDTA that is of type *CCHAR is assumed to be in the CCSID of the JOB running this command. If the CMPDTA is not changing, the CCSID associated with the CMPDTA is not changed.

***HEX** The CCSID associated with the CMPDTA is changed to 65535. No conversion occurs before the replacement data is compared with the CMPDTA.

coded-character-set-identifier

The CCSID associated with the CMPDTA is assumed to be the CCSID value specified.

Top

Examples

Example 1: Changing the Message Identifier

```
CHGRPYLE  SEQNBR(20)  MSGID(RPG1299)
```

This command changes the message identifier of the reply list entry (sequence number 20) to RPG1299. Whenever an RPG1299 inquiry message is sent by a job that is using the reply list, the action previously specified for entry 20 is taken.

Example 2: Changing the Comparison Data

```
CHGRPYLE  SEQNBR(25)  CMPDTA(MYPROGRAM)
```

This command changes the comparison data of the reply list entry whose sequence number is 25 to MYPROGRAM. This entry only matches inquiry messages whose message data begins with MYPROGRAM. For example, if this entry were for the RPG1200 messages, the entry is used only when the RPG program from which the message was sent has message data named MYPROGRAM.

Example 3: Changing the Reply Sent

```
CHGRPYLE  SEQNBR(30)  RPY(C)
```

This command changes the reply sent for the reply list entry whose sequence number is 30 to C. Whenever an inquiry message which matches the message identifier and comparison data previously defined for this entry is sent by a job that is using the reply list, a 'C' reply is automatically sent.

Example 4: Printing the Job Contents

```
CHGRPYLE  SEQNBR(40)  DUMP(*YES)
```

This command changes the attribute defined for the DUMP parameter for the reply list entry whose sequence number is 40. Whenever this entry matches an inquiry message, the sending job is dumped before control returns to the sending program.

Example 5: Sending a Manual Reply

```
CHGRPYLE  SEQNBR(45)  MSGID(CPA5300)  CMPDTA(*NONE)
           RPY(*RQD)  DUMP(*NO)
```

This command changes some of the attributes of the reply list entry whose sequence number is 45. Whenever a CPA53xx inquiry message is sent by a job that is using the reply list, a manual reply must be issued. If the message queue to which the inquiry is sent is in break mode, the message interrupts the job. The sending job is not dumped.

Example 6: Sending an Automatic Reply

```
CHGRPYLE  SEQNBR(9999)  MSGID(CPA3917)  RPY(R)
```

This command changes the reply list entry whose sequence number is 9999. Whenever a CPA3917 inquiry message is sent by a job that is using the reply list, an 'R' reply is automatically sent. The inquiry does not break into the message queue, and no opportunity is given to reply to the message manually.

Top

Error messages

*ESCAPE Messages

CPF2435

System reply list not found.

CPF2436

System Reply List entry not added or changed.

CPF247E

CCSID &1 is not valid.

CPF2499

Message identifier &1 not valid.

CPF2556

Sequence number &1 not defined in system reply list.

CPF2557

System reply list damaged.

CPF2558

System reply list currently in use.

Top

Change Routed Attributes (CHGRTDA)

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

Parameters
Examples
Error messages

The Change Routed Attributes (CHGRTDA) command is used to change configurable Routing Information Protocol (RIP) server attributes. The changes take effect the next time the RouteD server is started either by the Start TCP/IP (STRTCP) command or by the Start TCP/IP Server (STRTCPVSR) command.

Restrictions:

You must have *IOSYSCFG special authority to use this command.

Top

Parameters

Keyword	Description	Choices	Notes
AUTOSTART	Autostart	<u>*SAME</u> , *YES, *NO	Optional
SUPPLY	Supply	<u>*SAME</u> , *YES, *NO	Optional

Top

Autostart (AUTOSTART)

Specifies whether to automatically start the RouteD server when TCP/IP is started by the STRTCP command or STRTCPVSR SERVER(*AUTOSTART). When RouteD is started by the STRTCPVSR command, but the SERVER(*AUTOSTART) parameter is omitted, the AUTOSTART parameter is ignored and the RouteD server is started regardless of the value of this parameter.

The possible values are:

*SAME

The AUTOSTART value does not change if it was previously set. Otherwise, it defaults to *NO.

***NO** Do not automatically start the RouteD server.

***YES** Start the RouteD server automatically.

Top

Supply (SUPPLY)

Specifies whether or not RouteD should supply routing information in RIP packets over the network interfaces.

The possible values are:

*SAME

The supply option that was previously set does not change; otherwise, *NO is used.

- *NO The Routed task receives and processes RIP packets normally, but does not supply periodic RIP broadcast packets over any of the attached network interfaces. This effectively puts the Routed server into "listen mode."
- *YES The Routed task supplies periodic RIP broadcast packets to the attached networks. The supply of RIP packets over a particular interface may be overridden by an entry in the configuration file specifying that the supply over a particular interface is to be turned off.

Top

Examples

Example 1: Automatically Start the Routed Server when the Start TCP/IP (STRTCP) CL Command is Issued.

```
CHGRTDA  AUTOSTART(*YES)
```

This command indicates that the next time the STRTCP command is issued to start up TCP/IP and to automatically start the TCP/IP applications, the Routed server will be automatically started.

Top

Error messages

*ESCAPE Messages

CPF0011

Error detected by prompt override program.

TCP5496

Error accessing configuration attributes member.

TCP5497

File &3, library &2 not found.

TCP8050

*IOSYSCFG authority required to use &1.

TCP9503

File &3 in library &2 not available.

*STATUS Messages

CPF5001

End of file &2 detected in library &3.

Top

Change Routing Entry (CHGRTGE)

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

Parameters
 Examples
 Error messages

The Change Routing Entry (CHGRTGE) command changes a routing entry in the specified subsystem description. The routing entry specifies the parameters used to start a routing step for a job. The associated subsystem can be active when the changes are made.

Restrictions:

- To use this command, you must have object operational (*OBJOPR), object management (*OBJMGT), and read (*READ) authority to the specified subsystem description and execute (*EXECUTE) authority to the library containing the subsystem description.

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, *LIBL, *CURLIB</i>	
SEQNBR	Routing entry sequence number	1-9999	Required, Positional 2
CMPVAL	Comparison data	Single values: *SAME , *ANY Other values: <i>Element list</i>	Optional, Positional 3
	Element 1: Compare value	<i>Character value</i>	
	Element 2: Starting position	1-80, *SAME	
PGM	Program to call	Single values: *SAME , *RTGDTA Other values: <i>Qualified object name</i>	Optional, Positional 4
	Qualifier 1: Program to call	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
CLS	Class	Single values: *SAME , *SBSD Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Class	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
MAXACT	Maximum active routing steps	0-1000, *SAME , *NOMAX	Optional
POOLID	Storage pool identifier	1-10, *SAME	Optional
THDRSCAFN	Thread resources affinity	Single values: *SAME , *SYSVAL Other values: <i>Element list</i>	Optional
	Element 1: Group	*NOGROUP, *GROUP	
	Element 2: Level	*NORMAL, *HIGH	
RSCAFNGRP	Resources affinity group	*SAME , *NO, *YES	Optional

Top

Subsystem description (SBSD)

Specifies the name and library of the subsystem description containing the routing entry that is being changed.

This is a required parameter.

Qualifier 1: Subsystem description

name Specify the name of the subsystem description for the routing entry that is being changed.

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 subsystem description's library for the routing entry that is being changed.

Top

Routing entry sequence number (SEQNBR)

Specifies the sequence number of the routing entry that is added or changed. Routing data is matched against the routing entry compare values in ascending sequence number order. Searching ends when a match occurs or the last routing entry is reached. Therefore, if more than one match possibility exists, only the first match is processed.

This is a required parameter.

1-9999 Specifies a sequence number between 1 and 9999.

Top

Comparison data (CMPVAL)

Specifies a value that is compared with the routing data to determine whether this routing entry is used for starting a routing step for the job. If the routing data matches the routing entry compare value, that routing entry is used. A starting position in the starting data character string can be used to specify the starting position in the routing data for comparison against the routing entry compare value.

Single values

***SAME**

The comparison value and starting position do not change.

***ANY** Any routing data is considered a match. To specify *ANY, the routing entry must have the highest sequence number value of any routing entry in the subsystem description.

Element 1: Compare value

character-value

Specify a value (any character string not exceeding 80 characters) that is compared with routing data for a match. When a match occurs, this routing entry is used to start a routing step.

Element 2: Starting position

*SAME

The starting position does not change.

1-80 Specify a value, 1 through 80, that indicates which position in the routing data character string is the starting position for the comparison. The last character position compared must be less than or equal to the length of the routing data used in the comparison.

Top

Program to call (PGM)

Specifies the name and library of the program called as the first program run in the routing step. No parameters can be passed to the specified program. The program name can be either explicitly specified in the routing entry, or extracted from the routing data. If a program name is specified in a routing entry, selection of that routing entry results in the routing entry being called (regardless of the program name passed in an EVOKE function). If the program specified in the EVOKE function is called, *RTGDTA must be specified. If the program does not exist when the routing entry is added or changed, a library qualifier must be specified because the qualified program name is kept in the subsystem description.

Single values

*SAME

The program called does not change.

*RTGDTA

The program name is taken from the routing data that was supplied and matched against this entry. A qualified program name is taken from the routing data in the following manner: the program name is taken from positions 37 through 46, and the library name is taken from positions 47 through 56. Care should be used to ensure that routing entries that specify *RTGDTA are selected only for EVOKE functions on jobs that have specified the program name in the correct position in the routing data.

Qualifier 1: Program to call

name Specify the name of the program that is run from this routing entry.

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 named program is located.

Note: If the program does not exist when this routing entry is changed, a library qualifier must be specified because the qualified program name is kept in the subsystem description.

Top

Class (CLS)

Specifies the name and library of the class used for the routing steps started through this routing entry. The class defines the attributes of the routing step's running environment. If the class does not exist when the routing entry is added, a library qualifier must be specified because the qualified class name is kept in the subsystem description.

Single values

*SAME

The class for this entry does not change.

*SBSD

The class having the same name as the subsystem description, specified on the **Subsystem description (SBSD)** parameter, is used for routing steps started through this entry.

Qualifier 1: Class

name Specify the name of the class used for routing steps started through this routing entry.

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 name of the class used for routing steps started through this entry.

Top

Maximum active routing steps (MAXACT)

Specifies the maximum number of routing steps (jobs) that can be active at the same time through this routing entry. In a job, only one routing step is active at a time. When a subsystem is active and the maximum number of routing steps is reached, any subsequent attempt to start a routing step through this routing entry fails. The job that attempted to start the routing step is ended, and a message is sent by the subsystem to the job's log.

*SAME

The maximum number of routing steps that can be active at the same time does not change.

*NOMAX

There is no maximum number of routing steps that can be active at the same time and processed through this routing entry. This value is normally used when there is no reason to control the number of routing steps.

0-1000 Specify the maximum number of routing steps that can be active at the same time through this routing entry. If a routing step being started would exceed this number, the job is ended.

Top

Storage pool identifier (POOLID)

Specifies the pool identifier of the storage pool in which the program runs. The pool identifier specified here relates to the storage pools in the subsystem description.

*SAME

The pool identifier does not change.

1-10 Specify the identifier of the storage pool defined for this subsystem in which the program runs.

Top

Thread resources affinity (THDRSCAFN)

Specifies the affinity of threads to system resources.

Single values

*SAME

The thread resources affinity does not change.

*SYSVAL

When a job is started using this routing entry, the thread resources affinity value from the QTHDRSCAFN system value will be used.

Element 1: Group

*NOGROUP

Jobs using this routing entry will have affinity to a group of processors and memory. Secondary threads running under the job will not necessarily have affinity to the same group of processors and memory.

*GROUP

Jobs using this routing entry will have affinity to a group of processors and memory. Secondary threads running under the job will all have affinity to the same group of processors and memory as the initial thread.

Element 2: Level

*NORMAL

A thread will use any processor or memory if the resources it has affinity to are not readily available.

*HIGH

A thread will only use the resources it has affinity to, and will wait until they become available if necessary.

Top

Resources affinity group (RSCAFNGRP)

Specifies whether or not jobs using this routing entry will be grouped together having affinity to the same system resources (processors and memory). A value of *YES for this parameter will take precedence over the QTHDRSCAFN system value when set to *NOGROUP.

*SAME

The resources affinity group does not change.

*NO Jobs that use this routing entry will not be grouped together.

*YES Jobs that use this routing entry will be grouped together such that they will have affinity to the same system resources. Jobs that share data in memory may perform better if they have affinity to the same resources.

Top

Examples

Example 1: Changing Class and Pool ID

```
CHGRTGE  SBSDB(LIB5/ORDER)  SEQNBR(1478)
          CLS(LIB6/SOFAST)   POOLID(3)
```

This command changes routing entry 1478 in the subsystem description ORDER found in library LIB5. The same program is used, but now it runs in storage pool 3 using class SOFAST in library LIB6.

Example 2: Changing the Name of the Program Called

```
CHGRTGE  SBSDB(T7/PGMR)  SEQNBR(157)  PGM(T7/INTDEV)
```

This command changes routing entry 157 in the subsystem description PGMR found in library T7. The program INTDEV in library T7 is now called whenever this routing entry is selected. The other routing entry parameters are not changed.

Top

Error messages

*ESCAPE Messages

CPF1619

Subsystem description &1 in library &2 damaged.

CPF1691

Active subsystem description may or may not have changed.

CPF1697

Subsystem description &1 not changed.

Top

Change RWS Controller Password (CHGRWSPWD)

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

Parameters
Examples
Error messages

The Change RWS Controller Password (CHGRWSPWD) command changes the password for the specified remote workstation controller. The remote workstation controller password is used to access certain 5494 Utility Program functions.

Restrictions:

1. You must have *SECADM special authority to use this command.
2. For the command to be successful, the specified remote workstation controller and associated APPC device must be active on the local system.
3. If you attempt to use this command while the 5494 Utility Program is in use with the specified controller the command will fail.

Top

Parameters

Keyword	Description	Choices	Notes
CTLD	Controller description	<i>Name</i>	Required, Positional 1
RMTPWD	Remote password	<i>Simple name</i>	Required, Positional 2
LCLLOCNAME	Local location	<i>Communications name, *LOC</i>	Optional
MODE	Mode	<i>Communications name, *LOC, *NETATR</i>	Optional

Top

Controller description (CTLD)

Specifies the name of the 5494 remote workstation controller description.

Top

Remote password (RMTPWD)

Specifies the new password to set in the remote control unit. The new password will replace the old password if a password already exists.

Top

Local location (LCLLOCNAME)

Specifies the local location name used to establish a conversation with the remote workstation controller.

The possible values are:

***LOC** The location name used is the same as the local location name identified in the APPC device associated with the remote workstation controller.

local-location-name

Specify a location name to identify the local system to the remote workstation controller. When the session maximum has been reached on the mode used for nonprogrammable workstations, the location name specified must be different than the local location name identified in APPC device associated with the remote workstation controller, otherwise the command will fail.

Note: If you specify a local location name which does not exist on the system, a local configuration list entry is automatically created for the specified local location name.

Top

Mode (MODE)

Specifies the mode name used to establish a conversation with the remote workstation controller.

The possible values are:

***LOC** The mode depends on the value specified for the local location name (LCLLOCNAME) parameter. If the value specified for LCLLOCNAME is *LOC, then the mode is the same as the mode used for nonprogrammable workstation sessions. Otherwise, the mode is #INTER.

***NETATR**

The mode in the network attributes is used.

mode-name

Specify a mode name. Specify BLANK for a mode name consisting of eight blank characters.

Note: SNASVCMG and CPSVCMG are reserved names and cannot be specified.

Top

Examples

```
CHGRWSPWD CTLD(L5494RMT) RMPWD(NEWPASS)
```

This command changes the 5494 remote workstation controller password to NEWPASS.

Top

Error messages

***ESCAPE Messages**

CPF2625

Not able to allocate object &1.

CPF2634

Not authorized to object &1.

CPF2703

Controller description &1 not found.

CPF8104

Controller description &4 damaged.

CPF8105

Device description &4 damaged.

CPF90A8

*SECADM special authority required to do requested operation.

CPF91E0

Operation on controller &2 failed with reason code &1.

Top

Change S/36 Configuration (CHGS36)

Where allowed to run: Interactive environments (*INTERACT
*IPGM *IREXX *EXEC)
Threadsafe: No

[Parameters](#)
[Examples](#)
[Error messages](#)

The Change System/36 (CHGS36) command allows the user to change or update the description of the System/36 environment configuration.

There are no parameters for this command.

[Top](#)

Parameters

None

[Top](#)

Examples

CHGS36

This command allows the user to change the System/36 Environment description. This command allows the user to change display stations, printers, tapes, diskettes, 3270 device emulation, general environment values, and, if authorized, MRT security values.

[Top](#)

Error messages

*ESCAPE Messages

SSP0520

System/36 environment is not active.

SSP0521

Command is not allowed in first-level procedure.

SSP0522

System/36 procedure is not active.

[Top](#)

Change S/36 Environment Attr (CHGS36A)

Where allowed to run:

- Batch job (*BATCH)
- Interactive job (*INTERACT)
- Batch program (*BPGM)
- Interactive program (*IPGM)
- Batch REXX procedure (*BREXX)
- Interactive REXX procedure (*IREXX)
- Using QCMDEXEC, QCAEXEC, or QCAPCMD API (*EXEC)

Parameters
Examples
Error messages

Threadsafe: No

The Change System/36 Attributes (CHGS36A) command allows the user to change the attributes of the System/36 environment configuration while the system is running in the System/36 environment.

More information about the System/36 environment is in the System/36 Environment Reference book.

Top

Parameters

Keyword	Description	Choices	Notes
SLIB	Default session library	Name, <u>*SAME</u>	Optional
FLIB	Default files library	Name, <u>*SAME</u>	Optional
LIBL	Use library list for file	*YES, *NO, <u>*SAME</u>	Optional
DATDIFF	Date differentiated files	*YES, *NO, <u>*SAME</u>	Optional
S36ESHARE	S/36 shared opens of files	*YES, *NO, <u>*SAME</u>	Optional
RCDBLK	Shared file record blocking	*YES, *NO, <u>*SAME</u>	Optional
CACHEDLTF	Store deleted files in cache	*YES, *NO, <u>*SAME</u>	Optional
LPPAGE	Default lines per page	1-112, <u>*SAME</u>	Optional
FORMTYPE	Forms type	Character value, *STD, <u>*SAME</u>	Optional
DFTMSGACN	Default message action	*CONTINUE, *HALT, *IGNORE, *CANCEL, <u>*SAME</u>	Optional
HALTOPT	Halt options	<u>*SAME</u> , 0, 1, 2, 3, 01, 02, 03, 012, 013, 123, 0123, 023, 12, 13, 23	Optional
EVKJOBINIT	Evoke job initiation	*IMMED, *JOBQ, <u>*SAME</u>	Optional
EVKJOBPOL	Evoke storage pool	*BASE, *CURRENT, <u>*SAME</u>	Optional
EVKJOBPTY	Evoke job priority	1-99, *SUBMITTER, <u>*SAME</u>	Optional
SRCRCLEN	Source file record length	52-132, <u>*SAME</u>	Optional
CHGACT	Allow CHGS36 while active	*YES, *NO, <u>*SAME</u>	Optional
ADDS36ONLY	Add only S/36 users	*YES, *NO, <u>*SAME</u>	Optional
ICFSUBST	Substitute ICF procedure data	*YES, *NO, <u>*SAME</u>	Optional
MRTUSRPRF	MRT user profile	*OWNER, *FRSTUSR, <u>*SAME</u>	Optional
MRTAUT	Check authority to files	*ALLUSR, *FRSTUSR, <u>*SAME</u>	Optional
MRTDLY	MRT delay value	0-32767, <u>*SAME</u>	Optional
MRTJOBINIT	MRT job initiation	*IMMED, *JOBQ, <u>*SAME</u>	Optional

Keyword	Description	Choices	Notes
MRTJOBPOL	MRT storage pool	*BASE, *CURRENT, <u>*SAME</u>	Optional
MRTJOBPTY	MRT job priority	1-99, *SUBMITTER, <u>*SAME</u>	Optional

Top

Default session library (SLIB)

Specifies the default session library name for users running jobs in the System/36 environment.

*SAME

The value does not change.

library-name

Specify the name of the default session library.

Top

Default files library (FLIB)

Specifies the default files library for users running jobs in the System/36 environment.

*SAME

The value does not change.

library-name

Specify the name of the default files library.

Top

Use library list for file (LIBL)

Specifies whether the library list is used when specifying database files for System/36 environment jobs.

*SAME

The value does not change.

***YES** The library list is used to search for database files.

***NO** The library list is not used to search for database files.

Top

Date differentiated files (DATDIFF)

Specifies whether jobs running in the System/36 environment can use files of the same name, distinguished by creation date.

*SAME

The value does not change.

***YES** Jobs can use files of the same name if the files have different creation dates.

***NO** Jobs cannot use files of the same name. Each file must have a unique name.

Top

S/36 shared opens of files (S36ESHARE)

Specifies whether the System/36 environment opens database files in a way to allow an open data path (ODP) to be shared by multiple programs processing in the same job.

*SAME

The value does not change.

***YES** Programs share an ODP to database files opened during the job. The shared files are held open between job steps.

***NO** Programs do not share an ODP to database files opened during the job. Files are closed between job steps.

Top

Shared file record blocking (RCDBLK)

Specifies whether the System/36 environment uses record blocking for sequential database files that share an ODP. More information about record blocking is in the Concepts and Programmers Guide for the System/36 Environment.

*SAME

The value does not change.

***YES** Jobs running use record blocking for shared sequential files.

***NO** Jobs running do not use record blocking for shared sequential files.

Top

Store deleted files in cache (CACHEDLTF)

Specifies whether database files deleted by the System/36 environment are stored in a cache.

*SAME

The value does not change.

***YES** The deleted files are stored in a cache.

***NO** The deleted files are not stored in a cache.

Top

Default lines per page (LPPAGE)

Specifies the default number of lines printed on a page for all printers for jobs running in the System/36 environment when no other number of lines is specified in the SET command or in the FORMS or PRINTER OCL statement.

*SAME

The value does not change.

lines-per-page

Specify the number of lines per page. Valid values range from 1 through 112.

Top

Forms type (FORMTYPE)

Specifies the form type of the default printer form which is used for System/36 printouts when no form type is specified in the SET command or in the FORMS or PRINTER OCL statement. The form types used to indicate different printer forms are user-defined and can be a maximum of 4 characters in length.

*SAME

The value does not change.

***STD** The standard form type is used.

form-type

Specify a user-defined form type.

Top

Default message action (DFTMSGACN)

Specifies the default action used for escape messages issued by CL commands in procedures running in the System/36 environment. The default action is used for messages not in the message list and when there is no message list. The default action is not used if the message list contains a message ID.

*SAME

The value does not change.

***CONTINUE**

Processing continues with the next statement after the CL command. The ID of the escape message is saved and can be retrieved by the message ID substitution expression (?MSGID?).

***HALT**

The procedure is stopped. Processing continues as specified on the **Halt options (HALTOPT)** parameter.

***IGNORE**

The error is ignored and processing continues with the statement after the CL command. The ID of the escape message is not saved.

***CANCEL**

The procedure is canceled.

Top

Halt options (HALTOPT)

Specifies a list of continuation options available when *HALT is specified for the default message action parameter. The list of options is a value consisting of up to 4 options with values ranging from 0 through 3, each of which represents an allowed response. If no options are specified, options 0 and 3 (value 03) are allowed. The meanings for the numbers assigned to the options are:

- 0 Continue. The message ID is saved for retrieval.
- 1 Retry the command. The message ID is not saved.
- 2 Cancel the job step. The message is saved for retrieval.
- 3 Cancel the job.

*SAME

The value does not change.

halt-options

Specify up to four continuation options. Multiple options must be specified in ascending order and each option must be unique. Each digit must be the character 0, 1, 2, or 3 (blanks are ignored).

Top

Evoke job initiation (EVKJOBINIT)

Specifies how EVOKE jobs or job steps are started within the System/36 environment.

***SAME**

The value does not change.

***IMMED**

The job queue is bypassed when starting jobs.

***JOBQ**

Jobs are started from the job queue.

Top

Evoke storage pool (EVKJOBPOL)

Specifies the storage pool used for an EVOKE job that bypassed the job queue when starting to run in the System/36 environment.

***SAME**

The value does not change.

***BASE**

The job uses the subsystem's base pool storage area.

***CURRENT**

The job uses the same storage pool as the submitting job.

Top

Evoke job priority (EVKJOBPTY)

Specifies the priority level at which an EVOKE job in the System/36 environment must be started when it bypasses the job queue.

***SAME**

The value does not change.

***SUBMITTER**

The job is started with the same run priority as the submitting job.

1-99 Specify a priority level.

Top

Source file record length (SRCRCLEN)

Specifies the record length in bytes for System/36 source files QS36PRC and QS36SRC. These source files are created by System/36 environment utilities.

***SAME**

The value does not change.

record-length

Specify the source file record length. Valid values range from 40 through 120 bytes (not including the extra 12 bytes required for the source sequence and date fields of each record).

Top

Allow CHGS36 while active (CHGACT)

Specifies whether the configuration object can be updated using the Change System/36 (CHGS36) command while others are signed on to the System/36 environment.

***SAME**

The value does not change.

***YES** The configuration information can be changed with the CHGS36 command while others are signed on to the System/36 environment.

***NO** The configuration information cannot be changed with the CHGS36 command while others are signed on to the System/36 environment.

Top

Add only S/36 users (ADDS36ONLY)

Specifies whether a workstation device can be added to the System/36 environment configuration when the device signs on to the System/36 environment.

***SAME**

The value does not change.

***YES** A workstation device is added to the configuration only when that device signs on to the System/36 environment.

***NO** A workstation device is added to the configuration when that device is created, not when it signs on to the System/36 environment.

Top

Substitute ICF procedure data (ICFSUBST)

Specifies if data received on an intersystem communications function (ICF) start request is scanned for substitution expressions.

***SAME**

The value does not change.

***YES** The data received on an ICF start request is scanned for substitution expressions, unless it is an ICF start request from a retail device or a finance device.

***NO** The data received on an ICF start request is not scanned for substitution expressions. This value can be preferable if the data may contain question marks that should not be treated as substitution expressions.

Top

MRT user profile (MRTUSRPRF)

Specifies the user profile under which the Multiple Requester Terminal (MRT) program runs to check security in the System/36 environment.

***SAME**

The value does not change.

***OWNER**

The MRT program runs under the profile of the MRT program owner.

***FRSTUSR**

The MRT program runs under the profile of the user that starts the program.

Top

Check authority to files (MRTAUT)

Specifies which users are checked for their authority to obtain access to files used by the MRT program in the System/36 environment.

***SAME**

The value does not change.

***ALLUSR**

All users are checked for their authority to obtain access to the files.

***FRSTUSR**

Only users who start MRT programs are checked for their authority to obtain access to the files.

Top

MRT delay value (MRTDLY)

Specifies the time (in seconds) that the system delays (waits) before ending the MRT program in the System/36 environment. The specified value is not valid if the program is a never-ending program (NEP).

***SAME**

The value does not change.

seconds-to-wait

Specify the number of seconds the system waits before ending the program. Valid values range from 0 to 32767 seconds.

Top

MRT job initiation (MRTJOBINIT)

Specifies how an MRT job is started in the System/36 environment.

***SAME**

The value does not change.

***IMMED**

The job queue is bypassed when starting the job.

***JOBQ**

The job is started from the job queue.

MRT storage pool (MRTJOBPOL)

Specifies the storage pool used for an MRT job started without using the job queue in the System/36 environment.

*SAME

The value does not change.

*BASE

The job uses the subsystem's base pool storage area.

*CURRENT

The job uses the same storage pool as the submitting job.

Top

MRT job priority (MRTJOBPTY)

Specifies the priority level for starting an MRT job that bypasses the job queue.

*SAME

The value does not change.

*SUBMITTER

The job starts with the same priority level as the submitting job.

priority-level

Specify the priority level for starting the job. Valid values range from 1 through 99.

Top

Examples

```
CHGS36A  FLIB(MYLIB)  CACHEDLTF(*YES)  LPPAGE(66)
```

This command changes the value of the default files library to MYLIB for users running jobs in the System/36 environment. Storage for deleted files is changed to a cache. The number of lines printed on a page is changed to 66.

Top

Error messages

None

Top

Change S/36 Message List (CHGS36MSGL)

Where allowed to run:

- Batch job (*BATCH)
- Interactive job (*INTERACT)

Threadsafe: No

Parameters
Examples
Error messages

The Change System/36 Message List (CHGS36MSGL) command determines the action taken for specific escape messages issued by Control Language (CL) commands in a procedure running in the System/36 environment. It is also used to set the default action for escape messages that are not specified.

This command is allowed to be external to a procedure only when SCOPE(*JOB) or SCOPE(*SESSION) is specified. It is not allowed in CL programs. It is valid only when the System/36 Environment is active.

For System/36 environment jobs that are started by the JOBQ command, the // JOBQ OCL statement, or the // EVOKE OCL statement, the initial message default action is taken from the job level of the submitting job. For other jobs, it is taken from the System/36 environment configuration. The Change System/36 Configuration (CHGS36) command can be used to set the initial message default action in the configuration.

Top

Parameters

Keyword	Description	Choices	Notes
MSGL	Message list	Single values: *SAME , *NONE Other values (up to 100 repetitions): <i>Element list</i>	Optional, Positional 1
	Element 1: Message list	Values (up to 100 repetitions): <i>Name</i> , *ANY	
	Element 2: Action	*CONTINUE, *IGNORE, *HALT, *CANCEL, *GOTO	
	Element 3: Label or halt option	<i>Character value</i>	
DFTACN	Default action	Single values: *SAME Other values: <i>Element list</i>	Optional
	Element 1: Action	*CONTINUE, *IGNORE, *HALT, *CANCEL, *GOTO	
	Element 2: Label or halt option	<i>Character value</i>	
SCOPE	Scope	*CURPRC , *PRVPRC, *JOB, *SESSION	Optional

Top

Message list (MSGL)

Specifies a list of message IDs and the action that is taken for each message. One or more message IDs can be specified along with the action that is taken for each message ID. When a CL command issues an escape message, the message list is searched for the message ID and the specified action is taken. If the message ID is not found in the message list, the default action is taken.

Note: The MSGL parameter can be specified only if SCOPE(*CURPRC) or SCOPE(*PRVPRC) is specified.

***SAME**

The message list does not change.

***NONE**

The message list is removed.

The possible Message ID Added to List values are:

***ANY** The specified action is taken for any message ID that is not found previously in the message list. Because this value matches any message, it is the last message ID specified in the list. Message IDs specified after this value are ignored.

message-ID

Specify the message ID being added to the list. Each message ID must contain 7 characters and must conform to the rules for message IDs. Generic message IDs are specified by ending the message ID with either 00 or 0000. For example, CPF1200 would match all messages beginning with CPF12, and CPF0000 would match all messages beginning with CPF.

The message list is searched in the order that it is specified on the command. Therefore, if the message list contains more than one message ID that matches the message ID being searched for, the first one is used. For example, if the message list contains CPF1200 followed by CPF1234, and the message CPF1234 is being searched for, the generic message ID is found first, and the action specified for that message ID is taken.

The possible Action Taken for Message ID values are:

***CONTINUE**

Processing continues with the statement that follows the CL command. The ID of the escape message is saved, and can be retrieved by the ?MSGID? substitution expression.

***IGNORE**

Processing continues with the statement following the CL command. The ID of the escape message is not saved, and the ?MSGID? substitution expression is null.

***HALT-options**

A halt with options is issued. This value can be followed by a list of options to be allowed on the halt. If the options to be allowed are not specified, options 0 (continue) and 3 (cancel) are allowed. The list of options is a value consisting of up to 4 numbers ranging from 0 through 3. The valid values are:

- 0 - Continue. The ?MSGID? substitution expression is set.
- 1 - Retry the command. The ?MSGID? substitution expression is not set.
- 2 - Cancel the job step. The ?MSGID? substitution expression is set.
- 3 - Cancel the job.

***CANCEL**

The procedure is canceled as if a // CANCEL statement was processed.

***GOTO-label**

Control continues at the TAG label specified. This value must be followed by a label of up to 8 characters.

Top

Default action (DFTACN)

Specifies the default action taken for escape messages issued by CL commands in procedures that run in the System/36 environment. The default action is taken for any message that is not in the message list, or for any message if there is no message list. The default action is not used if the message list contains a message ID of *ANY.

***SAME**

The default action does not change.

***CONTINUE**

Processing continues with the statement that follows the CL command. The ID of the escape message is saved and can be retrieved by the ?MSGID? substitution expression.

***IGNORE**

Processing continues with the statement that follows the CL command. The ID of the escape message is not saved, and the ?MSGID? substitution expression is null.

***HALT-options**

Message SYS3827 is issued with options. This value can be followed by a list of options to be allowed on the halt. If the options to be allowed are not specified, options 0 (continue) and 3 (cancel) are allowed. The list of options is a value consisting of up to 4 numbers ranging from 0 through 3. The valid values are:

- 0 - Continue. The ?MSGID? substitution expression is set.
- 1 - Retry the command. The ?MSGID? substitution expression is not set.
- 2 - Cancel the job step. The ?MSGID? substitution expression is set.
- 3 - Cancel the job.

***CANCEL**

The procedure is canceled as if a // CANCEL statement was processed.

***GOTO-label**

Control continues at the specified TAG label. This value must be followed by a label of up to 8 characters.

Top

Scope (SCOPE)

Specifies the scope of the message list and default action entered on the command.

***CURPRC**

The message list and default action apply only to the procedure in which the command is placed. It is not passed on to lower level procedures or used after the procedure ends.

***PRVPRC**

The message list and default action apply only to the procedure that called the procedure in which the command is placed. This value can only be entered in a procedure but cannot be entered in a first-level procedure.

***JOB** The default action applies to procedures in the current System/36 job. The default action specified applies to procedures in the current job that do not have a default action set. If *JOB is specified for this parameter, a message list is not allowed on the command.

***SESSION**

The default action applies to procedures run in the current session. If *SESSION is specified for this parameter, a message list is not allowed.

Top

Examples

Example 1: Setting Up a Message List

```
CHGS36MSGL  MSGL(((CPF9801) *GOTO NOTEXIST)
              ((CPF9802 CPF9820) *GOTO NOTAUT)
              ((*ANY) *HALT 3))
```

```

CHKOBJ ?2?/?1? *PGM
// GOTO OK
// TAG NOTEXIST
(code to handle object does not exist messages)
// GOTO OK
// TAG NOTAUT
(code to handle not authorized to object messages)
// TAG OK
CHGS36MSGL  MSGL(*NONE)

```

This command sets up a message list to go to label NOTEXIST if message CPF9801 is issued, and to label NOTAUT if either message CPF9802 or CPF9820 is issued. If any other message is entered, a halt with only option 3 (cancel) is issued. The second CHGS36MSGL command removes the message list.

Example 2: Setting the ?MSGID? Substitution Expression

```

CHGS36MSGL  MSGL(((CPF2105) *IGNORE) ((*ANY) *CONTINUE))
DLTF ?FLIB?/?1?
// IFF ?MSGID?/ ... (handle error)

```

In this example, message CPF2105 (object not found) is ignored; that is, the ?MSGID? substitution expression is not set. For any other messages, the ?MSGID? substitution expression is set to the message ID. The procedure is attempting to delete a file that may or may not exist. Because the object not found exception is not considered an error in this case, it is ignored. Any other message is handled as an error.

Top

Error messages

*ESCAPE Messages

SSP0520

System/36 environment is not active.

SSP0521

Command is not allowed in first-level procedure.

SSP0522

System/36 procedure is not active.

Top

Change S/36 Program Attributes (CHGS36PGMA)

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

Parameters
Examples
Error messages

The Change System/36 Program Attributes (CHGS36PGMA) command changes the attributes of the specified program.

Top

Parameters

Keyword	Description	Choices	Notes
PGM	S/36 program	<i>Qualified object name</i>	Required, Key, Positional 1
	Qualifier 1: S/36 program	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
MRTMAX	Maximum MRT's	1-255, *NONE	Optional
NEP	Never-ending program	*SAME, *NO, *YES	Optional

Top

S/36 program (PGM)

Specifies the name of the program whose attributes you want to change.

This is a required parameter.

The possible library values are:

***LIBL** The library list is used to locate the program.

***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.

library-name

Specify the library where the program is located.

Top

Maximum MRT's (MRTMAX)

Specifies the maximum number of multiple requester terminals that can be attached to the program.

***SAME**

The MRTMAX value is not changed.

number-of-requesters

Specify the maximum number of requesters for a program. Possible values range from 1 through 256. The value cannot be increased beyond the current value.

Never-ending program (NEP)

Specifies whether the program is a never-ending program (NEP). NEP is defined as a long-running program.

*SAME

The NEP value does not change.

***NO** The program is not a never-ending program.

***YES** The program is a never-ending program.

Examples

```
CHGS36PGMA PGM(RPGLIB/RPGPGM) MRTMAX(3) NEP(*YES)
```

This command changes program RPGPGM in RPGLIB to allow up to three MRTs and to be a never-ending program.

Error messages

*ESCAPE Messages

CPF2C01

Program &1 attributes not changed.

CPF2C02

Changing attributes not allowed for SSP program &1.

CPF2C03

MRTMAX parameter value &3 not correct.

CPF2C05

Program name *ALL not allowed with library *LIBL.

CPF9803

Cannot allocate object &2 in library &3.

CPF9811

Program &1 in library &2 not found.

CPF9820

Not authorized to use library &1.

CPF9830

Cannot assign library &1.

Change S/36 Proc Attributes (CHGS36PRCA)

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

Parameters
Examples
Error messages

The Change System/36 Procedure Attributes (CHGS36PRCA) command changes the attributes of the specified procedure.

Top

Parameters

Keyword	Description	Choices	Notes
MBR	S/36 procedure member	<i>Name</i>	Required, Key, Positional 1
FILE	Source file	<i>Qualified object name</i>	Optional, Key, Positional 2
	Qualifier 1: Source file	<i>Name</i> , <u>QS36PRC</u>	
	Qualifier 2: Library	<i>Name</i> , <u>*LIBL</u> , *CURLIB	
MRT	MRT procedure	<u>*SAME</u> , *NO, *YES	Optional
MRTDLY	MRT delay	<u>*SAME</u> , *NO, *YES	Optional
LOG	Log OCL statements	<u>*SAME</u> , *NO, *YES	Optional
PGMDTA	Contains program data	<u>*SAME</u> , *NO, *YES	Optional
RCDLEN	Logical record length	40-120, <u>*SAME</u> , *FILE	Optional
REFNBR	Reference number	0-999999, <u>*SAME</u> , *NEXT	Optional

Top

S/36 procedure member (MBR)

Specifies the name of the procedure member that has its attributes changed.

This is a required parameter.

procedure-member-name

Specify the name of the procedure member having its attributes changed.

Top

Source file (FILE)

Specifies the name of the physical file containing the procedure member.

QS36PRC

Specifies the name of the default physical file.

source-file-name

Specify the name of the physical file.

The possible library values are:

***LIBL** The library list 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, QGPL is used.

library-name

Specify the library where the file is located.

Top

MRT procedure (MRT)

Specifies whether the procedure is a multiple requester terminal (MRT) procedure.

***SAME**

The MRT value does not change.

***NO** The procedure is not a multiple requester terminal procedure.

***YES** The procedure is a multiple requester terminal procedure.

Top

MRT delay (MRTDLY)

Specifies whether the procedure should use the default MRT delay value.

***SAME**

The MRTDLY parameter does not change.

***YES** The procedure uses the default MRT delay value.

***NO** The procedure does not use the default MRT delay value.

Top

Log OCL statements (LOG)

Specifies whether the operator control language (OCL) statements are copied to the job log when the procedure is run.

***SAME**

The LOG value does not change.

***NO** The OCL statements are not copied to the job log.

***YES** The OCL statements are copied to the job log.

Top

Contains program data (PGMDTA)

Specifies whether the procedure passed data or parameters to the program.

***SAME**

The DTA value does not change.

***NO** The procedure passes parameters to the program.

***YES** The procedure passes data to the program.

Logical record length (RCDLEN)

Specifies the logical record length of the statements in the procedure member.

*SAME

The RCDLEN value does not change.

***FILE** The record length of the file specified by the **Source file** prompt (FILE parameter) is used.

record-length

Specify the logical record length. Valid values range from 40 through 120.

Reference number (REFNBR)

Specifies the reference number that is assigned to the procedure member.

*SAME

The REFNBR value does not change.

***NEXT**

The current reference number is increased by one.

reference-number

Specify the reference number of the procedure member. Valid values range from 0 through 999,999.

Examples

```
CHGS36PRCA  MBR(RPGPROC)  FILE(RPGLIB/QS36PRC)  MRT(*YES)
              RCDLEN(*FILE)  REFNBR(*NEXT)
```

This command changes procedure RPGPROC in file QS36PRC in library RPGLIB to be an MRT procedure with a logical record length the same as the QS36PRC file, and increments the current reference number by one.

Error messages

*ESCAPE Messages

CPF2C0A

Member &3 attributes not changed.

CPF2C0B

Changing attributes not allowed for SSP member &3.

CPF2C08

File &1 is not a source file.

CPF9803

Cannot allocate object &2 in library &3.

CPF9812

File &1 in library &2 not found.

CPF9815

Member &5 file &2 in library &3 not found.

CPF9820

Not authorized to use library &1.

CPF9822

Not authorized to file &1 in library &2.

CPF9826

Cannot allocate file &2.

[Top](#)

Change S/36 Source Attributes (CHGS36SRCA)

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

Parameters
Examples
Error messages

The Change System/36 Source Attributes (CHGS36SRCA) command changes the attributes of the specified source member.

Top

Parameters

Keyword	Description	Choices	Notes
MBR	S/36 source member	<i>Name</i>	Required, Key, Positional 1
FILE	Source file	<i>Qualified object name</i>	Optional, Key, Positional 2
	Qualifier 1: Source file	<i>Name</i> , <u>QS36SRC</u>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
SRCTYPE	Source type	*SAME, ARS36, ASM36, BASP36, BAS36, BGC36, BGD36, BGF36, CBL36, DFU36, DSPF36, DTA36, FOR36, MNU36, MSGF36, PHL36, RPG36, RPT36, SRT36, WSU36, UNS36	Optional
REFNBR	Reference number	0-999999, *SAME, *NEXT	Optional
RCDLEN	Logical record length	40-120, *SAME, *FILE	Optional
MAXDEV	Maximum devices	0-256, *SAME	Optional
DFRWRT	Defer write	*SAME, *YES, *NO	Optional

Top

S/36 source member (MBR)

Specifies the name of the source member that is having its attributes changed.

This is a required parameter.

source-member-name

Specify the name of the source member.

Top

Source file (FILE)

Specifies the name of the physical file containing the source member.

QS36SRC

Specifies the name of the default physical file.

source-file-name

Specify the name of the physical file.

The possible library values are:

***LIBL** The library list 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, QGPL is used.

library-name

Specify the library where the file is located.

Top

Source type (SRCTYPE)

Specifies the source type of the source member.

***SAME**

The SRCTYPE value does not change.

source-type

Specify the source type of the source member.

Value Type of Member

ARS36

Automatic response member

ASM36

Assembler member

BASP36

BASIC procedure (source member)

BAS36

BASIC member

BGC36

Business graphics utility member

BGD36

Business graphics utility data member

BGF36

Business graphics utility format member

CBL36 COBOL member

DFU36

Data file utility member

DSPF36

Display format member

DTA36

Data member

FOR36

FORTRAN member

MNU36

Menu member

MSGF36

Message member

PHL36	Telephone list member
RPG36	RPG for i5/OS member
RPT36	RPG for i5/OS automatic report member
SRT36	Sort member
WSU36	Work station utility member
UNS36	Unspecified

Top

Reference number (REFNBR)

Specifies the reference number assigned to the source member.

*SAME

The REFNBR value does not change.

*NEXT

The current reference number is increased by one.

reference-number

Specify the reference number of the procedure member. Valid values range from 0 through 999,999.

Top

Logical record length (RCDLEN)

Specifies the logical record length of the statements in the source member.

Top

Maximum devices (MAXDEV)

Specifies the maximum number of devices for an SFGR source member.

*SAME

The maximum number of devices does not change.

number-of-devices

Specify the maximum number of devices for a source member. Valid values range from 0 through 256.

Top

Defer write (DFRWRT)

Specifies that the writing of data to the display file is delayed until a read operation is requested. Control is returned to the requesting program immediately after the data is received for output. This may result in improved performance.

*SAME

The postpone option does not change. If the DFRWRT source attribute has not been set, *YES is used.

***YES** When a write request is made, control is returned after the buffer is processed. The actual display of data may take place later when a read or combined read/write operation is performed. The program buffer is immediately available for the next read or combined read/write operation.

***NO** When a write request is made, control is not returned to the requesting program until the input/output request is completed. The data is shown and the input/output feedback information is available.

Top

Examples

Example 1: Specifying Maximum Devices and Record Length

```
CHGS36SRCA  MBR(SFGRSRC) FILE(SDALIB/QS36SRC) REFNBR(*NEXT)
             RCDLEN(80)  MAXDEV(5)
```

This command changes source member SFGRSRC in file QS36SRC in library SDALIB to allow up to five devices and to have a record length of 80. It also increases the current reference number by one.

Example 2: Turning Off the Defer Write Attribute

```
CHGS36SRCA  MBR(SFGRSRC) FILE(SDALIB/QS36SRC) REFNBR(*NEXT)
             RCDLEN(80)  MAXDEV(5)  DFRWRT(*NO)
```

This command changes source member SFGRSRC in the file QS36SRC in library SDALIB to allow up to five devices and to have a record length of 80. It also increases the current reference number by one and turns off the defer write attribute.

Top

Error messages

*ESCAPE Messages

CPF2C0A

Member &3 attributes not changed.

CPF2C0B

Changing attributes not allowed for SSP member &3.

CPF2C08

File &1 is not a source file.

CPF9803

Cannot allocate object &2 in library &3.

CPF9812

File &1 in library &2 not found.

CPF9815

Member &5 file &2 in library &3 not found.

CPF9820

Not authorized to use library &1.

CPF9822

Not authorized to file &1 in library &2.

CPF9826

Cannot allocate file &2.

Top

Change Save File (CHGSAVF)

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

Parameters
Examples
Error messages

The Change Save File (CHGSAVF) command changes the attributes of the specified save file. The changes become a permanent part of the file and are kept until the file is either changed or deleted.

Restrictions:

- You must have object operational (*OBJOPR) and object management (*OBJMGT) authorities to the save file.
- You must have read (*READ) authority for the library where the save file is located.

Top

Parameters

Keyword	Description	Choices	Notes
FILE	Save file	<i>Qualified object name</i>	Required, Key, Positional 1
	Qualifier 1: Save file	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
MAXRCDS	Maximum records	1-4293525600, *SAME, *NOMAX	Optional
TEXT	Text 'description'	<i>Character value, *SAME, *BLANK</i>	Optional
WAITFILE	Maximum file wait time	<i>Integer, *SAME, *IMMED, *CLS</i>	Optional
SHARE	Share open data path	<i>*SAME, *NO, *YES</i>	Optional

Top

Save file (FILE)

Specifies the save file whose attributes are to be changed.

This is a required parameter.

Qualifier 1: Save file

name Specify the name of the save 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 used to locate the save file. If no current library entry exists in the library list, the QGPL library is used.

name Specify the name of the library where the save file is located.

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).

If the current number of records in the save file is greater than the maximum, an error message is sent and the save file does not change.

Note: The maximum amount of data that a save file can contain is approximately 2 terabytes. A message appears when the file is full.

*SAME

The maximum number of records specified in the save file does not change.

*NOMAX

The maximum value of 4293525600 records is used.

1-4293525600

Specify the maximum number of records that the save file can contain.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

*SAME

The text (if any) does not change.

*BLANK

No text is specified.

character-value

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

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. If the file resources cannot be allocated within the specified wait time, an error message is sent to the program.

*SAME

The wait time does not change.

*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.

*SAME

The value specified in the save file does not change.

***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

Examples

Example 1: File Resources Allocated Immediately

```
CHGSAVF FILE(ONLINE) WAITFILE(*IMMED)
```

This command changes the save file named ONLINE so that when it is opened the file resources must be available immediately, or an error message is sent. No other files are changed.

Example 2: Changing Maximum Number of Records

```
CHGSAVF FILE(ONLINE) MAXRCDS(20000)
```

This command changes the save file named ONLINE so that it can have up to 20,000 records (approximately 10 megabytes).

Top

Error messages

*ESCAPE Messages

CPF7304

File &1 in &2 not changed.

Top

Change Subsystem Description (CHGSBSD)

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

Parameters
Examples
Error messages

The Change Subsystem Description (CHGSBSD) command changes the operational attributes of the specified subsystem description. You can change the subsystem description while the subsystem is active. However, you cannot specify the *RMV value on the **Storage pools (POOLS)** parameter while the subsystem is active, because a job may become suspended.

Restrictions:

- To use this command, you must have:
 - object operational (*OBJOPR), object management (*OBJMGT), and read (*READ) authority to the specified subsystem description and execute (*EXECUTE) authority to the library containing that subsystem description.
 - all object (*ALLOBJ) and security administration (*SECADM) special authority to specify a system library list entry.
 - all object (*ALLOBJ) and security administration (*SECADM) special authority to specify an auxiliary storage pool (ASP) group name.
- You cannot specify the *RMV value on the POOLS parameter while the subsystem is active, because a job may become suspended.
- You cannot change the value of the ASPGRP parameter while the subsystem is active.

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, *LIBL, *CURLIB</i>	

Keyword	Description	Choices	Notes
POOLS	Storage pools	Single values: *SAME Other values (up to 10 repetitions): <i>Element list</i>	Optional, Positional 2
	Element 1: Pool identifier	1-10	
	Element 2: Storage size	<i>Integer</i> , *BASE, *NOSTG, *RMV, *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	
	Element 3: Activity level	<i>Integer</i>	
MAXJOBS	Maximum jobs	0-1000, *SAME , *NOMAX	Optional, Positional 3
TEXT	Text 'description'	<i>Character value</i> , *SAME , *BLANK	Optional
SGNDSPF	Sign-on display file	Single values: *SAME , *QDSIGNON Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Sign-on display file	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL , *CURLIB	
SYSLIBL	Subsystem library	<i>Name</i> , *SAME , *NONE	Optional
ASPGRP	ASP group	<i>Name</i> , *SAME , *NONE	Optional

Top

Subsystem description (SBSD)

Specifies the name and library of the subsystem description being changed.

This is a required parameter.

Qualifier 1: Subsystem description

name Specify the name of the subsystem description being changed.

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 subsystem description is located.

Top

Storage pools (POOLS)

Specifies the identifiers of one or more storage pool definitions and the changes that are made to them.

When an existing pool definition is removed, the subsystem must be inactive.

The size and activity level of each existing pool definition that is not specified, does not change.

Single values

***SAME**

The storage pool definitions in the subsystem description do not change.

Other values (up to 10 repetitions)

Element 1: Pool identifier

1-10 Specify the pool identifier of the storage pool definition to be changed.

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.)

***RMV** The specified pool definition is removed from the subsystem description.

***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.

Note: Changes to the size of a pool may require pages to be written to auxiliary storage. The time required for the system to complete a large change may be greater than your default wait time. If this occurs, message CPF1001 (Wait time expired for system response.) is issued, even though the change completes.

Element 3: Activity level

integer-number

Specify the maximum number of threads that can run at the same time in the pool.

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.

*SAME

The maximum number of jobs allowed at the same time in the subsystem does not change.

*NOMAX

There is no maximum number of jobs allowed at the same time 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.

*SAME

The text, if any, does not change.

*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: Use (*USE) is needed to complete format checks of the display file. This helps predict that the display will work correctly when the subsystem is started. If you are not authorized to the display file or its library, those format checks will not be performed.

Single values

*SAME

The current sign-on display file value does not change.

*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.

Top

Subsystem library (SYSLIBL)

Specifies a library that is added ahead of other libraries in the system portion of the library list of jobs started in the subsystem. This parameter allows you to use a secondary language library.

Restrictions:

1. This parameter can be changed while the subsystem is active. Any changes you make take effect for new jobs that are started. The library list of active jobs within the subsystem is not changed.
2. 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.
3. You must have *ALLOBJ and *SECADM special authority to specify a value other than *NONE for a system library list entry.

***SAME**

The system library list is not changed.

***NONE**

The secondary language library is removed from the system library list.

name Specify the name of the library being added to the system library list.

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.

*SAME

The ASP group value is not changed.

*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: Changing Storage Size and Activity Level

```
CHGSBSD  SBSDB(QGPL/PAYCTL)  POOLS((2 1500 3))
          SGNDSPF(QGPL/COMPANYA)
```

This command changes the definition of storage pool 2 that is used by subsystem PAYCTL to a storage size of 1500K and an activity level of 3. The sign-on display file is changed to display file COMPANYYA and is located in the QGPL library. If the subsystem is active when this command is issued, COMPANYYA is not used until the next time the subsystem is started.

Example 2: Changing Multiple Attributes

```
CHGSBSD  SBSDB(LIB6/ORDER)
          POOLS((1 *BASE)(2 750 4)(3 *RMV)(4 *NOSTG))
          MAXJOBS(5)
```

This command changes the maximum number of jobs that subsystem ORDER can support to five. (The description of the subsystem is stored in library LIB6.) The definition of storage pool 1 is changed to the base shared system pool, the definition of pool 2 is changed to have a storage size of 750K and an activity level of 4, the definition of pool 3 is removed from the subsystem, and the definition of pool 4 is changed to have no storage and no activity level.

Example 3: Changing the Language Library

```
CHGSBSD  SBSDB(QGPL/SPANISH)  SGNDSPF(QSYS2931/QDSIGNON)
          SYSLIBL(QSYS2931)
```

This command changes subsystem description SPANISH to a Spanish secondary language.

Error messages

*ESCAPE Messages

CPF1619

Subsystem description &1 in library &2 damaged.

CPF1691

Active subsystem description may or may not have changed.

CPF1697

Subsystem description &1 not changed.

Change Search Index (CHGSCHIDX)

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

Parameters
Examples
Error messages

The Change Search Index (CHGSCHIDX) command changes a search index. A search index is used to refer to the online help information contained in one or more panel groups. You can access online help information from user interface manager (UIM) panels, through data description specifications (DDS) by pressing the HELP key, or through the index search function.

Restrictions:

- You must have change (*CHANGE) authority to the search index that is to be changed, and use (*USE) authority for the library where the search index is located.

Top

Parameters

Keyword	Description	Choices	Notes
SCHIDX	Search index	<i>Qualified object name</i>	Required, Key, Positional 1
	Qualifier 1: Search index	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
TITLE	Display title	<i>Character value, *SAME</i>	Optional, Positional 2
TEXT	Text 'description'	<i>Character value, *SAME, *BLANK, *TITLE</i>	Optional
CHRID	Character identifier	Single values: <i>*SAME, *SYSVAL</i> Other values: <i>Element list</i>	Optional
	Element 1: Graphic character set	<i>Integer</i>	
	Element 2: Code page	<i>Integer</i>	

Top

Search index (SCHIDX)

Specifies the search index to be changed.

This is a required parameter.

Qualifier 1: Search index

name Specify the name of the search index to be changed.

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 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 located.

Top

Display title (TITLE)

Specifies the title you want to appear at the top of the display on which the search information is presented.

*SAME

The title does not change.

character-value

Specify no more than 55 characters of text, enclosed in apostrophes.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

*SAME

The text does not change.

*TITLE

The first 50 characters of the title is used as the title for the search index.

*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

*SAME

The character set and code page values do not change.

*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 used in the search index.

Element 2: Code page

integer

Specify the code page value that matches the code page of the synonyms used in the search index.

Top

Examples

```
CHGSCHIDX  SCHIDX(ACCOUNTING)  TITLE('Accounting Help Index')
           TEXT('Accounting Help Index')
```

This command changes the search index ACCOUNTING in the current library.

Top

Error messages

*ESCAPE Messages

CPF6E38

Character set and code page cannot be changed.

Top

Change Security Attributes (CHGSECA)

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

Parameters
Examples
Error messages

The Change Security Attributes (CHGSECA) command changes the security attributes of a system. This command can be issued to:

- Change the starting value for user ID numbers (UID) that are generated for user profiles.
- Change the starting value for group ID numbers (GID) that are generated for user profiles.

When the UID (user ID number) is to be changed, a search is made for the first available user ID number, starting at the specified value. When the GID (group ID number) is to be changed, a search is made for the first available group ID number, starting at the specified value. If the maximum number is reached before an available number is found, the search will wrap and continue searching starting at 101. These numbers will then be used the next time a UID or GID is generated, for example, when the Create User Profile (CRTUSRPRF) command is issued and *GEN is specified for the UID parameter or the GID parameter, or when profiles are restored. Each subsequent time a UID or GID is generated, the search starts with the last used UID or GID that was generated.

If the UID or GID parameter is not specified, or *SAME is specified, no change will be made to the starting value.

You can use this command to set the starting point for generating UIDs or GIDs on i5/OS to one value (for example 3000) and the starting point on a different system could be set to a different value (for example 5000). This facilitates generating unique UID or GID values on multiple systems in a network.

The Change User Profile (CHGUSRPRF) command or the Change User Profile UID or GID (QSYCHGID) API can be used to specify the same UID for profiles on different systems or to The same GID for profiles on different systems.

Restrictions:

- You must have security administrator (*SECADM) special authority.

Top

Parameters

Keyword	Description	Choices	Notes
UID	User ID number	101-4294967294, <u>*SAME</u>	Optional
GID	Group ID number	101-4294967294, <u>*SAME</u>	Optional

Top

User ID number (UID)

Specifies the new starting value at which a search for an available user ID (UID) number will begin.

*SAME

No change is made to the starting value for generated UIDs.

101-4294967294

Specify the new starting value at which a search for an available UID number will begin.

Top

Group ID number (GID)

Specifies the new starting value at which a search for an available group ID (GID) number will begin.

*SAME

No change is made to the starting value for generated GIDs.

101-4294967294

Specify the new starting value at which a search for an available GID number will begin.

Top

Examples

CHGSECA UID(2000) GID(3000)

User ID numbers generated after this command has run will start with the first available user ID number found with the search starting at 2000. Group ID numbers generated after this command has run will start with the first available user ID number found with the search starting at 3000.

Top

Error messages

*ESCAPE Messages

CPFB304

User does not have required special authorities.

Top

Change Security Auditing (CHGSECAUD)

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

Parameters
Examples
Error messages

The Change Security Auditing (CHGSECAUD) command allows you to change the current settings for the system values that control what is being audited on the system. If the security audit journal, QAUDJRN, does not exist when the command is issued, the security journal and its initial journal receiver are created by this command.

Restriction: You must have *ALLOBJ and *AUDIT special authorities to use this command.

Top

Parameters

Keyword	Description	Choices	Notes
QAUDCTL	QAUDCTL system value	Single values: <u>*SAME</u> , *ALL, *NONE Other values (up to 3 repetitions): *OBJAUD, *AUDLVL, *NOQTEMP	Optional
QAUDLVL	Auditing values	Single values: <u>*SAME</u> , *ALL, *DFTSET, *NONE Other values (up to 115 repetitions): *ATNEVT, *AUTFAIL, *CREATE, *DELETE, *JOBBAS, *JOBCHGUSR, *JOBDDTA, *NETBAS, *NETCLU, *NETCMN, *NETFAIL, *NETSCK, *OBJMGT, *OFCSRV, *OPTICAL, *PGMADP, *PGMFAIL, *PRTDDTA, *SAVRST, *SECCFG, *SECDIRSRV, *SECIPC, *SECNAS, *SECRUN, *SECCKD, *SECURITY, *SECVFY, *SECVLDL, *SERVICE, *SPLFDDTA, *SYSMGT	Optional
INLJRNRCV	Initial journal receiver	<i>Qualified object name</i>	Optional
	Qualifier 1: Initial journal receiver	<i>Name</i> , <u>AUDRCV0001</u>	
	Qualifier 2: Library	<i>Name</i> , <u>QGPL</u> , *CURLIB	

Top

QAUDCTL system value (QAUDCTL)

The setting for the system value QAUDCTL.

Single values

*SAME

The QAUDCTL system value does not change.

***ALL** The QAUDCTL system value is given the value of *AUDLVL, *OBJAUD, and *NOQTEMP.

Other values (up to 3 repetitions)

***NOTAVL**

The user performing the command is not allowed to display the current auditing value. You cannot change the system value to not available (*NOTAVL).

***NONE**

No security auditing is done on the system. This is the shipped value.

***OBJAUD**

Actions against objects that have an object audit value other than *NONE will be audited. An object's audit value is set through the Change Audit (CHGAUD) command or the Change Object Audit (CHGOBJAUD) command.

***AUDLVL**

The actions specified in the QAUDLVL and QAUDLVL2 system values will be logged to the security journal. Also actions specified by a user profile's action auditing values will be audited. A user profile's action auditing values are set through the AUDLVL parameter on the Change User Audit (CHGUSRAUD) command.

***NOQTEMP**

No auditing of most objects in QTEMP is done. You must specify *NOQTEMP with either *OBJAUD or *AUDLVL. You can not specify *NOQTEMP by itself.

Note:

- The QAUDJRN journal must exist in library QSYS in order to change this system value to a value other than *NONE.
- The QAUDJRN journal cannot be deleted or moved from the QSYS library until this system value is changed to *NONE.

Top

Auditing values (QAUDLVL)

The settings used for the system values QAUDLVL and QAUDLVL2.

If 16 values or less are specified, then these values will be set in system value QAUDLVL.

If more than 16 values are specified, then 15 of the specified values are set in system value QAUDLVL along with the value *AUDLVL2. The remaining values are set in system value QAUDLVL2.

Single values

***SAME**

The system values do not change.

***ALL** All values are selected (except the values that are automatically included. Example - *SECURITY includes *SECCFG so *SECCFG is not added to the system value).

***DFTSET**

The system value is given the value of *AUTFAIL, *CREATE, *DELETE, *SECURITY, and *SAVRST.

***NONE**

No security action auditing will occur on the system. This is the shipped value.

Other values (up to 115 repetitions)

***ATNEVT**

Attention events are audited. Attention events are conditions that require further evaluation to determine the condition's security significance. The following is an example:

- Intrusion monitor events need to be examined to determine whether the condition is an intrusion or a false positive

***AUTFAIL**

Authorization failures are audited. The following are some examples:

- All access failures (sign-on, authorization, job submission)
- Incorrect password or user ID entered from a device

***CREATE**

All object creations are audited. Objects created into library QTEMP are not audited. The following are some examples:

- Newly-created objects
- Objects created to replace an existing object

***DELETE**

All deletions of external objects on the system are audited. Objects deleted from library QTEMP are not audited.

***JOBBAS**

Job base functions are audited. The following are some examples:

- Job start and stop data
- Hold, release, stop, continue, change, disconnect, end, end abnormal, PSR-attached to prestart job entries

***JOBCHGUSR**

Changes to a thread's active user profile or its group profiles are audited.

***JOBDTA**

Actions that affect a job are audited. The following are some examples:

- Job start and stop data
- Hold, release, stop, continue, change, disconnect, end, end abnormal, PSR-attached to prestart job entries
- Changing a thread's active user profile or group profiles

Note: *JOBDTA is composed of two values to allow you to better customize your auditing. If you specify both of the values, you will get the same auditing as if you specified *JOBDTA. The following values make up *JOBDTA.

- *JOBBAS
- *JOBCHGUSR

***NETBAS**

Network base functions are audited. The following are some examples:

- IP rules actions
- Sockets connections
- APPN Directory search filter
- APPN end point filter

***NETCLU**

Cluster or cluster resource group operations are audited. The following are some examples:

- Add, create, and delete
- Distribution
- End
- Fail over
- List information
- Removal
- Start
- Switch

- Update attributes

***NETCMN**

Networking and communications functions are audited. The following are some examples:

- Network base functions (See *NETBAS)
- Cluster or cluster resource group operations (See *NETCLU)
- Network failures (See *NETFAIL)
- Sockets functions (See *NETSCK)

Note: *NETCMN is composed of several values to allow you to better customize your auditing. If you specify all of the values, you will get the same auditing as if you specified *NETCMN. The following values make up *NETCMN.

- *NETBAS
- *NETCLU
- *NETFAIL
- *NETSCK

***NETFAIL**

Network failures are audited. The following are some examples:

- Socket port not available

***NETSCK**

Sockets tasks are audited. The following are some examples:

- Accept
- Connect
- DHCP address assigned
- DHCP address not assigned
- Filtered mail
- Reject mail

***NOTAVL**

The user performing the command is not allowed to display the current auditing value. You cannot change the system value to not available (*NOTAVL).

***OBJMGT**

Generic object tasks are audited. The following are some examples:

- Moves of objects
- Renames of objects

***OFCSRVR**

OfficeVision are audited. The following are some examples:

- Changes to the system distribution directory
- Tasks involving electronic mail

***OPTICAL**

All optical functions are audited. The following are some examples:

- Add or remove optical cartridge
- Change the authorization list used to secure an optical volume
- Open optical file or directory
- Create or delete optical directory
- Change or retrieve optical directory attributes
- Copy, move, or rename optical file
- Copy optical directory

- Back up optical volume
- Initialize or rename optical volume
- Convert backup optical volume to a primary volume
- Save or release held optical file
- Absolute read of an optical volume

***PGMADP**

Adopting authority from a program owner is audited.

***PGMFAIL**

Program failures are audited. The following are some examples:

- Blocked instruction
- Validation value failure
- Domain violation

***PRTDTA**

Printing functions are audited. The following are some examples:

- Printing a spooled file
- Printing with parameter SPOOL(*NO)

***SAVRST**

Save and restore information is audited. The following are some examples:

- When programs that adopt their owner's user profile are restored
- When job descriptions that contain user names are restored
- When ownership and authority information changes for objects that are restored
- When the authority for user profiles is restored
- When a system state program is restored
- When a system command is restored
- When an object is restored

***SECCFG**

Security configuration is audited. The following are some examples:

- Create, change, delete, and restore operations of user profiles
- Changes to programs (CHGPGM) that will now adopt the owner's profile
- Changes to system values, environment variables and network attributes
- Changes to subsystem routing
- When the QSECOFR password is reset to the shipped value from DST
- When the password for the service tools security officer user ID is requested to be defaulted.
- Changes to the auditing attribute of an object

***SECDIRSRV**

Changes or updates when doing directory service functions are audited. The following are some examples:

- Audit change
- Successful bind
- Authority change
- Password change
- Ownership change
- Successful unbind

***SECIPC**

Changes to interprocess communications are audited. The following are some examples:

- Ownership or authority of an IPC object changed
- Create, delete or get of an IPC object
- Shared memory attach

***SECNAS**

Network authentication service actions are audited. The following are some examples:

- Service ticket valid
- Service principals do not match
- Client principals do not match
- Ticket IP address mismatch
- Decryption of the ticket failed
- Decryption of the authenticator failed
- Realm is not within client and local realms
- Ticket is a replay attempt
- Ticket not yet valid
- Remote or local IP address mismatch
- Decrypt of KRB_AP_PRIV or KRB_AP_SAFE checksum error
- KRB_AP_PRIV or KRB_AP_SAFE - timestamp error, replay error, sequence order error
- GSS accept - expired credentials, checksum error, channel bindings
- GSS unwrap or GSS verify - expired context, decrypt/decode, checksum error, sequence error

***SECRUN**

Security run time functions are audited. The following are some examples:

- Changes to object ownership
- Changes to authorization list or object authority
- Changes to the primary group of an object

***SECCKD**

Socket descriptors are audited. The following are some examples:

- A socket descriptor was given to another job
- Receive descriptor
- Unable to use descriptor

***SECURITY**

All security-related functions are audited.

- Security configuration (See *SECCFG)
- Changes or updates when doing directory service functions (See *SEC_DIRSRV)
- Changes to interprocess communications (See *SEC_IPC)
- Network authentication service actions (See *SEC_NAS)
- Security run time functions (See *SEC_RUN)
- Socket descriptor (See *SEC_CKD)
- Use of verification functions (See *SEC_VFY)
- Changes to validation list objects (See *SEC_VLDL)

Note: *SECURITY is composed of several values to allow you to better customize your auditing. If you specify all of the values, you will get the same auditing as if you specified *SECURITY. The following values make up *SECURITY.

- *SECCFG
- *SEC_DIRSRV
- *SEC_IPC

- *SECNAS
- *SECRUN
- *SECCKD
- *SECVFY
- *SECVLDL

***SECVFY**

Use of verification functions are audited. The following are some examples:

- A target user profile was changed during a pass-through session
- A profile handle was generated
- All profile tokens were invalidated
- Maximum number of profile tokens has been generated
- A profile token has been generated
- All profile tokens for a user have been removed
- User profile authenticated
- An office user started or ended work on behalf of another user

***SECVLDL**

Changes to validation list objects are audited. The following are some examples:

- Add, change, remove of a validation list entry
- Find of a validation list entry
- Successful and unsuccessful verify of a validation list entry

***SERVICE**

For a list of all the service commands and API calls that are audited, see the System i Security Reference, SC41-5302 publication.

***SPLFDA**

Spooled file functions are audited. The following are some examples:

- Create, delete, display, copy, hold, and release a spooled file
- Get data from a spooled file (QSPGETSP)
- Change spooled file attributes (CHGSPLFA command)

***SYSMGT**

System management tasks are audited. The following are some examples:

- Hierarchical file system registration
- Changes for Operational Assistant functions
- Changes to the system reply list
- Changes to the DRDA relational database directory
- Network file operations

Top

Initial journal receiver (INLJRNRCV)

The journal receiver that is created as the initial journal receiver when the security audit journal, QAUDJRN is created. This parameter is ignored if the security audit journal exists.

Qualifier 1: Initial journal receiver

AUDRCV0001

The default value for the initial journal receiver.

name The name of the journal receiver being created.

Qualifier 2: Library

QGPL The default library value for the initial journal receiver.

*CURLIB

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

name The library where the journal receiver is to be created.

Top

Examples

Warning: Temporary Level 3 Header

Example 1:

```
CHGSECAUD  QAUDCTL(*AUDLVL)  QAUDLVL(*DFTSET)
```

This command will activate system security auditing by ensuring the security journal exist, setting the QAUDCTL system value to *AUDLVL, and setting the QAUDLVL system value to the default set of values.

Example 2:

```
CHGSECAUD  QAUDCTL(*AUDLVL) +
            QAUDLVL(*AUTFAIL *CREATE *DELETE +
                    *JOBDDTA *NETBAS *NETFAIL +
                    *OBJMGT *OPTICAL *PGMADP +
                    *PGMFAIL *PRTDDTA *SAVRST +
                    *SECCFG *SECDDIRSRV *SECRUN +
                    *SERVICE *SPLFDDTA *SYSMGT)
```

This command will activate system security auditing by ensuring the security journal exist, setting the QAUDCTL system value to *AUDLVL, and setting the QAUDLVL and QAUDLVL2 system values to the specified values. QAUDLVL system value will contain *AUDLVL2, *AUTFAIL, *CREATE, *DELETE, *JOBDDTA, *NETBAS, *NETFAIL, *OBJMGT, *OPTICAL, *PGMADP, *PGMFAIL, *PRTDDTA, *SAVRST, *SECCFG, *SECDDIRSRV, *SECRUN. QAUDLVL2 system value will contain *SERVICE, *SPLFDDTA, *SYSMGT.

Top

Error messages

*ESCAPE Messages

CPF304

User does not have required special authorities.

Top

Change Shared Storage Pool (CHGSHRPOOL)

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

Parameters
 Examples
 Error messages

The Change Shared Storage Pool (CHGSHRPOOL) command changes the size, activity level, or tuning values for a shared pool. The only authority required to change a shared pool is authority to the command. When increasing the size of the shared pool, the change takes effect immediately if the shared pool is active (being used by a subsystem, by an active job, or for data) and the storage is available. If the shared pool is not active, the change takes effect when a subsystem is started using the shared pool.

Top

Parameters

Keyword	Description	Choices	Notes
POOL	Pool identifier	*MACHINE, *BASE, *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	Required, Positional 1
SIZE	Storage size	Integer, *SAME, *NOSTG	Optional, Positional 2
ACTLVL	Activity level	Integer, *SAME, *DATA	Optional, Positional 3
PAGING	Paging option	*SAME, *FIXED, *CALC	Optional, Positional 4
TEXT	Text 'description'	Character value, *SAME, *BLANK	Optional
MINFAULT	Minimum page faults	Decimal number, *SAME, *DFT	Optional
JOBFAULT	Per thread page faults	Decimal number, *SAME, *DFT	Optional
MAXFAULT	Maximum page faults	Decimal number, *SAME, *DFT	Optional
PTY	Priority	1-14, *SAME, *DFT	Optional
MINPCT	Minimum size %	0.0-100.0, *SAME, *DFT	Optional
MAXPCT	Maximum size %	0.0-100.0, *SAME, *DFT	Optional

Top

Pool identifier (POOL)

Specifies the shared pool being changed. More information about storage pools is in the Work Management and the Backup and Recovery topics in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

This is a required parameter.

*MACHINE

The machine pool used for Licensed Internal Code is changed. Only the size can be changed for the machine pool. This is the same as using the Change System Value (CHGSYSVAL) command to change the QMCHPOOL system value.

*BASE

The base pool is changed. Only the activity level can be changed for the base pool. This is the same as using the CHGSYSVAL command to change the QBASACTLVL system value.

*INTERACT

The shared pool for interactive work is changed.

*SPOOL

The shared pool used for spooled writers is changed.

*SHRPOOLnn

A general-purpose shared pool is changed. There are sixty general-purpose shared pools, identified by special values *SHRPOOL1 to *SHRPOOL60.

Top

Storage size (SIZE)

Specifies the size of the storage pool expressed in kilobyte (1KB = 1024 bytes) multiples. This is the amount of main storage that can be used by the pool. A value of at least 256 (256KB) must be specified for the storage size.

*SAME

The size does not change.

*NOSTG

No storage or activity level is defined for the pool. A pool cannot be changed to *NOSTG if it is being used by an active subsystem or active job or if the pool has reserved storage.

integer

Specify the size in kilobytes of the storage pool.

Note: Changes to the size of a pool may require pages to be written to auxiliary storage. The time required for the system to complete a large change may be greater than your default wait time. If this occurs, message CPF1001 (Wait time expired for system response.) is issued, even though the change completes.

Top

Activity level (ACTLVL)

Specifies the maximum number of threads that can run at the same time in the pool.

*SAME

The activity level does not change.

***DATA**

No threads can run in the pool. It is only used for data. A pool cannot be changed to or from *DATA if it is being used.

integer

Specify the activity level for the pool.

Top

Paging option (PAGING)

Specifies the paging option associated with the pool. The paging option determines whether the system dynamically adjusts the paging characteristics for the storage pool for optimum performance. Pools with *DATA activity level are not dynamically adjusted by the system.

***SAME**

The value does not change.

***FIXED**

The system default values are used. The system does not dynamically adjust the paging characteristics for the storage pool.

***CALC**

The system dynamically adjusts the paging characteristics for the storage pool to ensure optimum performance.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the shared pool.

***SAME**

The text does not change.

***BLANK**

No text is specified.

character-value

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

Top

Minimum page faults (MINFAULT)

Specifies the minimum page faults per second to use as a guideline for this storage pool. This value is used by the system if the QPFRADJ system value is set to 2 or 3 (automatic adjustment). Pools with *DATA activity level are not automatically adjusted by the system.

***SAME**

The value does not change.

***DFT** The minimum faulting rate guideline is set to the system default value for this pool.

decimal-number

Specify the minimum page faults per second to use for the paging guideline for this pool.

Top

Per thread page faults (JOBFAULT)

Specifies the page faults per second for each active thread to use as a guideline for this storage pool. Each job is comprised of one or more threads. A thread is counted as active when it uses CPU resource. This value is used by the system if the QPFRADJ system value is set to 2 or 3 (automatic adjustment). Pools with *DATA activity level are not automatically adjusted by the system.

*SAME

The value does not change.

***DFT** The guideline for the page faults per second for each active thread is set to the system default value for this pool.

decimal-number

Specify the page faults per second for each active thread to use for the paging guideline for this pool.

Top

Maximum page faults (MAXFAULT)

Specifies the maximum page faults per second to use as a guideline for this storage pool. This value is used by the system if the QPFRADJ system value is set to 2 or 3. Pools with *DATA activity level are not automatically adjusted by the system.

*SAME

The value does not change.

***DFT** The maximum faulting rate guideline is set to the system default value for this pool.

decimal-number

Specify the maximum page faults per second to use for the paging guideline for this pool.

Top

Priority (PTY)

Specifies the priority of this pool relative to the priority of the other storage pools. The valid range for priority is 1-14, where 1 is the highest priority and 14 is the lowest priority. This value is used by the system if the QPFRADJ system value is set to 2 or 3. Pools with *DATA activity level are not automatically adjusted by the system.

*SAME

The value does not change.

***DFT** The storage pool priority is set to the system default value for this pool.

1-14 Specify the priority of the storage pool.

Top

Minimum size % (MINPCT)

Specifies the minimum amount of storage to allocate to this storage pool (as a percentage of total main storage). This value is used by the system if the QPFRADJ system value is set to 2 or 3. Pools with *DATA activity level are not automatically adjusted by the system.

*SAME

The value does not change.

***DFT** The minimum pool size is set to the system default value for this pool.

0.0-100.0

Specify a percentage of total main storage to use as a minimum size for this storage pool.

Top

Maximum size % (MAXPCT)

Specifies the maximum amount of storage to allocate to this storage pool (as a percentage of total main storage). The maximum size of a pool is determined by this percentage and the amount of storage allocated to the other active pools. This value is used by the system if the QPFRADJ system value is set to 2 or 3. Pools with *DATA activity level are not automatically adjusted by the system.

***SAME**

The value does not change.

***DFT** The maximum pool size is set to the system default value for this pool.

0.0-100.0

Specify a percentage of total main storage to use as a maximum size for this storage pool.

Top

Examples

Example 1: Changing the Size of the Interactive Pool

```
CHGSHRPOOL  POOL(*INTERACT)  SIZE(4200)
             ACTLVL(*SAME)    PAGING(*SAME)
```

This command changes the size of the interactive pool to 4200 kilobytes. The activity level and paging option remain the same.

Example 2: Changing a Pool to Only be Used for Data

```
CHGSHRPOOL  POOL(*SHRPOOL5)  SIZE(80000)
             ACTLVL(*DATA)    TEXT('Data pool for LINUX1 NWS1')
```

This command changes Shared Pool 5 into a data pool with a size of 80000 kilobytes. The activity level will prevent any jobs from running in the pool.

Top

Error messages

*ESCAPE Messages

CPF1001

Wait time expired for system response.

CPF1076

Specified value not allowed for system value &1.

CPF1078

System value &1 not changed.

- CPF113A**
Sum of MINFAULT and JOBFAULT parameters exceeds MAXFAULT parameter.
- CPF113B**
Minimum size percentage exceeds maximum size percentage.
- CPF113C**
Private pool attributes not changed.
- CPF115D**
Shared pool &1 not changed.
- CPF1157**
Shared pool &1 not changed to *NOSTG.
- CPF1165**
Specified parameter not allowed for *MACHINE pool.
- CPF1166**
Specified parameter not allowed for *BASE pool.
- CPF1167**
ACTLVL not specified for pool &1.
- CPF1225**
SIZE not specified for pool &1.
- CPF1831**
User not authorized to change system value &1.
- CPF1864**
User not authorized to change system value &1.

Top

Change SNMP Attributes (CHGSNMPA)

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

Parameters
Examples
Error messages

The Change SNMP Attributes (CHGSNMPA) command changes values and options used by the i5/OS SNMP agent. The command also is used to specify which SNMP managers receive traps generated by the local System i5.

The SNMP agent is shipped with the following values for the SNMP attributes.

Keyword

Value

SYSCONTACT
*NONE

SYSLOC
*NONE

SNDAUTTRP
*YES

AUTOSTART
*NO

OBJACC
*READ

LOGSET
*NO

LOGGET
*NO

LOGTRP
*NO

TRPMGR
*NONE

Top

Parameters

Keyword	Description	Choices	Notes
SYSCONTACT	System contact	Character value, *SAME, *NONE, *CNTINF	Optional
SYSLOC	System location	Character value, *SAME, *NONE, *CNTINF	Optional
SNDAUTTRP	Send authentication traps	*SAME, *YES, *NO	Optional
AUTOSTART	Automatic start	*SAME, *YES, *NO	Optional
OBJACC	Object access	*SAME, *READ, *WRITE, *NONE	Optional
LOGSET	Log set requests	*SAME, *YES, *NO	Optional
LOGGET	Log get requests	*SAME, *YES, *NO	Optional
LOGTRP	Log traps	*SAME, *YES, *NO	Optional

Keyword	Description	Choices	Notes
TRPMGR	Trap managers	Single values: *SAME , *NONE Other values (up to 300 repetitions): <i>Element list</i>	Optional
	Element 1: Manager internet address	<i>Character value</i>	
	Element 2: Community name	<i>Character value</i>	
	Element 3: Translate community name	*YES , *NO	

Top

System contact (SYSCONTACT)

Specifies the name of the contact person for this System i5, along with information on how to contact this person. This value is used only by SNMP-specific functions. This value also may be read or modified by an authorized SNMP manager.

The possible values are:

***SAME**

The value does not change.

***NONE**

No system contact exists.

***CNTINF**

The value is obtained from the service contact information specified by using the Work with Contact Information (WRKCNTINF) command. The value obtained consists of the contact person and the contact telephone numbers.

system-contact

Specify the name of the contact person and other contact information. All of the characters specified must be able to be translated into the ASCII character set.

Top

System location (SYSLOC)

Specifies the physical location of this System i5. This value is used only by SNMP-specific functions. This value also may be read or modified by an authorized SNMP manager.

The possible values are:

***SAME**

The value does not change.

***NONE**

No system location information exists.

***CNTINF**

The value is obtained from the service contact information specified by using the Work with Contact Information (WRKCNTINF) command. The value obtained consists of the mailing address.

system-location

Specify the physical location of the system. All of the characters specified must be able to be translated into the ASCII character set.

Send authentication traps (SNDAUTTRP)

Specifies whether the SNMP agent may send any authenticationFailure traps to any defined SNMP managers. An authenticationFailure trap is sent by the SNMP agent if a request is received from an SNMP manager that contains a community name that is not recognized by the SNMP agent. This trap is only sent when SNDAUTTRP is *YES and when at least one trap manager has been defined. This value may also be read or modified by an authorized SNMP manager.

The possible values are:

***SAME**

The value does not change.

***YES** authenticationFailure traps may be sent.

***NO** authenticationFailure traps are not sent.

Automatic start (AUTOSTART)

Specifies whether the SNMP agent is started when the STRTCP command or STRTCPSVR SERVER(*AUTOSTART) command runs.

The possible values are:

***SAME**

The value does not change.

***YES** The SNMP agent is started when the STRTCP command or STRTCPSVR SERVER(*AUTOSTART) command runs.

***NO** The SNMP agent is not started when the STRTCP command runs.

Object access (OBJACC)

Specifies the default object access for SNMP communities.

The possible values are:

***SAME**

The value does not change.

***READ**

Allow SNMP managers that are part of a community to read all management information base (MIB) objects. Modification of MIB objects by SNMP managers is not permitted.

***WRITE**

Allow SNMP managers that are part of a community to modify all MIB objects that can be modified. Specifying *WRITE implies *READ access.

***NONE**

Do not allow SNMP managers that are part of a community to modify any MIB objects.

Log set requests (LOGSET)

Specifies the default value for whether set requests from SNMP managers in a community are logged in journal QSNMP in library QUSRSYS.

The possible values are:

***SAME**

The value does not change.

***YES** Set requests are logged.

***NO** Set requests are not logged.

Top

Log get requests (LOGGET)

Specifies the default value for whether get requests and get-next requests from SNMP managers in a community are logged in journal QSNMP in library QUSRSYS.

The possible values are:

***SAME**

The value does not change.

***YES** Get requests and get-next requests are logged.

***NO** Get requests and get-next requests are not logged.

Top

Log traps (LOGTRP)

Specifies whether traps are logged in journal QSNMP in library QUSRSYS.

The possible values are:

***SAME**

The value does not change.

***YES** Traps are logged.

***NO** Traps are not logged.

Top

Trap managers (TRPMGR)

Specifies which SNMP managers receive traps generated by this System i5.

The possible values are:

***SAME**

The value does not change.

***NONE**

No SNMP managers receive traps.

Element 1: Manager Internet Address

manager-internet-address

Specify the internet address of the SNMP manager. The address must be of the form *nnn.nnn.nnn.nnn*, where *nnn* is a decimal number ranging from 0 to 255. This address is independent of the manager internet address specified on the ADDCOMSNMP and CHGCOMSNMP commands.

Element 2: Community Name

community-name

Specify the SNMP community name to be placed in the traps sent to this SNMP manager. The community name specified in this element is independent of the community name specified on the ADDCOMSNMP, CHGCOMSNMP, and RMVCOMSNMP commands. The name may contain characters that cannot be displayed.

Element 3: Translate Community Name

- *YES** The community name is translated to ASCII characters when a trap is sent to the SNMP manager. This value should be specified when the community name consists entirely of characters that can be displayed. An error message is sent if the community name cannot be translated to ASCII characters.
- *NO** The community name is not translated to ASCII characters when a trap is sent to the SNMP manager. This value should be specified when the community name contains one or more characters that cannot be displayed.

Top

Examples

Example 1: Changing System Contact and Automatic Start

```
CHGSNMPA  SYSCONTACT('JOE SMITH, PHONE 555-1212')
          AUTOSTART(*NO)
```

This command changes the system contact information and specifies that the SNMP agent should not start when the STRTCP command runs. All other values are unchanged.

Example 2: Changing Trap Managers

```
CHGSNMPA  TRPMGR(('9.8.7.6' 'TRAPCOMMUNITY')
                ('9.8.7.5' 'TRAPCOMMUNITY2'))
```

This command causes any traps generated by the local System i5 to be sent to SNMP managers that have internet protocol addresses 9.8.7.6 and 9.8.7.5. Community name TRAPCOMMUNITY is placed in traps sent to 9.8.7.6, and community name TRAPCOMMUNITY2 is placed in traps sent to 9.8.7.5. For both managers the community name is translated to ASCII characters before being placed in the trap.

Top

Error messages

*ESCAPE Messages

TCP4001

Error occurred accessing SNMP configuration information.

TCP8050

*IOSYSCFG authority required to use &1.

[Top](#)

Change Spooled File Attributes (CHGSPLFA)

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

Parameters
Examples
Error messages

The Change Spooled File Attributes (CHGSPLFA) command allows you to change attributes of a spooled file while it is on an output queue. These changes affect only the current processing of the file. The next time the job runs and the file is produced, the file attributes are derived from the device file description, the program, and any override commands.

If the file is currently being produced on an output device, the only parameters that can be changed are COPIES, RESTART, and SAVE. An attempt to change any other parameter results in an error, and no file attributes are changed. However, if the file is being held on an output queue because of spooling attribute errors, this command can be used to change the attributes, and a spooling writer can then be started to produce the file.

See the i5/OS Information Center for more information about changing spooled file attributes.

You can change the following attributes:

- The name of the device
- The order of the spooled file entries
- The output queue of the specified file
- The type of forms to be used for printer output
- The number of copies to be produced
- The number of separator pages for this printer file
- The schedule for the output
- Whether the spooled file is to be saved after it has been written
- The output priority
- The user data that identifies the spooled file
- The alignment prompts to be used for a printer file
- The print quality for a printer file
- Whether to print the file on one or both sides of each page
- The form feed attachment to be used for a printer file
- The volume identifier used for diskette files
- The label identifier used for diskette files
- The exchange type used to write to diskette
- The character code (EBCDIC or ASCII) used for diskette

[Top](#)

Parameters

Keyword	Description	Choices	Notes
FILE	Spooled file	Name, *SELECT	Required, Key, Positional 1

Keyword	Description	Choices	Notes
JOB	Job name	Single values: * Other values: <i>Qualified job name</i>	Optional, Key, Positional 2
	Qualifier 1: Job name	<i>Name</i>	
	Qualifier 2: User	<i>Name</i>	
	Qualifier 3: Number	000000-999999	
SPLNBR	Spooled file number	1-999999, <u>*ONLY</u> , *LAST, *ANY	Optional, Key, Positional 3
JOBSYSNAME	Job system name	<i>Name</i> , <u>*ONLY</u> , *CURRENT, *ANY	Optional, Key
CRTDATE	Spooled file created	Single values: <u>*ONLY</u> , *LAST Other values: <i>Element list</i>	Optional, Key
	Element 1: Creation date	<i>Date</i>	
	Element 2: Creation time	<i>Time</i> , <u>*ONLY</u> , *LAST	
SELECT	Select files for	<i>Element list</i>	Optional
	Element 1: User	<i>Name</i> , <u>*CURRENT</u> , *ALL	
	Element 2: Print device	<i>Name</i> , <u>*ALL</u> , *OUTQ	
	Element 3: Form type	<i>Character value</i> , <u>*ALL</u> , *STD	
	Element 4: User data	<i>Character value</i> , <u>*ALL</u>	
	Element 5: ASP	1-32, <u>*ALL</u> , *ASPDEV	
ASPDEV	ASP device	<i>Name</i> , <u>*</u> , *SYSBAS, *CURASPGRP	Optional
DEV	Printer	<i>Name</i> , <u>*SAME</u> , *OUTQ	Optional
PRTSEQ	Print sequence	<u>*SAME</u> , *NEXT	Optional
FORMTYPE	Form type	<i>Character value</i> , <u>*SAME</u> , *STD	Optional
COPIES	Copies	1-255, <u>*SAME</u>	Optional
RESTART	Restart printing	<i>Integer</i> , <u>*SAME</u> , *STRPAGE, *ENDPAGE, *NEXT	Optional
VOL	Volume	Single values: <u>*SAME</u> , *NONE Other values (up to 50 repetitions): <i>Character value</i>	Optional
LABEL	Diskette label	<i>Character value</i> , <u>*SAME</u>	Optional
OUTQ	Output queue	Single values: <u>*SAME</u> , *DEV Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Output queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <u>*LIBL</u> , *CURLIB	
FILESEP	File separators	0-9, <u>*SAME</u>	Optional
PAGERANGE	Page range to print	<i>Element list</i>	Optional
	Element 1: Starting page	<i>Integer</i> , <u>*SAME</u> , *ENDPAGE	
	Element 2: Ending page	<i>Integer</i> , <u>*SAME</u> , *END	
SCHEDULE	File becomes available	<u>*SAME</u> , *JOBEND, *FILEEND, *IMMED	Optional
SAVE	Save file	<u>*SAME</u> , *NO, *YES, *IMMED	Optional
EXPDATE	Expiration date for file	<i>Date</i> , <u>*SAME</u> , *NONE, *DAYS	Optional
DAYS	Days until file expires	1-366	Optional
OUTPTY	Output priority	1-9, <u>*SAME</u> , *JOB	Optional
USRDTA	User data	<i>Character value</i> , <u>*SAME</u>	Optional
ALIGN	Align page	<u>*SAME</u> , *NO, *YES	Optional
PRTQLTY	Print quality	<u>*SAME</u> , *STD, *DEV, *DRAFT, *NLQ, *FASTDRAFT	Optional
FORMFEED	Form feed	<u>*SAME</u> , *DEV, *CONT, *CUT, *AUTOCUT, *CONT2	Optional
DRAWER	Source drawer	1-255, <u>*SAME</u> , *E1, *FORMDF	Optional
FIDELITY	Print fidelity	<u>*SAME</u> , *ABSOLUTE, *CONTENT	Optional
DUPLEX	Print on both sides	<u>*SAME</u> , *NO, *YES, *TUMBLE, *FORMDF	Optional

Keyword	Description	Choices	Notes
MULTIUP	Pages per side	1-4, <u>*SAME</u>	Optional
PAGDFN	Page definition	Single values: <u>*SAME</u> , *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Page definition	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <u>*LIBL</u> , *CURLIB	
FORMDF	Form definition	Single values: <u>*SAME</u> , *NONE, *DEVVD, *INLINE, *INLINED Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Form definition	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <u>*LIBL</u> , *CURLIB	
AFPCHARS	AFP Characters	Single values: <u>*SAME</u> , *NONE Other values (up to 4 repetitions): <i>Character value</i>	Optional
FRONTOVL	Front side overlay	Single values: *NONE Other values: <i>Element list</i>	Optional
	Element 1: Overlay	Single values: <u>*SAME</u> Other values: <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>*SAME</u>	
	Element 3: Offset across	0.0-57.79, <u>*SAME</u>	
BACKOVL	Back side overlay	Single values: *FRONTOVL, *NONE Other values: <i>Element list</i>	Optional
	Element 1: Overlay	Single values: <u>*SAME</u> Other values: <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>*SAME</u>	
	Element 3: Offset across	0.0-57.79, <u>*SAME</u>	
	Element 4: Constant back	<u>*SAME</u> , *NOCONSTANT, *CONSTANT	
USRDFNOPT	User defined option	Single values: <u>*SAME</u> , *NONE Other values (up to 4 repetitions): <i>Character value</i>	Optional
USRDFNDTA	User Defined Data	<i>Character value</i> , <u>*SAME</u> , *NONE	Optional
USRDFNOBJ	User defined object	Single values: *NONE, <u>*SAME</u> Other values: <i>Element list</i>	Optional
	Element 1: Object	<i>Qualified object name</i>	
	Qualifier 1: Object	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <u>*LIBL</u> , *CURLIB	
	Element 2: Object type	*DTAARA, *DTAQ, *FILE, *PSFCFG, *USRIDX, *USRQ, *USRSFC	
IPDSPASTHR	IPDS pass through	<u>*SAME</u> , *DEVVD, *NO, *YES	Optional
FNTRSL	Font resolution for formatting	<u>*SAME</u> , *DEVVD, *SEARCH, 240, 300	Optional
EXCHTYPE	Diskette file exchange type	<u>*SAME</u> , *STD, *BASIC, *H, *I	Optional
CODE	Code	<u>*SAME</u> , *EBCDIC, *ASCII	Optional

Top

Spooled file (FILE)

Specifies the spooled file that is having its attributes changed.

This is a required parameter.

***SELECT**

All spooled files that meet the selection values specified on the **Select files for (SELECT)** parameter are changed. This value is mutually exclusive with a value specified on the **Job name (JOB)** parameter, **Spooled file number (SPLNBR)** parameter, **Job system name (JOBSYSNAME)** parameter, or **Spooled file created (CRTDATE)** parameter.

name Specify the name of the spooled file.

Top

Job name (JOB)

Specifies the job that created the spooled file.

Single values

***** The job that created the spooled file issued this command.

Qualifier 1: Job name

name Specify the name of the job that contains the spooled file.

Qualifier 2: User

name Specify the user name that identifies the user profile under which the job is run.

Qualifier 3: Number

000000-999999

Specify the system-assigned job number.

Top

Spooled file number (SPLNBR)

Specifies the unique number of the spooled file in the job whose attributes are being changed.

***ONLY**

Only one spooled file in the job has the specified file name; therefore, the number of the spooled file is not necessary.

***LAST**

If there is more than one spooled file with the specified file name the one with the highest number is the file whose attributes are changed.

***ANY** The spooled file number is not used to determine which spooled file is used. Use this value when the job system name parameter or the spooled file create date and time parameter is to take precedence over the spooled file number when selecting a spooled file.

1-999999

Specify the number of the spooled file that matches the file name whose attributes you wish to change.

Top

Job system name (JOBSYSNAME)

Specifies the system where the job that created the spooled file (JOB parameter) ran. This parameter is considered after the job name, user name, job number, spooled file name, and spooled file number parameter requirements have been met.

*ONLY

There is one spooled file with the specified job name, user name, job number, spooled file name, spooled file number, and spooled file create date and time.

*CURRENT

The spooled file created on the current system with the specified job name, user name, job number, spooled file name, spooled file number, and create date and time is used.

***ANY** The job system name is not used to determine which spooled file is used. Use this value when the spooled file create date and time parameter is to take precedence over the job system name when selecting a spooled file.

name Specify the name of the system where the job that created the spooled file ran.

Top

Spooled file created (CRTDATE)

Specifies the date and time the spooled file was created. This parameter is considered after the job name, user name, job number, spooled file name, spooled file number, and job system name parameter requirements have been met.

Single values

*ONLY

There is one spooled file with the specified job name, user name, job number, spooled file name, spooled file number, and job system name.

*LAST

The spooled file with the latest create date and time of the specified job name, user name, job number, spooled file name, spooled file number, and job system name is used.

Element 1: Creation date

date Specify the date the spooled file was created.

Element 2: Creation time

*ONLY

There is one spooled file with the specified job name, user name, job number, spooled file name, spooled file number, job system name, and spooled file create date.

*LAST

The spooled file with the latest create time of the specified job name, user name, job number, spooled file name, spooled file number, job system name, and spooled file create date is used.

time Specify the time the spooled file was created.

Top

Select files for (SELECT)

Specifies which files have their attributes changed. This parameter allows you to process more than one file at a time. Positional values can be specified to select the files: the user that created the file, the device that the file is queued for, the form type specified, the user data tag associated with the file, or the auxiliary storage pool the file is in. Only files that meet each of the values are selected.

Element 1: User

*CURRENT

Only files created by the user running this command are selected.

***ALL** Files created by all users are selected.

name Specify a user name. Only files created by that user name are selected.

Element 2: Print device

***ALL** Files on any device-created or user-created output queue are selected.

***OUTQ**

All files on any user-created output queue are selected. A user-created output queue is any output queue that is not automatically created by a device. A user-created output queue does not generally have the same name as a device, but if it does, it does not reside in library QUSRSYS.

name Specify a device name. Only files on the device created output queue for that device are selected. A device created output queue is one that has the same name as a device and resides in the QUSRSYS library. Unless it already exists, it will automatically be created by the system when the device is created. A device created output queue cannot be deleted.

Element 3: Form type

***ALL** Files for all form types are selected.

***STD** Only files that specify the standard form type are selected.

form-type

Specify the form type to select the file.

Element 4: User data

***ALL** Files with any user data tag specified are selected.

user-data

Specify the user data tag to select the file.

Element 5: ASP

***ALL** All files as specified in the Auxiliary Storage Pool Device (ASPDEV) parameter are selected.

***ASPDEV**

Files specified in the Auxiliary Storage Pool Device (ASPDEV) parameter are selected.

1-32 Specify the auxiliary storage pool (ASP) of the files being selected.

Top

ASP device (ASPDEV)

Specifies the auxiliary storage pool device from which spooled files are to be selected. This parameter is only valid if the ASP number (ASP) element of the SELECT parameter is *ALL or *ASPDEV.

***** Files which are found in the ASPs that are currently part of the thread's library name space are

selected. 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.

***SYSBAS**

Files which are found in the system ASP (ASP 1) and all defined basic user ASPs (ASPs 2-32) are selected.

***CURASPGRP**

Files which are found in the primary and secondary ASPs in the thread's ASP group are selected. If no ASP group is associated with the thread, an error will be issued.

name Specify the name of the auxiliary storage pool device description. Files which are found in the specified primary or secondary ASP are selected. Only primary or secondary ASPs which are in the thread's ASP group may be specified. If no ASP group is associated with the thread, an error will be issued.

Top

Printer (DEV)

Specifies the printer that is used to print the file.

***SAME**

The current value does not change.

***OUTQ**

The file is not assigned to a specific printer. Instead, it is placed on the output queue specified on the **Output queue (OUTQ)** parameter.

name Specify the name of the printer that will print this file.

Top

Print sequence (PRTSEQ)

Specifies whether the file is the next file on the output queue to be printed.

A value here is mutually exclusive with a value on the **File becomes available (SCHEDULE)** parameter or **Output priority (OUTPTY)** parameter.

***SAME**

The file is not explicitly moved to the top. Changes to the SCHEDULE parameter or OUTPTY parameter may cause the position of the file on the output queue to change.

***NEXT**

The attributes of the file (or files) are changed so that they are moved to the top of the output queue. If PRTSEQ(*NEXT) is specified when the SELECT parameter is specified, files with selection values are moved ahead of the files that do not meet the requirements. Two files that are both moved may change their relative positions on the output queue.

Top

Form type (FORMTYPE)

Specifies the type of forms used in the printer.

***SAME**

The type of forms does not change.

***STD** The standard form used at your computer system is used to produce this spooled file.

form-type

Specify the type of form you wish to use to print the output of this spooled file. If the name of the form type includes embedded blanks, you must enclose it in apostrophes.

Top

Copies (COPIES)

Specifies, for spooled output only, the number of copies of the output being printed.

Note: If you specify a value while a file is being printed the number of copies you specify are printed in addition to the number of copies that have already been printed.

***SAME**

The number of copies remains unchanged.

1-255 Specify the number of identical copies to print.

Top

Restart printing (RESTART)

Specifies the page on which you wish to restart printing. Specifying a value while a file is being printed causes the writer to stop printing the file and restart on the specified page. If a file is not being printed, this change takes effect when the first copy is printed. After the writer repositions to the page specified by this parameter, the value for this parameter is reset to *STRPAGE.

***SAME**

The page on which to restart printing does not change.

***STRPAGE**

The first page specified on the **Page range to print (PAGERANGE)** parameter is the page on which to restart printing.

***ENDPAGE**

The starting page to print is the ending page to print. Only the end page is printed.

***NEXT**

The page following the last page printed is the page on which to restart printing. If printing has not been interrupted, the starting page will be used.

Note: You can determine the last page printed by using the Work with Spooled File Attributes (WRKSPLFA) command. This value will be accurate when the writer has been ended *PAGEEND or the file has been held *PAGEEND. This value may not be accurate if the writer has been ended *IMMED or the spooled file has been held *IMMED.

restart-page

Specify the page on which to restart printing.

Top

Volume (VOL)

Specifies, for diskette output files only, one or more volume identifiers of the diskettes on which this spooled file will be written. The diskettes (volumes) must be put into the device in the same order as the identifiers are specified here; a message is sent to the system operator if the order is different.

*SAME

The volume identifiers associated with the spooled file are not changed.

*NONE

No diskette volume identifiers are specified. This file is written on the first available diskette, based on the diskette writer's current position. No volume identifier checking is performed.

volume-identifier

Specify the identifier of one or more volumes in the order in which they are inserted and used for this file. Each volume identifier contains a maximum of six characters. A blank is used as the separator character when listing multiple identifiers.

If less than ten identifiers were initially specified for the diskette unit file, a maximum of ten can be specified here. If more than ten volume names were specified when the file was first opened, only that number of volumes can be entered on the change command. The maximum number of volumes allowed in the list is 50. You can always specify at least 10 volumes.

Top

File label (LABEL)

Specifies, for diskette output files only, the data file identifier of the data file written on diskette from this spooled file. The data file identifier is stored in a label in the volume label area of the diskette.

*SAME

The data file identifier associated with the spooled file remains the same.

data-file-identifier

Specify the identifier (8 characters maximum) to be assigned to the data file that will be written on the diskette.

Top

Output queue (OUTQ)

Specifies the output queue to which the spooled file is moved. This parameter is used only when the specified file is moved from one output queue to another.

Note: If the spooled file is currently on an output queue for which DSPDTA(*OWNER) is specified, you must own the file or have *SPLCTL authority to move it.

Single values

*SAME

The file remains on the same output queue.

***DEV** The output queue associated with the printer device for the spooled file is used.

Qualifier 1: Output queue

name Specify the name of the output queue to which the spooled file is moved.

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 output queue. If no current library entry exists in the library list, QGPL is used.

name Specify the name of the library in which the output queue is located.

Top

File separators (FILESEP)

Specifies the number of separator pages to produce at the beginning of each file so you can separate this file from the other files being printed. The identifying information included on each file separator is the file name, file number, the name of the job and number, and the user's name.

*SAME

The number of separator pages does not change.

0-9 Specify the number of pages that are used as file separators.

Top

Page range to print (PAGERANGE)

Specifies the page range to print for each copy of the file.

Restriction This parameter will be ignored by diskette writers when printer spooled files are redirected.

Element 1: Starting page

*SAME

The starting page does not change.

*ENDPAGE

The starting page to print is the ending page to print. Only the ending page is printed.

integer

Specify the starting page to printed.

Element 2: Ending page

*SAME

The ending page does not change.

*END The last page of the file is the ending page to print.

integer

Specify the ending page to print.

Top

File becomes available (SCHEDULE)

Specifies when the spooled file is made available to the writer.

*SAME

The schedule attribute of the spooled file does not change.

*JOBEND

The spooled file is made available to the writer only after the entire job is completed.

*FILEEND

The spooled file is made available to the writer as soon as the file has been closed in the program.

***IMMED**

The spooled output file is made available to the writer as soon as the file is opened in the program.

Top

Save file (SAVE)

Specifies whether the spooled file is saved after it has been written to an output device.

***SAME**

The save attribute of the spooled file does not change.

***NO** The spooled file data is not held on the output queue after it has been produced.

***YES** The spooled file data is held on the output queue until the file is deleted. After the file is produced, the number of copies is set to 1, and the status of the file is changed from WTR to SAV. Refer to the Release Spooled File (RLSSPLF) command for information on how to produce the spooled file again.

***IMMED**

The spooled file status is changed to SAV immediately, without being produced. The spooled file data is held on the output queue until the file is deleted. If the file is currently being produced on an output device or ***NEXT** is specified on the **Print sequence (PRTSEQ)** parameter, **SAVE(*YES)** will be used. Refer to the Release Spooled File (RLSSPLF) command for information on how to produce the spooled file again.

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.

***SAME**

The expiration date does not change.

***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 this command is executed.

Top

Output priority (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.

*SAME

The current value does not change.

***JOB** The output priority associated with the job that created the spooled file is used.

1-9 Specify the output priority assigned. Valid values range from 1 (highest) to 9 (lowest).

Top

User data (USRDTA)

Specifies, for spooled output, user-specified data that identifies the file.

*SAME

The current value does not change.

character-value

Specify up to 10 characters of data assigned to the spooled file.

Top

Align page (ALIGN)

Specifies whether to verify forms alignment on this file. This parameter is only used by printer writers which were started with *FILE specified on the **Align page (ALIGN)** parameter.

*SAME

The current value for forms alignment verification does not change.

***NO** The forms alignment is not verified.

***YES** The forms alignment is verified.

Top

Print quality (PRTQLTY)

Specifies the quality of the print to be produced. Not all printers support this parameter. Refer to the Create Printer File (CRTPRTF) command to determine which printers are supported.

*SAME

The print quality associated with the spooled file remains the same.

***STD** The output is printed with standard quality.

***DRAFT**

The output is printed with draft print quality.

***NLQ** The output is printed with near letter quality.

***DEV**

The output is printed with the default print quality for the printer.

***FASTDRAFT**

The output is printed at a higher speed and with lower quality than it would be if you specified *DRAFT.

Top

Form feed (FORMFEED)

Specifies the form feed attachment used for this spooled file. This parameter determines how forms are fed into the printer. Not all printers support this parameter. Refer to the Create Printer File (CRTPRTF) command to determine if this parameter is supported.

***SAME**

The value does not change.

***DEV**

The forms are fed into the printer in the manner specified in the device description for that printer.

***CONT**

Continuous forms are used by the printer (the tractor feed attachment must be present).

***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. For cut sheets, the forms alignment message is not issued.

***AUTOCUT**

Single-cut sheets are automatically fed into the printer (the sheet-feed attachment must be attached). For cut sheets, the forms alignment message is not issued.

Top

Source drawer (DRAWER)

Specifies the source drawer used when single-cut sheets are fed into the printer (specified by FORMFEED(*AUTOCUT)).

***SAME**

The value does not change.

***E1**

The envelopes are fed from the envelope drawer on the sheet-feed paper handler.

***FORMDF**

The form definition specifies the drawer from which the paper is fed.

1-255 Specify the drawer from which the paper is fed.

Top

Print fidelity (FIDELITY)

Specifies the print fidelity that will be maintained for this file.

***SAME**

The print fidelity does not change.

***ABSOLUTE**

The file is printed exactly as intended. Printing is stopped if an error is encountered in the data stream.

***CONTENT**

Errors in the data stream are overridden, if possible, and printing is continued.

Top

Print on both sides (DUPLEX)

Specifies whether output is printed on one side or two sides of the paper.

***SAME**

The duplex value does not change.

***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.

***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 used for output that will be bound at the top.

***FORMDF**

The duplex value specified in the form definition is used. This value is valid only with printer device types of *AFPDS, *AFPDSLIN, or *LINE.

Top

Pages per side (MULTIUP)

Specifies, for spooled files, whether or not multiple pages of output are printed on each physical page. This parameter is used only when the printer device type is *SCS, *IPDS, or *AFPDS and the spooled file was created on an IBM System i.

Note: This parameter cannot change when the value for Reduce output (REDUCE) is *NONE. You can determine the value of Reduce output by using the Work with Spooled File Attributes (WRKSPLFA) command.

***SAME**

The number of pages of output printed per physical page does not change.

1 One page of output is printed for every physical page.

2 Two pages of output are printed for every physical page.

4 Four pages of output are printed for every physical page.

Top

Page definition (PAGDFN)

Specifies the page definition to be used to format line data.

Single values

*SAME

The value does not change.

*NONE

No page definition is specified.

Because PSF requires a page definition when *LINE or *AFPDSLINe is specified, an inline page definition is built from the print file parameters and passed to PSF 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 *AFPDSLINe, *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.

Single values

*SAME

The value does not change.

*NONE

No form definition is used.

Because PSF requires a form definition, an inline form definition is built from the print file parameters and passed to PSF when *NONE is specified.

*DEVd

The name of the form definition is specified in the printer device description.

*INLINE

The form definition is searched for inline. If no inline form definition exists, the file will not print.

*INLINED

The form definition is searched for inline. If none exists, the *DEVd form definition is used.

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

*SAME

The value does not change.

*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

Front side overlay (FRONTOVL)

Specifies the overlay object to be printed on the front side of the page, and where on the page to place the overlay.

Single values

*NONE

No overlay is to be used.

Element 1: Overlay

Single values

*SAME

The front overlay value does not change.

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, QGPL is used.

name Specify the name of the library where the overlay is located.

Element 2: Offset down

*SAME

The offset down does not change.

0.0-57.79

Specify the point where the overlay is placed. The offset down value specifies the vertical position. Valid values range from 0 through 57.79 if the unit of measure is centimeters, or 0 through 22.75 if the unit of measure is inches. If no value is specified, the system sets the offset to 0.

Element 3: Offset across

*SAME

The offset across does not change.

0.0-57.79

Specify the point where the overlay is placed. The offset across value specifies the horizontal position. Valid values range from 0 through 57.79 if the unit of measure is centimeters, or 0 through 22.75 if the unit of measure is inches. If no value is specified, the system sets the offset to 0.

Top

Back side overlay (BACKOVL)

Specifies the qualified name of the object that contains both the the overlay to be printed on the back side of the page and the offset, down and across, form the point of origin used when the overlay is printed. This parameter is used only when the printer device is *SCS or *IPDS.

Single values

*FRONTOVL

The value specified for the **Front side overlay (FRONTOVL)** parameter is used.

*NONE

No overlay is used.

Element 1: Overlay

Single values

*SAME

The back overlay value does not change.

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, QGPL is used.

name Specify the name of the library where the overlay is located.

Element 2: Offset down

*SAME

The offset down does not change.

0.0-57.79

Specify the offset down from the point of origin at which to begin printing. If UOM(*CM) was specified on the CRTPRTF command when this file was created, valid values range from 0 through 57.79 and if UOM(*INCHES) was specified, valid values range from 0 through 22.57.

Element 3: Offset across

*SAME

The offset across does not change.

0.0-57.79

Specify the offset across from the point of origin at which to begin printing the overlay. If UOM(*CM) was specified on the CRTPRTF command when this file was created, valid values range from 0 through 57.79 and if UOM(*INCHES) was specified, valid values range from 0 through 22.57.

Element 4: Constant back

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 blank pages 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 print application is printed on the pages. This value is not changeable if MULTIUP is not 1. The constant back function is only supported for duplex printing. It is ignored when DUPLEX(*NO) is specified on the printer file.

Note: 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.

*SAME

The value does not change.

*NOCONSTANT

The constant back function is not performed.

*CONSTANT

The constant back function is performed.

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

*SAME

The value does not change.

*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.

*SAME

The value does not change.

*NONE

No user-defined data is specified.

character-value

Specify 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)

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

*SAME

The value does not change.

*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

IPDS pass through (IPDSPASTHR)

Specifies whether IPDS (Intelligent Printer Data Stream) pass-through is done for the spooled file.

***SAME**

The value does not change.

***DEV D**

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 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 using Print Services Facility for OS/2's Distributed Print Function.

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(*DEVDD) in the printer file. If you specify a value of anything other than *DEVDD for the IPDSPASTHR parameter, any IPDS pass-through value in the USRDFNDDTA parameter is ignored.

Top

Font resolution for formatting (FNTRSL)

Specifies the resolution PSF should use to print the spooled file when printing to a multiple resolution printer and 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.

For more information regarding the algorithm used for searching a library list for a font resource, see the Printing category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/> in the section entitled "User and Device Resource Library Lists" in the chapter called "Working With PSF Configuration Objects".

*SAME

The value does not change.

*DEVDD

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.

300 The font resolution is 300 pels per inch.

Top

Diskette file exchange type (EXCHTYPE)

Specifies, for diskette output files only, the exchange type used to write the spooled file. This parameter determines the format and record length of the data being written to diskette. If you are going to read this diskette on another type of system, make sure this format is compatible with the other system.

*SAME

The current value does not change.

*STD The BASIC exchange format is used for a type 1 or a type 2 diskette. The H exchange type is used for a type 2D diskette.

*BASIC

The BASIC exchange type is used.

*H The H exchange type is used.

*I The I exchange type is used.

Top

Code (CODE)

Specifies, for diskette output files only, the type of character code used when this spooled file is written to diskette.

*SAME

The type of character code associated with the spooled file remains the same.

*EBCDIC

The EBCDIC character code is used with this spooled file.

*ASCII

The ASCII character code is used.

Top

Examples

Example 1: Moving a File to Another Queue

```
CHGSPLFA FILE(SALES) JOB(000147/JONES/BILLING) OUTQ(QPRINT2)
          FORMTYPE('1140-6')
```

This command moves the file named SALES (of the BILLING job numbered 000147) from the present queue to the QPRINT2 queue. It also changes the forms identifier to 1140-6, which means that this form type is used in the printer.

Example 2: Changing Number of Output Copies

```
CHGSPLFA FILE(DEPT511) COPIES(2) FILESEP(5)
```

This command changes the attributes of the spooled file DEPT511 that is produced by the submitter's job. It changes the number of output copies to 2 and specifies that five separator pages precede each copy.

Example 3: Changing Starting and Ending Pages to Print

```
CHGSPLFA FILE(DEPT481) PAGERANGE(99 100)
```

This command changes the attributes of the spooled file, DEPT481. It changes the starting and ending pages that are to be printed. Now, only pages 99 and 100 of each copy of the file is printed.

Example 4: Starting on a Specific Page

```
CHGSPLFA FILE(DEPT481) RESTART(5)
```

This command restarts printing spooled file DEPT481 on page 5. All of the copies that follow are printed from the specified starting page to ending page. If the file is in WTR status, the writer stops printing the

current copy and restarts printing on page 5. The page specified on the RESTART parameter must be within the range specified on the PAGERANGE parameter.

Example 5: Restarting on the Next Page

```
CHGSPLFA FILE(DEPT481) RESTART(*NEXT)
```

This command restarts the printing job on the page following the last page printed when the job was interrupted. All of the copies that follow are printed from the specified starting page to ending page. The file must not be in WTR status. If the file is in WTR status, this command is rejected and a message is sent to the user. RESTART(*NEXT) is not valid when a file is being processed by a writer.

Top

Error messages

*ESCAPE Messages

CPF337E

ASP device &1 not in current ASP group for thread.

CPF337F

ASP device &1 not allowed with ASP number &2.

CPF339F

Expiration date must be today or a date in the future.

CPF2207

Not authorized to use object &1 in library &3 type *&2.

CPF33AD

Target spooled file &1 not last spooled file in ready status. Source spooled file not moved.

CPF33A6

Spooled file &1 selected by writer. Spooled file not moved.

CPF33A7

Spooled file &1 number &8 in job &5/&4/&3 not moved.

CPF33A8

Spooled file &1 specified more than once. Spooled file not moved.

CPF33A9

Target spooled file &1 changed output queue. Source spooled file not moved.

CPF33C2

Moving spooled files to the top allowed only for output queues with SEQ(*FIFO).

CPF33C3

Priority required to move spooled file exceeds user's limit.

CPF33C4

Spooled file &1 held by HLDJOB command. Spooled file not moved.

CPF33C5

Target spooled file &1 selected by writer. Source spooled file not moved.

CPF33C6

Priority required to move file exceeds user's limit.

CPF33C7

Cannot move file ahead of other users' files.

CPF33D0
Printer &1 does not exist.

CPF33D1
User &1 does not exist.

CPF33F0
Not authorized to move spooled file.

CPF3303
File &1 not found in job &5/&4/&3.

CPF3309
No files named &1 are active.

CPF3330
Necessary resource not available.

CPF3335
File &1 number &8 attributes not changed.

CPF334A
Specified user defined object &1 not valid. See previous messages.

CPF3340
More than one file with specified name found in job &5/&4/&3.

CPF3341
File &1 number &8 attributes not changed.

CPF3342
Job &5/&4/&3 not found.

CPF3343
Duplicate job names found.

CPF3344
File &1 number &8 no longer in the system.

CPF3401
Cannot change COPIES for files in PRT or SND status.

CPF3464
Not authorized to output queue &1 in library &2.

CPF3492
Not authorized to spooled file.

CPF9825
Not authorized to device &1.

CPF9833
*CURASGRP or *ASPGRPPRI specified and thread has no ASP group.

CPFB8ED
Device description &1 not correct for operation.

Top

Change Source Physical File (CHGSRCPF)

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

Parameters
 Examples
 Error messages

The Change Source Physical File (CHGSRCPF) command changes the attributes of a source physical file and all its members. The changed attributes are used for all members subsequently added to the file unless other values are specified or default for the add operation.

Restrictions:

- To change a source physical file, you must have object management (*OBJMGT) authority or object alter (*OBJALTER) authority to the file and execute (*EXECUTE) authority to the library.
- To change the file, an exclusive lock is necessary; no one may be using the file for any purpose.

Top

Parameters

Keyword	Description	Choices	Notes
FILE	Physical file	<i>Qualified object name</i>	Required, Key, Positional 1
	Qualifier 1: Physical file	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
SYSTEM	System	<i>*LCL, *RMT, *FILETYPE</i>	Optional, Key
EXPDTE	Expiration date for member	<i>Date, *SAME, *NONE</i>	Optional
MAXMBRS	Maximum members	<i>Integer, *SAME, *NOMAX</i>	Optional
ACCPHSIZ	Access path size	<i>*SAME, *MAX4GB, *MAX1TB</i>	Optional
MAINT	Access path maintenance	<i>*SAME, *IMMED, *REBLD, *DLY</i>	Optional
RECOVER	Access path recovery	<i>*SAME, *NO, *AFTIPL, *IPL</i>	Optional
FRCACPTH	Force keyed access path	<i>*SAME, *NO, *YES</i>	Optional
SIZE	Member size	Single values: *NOMAX Other values: <i>Element list</i>	Optional
	Element 1: Initial number of records	1-2147483646, <i>*SAME</i>	
	Element 2: Increment number of records	0-32767, <i>*SAME</i>	
	Element 3: Maximum increments	0-32767, <i>*SAME</i>	
ALLOCATE	Allocate storage	<i>*NO, *YES, *SAME</i>	Optional
UNIT	Preferred storage unit	1-255, <i>*SAME, *ANY</i>	Optional
FRCRATIO	Records to force a write	<i>Integer, *SAME, *NONE</i>	Optional
WAITFILE	Maximum file wait time	<i>Integer, *SAME, *IMMED, *CLS</i>	Optional
WAITRCD	Maximum record wait time	<i>Integer, *SAME, *IMMED, *NOMAX</i>	Optional
SHARE	Share open data path	<i>*SAME, *NO, *YES</i>	Optional
DLTPCT	Max % deleted records allowed	1-100, *NONE, <i>*SAME</i>	Optional
TEXT	Text 'description'	<i>Character value, *SAME, *BLANK</i>	Optional
CCSID	Coded character set ID	1-65535, <i>*SAME, *HEX</i>	Optional

Physical file (FILE)

Specifies the physical file to be changed.

Note: If a Distributed Data Management (DDM) file is specified, the name of the physical file to be changed and the name of the remote system on which the file is to be changed are contained in the DDM file. For more information, see the **System (SYSTEM)** parameter of this command.

This is a required parameter.

Qualifier 1: Physical file

name Specify the name of the physical 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 used to locate the 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 to be searched.

Top

System (SYSTEM)

Specifies whether the physical file is changed on the local system or the remote system.

***LCL** The physical file is changed on the local system.

***RMT** The physical file is changed on a remote system using distributed data management (DDM). The physical file name specified on the **Physical file (FILE)** parameter must be the name of the DDM file that identifies the name of the physical file to be changed and the name of the remote system on which the file is to be changed.

***FILETYPE**

If the name specified on the FILE parameter is a DDM file, the physical file is changed on the remote system specified by the **Remote location (RMTLOCNAME)** parameter of the DDM file. If the name specified on the FILE parameter is not a DDM file, the physical file on the local system with that name is changed.

Top

Expiration date for member (EXPDATE)

Specifies the expiration date of all the file's members. If an expiration date is specified, all members in the file are changed. You can specify a new expiration date for a member that has exceeded its expiration date by changing this parameter. The expiration date must be later than or equal to the current date.

***SAME**

The expiration date of the file does not change.

***NONE**

No expiration date is specified.

date Specify the date after which the file members should not be used. The date must be specified in the job-date format.

Top

Maximum members (MAXMBRS)

Specifies the maximum number of members that the physical file can have at any time. The maximum number of members specified must be greater than or equal to the current number of members in the file.

*SAME

The maximum number of members in the file does not change.

*NOMAX

No maximum is specified for the number of members; the system maximum of 32,767 members per file is used.

integer

Specify the maximum number of members that the physical file can have. Valid values range from 1 through 32767.

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 database 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.

Changing the value for this file causes the access paths that are owned by the file to be rebuilt.

Note: This parameter does not apply to access paths that are created for queries that refer to the data in the file.

Performance Tip

For optimum performance, consider whether there is high contention for keys within the access path when selecting the value on this parameter:

- When there is little or no contention for keys, specifying the *MAX4GB value generally provides better performance.
- When there is high contention for keys, specifying the *MAX1TB value generally provides better performance.

*SAME

The value does not change.

*MAX4GB

The access paths associated with this file can occupy a maximum of four gigabytes (4,294,966,272 bytes) of auxiliary storage. This value provides compatibility with releases of the operating system earlier than Version 3 Release 6 Modification 0.

*MAX1TB

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

Access path maintenance (MAINT)

Specifies the type of access path maintenance used for all members of the physical file. This parameter is valid only if the file has a keyed access path.

*SAME

The access path maintenance of the file does not change.

*IMMED

The access path is continuously (immediately) maintained for each physical file member. The path is changed each time a record is changed, added to, or deleted from the member. *IMMED is specified for all files requiring unique keys to ensure uniqueness in all inserts and changes.

*REBLD

The access path is rebuilt when a file member is opened. The access path is continuously maintained until the member is closed; then the access path maintenance is ended. *REBLD is not valid for access paths that contain unique key values.

***DLY** The maintenance of the access path is delayed until the member is opened for use. Then the access path is changed only for records that were added, deleted, or changed since the file was last closed. (While the file is open, all changes made to based-on members are immediately reflected in the access paths of the members of the opened files, no matter what is specified for the **Access path maintenance (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 between a close operation and the next open operation are small (when 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% 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 done if a system failure occurs while the access path is being changed. This parameter is valid only if a keyed access path is used.

*SAME

The recovery attribute of the file does not change.

***NO** The access path of the file is not rebuilt. The file's access path, if not valid, is rebuilt when the file is opened.

*AFTIPL

The file has its access path rebuilt after the IPL operation is completed. This option allows other jobs not using this file to begin processing immediately after the IPL is completed.

***IPL** The file has its access path 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 are started until after all files that specify *IPL have their access paths rebuilt.

Top

Force keyed access path (FRCACPTH)

Specifies, for files with keyed access paths only, whether access path changes are forced to auxiliary storage along with the associated records in the file. Specifying *YES minimizes (but does not remove) the chance that an abnormal end will cause damage to the access path, which then requires it to be rebuilt.

*SAME

The force access path attribute of the file does not change.

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

***YES** The changed access path and changed records are forced to auxiliary storage whenever the access path is changed. If this value is specified, *REBLD must not be 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 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).

The maximum number of records for the member (initial number of records plus the increment number of records times the maximum increments) must be larger than the current number of records in the member. If it is smaller than the current number of records in the member, an error message is sent, and the maximum number of records for the member does not change.

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 *YES is in effect for the ALLOCATE attribute of the physical file, this option cannot be specified

Element 1: Initial number of records

*SAME

The value does not change.

1-2147483646

Specify the number of records that can be inserted before an automatic extension occurs. If automatic extensions are not wanted, enter zeros for the second and third values in the list.

Element 2: Increment number of records

*SAME

The value does not change.

0-32767

Specify a value for 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.

Enter a 0 value to prevent automatic extensions. This value must be 0 if the value for the maximum increments is 0.

Element 3: Maximum increments

***SAME**

The value does not change.

0-32767

Specify the maximum number of increments that can be automatically added to the member(s). Enter a 0 value to prevent automatic extensions. If the increment number of records value is 0, this value must also be 0.

Top

Allocate storage (ALLOCATE)

Specifies whether the initial storage space is allocated for each physical file member when it is added to the file. This change takes effect the next time a new member is added to the file or when a current member is cleared, restored, or reorganized.

***SAME**

The allocation method does not change.

***NO** When a new member is added, or when an existing member is cleared or reorganized, the system determines the space that is needed and allocates that amount.

***YES** The amount of storage space specified in the first value of the **Member size (SIZE)** parameter is allocated each time a new member is added, or each time an existing member is cleared or reorganized. If that amount of storage space is not available, the member is not added, and a message is sent to the user. If this parameter value is used, ***NOMAX** cannot be in effect for the **SIZE** parameter.

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 OS/400. For information on using auxiliary storage pools (ASPs), refer to the Recovering your system book, SC41-5304.

Top

Records to force a write (FRCRATIO)

Specifies the number of inserted, changed, or deleted records that are processed before those records are forced to auxiliary (permanent) storage. If the physical file is being recorded in a journal, it is recommended that a larger force write ratio, or ***NONE**, be specified. More information on journal management is in the Recovering your system book, SC41-5304.

***SAME**

The force write ratio of the file does not change.

***NONE**

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

integer

Specify the number of new or changed records that are processed before those records are forced into auxiliary storage.

Top

Maximum file wait time (WAITFILE)

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

Note: An immediate allocation of the device by the device resource is required when an acquire operation is performed to the file.

*SAME

The wait attribute of the file does not change.

*IMMED

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

***CLS** The default wait time specified in the class description is used as the wait time for the file resources that are allocated.

1-32767

Specify the number of seconds that the program waits for the file resources to be allocated.

Top

Maximum record wait time (WAITRCD)

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

*SAME

The record wait attribute of the file does not change.

*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 the 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.

*SAME

The ODP sharing value of the member does not change.

***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 that any member in the physical file can have. The percentage is based on the number of deleted records compared with the total record count in a member. This change takes effect the next time the file is opened and closed.

*SAME

The deleted record percentage does not change.

*NONE

No percentage is specified; the number of deleted records in the file members is not checked when a member is closed.

1-100 Specify the largest percentage of deleted records that any member in the file can have. If a value is larger than this percentage, a message is sent to the system history log (QHST) when the file is closed.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

*SAME

The text that describes the file does not change.

*BLANK

No text is specified.

character-value

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

Top

Coded character set ID (CCSID)

Specifies the coded character set identifier (CCSID) used to describe character data in the fields of the file.

*SAME

The CCSID does not change.

*HEX The CCSID 65535 is used, which indicates that character data in the fields is treated as bit data and is not converted.

1-65535

Specify the CCSID to be used.

Top

Examples

Example 1: Changing the Expiration Date

```
CHGSRCPF FILE(QGPL/INV) EXPDATE('10/31/88')
```

This command changes the expiration date of all members in file INV to October 31, 1988.

Example 2: Changing Text

310 System i: Programming i5/OS commands Starting with CHGPFTRG (Change Physical File Trigger)


```
CHGSRCF FILE(QGPL/DDMF) TEXT('Inventory File')
        SYSTEM(*RMT)
```

This command changes the text of file INV located in the QGPL library on the remote system. Prior to specifying the above command, this user had created a DDM file by specifying the command, CRTDDMF FILE(QGPL/DDMF) RMTFILE(QGPL/INV) RMTLOCNAME(AS400).

Top

Error messages

*ESCAPE Messages

CPF326A

Operation not successful for file &1 in library &2.

CPF327F

Operation not successful for file &1 in library &2.

CPF7304

File &1 in &2 not changed.

Top

Change Service Attributes (CHGSRVA)

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

Parameters
Examples
Error messages

The Change Service Attributes (CHGSRVA) command is used to specify:

- The connection number to report to external support
- The connection number to call back this system
- Whether problem analysis routines should run automatically when a failure occurs
- How the specified service provider should be notified of problems
- The connection number to the service provider
- When PTFs should be installed
- Where critical system messages are sent
- Whether PTF save files and cover letter should be copied into *SERVICE when PTFs are loaded from a tape or optical device
- The maximum number of levels of a PTF group to keep on the system
- The message queue used by electronic customer support (ECS) programs

The values specified for the parameters of this command are saved when the Save System (SAVSYS) command is run, and can be restored to the system when the operating system is reinstalled.

Restrictions:

1. To use this command, you must have *ALLOBJ authority.
2. The system specified by the RPTSRVPVD parameter must currently exist on the list of service providers (use the Work with Service Providers (WRKSRVPVD) command to display the list of service providers defined for your system.) If the system specified is not defined on the list of service providers, an error message is returned, and the values of all parameters remain unchanged.
3. The user profiles that are specified for the CRITMSGUSR parameter must currently exist on the system; otherwise, an error message is returned and the values remain unchanged. The Work with User Profiles (WRKUSRPRF) command can be used to display a list of user profiles that exist on the system.

Top

Parameters

Keyword	Description	Choices	Notes
SYSDSBRPT	System disabled reporting	Character value, *SAME	Optional
SYSDSBCB	System disabled call back	Character value, *SAME	Optional
ANZPRBAUTO	Analyze problem automatically	*SAME, *NO, *YES	Optional
RPTPRBAUTO	Report problem automatically	*SAME, *NO, *YES	Optional

Keyword	Description	Choices	Notes
RPTSRVPVD	Report problem to	Single values: <u>*SAME</u> , *IBMSRV, *SELECT Other values: <i>Element list</i>	Optional
	Element 1: Control point name	<i>Communications name</i>	
	Element 2: Network ID	<i>Communications name</i> , *LCLNETID	
SRVPVDCNN	Service provider connection	<i>Character value</i> , <u>*SAME</u>	Optional
PTFINSTYP	PTF install type	<u>*SAME</u> , *DLYIPL, *DLYALL, *IMMONLY, *IMMDLY	Optional
CPYPTF	Copy PTFs	<u>*SAME</u> , *NO, *YES	Optional
PTFGRPLVL	PTF group levels	1-99999, <u>*SAME</u> , *NOMAX	Optional
SNDDTAPKT	Send data packet	<u>*SAME</u> , *NO, *YES	Optional
ECSMSGQ	ECS message queue	Single values: <u>*SAME</u> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: ECS message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
CRITMSGUSR	Critical messages to user	Single values: <u>*SAME</u> Other values (up to 50 repetitions): <i>Name</i> , *SYSOPR, *SECOFR, *SECADM, *PGMR, *USER	Optional

Top

System disabled reporting (SYSDSBRPT)

Specifies the complete electronic connection number used for automatic reporting to external support when this system is disabled.

*SAME

The value does not change.

connection-number

Specify the entire sequence of numbers required to dial including international access codes, country or region codes, area codes, and exchange codes.

Top

System disabled call back (SYSDSBCB)

Specifies the complete electronic connection number used to call this system from external support when this system is disabled.

*SAME

The value does not change.

connection-number

Specify the entire sequence of numbers required to dial including international access codes, country or region codes, area codes, and exchange codes.

Top

Analyze problem automatically (ANZPRBAUTO)

Specifies whether problem analysis routines will run automatically at the time of failure. Problem analysis routines are programs that attempt to isolate or correct the problem. If problem analysis routines are run automatically, they are run at the time of failure as a background batch job. If problem analysis routines are not run automatically at the time of failure, they can be run manually from the QSYSOPR message queue, or by using the Work with Problems (WRKPRB) command.

*SAME

The value does not change.

***NO** Problem analysis routines will not run automatically at the time of failure.

***YES** Problem analysis routines will run automatically at the time of failure.

Top

Report problem automatically (RPTPRBAUTO)

Specifies whether notification of problems that have been automatically analyzed will be sent to the service provider specified on the RPTSRVPVD parameter.

If automatic problem notification is specified, it is run as a background batch job at the time of failure. If automatic problem notification is not specified, problems can be manually reported to a service provider from the QSYSOPR message queue, or by using the Work with Problems (WRKPRB) command.

*SAME

The value does not change.

***NO** The service provider will not automatically receive notification of local system problems.

***YES** The service provider will automatically receive notification of local system problems.

Top

Report problem to (RPTSRVPVD)

Specifies the name of the service provider to receive automatic notification of problems.

Notification of problems will automatically be sent to the system specified by this parameter when RPTPRBAUTO(*YES) is specified. This system must be in the list of service providers. Use the Work with Service Providers (WRKSRVPVD) command to see the service providers defined for your system.

*SAME

The value does not change.

***IBMSRV**

IBM Service Support is the service provider.

***SELECT**

A list of service providers is shown from which the user can select the **control-point-name** and **network-id**.

The possible Control Point Name value is:

control-point-name

Specify the control point name of the service provider that will be notified of local system problems.

The possible Network ID values are:

***LCLNETID**

The network ID of the service provider is the same as that of the local system.

network-id

Specify the network ID of the service provider that is notified of local system problems.

Top

Service provider connection (SRVPVDCNN)

Specifies the complete electronic connection number to the service provider.

***SAME**

The value does not change.

connection-number

Specify the entire sequence of numbers required to dial including international access codes, country or region codes, area codes, and exchange codes.

Top

PTF install type (PTFINSTYP)

Specifies when a PTF should be applied. The value specified for this parameter is used when applying a PTF using either the INSPTF command, or the Program Temporary Fix (PTF) menu (options 7 or 8).

***SAME**

The value does not change.

***DLYIPL**

All PTFs are marked for delayed apply, and a system IPL is done.

***DLYALL**

All PTFs are marked for delayed apply, and a system IPL is not done.

***IMMONLY**

All immediate PTFs are applied. Delayed PTFs are not marked for delayed apply, and a system IPL is not done. It is recommended that this value not be used for applying cumulative PTF packages. There is a risk of applying immediate PTFs to products that are in use. PTFs should only be applied to products that are not in use.

***IMMDLY**

All immediate PTFs are applied, and delayed PTFs are marked for delayed apply, but a system IPL is not done. It is recommended that this value not be used for applying cumulative PTF packages. There is a risk of applying immediate PTFs to products that are in use. PTFs should only be applied to products that are not in use.

Top

Copy PTFs (CPYPTF)

Specifies whether to copy PTF save files and cover letters into *SERVICE when PTFs are loaded from a tape or optical device. PTF save files must be in *SERVICE when distributing PTFs to other systems or when using the Save System Information (SAVSYSINF) command.

***SAME**

The value does not change.

- *YES PTF save files and cover letters that do not already exist are copied into *SERVICE when PTFs are loaded from tape or optical.
- *NO PTF save files and cover letters are not copied into *SERVICE when PTFs are loaded from tape or optical.

Top

PTF group levels (PTFGRPLVL)

Specifies the maximum number of levels of a PTF group to keep on the system. When the number of levels of the PTF group on the system exceeds this value, the lowest levels of the PTF group will automatically be deleted, leaving only this number of levels of the PTF group on the system.

*SAME

The value does not change.

*NOMAX

All levels of a PTF group should be kept on the system.

1-99999

Specify the number of levels of a PTF group to keep on the system.

Top

Send data packet (SNDDTAPKT)

Specifies whether additional data collected by the program that detects the problem should be sent to the service provider when a problem is reported.

*SAME

The value does not change.

*YES Up to 2000 bytes of additional data is sent to the service provider when a problem is reported.

*NO Additional data is not sent to the service provider when a problem is reported.

Top

ECS message queue (ECSMSGQ)

Specifies the message queue to be used by electronic customer support (ECS) programs to send message when resuming PTF orders.

Single values

*SAME

The value does not change.

Qualifier 1: ECS message queue

name Specifies the name of the message queue being used.

Qualifier 2: Library

name Specifies the library that contains the message queue.

Top

Critical messages to user (CRITMSGUSR)

Specifies users, or classes of users, that can receive a break message when the system detects a critical condition, such as a DASD failure.

The values specified for this parameter are entered sequentially, in order of priority (highest to lowest). In the event the system detects a critical condition, it will attempt to send a break message indicating the nature of the problem to the user, or class of users, specified in the entry with the highest priority.

When the entry specifies a user name, a break message is sent only if the user is signed on. When the entry specifies a user class, a break message is sent to all users of that class that are currently signed on.

In the event that none of the users specified by the entry are currently signed on, the next entry is checked. This process continues until either a break message can be sent, or the last entry is checked.

*SAME

The value does not change.

*SYSOPR

All users of user class *SYSOPR will receive a message when a critical message is sent.

*SECOFR

All users of user class *SECOFR will receive a message when a critical message is sent.

*SECADM

All users of user class *SECADM will receive a message when a critical message is sent.

*PGMR

All users of user class *PGMR will receive a message when a critical message is sent.

*USER

All users of user class *USER receive a message when a critical message is sent.

user-name

Specify the name of the user profile that receives a message when a critical message is sent.

Top

Examples

Example 1: Specifying no Automatic Problem Analysis

```
CHGSRVA ANZPRBAUTO(*NO)
```

This command changes the analyze problem automatically flag. Problem analysis will no longer be run at the point of failure.

Example 2: Changing the Service Provider

```
CHGSRVA RPTSRVPVD(PARIS *LCLNETID)
```

This command changes the name of the service provider. The new service provider has a control point name of PARIS, and the same network ID as the local system.

Top

Error messages

***ESCAPE Messages**

CPF8C66

Service attributes not changed.

CPF8C98

No authority to change certain service attributes.

CPF9899

Error occurred during processing of command.

[Top](#)

Change Service Agent (CHGSRVAGT)

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

Parameters
 Examples
 Error messages

The Change Service Agent (CHGSRVAGT) command allows a user to change the operation of Service Agent in several functional areas. The function to be changed is specified by the **Type (TYPE)** parameter.

Top

Parameters

Keyword	Description	Choices	Notes
TYPE	Type	*COVERAGE, *JOBLOG, *MASTERPWD, *PRBLOG, *PRBRPT, *PRDACTLOG, *SENDDATA, *THRESHOLD, *USERAUTH	Required, Positional 1
BLKPRBRPT	Block reporting	*YES, *NO	Optional
PERIOD	Block period	<i>Element list</i>	Optional
	Element 1: Start time and date	<i>Element list</i>	
	Element 1: Start time	<i>Time</i>	
	Element 2: Start date	<i>Date</i>	
	Element 2: End time and date	<i>Element list</i>	
	Element 1: End time	<i>Time</i>	
IGNPRB	Ignore	*YES, *NO	Optional
CRTJOBLOG	Create job logs	*YES, *NO	Optional
ANZIMMED	Analyze immediately	*YES, *NO	Optional
ANZSTRDATE	Analysis start date	<i>Date</i> , *NOCHG	Optional
ANZSTRTIME	Analysis start time	<i>Time</i> , *NOCHG	Optional
ENBCVG	Enable coverage	*NO, *YES	Optional
CVGSTRTIME	Coverage start time	<i>Time</i> , <u>080000</u>	Optional
CVGENDTIME	Coverage end time	<i>Time</i> , <u>200000</u>	Optional
WEEKEND	Call over weekends	*YES, *NO	Optional
DATA	Data	*CHG, *ALL	Optional
CURPWD	Current password	<i>Character value</i>	Optional
NEWPWD	New password	<i>Character value</i>	Optional
VFYPWD	Verify password	<i>Character value</i>	Optional
SUBTYPE	Subtype	*DEVICE, *SYSREFCDE	Optional
ACTION	Action	*ADD, *CHG, *RMV	Optional
DEVICE	Device	<i>Character value</i>	Optional
CATEGORY	Category	*DASD, *TAPE, *PROCESSOR, *OPTICAL, *FSIOP, *OTHER	Optional
SENSEFMT	Sense byte format	<u>0</u> , 4, 2, 8, C	Optional

Keyword	Description	Choices	Notes
RPTERRCLS	Error classes	Values (up to 27 repetitions): <i>Element list</i>	Optional
	Element 1: Class	*PERMANENT, *THRESHOLD, *TEMPORARY, *STATISTICAL, *INFORMATIONAL, *SOFTWARE, *RECOVERABLE, *BUFFERED, *MACHINECHECK, *VARYON, *VARYOFF, *RECOVERED, *TOPDUMP, *LICINTCODE, *RESET, *QUALIFIED, *PREDANALYSIS, *DATAPROTECTION, *HDWREDUNDANCY, *ADDITIONAL1, *ADDITIONAL2, *ADDITIONAL3, *ADDITIONAL4, *ADDITIONAL5, *ADDITIONAL6, *ADDITIONAL7, *ADDITIONAL8	
	Element 2: Report error	*YES, *NO	
SYSREFCDE	System reference code	Character value, *RANGE	Optional
ADDACTIVE	Active	*YES, *NO	Optional
ADDTHRESH	Threshold	0-99, *NONE	Optional
ADDGROUP	Group	Character value	Optional
ADDTEXT	Text	Character value, *BLANK	Optional
CHGACTIVE	Active	*SAME, *YES, *NO	Optional
CHGTHRESH	Threshold	0-99, *SAME, *NONE	Optional
CHGGROUP	Group	Character value, *SAME	Optional
CHGTEXT	Text	Character value, *SAME, *BLANK	Optional
RANGE	System reference code range	Element list	Optional
	Element 1: Starting code	Character value, *FIRST	
	Element 2: Ending code	Character value, *LAST	
IBMID	IBM ID	Values (up to 2 repetitions): <i>Character value</i>	Optional

Top

Type (TYPE)

Specifies the type of change to be made.

This is a required parameter.

*PRBRPT

Problem reporting is to be changed by specifying the window of time during which product activity log entries should be ignored when Service Agent analyzes the product activity log.

This option is for use before a DASD pump or before other system maintenance which may generate product activity log entries. For example, during a DASD pump operation, errors may be put into the product activity log. When Service Agent analyzes the product activity log after the DASD pump operation, Service Agent reports the errors generated by the pump process.

To prevent the analysis and reporting of these errors, use this feature before starting the Service Agent monitoring jobs before powering down the system to perform maintenance.

Note: Using this feature can prevent unnecessary problem reporting.

*MASTERPWD

The Service Agent master password is to be changed. Passwords for Service Agent are to be kept in confidence. The new password may be 6 - 8 characters in length and may contain any combination of alphanumeric characters. To change the password you must do the following:

1. Enter the current password.
2. Enter the new password.
3. Enter the new password again to verify it.

4. Press Enter to save the new password.

Note: The first time that a new password is created, it actually is an additional master password. This additional password may subsequently be changed by this procedure, but the original master password remains valid.

***PRBLOG**

Problem log analysis is to be changed either to prevent any existing problems from being analyzed and reported, or to allow existing problems to be analyzed and reported. If Service Agent monitoring jobs have been ended for an extended period of time and are to be started again, this feature may be used to prevent reporting of problem log entries that occurred during the inactive period.

Note: This command should be issued while no Service Agent monitoring jobs are running. If this command is issued while Service Agent monitoring jobs are running, you must end and restart these jobs either by using the end jobs and start jobs options on the GO SERVICE main menu, or by using ENDSRVAGT TYPE(*SBSJOB) and STRSRVAGT TYPE(*SBSJOB).

***JOBLOG**

Service Agent job logging is to be changed (set on or off).

***PRDACTLOG**

Parameters to the next product activity log (PAL) analysis cycle are to be changed. These are the date and time from which PAL records are analyzed, and the time at which the next analysis cycle will be initiated.

Note: PAL routines must be active for this function. Use the Change Service Agent attributes (CHGSRVAGTA) command and specify PAL analysis parameters (PALANZ) to activate the PAL analysis routines.

***SENDDATA**

The amount of service information to be sent is to be changed.

***COVERAGE**

Offhours coverage is to be changed. This feature will cause Service Agent to stop reporting problems at the time specified for the **Coverage end time (CVGENDTIME)** parameter and resume reporting problems at the time specified for the **Coverage start time (CVGSTRTIME)** parameter. If **Call over weekends (WEEKEND)** parameter is set to *NO, Service Agent will stop reporting problems at the coverage end time on Friday and resume reporting problems at the coverage start time on Monday.

***THRESHOLD**

Specifies that a change action is to be performed on a device or system reference code in the threshold table.

***USERAUTH**

Specifies that user IDs will be authorized to access system information using the IBM Electronic Services web site. One or more values must be specified for the IBM ID (IBMID) parameter.

Top

Block reporting (BLKPRBRPT)

Specifies whether Service Agent should ignore product activity log entries for a given period of time.

Note: This is a required parameter when TYPE(*PRBRPT) is specified.

***YES** Service Agent will ignore product activity log entries created during the given date and time range.

***NO** Service Agent will not ignore product activity log entries created after the present time, even if that period of time falls within the date and time range given in a previous use of this command with BLKPRBRPT(*YES).

Top

Block period (PERIOD)

Specifies the period during which Service Agent should ignore product activity log entries.

Note: This is a required parameter when BLKPRBRPT(*YES) is specified.

Element 1: Start time and date

Specifies the time and date at which Service Agent should start ignoring product activity log entries.

Element 1: Start time

time Specify the start time in the job time format.

Element 2: Start date

date Specify the start date in the job date format.

Element 2: End time and date

Specifies the time and date at which Service Agent should stop ignoring product activity log entries.

Element 1: End time

time Specify the end time in the job time format.

Element 2: End date

date Specify the end date in the job date format.

Top

Ignore (IGNPRB)

Specifies whether Service Agent will ignore existing problem log entries when Service Agent monitoring jobs are started.

Note: This is a required parameter when TYPE(*PRBLOG) is specified.

***YES** Service Agent will ignore existing problem log entries.

***NO** Service Agent will not ignore existing problem log entries.

Top

Create job logs (CRTJOBLOG)

Specifies whether joblogs are created for jobs ran by the QSRVAGT user profile.

Note: This is a required parameter when TYPE(*JOBLOG) is specified.

***NO** No joblogs are created for Service Agent jobs unless a job ends abnormally.

***YES** A joblog is created for each of the Service Agent jobs ran by the QSRVAGT user profile.

Top

Analyze immediately (ANZIMMED)

Specifies whether the next analysis cycle should start immediately.

Note: This parameter is valid only when TYPE(*PRDACTLOG) is specified.

***YES** Service Agent product activity log analysis is started immediately.

***NO** Service Agent product activity log analysis is started automatically at the next scheduled date and time. The scheduled date and time can be changed by using the **Analysis start date (ANZSTRDATE)** and **Analysis start time (ANZSTRTIME)** parameters provided, or by using the Change Service Agent settings option on the SERVICE menu.

Top

Analysis start date (ANZSTRDATE)

Specifies the date at which analysis is to begin.

Note: This parameter is valid only when TYPE(*PRDACTLOG) is specified.

*NOCHG

The ending date of the previous analysis cycle is used as the starting date for the next cycle.

date Specify the start date in the job date format. This will indicate that the date at which analysis is to begin is to change. An additional field is provided to specify a new time if desired. All product activity log records with time stamps from this date and time to the current date and time are included in the analysis.

Specifying a new date and/or time causes all existing data on the Media Analysis Report and the Product Activity Log Monthly Summary to be removed. The data will be recreated from the records included in the next analysis cycle. This parameter can therefore be used to modify the starting date for these cumulative reports. These reports can be accessed by selecting the Customer Reports menu option on the SERVICE menu. This parameter has the same effect on the product activity log reports available on the SERVICECE menu.

Top

Analysis start time (ANZSTRTIME)

Specifies the time at which analysis is to begin.

Note: This parameter is valid only when TYPE(*PRDACTLOG) is specified.

*NOCHG

The ending time of the previous analysis cycle is used as the starting time for the next cycle.

time Specify the start time in the job date format. This will indicate that the time at which analysis is to begin is to change. An additional field is provided to specify a new date if desired. All product activity log records with time stamps from this date and time to the current date and time are included in the analysis.

Specifying a new time and date causes all existing data on the Media Analysis Report and the Product Activity Log Monthly Summary to be removed. The data will be recreated from the records included in the next analysis cycle. This parameter can therefore be used to modify the starting time for these cumulative reports. These reports can be accessed by selecting the Customer Reports menu option on the SERVICE menu. This parameter has the same effect on the product activity log reports available on the SERVICECE menu.

Top

Enable coverage (ENBCVG)

Specifies whether the offhours coverage feature is to be used.

Note: This parameter is valid only when TYPE(*COVERAGE) is specified.

*NO The offhours coverage feature is not used.

*YES The offhours coverage feature is used.

Top

Coverage start time (CVGSTRTIME)

Specifies the time at which coverage is to begin.

Note: This is a required parameter when ENBCVG(*YES) is specified.

time Specify the start time in the job time format.

Top

Coverage end time (CVGENDTIME)

Specifies the time at which coverage is to end.

Note: This is a required parameter when ENBCVG(*YES) is specified.

time Specify the end time in the job time format.

Top

Call over weekends (WEEKEND)

Specifies whether service requests are to be placed during the weekend.

Note: This parameter is valid only when ENBCVG(*YES) is specified.

*YES Service requests will be placed between the time specified for the **Coverage end time (CVGENDTIME)** on Friday and the time specified for the **Coverage start time (CVGSTRTIME)** parameter on Monday.

***NO** Service requests will not be placed between the time specified for CVGENDTIME on Friday and the time specified for CVGSTARTIME on Monday.

Top

Data (DATA)

Indicates the amount of service information to be sent.

Note: This is a required parameter when TYPE(*SENDDATA) is specified.

***CHG** Only the service information types that have changed is sent.

***ALL** All service information is sent whether it has changes or not. This value is in effect for the next time Service Agent sends service information, after which it will be returned to the default of *CHG.

Top

Current password (CURPWD)

Specifies the current value of the master password. This may be either the original master password or the additional value already created.

Note: This is a required parameter when TYPE(*MASTERPWD) is specified.

character-value

Specify the master password.

Top

New password (NEWPWD)

Specifies the new password you want to use to sign on to the CE menu. This password must be 6 - 8 characters in length and may contain any combination of alphanumeric characters. The first time that a new password is created, it actually is an additional master password. This additional password may subsequently be changed by this procedure, but the original master password remains in force.

It is recommended that you not use the same password that you use for your user profile.

Note: This is a required parameter when TYPE(*MASTERPWD) is specified.

character-value

Specify the new password.

Top

Verify password (VFYPWD)

Specifies the new password again to make sure that you have entered it correctly. If the password you enter here is different from the one you entered in the previous field, an error message is displayed and your password remains the same as it was before you attempted to change it.

Note: This is a required parameter when TYPE(*MASTERPWD) is specified.

character-value

Specify the new password again, for verification.

Top

Subtype (SUBTYPE)

Specifies the type of entry to be changed in the threshold table.

Note: This is a required parameter when TYPE(*THRESHOLD) is specified.

***DEVICE**

A device entry is to be changed.

***SYSREFCDE**

A system reference code entry is to be changed.

Top

Action (ACTION)

Specifies the type of change action to be performed on the threshold table entry.

Note: This is a required parameter when a value is specified for the **Subtype (SUBTYPE)** parameter.

***ADD** A threshold table entry is added.

***CHG** A threshold table entry is changed.

***RMV** A threshold table entry is removed.

Top

Device (DEVICE)

Specifies the device to be added to or changed in the Service Agent threshold table, or the device that is associated with the system reference code to be added to, changed in, or removed from the Service Agent threshold table.

A list of the current devices may be displayed by using the Work with Threshold Table option from the SERVICE menu.

Note: This is a required parameter when TYPE(*THRESHOLD) is specified.

character-value

Specify the four character device type associated with the threshold table or system reference code. For example, DEVICE(2420) might be specified for a 2420 tape device.

Top

Category (CATEGORY)

Specifies the category of device added or changed in the Service Agent threshold table.

Note: This is a required parameter when SUBTYPE(*DEVICE) is specified and ACTION(*ADD) or ACTION(*CHG) is specified.

***DASD**

The device is a DASD device.

***TAPE** The device is a tape device.

***PROCESSOR**

The device is a processor.

***OPTICAL**

The device is an optical device.

***FSIOP**

The device is an FSIOP device.

***OTHER**

The device is other than one of the above listed devices.

Top

Sense byte format (SENSEFMT)

Specifies the format of the volume statistical data for tape devices.

Note: This parameter is valid only when CATEGORY(*TAPE) is specified.

0 The device does not report removable media statistics.

4 The format is for a 1/4" cartridge tape device.

2 The format is for a 1/2" reel tape device.

8 The format is for an 8 mm tape device.

C The format is for a 1/2" cartridge tape device.

Top

Error classes (RPTERRCLS)

Specifies whether or not Service Agent processes an error of the specified class for this device.

Note: This parameter is valid only when SUBTYPE(*DEVICE) is specified and ACTION(*ADD) or ACTION(*CHG) is specified.

Element 1: Class

Specifies the class of error.

***PERMANENT**

A permanent error.

***THRESHOLD**

A threshold error.

***TEMPORARY**

A temporary error.

***STATISTICAL**

A statistical error.

***INFORMATIONAL**

An informational error.

- *SOFTWARE**
A software error.
- *RECOVERABLE**
A recoverable error.
- *BUFFERED**
A buffered error.
- *MACHINECHECK**
A machine check error.
- *VARYON**
A vary on error.
- *VARYOFF**
A vary off error.
- *RECOVERED**
A recovered error.
- *IOPDUMP**
An IOP dump error.
- *LICINTCODE**
A licensed internal code error.
- *RESET**
A reset error.
- *QUALIFIED**
A qualified error.
- *PREDANALYSIS**
A predictive analysis error.
- *DATAPROTECTION**
A data protection error.
- *HDWREDUNDANCY**
A hardware redundancy error.
- *ADDITIONAL1**
First additional error.
- *ADDITIONAL2**
Second additional error.
- *ADDITIONAL3**
Third additional error.
- *ADDITIONAL4**
Fourth additional error.
- *ADDITIONAL5**
Fifth additional error.
- *ADDITIONAL6**
Sixth additional error.
- *ADDITIONAL7**
Seventh additional error.
- *ADDITIONAL8**
Eighth additional error.

Element 2: Report error

Specifies whether an error of this class is to be reported for this device.

***YES** An error of this class is reported.

***NO** An error of this class is not reported.

Top

System reference code (SYSREFCDE)

Specifies the system reference code added, changed, or removed from the threshold table.

Note: This parameter is required when SUBTYPE(*SYSREFCDE) is specified.

***RANGE**

Specify a range of system reference codes to be changed.

Note: *RANGE is valid only when ACTION(*CHG) is specified. When *RANGE is specified, values must be specified for the **System reference code range (RANGE)** parameter.

character-value

Specify the system reference code added, changed, or removed from the threshold table.

Top

Active (ADDACTIVE)

Specifies whether or not Service Agent reports errors for a system reference code for this device.

Note: This parameter is required when SUBTYPE(*SYSREFCDE) and ACTION(*ADD) are specified.

***YES** Service Agent reports the errors for this system reference code for this device.

***NO** Service Agent does not report errors for this system reference code for this device.

Top

Threshold (ADDTHRESH)

Specifies the number of times this system reference code must occur within a seven day period for Service Agent to report this error from the product activity log.

Note: This parameter is required when SUBTYPE(*SYSREFCDE) and ACTION(*ADD) are specified.

***NONE or 0**

This error is not reported from the product activity log.

1-99 Specify a threshold value.

Top

Group (ADDGROUP)

Specifies the group to which this system reference code belongs.

Note: This parameter is required when SUBTYPE(*SYSREFCDE) and ACTION(*ADD) are specified.

character-value

Specify the one-character group identifier.

Top

Text (ADDTEXT)

Specifies the text that briefly describes the system reference code.

Note: This parameter is valid only when SUBTYPE(*SYSREFCDE) and ACTION(*ADD) are specified.

***BLANK**

No text is specified.

character-value

Text to describe the system reference code.

Top

Active (CHGACTIVE)

Specifies whether or not Service Agent reports errors for this system reference code for this device.

Note: This parameter is valid only when SUBTYPE(*SYSREFCDE) and ACTION(*CHG) are specified.

***SAME**

The value does not change.

***YES** Service Agent reports the errors for this system reference code for this device.

***NO** Service Agent does not report the errors for this system reference code for this device.

Top

Threshold (CHGTHRESH)

Specifies the number of times this system reference code must occur in a seven day period for Service Agent to report this error from the product activity log.

Note: This parameter is valid only when SUBTYPE(*SYSREFCDE) and ACTION(*CHG) are specified.

***SAME**

The value does not change.

***NONE or 0**

This error is not reported from the product activity log.

1-99 Specify a threshold value.

Top

Group (CHGGROUP)

Specifies the group to which this system reference code belongs.

Note: This parameter is valid only when SUBTYPE(*SYSREFCDE) and ACTION(*CHG) are specified.

***SAME**

The value does not change.

character-value

Specify a one character group identifier.

Top

Text (CHGTEXT)

Specifies the text that briefly describes the system reference code.

Note: This parameter is valid only when SUBTYPE(*SYSREFCDE) and ACTION(*CHG) are specified.

***SAME**

The value does not change.

***BLANK**

No text is specified.

character-value

Text to describe the system reference code.

Top

System reference code range (RANGE)

Specifies the starting and ending system reference codes to be changed.

Note: This parameter is required when SYSREFCDE(*RANGE) is specified.

Element 1: Starting code

***FIRST**

System reference codes are to be changed starting with the first system reference code for the device.

character-value

Specify the first system reference code to be changed.

Element 2: Ending code

***LAST**

System reference codes are to be changed ending with the last system reference code for the device.

character-value

Specify the last system reference code to be changed.

Top

IBM ID (IBMID)

Specifies the IBM IDs that will be authorized to access service information using the IBM Electronic Services web site. IBM provides personalized web functions that use information collected by IBM Electronic Service Agent. To use these functions, users sign in using their IBM ID (user ID) that they obtain from IBM. To register for an IBM ID, go to the My IBM Profile (<https://www.ibm.com/account/profile>) web site.

Examples

```
CHGSRVAGT  TYPE(*THRESHOLD)  SUBTYPE(*SYSREFCDE)  ACTION(*ADD)
           DEVICE(9337)  SYSREFCDE(3050)
           ADDACTIVE(*YES)  ADDTHRESH(0)
           ADDTEXT('DISK DVC RET WRN RSP TO IOP')
```

This command adds system reference code 3050 to the 9337 device in the threshold table with a threshold limit of 0.

Top

Error messages

*ESCAPE Messages

CPF9899

Error occurred during processing of command.

Top

Change Service Agent Attr (CHGSRVAGTA)

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

Parameters
 Examples
 Error messages

The Change Service Agent Attr (CHGSRVAGTA) command allows a user to change the attributes of Service Agent.

Top

Parameters

Keyword	Description	Choices	Notes
ENABLE	Enable	<u>*SAME</u> , *YES, *NO, *SRVINE, *PRBRPT	Optional, Positional 1
AUTORPT	Auto report	<u>*SAME</u> , *YES, *NO	Optional
AUTORPTRY	Auto report retry	<i>Element list</i>	Optional
	Element 1: Retry	<u>*SAME</u> , *YES, *NO	
	Element 2: Frequency	5-720, <u>*SAME</u>	
	Element 3: Number of times to retry	1-999, <u>*SAME</u> , *NOMAX	
PALANZ	Product activity log analysis	<i>Element list</i>	Optional
	Element 1: Enable	<u>*SAME</u> , *YES, *NO	
	Element 2: Start hour	0-23, <u>*SAME</u>	
	Element 3: Interval	<u>*SAME</u> , 1, 2, 3, 4, 6, 8, 12, 24	
Element 4: Send message	<u>*SAME</u> , *YES, *NO		
RUNPTY	Run priority	1-99, <u>*SAME</u>	Optional
NOTIFYUSR	Notify user ID	Single values: <u>*SAME</u> Other values (up to 5 repetitions): <i>Simple name</i>	Optional
AUTOPTF	Auto PTF	<i>Element list</i>	Optional
	Element 1: Enable	<u>*SAME</u> , *YES, *NO	
	Element 2: Schedule day	<u>*SAME</u> , *SUN, *MON, *TUE, *WED, *THU, *FRI, *SAT	
Element 3: Download PTFs	<u>*SAME</u> , *YES, *NO, *CVRLTR		
AUTOTEST	Auto test	<i>Element list</i>	Optional
	Element 1: Schedule day	<u>*SAME</u> , *SUN, *MON, *TUE, *WED, *THU, *FRI, *SAT	
Element 2: Schedule time	<i>Time</i> , <u>*SAME</u>		
SRVINP	Service information	<i>Element list</i>	Optional
	Element 1: Select information	Values (up to 9 repetitions): <i>Character value</i> , <u>*SAME</u> , <u>*SAME</u>	
	Element 2: Collect time	<i>Time</i> , <u>*SAME</u> , *CURRENT	
	Element 3: Send time	<i>Time</i> , <u>*SAME</u> , *COLLECT	
	Element 4: Connection verification timer	1-21, <u>*SAME</u>	
Element 5: Task hold interval	1-30, <u>*SAME</u>		

Keyword	Description	Choices	Notes
SRVPVDID	Report problem to	<i>Element list</i>	Optional
	Element 1: Control point name	<i>Communications name, *SAME, *IBMSRV</i>	
	Element 2: Network ID	<i>Communications name, *SAME, *NETATR</i>	
LINECTL	Line control	<i>Element list</i>	Optional
	Element 1: Enable	<i>*SAME, *YES, *NO</i>	
	Element 2: Configuration object	<i>Values (up to 12 repetitions): Element list</i>	
	Element 1: Line description	<i>Name, *SAME</i>	
	Element 2: Controller description	<i>Name, *SAME, *ANY</i>	
	Element 3: Device description	<i>Name, *SAME, *ANY</i>	
RPTRMTPRB	Report remote problem	<i>*SAME, *YES, *NO</i>	Optional
ACTPWD	Activation password	<i>Character value, *SAME</i>	Optional

Top

Enable (ENABLE)

Specifies whether Service Agent is enabled.

*SAME

The value does not change if it has been set. Otherwise, it is set to *YES.

***YES** Service Agent is enabled.

***NO** Service Agent is not enabled.

This is a required parameter.

Top

Auto report (AUTORPT)

Specifies whether service requests are to be placed automatically by Service Agent.

*SAME

The value does not change if it has been set. Otherwise, it is set to *YES.

***YES** Service Agent will automatically place service requests.

This function requires the use of the problem log filter. System value QPRBFTR will be changed to QS9FILTER.

***NO** Service Agent will not automatically place service requests. The users specified for the Notify user ID (NOTIFYUSR) parameter will receive messages about a problem that is discovered.

Top

Auto report retry (AUTORPTRTY)

Specifies whether service requests placed automatically by Service Agent are to be retried if an attempt fails, and if so, how they are to be retried.

Element 1: Retry

*SAME

The value does not change if it has been set. Otherwise, it is set to *YES.

***YES** Service requests placed automatically by Service Agent are retried.

***NO** Service requests placed automatically by Service Agent are not retried.

Element 2: Frequency

*SAME

The value does not change if it has been set. Otherwise, it is set to 15.

5-720 Specifies the frequency in minutes at which service requests placed automatically by Service Agent are retried.

Element 3: Number of times to retry

*SAME

The value does not change if it has been set. Otherwise, it is set to 3.

***NOMAX**

Service requests placed automatically by Service Agent will be retried until successful.

1-999 Specify the number of times to retry service requests placed automatically by Service Agent.

Element 4: Notify users

*SAME

The value does not change if it has been set. Otherwise, it is set to *YES.

***YES** The users specified for the Notify user ID (NOTIFYUSR) parameter will receive a message when a service request placed automatically by Service Agent is retried.

***NO** No message will be sent when a service request placed automatically by Service Agent is retried.

Top

Product activity log analysis (PALANZ)

Specifies whether product activity log (PAL) analysis routines are run and errors are reported.

Before a problem found in the product activity log is reported, product activity log analysis routines are run. These analysis routines can be CPU intensive.

Element 1: Enable

*SAME

The value does not change if it has been set. Otherwise, it is set to *YES.

***YES** Product activity log analysis routines are run. A problem from the product activity log is reported.

***NO** Product activity log analysis routines are not run. A problem from the product activity log is not reported. There will be no media analysis data or product activity log data available for reports.

Element 2: Start hour

Specifies the base hour of the day used to determine when product activity log (PAL) analysis runs. PAL analysis will run at the intervals specified using the Start hour parameter as the base hour. PAL analysis will run 10 minutes after the hour.

For example, 00 means to base the start hour at midnight. With the PAL analysis interval is 4, it will run at 00:10, 04:10, 08:10 and 12:10.

*SAME

The value does not change if it has been set. Otherwise, it is set to 00.

0-23 Specify the base hour to determine when PAL analysis runs.

Element 3: Interval

Specifies how often, in hours, to check the product activity log for problems to report.

*SAME

The value does not change if it has been set. Otherwise, it is set to 4.

- 1** Service Agent checks the product activity log every hour.
- 2** Service Agent checks the product activity log every 2 hours.
- 3** Service Agent checks the product activity log every 3 hours.
- 4** Service Agent checks the product activity log every 4 hours.
- 6** Service Agent checks the product activity log every 6 hours.
- 8** Service Agent checks the product activity log every 8 hours.
- 12** Service Agent checks the product activity log every 12 hours.
- 24** Service Agent checks the product activity log every 24 hours.

Element 4: Send message

Specifies whether a message should be sent to the list of users to receive Service Agent messages each time Service Agent begins analyzing the product activity log.

*SAME

The value does not change if it has been set. Otherwise, it is set to *YES.

***YES** The users identified in the Notify user ID (NOTIFYUSR) parameter will receive messages each time Service Agent starts a product activity log analysis cycle. A record will also be created in the Service Agent audit log.

***NO** Service Agent will not send messages to users each time it starts a product activity log analysis cycle. A record will still be created in the Service Agent audit log.

Top

Run priority (RUNPTY)

Specifies the run priority for Service Agent. Run priority is a value ranging from 1 (highest priority) through 99 (lowest priority) that represents the importance of the job when it competes with other jobs for the machine resources.

*SAME

The value does not change if it has been set. Otherwise, it is set to 51.

1-99 Specify the run priority for Service Agent.

Top

Notify user ID (NOTIFYUSR)

Specifies the user profiles to receive messages about Service Agent activity.

Note: In addition to any user profiles you specify, the system operator (QSYSOPR) and QSRV user profiles will also receive messages. It is not possible to prevent messages from being sent to the QSYSOPR and QSRV user profiles.

Single values

*SAME

The value does not change.

Other values (up to 5 repetitions)

simple-name

Specify the user profile names of the users to receive Service Agent messages.

Top

Auto PTF (AUTOPTF)

Specifies whether Service Agent will electronically (using ECS) check the system or logical partition to determine if PTFs deemed critical by IBM Service are on the system or logical partition. If PTFs are needed, fix request entries containing the PTF numbers to be ordered will be created into the problem log.

Element 1: Enable

*SAME

The value does not change if it has been set. Otherwise, it is set to *YES.

*YES The function is enabled.

*NO The function is not enabled.

Element 2: Schedule day

Specifies the day of the week the automatic PTF processing is to take place and whether any PTFs identified as being needed by the system or logical partition are downloaded to the system or logical partition.

This value may not be set correctly if your system or logical partition is not using the Gregorian calendar.

Note: The available days from which to choose are shown when F4 is pressed. This provides an even distribution of the IBM Service system resources, thereby maintaining high availability of the IBM Service system.

The day of the week can be selected, however the time of day cannot, for the same reason stated above. This automatic PTF function may not run at the same time of day each time it runs.

*SAME

The value does not change if it has been set. Otherwise, it is set to the first day of those described above.

- *SUN The function will run on Sunday.
- *MON
The function will run on Monday.
- *TUE The function will run on Tuesday.
- *WED The function will run on Wednesday.
- *THU The function will run on Thursday.
- *FRI The function will run on Friday.
- *SAT The function will run on Saturday.

Element 3: Download PTFs

*SAME

The value does not change if it has been set. Otherwise, it is set to *YES.

- *YES The PTFs that are found to be needed during the automatic PTF processing will be downloaded to the system or logical partition.

Note: PTFs that are downloaded will NOT be loaded or applied.

- *NO The PTFs that are found to be needed during the automatic PTF processing will not be downloaded to the system or logical partition. Fix request entries containing the PTF numbers to be ordered will exist in the problem log.

*CVRLTR

The PTF cover letters for the PTFs that are found to be needed during the automatic PTF processing will be downloaded to the system or logical partition. Fix request entries containing the PTF numbers to be ordered will exist in the problem log, but only the associated cover letters will be ordered.

Top

Auto test (AUTOTEST)

Specifies the day of the week and the time of day that the automated operational test problem reporting is to take place.

Element 1: Schedule day

Specifies the day of the week the automated operational test is to take place.

This value may not be set correctly if your system or logical partition is not using the Gregorian calendar.

Note: The available days from which to choose are shown when F4 is pressed. This provides an even distribution of the IBM Service system resources, thereby maintaining high availability of the IBM Service system.

*SAME

The value does not change if it has been set. Otherwise, it is set to the first day of those described above.

- *SUN The function will run on Sunday.
- *MON
The function will run on Monday.
- *TUE The function will run on Tuesday.

***WED** The function will run on Wednesday.

***THU** The function will run on Thursday.

***FRI** The function will run on Friday.

***SAT** The function will run on Saturday.

Element 2: Schedule time

***SAME**

The value does not change if it has been set. Otherwise, it is set to a time chosen at random.

time Specify the time at which the automated operational test problem is to take place. Specify the time in the job time format.

Top

Service information (SRVINP)

Specifies service information is to be collected and sent to IBM, the time at which service information collection is to start, the time at which service information is to be sent, and how often the connection to IBM is automatically tested.

Element 1: Select information

Specify that service information is to be sent to IBM.

***SAME**

The value does not change if it has been set. Otherwise, it is set to *ALL.

***ALL** All service information is sent to IBM.

Element 2: Collect time

Specify the time at which the service information collection is to start.

***SAME**

The value does not change if it has been set. Otherwise, it is set to *CURRENT.

***CURRENT**

The service information collection is to start at the current time.

time The time at which the service information collection is to start. Specify the time in the job time format.

Element 3: Send time

Specify the time at which the service information is to be sent to IBM.

***SAME**

The value does not change.

***COLLECT**

The service information will be sent immediately after it is collected.

time The time at which the service information is to be sent. Specify the time in the job time format.

Element 4: Connection verification timer

Specify how often, in days, the connection to IBM will automatically be tested.

*SAME

The value does not change if it has been set. Otherwise, it is set to 7.

1-21 How often, in days, the connection to IBM will automatically be tested.

Element 5: Task hold interval

Specify the minimum number of days a Service Agent collection task or send task is kept after it has run. After this time interval, the task will be deleted. The time interval starts as soon as the task has run.

*SAME

The value does not change if it has been set. Otherwise, it is set to 7.

1-30 The number of days the tasks are kept.

Top

Report problem to (SRVPVDID)

Specifies the name of the service provider to receive automatic notification of a problem.

Notification of a problem will automatically be sent to the system or logical partition specified by this parameter when AUTORPT(*YES) is specified. This system or logical partition must be in the list of service providers. Use the Work with Service Providers (WRKSRVPVD) command to see the service providers defined for your system or logical partition.

Element 1: Control point name

*SAME

The value does not change if it has been set. Otherwise, it is set to *IBMSRV.

***IBMSRV**

IBM Service is the service provider.

communications-name

Specify the control point name of the service provider that will be notified of a local system problem.

Element 2: Network ID

*SAME

The value does not change if it has been set. Otherwise, it is set to *NETATR.

***NETATR**

The service provider is in the local network.

communications-name

Specify the network ID of the service provider that is notified of a local system problem.

Top

Line control (LINECTL)

For ECS configurations that use a line description, Service Agent can vary off a line description that is in connect pending status which shares the same resource as the ECS line description. After the service request has completed, the specified configuration objects will be varied back on. This program will not take any action for any other line status.

Element 1: Enable

***SAME**

The value does not change if it has been set. Otherwise, it is set to *NO.

***YES** The line control feature is enabled.

***NO** The line control feature is not enabled.

Element 2: Configuration object

Each configuration object specified has three elements: line, controller, and device description name. Up to twelve sets of configuration objects can be specified.

Note: You must ensure the device is attached to the controller and the controller is attached to the line for all configuration object entries.

Element 1: Line description

***SAME**

The value does not change.

name The name of the line description that is to be varied off.

Element 2: Controller description

***SAME**

The value does not change.

***ANY** Any controller description attached to the line description will be varied off.

name The name of the controller description that is to be varied off.

Element 3: Device description

***SAME**

The value does not change.

***ANY** Any device description attached to the controller description will be varied off.

name The name of the device description that is to be varied off.

Top

Report remote problem (RPTRMTPRB)

Specifies whether this system or logical partition reports problems on behalf of a network of systems or logical partitions.

***SAME**

The value does not change if it has been set. Otherwise, it is set to *NO.

***NO** This system or logical partition does not report problems in the problem log that were sent from a remote system or logical partition in a network environment.

***YES** This system or logical partition reports problems in the problem log that were sent from a remote system or logical partition in a network environment.

Note: This system or logical partition must be the host system or host logical partition. To enable this function, System Manager for i5/OS must be installed and configured.

Activation password (ACTPWD)

Specifies the current value of the activation password.

Note: This is a required parameter when RPTRMTPRB(*YES) is specified.

*SAME

The value does not change.

character-value

Specify the current value of the activation password. Your IBM Service Representative can provide you with the current activation password.

Examples

```
CHGSRVAGTA  ENABLE(*YES)  AUTORPT(*YES)  NOTIFYUSR(SMITH)
```

This command changes enables problem reporting and service information collection and transmission and specifies the user profile SMITH to receive Service Agent messages.

Error messages

*ESCAPE Messages

CPF9899

Error occurred during processing of command.

Change Service Configuration (CHGSRVCFG)

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

Parameters
 Examples
 Error messages

The Change Service Configuration (CHGSRVCFG) command changes the service configuration needed for all service and support applications: Electronic Customer Support (ECS) and Electronic Service Agent. Primary or backup configurations can be changed 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, Key, Positional 1
CNNTYPE	Connection type	*SAME, *DIRECT, *OTHERISP, *LCLDIAL, *MULTIHOP, *RMTDIAL	Optional
CNTRYID	Country or region ID	Character value, *SAME, *SELECT	Optional
STATE	State or province code	Character value, *SAME, *SELECT	Optional
TELNBR1	Primary telephone number	Character value, *SAME, *SELECT	Optional
TELNBR2	Alternate telephone number	Character value, *SAME, *SELECT	Optional
RSRCNAME	Resource name	Name, *SAME, *CALC, *SELECT	Optional
MODEM	Modem information name	Character value, *SAME, *RSRCNAME, *SELECT	Optional
DIALTONE	Wait for dial tone	*SAME, *WAIT, *NOWAIT	Optional
RMTSYS	Remote system	Character value, *SAME	Optional
PROXY	Proxy server	Single values: *NO Other values: Element list	Optional
	Element 1: IP address or host name	Character value, *SAME	
	Element 2: Port number	1-65535, *SAME, *IBMSVR	
	Element 3: Relative priority	*SAME, *TRYAFTER, *TRYBEFORE	
	Element 4: Authentication user ID	Character value, *SAME, *NONE	
	Element 5: Authentication password	Character value, *SAME, *NONE	
ISPPRF	ISP profile name	Character value, *SAME, *SELECT	Optional
CNNPNT	Connectivity for others	Single values: *NO Other values: Element list	Optional
	Element 1: Connection point	*SAME, *YES	
	Element 2: Interfaces	Values (up to 12 repetitions): Element list	
	Element 1: Interface	Character value, *SAME, *ALL, *SELECT	
	Element 2: L2TP profile name	Character value, *SAME, *GEN, *SELECT	

Keyword	Description	Choices	Notes
CNNPNTPRX	Connection point proxy	<i>Element list</i>	Optional
	Element 1: Port number	1-65535, * SAME , *IBMSVR	
	Element 2: Authentication user ID	<i>Character value</i> , * SAME , *NONE	
	Element 3: Authentication password	<i>Character value</i> , * SAME , *NONE	

Top

Role (ROLE)

Specifies whether the service configuration to be changed is the primary or backup service configuration. The system or logical partition will attempt to connect to IBM using the primary configuration. If the primary service configuration fails, the system or logical partition will try to establish the connection using a backup service configuration.

*PRIMARY

The primary service configuration will be changed.

***BACKUP**

The backup service configuration will be changed.

Top

Connection type (CNNTYPE)

Specifies the current connection type by which the system or logical partition connects to IBM. The applicable parameters for the currently configured connection type will be the only ones that can be changed. The connection type for an existing service configuration for the system or logical partition cannot be changed.

Note: To change the connection type, the existing service configuration must be deleted by using the Delete Service Configuration (DLTSRVCFG) command, and a new service configuration must be created using the Create Service Configuration (CRTSRVCFG) command, specifying the desired connection type.

*SAME

No existing connection type was found.

***DIRECT**

The current system or logical partition uses a direct connection to the internet as the connection type.

***OTHERISP**

The current system or logical partition uses an internet service provider (ISP) as the connection type.

***LCLDIAL**

The current system or logical partition uses a dial connection using AT&T Global Network Services (AGNS) as the connection type.

***MULTIHOP**

The current system or logical partition uses a multi-hop connection to the internet as the connection type.

***RMTDIAL**

The current system or logical partition uses an AT&T Global Network Services (AGNS) connection configuration from another system or logical partition as the connection type.

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.

*SAME

The country or region identifier does not change.

*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

Specifies the 2-character country or region identifier that will 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.

*SAME

The state or province code does not change.

*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

Specifies the 2-character state or province code that will be used.

Top

Primary telephone number (TELNR1)

Specifies the primary telephone number 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.

*SAME

The telephone number does not change.

*SELECT

A panel is displayed that allows the selection of the primary telephone number used. After a selection is made, an additional panel will be displayed to allow changes of the connection number, adding any numbers or characters needed to obtain an outside line, pause while dialing, etc.

character-value

Specifies the primary telephone number that will be dialed. Up to 48 characters can be specified.

Alternate telephone number (TELNBR2)

Specifies the backup telephone number dialed to connect to AT&T Global Network Services (AGNS), if the connection attempt using the primary number is unsuccessful.

Note: This parameter is only valid when *LCLDIAL is specified for the **Connection type (CNNTYPE)** parameter.

*SAME

The telephone number does not change.

*SELECT

A panel is displayed that allows the selection of the alternate telephone number that will be used. After a selection is made, an additional panel will be displayed to allow changes of the connection number, adding any numbers or characters needed to obtain an outside line, pause while dialing, etc.

character-value

Specifies the alternate telephone number that will be dialed. Up to 48 characters can be specified.

Top

Resource name (RSRCNAME)

Specifies the communications resource used by this service.

Note: This parameter is only valid when *LCLDIAL is specified for the **Connection type (CNNTYPE)** parameter.

*SAME

The resource name does not change.

*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 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 Specifies 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.

***SAME**

The modem name does not change.

***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

Specifies the modem name. Note that 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 should wait for a dial tone before dialing out.

Note: This parameter is only valid when *LCLDIAL is specified for the **Connection type (CNNTYPE)** parameter.

***SAME**

The modem dial tone value does not change.

***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 will be 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.

***SAME**

The remote system does not change.

character-value

Specifies 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 information for configuring an HTTP or Service and Support proxy connection. Configuring a proxy connection is optional. The proxy connection is an alternate connection to the primary or backup connection that was 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 will not be used.

Element 1: IP address or host name

*SAME

The value does not change.

character-value

Specifies the IP address or host name of the proxy server through which this server will attempt to connect.

***NONE**

The IP address or host name is not specified. A proxy connection configuration will not be created.

Element 2: Port number

*SAME

The value does not change.

***IBMSVR**

The Service and Support proxy server will accept connections using the default port.

1-65535

Specifies the port number on which the Service and Support proxy server will accept connections.

Element 3: Relative priority

*SAME

The value does not change.

***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

*SAME

The value does not change.

***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

***SAME**

The value does not change.

***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.

***SAME**

The ISP profile name does not change.

***SELECT**

A panel is displayed that allows the selection of the ISP profile that will be used.

character-value

Specifies 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

***SAME**

The value is not changed.

***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

***SAME**

The value does not change.

***ALL** All available interfaces will listen for a connection.

***SELECT**

Only selected interfaces will listen for a connection.

character-value

Specifies the interface that will listen for a connection.

Element 2: L2TP profile name

***SAME**

The value does not change.

***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

Specifies the name of an L2TP terminator profile which will be used to provide connectivity for other systems or logical partitions.

Top

Connection point proxy (CNNPNTPRX)

Specifies the Service and Support proxy server to provide connectivity for other systems or logical partitions.

Element 1: Port number

***SAME**

The value does not change.

***IBMSVR**

The Service and Support proxy server will accept connections using the default port.

1-65535

Specifies the port number on which the Service and Support proxy server will accept connections.

Element 2: Authentication user ID

***SAME**

The value does not change.

***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

*SAME

The value does not change.

*NONE

A password is not required.

character-value

If the proxy server requires authentication, specify the password that will be used.

Top

Examples

Example 1: Change a Local Dial Primary Service Configuration

```
CHGSRVCFG  ROLE(*PRIMARY)  CNNTYPE(*SAME)  TELNBRI(3333333)
```

This command changes the primary telephone number of the primary service configuration. This example assumes the existing primary service configuration has a connection type of *LCLDIAL.

Example 2: Change a Direct Internet Backup Service Configuration

```
CHGSRVCFG  ROLE(*BACKUP)  CNNTYPE(*SAME)  PROXY('10.1.1.1')
```

This command changes the Service and Support proxy for a direct internet backup service configuration. This example assumes the existing backup service configuration has a connection type of *DIRECT.

Example 3: Change Modem to Not Wait for a Dial Tone

```
CHGSRVCFG  ROLE(*PRIMARY)  CNNTYPE(*SAME)  DIALTONE(*NOWAIT)
```

This command changes the modem to dial out without waiting for a dial tone. This example assumes the existing primary service configuration has a connection type of *LCLDIAL.

Top

Error messages

*ESCAPE Messages

CPFB040

If RSRCTYPE(*SELECT) is specified, MODEM(*RSRCTYPE) 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](#)

Change Service Program (CHGSRVPGM)

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

Parameters
 Examples
 Error messages

The Change Service Program (CHGSRVPGM) command changes the attributes of a program without requiring that it be recompiled. The attributes that can be changed are the optimization attribute, the user profile attribute, the use-adopted-authority attribute, the performance collection attribute, the profiling data attribute, and the service program text. The user can also force re-creation of a service program even if the attributes being specified are the same as the current attributes.

Restrictions:

- You must have use (*USE) authority to the library for the service program that is being changed.
- You must have *USE and object management (*OBJMGT) authorities for the service program that is being changed.
- You must have *USE, delete (*DLT), and add (*ADD) authority to the library to change the optimization attribute (OPTIMIZE), performance collection attribute (ENBPFCOL), profiling data attribute (PRFDTA), Licensed Internal Code Options (LICOPT), enable teraspace storage (TERASPACE), or to force service program re-creation by specifying FRCCRT(*YES).
- Service programs in library QSYS, QGDDM, and QTEMP cannot be changed unless the only indicated change is a removal of observable information.
- The STGMDL of the program and all bound modules must be *SINGLVL to change a program to TERASPACE(*NO).

Top

Parameters

Keyword	Description	Choices	Notes
SRVPGM	Service program	Qualified object name	Required, Key, Positional 1
	Qualifier 1: Service program	Generic name, name, *ALL	
	Qualifier 2: Library	Name, *USRLIBL	
OPTIMIZE	Optimize service program	*SAME, *FULL, *BASIC, *NONE, 40, 30, 20, 10	Optional
USRPRF	User profile	*SAME, *USER, *OWNER	Optional
USEADPAUT	Use adopted authority	*SAME, *YES, *NO	Optional
RMVOBS	Remove observable info	Single values: *SAME, *ALL, *NONE Other values (up to 4 repetitions): *CRTDTA, *DBGDTA, *BLKORD, *PRCORD	Optional
PRFDTA	Profiling data	*SAME, *NOCOL, *COL, *CLR, *APYBLKORD, *APYPRCORD, *APYALL	Optional
FRCCRT	Force recreation	*NO, *YES, *NOCRT	Optional
TEXT	Text 'description'	Character value, *SAME, *BLANK	Optional
LICOPT	Licensed Internal Code options	Single values: *SAME, *NONE Other values: Element list	Optional
	Element 1: Options	Character value	
	Element 2: Action	*REPLACE, *ADD	
NBRTHD	Number of threads	1-256, 1, *CALC	Optional

Keyword	Description	Choices	Notes
ENBPFCOL	Enable performance collection	Single values: *SAME, *NONE, *PEP Other values: <i>Element list</i>	Optional
	Element 1: Collection level	*FULL, *ENTRYEXIT	
	Element 2: Procedures	*ALLPRC, *NONLEAF	
TERASPACE	Teraspace	*SAME, *YES, *NO	Optional

Top

Service program (SRVPGM)

Specifies the service programs whose attributes are being changed. *USRLIBL cannot be specified or defaulted for the library qualifier when a generic name or *ALL is specified for the program qualifier.

This is a required parameter.

Qualifier 1: Service program

***ALL** All service programs in the specified library to which the user has some authority (for example, *USE authority) are selected for change.

generic-name

Specify the generic name of the service program. 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 changed only if *ALL or *ALLUSR library values can be specified for the name.

name Specify the name of the service programs whose attributes are being changed.

Qualifier 2: Library

*USRLIBL

Only the libraries in the user portion of the job's library list are searched.

name Specify the name of the library where the program is located.

Top

Optimize service program (OPTIMIZE)

Specifies whether the service program is optimized. This parameter removes redundant instructions from the specified programs. Changing the current optimization level of a service program causes the system to re-create the service program with the new optimization level.

*SAME

The value does not change.

***NONE or 10**

The service program is not optimized. Variables can be displayed and changed when debugging ILE service programs at this optimization level.

***BASIC or 20**

Some optimization is performed on the code. When debugging ILE service programs at this level, variables may be displayed but not changed.

***FULL or 30**

More optimization is performed in addition to the optimization performed at level 20. Variables cannot be changed but can be displayed while the program is being debugged. However, the displayed value of the variable during debugging may not be its actual value.

- 40** This level includes all the optimization performed at optimization level 30. In addition, it includes optimization that disables call and instruction tracing. Thus, tracing of modules created at this optimization level cannot be performed.

Top

User profile (USRPRF)

Specifies whether the authority checking done while this service program is running includes only the user who is running the service program (*USER) or both the user running the service program and the service program owner (*OWNER). The profiles of the service program user or both the service program user and the service program owner are used to control which objects can be used by the service program, including the authority the service program has for each object.

Note: To change the user profile attribute, you must be the owner of the service program, or be a member of the group profile that owns the service program, or if your user profile (or one of your group profiles) has all object (*ALLOBJ) and security administrator (*SECADM) special authorities.

***SAME**

The value does not change.

***USER**

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

***OWNER**

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

Top

Use adopted authority (USEADPAUT)

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

Note: To change the use adopted authority attribute, you must be the owner of the service program, or be a member of the group profile that owns the service program, or if your user profile (or one of your group profiles) has all object (*ALLOBJ) and security administrator (*SECADM) special authorities.

***SAME**

The value does not change.

- *YES** Program or service program adopted authority from previous recursion levels is used when this service program is running.

- *NO** Program or service program adopted authority from previous recursion levels is not used when this service program is running.

Top

Remove observable info (RMVOBS)

Specifies whether the observable information associated with service programs is removed.

*SAME

The value does not change.

***ALL** All of the observable information associated with the service program is removed, if possible. If the service program requires the observable information to ensure that it runs correctly, that information is not removed.

NOTES:

- If block order profiling data has previously been applied to this ILE service program, specifying *ALL on the RMVOBS parameter also removes *BLKORD observability.
- *ALL cannot be specified if the ILE service program is enabled to collect profiling data.

*NONE

None of the observable information associated with the service program is removed.

*DBGDTA

All of the observable information necessary to allow the service program to be debugged is removed.

*CRTDTA

All of the observable creation data is removed. Observable Creation data is necessary to allow the service program to be re-created using CHGSRVPGM, to change the optimization level, to change the performance collection attribute, or to change the profiling data attribute, is removed.

NOTES:

- *CRTDTA cannot be specified if the ILE service program is enabled to collect profiling data.
- Creation data (either observable or unobservable) is required to convert service programs to a different hardware technology, for example, between CISC (Complex Instruction Set Computer) and RISC (Reduced Instructions Set Computer) technology.
- Service programs created only from modules created for release V5R1M0 or later (TGTRLS parameter when the module was created) will retain unobservable creation data even when *ALL observability or *CRTDTA observability is removed.
- If the service program was created for a release earlier than V3R6M0, and is currently in RISC format or FRCCRT(*YES) is specified, removing *CRTDTA will cause the service program to no longer be able to be saved for a release earlier than V3R6M0.

*BLKORD

Block order profiling data is removed from the service program.

*PRCORD

Procedure order profiling data is removed from the service program.

Top

Profiling data (PRFDTA)

Specifies the program profiling data attribute for service programs. Program profiling is an advanced optimization technique to reorder procedures and code within the procedures based on statistical data (profiling data).

*SAME

The value does not change.

*NOCOL

The collection of profiling data is not enabled and profiling data is not applied.

*COL The collection of profiling data is enabled for eligible modules.

Note: Specifying *COL removes all applied profiling data if the service program has profiling data applied.

*CLR All previously collected profiling data is discarded. The service program remains enabled to collect profiling data.

***APYBLKORD**

Block order profiling data is applied to every module bound into this service program previously enabled to collect profiling data. The collection of profiling data is no longer enabled.

***APYPRCORD**

Block order and procedure order profiling data are applied. The collection of profiling data is no longer enabled.

***APYALL**

Block order and procedure order profiling data are applied. The collection of profiling data is no longer enabled.

Top

Force recreation (FRCRT)

Specifies whether service program re-creation is forced.

***NO** Service program re-creation is not forced unless the **Optimize service program (OPTIMIZE)** parameter, the **Use adopted authority (USEADPAUT)** parameter, the **Enable performance collection (ENBPFCOL)** parameter, the **Profiling data (PRFDTA)** parameter, **User profile (USRPRF)** parameter, **Licensed Internal Code options (LICOPT)** parameter or the **Teraspace (TERASPACE)** parameter has changed. This option allows the system to determine whether a change is required.

***YES** Service program re-creation is forced whether or not the OPTIMIZE parameter, the USEADPAUT parameter, the ENBPFCOL parameter, the PRFDTA parameter, the USRPRF parameter, the LICOPT parameter, or the TERASPACE parameter has changed.

***NOCRT**

No service program re-creation is done. If you attempt to change a service program attribute which would implicitly require the service program to be re-created, an error message is issued and no attributes of the service program are changed. Modifying one of the following parameters may cause the service program to be re-created: OPTIMIZE, USEADPAUT, ENBPFCOL, PRFDTA, USRPRF, LICOPT, or TERASPACE.

Top

Text 'description' (TEXT)

Specifies text that briefly describes the service program.

***SAME**

The value does not change.

***BLANK**

Text is not specified.

character-value

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

Top

Licensed Internal Code options (LICOPT)

Specifies individual Licensed Internal Code compile-time options to be selected, and is intended for the advanced programmer who understands the potential benefits and drawbacks of each selected compiler option. Changing the Licensed Internal Code options of an Integrated Language Environment (ILE) service program to any value other than *SAME causes the system to re-create the ILE service program. Note: Additional information about the LICOPT options can be found in the ILE Concepts book, SC41-5606.

Element 1: Options

*SAME

If the service program object is re-created, the existing Licensed Internal Code compile-time options are input to object re-creation. Otherwise, the Licensed Internal Code compile-time options do not change.

*NONE

Service program re-creation is forced and no Licensed Internal Code options are used for all the bound modules.

character-value

Specify one or more Licensed Internal Code compile-time options. Changing the Licensed Internal Code options of an Integrated Language Environment (ILE) service program causes the system to re-create the ILE service program.

Element 2: Action

*REPLACE

Any existing Licensed Internal Code options for the bound modules are replaced with the specified values.

*ADD The specified Licensed Internal Code options are added to the end of the existing Licensed Internal Code options string for each of the bound modules. Any conflicts between Licensed Internal Code option values will be resolved with the last specified value taking precedence.

Top

Number of threads (NBRTHD)

Specifies the maximum number of threads to use when re-creating bound modules. Specifying a number greater than 1 allows the command to take advantage of available CPU cycles, especially on a multi-processor system.

1 A single thread is used when creating bound modules.

*CALC

The system calculates a reasonable maximum number of threads to use which will not use excessive resources. Usually this is one or two threads for each available processor.

1-256 Specify the maximum number of threads to use.

Top

Enable performance collection (ENBPFCOL)

This parameter is obsolete.

Top

Teraspace (TERASPACE)

Specifies whether the service program object is enabled to work with teraspace storage. This includes teraspace storage allocated by the module object and parameters passed from other teraspace-enabled program and service program objects.

If the service program being changed was created for TGTRLS(V6R1M0) or a later release, the service program will be enabled for teraspace regardless of the value specified for this parameter. If the service program being changed was created for a release prior to V6R1M0, the TERASPACE value specified will be stored in the service program and will be used when the service program is brought to a release prior to V6R1M0. However, when the service program is on V6R1M0 and later releases, it is enabled for teraspace.

If the service program being changed has a target release (TGTRLS) value earlier than V6R1M0, specifying a value different than the current TERASPACE attribute value will cause the service program to be recreated and the specified value will be stored in the object template information.

*SAME

The teraspace storage enablement does not change.

***NO** If the service program was created for a release prior to V6R1M0, then the teraspace storage enablement of the eligible bound modules is changed to no. A bound module must be single level storage model to be changed to TERASPACE(*NO).

***YES** If the service program was created for a release prior to V6R1M0, then the teraspace storage enablement of the eligible bound modules is changed to yes. A bound module must be at least V4R4M0 or later to be changed to TERASPACE(*YES).

Top

Examples

Example 1: Optimizing a Service Program

```
CHGSRVPGM SRVPGM(PROG1/SERVICE) OPTIMIZE(*FULL)
          USRPRF(*OWNER)
```

The service program SERVICE in library PROG1 is optimized, and the user profile under which it is processed is changed to include the service program owner's user profile. Only the owner of service program PROG1/SERVICE, or a user with security officer authority, can change the USRPRF attribute. The service program is re-created only if the attributes specified differ from those of the current service program.

Example 2: Changing Text for a Service Program

```
CHGSRVPGM PGM(*USRLIBL/KNUTE)
          TEXT('Service program description')
```

This command changes the text for service program KNUTE. The user portion of the library list is used to find the service program.

Example 3: Optimizing Multiple Service Programs

```
CHGSRVPGM SRVPGM(PROG1/ACE*) OPTIMIZE(40)
```

All service programs in library PROG1 whose names begin with ACE, are optimized to level 40 or their maximum optimization level.

Example 4: Changing Text of Multiple Service Programs

```
CHGSRVPGM SRVPGM(PROG2/*ALL) TEXT('Generic Text')
```

This command changes the text of all service programs in library PROG2 to Generic Text.

Example 5: Enabling Collection of Profiling Data

```
CHGSRVPGM SRVPGM(PROG1/PROFPGM) PRFDTA(*COL)
```

This command enables the collection of profiling data for service program PROFPGM in library PROG1. If PROFPGM in library PROG1 had profiling data applied prior to issuing this command, all applied profiling data will be removed.

Example 6: Applying Profiling Data

```
CHGSRVPGM SRVPGM(PROG1/PROFPGM) PRFDTA(*APYALL)
```

This command applies block order and procedure order profiling data to service program PROFPGM in library PROG1. The collection of profiling data is no longer enabled for service program PROFPGM library PROG1.

Top

Error messages

*ESCAPE Messages

CPF223C

Not authorized to change the use adopted authority (USEADPAUT) attribute for &1 in &2 type *&3.

CPF223E

Authority check for use adopted authority attribute failed.

CPF5CEB

Service program &1 in library &2 not found.

CPF5CEC

&1 changed. &2 did not require change. &3 not changed.

CPF5CED

No service programs changed.

CPF5CEE

Service programs in libraries QSYS and QGDDM cannot be changed.

CPF5CEF

*USRLIBL not allowed with generic name or *ALL.

CPF5CF0

User &3 not authorized to change &1.

CPF5CF1
Cannot remove observable information.

CPF5CF2
User &3 not authorized to change &1.

CPF5CF3
Service program &1 in library &2 not changed.

CPF5CF4
Service program &1 in &2 not changed.

CPF5D04
Not authorized to service program &1 in library &2.

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.

CPF9810
Library &1 not found.

CPF9818
Object &2 in library &3 not created.

CPF9819
Object &2 in library &3 not created.

CPF9820
Not authorized to use library &1.

CPF9830
Cannot assign library &1.

Top

Change Session Maximum (CHGSSNMAX)

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

Parameters
Examples
Error messages

The Change Session Maximum (CHGSSNMAX) command is used to dynamically change the maximum number of sessions the local location allows to a mode.

When a change to the maximum number of sessions is made, the remote system is informed and allowed to negotiate for a lower session maximum. The remote system cannot negotiate a session maximum higher than the value specified for the local number of sessions specified. The resulting session maximum value is the **current session maximum**. Neither system may activate more sessions than the current session maximum.

If the requested session maximum is accepted or negotiated by the remote system, the value requested on this command is stored as the **local session maximum**; the remote system is not allowed to increase the current session maximum above the value stored as the local session maximum. This new value for the local session is only used the next time a new session maximum needs to be negotiated. The current session maximum, which controls how many sessions can be active between the local and remote location, is not changed if the command fails. If the request to change the session maximum is rejected by the remote system, the command ends abnormally and the local session maximum is changed as follows: If it is increasing, it is changed to the value specified; if it is decreasing, it is not changed.

This command is normally used by the system operator to control the number of sessions that can be active at the same time with a remote location. If the current number of active sessions is greater than the maximum number specified on the command, no new sessions are created until the number of active sessions falls below that specified on the command. If the current number of active sessions is less than the maximum number specified, sessions are not created until jobs requiring them are started. The value created by the systems remains in effect until another Change Session Maximum (CHGSSNMAX) command or an End Mode (ENDMOD) command is run for the same mode, or until all the device descriptions associated with the remote location are varied off.

NOTES:

1. When this command is used to reduce the number of sessions with a remote system, the sessions that are ended first are the available locally controlled sessions, followed by any other available sessions. If the new session count is still not reached, other sessions are ended as jobs using them are completed or are canceled.
2. When the CHGSSNMAX command is used to increase the maximum number of sessions that can be created with a remote system, the locally controlled sessions are made available first (depending on the negotiated values), and then other sessions are made available.
3. The CHGSSNMAX command does not change the value specified for the MAXSSN parameter in the mode description; the Change Mode Description (CHGMODD) command must be used to permanently change the value. When the device is next varied on, the MAXSSN value from the mode description is used to limit the number of sessions instead of the MAXSSN value specified on a previous CHGSSNMAX command.

The APPC Programming book, SC41-5443 has more information on this command.

Top

Parameters

Keyword	Description	Choices	Notes
RMTLOCNAME	Remote location	<i>Communications name</i>	Required, Positional 1
MAXSSN	Maximum sessions	1-512	Optional
DEV	Device	<i>Name</i> , <u>*LOC</u>	Optional, Positional 2
MODE	Mode	<i>Communications name</i> , <u>*NETATR</u>	Optional, Positional 3
LCLLOCNAME	Local location	<i>Communications name</i> , <u>*LOC</u> , *NETATR	Optional
RMTNETID	Remote network identifier	<i>Communications name</i> , <u>*LOC</u> , *NETATR, *NONE	Optional

Top

Remote location (RMTLOCNAME)

Specifies the remote location name.

This is a required parameter.

Top

Maximum sessions (MAXSSN)

Specifies the number of sessions allowed with the remote system. This value represents the desired maximum session number for the specified mode name. It must be less than or equal to the limit for number of sessions defined in the mode description. This value can be negotiated to a lower value by the remote location; therefore, the value specified here is not necessarily the value that is used.

Valid values for this parameter are 1 through 512.

Top

Device (DEV)

Specifies the name of the device description used with the remote location.

The possible values are:

*LOC The device associated with the remote location is used. If several devices can be associated with the remote location, the system determines which device is used.

device-name

Specify the name of a device description that is associated with the remote location.

Top

Mode (MODE)

Specifies the name of the mode to be changed.

The possible values are:

***NETATR**

The mode in the network attributes is used.

BLANK

A mode name (consisting of 8 blank characters) is used.

mode-name

Specify a value, no more than 8 characters, used to identify the mode to be changed.

Note: SNASVCMG and CPSVCMG are reserved names and cannot be specified.

Top

Local location (LCLLOCNAME)

Specifies the local location name.

The possible values are:

***LOC** The local location name is determined by the system.

***NETATR**

The LCLLOCNAME value specified in the system network attributes is used.

local-location-name

Specify the local location name associated with the remote location.

Top

Remote network identifier (RMTNETID)

Specifies the remote network ID that is used with the remote location.

The possible values are:

***LOC** The system selects the remote network ID.

***NETATR**

The remote network identifier specified in the network attributes is used.

***NONE**

No remote network identifier (ID) is used.

remote-network-id

Specify a remote network ID.

Top

Examples

```
CHGSSNMAX RMTLOCNAME(APPCRLOC) DEV(APPCDEV) MODE(APPC2) MAXSSN(3)
```

This command changes the maximum number of sessions allowed by remote location APPCRLOC for mode APPC2 to a maximum of three.

Top

Error messages

*ESCAPE Messages

CPF598B

The &1 command failed for one or more modes.

[Top](#)

Change Server Auth Entry (CHGSVRAUTE)

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

Parameters
Examples
Error messages

The Change Server Authentication Entry (CHGSVRAUTE) command changes existing authentication information entries for a user profile. The authentication information is for use by application requesters in connecting to application servers.

Restrictions: You must have security administrator (*SECADM) special authority, and object management (*OBJMGT) and use (*USE) authorities to the user profile for which the server authentication entry is to be changed, or else be signed on under that user profile, to run this command.

Top

Parameters

Keyword	Description	Choices	Notes
USRPRF	User profile	<i>Simple name</i> , *CURRENT	Required, Positional 1
SERVER	Server	<i>Character value</i>	Required, Positional 2
USRID	User ID	<i>Character value</i> , *SAME, *USRPRF	Optional
PASSWORD	User password	<i>Character value</i> , *SAME, *NONE	Optional

Top

User profile (USRPRF)

Specifies the user profile for which the server authentication entry is to be changed.

*CURRENT

The server authentication entry will be changed for the current user profile.

name Specify the name of the user profile for which the server authentication entry is to be changed.

Top

Server (SERVER)

Specifies the name of the application server for which the entry is to be changed. You can specify a maximum of 200 characters.

Note: Refer to the documentation for the server that you are using to determine if there are any values that have special meaning. For example, the server name QDDMSERVER has special meaning if you are using the Distributed Data Management (DDM) server.

Top

User ID (USRID)

Specifies the user name for which requests will be made to the application server.

*SAME

The user ID specified on connection requests to the server does not change.

*USRPRF

The name specified in the user profile parameter will be the user ID specified on connection requests to the server.

'user-name'

The user ID to be used on connection requests. Specify no more than 1000 characters.

Top

User password (PWD)

Specifies the password to be used to authenticate the user when the client attempts to connect to the server.

Note: If the retain server security data (QRETSVRSEC) system value is set to 0 (do not retain data), then the password will not be saved in the entry.

*SAME

The password does not change.

*NONE

No password is supplied.

'password'

Specify the password associated with the user ID. Specify no more than 696 characters.

Top

Examples

Example 1: Changing a default remote user ID and password for the current user

```
CHGSVRAUTE  USRPRF(*CURRENT) SERVER(*ANY)  USRID('JOHN')
             PASSWORD('XU53W4')
```

This command changes a server authentication entry for the currently signed on user specifying that for connection requests to any server for which there is no specific authentication entry, a remote user ID of JOHN and a password of XU53W4 is to be used.

Example 2: Changing an entry for another user for a specific server

```
CHGSVRAUTE  USRPRF(SUSAN) SERVER('MPLS_RDB') USRID(*SAME)
             PASSWORD('S23084')
```

This command changes the password for the user SUSAN when connecting to the server named MPLS_RDB.

Top

Error messages

*ESCAPE Messages

CPF2204

User profile &1 not found.

CPF2213

Not able to allocate user profile &1.

CPF2222

Storage limit is greater than specified for user profile &1.

CPF225E

Server authentication entry does not exist.

CPF225F

Not all information stored.

CPF226C

Not authorized to perform function.

Top

Change System Dir Attributes (CHGSYSDIRA)

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

Parameters
 Examples
 Error messages

The Change System Directory Attributes (CHGSYSDIRA) command changes system directory attributes used when working interactively with the directory and the directory shadow systems.

An override program is provided that fills in the values of these directory attributes.

Restrictions:

1. You must have security administrator (*SECADM) or all object (*ALLOBJ) special authority to use this command.
2. You must have all object (*ALLOBJ) special authority to change the search (SCHPGM), the verification (VRFPGM), or the supplier (SUPPGM) user exit program.

Top

Parameters

Keyword	Description	Choices	Notes
SCHTYPE	Type of search	*EXACT, *GENERIC, <u>*SAME</u>	Optional, Positional 1
SCHPGM	Search program	Single values: <u>*SAME</u> , *NONE Other values: <i>Qualified object name</i>	Optional, Positional 2
	Qualifier 1: Search program	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
VRFPGM	Verification program	Single values: <u>*SAME</u> , *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Verification program	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
SUPPGM	Supplier program	Single values: <u>*SAME</u> , *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Supplier program	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
RTYITV	Retry interval	1-999, <u>*SAME</u>	Optional
RTYLMT	Retry limit	0-9, <u>*SAME</u>	Optional
ALWDSPNUI	Display network user ID	*NO, *YES, <u>*SAME</u>	Optional
MSGQ	Message queue	Single values: <u>*SAME</u> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
RMTSHD	Shadow remote users	*NO, *YES, <u>*SAME</u>	Optional
RMVJOBLOG	Remove shadowing job logs	*NO, *YES, <u>*SAME</u>	Optional
ALWSCH	Allow search	*NO, *YES, <u>*SAME</u>	Optional

Keyword	Description	Choices	Notes
USRDFNFLD	User-defined fields	Single values: *SAME Other values (up to 100 repetitions): <i>Element list</i>	Optional
	Element 1: Field name	<i>Character value</i>	
	Element 2: Product ID	<i>Character value</i> , *NONE	
	Element 3: Function	*ADD, *RMV, *CHG, *KEEP	
	Element 4: Field type	*DATA, *MSFSRVLVL, *ADDRESS	
	Element 5: Maximum field length	1-512	

Top

Type of search (SCHTYPE)

Specifies the type of search to be applied to the Search System Directory display. The search attribute specified on this parameter applies to the system.

*SAME

The value does not change.

*EXACT

The system searches for the exact text string specified on the Search System Directory display. This value includes the ability to specify an asterisk (*) as part of the string to find generic values.

*GENERIC

The system searches for the text string specified on the Search System Directory display, but makes the end of the string an automatic generic search. An asterisk (*) does not need to be specified at the end of a string to find generic values.

Top

Search program (SCHPGM)

Specifies the user exit program that performs a customized search from the Search System Directory display. More information about the user exit program is in the APIs topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

If a user exit program is specified, it must exist.

*SAME

The value does not change.

*NONE

No search user exit program is specified.

The name of the program 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.

program-name

Specify the name of the user exit program that performs the user search.

Verification program (VRFPGM)

Specifies the user exit program that verifies a change, add, or delete operation for directory entries, departments, and locations that are local or shadowed. This program is called from both a local data entry and from directory shadowing. More information about the user exit program is in the APIs topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Changes are always verified by the system. If a user exit program is not supplied, no additional verification checking is required by the system. When a user exit program is supplied, the user exit program is called and then system validation is performed.

If a user exit program is specified, it must exist.

***SAME**

The value does not change.

***NONE**

No authority user exit program is specified.

The name of the program 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.

program-name

Specify the name of the user exit program that verifies the modification.

Supplier program (SUPPGM)

Specifies the user exit program that decides whether a change, add, or delete operation for directory entries, departments, and locations is to be shadowed to a collector system. This program is called from directory shadowing. More information about the user exit program is in the APIs topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

If a user exit program is not supplied, all changes are sent to the collector system. When a user exit program is supplied, the user exit program is called and then directory shadowing is performed.

If a user exit program is specified, it must exist.

***SAME**

The value does not change.

***NONE**

No authority user exit program is specified.

The name of the program 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.

program-name

Specify the name of the user exit program that decides which records to supply during directory shadowing.

Top

Retry interval (RTYITV)

Specifies the number of minutes to wait after an unsuccessful shadow before attempting to shadow again.

***SAME**

The value does not change.

retry-interval

Specify the interval (in minutes) to wait before attempting to shadow the directory data again. Valid values range from 1 through 999.

Top

Retry limit (RTYLMT)

Specifies the number of times to retry a directory shadow before the operation fails.

***SAME**

The value does not change.

number-of-retries

Specify the number of retries to perform before ending the directory shadow attempt. Valid values range from 0 through 9.

Top

Display network user ID (ALWDSPNUI)

Specifies whether to allow all network user IDs to be displayed or printed by all users. The network user IDs are always displayed or printed for system administrators or for users who display or print their own directory entries.

***SAME**

The value does not change.

***YES** All network user IDs are displayed to all users.

***NO** Network user IDs are not displayed to all users.

Top

Message queue (MSGQ)

Specifies the qualified name of the message queue to which messages are sent.

***SAME**

The value does not change.

The name of the message queue 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.

message-queue-name

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

Top

Shadow remote users (RMTSHD)

Specifies whether to supply additions, changes, or deletions of locally-defined remote directory entries during directory shadowing. Locally-defined remote directory entries are added locally, but have a system name that is different from the local system name. Changes are always supplied for local directory entries and for shadowed entries.

***SAME**

The value does not change.

***YES** Additions, changes, and deletions to all directory entries are supplied to collecting systems during directory shadowing.

***NO** Additions, changes, or deletions of locally-defined remote directory entries are not supplied during directory shadowing. Updates to local directory entries or shadowed entries are supplied to collecting systems during directory shadowing.

Top

Remove shadowing job logs (RMVJOBLOG)

Specifies whether to delete job logs created during previous directory shadow collections from a specific supplier system. More information about this parameter is in the SNA Distribution Services book, SC41-5410.

***SAME**

The value does not change.

***YES** The job log created when the local system collected from a remote system is automatically deleted when the local system collects from that supplier system again.

***NO** The job log created when the local system collected data from a remote system is not automatically deleted.

Top

Allow search (ALWSCH)

Specifies whether to allow a search on the system distribution directory.

***SAME**

The value does not change.

***NO** Search data is not created for the system distribution directory.

***YES** Search data is created for the system distribution directory. When this option is specified, the search file cannot be shared while the search data is being created. After the search data is created, all updates to the system distribution directory will update the search data. After this option is successfully run, the system distribution directory can be searched.

Top

User-defined fields (USRDFNFLD)

Specifies the user-defined field names, function, field type, and maximum field length on the user-defined field names. You can add, remove, or change user-defined field names in the system distribution directory for the system with this parameter.

If the specified user-defined field name exists on a supplier shadowing system, the data is automatically initialized on your system the next time you collect from that supplier system. After the initialization, any changes made to that field on other shadowing systems are updated on your system when it is shadowed. If there are user-defined fields on other shadowing systems that are not defined on your system, then these fields and their value are passed through to the other shadowing systems so the data is not lost.

If the user-defined field name does not exist on a supplier system but exists in the network, the user-defined field will not get initialized. To get the user-defined field initialized on your system, add it to the supplier system where the supplier system shadows data from a system with the user-defined field.

Up to 100 user-defined fields can be specified.

***SAME**

The user-defined fields as specified on the system do not change.

The possible User-Defined-Field Name value is:

field-name

Specify up to 10 characters for the user-defined field name.

The possible User-Defined-Field Product ID values are:

***NONE**

No user-defined field product ID is specified.

product-ID

Specify up to 7 characters for the user-defined field product ID.

The possible User-Defined-Field Function values are:

***KEEP**

Indicates that the system should keep the user-defined field that is specified above.

***ADD** Indicates that the system should add the user-defined field that is specified above.

***RMV** Indicates that the system should remove the user-defined field that is specified above. This removes it from this system and not from the shadowing systems.

***CHG** Indicates that the system should change the user-defined field that is specified above. The maximum length value and the field type can be changed. The field name and product ID cannot be changed.

The possible Field Type values are:

Field type is required for function *ADD and optional for *CHG. It will be ignored for function *KEEP and *RMV.

***DATA**

Indicates that the user-defined field contains data for the user.

***MSFSRVLVL**

Indicates that the user-defined field contains a mail server framework service level value. By specifying this value, this user-defined field can be used to store information for a service level for the Mail Server Framework. Also, this type of field will be displayed in the list when F4 is pressed on the Add and Change Directory Entry panels for the 'Mail service level' field.

***ADDRESS**

Indicates that the user-defined field contains an address. By specifying this field, it indicates that this field can be used as a preferred address by the user. Also, this type of field will be displayed in the list when F4 is pressed on the Add and Change Directory Entry panels for the 'Preferred address' field.

The possible User-Defined-Field Maximum length value is:

maximum-length

Specify between 1 and 512 bytes for the maximum length of the user-defined field. Maximum field length is required for function *ADD and optional for *CHG. It will be ignored for function *KEEP and *RMV.

Top

Examples

Example 1: Changing the Search Type to Generic

```
CHGSYSDIRA SCHTYPE(*GENERIC)
```

This command searches the Search System Directory display to find all matches that begin with the specified text string. For example, a search for Smith may result in Smith, Smithsonian and Smithton.

Example 2: Changing the Shadowing Retry Attributes

```
CHGSYSDIRA RTYITV(10) RTYLMT(3)
```

This command changes the attributes that control the available options when shadowing fails. The interval between failures is 10 minutes with a maximum of three retries for this example.

Top

Error messages

*ESCAPE Messages

CPF898C

*ALLOBJ special authority required to do requested operation.

CPF90F7

System directory attributes not changed.

Top

Change System Job (CHGSYSJOB)

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

Parameters
Examples
Error messages

The Change System Job (CHGSYSJOB) command allows the user to change the run priority of a system job.

Restrictions:

1. To use this command, you must have job control (*JOBCTL) and all object (*ALLOBJ) special authorities.

Top

Parameters

Keyword	Description	Choices	Notes
JOB	Job name	<i>Qualified job name</i>	Required, Key, Positional 1
	Qualifier 1: Job name	<i>Name</i>	
	Qualifier 2: User	<i>Name</i>	
	Qualifier 3: Number	000000-999999	
RUNPTY	Run priority	0-99, *SAME, *IPL	Optional

Top

Job name (JOB)

Specifies the name of the system job whose attributes are being changed. The list of valid job names are displayed when F4 is pressed while prompting for this parameter.

This is a required parameter.

Qualifier 1: Job name

name Specify the name of the system job.

If more than one system job has the name specified, and no values are specified for the user name and job number elements of this parameter, and the CHGSYSJOB command is being run in an interactive job, a selection panel is shown where you can select the system job to change. If the specified job name is not unique and the CHGSYSJOB command is being run in a batch job, escape message CPF1069 is sent.

Qualifier 2: User

name Specify the user name that identifies the user profile under which the job is started.

Qualifier 3: Number

000000-999999

Specify the system-assigned job number.

Run priority (RUNPTY)

Specifies the run priority for the routing step. Machine run priority is a value, ranging from 0 (highest priority) through 99 (lowest priority), that represents the importance of the routing step when it competes with other routing steps for machine resources. This value represents the relative (not the absolute) importance of the routing step. For example, a routing step with a run priority of 25 is not twice as important as one with a run priority of 50.

*SAME

The value does not change.

***IPL** Use the run priority at which the system job was started.

0-99 Specify the run priority that the routing step uses.

Examples

```
CHGSYSJOB JOB(QDBSRVXR2) RUNPTY(20)
```

This command changes the run priority of the system job QDBSRVXR2 to 20.

Error messages

*ESCAPE Messages

CPF1069

End of duplicate names.

CPF1070

Job &3/&2/&1 not found.

CPF137A

Not authorized to change system job.

CPF1379

Job &3/&2/&1 cannot be changed.

Change System Library List (CHGSYSLIBL)

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

Parameters
Examples
Error messages

The Change System Library List (CHGSYSLIBL) command changes the system portion of the library list for the current thread. You can specify if the library is added to the beginning of the system portion of the library list, or removed from the system portion of the library list.

Restrictions:

1. This command is shipped with exclude (*EXCLUDE) public authority. It is shipped authorized only to the security officer or a user with all object (*ALLOBJ) special authority.
2. The QSYS library is always in the system portion of the library list and cannot be added to or removed from it.

Top

Parameters

Keyword	Description	Choices	Notes
LIB	Library	<i>Name</i>	Required, Positional 1
OPTION	Option	<u>*ADD</u> , *REMOVE	Optional, Positional 2

Top

Library (LIB)

Specifies the library to be added to or removed from the system portion of the library list for the current thread.

This is a required parameter.

name Specify the name of the library to be added to or removed from the system portion of the library list for the current thread.

Top

Option (OPTION)

Specifies if the library is added to or removed from the system portion of the library list for the current thread.

***ADD** The specified library is added as the first library in the system portion of the library list for the current thread.

***REMOVE**

The specified library is removed from the system portion of the library list for the current thread.

Examples

```
CHGSYSLIBL LIB(PAYROLL) OPTION(*ADD)
```

This command adds the library PAYROLL to the beginning of the system portion of the library list.

Top

Error messages

*ESCAPE Messages

CPF2103

Library &1 already exists in library list.

CPF2106

Library list not available.

CPF2110

Library &1 not found.

CPF2113

Cannot allocate library &1.

CPF2118

Library &1 not added.

CPF2128

Library &1 not in system portion of library list.

CPF2176

Library &1 damaged.

CPF2182

Not authorized to library &1.

Top

Change System Value (CHGSYSVAL)

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

Parameters
Examples
Error messages

The Change System Value (CHGSYSVAL) command changes the current value of the specified system value. Changes to some system values take effect immediately, some changes do not take effect until new jobs are started, and others do not take effect until the next initial program load (IPL).

System values must be enclosed in apostrophes under three conditions:

- If the system value specified is a character string with embedded blanks
- If numeric values or special characters are specified for character type system values
- If the system value is a date or time value

Some system values, such as QACGLVL, QCHRID, QCMNRCYLMT, etc., may be lists. To separate items in the list, use blanks and enclose the entire list in apostrophes. If there is only one item in the list, you do not need apostrophes.

Some system values, such as QCTLSBSD, QSTRUPPGM, QUPSMGQ, and QPWDVLDPGM, accept object names and library names. If the system values are qualified, use blanks to separate the object and library names, and enclose the value in apostrophes. Apostrophes are necessary only when the library name or *LIBL is specified with the object name.

Notes:

- If a change is made to a date or time system value during any operation that measures the length of time, a negative value may be set if the end time is less than the start time.
- When object names are specified for system values, the lowercase letters in the names are always changed to uppercase even when they are in apostrophes. This means you should not use lowercase letters in the names of objects or libraries that you want to specify on any of the system values.

Restrictions:

1. To use this command as shipped by IBM, you must be signed on as QPGMR, QSYSOPR, or QSRV, or have all object (*ALLOBJ) special authority.
2. Only user profiles with *ALLOBJ special authority are allowed to change the following system values:

QCENTURY
QDATE
QDATETIME
QDAY
QHOURL
QMINUTE
QMONTH
QSECOND
QTIME
QTIMZON
QYEAR

3. Only user profiles with *ALLOBJ and security administrator (*SECADM) special authorities are allowed to change security related system values. System values that are affected:

QACGLVL	QIPLTYPE	QPWDLVL	QSECURITY
QALWJOBITP	QKBDBUF	QPWDMAXLEN	QSHRMEMCTL
QALWOBJRST	QLIBLCKLVL	QPWDMINLEN	QSPCENV
QALWUSRDMN	QLMTDEVSSN	QPWDPOSDIF	QSPLFACN
QATNPGM	QLMTSECOFR	QPWDRQDDGT	QSTGLOWACN

QAUTORMT	QMAXJOB	QPWDRQDDIF	QSTGLOWLMT
QAUTOSPRPT	QMAXSGNACN	QPWDRULES	QSVRAUTITV
QAUTOVRT	QMAXSIGN	QPWDVLDPGM	QSYSLIBL
QCRTAUT	QMLTTHDACN	QPWRRSTIPL	QTHDRSCADJ
QDEVNAMING	QPRCLMTTSK	QQRDEGREE	QTHDRSCAFN
QDSPSGNINF	QPRTDEV	QQRYTIMLMT	QUSEADPAUT
QDYNPTYADJ	QPWDCHGBLK	QRETSVRSEC	QVFOBJRST
QDYNPTYSCD	QPWDEXPITV	QRMTIPL	
QFRCCVNRST	QPWDEXPWRN	QRMTSIGN	
QINACTITV	QPWDLMTAJC	QRMTSRVATR	
QINACTMSGQ	QPWDLMTCHR	QSCANFS	
QIPLDATTIM	QPWDLMTREP	QSCANFSCTL	

- Only user profiles with audit (*AUDIT) special authority are allowed to change the following system values:

QAUDCTL
QAUDENDACN
QAUDFRCLVL
QAUDLVL
QAUDLVL2
QCRTOBJAUD

- Only user profiles with input/output system configuration (*IOSYSCFG) special authority are allowed to change the following system values:

QCFGMSGQ

- Only user profiles with *IOSYSCFG, *ALLOBJ, and *SECADM special authorities are allowed to change the secure sockets layer related system values. System values that are affected:

QSSLCSL
QSSLCSLCTL
QSSLPCL

- Only user profiles with job control (*JOBCTL) special authority are allowed to change the following system values:

QCMNARB
QLOGOUTPUT
QPASTHRSVR

- Certain security related system values may not be changed if an option in Start Service Tools (STRSST) has been used to prevent them from being changed. System values that are affected:

QALWJOBITP	QDEVRCYACN	QPWDLMTCHR	QSCANFS
QALWOBJRST	QDSCJOBITV	QPWDLMTREP	QSCANFSCTL
QALWUSRDMN	QDSPSGNINF	QPWDLVL	QSECURITY
QAUDCTL	QFRCCVNRST	QPWDMAXLEN	QSSLCSL
QAUDENACN	QINACTMSGQ	QPWDMINLEN	QSSLCSLCTL
QAUDFRCLVL	QLMTDEVSSN	QPWDPOSDIF	QSSLPCL
QAUDLVL	QLMTSECOFR	QPWDRQDDGT	QSHRMEMCTL
QAUDLVL2	QMAXSGNACN	QPWDRQDDIF	QUSEADPAUT
QAUTOCFG	QMAXSIGN	QPWDRULES	QVFOBJRST
QAUTORMT	QPWDCHGBLK	QPWDVLDPGM	
QAUTOVRT	QPWDEXPITV	QRETSVRSEC	
QCRTAUT	QPWDEXPWRN	QRMTSIGN	
QCRTOBJAUD	QPWDLMTAJC	QRMTSRVATR	

Top

Parameters

Keyword	Description	Choices	Notes
SYSVAL	System value	QACGLVL, QACTJOB, QADLACTJ, QADLSPLA, QADLTOTJ, QALWJOBITP, QALWOBJRST, QALWUSRDMN, QASTLVL, QATNPGM, QAUDCTL, QAUDENDACN, QAUDFRCLVL, QAUDLVL, QAUDLVL2, QAUTOCFG, QAUTORMT, QAUTOSPRPT, QAUTOVRT, QBASACTLVL, QBASPOOL, QBOOKPATH, QCCSID, QCENTURY, QCFGMSGQ, QCHRID, QCHRIDCTL, QCMNARB, QCMNRCYLMT, QCNTYID, QCRTAUT, QCRTOBJAUD, QCTLSBSD, QCURSYM, QDATE, QDATETIME, QDATFMT, QDATSEP, QDAY, QDBFSTCCOL, QDBRCVYWT, QDECFMT, QDEVNAMING, QDEVRCYACN, QDSCJOBITV, QDSPSGNINE, QDYNPTYADJ, QDYNPTYSCD, QENDJOBMT, QFRCCVNRST, QHOUR, QHSTLOGSIZ, QIGCCDEFNT, QIGCFNTSIZ, QINACTITV, QINACTMSGQ, QIPLDATTIM, QIPLTYPE, QJOBMSGQFL, QJOBMSGQMX, QJOBMSGQSZ, QJOBMSGQTL, QJOBSPLA, QKBDBUF, QKBDTYPE, QLANGID, QLEAPADJ, QLIBLCKLVL, QLMTDEVSSN, QLMTSECOFR, QLOCALE, QLOGOUTPUT, QMAXACTLVL, QMAXJOB, QMAXSGNACN, QMAXSIGN, QMAXSPLF, QMCHPOOL, QMINUTE, QMLTHDACN, QMONTH, QPASTHRSVR, QPFRADJ, QPRBFTR, QPRBHLDTIV, QPRCLTTSK, QPRTDEV, QPRTKEYFMT, QPRTTXT, QPWDCHGBLK, QPWDEXPITV, QPWDEXPWRN, QPWDLMTAJC, QPWDLMTCHR, QPWDLMTREP, QPWDLVL, QPWDMAXLEN, QPWDMINLEN, QPWDPOSDIF, QPWDRQDDGT, QPWDRQDDIF, QPWDRULES, QPWDVLDPGM, QPWRDWNLMT, QPWRRSTIPL, QQRYDEGREE, QQRYTIMLMT, QRCLSPLSTG, QRETSVRSEC, QRMTIPL, QRMTSIGN, QRMTSRVATR, QSAVACCPH, QSCANFS, QSCANFCTL, QSCPFCONS, QSECOND, QSECURITY, QSETJOBATR, QSFWERRLOG, QSHRMEMCTL, QSPCENV, QSPLFACN, QSRTSEQ, QSRVDMP, QSSLSL, QSSLSLCTL, QSSLPCL, QSTGLOWACN, QSTGLOWLMT, QSTRUPPGM, QSTMSG, QSVRAUTITV, QSYSLIBL, QTHDRSCADJ, QTHDRSCAFN, QTIMADJ, QTIME, QTIMSEP, QTIMZON, QTOTJOB, QTSEPOOL, QUPSDLYTIM, QUPSMGQ, QUSEADPAUT, QUSRLIBL, QUTCOFFSET, QVFOBJRST, QYEAR	Required, Positional 1
VALUE	New value	<i>Not restricted</i>	Required, Positional 2

Top

System value (SYSVAL)

Specifies the name of the system value whose value is being changed. Most of the system values can be specified; however, some cannot have their values changed by this command.

This is a required parameter.

The system values are:

QABNORMSW

Previous end of system indicator. This value cannot be changed.

- '0' means previous end was normal.

- '1' means previous end was abnormal.

QACGLVL

Accounting level. Changes made to this system value take effect for jobs started after the change is made.

- *NONE - No accounting information is written to a journal.
- *JOB - Job resource use is written to a journal.
- *PRINT - Spooled and printer file resource use is written to a journal.

QACTJOB

Initial number of active jobs for which storage is allocated. Changes made to this system value take effect at the next IPL.

QADLACTJ

Additional number of active jobs for which storage is allocated. Changes made to this system value take effect immediately.

QADLSPLA

Additional storage for extending spooling control block (bytes). The operating system no longer uses this system value. Changes made to this system value have no effect.

QADLTOTJ

Additional total number of jobs for which storage is allocated. Changes made to this system value take effect immediately.

QALWJOBITP

Allow jobs to be interrupted. This system value specifies how the system responds to user initiated requests to interrupt a job to run a user-defined exit program in that job. The Call Job Interrupt Program (QWCJBITP) API in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/> contains information on using job interrupt exit programs. The Change Job Interrupt Status (QWCCJITP) API in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/> contains information on retrieving and changing the interrupt status of a job. The interrupt status of an active job can be changed at any time but will only take effect when the value of QALWJOBITP allows jobs to be interrupted. Changes made to this system value take effect immediately. The shipped value is 0.

- 0 means the system will not allow jobs to be interrupted to run user-defined exit programs. All new jobs becoming active will default to be uninterruptible. All active jobs are uninterruptible regardless of what the job interrupt status is set to.
- 1 means the system will allow jobs to be interrupted to run user-defined exit programs. All new jobs becoming active will default to be uninterruptible.
- 2 means the system will allow jobs to be interrupted to run user-defined exit programs. All new jobs becoming active will default to be interruptible.

QALWOBJRST

Allow object to be restored. This system value determines whether objects with security-sensitive attributes are restored. See Restore options for additional information.

QALWUSRDMN

Allow user domain objects in libraries or directories. This system value specifies which libraries on the system can contain the user domain user objects *USRSPC (user space), *USRIDX (user index), and *USRQ (user queue). Changes made to this system value take effect immediately.

QASTLVL

Assistance level. Indicates the Operational Assistant level of system displays for user profiles where ASTLVL(*SYSVAL) is specified. Changes made to this system value take effect immediately.

- *BASIC - The Operational Assistant user interface is used.
- *INTERMED - The system interface is used.

- *ADVANCED - The expert system interface is used.

If a command does not have an *ADVANCED level interface, *INTERMED is used.

QATNPGM

Attention program. If *ASSIST is specified for this system value, the Operational Assistant main menu is called when the user presses the Attention (Attn) key. This value can be changed to the name of a program, which will be called when the user presses the Attn key in a job where ATNPGM(*SYSVAL) is specified in the user profile. Changes made to this system value take effect immediately.

QAUDCTL

Audit control. This system value contains the on and off switches for object and user action auditing. This system value activates auditing on the system that is selected by the Change Object Auditing (CHGOBJAUD) and Change User Auditing (CHGUSRAUD) commands and the QAUDLVL and QAUDLVL2 system values. Changes made to this system value take effect immediately.

- *NOTAVL - The user performing the command is not allowed to display the current auditing value. You cannot change the system value to not available (*NOTAVL).
- *NONE - No security auditing is done on the system. This is the shipped value.
- *AUDLVL - The actions specified in the QAUDLVL and QAUDLVL2 system values will be logged to the security journal. Also actions specified by a user profile's action auditing values will be audited. A user profile's action auditing values are set through the AUDLVL parameter on the CHGUSRAUD command.
- *OBJAUD - Actions against objects that have an object audit value other than *NONE will be audited. An object's audit value is set through the Change Auditing Value (CHGAUD) command or the CHGOBJAUD command.
- *NOQTEMP - No auditing of most objects in QTEMP is done. You must specify *NOQTEMP with either *OBJAUD or *AUDLVL. You can not specify *NOQTEMP by itself.

QAUDENDACN

Audit journal error action. This system value specifies the action to be taken by the system if errors occur when an audit journal entry is being sent by the operating system to the security audit journal. Changes made to this system value take effect immediately.

- *NOTAVL - The user performing the command is not allowed to display the current auditing value. You cannot change the system value to not available (*NOTAVL).
- *NOTIFY - Notification of failure is sent to the QSYSOPR and QSYSMSG message queues, and then the action that caused the audit attempt continues.
- *PWRDWN SYS - The Power Down System (PWRDWN SYS) command is issued. The system will then be brought up in a restricted state on the following IPL, and then only a user with audit (*AUDIT) and all object (*ALLOBJ) special authority can sign on the system.

QAUDFRCLVL

Force audit journal. This system value specifies the number of audit journal entries that can be written to the security auditing journal before the journal entry data is forced to auxiliary storage.

- 1 through 100.
- *SYS - The system determines when the journal entries are to be written to auxiliary storage based on internal system processing. *SYS cannot be returned in a decimal variable, so the command returns 0 when the value *SYS is specified.
- *NOTAVL - The user performing the command is not allowed to display the current auditing value. You cannot change the system value to not available (*NOTAVL). *NOTAVL cannot be returned in a decimal variable, so the command returns -1 in place of *NOTAVL.

Changes made to this system value take effect immediately.

QAUDLVL

Security auditing level. Controls the level of action auditing on the system. Changes made to this system value take effect immediately for all jobs running on the system.

- *NONE - No security action auditing will occur on the system. This is the shipped value.
- *AUDLVL2 - Both QAUDLVL and QAUDLVL2 system values will be used to determine the security actions to be audited.

Note:

- If you wish to use the QAUDLVL2 system value exclusively, set the QAUDLVL system value to *AUDLVL2 and add your auditing values to the QAUDLVL2 system value.
- If you wish to use both system values you can set your values in the QAUDLVL system value along with the *AUDLVL2 value, then add any additional values to the QAUDLVL2 system value.
- *ATNEVT - Attention events are audited. Attention events are conditions that require further evaluation to determine the condition's security significance. For example, intrusion monitor events need to be examined to determine whether the condition is an intrusion or a false positive.
- *AUTFAIL - Authorization failures are audited.
- *CREATE - All object creations are audited. Objects created into library QTEMP are not audited.
- *DELETE - All deletions of external objects on the system are audited. Objects deleted from library QTEMP are not audited.
- *JOBBAS - Base actions that affect a job are audited.
- *JOBCHGUSR - Actions that change a thread's active user profile or its group profiles are audited.
- *JOBDTA - Actions that affect a job are audited.

Note: *JOBDTA is composed of two values to allow you to better customize your auditing. If you specify both of the values, you will get the same auditing as if you specified *JOBDTA. The following values make up *JOBDTA.

- *JOBBAS
- *JOBCHGUSR
- *NETBAS - Network base functions are audited.
- *NETCLU - Cluster and cluster resource group operations are audited.
- *NETCMN - Networking and communications functions are audited.

Note: *NETCMN is composed of several values to allow you to better customize your auditing. If you specify all of the values, you will get the same auditing as if you specified *NETCMN. The following values make up *NETCMN.

- *NETBAS
- *NETCLU
- *NETFAIL
- *NETSCK
- *NETFAIL - Network failures are audited.
- *NETSCK - Socket tasks are audited.
- *NOTAVL - The user performing the command is not allowed to display the current auditing value. You cannot change the system value to not available (*NOTAVL).
- *OBJMGT - Generic object tasks are audited.
- *OFCSRVR - OfficeVision tasks are audited.
- *OPTICAL - All optical functions are audited.
- *PGMADP - Adopting authority from a program owner is audited.

- *PGMFAIL - Program failures are audited.
- *PRTDTA - Printing functions are audited.
- *SAVRST - Save and restore information is audited.
- *SECCFG - Security configuration is audited.
- *SECDIRSRV- Changes or updates when doing directory service functions are audited.
- *SECIPC - Changes to interprocess communications are audited.
- *SECNAS - Network authentication service actions are audited.
- *SECRUN - Security run time functions are audited.
- *SECSCCKD - Socket descriptors are audited.
- *SECURITY - All security-related functions are audited.

Note: *SECURITY is composed of several values to allow you to better customize your auditing. If you specify all of the values, you will get the same auditing as if you specified *SECURITY. The following values make up *SECURITY.

- *SECCFG
- *SECDIRSRV
- *SECIPC
- *SECNAS
- *SECRUN
- *SECSCCKD
- *SECVFY
- *SECVLDL
- *SECVFY - Use of verification functions are audited.
- *SECVLDL - Changes to validation list objects are audited.
- *SERVICE - For a list of all the service commands and API calls that are audited, see the System i Security Reference, SC41-5302 publication
- *SPLFDTA - Spooled file functions are audited.
- *SYSMGT - System management tasks are audited.

QAUDLVL2

Security auditing level extension. This system value is required when more than sixteen auditing values are needed. Specifying *AUDLVL2 as one of the values in the QAUDLVL system value will cause the system to also look for auditing values in the QAUDLVL2 system value. Changes made to this system value take effect immediately for all jobs running on the system.

- *NONE - No auditing values are contained in this system value. This is the shipped value.
- *ATNEVT - Attention events are audited. Attention events are conditions that require further evaluation to determine the condition's security significance. For example, intrusion monitor events need to be examined to determine whether the condition is an intrusion or a false positive.
- *AUTFAIL - Authorization failures are audited.
- *CREATE - All object creations are audited. Objects created into library QTEMP are not audited.
- *DELETE - All deletions of external objects on the system are audited. Objects deleted from library QTEMP are not audited.
- *JOBBAS - Base actions that affect a job are audited.
- *JOBCHGUSR- Actions that change a thread's active user profile or its group profiles are audited.
- *JOBDTA - Actions that affect a job are audited.

Note: *JOBDDTA is composed of two values to allow you to better customize your auditing. If you specify both of the values, you will get the same auditing as if you specified *JOBDDTA. The following values make up *JOBDDTA.

- *JOBDBAS
- *JOBCHGUSR
- *NETBAS - Network base functions are audited.
- *NETCLU - Cluster and cluster resource group operations are audited.
- *NETCMN - Networking and communications functions are audited.

Note: *NETCMN is composed of several values to allow you to better customize your auditing. If you specify all of the values, you will get the same auditing as if you specified *NETCMN. The following values make up *NETCMN.

- *NETBAS
- *NETCLU
- *NETFAIL
- *NETSCK
- *NETFAIL - Network failures are audited.
- *NETSCK - Socket tasks are audited.
- *NOTAVL - The user performing the command is not allowed to display the current auditing value. You cannot change the system value to not available (*NOTAVL).
- *OBJMGT - Generic object tasks are audited.
- *OFCSRVR - OfficeVision tasks are audited.
- *OPTICAL - All optical functions are audited.
- *PGMADP - Adopting authority from a program owner is audited.
- *PGMFAIL - Program failures are audited.
- *PRTDDTA - Printing functions are audited.
- *SAVRST - Save and restore information is audited.
- *SECCFG - Security configuration is audited.
- *SECDDIRSRV - Changes or updates when doing directory service functions are audited.
- *SECIPC - Changes to interprocess communications are audited.
- *SECNAS - Network authentication service actions are audited.
- *SECRUN - Security run time functions are audited.
- *SECSDCKD - Socket descriptors are audited.
- *SECURITY - All security-related functions are audited.

Note: *SECURITY is composed of several values to allow you to better customize your auditing. If you specify all of the values, you will get the same auditing as if you specified *SECURITY. The following values make up *SECURITY.

- *SECCFG
- *SECDDIRSRV
- *SECIPC
- *SECNAS
- *SECRUN
- *SECSDCKD
- *SECVFY
- *SECVLDL
- *SECVFY - Use of verification functions are audited.
- *SECVLDL - Changes to validation list objects are audited.

- *SERVICE - For a list of all the service commands and API calls that are audited, see the System i Security Reference, SC41-5302 publication
- *SPLFDTA - Spooled file functions are audited.
- *SYSMGT - System management tasks are audited.

QAUTOCFG

Automatic device configuration indicator. Changes made to this system value take effect immediately.

- 0 means auto-configuration is off.
- 1 means auto-configuration is on.

QAUTOSPRPT

Automatic system disabled reporting. The operating system no longer uses this system value. Changes made to this system value have no effect.

QAUTORMT

Automatic configuration for remote controllers. The QAUTORMT system value controls the automatic configuration of remote controllers.

- 0 means auto-configuration is off.
- 1 means auto-configuration is on.

QAUTOVRT

Automatic virtual device configuration indicator. The user must have *ALLOBJ authority to change this system value. Changes made to this system value take effect immediately. See Autoconfigure virtual devices for additional information.

QBASACTLVL

Activity level of base storage pool. Changes made to this system value take effect immediately.

QBASPOOL

Minimum size of base storage pool (in Kilobytes). Changes made to this system value take effect immediately.

QBOOKPATH

Book and bookshelf search path. The operating system no longer uses this system value. Changes made to this system value have no effect.

QCCSID

Coded character set identifier. Changes made to this system value take effect for jobs started after the change is made.

QCENTURY

Century value for the system date.

- 0 indicated years 19XX.
- 1 indicates years 20XX.

QCFGMSGQ

Configuration message queue used to specify the message queue to receive communication messages. Both an object name and library name can be specified. A change to this system value takes effect when a line, controller, or device description that supports the MSGQ parameter is varied on.

QCHRID

Default graphic character set and code page used for displaying or printing data. Changes made to this system value take effect for display files, display device descriptions, and printer files that are created, changed, or overridden after the change.

QCHRIDCTL

Character identifier control for the job. This attribute controls the type of CCSID conversion that occurs for display files, printer files, and panel groups. The *CHRIDCTL special value must be

specified for the CHRID parameter on the create, change, or override commands for display files, printer files, and panel groups before this attribute is used.

- 0 means the *DEVD special value is used.
- 1 means the *JOBCCSID special value is used.

QCMNARB

Communication arbiters. The number of communication arbiter jobs that are available to process work for controllers and devices. A change to this value takes effect on the next IPL. The shipped value is *CALC.

- *CALC: The operating system calculates the number of communication arbiter jobs.
- 0 - 99: Specifies the number of communication arbiter jobs that are available to process work for controllers and devices.

Note: If this system value is set to zero (0), the work in these jobs is done in QSYSARB and QCLUS system jobs as opposed to the communication arbiters.

QCMNRCYLMT

Provides recovery limits for system communications recovery. Specifies the number of recovery attempts to make and when an inquiry message is sent to the device message queue or to the system operator when the specified number of recovery attempts have been reached. Changes made to this system value do not affect a currently varied on device, but is in effect when a device is varied on after the change.

QCNTYID

Default country or region identifier. Changes to this system value take effect for jobs started after the change is made.

QCONSOLE

System console. This value is not changeable.

QCRTAUT

Public authority for created objects. You must have *ALLOBJ and *SECADM special authorities to change this system value. Changes made to this system value take effect immediately.

- *CHANGE means the user can change the object and perform basic functions on the object. Change authority allows the user to 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 means the user can control the object's existence, specify the security for the object, change the object, change the owner for the object, and perform basic functions on the object. All authority allows the user to perform all operations on the object except those limited to the owner or controlled by authorization list management rights. If the object is an authorization list, the user cannot add, change, or remove users, or transfer ownership of the authorization list.
- *USE means the user can perform basic operations on the object, such as run a program or read a file. The user is prevented from changing the object. Use authority provides object operational authority and read authority.
- *EXCLUDE authority prevents the user from accessing the object.

QCRTOBJAUD

Create object auditing. This system value specifies the default object auditing value for an object created into a library or directory. The object auditing value determines whether an audit journal entry is sent to the system auditing journal when an object is used or changed. Changes made to this system value take effect immediately.

- *NOTAVL - The user performing the command is not allowed to display the current auditing value. You cannot change the system value to not available (*NOTAVL).
- *NONE - No auditing entries are sent for the object.
- *USRPRF - Auditing entries are sent if the user is currently being audited.

- *CHANGE - Auditing entries are sent if the object is changed.
- *ALL - Auditing entries are sent if the object is used or changed.

QCTLSBSD

Controlling subsystem description name. Both an object name and library name can be specified. Changes made to this system value take effect at the next IPL.

QCURSYM

Currency symbol. Changes made to this system value take effect immediately.

QDATE

System date. Changes made to this system value take effect immediately.

QDATETIME

System date and time. This is the date and time for the local system time as a single value. Retrieving or changing this value is similar to retrieving or changing QDATE and QTIME in a single operation. The format of the field is YYYYMMDDHHNNSSXXXXXX where YYYY is the year, MM is the month, DD is the day, HH is the hours, NN is the minutes, SS is the seconds, and XXXXXX is the microseconds. Changes made to this system value take effect immediately.

QDATFMT

Date format. Changes made to this system value take effect for jobs started after the change is made.

QDATSEP

Date separator. Changes made to this system value take effect for jobs started after the change is made.

QDAY Day of the month (day of the year if the system date format is Julian). Changes made to this system value take effect immediately.

QDAYOFWEEK

The day of the week.

- *SUN - Sunday
- *MON - Monday
- *TUE - Tuesday
- *WED - Wednesday
- *THU - Thursday
- *FRI - Friday
- *SAT - Saturday

QDBFSTCCOL

Database file statistics collection. Specifies the type of statistics collection requests that are allowed to be processed in the background by system job, QDBFSTCCOL. Changes made to this system value take effect immediately.

- *ALL means all user requested database file statistics collection requests and statistics collections automatically requested by the database manager are allowed to be processed by the database statistics system job.
- *SYSTEM means only automatically requested database statistics collection requests by the database manager are allowed to be processed by the database statistics system job.
- *USER means only user requested database file statistics collection requests are allowed to be processed by the database statistics system job.
- *NONE means no database file statistics collection requests are allowed to be processed by the database statistics system job.

QDBRCVYWT

Database recovery wait indicator. Changes to this system value take effect at the next IPL in unattended mode.

- 0 means do not wait.
- 1 means wait.

QDECFMT

Decimal format. Changes made to this system value take effect immediately.

QDEVNAMING

Indicates the device naming convention. Changes made to this system value take effect the next time a device is automatically configured. Existing configured device names are not changed.

- *NORMAL means follow System i standards.
- *S36 means follow S/36 standards.
- *DEVADR means device names are derived from resource names.

QDEVRCYACN

Specifies the action taken when an I/O error occurs for the job's requesting program device. Changes made to this system value take effect for jobs started after the change is made.

- *DSCMSG disconnects the job. On reconnection, an error message will be sent to the user's application program.
- *DSCENDRQS disconnects the job. On reconnection, a cancel request function should be performed to return control of the job back to the last request level.
- *ENDJOB ends the job. A job log will be produced for the job. A message will be sent to the job log and to the QHST log indicating that the job was ended because of device error.
- *ENDJOBNOLOG ends the job. A job log will not be produced for the job. A message will be sent to the QHST log indicating that the job was ended because of device error.
- *MSG signals the I/O error message to the application program. The application program performs error recovery itself.

QDSCJOBTV

Time interval that a job can be disconnected before it is ended. Changes made to this system value take effect immediately. An interactive job can be disconnected with the Disconnect Job (DSCJOB) command when it has been inactive for an interval of time (the system values QINACTIV and QINACTMSGQ), or when an Input/Output error occurs at the interactive job's work station (the system value QDEVRCYACN).

- 5-1440 is the time out interval in minutes.
- *NONE means no time out interval.

QDSPSGNINF

Controls the display of sign-on information. Changes made to this system value take effect immediately.

- 0 means the sign-on information is not displayed.
- 1 means the sign-on information is displayed.

QDYNPTYADJ

Dynamic priority adjustment. The QDYNPTYADJ system value controls whether the priority of interactive jobs is dynamically adjusted to maintain high performance of batch job processing. This adjustment capability is only effective on systems that are rated for both interactive and non-interactive throughput and have Dynamic Priority Scheduling enabled. A change to this value takes effect at the next IPL.

- 0 means the dynamic priority adjustment support is turned off.
- 1 means the dynamic priority adjustment support is turned on.

QDYNPTYSCD

Dynamic priority scheduler. The QDYNPTYSCD system value controls the dynamic priority scheduler algorithm. The value allows the use of dynamic priority scheduling.

- 0 means the dynamic priority scheduler is off.

- 1 means the dynamic priority scheduler is on.

QENDJOBLMT

Maximum time (in seconds) for application clean up during immediate ending of a job.

When a job being ended has a signal handling procedure for the asynchronous signal SIGTERM, the SIGTERM signal is generated for that job. When the signal handling procedure for the SIGTERM signal is given control, the procedure can take the appropriate actions to avoid undesirable results such as application data that has been partially updated. If the SIGTERM signal handler has not completed in the specified time, the system ends the job.

When the job is ended in a controlled manner, the maximum time for the SIGTERM signal handler is specified on the command. When the job is ended in an immediate manner, the maximum time for the SIGTERM signal handler is specified by this system value. This time limit is used when ending one job, when ending all the jobs in a subsystem, or when ending all jobs in all subsystems. After two minutes, the system operator can use the End Job (ENDJOB) command with OPTION(*IMMED) to override the QENDJOBLMT value and end individual jobs immediately.

A change to this value takes effect immediately. Jobs that are already ending are not affected.

QFRCCVNRST

Force conversion on restore. This system value allows you to specify whether or not to convert programs, service programs, SQL packages, and module objects during the restore. It can also prevent some objects from being restored. The default value on the restore commands use the value of this system value. Changes to this system value will take effect immediately.

- 0 Do not convert anything. Do not prevent anything from being restored.
- 1 Objects with validation errors will be converted.
- 2 Objects requiring conversion to be used on the current version of the operating system or on the current machine will be converted. Objects with validation errors will also be converted.
- 3 Objects suspected of having been tampered with, objects containing validation errors, and objects requiring conversion to be used by the current version of the operating system or on the current machine will be converted.
- 4 Objects that contain sufficient creation data to be converted and do not have valid digital signatures will be converted. An object that does not contain sufficient creation data will be restored without conversion. NOTE: Objects (signed and unsigned) that have validation errors, are suspected of having been tampered with, or require conversion to be used by the current version of the operating system, but cannot be converted will not be restored.
- 5 Objects that contain sufficient creation data will be converted. An object that does not contain sufficient creation data will be restored. NOTE: Objects that have validation errors, are suspected of having been tampered with, or require conversion to be used on the current version of the operating system, but cannot be converted will not be restored.
- 6 All objects that do not have a valid digital signature will be converted. NOTE: An object with a valid digital signature that also has a validation error, is suspected of having been tampered with, or requires conversion to be used on the current version of the operating system, but cannot be converted will not be restored.
- 7 Every object will be converted.

When an object is converted, its digital signature is discarded. The state of the converted object is set to user state. After conversion, objects will have a good validation value and are not suspected of having been tampered with.

QHOURL

Hour of the day. Changes made to this system value take effect immediately.

QHSTLOGSIZ

Maximum number of records for each version of the history log. Valid values range from 1 to 10,000,000 or the special value *DAILY which means that a new version of the history log is created each time the date in the history log messages changes, or when the current log version reaches the maximum size of 10,000,000 records. *DAILY cannot be returned in a decimal variable, so the Retrieve System Value (RTVSYVAL) command returns a value of -1 when the system value is set to *DAILY. Specifying a value of -1 on the Change System Value (CHGSYSVAL) command has the same effect as specifying *DAILY. Changes made to this system value take effect when the next version of the history log is created.

QIGC Indicates whether the double-byte character set (DBCS) version of the system is installed. This value cannot be changed.

- 0 means the DBCS version is not installed.
- 1 means the DBCS version is installed.

QIGCCDEFNT

Double byte character set (DBCS) coded font name. Used when transforming an SNA character string (SCS) into an Advanced Function Printing data stream (AFPDS) and when creating an AFPDS spooled file with shift in/shift out (SI/SO) characters in the data. Changes made to this system value take effect immediately.

QIGCFNTSIZ

Double byte coded font point size. Used along with the system value, QIGCCDEFNT, double byte coded font. They will be used when transforming SNA character string (SCS) into an Advanced Function Printing Data Stream (AFPDS) and when creating an AFPDS spooled file with shift in/ shift out (SI/SO) characters present in the data.

- *NONE means that no point size is identified to the system. The point size is selected by the system based on the type of printer used.
- 000.1 - 999.9 means the point size for the double byte coded font.

QINACTIV

Inactive interactive job time out interval in minutes. When the time interval is changed to a value other than *NONE a new inactivity interval is established and the analysis of job inactivity is started again. The system value QINACTMSGQ determines the action the system takes. For information on enforcement for target pass-through and TELNET sessions, see the Work management topic collection in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>

Local jobs that are currently signed on to a remote system are excluded. For example, a work station is directly attached to system A, and system A has QINACTIV set on. If Display Station Pass-through or TELNET is used to sign on to system B, this work station is not affected by the QINACTIV value set on system A. Changes made to this system value take effect immediately.

- *NONE means that the system does not check for inactivity.
- 5 - 300 means the number of minutes a job can be inactive before action is taken.

QINACTMSGQ

The qualified name of a message queue to which job inactive messages will be sent if QINACTMSGQ is not *NONE. The message queue must exist before the system value can be changed to a message queue name. Both an object name and library name can be specified. Changes made to this system value take effect immediately.

- *ENDJOB means that interactive jobs, secondary jobs, and group jobs will be ended.
- *DSCJOB means that interactive jobs, secondary jobs, and group jobs will be disconnected.
- Message queue name is the name of a message queue that receives a message when a job has been inactive.

QIPLDATTIM

Date and time for automatic IPL. This system value can be set independently in each partition. If the primary partition is powered down at the time an automatic IPL should occur in a secondary partition, the IPL will not occur. When the primary partition does IPL, the secondary partition will be IPLed if its IPL date and time is past due. The secondary partition will not IPL if it was configured with an IPL action of hold. Changes made to this system value take effect immediately.

QIPLDATTIM is a single system value with two parts:

- **Date:** The date an IPL automatically occurs on the system. The date is specified in QDATFMT format with no date separators.
- **Time:** The time an IPL automatically occurs on the system. The time is specified with no time separators.

*NONE, which indicates that no timed automatic IPL is scheduled, can be specified instead of a specific date and time.

The following example shows how to change the IPL date and time to September 10, 1993 (QDATFMT is MDY) at 9:00 a.m.

```
CHGSYSVAL SYSVAL(QIPLDATTIM) VALUE('091093 090000')
```

QIPLSTS

Initial program load (IPL) status indicator.

- 0 means operator panel IPL.
- 1 means auto-IPL after power restored.
- 2 means restart IPL.
- 3 means time of day IPL.
- 4 means remote IPL.

QIPLTYPE

Indicates the type of IPL to perform. Changes made to this system value take effect at the next manual IPL.

- 0 means unattended IPL.
- 1 means attended IPL with dedicated service tools.
- 2 means attended IPL with console in debug mode.

Note: You should only use this for problem analysis because it prevents other devices on the work station controller from being used.

QJOBMSGQFL

Job message queue full action. This system value specifies how to handle the job message queue when it is considered full. Changes made to this system value take effect for jobs started after the change is made.

- *NOWRAP - The job message queue is not wrapped.
- *WRAP - The job message queue is wrapped.
- *PRTWRAP - The job message queue is wrapped and the messages that are being overlaid are printed.

QJOBMSGQMX

Job message queue maximum size. This system value specifies how large (in megabytes) a message queue can be before it is considered full. Changes made to this system value take effect for jobs started after the change is made.

QJOBMSGQSZ

Initial size of job message queue in kilobytes (KB). The operating system no longer uses this system value. Changes made to this system value have no effect.

QJOBMSGQTL

Maximum size of job message queue (in KB). The operating system no longer uses this system value. Changes made to this system value have no effect.

QJOBSPLA

Initial size of spooling control block for a job (in bytes). Changes made to this system value take effect when a cold start is requested during the installation of the operating system licensed program.

QKBDBUF

Keyboard buffer. Changes made to this system value take effect the next time someone logs on.

- *NO means turn off the type-ahead feature and the attention key buffering option.
- *TYPEAHEAD means turn on the type-ahead feature but turn off the attention key buffering option.
- *YES means turn on the type-ahead feature and the attention key buffering option.

QKBDTYPE

Keyboard language character set. Changes made to this system value take effect immediately.

QLANGID

Default language identifier. Changes to this system value take effect for jobs started after the change is made.

QLEAPADJ

Leap year adjustment. This system value is used to adjust the system calendar algorithm for the leap year in different calendar systems.

This system value is determined by the year offset that is associated with the time zone description specified in the system value QTIMZON. A change to a different time zone description for QTIMZON may result in a different associated adjustment.

QLEAPADJ cannot be changed to a value that is different than its current value. If an attempt is made to do so, the diagnostic message CPD168B will be issued. The value of QLEAPADJ is managed by the system.

QLIBLCKLVL

Library locking level. Specifies whether libraries in a job's library search list are locked by that job. A change to this system value takes effect for all jobs that become active after the change.

- 0 means the libraries in a user job's library search list are not locked.
- 1 means the libraries in a user job's library search list are locked by that job.

QLMTDEVSSN

Limits concurrent device sessions. Changes made to this system value take effect immediately.

- 0 means users are not limited to a specific number of device sessions.
- 1-9 indicates maximum number of concurrent device sessions.

QLMTSECOFR

Limit security officer device access. Changes made to this system value take effect immediately.

- 0 means users with *ALLOBJ or *SERVICE special authority can sign on any work station.
- 1 means users with *ALLOBJ or *SERVICE special authority must have explicit authority to a work station.

QLOCALE

Locale path name. This system value is used to set the locale for the system. The locale path name must be a path name that specifies a locale. A locale is made up of the language, territory, and code set combination used to identify a set of language conventions. The maximum path length allowed for the locale path name on the Change System Value (CHGSYSVAL) command is 1,024 bytes.

A change to this system value takes effect immediately. The shipped value may be different for different countries.

- *NONE means there is no locale path name for the QLOCALE system value.
- *C means the C locale is to be used.
- *POSIX means the POSIX locale is to be used.

QLOGOUTPUT

Job log output. This system value specifies how the job log will be produced when a job completes. This does not affect job logs produced when the message queue is full and the job message queue full action specifies *PRTWRAP. Messages in the job message queue are written to a spooled file, from which the job log can be printed, unless the Control Job Log Output (QMHCTLJL) API was used in the job to specify that the messages in the job log are to be written to a database file.

Changes made to this system value take effect immediately for jobs entering the system after the change is made.

- *JOBEND means the job log will be produced by the job itself. If the job cannot produce its own job log, the job log will be produced by a job log server.
- *JOBLOGSVR means the job log will be produced by a job log server.
- *PND means the job log will not be produced. The job log remains pending until removed.

QMAXACTLVL

Maximum activity level of the system. Changes made to this system value take effect immediately.

QMAXJOB

Maximum number of jobs that are allowed on the system. Changes made to this system value take effect immediately.

QMAXSGNACN

The system's response when the limit imposed by QMAXSIGN system value is reached. Changes made to this system value take effect the next time someone attempts to sign on the system.

- 1 means the device will be disabled.
- 2 means the user profile will be disabled.
- 3 means the device and the user profile will be disabled.

QMAXSIGN

Maximum number of not valid sign-on attempts allowed. Changes made to this system value take effect the next time someone attempts to sign on the system.

QMAXSPLF

Maximum number of spooled files that can be created per job. Changes made to this system value take effect immediately. Spooled files will not be deleted when this value is changed to a lower number. See the Printer Device Programming book for information on how this system value affects spooling for a job.

QMCHPOOL

Machine storage pool size (in KB). Changes made to this system value take effect immediately.

Note: Changes to the size of a pool may require pages to be written to auxiliary storage. The time required for the system to complete a large change may be greater than your default wait time. If this occurs, message CPF1001 (Wait time expired for system response.) is issued, even though the change completes.

QMINUTE

Minute of the hour. Changes made to this system value take effect immediately.

QMLTTHDACN

Multithreaded job action. This value controls the action to be taken when a function that may not be threadsafe is called in a multithreaded job. Changes made to this system value take effect immediately. The shipped value is 2.

- 1 means perform the function that is not threadsafe without sending a message.
- 2 means perform the function that is not threadsafe and send an informational message.
- 3 means do not perform the function that is not threadsafe.

QMODEL

System model number. The number or letters used to identify the model of the system. You cannot change QMODEL, but the 4-character value can be displayed or retrieved in user-written programs. The system model number system value is the same in each partition on a system.

QMONTH

Month of the year (not used for Julian dates). Changes made to this system value take effect immediately.

QPASTHRSVR

Pass-through servers. The number of target display station pass-through server jobs that are available to process display station pass-through, IBM System i Access for Windows workstation function (WSF), and other 5250 emulation programs on programmable workstations. Changes made to this system value take effect immediately. The shipped value is *CALC.

QPFRAJ

Initial program load (IPL) performance adjustment and dynamic performance tuning. Dynamic performance tuning automatically changes storage pool sizes and activity levels for shared storage pools. Private storage pools are not changed. Changes made to this system value take effect immediately.

- 0 means no performance adjustment. Dynamic performance tuning is not started.
- 1 means performance adjustment at IPL. Dynamic performance tuning is not started.
- 2 means performance adjustment at IPL. Dynamic performance tuning is started. If QPFRAJ is changed from 2 to 0 or 1, dynamic performance tuning is stopped.
- 3 means dynamic performance tuning is started. If QPFRAJ is changed from 3 to 0 or 1, dynamic performance tuning is stopped.

If you create journal QPFRAJ in library QSYS, the dynamic tuning program keeps a record of the changes made to storage pool sizes, activity levels, and the performance level of the system when the changes were made (faulting rates per pool, pool sizes, and activity levels).

QPRBFTR

Problem filter name. Specifies the name of the filter object used by the service activity manager when processing problems. Changes to this system value take effect immediately.

QPRBHLDTV

Problem log entry hold interval. Changes made to this system value take effect immediately.

QPRCFEAT

Processor feature. This is the processor feature code level of the system. You cannot change QPRCFEAT, but the 4-character value can be displayed or retrieved in user-written programs. The processor feature system value is the same in each partition on a system.

QPRCMLTTSK

Processor multitasking. If the hardware on your system supports processor multitasking, this system value allows you to set the multitasking capability to be on, off, or System-controlled. Changes to this system value can affect the performance of your system.

An IPL may be required for this system value to take effect. See the System Values topic in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/> for additional information.

- 0 means that processor multitasking is turned off.
- 1 means that processor multitasking is turned on.
- 2 means that processor multitasking is under system control.

On some partitioned systems, this system value can only be changed from the primary partition. For more information on partitions, see the Logical Partitions topic in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

QPRTDEV

Default printer device description. Changes made to this system value take effect for jobs started after the change is made.

QPRTKEYFMT

Print key format. Changes made to this system value take effect for jobs started after the change is made.

- *PRTHDR means that header information is printed when the print key is pressed.
- *PRTBDR means that border information is printed when the print key is pressed.
- *PRTALL means that border information and header information are printed when the print key is pressed.
- *NONE means that border information and header information are not printed when the print key is pressed.

QPRTTXT

Up to 30 characters of text that can be printed at the bottom of listings and separator pages. Changes made to this system value take effect for jobs started after the change is made.

QPWDCHGBLK

Specifies the time period during which a password is blocked from being changed following the prior successful password change operation. This system value does not restrict password changes made by the Change User Profile (CHGUSRPRF) command. Changes made to this system value take effect immediately.

- *NONE means there is no restriction on how frequently a user can change a password.
- 1-99 indicates the number of hours a user must wait after the prior successful password change operation before they can change the password again.

QPWDEXPITV

The number of days for which a password is valid. Changes made to this system value take effect immediately.

- *NOMAX means a password can be used an unlimited number of days.
- 1-366 means the number of days before the password ends.

QPWDEXPWRN

Controls the number of days prior to a password expiring to begin displaying password expiration warning messages on the Sign-on Information display.

- 1-99 indicates the number of days prior to the password expiring to begin displaying the password expiration warning message.

QPWDLMTAJC

Limits the use of adjacent numbers in a password. Changes made to this system value take effect the next time a password is changed.

- 0 means adjacent numbers are allowed.
- 1 means adjacent numbers are not allowed.

Note: If the QPWDRULES system value specifies any value other than *PWDSYSVAL, this system value will be ignored when new passwords are checked to see if they are formed correctly. In addition, this system value cannot be changed if QPWDRULES has a value other than *PWDSYSVAL.

QPWDLMTCHR

Limits the use of certain characters in a password. Changes made to this system value take effect the next time a password is changed.

- *NONE means there are no restricted characters.
- restricted-characters means up to 10 restricted characters enclosed in apostrophes can be specified. Valid characters are: A-Z, 0-9, and special characters #, \$, @, or underscore (_).

Note: This system value is ignored if the system is operating at QPWDLVL 2 or 3.

Note: If the QPWDRULES system value specifies any value other than *PWDSYSVAL, this system value will be ignored when new passwords are checked to see if they are formed correctly. In addition, this system value cannot be changed if QPWDRULES has a value other than *PWDSYSVAL.

QPWDLMTREP

Limits the use of repeating characters in a password. Changes made to this system value take effect the next time a password is changed.

- 0 means characters can be used more than once.
- 1 means characters cannot be used more than once.
- 2 means characters cannot be used consecutively.

Note: If the QPWDRULES system value specifies any value other than *PWDSYSVAL, this system value will be ignored when new passwords are checked to see if they are formed correctly. In addition, this system value cannot be changed if QPWDRULES has a value other than *PWDSYSVAL.

QPWDLVL

Specifies the password level.

Changing this system value requires careful consideration. If your system connects to other systems in a network then all systems must be able to run with the password rules that will be in effect.

See the System i Security Reference, SC41-5302 publication for additional considerations prior to changing this system value.

Changes to this system value will take effect on the next IPL.

- 0 means passwords from 1-10 characters are allowed.
- 1 means passwords from 1-10 characters are allowed. i5/OS NetServer passwords for Windows 95/98/ME clients will be removed from the system making the product unavailable for use.
- 2 means passwords from 1-128 characters are allowed. Passwords can consist of any character and will be case sensitive.
- 3 means passwords from 1-128 characters are allowed. Passwords can consist of any character and will be case sensitive. i5/OS NetServer passwords for Windows 95/98/ME clients will be removed from the system making the product unavailable for use.

QPWDMAXLEN

The maximum number of characters in a password. Changes made to this system value take effect the next time a password is changed.

- 1-128 means a value from 1 to 128 can be specified as the maximum number of characters in a password.

If the system is operating at QPWDLVL 0 or 1, the valid range is 1-10. If the system is operating at QPWDLVL 2 or 3, the valid range is 1-128.

Note: If the QPWDRULES system value specifies any value other than *PWDSYSVAL, this system value will be ignored when new passwords are checked to see if they are formed correctly. In addition, this system value cannot be changed if QPWDRULES has a value other than *PWDSYSVAL.

QPWDMINLEN

The minimum number of characters in a password. Changes made to this system value take effect the next time a password is changed.

- 1-128 means a value from 1 to 128 can be specified as the minimum number of characters in a password.

If the system is operating at QPWDLVL 0 or 1, the valid range is 1-10. If the system is operating at QPWDLVL 2 or 3, the valid range is 1-128.

Note: If the QPWDRULES system value specifies any value other than *PWDSYSVAL, this system value will be ignored when new passwords are checked to see if they are formed correctly. In addition, this system value cannot be changed if QPWDRULES has a value other than *PWDSYSVAL.

QPWDDIF

Controls the position of characters in a new password. Changes made to this system value take effect the next time a password is changed.

- 0 means the same characters can be used in a position corresponding to the same position in the previous password.
- 1 means the same character cannot be used in a position corresponding to the same position in the previous password.

Note: If the QPWDRULES system value specifies any value other than *PWDSYSVAL, this system value will be ignored when new passwords are checked to see if they are formed correctly. In addition, this system value cannot be changed if QPWDRULES has a value other than *PWDSYSVAL.

QPWDRQDDGT

Require number in a new password. Changes made to this system value take effect the next time a password is changed.

- 0 means numbers are not required.
- 1 means one or more numbers are required.

Note: If the QPWDRULES system value specifies any value other than *PWDSYSVAL, this system value will be ignored when new passwords are checked to see if they are formed correctly. In addition, this system value cannot be changed if QPWDRULES has a value other than *PWDSYSVAL.

QPWDRQDDIF

Controls whether the password must be different than the previous passwords. Changes made to this system value take effect the next time a password is changed.

- 0 means a password can be the same as one previously used.
- 1 means a password must be different than the previous 32 passwords.
- 2 means a password must be different than the previous 24 passwords.
- 3 means a password must be different than the previous 18 passwords.
- 4 means a password must be different than the previous 12 passwords.
- 5 means a password must be different than the previous 10 passwords.
- 6 means a password must be different than the previous 8 passwords.
- 7 means a password must be different than the previous 6 passwords.
- 8 means a password must be different than the previous 4 passwords.

QPWDRULES

Specifies the rules used to check whether a password is formed correctly. Changes made to this system value take effect the next time a password is changed.

- *PWDSYSVAL - This system value is ignored and the other password system values are used to check whether a password is formed correctly. Specifically, the QPWDLMTAJC,

QPWDLMTCHR, QPWDLMTREP, QPWDMAXLEN, QPWDMINLEN, QPWDPOSDIF, and QPWDRQDDGT system values will be used instead of QPWDRULES.

Note: If any value other than *PWDSYSVAL is specified for QPWDRULES, the QPWDLMTAJC, QPWDLMTCHR, QPWDLMTREP, QPWDMAXLEN, QPWDMINLEN, QPWDPOSDIF, and QPWDRQDDGT system values are ignored when a new password is checked to see if it is formed correctly.

- *CHRLMTAJC - The password may not contain 2 or more occurrences of the same character that are positioned adjacent (consecutive) to each other. This value cannot be specified if the *CHRLMTREP value is also specified.
- *CHRLMTREP - The password may not contain 2 or more occurrences of the same character. This value cannot be specified if the *CHRLMTAJC value is also specified.
- *DGTLMTAJC - The password may not contain 2 or more adjacent (consecutive) digit characters.
- *DGTLMTFST - The first character of the password may not be a digit character. This value cannot be specified if *LTRLMTFST and *SPCCHRLMTFST values are also specified.
- *DGTLMTLST - The last character of the password may not be a digit character. This value cannot be specified if *LTRLMTLST and *SPCCHRLMTLST values are also specified.
- *DGTMAXn - Where n is a number from 0 to 9. Specifies the maximum number of digit characters that may occur in the password.

Only one *DGTMAXn value can be specified. If a *DGTMINn value is also specified, the n value specified for *DGTMAXn must be greater than or equal to the n value specified for *DGTMINn.

- *DGTMINn - Where n is a number from 0 to 9. Specifies the minimum number of digit characters that must occur in the password.
Only one *DGTMINn value can be specified. If a *DGTMAXn value is also specified, the n value specified for *DGTMAXn must be greater than or equal to the n value specified for *DGTMINn.
- *LMTSAMPOS - The same character cannot be used in a position corresponding to the same position in the previous password.
- *LMTPRFNAME - The uppercase password value may not contain the complete user profile name in consecutive positions.
- *LTRLMTAJC - The password may not contain 2 or more adjacent (consecutive) letter characters.
- *LTRLMTFST - The first character of the password may not be a letter character. This value cannot be specified if *DGTLMTFST and *SPCCHRLMTFST values are also specified. If the system is operating with a QPWDLVL of 0 or 1, *LTRLMTFST and *SPCCHRLMTFST cannot both be specified.
- *LTRLMTLST - The last character of the password may not be a letter character. This value cannot be specified if *DGTLMTLST and *SPCCHRLMTLST values are also specified.
- *LTRMAXn - Where n is a number from 0 to 9. Specifies the maximum number of letter characters that may occur in the password.

Only one *LTRMAXn value can be specified. If a *LTRMINn value is also specified, the n value specified for *LTRMAXn must be greater than or equal to the n value specified for *LTRMINn.

- *LTRMINn - Where n is a number from 0 to 9. Specifies the minimum number of letter characters that must occur in the password.

Only one *LTRMINn value can be specified. If a *LTRMAXn value is also specified, the n value specified for *LTRMAXn must be greater than or equal to the n value specified for *LTRMINn.

- *MAXLENnnn - Where nnn is a number from 1 to 128 (without leading zeroes). The maximum number of characters in a password.

If the system is operating at QPWDLVL 0 or 1, the valid range is 1-10. If the system is operating at QPWDLVL 2 or 3, the valid range is 1-128.

The nnn value specified must be large enough to accommodate all *MIXCASEn, *DGTMAXn, *LTRMAXn, *SPCCHRMAXn, first and last character restrictions, and non-adjacent character requirements.

If *MINLENnnn is also specified, the nnn value specified for *MAXLENnnn must be greater than or equal to the nnn value specified for *MINLENnnn.

If no *MAXLENnnn value is specified, a value of *MAXLEN10 is assumed if the system is operating with a QPWDLVL value of 0 or 1 or a value of *MAXLEN128 is assumed if the system is operating with a QPWDLVL value of 2 or 3.

- *MINLENnnn - Where nnn is a number from 1 to 128 (without leading zeroes). The minimum number of characters in a password.

If the system is operating at QPWDLVL 0 or 1, the valid range is 1-10. If the system is operating at QPWDLVL 2 or 3, the valid range is 1-128.

If *MAXLENnnn is also specified, the nnn value specified for *MAXLENnnn must be greater than or equal to the nnn value specified for *MINLENnnn.

If no *MINLENnnn value is specified, a value of *MINLEN1 is assumed.

- *MIXCASEn - Where n is a number from 0 to 9. The password must contain at least n uppercase and n lowercase letters. This value is rejected if the system is operating with a QPWDLVL value of 0 or 1 because passwords are required to be uppercase.

Only one *MIXCASEn value can be specified.

If a *LTRMAXn value is specified, the n value specified for *LTRMAXn must be greater than or equal to two times the n value specified for *MIXCASEn.

- *REQANY3 - The password must contain characters from at least three of the following four types of characters.
 - Uppercase letters
 - Lowercase letters
 - Digits
 - Special characters

When the system is operating with a QPWDLVL of 0 or 1, *REQANY3 has the same effect as if *DGTMIN1, *LTRMIN1, and *SPCCHRMIN1 were all specified.

- *SPCCHRLMTAJC - The password may not contain 2 or more adjacent (consecutive) special characters.
- *SPCCHRLMTFST - The first character of the password may not be a special character. This value cannot be specified if *DGTLMTFST and *LTRLMTFST values are also specified. If the system is operating with a QPWDLVL value of 0 or 1, *LTRLMTFST and *SPCCHRLMTFST cannot both be specified.
- *SPCCHRLMTLST - The last character of the password may not be a special character. This value cannot be specified if *DGTLMTLST and *LTRLMTLST values are also specified.
- *SPCCHRMAXn - Where n is a number from 0 to 9. Specifies the maximum number of special characters that may occur in the password.

Only one *SPCCHRMAXn value can be specified. If a *SPCCHRMINn value is also specified, the n value specified for *SPCCHRMAXn must be greater than or equal to the n value specified for *SPCCHRMINn.

- *SPCCHRMINn - Where n is a number from 0 to 9. Specifies the minimum number of special characters that must occur in the password.

Only one *SPCCHRMINn value can be specified. If a *SPCCHRMAXn value is also specified, the n value specified for *SPCCHRMAXn must be greater than or equal to the n value specified for *SPCCHRMINn.

QPWDLVDPGM

Password validation program provides the ability for a user-written program to do additional

validation on passwords. Changes made to this system value take effect the next time a password is changed. See Password validation program for additional information.

QPWRDWNLMT

Maximum amount of time (in seconds) allowed for PWRDWNSYS *IMMED. This is the time used to wait for power down to complete normally after either of the following happens:

- A Power Down System (PWRDWNSYS) command with *IMMED specified for the **How to end** (OPTION) parameter is entered.
- A PWRDWNSYS command with *CNTRLD specified for the **How to end** (OPTION) parameter is entered and the time specified for the **Controlled end delay time** (DELAY) parameter has ended.

Changes to this value take effect when a PWRDWNSYS command is entered.

QPWRRSTIPL

Automatic initial program load (IPL) after power restored allowed. Changes made to this system value take effect the next time there is a power failure.

- 0 means no auto-IPL after power restored.
- 1 means auto-IPL after power restored.

On partitioned AS/400 7xx and iSeries 8xx servers, this system value can only be changed from the primary partition. Whether or not a secondary partition is IPLed at the same time as the primary partition depends on the secondary partition's configuration value for IPL action.

On partitioned eServer i5 servers and System i, this system value must be changed from the service processor's Advanced System Management (ASM) interface.

For more information on partitions, see the Logical Partitions topic in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

QQRYDEGREE

Query parallel processing degree. The value specifies the parallel processing degree available to users of the system.

- *NONE means no parallel processing is allowed for database query processing or database file keyed access path builds or rebuilds.
- *IO means any number of tasks can be used when the database query optimizer chooses to use I/O parallel processing for queries. SMP parallel processing is not allowed, including when building or rebuilding database file keyed access paths.
- *OPTIMIZE means the query optimizer can choose to use any number of tasks for either I/O or SMP parallel processing to process the query or database file keyed access path build or rebuild. Use of parallel processing and the number of tasks used is determined with respect to the number of processors available in the pool in which the job is run, and whether the expected elapsed time for the query or database file keyed access path build or rebuild, is limited by CPU processing or I/O resources.
- *MAX means the query optimizer can choose to use either I/O or SMP parallel processing to process the query. The choices made by the query optimizer will be similar to those made for the value *OPTIMIZE except the optimizer will assume that all active memory in the pool can be used to process the query or database file keyed access path build or rebuild.

QQRYTIMLMT

Query processing time limit.

- *NOMAX means the maximum query interval is used.
- 0-2147352578 means the number of seconds allowed for query processing.

QRCLSPLSTG

Automatic deletion of empty spooled members is allowed based on the member retention interval. Changes made to this system value take effect immediately.

- *NONE means no retention interval.

Note: Using this value can have adverse effects on system performance. More information is in the Files and file systems category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

- *NOMAX means all empty members are kept.
- 1-366 means the number of days that empty spooled members are kept for new spooled file use.

QRETSVRSEC

Retain server security data indicator. This value determines whether the security data needed by a server to authenticate a user on a target system through client/server interfaces can be retained on this system.

- 0 means that the server security data is not retained.
- 1 means that the server security data is retained.

QRMTSRVATR

Remote service attribute. The QRMTSRVATR system value controls the remote service problem analysis ability. The value allows the system to be analyzed remotely.

- 0 means the remote service attribute is off.
- 1 means the remote service attribute is on.

QRMTIPL

Remote power on and IPL indicator. Changes made to this system value take effect immediately.

- 0 means remote power on and IPL are not allowed.
- 1 means remote power on and IPL are allowed.

Note: Any telephone call will cause the system to IPL.

On partitioned AS/400 7xx and iSeries 8xx servers, this system value can only be changed from the primary partition. Whether or not a secondary partition is IPLed at the same time as the primary partition depends on the secondary partition's configuration value for IPL action.

On partitioned eServer i5 servers and System i, this system value must be changed from the service processor's Advanced System Management (ASM) interface.

For more information on partitions, see the Logical Partitions topic in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

QRMTSIGN

Remote sign-on control. Changes made to this system value take effect immediately.

- *FRCSIGNON means normal sign-on required.
- *SAMEPRF means when the source and target user profile are the same, the sign-on can be bypassed for remote sign-on attempts.
- *REJECT means no remote sign-on is allowed.
- *VERIFY means after verifying that the user has access to the system, the system allows the user to bypass the sign-on.
- program means you can specify a program to decide which remote sessions will be allowed and which user profiles can be automatically signed-on from which locations.

QSAVACPTH

Save access paths. Changes made to this system value take effect at the start of the next save operation.

- 0 means do not save logical file access paths that are dependent on the physical files that are being saved.
- 1 means save logical file access paths that are dependent on the physical files that are being saved.

QSCANFS

Scan file systems. This system value specifies the integrated file systems in which objects will be scanned when exit programs are registered with any of the integrated file system scan-related exit points. Changes made to this system value take effect immediately. See Scan file systems for additional information.

QSCANFCTL

Scan file systems control. This system value controls the integrated file system scanning on the system when exit programs are registered with any of the integrated file system scan-related exit points. These controls apply to integrated file system objects in the file systems covered by the QSCANFS(Scan file systems) system value. Changes made to this system value take effect immediately. See Scan file systems control for additional information.

QSCPFCONS

IPL action with console problem. Changes to this system value take effect before the next IPL.

- 0 means end system.
- 1 means continue the unattended IPL.

QSECOND

Second of the minute. Changes made to this system value take effect immediately.

QSECURITY

System security level. Changes made to this system value take effect at the next IPL.

- 20 means the system requires a password to sign-on.
- 30 means password security at sign-on and object security at each access. You must have authority to access all system resources.
- 40 means password security at sign-on and object security at each access. Programs that try to access objects through interfaces that are not supported will fail.
- 50 means the system requires a password to sign on and users must have authority to access objects and system resources. The security and integrity of the QTEMP library and user domain objects are enforced. Programs that try to access objects through interfaces that are not supported or that try to pass unsupported parameter values to supported interfaces will fail.

QSFWERRLOG

Software error log. Indicates whether system-detected software problems are entered in the error log. Changes made to this system value take effect immediately.

- *LOG means that when a software error is detected by the system, the error is evaluated to determine if it should be logged unconditionally, or if the decision to log the error should be deferred to the policy based Service Monitor.

If the error is to be logged unconditionally, a PARable message is sent to QSYSOPR and an entry is created in the problem log. If the reporting component provides error data, a spooled file is created to contain the data. The spooled file name is stored in the error log and problem log entries.

If the error is to be conditionally logged, the decision to log the error will be made by the policy based Service Monitor. If the decision is to log the problem, an entry is created in the problem log. The problem data will be stored in a problem data library and the problem record entry will be updated with the name of the library.

- *NOLOG means no logging will occur if a software error is detected.

QSHRMEMCTL

Shared memory control. Specifies whether or not users can use shared memory, or use mapped memory that has write capability. Changes made to this system value take effect immediately.

- 0 means that users cannot use shared memory, or use mapped memory that has write capability.
- 1 means that users can use shared memory or mapped memory that has write capability.

QSPCENV

Special environment. The system environment used as the default for all users. Changes made to this system value take effect the next time a user signs on to the system.

- *NONE means no special environment is entered when you sign on.
- *S36 means the System/36 environment is entered when you sign on.

QSPLFACN

Spooled file action. Specifies whether spooled files are kept with a job or detached from the job. Keeping spooled files with jobs allows job commands such as the Work with Submitted Jobs (WRKSBMJOB) command to work with the spooled files even after the job has ended. Detaching spooled files from jobs reduces the use of system resources by allowing job structures to be recycled when the job ends. A change to this system value takes effect for all jobs that become active after the change. The shipped value is *KEEP.

- *KEEP means that when the job ends, as long as at least one spooled file for the job exists in the system auxiliary storage pool (ASP number 1) or in a basic user ASP (ASP numbers 2-32), the spooled files are kept with the job and the status of the job is updated to indicate that the job has completed. If all remaining spooled files for the job are in independent ASPs (ASP numbers 33-255), the spooled files will be detached from the job and the job will be removed from the system.
- *DETACH means the spooled files are detached from the job when the job ends.

QSRLNBR

System serial number. This value cannot be changed. If is retrieved from the data fields by the system when installing the operating system licensed program. You can display QSRLNBR, or you can retrieve this value in user-written programs. The system serial number is the same in each partition on a system.

QSRTSEQ

Sort sequence. This system value specifies the default sort sequence algorithm to be used by the system. Changes made to this system value take effect for jobs started after the change is made.

QSRVDMP

Service dumps. Indicates whether service dumps for escape messages that are not monitored are created. Changes made to this system value take effect immediately.

- *DMPUSRJOB means that service dumps are created only for user jobs, not system jobs.
- *DMPSYSJOB means that service dumps are created only for system jobs, not user jobs. System jobs include the operating system, subsystem monitors, LU service process, spooled readers and writers, and the SCPF job.
- *DMPALLJOB means that service dumps are created for all jobs.
- *NONE means no service dumps are created.

QSSLCSL

Secure Sockets Layer (SSL) cipher specification list. This system value specifies the list of cipher suites that are supported by System SSL. The values are read-only unless the QSSLCSLCTL (SSL cipher control) system value is set to *USRDFN.

For details on System SSL and SSL ciphers, see the SSL section of the Security Reference information in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

A change to this system value takes effect immediately for all subsequent System SSL sessions. The shipped value is *RSA_AES_128_CBC_SHA, *RSA_RC4_128_SHA, *RSA_RC4_128_MD5, *RSA_AES_256_CBC_SHA, *RSA_3DES_EDE_CBC_SHA, *RSA_DES_CBC_SHA, *RSA_EXPORT_RC4_40_MD5, *RSA_EXPORT_RC2_CBC_40_MD5, *RSA_NULL_SHA, and *RSA_NULL_MD5.

Note: You must have *IOSYSCFG, *ALLOBJ, and *SECADM special authorities to change this system value.

A cipher cannot be added to QSSLCSL if the required SSL protocol value for the cipher suite is not set for the QSSLPCL (SSL protocol list) system value.

- *RSA_AES_128_CBC_SHA - Use the RSA encoding algorithms for the Advanced Encryption Standard (AES) cipher with cipher block changing (CBC) and 128 bit keys. Use Secure Hash Algorithm (SHA) for generating message authentication codes (MAC).
- *RSA_RC4_128_SHA - Use the RSA encoding algorithms for the Rivest Cipher 4 (RC4) cipher and 128 bit keys. Use Secure Hash Algorithm (SHA) for generating message authentication codes (MAC).
- *RSA_RC4_128_MD5 - Use the RSA encoding algorithms for the Rivest Cipher 4 (RC4) cipher and 128 bit keys. Use message digest algorithm 5 (MD5) for generating message authentication codes (MAC).
- *RSA_AES_256_CBC_SHA - Use the RSA encoding algorithms for the Advanced Encryption Standard (AES) cipher with cipher block changing (CBC) and 256 bit keys. Use Secure Hash Algorithm (SHA) for generating message authentication codes (MAC).
- *RSA_3DES_EDE_CBC_SHA - Use the RSA encoding algorithms for the Triple Data Encryption Standard (3DES) cipher with the encrypt/decrypt/encrypt (EDE) and cipher block changing (CBC) modes and 168 bit keys. Use Secure Hash Algorithm (SHA) for generating message authentication codes (MAC).
- *RSA_DES_CBC_SHA - Use the RSA encoding algorithms for the Data Encryption Standard (DES) cipher with the cipher block changing (CBC) mode and 56 bit keys. Use Secure Hash Algorithm (SHA) for generating message authentication codes (MAC).
- *RSA_EXPORT_RC2_CBC_40_MD5 - Use the RSA encoding algorithms for the Rivest Cipher 2 (RC2) cipher with the cipher block changing (CBC) mode and 40 bit keys. Use message digest algorithm 5 (MD5) for generating message authentication codes (MAC).
- *RSA_EXPORT_RC4_40_MD5 - Use the RSA encoding algorithms for the Rivest Cipher 4 (RC4) cipher and 40 bit keys. Use message digest algorithm 5 (MD5) for generating message authentication codes (MAC).
- *RSA_NULL_SHA - Use the RSA encoding algorithms but do not use any cipher. Use Secure Hash Algorithm (SHA) for generating message authentication codes (MAC).
- *RSA_NULL_MD5 - Use the RSA encoding algorithms but do not use any cipher. Use message digest algorithm 5 (MD5) for generating message authentication codes (MAC).
- *RSA_RC2_CBC_128_MD5 - Use the RSA encoding algorithms for the Rivest Cipher 2 (RC2) cipher with the cipher block changing (CBC) mode and 128 bit keys. Use message digest algorithm 5 (MD5) for generating message authentication codes (MAC).
- *RSA_3DES_EDE_CBC_MD5 - Use the RSA encoding algorithms for the Triple Data Encryption Standard (3DES) cipher with the encrypt/decrypt/encrypt (EDE) and cipher block changing (CBC) modes and 168 bit keys. Use message digest algorithm 5 (MD5) for generating message authentication codes (MAC).
- *RSA_DES_CBC_MD5 - Use the RSA encoding algorithms for the Data Encryption Standard (DES) cipher with the cipher block changing (CBC) mode and 56 bit keys. Use message digest algorithm 5 (MD5) for generating message authentication codes (MAC).

Note: System SSL uses the sequence of the values in QSSLCSL to order the System SSL default cipher specification list. The default cipher specification list entries are system defined and can change on release boundaries. A default cipher removed from QSSLCSL results in the cipher's removal from the default list. The default cipher is added back to the default cipher specification list when it is added back into QSSLCSL. It is not possible to add other ciphers to the default list beyond the system defined set for the release.

QSSLCSLCTL

Secure Sockets Layer (SSL) cipher control. This system value specifies whether or not the QSSLCSL (SSL cipher specification list) system value is controlled by the system or by the user.

For details on System SSL and SSL ciphers, see the SSL section of the Security Reference information in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

A change to this system value takes effect immediately. The shipped value is *OPSYS.

Note: You must have *IOSYSCFG, *ALLOBJ, and *SECADM special authorities to change this system value.

- *OPSYS - The QSSLCSL (SSL cipher specification list) system value is read only. The values contained in the QSSLCSL (SSL cipher specification list) system value are automatically modified to contain the list of supported cipher suites as determined by the operating system release.

Note: *OPSYS allows the values to be automatically updated with newer and stronger ciphers when installing to a future release that has new cipher suite capabilities.

- *USRDFN - The QSSLCSL (SSL cipher specification list) system value is modifiable.

Note: Additional cipher suite capabilities will not be added automatically when moving to a future release. You will have to determine what if any new cipher suites are available and add them to the QSSLCSL (SSL cipher specification list) system value manually.

QSSLPCL

Secure Sockets Layer (SSL) protocols. This system value specifies the SSL protocol versions supported by System SSL.

For details on System SSL and SSL Protocols, see the SSL section of the Security Reference information in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

A change to this system value takes effect immediately for all subsequent System SSL sessions. The shipped value is *OPSYS.

Note: You must have *IOSYSCFG, *ALLOBJ, and *SECADM special authorities to change this system value.

- *OPSYS - The SSL protocols supported are determined by the system. The protocols can be different with each operating system release. See the SSL section of the Security Reference information in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/> for the values supported for your release.
- *TLSV1 - Transport Layer Security version 1.0 will be supported. This value cannot be specified if the *OPSYS value is also specified.
- *SSLV3 - Secure Sockets Layer version 3.0 will be supported. This value cannot be specified if the *OPSYS value is also specified.
- *SSLV2 - Secure Sockets Layer version 2.0 will be supported. This value cannot be specified if the *OPSYS value is also specified.

QSTGLOWACN

Auxiliary storage lower limit action. Specifies the action to take when the available storage in the system ASP goes below the auxiliary storage lower limit. A change to this system value takes effect immediately. The shipped value is *MSG.

- *MSG: Send message CPI099C to QSYSMSG and QSYSOPR message queue. This message is also sent for the other actions.
- *CRITMSG: Send critical message CPI099B to the user specified in the service attribute to receive critical messages.
- *REGFAC: Submit a job to call exit programs registered for the QIBM_QWC_QSTGLOWACN exit point.
- *ENDSYS: End the system to the restricted state.
- *PWRDWSYS: Power down the system immediately and restart it.

QSTGLOWLMT

Auxiliary storage lower limit. Specifies the percent of available storage remaining in the system ASP when the auxiliary storage lower limit action is taken. A change to this system value takes effect immediately. The shipped value is 5.0.

- Lower limit: Percentage of available storage remaining in the system ASP when the action specified in QSTGLOWACN is taken. The percent of storage currently used in the system ASP can be viewed with the Work with System Status (WRKSYSSTS) command.

QSTRPRTWTR

Start print writers at initial program load (IPL). This system value is set by the system at the time of IPL or is set by the user on the IPL Options display. This system value cannot be changed using the Change System Value (CHGSYSVAL) command.

- 0 means print writers were not started.
- 1 means print writers were started.

QSTRUPPGM

Start-up program name from autostart job in the controlling subsystem. Both an object name and library name can be specified. Changes made to this system value take effect at the next IPL.

QSTSMMSG

Indicates whether status messages are shown. Changes made to this system value take effect the next time a user signs on to the system.

- *NORMAL means status messages will be shown.
- *NONE means status messages will not be shown.

QSVRAUTIV

Server authentication interval. The operating system no longer uses this system value. Changes made to this system value have no effect.

QSYSLIBL

System part of the library list. Changes made to this system value take effect for jobs started after the change is made.

QTHDRSCADJ

Thread resources adjustment. This system value specifies whether or not the system should dynamically make adjustments to the affinity or preference of threads currently running in the system to certain processors and memory. If some resources are being utilized more than others, the system may reassign some of the threads running on the more heavily utilized resources to have affinity to the less utilized resources. Changes made to this system value take effect immediately. The shipped value is '1.'

- '0' means no automatic adjustment of threads is made by the system. Threads will continue to have affinity to the resources which they are currently assigned to until they end or until the system value is changed.
- '1' means the system dynamically makes adjustments of threads' affinity to the system's resources. It does not change the grouping or level of affinity in the threads.

QTHDRSCAFN

Thread resources affinity. The affinity or preference of threads to certain processors and memory. Changes made to this system value take effect immediately for threads in jobs that are started after the change, but has no effect on threads currently running.

- *NOGROUP - Secondary threads will not necessarily have affinity to the same group of processors and memory as their initiating thread.
- *GROUP - Secondary threads will have affinity to the same group of processors and memory as their initiating thread.

The thread resources affinity level can be set to the following values:

- *NORMAL - A thread will use any processor or memory if the resources it has affinity to are not readily available.
- *HIGH - A thread will only use the resources it has affinity to, and will wait until they become available if necessary.

QTIMADJ

Time adjustment. This system value can be used to identify software that adjusts the system clock to keep it synchronized with an external time source. This value should be maintained by time adjustment software and is intended as an aid to prevent having multiple time adjustment applications conflict with each other. There are no checks performed by the system to verify this value or that software is or is not performing time adjustments. IBM time adjustment offerings will use identifiers that start with QIBM such as 'QIBM_OS400_SNTP'. Other software suppliers should follow a similar naming convention of company name and product name.

Time adjustment software should check QTIMADJ prior to starting. If QTIMADJ has an identifier for other time adjustment software, then the software being started should notify the user of this potential conflict and confirm that this time adjustment software should be started. When QTIMADJ is *NONE the software should update QTIMADJ to identify that it is now responsible for adjusting the system clock. Time adjustment software should check QTIMADJ again prior to ending. QTIMADJ should be set to *NONE only if the current value identifies this time adjustment software that is ending. Changes made to this system value take effect immediately. The shipped value is *NONE.

- *NONE - Indicates that time adjustment software has not been identified.
- Identifier - Identify the software that will be used to adjust the system clock.

QTIME

Time of day. Changes made to this system value take effect immediately.

QTIMSEP

Time separator. Changes made to this system value take effect for jobs started after the change is made.

This value affects jobs for which *SYSVAL is specified as the time separator. When specifying time on commands, users must use the time separator specified for their job or no time separator. If a time separator different from the job's time separator is used to specify time on a command, the command will fail.

QTIMZON

Time zone. This specifies the name of the time zone description used to calculate local system time. A change to a different time zone description may result in a different offset that is associated with this new time zone description. A different offset would cause the local system time (system value QTIME) to change. In addition, the system value QUTCOFFSET will be changed to match this new offset. Changes made to this system value take effect immediately.

QTOTJOB

The total number of jobs for which storage must be allocated. Changes made to this system value take effect the next time the job tables are rebuilt during the IPL.

QTSEPOOL

Indicates whether interactive jobs should be moved to another main storage pool when they reach time slice end. Changes made to this system value take effect for jobs started after the change is made.

- *NONE means jobs are not moved when time slice end is reached.
- *BASE means jobs are moved when time slice end is reached.

QUPSDLYTIM

Uninterruptible power supply delay time. Changes made to this system value take effect the next time there is a power failure.

- *BASIC and *CALC cause the Licensed Internal Code (LIC) to assign specific values as the delay time.
- *NOMAX means the system will not start any action on its own.
- 0 means the system will power down automatically when system utility power fails.
- 1-99999 means specify the delay time in seconds before the system powers down.

On some partitioned systems, this system value can only be changed from the primary partition.

For more information on partitions, see the Logical Partitions topic in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

QUPSMMSGQ

Message queue for uninterruptible power supply messages. Changes made to this system value take effect the next time there is a power failure.

QUSEADPAUT

Defines which users can create, change and update programs and service programs with the (use adopted authority) USEADPAUT(*YES) attribute. When a program or service program has a use adopted authority attribute of *YES, the program/service program can use any adopted authority that is being passed to it from a program/ service program higher in the call stack.

This system value has no effect on the following:

- Existing programs/service programs created with the USEADPAUT(*YES) attribute. Users are responsible for deciding which existing programs/service programs should be changed to have USEADPAUT(*NO).
- Restoring a program/service program that uses adopted authority. These program/service programs can still be restored on your system.
- Duplicating a program/service program that uses adopted authority. The USEADPAUT attribute of the existing program/service program is copied to the new object.

The following values can be specified:

- *NONE means there is no restriction on who can create, change or update a program/service program to use adopted authority. Any user can create, change or update a program/service program to have the USEADPTAUT(*YES) attribute.
- Name means you can specify the name of the authorization list which will control which users can set the USEADPAUT(*YES) attribute. The user needs *USE authority to the authorization list to be able to create, change or update programs/service programs with the USEADPAUT(*YES) attribute. Authority to the authorization list cannot come from adopted authority. That is, if you are running a program that adopts authority, the adopted authority is not used when checking authority to the authorization list.

QUSRLIBL

User part of the library list. Changes made to this system value take effect for jobs started after the change is made.

QUTCOFFSET

Indicates the number of hours (in 24-hour format) and minutes that the current system time is offset from the Coordinated Universal Time (UTC).

- +hhmm means that the current system time is hh hours and mm minutes ahead of UTC.
- -hhmm means that the current system time is hh hours and mm minutes behind UTC.

Note: This system value must be the same as the offset that is associated with the time zone description specified in the system value QTIMZON. A change to a different time zone description for QTIMZON may result in a different associated offset. The system value QUTCOFFSET will be changed as well to match this new offset. QUTCOFFSET cannot be changed to a value that is different than the offset currently associated with QTIMZON. If an attempt is made to do so, the diagnostic message CPD1687 will be issued.

QVFYOBJRST

Verify object on restore. This system value specifies the policy to be used for object signature verification during a restore operation. This value applies to objects of types: *CMD, *PGM, *SRVPGM, *SQLPKG and *MODULE. It also applies to *STMF objects which contain Java programs. This value also specifies the policy for PTFs applied to the system including Licensed Internal Code fixes. Changes made to this system value take effect immediately. See Verify object on restore for additional information.

QYEAR

Year. Changes made to this system value take effect immediately.

Top

New value (VALUE)

Specifies the new value of the system value. Some system values, such as QUSRLIBL and QCTLSBSD, are made up of multiple character strings. These strings must be separated by blanks; apostrophes must surround the value specified for this parameter. For those system values that accept alphabetic characters, any letters that are entered in lowercase (a through z) are translated into uppercase (A through Z), even if they are enclosed in apostrophes. Some system values, such as QDATE and QDBRCVYWT, are zoned-decimal values (character in nature) and must also be enclosed in apostrophes when specified for this parameter. For numeric system values, except for QSECURITY, apostrophes cannot be used. Type the new values that meet the type, length, and range requirements for that system value.

This is a required parameter.

unrestricted-value

Specify the new value of the system value.

Top

Examples

Example 1: Changing a System Value Which Contains a String

```
CHGSYSVAL  SYSVAL(QLANGID)  VALUE('ENP')
```

This command changes the value of the system value QLANGID to ENP (ENP represents a valid language identifier).

Example 2: Changing a System Value Which Contains a List

```
CHGSYSVAL  SYSVAL(QUSRLIBL)  VALUE('INVLIB STOCKLIB MYLIB')
```

This command changes the value of the system value QUSRLIBL, which specifies the default list of libraries in the user portion of the library list to be used for a job at the time the job is started. The user portion of the library list contains the libraries INVLIB, STOCKLIB, and MYLIB.

Top

Error messages

*ESCAPE Messages

CPF1001
Wait time expired for system response.

CPF1028
&1 not valid for parameter SYSVAL.

CPF1030
System value &1 cannot be changed.

CPF1058
VALUE parameter not correct for system value &1.

CPF1059
Length of value not correct for &1.

CPF1074
SYSVAL(QMONTH) not valid for Julian date format.

CPF1076
Specified value not allowed for system value &1.

CPF1078
System value &1 not changed.

CPF1079
Too many or too few values listed for &1.

CPF1127
Device specified for QPRTDEV not printer device.

CPF1132
Name specified for system value &1 not valid.

CPF1203
Keyboard identifier &1 not correct.

CPF18A4
User not authorized to change system value &1.

CPF18C0
System value &1 cannot be changed.

CPF1830
Specified values not valid for system value &1.

CPF1831
User not authorized to change system value &1.

CPF1832
Cannot change system value &1 during IPL.

CPF1842
Cannot access system value &1.

CPF1852
System value &1 not changed.

CPF1856
Filter type &4 not correct for system value &1.

CPF1857
Specified value for &1 not a code font.

CPF1864
User not authorized to change system value &1.

CPF210C

Library &1 not changed.

CPF268D

Unable to access system value &1.

Top

Change Tape Cartridge (CHGTAPCTG)

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

Parameters
Examples
Error messages

The Change Tape Cartridge (CHGTAPCTG) command changes the specified cartridge from any category to the specified category.

Top

Parameters

Keyword	Description	Choices	Notes
DEV	Library device	<i>Name</i>	Required, Positional 1
CTG	Cartridge ID	Values (up to 40 repetitions): <i>Character value</i> , *ALL	Optional
CGY	Category	Single values: *SHARE400 Other values: <i>Element list</i>	Optional
	Element 1: Category name	<i>Character value</i> , *SAME, *NOSHARE, *IPL, *NL, *CNV	
	Element 2: Category system	<i>Character value</i> , *SAME, *CURRENT	

Top

Library device (DEV)

Specifies the device to be used. The device name must have previously been created on the system using the Create Device Media Library (CRTDEVMLB) command.

This is a required parameter.

name Specify the name of the device.

Top

Cartridge ID (CTG)

Specifies the cartridge identifiers that are to have their corresponding categories changed to the category specified.

Note: The cartridge identifier should represent the external identifier if the library device has a bar code scanner to read external identifiers.

*ALL All tape cartridges in the device are changed.

generic-identifier

Specify the generic name of the cartridge identifier. 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 cartridge identifiers with names that begin with the generic prefix. If an asterisk is not included with the generic (prefix) name, the system assumes it to be the complete cartridge identifier.

identifier

Specify 1 to 40 cartridge identifiers to change the category of.

Top

Category (CGY)

Specifies the category to change the tape cartridge to. The category cannot be changed with this command if it is a *NOSHARE category unless the command is executed from the system that owns the rights of the *NOSHARE.

Single values

***SHARE400**

The cartridge identifiers specified are changed to the *SHARE400 category.

Element 1: Category name

***SAME**

The category information is not changed.

***NOSHARE**

The cartridge identifiers specified are changed to the *NOSHARE category.

***IPL** The cartridge identifiers specified are changed to the *IPL category.

***NL** The cartridge identifiers specified are changed to the *NL category.

character-value

Specify the name of a user-defined category. The cartridge identifiers specified are changed to the user-defined category that is specified.

Element 2: Category system

The system name is obtained from the pending system name field of a Display Network Attributes (DSPNETA) command. If there is no pending system name, the current system name attribute is used.

```
***** Attention *****  
If the system name is changed, all category  
information associated with all tape  
cartridges in library devices are not valid.  
*****
```

***SAME**

The system does not change.

***CURRENT**

The category belongs to the system currently running the command.

character-value

Specify the name of the system to which the category belongs.

Top

Examples

```
CHGTAPCTG DEV(LIB01) CTG(VOL1) CGY(*SHARE400)
```


This command changes the category associated with the cartridge identifier VOL1 to the category *SHARE400.

Top

Error messages

*ESCAPE Messages

CPF6708

Command ended due to error.

CPF6711

Command not allowed

CPF6718

Cannot allocate device &1.

CPF6745

Device &1 not a media library device.

CPF67A6

Category does not exist

CPF67D2

Cartridge command was not successful.

CPF67D4

Category not available

CPF67E4

Library device function not successful

CPF67EA

Function not successful

CPF67F5

Duplicate cartridge or virtual volume name found

CPF67F9

&6 cartridges not changed

CPF9814

Device &1 not found.

CPF9825

Not authorized to device &1.

Top

Change Tape File (CHGTAPF)

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

Parameters
 Examples
 Error messages

The Change Tape File (CHGTAPF) command changes the attributes of the specified tape device file.

Top

Parameters

Keyword	Description	Choices	Notes
FILE	File	<i>Qualified object name</i>	Required, Key, Positional 1
	Qualifier 1: File	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
DEV	Tape device	Single values: *SAME , *NONE Other values (up to 4 repetitions): <i>Name</i>	Optional, Positional 2
VOL	Volume identifier	Single values: *SAME , *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	*SAME , *SL, *NL, *NS, *BLP, *LTM	
	Element 2: Number of reels	1-255, *SAME	
SEQNBR	Sequence number	1-16777215, *SAME , *END, *NEXT	Optional
LABEL	Tape label	<i>Character value, *SAME</i> , *NONE	Optional
TEXT	Text 'description'	<i>Character value, *SAME</i> , *BLANK	Optional
RCDLEN	Record length	<i>Integer, *SAME</i> , *CALC	Optional
BLKLEN	Block length	1-524288, *SAME , *CALC	Optional
BUFOFSET	Buffer offset	<i>Integer, *SAME</i> , *BLKDSC	Optional
RCDBLKFMT	Record block format	*SAME , *FB, *F, *V, *VB, *D, *DB, *VS, *VBS, *U	Optional
EXTEND	Extend	Single values: *SAME , *NO Other values: <i>Element list</i>	Optional
	Element 1: Extend file	*YES	
	Element 2: Check file	*NOCHECK , *CHECK	
DENSITY	Tape density	<i>Character value, *SAME</i> , *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	*SAME , *DEV, *NO	Optional
CODE	Code	*SAME , *EBCDIC, *ASCII	Optional
CRTDATE	Creation date	<i>Date, *SAME</i> , *NONE	Optional
EXPDATE	File expiration date	<i>Date, *SAME</i> , *NONE, *PERM	Optional
ENDOPT	End of tape option	*SAME , *REWIND, *LEAVE, *UNLOAD	Optional

Keyword	Description	Choices	Notes
USRLBLPGM	User label program	Single values: <u>*SAME</u> , *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: User label program	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <u>*LIBL</u> , *CURLIB	
IGCDTA	User specified DBCS data	<u>*SAME</u> , *NO, *YES	Optional
WAITFILE	Maximum file wait time	<i>Integer</i> , <u>*SAME</u> , *IMMED, *CLS	Optional
SHARE	Share open data path	<u>*SAME</u> , *NO, *YES	Optional

Top

File (FILE)

Specifies the tape device file to be changed.

This is a required parameter.

Qualifier 1: File

name Specify the name of the tape device 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 tape device file. If no library is specified as the current library for the job, QGPL is used.

name Specify the library name where the tape device 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 device file to perform input/output 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

*SAME

The device name (if any) does not change.

*NONE

No device names are specified. They must be supplied later on an Override Tape File (OVRTAPF) command, on another Change Tape file (CHGTAPF) command, or when the tape device file is opened.

Other values (up to 4 repetitions)

name Specify the names of up to 4 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 the devices are processed. When more volumes are processed than the number of devices in the DEV list, the devices are used in the same order specified,

wrapping around to the first device as needed. Each device name must be known on the system by a device description before this device file is created.

Top

Volume identifier (VOL)

Specifies one or more volume identifiers used by the file. The tapes (volumes) must be placed in the devices in the same order as the identifiers are specified in the device file used with the device specified for the **Tape device (DEV)** parameter. If the file is opened for being read backward, 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.

Single values

*SAME

The volume identifiers do not change.

*NONE

No tape volume identifiers are specified for this file. They can be supplied before the device file is opened, either in the Change Tape File (CHGTAPF) command, the Override Tape File (OVRTAPF) command, or in the high-level language program.

Other values (up to 50 repetitions)

character-value

Specify the identifiers of one or more volumes in the order in which they are processed, placed in the devices, and used by this device file. Each identifier can have six or fewer alphanumeric characters. The maximum number of reels processed for an *NL, *LTM, *NS, or *BLP input file is determined by the number of volume identifiers in the list.

Top

Tape reels specifications (REELS)

Specifies the type of labeling used on the tape reels and the maximum number of reels that can be processed, if no list of volume identifiers is specified for the **Volume identifier (VOL)** parameter and this device file is used with either *NL, *LTM, *NS, or *BLP input files.

When the number of reels is specified, the volume identifiers on the tapes are ignored if labeled tapes are being processed. The order in which the reels is arranged within the volumes must be checked by the operator.

The number of reels value (the second part of this parameter) is not a limiting value for standard-labeled output files. For a standard-labeled input file, the data file labels limit the number of volumes that can be processed by indicating end-of-file. For an output file, the maximum number of reels value is ignored. The system requests that additional volumes be placed in the device until the output file is closed.

Note: The values *SL, *NL, and *LTM can be specified if the device file is used for either reading from or writing to tapes. The values *NS and *BLP are valid only if the device file is used to read from tapes.

Element 1: Label processing type

*SAME

The type of volume (tape) and tape file labeling does not change.

- *SL** The volumes (tapes) have standard labels. The volume identifiers are ignored. Instead, the number-of-reels value is checked.
- *NL** The volumes (tapes) have no labels. On a nonlabeled volume, tape markers are used to indicate the beginning and end of the volume and each data file on it.
- *NS** The volumes (tapes) have nonstandard labels. The load point on the tape may be immediately followed by an optional beginning-of-tape marker and some kind of volume and file information, but these are ignored. Only a single data file can exist on a nonstandard tape.
- *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 marks between it and the beginning of the tape. Bypass label processing can be used when some file label information is incorrect.
- *LTM** The volumes have no labels, but they do have a single leading tape marker before the first data file.

Element 2: Number of reels

*SAME

The number of reels does not change.

- 1-255** Specify the maximum number of reels that are processed for a *NL, *LTM, *NS, or *BLP input tape operation when a list of volume identifiers is not specified. The number-of-reels value is ignored for a standard label (*SL) file or for any output file.

Top

Sequence number (SEQNBR)

Specifies the file sequence number of the data file on the tape that is being processed. When standard-labeled 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-labeled tapes are not used, the system uses the tape marks and the value specified (or assumed) by this parameter to locate the correct data file being processed.

*SAME

The file sequence number does not change.

- *END** The file is written to the end of the tape. This value can only be specified in tape files that are used to write to tape. An error message is issued when a tape file is used to read from a tape and *END was specified in the tape file.

***NEXT**

The next file on the tape is processed. If the tape is currently positioned prior to the first file, the first file on the tape is processed. This value can only be specified in tape files being used to read from tape. An error message is issued when a tape file is used to write to a tape and *NEXT was specified in the tape file.

1-16777215

Specify the file sequence number of the file being processed on this tape.

Top

Tape label (LABEL)

Specifies the data file identifier of the data file that is being processed by this tape device file. The data file identifier is defined only for standard-labeled tapes and is stored in the header label immediately before the data file that the header describes.

*SAME

The data file identifier does not change.

*NONE

The data file identifier is not specified.

character-value

Specify the identifier of the data file being used with this tape device file. If this identifier is for a tape that is written in the basic exchange format, and it is being used on a system other than a System i5, a maximum of 8 characters is used or a qualified identifier having no more than 8 characters per qualifier should be used. Otherwise, a maximum of 17 alphanumeric characters can be used.

Top

Text 'description' (TEXT)

Specifies text that describes the tape device file.

*SAME

The text (if any) does not change.

*BLANK

No text is specified.

character-value

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

Top

Record length (RCDLEN)

Specifies the length (in bytes) of the records contained in the data file being processed with this device file.

*SAME

The record length does not change.

*CALC

No record length is specified for the data file being processed. If *CALC is specified, the system attempts to calculate an appropriate record length when the file is opened.

integer

Specify a value ranging from 1 through 32767 bytes that specifies the length of each record in the data file being processed. The minimum and maximum record length allowed for a file depends on the record block format, block length, buffer offset (for an ASCII file), and recording code.

Table 1. Figure: EBCDIC RCDLEN Ranges

RCDLFLKMT	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

RCDLFLKMT	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 maximum length (in bytes) of data blocks being moved to or from the tape for output or input operations.

***SAME**

The data block length does not change.

***CALC**

No data block length is specified for the data file being processed. If *CALC is specified, 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 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 for an ASCII file, and it is ignored for an EBCDIC tape file. This parameter is not needed for a standard-labeled file processed for input if the tape includes a second file header label (HDR2) that contains the buffer offset value.

A buffer offset must be provided by the Create Tape File (CRTTAPF) command, the Change Tape File (CHGTAPF) command, the Override with Tape File (OVRTAPF) command, or by the file labels for an input file that contain any information (such as a block descriptor) ahead of the first record in each block. If you do not specify a buffer offset 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.

*SAME

The buffer offset value does not change.

*BLKDSC

Block descriptors 4-bytes in length are created in tape files created by using this device file. Input files that are read by using this device file assume 4-bytes of buffer offset information preceding the first record in each data block.

0-99 Specify the length of the buffer offset information that precedes the first record in each data block.

Top

Record block format (RCDBLKFMT)

Specifies the blocking attribute and type of records in the tape data file being processed. Record block format *V and *VB records can only be processed for an EBCDIC file; *D and *DB records can only be processed for an ASCII file.

*SAME

The record block format does not change.

***FB** Constant length, blocked, unspanned records in either EBCDIC or ASCII code are processed. The system may change this record block format to *F, based on other file parameters.

***F** Constant length, deblocked, unspanned records in either EBCDIC or ASCII code are processed. The system may change this record block format to *FB, based on other file parameters.

***V** Variable length, deblocked, unspanned records in EBCDIC type V format are processed. The system may change this record block format to *VB, *D, or *DB, based on other file parameters.

***VB** Variable length, blocked, unspanned records in EBCDIC type V format are processed. The system may change this record block format to *DB, based on the volume code.

***D** Variable length, deblocked, unspanned records in ASCII type D format are processed. The system may change this record block format to *DB, *V, or *VB, based on other file parameters.

***DB** Variable length, blocked, unspanned records in ASCII type D format are processed. The system may change this record block format to *VB, based on the volume code.

***VS** Variable length, deblocked, spanned records in either EBCDIC or ASCII code are processed. The system may change this record block format to *VBS, based on other file parameters.

***VBS** Variable length, blocked, spanned records in either EBCDIC or ASCII code are processed. Note that 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. *U records are

processed as variable length records, and each record being written or read is in a separate tape block. This format is useful for processing tape files that do not meet the formatting requirements of any other record block format.

Table 4. Figure: Required RCDLEN/BLKLEN/BUFOFSET Relation

CODE	RCDLEN	BLKLEN
=====	=====	=====
*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. The specific data file is identified by the SEQNBR parameter and, for a standard-label file, the LABEL parameter. If the data file is extended, it becomes the last file on the tape volume; data files that follow it are overwritten as the specified file is extended.

Note: This parameter is not valid for 1/4-inch cartridge tape devices.

*SAME

The value does not change.

***NO** Records are not added to the end of the specified data file on tape.

***YES** New records are added to the end of the specified data file on tape.

*NOCHECK

The file is extended without checking to determine whether it is active.

*CHECK

Before the file is extended, a check is made 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 used. This parameter is used only for tapes written as nonlabeled volumes (*NL); it is not valid unless the *first* data file is being written on the nonlabeled volume. The density of a standard-labeled volume is specified on the Initialize Tape (INZTAP) command, which initializes tapes as standard-labeled volumes by writing

volume labels on them. If a labeled or nonlabeled output file is written with a density different than the density specified by this parameter, a warning message is sent.

***SAME**

The data density does not change.

***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.

***SAME**

The value does not change.

***DEV D**

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.

*SAME

The type of character code does not change.

*EBCDIC

The EBCDIC character code is used.

*ASCII

The ASCII character code is used.

Top

Creation date (CRTDATE)

Specifies, for tape input data files and for tape output for which *YES is specified for the **Extend file (EXTEND)** parameter, the date when the data file was created (written on tape).

*SAME

The creation date does not change.

*NONE

The creation date is not specified. It is not checked unless it is supplied in the Override with Tape File (OVRTAPF) command or in the high-level language program.

date Specify the creation date of the data file being used by this device file. The date must be specified in the job date format and, if separators are used, using the job date separator character.

Top

File expiration date (EXPDATE)

Specifies, for tape output data files only, the expiration date of the data file used by this device file. 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.

*SAME

The expiration date does not change.

*NONE

No expiration date for the data file is specified. The 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 beyond which, the data file is no longer protected.

Top

End of tape option (ENDOPT)

Specifies the operation that is automatically performed on the tape volume after the operation ends. If more than one volume is included, this parameter applies only to the last tape volume used; all other tape volumes are rewound and unloaded when the end of the tape is reached.

*SAME

The value does not change.

***REWIND**

The tape is rewound, but not unloaded.

***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.

Top

User label program (USRLBLPGM)

Specifies the user program that processes user tape labels. On an output file, the user tape label program passes the user tape labels that are written to tape. On an input file, the user tape labels are passed to the user label program.

Single values

***SAME**

The user label program name does not change.

***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

User specified DBCS data (IGCDTA)

Specifies whether the file processes double-byte character set (DBCS) data.

***SAME**

The IGCDTA value does not change.

***NO** The file does not process double-byte character set (DBCS) data.

***YES** The file processes double-byte character set (DBCS) data.

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. If the file resources cannot be allocated within the specified wait time, an error message is sent to the program.

***SAME**

The wait time does not change.

***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.

***SAME**

The value does not change.

***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

Examples

Example 1: Changing the Tape File Description

```
CHGTAPF FILE(TAPE01) LABEL(TUESDAY)
```

This command changes the description of the tape device file named TAPE01. The LABEL parameter now contains the data file identifier TUESDAY.

Example 2: Enabling a Tape File to Process DBCS Data

```
CHGTAPF FILE(IGCLIB/IGCTAP) IGCDA(*YES)
```

This command changes the tape file IGCTAP, which is stored in the library IGCLIB, so that the file processes double-byte character set data.

Top

Error messages

***ESCAPE Messages**

CPF7304

File &1 in &2 not changed.

Top

Change TCP/IP Attributes (CHGTCPA)

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

Parameters
Examples
Error messages

The Change TCP/IP Attributes (CHGTCPA) command is used to change the TCP, UDP, IP, and ARP protocol layer attributes. The changes take effect immediately.

The protocols (IPv4, IPv6, or both) affected by the following keywords and the default values for the keywords follow. These values are also used if *DFT is specified for the keyword.

Keyword

Affected Protocols and Default Value

TCPKEEPALV

IPv4 and IPv6; 120 minutes

TCPURGPTR

IPv4 and IPv6; *BSD

TCPRCVBUF

IPv4 and IPv6; 65535 bytes

TCPSNDBUF

IPv4 and IPv6; 65535 bytes

TCPR1CNT

IPv4 and IPv6; 3

TCPR2CNT

IPv4 and IPv6; 16

TCPMINRTM

IPv4 and IPv6; 250 milliseconds

TCPCLOTIMO

IPv4 and IPv6; 120 seconds

TCPCNNMSG

IPv4 and IPv6; *THRESHOLD

UDPCKS

IPv4 only; *YES

IPPATHMTU

IPv4 and IPv6; *YES, 10 minutes

IPDTGFWD

IPv4 only; *NO

IPSRCRTG

IPv4 only; *YES

IPRSBTIMO

IPv4 only; 10 seconds

IPTTL IPv4 only; 64

IPQOSEN

IPv4 only; *NO

IPDEADGATE

IPv4 only; *YES, 2 minutes

ARPTIMO

IPv4 only; 15 minutes

ECN IPv4 only; *NO

NFC IPv4 only; *YES, 300 seconds, 10MB

LOGPCLERR

IPv4 only; *NO

IP6ERRLMT

IPv6 only; 10

IP6ERRRATE

IPv6 only; 10 messages per second

IP6HOPLMT

IPv6 only; 64

IP6DUPRTLS

IPv6 only; *RTR

IP6TMPAVL

IPv6 only; 7 days

IP6TMPAPL

IPv6 only; 1 day

Restriction:

- You must have input/output system configuration (*IOSYSCFG) special authority to run this command.

Top

Parameters

Keyword	Description	Choices	Notes
TCPKEEPALV	TCP keep alive	1-40320, *SAME, *DFT	Optional
TCPURGPTR	TCP urgent pointer	*SAME, *BSD, *RFC	Optional
TCPRCVBUF	TCP receive buffer size	512-8388608, *SAME, *DFT	Optional
TCPSNDBUF	TCP send buffer size	512-8388608, *SAME, *DFT	Optional
TCPR1CNT	TCP R1 retransmission count	1-15, *SAME, *DFT	Optional
TCPR2CNT	TCP R2 retransmission count	2-16, *SAME, *DFT	Optional
TCPMINRTM	TCP minimum retransmit time	100-1000, *SAME, *DFT	Optional
TCPCLOTIMO	TCP time-wait timeout	0-14400, *SAME, *DFT	Optional
TCPCNNMSG	TCP close connection message	*SAME, *THRESHOLD, *ALL, *NONE	Optional
UDPKS	UDP checksum	*SAME, *YES, *NO	Optional
IPPATHMTU	Path MTU discovery	Single values: *SAME, *DFT, *NO Other values: <i>Element list</i>	Optional
	Element 1: Enablement	*YES	
	Element 2: Interval	5-40320, *ONCE	
IPDTGFWD	IP datagram forwarding	*SAME, *YES, *NO	Optional

Keyword	Description	Choices	Notes
IPSRCRTG	IP source routing	<u>*SAME</u> , *YES, *NO	Optional
IPRSBTIMO	IP reassembly time-out	5-120, <u>*SAME</u> , *DFT	Optional
IPTTL	IP time to live (hop limit)	1-255, <u>*SAME</u> , *DFT	Optional
IPQOSENB	IP QoS enablement	<u>*SAME</u> , *TOS, *YES, *NO	Optional
IPDEADGATE	IP dead gateway detection	Single values: <u>*SAME</u> , *DFT, *NO Other values: <i>Element list</i>	Optional
	Element 1: Enablement	*YES	
	Element 2: Interval	1-60	
ARPTIMO	ARP cache timeout	1-1440, <u>*SAME</u> , *DFT	Optional
ECN	Enable ECN	<u>*SAME</u> , *YES, *NO	Optional
NFC	Network file cache	Single values: *DFT, *CLEAR Other values: <i>Element list</i>	Optional
	Element 1: Enablement	<u>*SAME</u> , *YES, *NO	
	Element 2: Cached file timeout	30-604800, <u>*SAME</u> , *NOMAX	
	Element 3: Cache size	10-100000, <u>*SAME</u>	
LOGPCLERR	Log protocol errors	<u>*SAME</u> , *YES, *NO	Optional
IP6ERRLMT	ICMPv6 error msg burst limit	1-255, <u>*SAME</u> , *DFT	Optional
IP6ERRRATE	ICMPv6 error msg send rate	1-255, <u>*SAME</u> , *DFT	Optional
IP6HOPLMT	IPv6 hop limit	1-255, <u>*SAME</u> , *DFT	Optional
IP6DUPRTLS	IPv6 dup route load sharing	<u>*SAME</u> , *DFT, *NONE, *RTR	Optional
IP6TMPAVL	IPv6 temp addr valid lifetime	0.1-30.0, <u>*SAME</u> , *DFT	Optional
IP6TMPAPL	IPv6 temp addr pref lifetime	0.1-30.0, <u>*SAME</u> , *DFT	Optional
IPQOSBCH	IP QoS datagram batching	<u>*SAME</u> , *NORMAL, *MINDELAY	Optional
IPQOSTMR	IP QoS timer resolution	5-5000, <u>*SAME</u> , *DFT	Optional

Top

TCP keep alive (TCPKEEPALV)

Specifies the amount of time, in minutes, that TCP waits before sending out a probe to the other side of a connection. The probe is sent when the connection is otherwise idle, even when there is no data to be sent.

The transmission of keep-alive packets is controlled by individual sockets applications through use of the SO_KEEPALIVE socket option. For more information see the Socket programming topic collection in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

*SAME

The value does not change.

***DFT** The keep-alive time interval value of 120 minutes is used.

1-40320

Specify a keep-alive time interval in minutes. Valid values range from 1 through 40320 minutes (28 days).

Top

TCP urgent pointer (TCPURGPTR)

Specifies which convention to follow when interpreting which byte the urgent pointer in the TCP header points to. The urgent pointer in the TCP header points to either the byte immediately following the last byte of urgent data (BSD convention) or the last byte of the urgent data (RFC convention).

Note: This value must be consistent between the local and remote ends of a TCP connection. Socket applications that use this value must use it consistently between the client and server applications. This value is set on a system basis. All applications using this system will use this value.

*SAME

The value does not change.

***BSD** Use the BSD defined convention. The TCP urgent pointer points to the byte immediately following the last byte of urgent data. This is the initial value.

***RFC** Use the RFC defined convention. The TCP urgent pointer points to the last byte of the urgent data.

Top

TCP receive buffer size (TCPRCVBUF)

Specifies what to allocate for the default receive buffer size. The TCP receive window size is based on this value. Decreasing this value decreases the amount of data that the remote system can send before being read by the local application.

Notes:

1. The default User Datagram Protocol (UDP) receive buffer size is 65535. If the TCP receive buffer size is specified as greater than 65535 then the UDP receive buffer size will be changed to equal the TCP receive buffer size. If the TCP receive buffer size is specified as less than 65535 then the default UDP buffer size will be used.
2. This value is also used as the default receive buffer size by IP over SNA processing.
3. This value is the default TCP receive buffer size. An individual application can override this value by using the SO_RCVBUF socket option. For more information see the Socket programming topic collection in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

*SAME

The value does not change.

***DFT** The default TCP receive buffer size of 65535 (64K - 1) is used.

512-8388608

Specify the number of bytes to be used for the TCP receive buffer size.

Top

TCP send buffer size (TCPSNDBUF)

Specifies the TCP send buffer size. This parameter informs TCP what to use for the default send buffer size. The TCP send buffer size provides a limit on the number of outgoing bytes that are buffered by TCP. Once this limit is reached, attempts to send additional bytes may result in the application blocking until the number of outgoing bytes buffered drops below this limit. The number of outgoing bytes buffered is decremented when the remote system acknowledges the data sent.

Notes:

1. This value is used also as the default send buffer size by IP over SNA processing.

444 System i: Programming i5/OS commands Starting with CHGPFTRG (Change Physical File Trigger)

2. The default UDP send buffer size is 65535..
3. This value is the default TCP send buffer size. An individual application can override this value by using the SO_SNDBUF socket option. For more information see the Socket programming topic collection in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

***SAME**

The value does not change.

***DFT** The default TCP send buffer size of 65535 (64K - 1) is used.

512-8388608

Specify the number of bytes to be used for the TCP send buffer size.

Top

TCP R1 retransmission count (TCPR1CNT)

Specifies the TCP R1 retransmission count value. This parameter is a counter that specifies the number of TCP retransmissions that will be attempted before TCP requests a different network route from IP.

Note: The R1 retransmission count value must be less than the R2 retransmission count value.

***SAME**

The value does not change.

***DFT** The default TCP R1 retransmission count value of 3 is used.

1-15 Specify the TCP R1 retransmission count value.

Top

TCP R2 retransmission count (TCPR2CNT)

Specifies the TCP R2 retransmission count value. This parameter is a counter that specifies the number of TCP retransmissions that will be attempted before TCP assumes that the connection has been lost and stops retransmitting.

Note: The R2 retransmission count value must be greater than the R1 retransmission count value.

***SAME**

The value does not change.

***DFT** The default TCP R2 retransmission count value of 16 is used.

2-16 Specify the TCP R2 retransmission count value.

Top

TCP minimum retransmit time (TCPMINRTM)

Specifies the TCP minimum retransmit time value which is the lowest amount of time (expressed in milliseconds) to elapse before TCP decides that a transmitted packet is lost and needs to be sent again. After each unsuccessful attempt to transmit a packet, this value will be doubled until it reaches a maximum value of 2 minutes.

***SAME**

The value does not change.

***DFT** The default TCP minimum retransmit time value of 250 milliseconds is used.

100-1000

Specify the number of milliseconds to be used for the TCP minimum retransmit time value.

Top

TCP time-wait timeout (TCPCLOTIMO)

This parameter indicates the amount of time, in seconds, for which a socket pair (client IP address and port, server IP address and port) cannot be reused after a connection is closed.

Note: Setting the TCP time wait timeout value to 0 means that a timer will not be used.

*SAME

The value does not change.

***DFT** The default TCP time wait timeout value of 120 seconds is used.

0-14400

Specify the number of seconds to be used for the TCP time wait timeout value.

Top

TCP close connection message (TCPCNNMSG)

Specifies whether abnormally closed TCP connections will be logged via messages to the QTCP message queue. TCP connections could be abnormally closed for the following reasons:

- TCP connection closed due to the 10 minute Close_Wait_timeout.
- TCP connection closed due to the R2 retry threshold being exceeded.
- TCP connection closed due to the keepalive time-out value being exceeded.

*SAME

The value does not change.

***THRESHOLD**

At most, one abnormally closed TCP connection message per minute will be logged. TCPCNNMSG(*THRESHOLD) is the initial value.

***ALL** All abnormally closed TCP connections will be logged. Note that there are some conditions that could cause MANY closed connection messages to be logged at the same time.

***NONE**

Abnormally closed TCP connections will not be logged.

Top

UDP checksum (UDPCKS)

Specifies whether UDP processing should generate and validate checksums. It is strongly recommended that you specify UDPCKS(*YES) to use UDP checksum processing. If you are concerned about obtaining the best possible performance and are not concerned with the protection provided by UDP checksum processing, specify UDPCKS(*NO).

*SAME

The value does not change.

***YES** Checksum protection is provided for UDP data. UDPCKS(*YES) is the initial value.

***NO** Checksum protection is not provided for UDP data.

Path MTU discovery (IPPATHMTU)

Specifies whether the Path Maximum Transmission Unit (MTU) discovery function will be enabled on this system. Path MTU discovery allows for dynamic MTU adjustment, on a per connection basis, in order to maximize network throughput.

Single values

*SAME

The value does not change.

***NO** Path MTU discovery is not enabled for this system.

***DFT** The default path MTU discovery enablement status is ***YES** and the default path MTU discovery time interval is 10 minutes.

Element 1: Enablement

***YES** Path MTU discovery is enabled for this system.

Element 2: Interval

Specifies the amount of time, in minutes, that the TCP/IP protocol stack will cache the results of a path MTU discovery. When the time interval is exceeded, the path MTU is rediscovered.

***ONCE**

Once a path MTU is discovered, it is not recalculated.

5-40320

Specify a path MTU discovery interval in minutes. Valid values range from 5 through 40320 minutes (28 days).

Notes:

1. In order for the path MTU discovery interval element to be specified, the first element must be set to ***YES**.
2. Path MTU discovery, if enabled, is only done over routes with a MTU value of ***IFC**.
3. The use of Path MTU discovery for UDP applications is controlled by individual sockets applications through the use of the **SO_PATHMTU** socket option.

IP datagram forwarding (IPDTGFWD)

Specifies whether the IP layer forwards Internet Protocol (IP) datagrams between different networks. It specifies whether the IP layer is acting as a gateway.

Note: IP does not forward datagrams between interfaces on the same subnet.

The i5/OS implementation of TCP/IP does not include full gateway function as defined in RFC1009. A subset of the gateway functions are supported. One of the gateway functions supported is IP datagram forwarding capabilities.

*SAME

The value does not change.

***NO** IP datagrams are not forwarded. **IPDTGFWD(*NO)** is the initial value.

*YES IP datagrams are forwarded.

Top

IP source routing (IPSRCRTG)

The default setting for IP Source Routing (IPSRCRTG) is *YES or on. Some firewalls will not pass datagrams that have IP Source Routing switched on. This parameter allows you to switch IP Source Routing on or off as required for your situation.

*SAME

The value does not change.

*NO The value *NO switches IP Source Routing off.

*YES The value *YES switches IP Source Routing on. IPSRCRTG(*YES) is the initial value.

Top

IP reassembly time-out (IPRSBTIMO)

Specifies, in seconds, the IP datagram reassembly time. If this time is exceeded, a partially reassembled datagram is discarded and an ICMP time exceeded message is sent to the source host.

*SAME

The value does not change.

*DFT The default assembly time of 10 seconds is used.

5-120 Specify the number of seconds to be used for an IP reassembly time.

Top

IP time to live (hop limit) (IPTTL)

Specifies the default TTL value. The IP datagram time-to-live value specifies a relative limit on the number of hops across which an IP datagram remains active. The time-to-live value acts as a "hop count" that is decremented by each gateway to prevent Internet routing loops.

Note: Even though this parameter is specified as a time-to-live value, it is not used as a time value. It is used as a counter. The standard description is *time to live* as specified in RFCs.

*SAME

The value does not change.

*DFT The default time-to-live value of 64 is used.

Note: This default IP datagram time-to-live value is not used for datagrams sent to an IP multicast group address. The default IP datagram time-to-live value for datagram sent to an IP multicast group is always 1 as specified by the Internet standards. Individual multicast applications may override this default using the IP_MULTICAST_TTL socket option.

1-255 Specify an IP time-to-live value.

Top

IP QoS enablement (IPQOSENB)

Specifies whether Quality of Service (QoS), IP Type of Service (TOS), or neither of the two are in use.

***SAME**

The value does not change.

***TOS** Use TOS byte in the IP header.

***YES** Use QoS.

***NO** Do not use QoS or TOS. This is the initial value.

Top

IP dead gateway detection (IPDEADGATE)

Specifies whether dead gateway detection will be enabled on this system. Dead gateway detection is a mechanism which involves polling all attached gateways. If no reply is received to the polls then all routes using that gateway are inactivated. Gateways marked as dead will continue to be polled and when they respond again all routes using that gateway will be reactivated.

Single values

***SAME**

The value does not change.

***NO** Dead gateway detection is not enabled for this system.

***DFT** The default dead gateway detection enablement status is *YES and the default dead gateway detection time interval is 2 minutes.

Element 1: Enablement

***YES** Dead gateway detection is enabled for this system.

Element 2: Interval

Specifies the amount of time, in minutes, that the TCP/IP protocol stack will wait between dead gateway detection polls. When the time interval is exceeded, the gateways are polled.

1-60 Specify a dead gateway detection interval in minutes.

Notes:

1. In order for the dead gateway detection interval element to be specified, the first element must be set to *YES.

Top

ARP cache timeout (ARPTIMO)

Specifies, in minutes, the ARP cache time-out value. The time-out value's purpose is to flush out-of-date cache entries from the ARP cache.

***SAME**

The value does not change.

***DFT** The default ARP cache time-out interval of 15 minutes is used.

1-1440 Specify an ARP cache time-out interval in minutes.

Top

Enable ECN (ECN)

Specifies whether explicit congestion notification (ECN) is enabled.

If ECN is enabled, routers can notify end-nodes of congestion before queues overflow. Without ECN, end-nodes can only detect congestion when packets are lost due to queues overflowing.

*SAME

The value does not change.

***NO** ECN is not enabled for the system.

***YES** ECN is enabled for the system.

Top

Network file cache (NFC)

Specifies whether the Network File Cache (NFC) function will be enabled on this system. The Network File Cache is used for the support of FRCA (Fast Response Cache Accelerator). FRCA dramatically improves the performance of serving non-secure static content by Web and other TCP servers.

Single values

***DFT** The default NFC enablement status is ***YES** with a default cache size of 10MB and a cache timeout of 300 seconds.

***CLEAR**

Specifies to immediately clear the entire network file cache. After the cache is cleared, the previous Network File Cache values will be retained.

Element 1: Enablement

*SAME

The value does not change.

***YES** The Network File Cache is enabled for this system.

***NO** The Network File Cache is not enabled for this system.

Element 2: Cached file timeout

Specifies the maximum amount of time, in seconds, that a file can be cached in the Network File Cache. This ensures that a file is refreshed at a regular interval.

Note: A cache time can be specified when NFC is not enabled; however, the cache time will not take affect until NFC is enabled.

*SAME

The value does not change.

***NOMAX**

The cached file entries will NOT timeout.

30-604800

Specify a file cache time in seconds. The maximum value of 604800 seconds equals 1 week.

Element 3: Cache size

Specifies the maximum amount of storage that may be used by the NFC for the entire system. This is the accumulative storage used by all TCP servers for loading files.

Note: A cache time can be specified when NFC is not enabled; however, the cache size will not take effect until NFC is enabled.

***SAME**

The value does not change.

10-100000

Specify the number of megabytes to be used for the file cache size.

Top

Log protocol errors (LOGPCLERR)

Specifies log protocol errors. This parameter enables a user to log protocol errors that occur during the processing of TCP/IP data. These TCP/IP stack layer functions use this parameter to determine if they log protocol-specific errors: IP, ICMP, ARP, and NAM. TCP and UDP do not log protocol errors.

The 7004 error reference code is logged when the LOGPCLERR(*YES) option is specified and inbound datagrams are silently discarded. Silently discarded means that an ICMP message is not returned to the originating host when a datagram is discarded because of header errors. Examples of such datagrams include those with invalid checksums and invalid destination addresses.

The error reference code is for information only. No action should be taken as a result of this error reference code. It is generated to assist with remote device or TCP/IP network problem analysis.

Note: These error conditions cannot be processed using an APAR.

The log protocol errors parameter should be used when error conditions require the logging of TCP/IP data, such as datagrams, to determine network problems.

The data is logged in the system error log. This error log is available through the Start System Service Tools (STRSST) command.

***SAME**

The value does not change.

***NO** Protocol errors are not logged.

***YES** Protocol errors are logged.

Top

ICMPv6 error msg burst limit (IP6ERRLMT)

Specifies the maximum number of Internet Control Message Protocol for IPv6 (ICMPv6) error messages sent in a single burst.

***SAME**

The value does not change.

***DFT** A maximum of 10 ICMPv6 error messages (the default) are sent in a single burst.

1-255 Specify the maximum number of IPMPv6 error messages to be sent in a single burst.

Top

ICMPv6 error msg send rate (IP6ERRRATE)

Specifies the average rate limit of sending ICMPv6 error messages (in messages/second).

*SAME

The value does not change.

***DFT** An average of 10 ICMPv6 error messages per second are allowed to be sent.

1-255 Specify the average rate limit of sending ICMPv6 error messages.

Top

IPv6 hop limit (IP6HOPLMT)

Specifies the limit on the number of hops across which an IPv6 datagram remains active.

*SAME

The value does not change.

***DFT** The maximum number of hops is 64.

1-255 Specify the maximum number of hops.

Top

IPv6 dup route load sharing (IP6DUPRTLS)

Specifies how data traffic is distributed (load sharing) over duplicate IPv6 routes.

*SAME

The value does not change.

***DFT** The default value is used (*RTR).

***NONE**

No load sharing is performed.

***RTR** Load sharing is done across routers on the same physical interface (line description).

Top

IPv6 temp addr valid lifetime (IP6TMPAVL)

Specifies the valid lifetime (in days) of temporary addresses created as a result of privacy extensions for IPv6 stateless address auto-configuration.

*SAME

The value does not change.

***DFT** The default value is used (7 days).

.1-30 Specify the valid lifetime (in days).

Top

IPv6 temp addr pref lifetime (IP6TMPAPL)

Specifies the preferred lifetime (in days) of temporary addresses created as a result of privacy extensions for IPv6 stateless address auto-configuration.

Note: IP6TMPAPL must specify a value less than or equal to IP6TMPAVL.

*SAME

The value does not change.

***DFT** The default value is used (1 day).

.1-30 Specify the preferred lifetime (in days).

Top

IP QoS datagram batching (IPQOSBCH)

This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of i5/OS.

Top

IP QoS timer resolution (IPQOSTMR)

This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 5 Release 3 Modification 0 of i5/OS.

Top

Examples

Example 1: Using TCP/IP with UDP Checksum Verification

```
CHGTCPA  UDPCKS(*YES)
```

This command indicates that UDP checksumming is done for UDP data.

Example 2: Using Selected IP Parameters

```
CHGTCPA  IPDTGFWD(*YES)  IPTTL(5)  IPRSBTMO(60)
```

This command indicates that TCP/IP has the following characteristics:

- IP datagrams are forwarded between interfaces on different subnets.
- IP time to live (TTL) is set to 5.
- IP reassembly time-out is set to 60 seconds.

Example 3: Using Selected TCP Parameters

```
CHGTCPA  TCPKEEPALV(100)  TCPURGPTR(*RFC)  TCPRCVBUF(16000)
```

This command indicates the following:

- TCP probes the other side of a connection every 100 minutes.
- The TCP urgent pointer in the TCP header points to the last byte of the urgent data (RFC convention).
- The TCP default receive buffer size is 16000 bytes.

Example 4: Turning Off IP Source Routing

```
CHGTCPA  IPSRCRTG(*NO)
```

This command indicates that IP source routing will no longer be allowed. Any IP datagrams found with IP source routing turned on will be rejected.

Example 5: Changing R1/R2 Counts and QoS Attributes

```
CHGTCPA  TCPRICNT(3)  TCPR2CNT(10)  TCPCLOTIMO(300)
          IPQOSEN(*YES)  IPDEADGATE(*YES)
```

This command indicates the following:

- TCP is set to request a different network route after 3 unacknowledged transmissions.
- TCP is set to stop retransmitting an unacknowledged packet after 10 unsuccessful attempts.
- TCP is set to wait 300 seconds (5 minutes) before reusing a closed connection socket pair.
- Quality of Service (QoS) is enabled.
- Dead gateway detection is enabled.

Top

Error messages

*ESCAPE Messages

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.

CPF9820

Not authorized to use library &1.

CPF9830

Cannot assign library &1.

TCP1D03

&1 member record length not correct.

TCP1D04
Error occurred processing member &1 of &2/&3.

TCP15A3
TCP/IP attributes not changed.

TCP15A5
Error accessing member &3

TCP15A6
Attribute file keyword &4 missing

TCP15A7
Attribute file keyword &4 not valid.

TCP8050
*IOSYSCFG authority required to use &1.

TCP9503
File &3 in library &2 not available.

TCP9999
Internal system error in program &1.

Top

Change TCP/IP Domain (CHGTCPDMN)

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

Parameters
Examples
Error messages

The Change TCP/IP Domain (CHGTCPDMN) command is used to specify this system's TCP/IP host and domain name and to configure the Domain Name Server (DNS) information for this system.

Restrictions:

- You must have input/output system configuration (*IOSYSCFG) special authority to run this command.

Top

Parameters

Keyword	Description	Choices	Notes
HOSTNAME	Host name	Character value, *SAME, *NONE	Optional
DMNNAME	Domain name	Character value, *SAME, *NONE	Optional
DMNSCHLIST	Domain search list	Character value, *SAME, *DFT	Optional
HOSTSCHPTY	Host name search priority	*REMOTE, *LOCAL, *SAME	Optional
INTNETADR	Domain name server	Element list	Optional
	Element 1: Internet address	Character value, *SAME, *NONE	
	Element 2: Internet address	Character value, *SAME, *NONE	
	Element 3: Internet address	Character value, *SAME, *NONE	
PORT	Port	1-65535, *SAME	Optional
PROTOCOL	Protocol	*UDP, *TCP, *SAME	Optional
INLDMNSVR	Initial domain name server	*FIRST, *ROTATE, *SAME	Optional
DMNSVRRTY	Domain name server retry	Element list	Optional
	Element 1: Number of retries	1-99, *SAME	
	Element 2: Initial time interval	1-99, *SAME	

Top

Host name (HOSTNAME)

Specify the TCP/IP host name of this system.

Note: This system's TCP/IP host name must also be defined in the local host table or the Domain Name Server (DNS) specified in the INTNETADR parameter. If no DNS is specified, the local TCP/IP host table is used.

*SAME

The TCP/IP host name does not change if it was previously set.

*NONE

No host name is defined for this system.

character-value

Specify a TCP/IP host name for this system. The host name is a text string that has 1 to 63 characters. The following characters are allowed in the host name:

- Alphabetical characters A through Z
- Digits 0 through 9
- Underscore (_)
- Minus sign (-)

The first and last characters of the host name must be an alphabetical character or a digit.

Top

Domain name (DMNNAME)

Specify the name of the TCP/IP domain this i5/OS host is a member of.

*SAME

The TCP/IP domain name does not change if it was previously set.

*NONE

No TCP/IP domain name is defined for this system.

character-value

Specify the TCP/IP domain name for this system. The domain name consists of one or more labels separated by periods. Each label can contain up to 63 characters. The first character of each label must be an alphabetical character or a digit. The last character of each label must be an alphabetical character, a digit, or a period. The following characters are allowed in the domain name:

- Alphabetical characters A through Z
- Digits 0 through 9
- Underscore (_)
- Minus sign (-)
- Period (.). Periods are allowed only when they separate domain name labels or as the last character in the domain name (refer to RFC 1034). A domain name cannot have two consecutive periods.

The DMNNAME parameter combined with the HOSTNAME parameter must be less than 255 characters in length.

Top

Domain search list (DMNSCHLIST)

Specify the TCP/IP domains to search when fully-qualified domain names (FQDN) are not given. The first name in the search list is the default domain name on all searches.

*SAME

The domain search list does not change if it was previously set; otherwise *DFT is used.

*DFT

The default behavior is to search the local domain tree. The local domain tree is the system TCP/IP domain name (DMNNAME) and each parent domain with two or more parts to the domain. The system TCP/IP domain name is the default domain name on all searches.

character-value

Specify the list of domain names to be searched. Each domain name must follow the criteria specified for the DMNNAME parameter. Up to six domain names may be specified, separated by spaces and enclosed in apostrophes. The maximum length for the DMNSCHLIST parameter is

256 characters. The first domain name in the search list is the default domain name on all searches. Note that if a domain search list is defined then the local system TCP/IP domain name (DMNNAME) will not automatically be used in the search list. Parent domains for the domains defined in the search list will not be searched. If you want parent domains to be searched then they must be explicitly defined in the search list.

Top

Host name search priority (HOSTSCHPTY)

Specifies whether to search a Domain Name Server (DNS) first to resolve a TCP/IP host name conflict, or to search the local TCP/IP host table first.

*SAME

The value does not change if it was previously set. If the value was not previously set, *REMOTE will be used.

*REMOTE

Specify *REMOTE if you want this system to search a remote or local DNS to resolve TCP/IP host names before searching the local TCP/IP host table. The DNS to use is specified by the internet address (INTNETADR) parameter.

*LOCAL

Specify *LOCAL if you want this system to first search the TCP/IP host table, located on this system, to resolve TCP/IP host names.

Top

Internet address (INTNETADR)

Specifies up to three Domain Name Servers (DNS) to be used by this system. Specify a DNS by entering its internet address. You may add none, one, two, or three DNS internet addresses.

If the first DNS in the list does not respond, the second DNS server in the list will be contacted. If the second DNS server does not respond, the third DNS server will be contacted.

A DNS IPv4 internet address is specified in the form *nnn.nnn.nnn.nnn*, where *nnn* is a decimal number ranging from 0 through 255.

An IPv6 internet address is specified in the form *x::x::x::x::x::x*, where *x* is a hexadecimal number ranging from 0 through X'FFFF'. "::" may be used once in the IPv6 address to indicate one or more groups of 16 bits of zeros. The "::" may be used to compress leading, imbedded, or trailing zeros in the address.

An IPv4-mapped IPv6 address may be specified. An IPv4-mapped IPv6 address is specified in the form *::FFFF:nnn.nnn.nnn.nnn*, where *nnn* is a decimal number ranging from 0 through 255.

Element 1: Internet address

*SAME

The value does not change.

*NONE

No domain name server address is specified.

character-value

Specify the internet address of a domain name server.

Element 2: Internet address

***SAME**

The value does not change.

***NONE**

No domain name server address is specified.

character-value

Specify the internet address of a domain name server.

Element 3: Internet address

***SAME**

The value does not change.

***NONE**

No domain name server address is specified.

character-value

Specify the internet address of a domain name server.

Top

Port (PORT)

Use this parameter to specify the remote TCP/IP port number used to contact the Domain Name Server (DNS) or Servers listed in the INTNETADR parameter. 53 is the well-known port used for this purpose.

Note: Use of a TCP/IP port number other than the well-known port 53 for use by the Domain Name Server (DNS) can result in TCP/IP communication problems. You may inadvertently use a port number which is reserved for use by another TCP/IP application.

***SAME**

The remote port number will not be changed if it was previously set. If the remote port number was not previously set, the remote port number 53 will be used.

1-65535

Specify the remote port number to be used to contact the Domain Name Server (DNS) specified in the INTNETADR parameter.

Top

Protocol (PROTOCOL)

Specify the TCP/IP protocol used to communicate with the Domain Name Server (DNS) specified in the INTNETADR parameter. User Datagram Protocol (UDP) is typically used for this purpose. Use *TCP only if your Domain Name Server (DNS) is specifically configured to use the Transmission Control Protocol (TCP).

***SAME**

The protocol value will not be changed if it was previously set. If the protocol value was not previously set, the protocol value *UDP will be used.

***UDP** Specifies use of the User Datagram Protocol (UDP) to communicate with the Domain Name Server (DNS) specified in the INTNETADR parameter.

***TCP** Specifies the use of Transmission Control Protocol (TCP) to communicate with the Domain Name Server (DNS) specified in the INTNETADR parameter.

Top

Initial domain name server (INLDMNSVR)

Specify the initial domain name server selection method. This option determines whether the first configured Domain Name Server (DNS) should always be queried first, or if the first name server to be queried should be rotated in a round robin fashion if more than one is configured. This rotation provides a simple form of load balancing on the configured name servers.

*SAME

The initial domain name server selection value will not be changed if it was previously set. If the initial domain name server selection value was not previously set, the value *FIRST will be used.

*FIRST

The first configured domain name server is queried first. Always query the Domain Name Servers (DNS) in order as configured.

*ROTATE

Rotate through the configured name servers in a round robin fashion to determine which to query first.

Top

Domain name server retry (DMNSVRRTY)

The Domain Name Server Retry (DMNSVRRTY) parameter consists of two elements: number of retries and initial time interval.

Number of retries specifies the number of additional attempts made to establish communication with each Domain Name Server (DNS) specified in the INTNETADR parameter in the event that the first attempt fails.

Initial time interval specifies the initial interval in seconds between retries. For each subsequent retry attempt, the time interval is doubled to a maximum of 120 seconds. For example, if number of retries is 4 and initial time interval is 2, the first retry would occur 2 seconds after the initial attempt to contact the DNS. The second retry would occur 4 seconds after the first retry, the third retry occurs 8 seconds after the second retry, and the fourth retry occurs 16 seconds after the third retry.

Element 1: Number of retries

*SAME

This is the default value. The number of retries value will not be changed if it was previously set. If the number of retries value was not previously set, the value of 2 will be used.

1-99 Specify the number of communication retry attempts.

Element 2: Initial time interval

*SAME

The initial time interval value will not be changed if it was previously set. If the initial time interval value was not previously set, the value of 2 will be used.

1-99 Specify the initial time interval in seconds.

Top

Examples

Example 1: Change Host and Domain Names

```
CHGTCPDMN  HOSTNAME(rs021)  DMNNAME(endicott.ibm.com)
```

This command changes the host name and domain name.

Example 2: Change Domain Search List

```
CHGTCPDMN  DMNSCHLIST('endicott.ibm.com
                      rochester.ibm.com
                      ibm.com')
```

This command changes the domain search list to be three domain names: endicott.ibm.com, rochester.ibm.com, and ibm.com.

Example 3: Change Domain Name Servers

```
CHGTCPDMN  INTNETADR('9.131.42.251' '5678::1234' *NONE)
```

This command specifies two domain name server addresses: 9.131.42.251 and 5678::1234.

Example 4: Change Domain Name Server Rotation

```
CHGTCPDMN  INLDMNSVR(*ROTATE)
```

This command changes the initial domain name server selection so it rotates between the configured name servers in a round robin fashion.

Example 5: Change Domain Name Server Retry

```
CHGTCPDMN  DMNSVRRTY(3 10)
```

This command changes the domain name server retry values. It sets the number of retries to three and the interval between each retry to ten seconds.

[Top](#)

Error messages

*ESCAPE Messages

TCP1609

TCP/IP domain information not changed.

TCP264D

Error occurred processing file.

TCP8050

*IOSYSCFG authority required to use &1.

TCP9503

File &3 in library &2 not available.

TCP9999

Internal system error in program &1.

[Top](#)

Change TCP/IP Host Table Entry (CHGTCPHTE)

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

Parameters
Examples
Error messages

The Change TCP/IP Host Table Entry (CHGTCPHTE) command is used to change the host names and text description field for an existing host table entry in the local host table. A host table entry consists of one internet address, up to 65 host names, and a text description field.

See also the following host table commands:

- Add TCP/IP Host Table Entry (ADDTCPHTE) command adds a new entry to the local host table.
- Copy TCP/IP Host Table (CPYTCPHT) command copies the contents of the local host table to a physical file member.
- Merge TCP/IP Host Table (MRGTCPHT) command merges host names, internet addresses, and text comment entries from a physical file member into the local host table. A replace option is also provided that allows the entire local host table to be replaced by the host table entries in a user specified physical file member.
- Rename TCP/IP Host Table Entry (RNMTCPHTE) command renames the internet address of a host table entry to another internet address.
- Remove TCP/IP Host Table Entry (RMVTCPHTE) command removes an entire entry from the local host table.

The CHGTCPHTE command can change a minimum of zero and a maximum of 65 host names associated with a specific internet address. This command can also be used to add or remove a host name value associated with a specific internet address. To remove a host name value, specify *BLANK as the host name. Setting all the host names for a host table entry to *BLANK is not allowed.

If the CHGTCPHTE command is prompted with an internet address specified, the current host names and text description for the host table entry associated with that internet address are displayed in the appropriate prompt fields.

If a remote name server is being used by your system for resolving a host name or an internet address, the choice to first search the remote name server or the local host table depends on the setting of the host name search priority (HOSTSCHPTY) parameter on the Change TCP/IP Domain (CHGTCPDMN) command. To change the host name search priority use the CHGTCPDMN command or use the Configure TCP/IP (CFGTCP) command and select option 12.

The TCP/IP host table is shipped with two loopback entries — one for IPv4 and one for IPv6. The IPv4 entry has an internet address of 127.0.0.1 and two host names: LOOPBACK and LOCALHOST. The LOOPBACK host name can only be associated with an internet address that has a first-byte value equal to 127. The IPv6 entry has an internet address of ::1 and two host names: IPV6-LOOPBACK and IPV6-LOCALHOST. The IPV6-LOOPBACK host name can only be associated with the IPv6 internet address ::1. The IPV6-LOCALHOST host name can only be associated with an IPv6 internet address.

Warning: Temporary Level 2 Header

Warning: Temporary Level 3 Header

Related APPC over TCP/IP Information

APPC over TCP/IP (AnyNet) uses the host name to map location names to internet addresses. The host name must be in the form:

location.netid.SNA.IBM.COM

Where *location* is the remote location the program is opening to, and *netid* is the network identifier for this connection. *SNA.IBM.COM* is the qualifier that designates this as the APPC over TCP/IP domain.

Location names support characters that **cannot** be present in host names (for example: \$ (dollar), @ (at sign), and # (number sign)). Therefore, the APPC application can open only to locations that fulfill the TCP/IP host name syntax. This limits location names used for APPC over TCP/IP to the characters A-Z (uppercase and lowercase) and 0-9.

Restrictions:

- You must have input/output system configuration (*IOSYSCFG) special authority to run this command.

Top

Parameters

Keyword	Description	Choices	Notes
INTNETADR	Internet address	<i>Character value</i>	Required, Key, Positional 1
HOSTNAME	Host names	Values (up to 65 repetitions): <i>Element list</i>	Optional
	Element 1: Name	<i>Character value, *SAME, *BLANK</i>	
TEXT	Text 'description'	<i>Character value, *SAME, *BLANK</i>	Optional

Top

Internet address (INTNETADR)

Specifies the internet address associated with the host name (or names) or the text description field that is to be changed in the local host table.

An IPv4 internet address is specified in the form *nnn.nnn.nnn.nnn*, where *nnn* is a decimal number ranging from 0 through 255. An IPv4 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.

An IPv6 internet address is specified in the form *x::x::x::x::x::x*, where *x* is a hexadecimal number ranging from 0 through X'FFFF'. "::" may be used once in the IPv6 address to indicate one or more groups of 16 bits of zeros. The "::" may be used to compress leading, imbedded, or trailing zeros in the address.

An IPv4-mapped IPv6 address may be specified. An IPv4-mapped IPv6 address is specified in the form *::FFFF:nnn.nnn.nnn.nnn*, where *nnn* is a decimal number ranging from 0 through 255.

If the internet address is entered from a command line, the address must be enclosed in apostrophes.

This is a required parameter.

character-value

Specify the internet address.

Top

Host names (HOSTNAME)

Specifies the host names corresponding to the internet address. The host name can be either the short form or the full domain version of the name. A common practice is to define one short name that is unique within your local network and to also define the full domain version of the host name that is unique within the Internet.

A host name is a text string that has 1 to 255 characters. Host names consist of one or more labels separated by periods. Each label can contain up to 63 characters. The first character of each label must be an alphabetical character or a digit. The last character of each label must be an alphabetical character, a digit, or a period. The following characters are allowed in host names:

- Alphabetical characters A through Z
- Digits 0 through 9
- Underscore (_)
- Minus sign (-)
- Period (.). Periods are allowed only when they separate host name labels or as the last character in the host name (refer to RFC 1034). A host name cannot have two consecutive periods.

Note: These characters are part of the Syntactic/Invariant Character Set (character set number 640).

Other domain name and host name conventions include the following:

- Uppercase and lowercase characters are allowed, but no significance is attached to the case. The host name (HOSTNAME) may be converted to uppercase depending on the combination of characters and digits. If the HOSTNAME is enclosed in apostrophes ('), the case is maintained as entered.
- The host name returned when searching the host table for an internet address is the first host name associated with the internet address. For example, if the address 9.130.38.187 is defined in the host table with names ROCHESTER, JOHN, and RCHAS100, the name ROCHESTER would be returned. The other two host names would not be used in this type of search. However, these host names would be used when searching the host table to find the internet address associated with the names JOHN and RCHAS100.
- Try to limit your domain name labels to 12 characters. Shorter labels are easier to remember.
- It is a common practice to use hierarchical names that allow predictable extensions for change and growth. Domain names normally reflect the delegation of authority or hierarchy used to assign them. For example, the name SYS1.MFG.ABC.COM can be broken down into the following:

COM All commercial networks.

ABC.COM

All systems in the ABC company's commercial network.

MFG.ABC.COM

All manufacturing systems in the ABC company's commercial network.

SYS1.MFG.ABC.COM

A host named SYS1 in the manufacturing area of the company's commercial network.

The COM designation is one of several domain names used by convention when connecting to the internet. Some of the other domain names that follow this convention are:

- AERO** Air-transport industry
- BIZ** Businesses
- CAT** Catalan linguistic and cultural community
- COM** Commercial organizations
- COOP** Cooperative associations
- EDU** Educational institutions
- GOV** United States of America government institutions
- INFO** Global information
- INT** Organizations established by international treaties between governments
- JOBS** Human resource managers
- MIL** United States of America military groups
- MOBI** Consumers and providers of mobile products and services
- MUSEUM**
Museums
- NAME**
Individuals
- NET** Major networks support centers
- PRO** Credentialed professionals and related entities
- TRAVEL**
Travel industry
- ORG** Organizations other than those above
- ARPA** Temporary ARPANET domain
- Country or Region Code**
Countries or regions other than the USA

You can specify 65 values for this parameter.

***SAME**

The value does not change.

Note: If *SAME is specified and no other host name values are specified, all of the host name values remain the same. If a host table entry has more than one host name identified and if the first host name is specified but no other element values are specified, the remaining host names are not changed.

***BLANK**

This host name value is changed to blanks if it previously existed.

character-value

Specify a host name to be associated with the specified internet address that replaces the current host name value. When running APPC over TCP/IP, the host name is in the form:

location.netid.SNA.IBM.COM

Top

Text 'description' (TEXT)

Specifies text that briefly describes the host table entry.

*SAME

The value does not change.

*BLANK

No text is specified.

character-value

Specify no more than 64 characters of text, enclosed in apostrophes.

Top

Examples

Example 1: Changing a Host Name

```
CHGTCPHTE  INTNETADR('132.28.71.5')
            HOSTNAME((*SAME) (*SAME) (*SAME) (*SAME) (NEWHOST))
            TEXT(*BLANK)
```

This command changes only the fifth host name associated with internet address 132.28.71.5 to NEWHOST — none of the other host names associated with the internet address are changed. If any of the host names 1-4 do not currently exist, NEWHOST will move up in the host name list. For example, if host names 3 and 4 do not exist, NEWHOST becomes the third host name. The text description for this host table entry is set to blanks.

Example 2: Changing More Than One Host Name

```
CHGTCPHTE  INTNETADR('9.130.25.21')
            HOSTNAME((MYHOST) (MYHOST.MYNET)
                    (MYHOST.MYNET.MYCORP)
                    (MYHOST.MYNET.MYCORP.MYFIELD)
                    (MYHOST2)
                    (MYHOST3))
            TEXT(*SAME)
```

This command changes the first six host names associated with internet address 9.130.25.21. The first, fifth, and sixth host names are specified in the short form — MYHOST, MYHOST2, and MYHOST3, respectively. The fourth host name is specified in the fully qualified form, MYHOST.MYNET.MYCORP.MYFIELD. The text description for this host table entry is not changed.

Example 3: Changing Host Names and Text Description

```
CHGTCPHTE  INTNETADR('1234::5678')
            HOSTNAME((MYETHERNET.SALES.ABC.COM)
                    (MYETHERNET.SALES.ABC) (*BLANK) (*BLANK))
            TEXT('THIS ENTRY UPDATED BY T.J.')
```

This command changes the first and second host names associated with internet address 1234::5678 to MYETHERNET.SALES.ABC.COM and MYETHERNET.SALES.ABC. The third and fourth host names are changed to blanks. If more than four host names are currently associated with the host table entry, those

host names move up in the host name list by two positions, since the current third and fourth entries are now blank. The text description for this host table entry is changed to 'THIS ENTRY UPDATED BY T.J.'.

Top

Error messages

*ESCAPE Messages

TCP1901

Internet address &2 not valid.

TCP1902

Internet address &1 not valid.

TCP1903

Specified host name not valid.

TCP1907

Internet address entry &1 does not exist.

TCP1908

Internet address &1 not valid.

TCP1910

LOOPBACK internet address &2 not valid.

TCP1929

Host table not available.

TCP1936

All host names for internet address &2 are blank.

TCP8050

*IOSYSCFG authority required to use &1.

Top

Change TCP/IP Interface (CHGTCPIFC)

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

Parameters
Examples
Error messages

The Change TCP/IP Interface (CHGTCPIFC) command is used to change an existing interface in the Transmission Control Protocol/Internet Protocol (TCP/IP) configuration. The interfaces changed by the CHGTCPIFC command are logical interfaces. They are not physical interfaces. Each interface is associated with a line description. The line description is the physical connection from the system to the TCP/IP network.

The i5/OS TCP/IP implementation supports *multihoming*. This allows either a single interface or multiple interfaces to be specified per line description. The system can appear as any one or combination of the following:

- A single host on a network over a communications line
- Multiple hosts on the same network over the same communications line
- Multiple hosts on different networks over the same communications line
- Multiple hosts on the same network over multiple communications lines
- Multiple hosts on different networks over multiple communications lines

Notes:

1. If you attempt to change a value for an interface that will invalidate a route or remote system information (RSI) associated with the interface, the change will not be allowed.
2. In SNMP, an interface is a physical interface. The physical interface relates directly to an input/output processor (IOP).
3. The interface table is shipped with a default IPv4 interface of 127.0.0.1. The line description value associated with the 127.0.0.1 interface is *LOOPBACK. The host table is also shipped with an entry that has an internet address of 127.0.0.1 and host names of LOOPBACK and LOCALHOST.
4. The interface table is shipped with a default IPv6 interface of ::1. The line description value associated with the ::1 interface is *LOOPBACK. The host table is also shipped with an entry of ::1 and host names of IPV6-LOOPBACK and IPV6-LOCALHOST.

Attention: Before attempting to start an X.25 interface, ensure that the remote system information (RSI) for non-DDN X.25 interfaces that use a permanent virtual circuit (PVC) is configured. Use the Add TCP/IP Remote System (ADDTCPRSI) command to do this. Incoming data from a remote system on the X.25 network is not processed unless an RSI entry for the PVC is configured on the X.25 interface before the interface is started.

Restrictions:

- Input/output system configuration (*IOSYSCFG) special authority is necessary to run this command.
- Only certain values can be changed using this command. The values that can be changed depend on the status of the interface, the status of the dependent routes, and the remote system information configured.

Top

Parameters

Keyword	Description	Choices	Notes
INTNETADR	Internet address	<i>Character value</i> , *IP6SAC	Optional, Positional 1
LIND	Line description	<i>Name</i> , * <u>SAME</u> , *LOOPBACK, *VIRTUALIP, *OPC	Optional, Positional 2
SUBNETMASK	Subnet mask	<i>Character value</i> , * <u>SAME</u> , *HOST	Optional, Positional 3
ADRPFXLEN	Address prefix length	1-128, * <u>SAME</u>	Optional
ALIASNAME	Alias name	<i>Simple name</i> , * <u>SAME</u> , *NONE	Optional
LCLIFC	Associated local interface	<i>Character value</i> , * <u>SAME</u> , *NONE	Optional
TOS	Type of service	* <u>SAME</u> , *MINDELAY, *MAXTHRPUT, *MAXRLB, *MINCOST, *NORMAL	Optional
MTU	Maximum transmission unit	576-16388, * <u>SAME</u> , *LIND	Optional
AUTOSTART	Autostart	* <u>SAME</u> , *YES, *NO	Optional
PVCLGLCHLI	PVC logical channel identifier	Values (up to 64 repetitions): <i>Character value</i> , * <u>SAME</u> , *NONE	Optional
IDLVCTTIMO	X.25 idle circuit timeout	1-600, * <u>SAME</u>	Optional
MAXSVC	X.25 maximum virtual circuits	0-64, * <u>SAME</u>	Optional
DDN	X.25 DDN interface	* <u>SAME</u> , *YES, *NO	Optional
BITSEQ	TRLAN bit sequencing	* <u>SAME</u> , *MSB, *LSB	Optional
IFCID	Interface ID	0000000000000001-FFFFFFFFFFFFFFEF, * <u>SAME</u> , *LIND, *GEN	Optional
DADMAXTRN	DAD maximum transmits	0-10, * <u>SAME</u>	Optional
PVYEXN	Privacy extensions	* <u>SAME</u> , *NO, *YES	Optional
PREFIFC	Preferred interfaces	Single values: * <u>SAME</u> , *NONE, *AUTO Other values (up to 10 repetitions): <i>Character value</i>	Optional
PREFLIND	Preferred line descriptions	Single values: * <u>SAME</u> , *NONE Other values (up to 10 repetitions): <i>Name</i>	Optional
TEXT	Text 'description'	<i>Character value</i> , *BLANK, * <u>SAME</u>	Optional

Top

Internet address (INTNETADR)

Specifies the IPv4 or IPv6 internet address.

*IP4DHCP

Specify that Dynamic Host Configuration Protocol is being changed. The LIND parameter must also be specified in order to identify the interface being changed.

*IP6SAC

Specify that IPv6 stateless address auto-configuration is being changed. The LIND parameter must also be specified in order to identify the interface being changed.

character-value

Specify a particular internet address.

An IPv4 internet address is specified in the form *nnn.nnn.nnn.nnn*, where *nnn* is a decimal number ranging from 0 through 255. An IPv4 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.

An IPv6 internet address is specified in the form `x::x::x::x::x::x`, where `x` is a hexadecimal number ranging from 0 through `X'FFFF'`. `::` may be used once in the IPv6 address to indicate one or more groups of 16 bits of zeros. The `:::` may be used to compress leading, imbedded, or trailing zeros in the address.

An IPv6 internet address must be a unicast address and must not contain an imbedded IPv4 address (compatibility or mapped). If `*VIRTUALIP` is specified for LIND, the IPv6 address must be a global unicast address. If the IPv6 internet address is a link-local unicast address, the line description (LIND) parameter must also be specified in order to identify the interface being changed.

If the internet address is entered from a command line, the address must be enclosed in apostrophes.

Note: If an internet address is not provided with the command, the alias name must be provided and it will be used as the key value for the command.

Top

Line description (LIND)

Specifies the name of the line description associated with the interface being changed. The line description must exist before the TCP/IP interface can be changed.

The following conditions are based on the type of line description:

Token-ring

The line description must be previously created with the Create Line Description (Token-Ring Network) (CRTLINTRN) command.

X.25 The line description must be previously created with the Create Line Description (X.25) (CRTLINX25) command.

Ethernet

The line description must be previously created with the Create Line Description (Ethernet) (CRTLINETH) command.

DDI The line description must be previously created with the Create Line Description (DDI Network) (CRTLINDDI) command.

Frame relay

The line description must be previously created with the Create Line Description (Frame Relay Network) (CRTLINFR) command.

Wireless

The line description must be previously created with the Create Line Description (Wireless Network) (CRTLINWLS) command.

Twinax (TDLC)

The line description must be previously created with the Create Line Description (TDLC) (CRTLINTDLC) command.

TCP/IP can also be used on certain line descriptions attached to these network interfaces (NWI):

- A frame relay NWI using a frame relay, token ring, Ethernet, or DDI line description.
 - The frame relay NWI is created using the Create Network Interface Frame Relay Network (CRTNWIFR) command.
 - The line description is created using the appropriate Create Line command and attached to the frame relay NWI by specifying the NWI and NWIDLCI parameters.

***SAME**

The value does not change.

***LOOPBACK**

The interface being changed is the loopback or LOCALHOST interface. Because processing associated with loopback does not extend to a physical line, there is no line description associated with a loopback address. This special value must be used for any INTNETADR that has a first octet value of 127.

***VIRTUALIP**

The virtual interface is a circuitless interface. It is used in conjunction with the associated local interface (LCLIFC) when adding standard interfaces. This special value is used to accommodate any of the following cases:

1. Load balancing. This is the means of having a fixed source IP address regardless of which interface the traffic is being distributed.
2. Frame-relay multi-access network to define the local network IP address. This allows for multiple virtual circuits to share the same IP network.
3. Alternate method of network access translation (NAT). This eliminates the need for a NAT box by assigning a globally unique single IP address directly to the box without the need to define an entire network.
4. Unnumbered networks. This provides a means of associating a local source IP address for an unnumbered point-to-point network.

***OPC** This special value is used if a TCP/IP over OptiConnect interface is being changed. This interface is attached to the optical bus (OptiConnect). INTNETADR must specify an IPv4 address.

name Specify the name of the line description to be used for this interface. If INTNETADR specifies an IPv6 address or *IP6SAC, the line description must be for an Ethernet line. If INTNETADR specifies *IP4DHCP, the line description name must also be specified.

Top

Subnet mask (SUBNETMASK)

Specifies the subnet mask, which is a bit mask that defines the part of the network where this IPv4 interface attaches. The mask is a 32-bit combination that is logically ANDed with the IPv4 internet address to determine a particular subnetwork. The bits of the mask set to the value one (1) determine the network and subnetwork portions of the address. The bits set to the value zero (0) determine the host portion of the address.

The bits that identify the subnetwork are not required to be adjacent in the address. However, if this subnet mask value is changed, it might invalidate or affect the routes using this interface. To prevent this, keep the subnet bits contiguous and located in the most significant bits of the host address.

Note: The network portion must be equal to one bits in the subnetmask. The host portion of an address must be at least two bits wide. This parameter is ignored if INTNETADR specifies an IPv6 address, *IP4DHCP, or *IP6SAC.

***SAME**

The value does not change.

***HOST**

The subnet mask value used will be 255.255.255.255. Specify this value for use with Proxy ARP (Address Resolution Protocol).

character-value

Specify the mask for the network subnet field and host address field of the internet address that defines a subnetwork. The subnet mask is in the form *nnn.nnn.nnn.nnn*, where *nnn* is a decimal

number ranging from 0 through 255. The subnet mask must mask off all bits of the network class's network ID portion of the internet address. For more detailed information on subnet masks and an example, see the help for the Add TCP/IP Interface (ADDTCPIFC) command.

Top

Address prefix length (ADRPFXLEN)

Specifies the address prefix length in bits. The address prefix length specifies how much of the leftmost portion of an IPv6 address is the subnet prefix. This parameter applies only if INTNETADR is an IPv6 address.

*SAME

The value does not change.

1-128 Specify the address prefix length.

Top

Alias name (ALIASNAME)

Specifies a name that can be used in place of the internet address. The name must be unique among all of the interfaces on the system.

Note: If an internet address is not provided with the command, the alias name will be the key for the command. If an internet address is provided, the alias name can be changed from its current value.

*SAME

The value does not change.

*NONE

No alias name is associated with the TCP/IP interface being changed.

simple-name

Specify an alias for the interface. The alias name must be 25 characters or less.

Top

Associated local interface (LCLIFC)

Use this parameter to associate the IPv4 interface being changed with an existing local IPv4 TCP/IP interface. This parameter is ignored if INTNETADR specifies an IPv6 address, *IP4DHCP, or *IP6SAC.

The associated local interface (LCLIFC) is used to allow 'transparent subnetting' (also known as 'Proxy Arp') between the associated interfaces, to define unnumbered networks, or for load balancing.

Conditions for using the LCLIFC for unnumbered networks:

- The line type of the interface being added MUST be Frame Relay, Opti-Connect, or Point-to-Point and the subnet mask (SUBNETMASK) parameter must be *HOST (255.255.255.255).

Conditions for using LCLIFC for transparent subnetting:

- The network of the associated local interface must be broadcast capable.
- The interface being changed must be defined as a subnet of the network with which it is associated (using LCLIFC).

Condition for using the LCLIFC for load balancing:

- This is the means of having a fixed source IP address regardless of which interface the traffic is being distributed.
- The line type of the associated local interface must be *VIRTUALIP.

Note: LCLIFC can only be used to associate this interface with another interface that is already added. Once associated, the interface specified in LCLIFC and this interface must both be started in order for them to work together properly.

***SAME**

The value does not change.

***NONE**

No TCP/IP interface is associated with the interface being changed.

character-value

Specify the internet address of the interface you want to associate with the interface being changed.

Top

Type of service (TOS)

Specifies the type of service to be used. The type of service specifies how the internet hosts and routers should make trade-offs between throughput, delay, reliability, and cost. This parameter is ignored if INTNETADR specifies an IPv6 address, *IP4DHCP, or *IP6SAC.

***SAME**

The value does not change.

***NORMAL**

Normal service is used for delivery of data.

***MINDELAY**

Minimize delay means that prompt delivery is important for data on this connection.

***MAXTHRPUT**

Maximize throughput means that a high data rate is important for data on this connection.

***MAXRLB**

Maximize reliability means that a higher level of effort to ensure delivery is important for data on this connection.

***MINCOST**

Minimize monetary cost means that lower cost is important for data on this connection.

Top

Maximum transmission unit (MTU)

Specifies the maximum size (in bytes) of IP datagrams that can be transmitted through this interface. A datagram is a basic unit of information passed over an internet network. For an IPv4 interface, the minimum MTU value is 576 bytes. For an IPv6 interface, the minimum MTU value is 1280 bytes. If this value is changed it affects the MTUs of routes using this interface.

***SAME**

The value does not change.

***LIND**

The MTU is determined by the information specified in the line description. If *LIND is specified, the MTU is equal to the largest amount of data that can be transmitted on the line.

576-16388

Specify a value for the maximum transmission unit in bytes. The maximum MTU that can be specified for this interface depends on the type of physical connection to the network. The following table lists the maximum MTU values that can be specified based on the line type:

X.25 4096

Token ring (4 meg)
4060

Token ring (16 meg)
16388

Ethernet 802.3
8992

Ethernet Version 2
9000

DDI 4352

Frame relay
8177

Wireless 802.3
1492

Wireless Version 2
1500

Twinax (TDLC)
4105

Notes:

1. The actual MTU value used for an interface is resolved during interface activation. This value is the minimum of either the specified MTU value for the interface or the largest amount of data that can be transmitted on the line.
2. It is suggested (not required) that the same MTU values be used for all interfaces on the same network. However, all interfaces must have an MTU that does not exceed the value used when *LIND is specified for the interface MTU.
3. To view the MTU value actually used for an interface, do the following:
 - a. Use the Start TCP/IP Interface (STRTCPIFC) command to activate the interface.
 - b. Use the Work with TCP/IP Status (WRKTCPISTS or NETSTAT) command to view the actual MTU value of the interface in bytes.

Top

Autostart (AUTOSTART)

Specifies whether the interface is automatically started when the TCP/IP stack is activated by the Start TCP/IP (STRTCP) command.

*SAME

The value does not change.

***YES** The interface is automatically started when TCP/IP is started.

***NO** The interface is not started when TCP/IP is started.

Note: The Start TCP/IP Interface (STRTCPIFC) command can be used to start an interface after TCP/IP has been started.

Top

PVC logical channel identifier (PVCLGLCHLI)

Specifies the permanent virtual circuit (PVC) logical channel identifiers that can be established on an X.25 interface by the TCP/IP protocol stack. Up to 64 unique channel identifiers may be specified. These logical channel identifiers must be specified in the X.25 line description.

With this parameter the line can be shared with other communications software, such as Systems Network Architecture (SNA). It prevents the TCP/IP protocol stack from monopolizing the PVCs defined for the line.

Notes:

1. This parameter is valid only for an interface defined on an X.25 line description.
2. PVCs cannot be used in a DDN network.
3. When specifying PVCs for an X.25 interface, all interfaces on the same X.25 network should have the same set of PVC logical channel identifiers specified. This is especially important if one or more remote system information (RSI) entries will use a PVC to connect to the RSI entry's remote system on the X.25 network.
4. If the RSI entries are defined such that two or more remote internet addresses can be reached across the same PVC, that PVC is shared.
5. The sum of the maximum switched virtual circuits (MAXSVC) and the number of PVCs cannot exceed 64.

*SAME

The value does not change.

*NONE

No PVC logical channel identifier values are specified.

character-value

Specify the PVC logical channel identifier value. The value may be from 001 to FFF. Up to 64 PVC logical channel identifiers can be specified.

Top

X.25 idle circuit timeout (IDLVCTTIMO)

Specifies the duration (in seconds) that TCP/IP waits before clearing an idle virtual circuit established on an X.25 link. Clearing an idle virtual circuit frees resources on the network. TCP/IP automatically reestablishes virtual circuits when required to send or receive data. Virtual circuits are transparent to a TCP/IP client and have no noticeable effect on TCP connections.

Note: This parameter is valid only for switched virtual circuits (SVCs) on an interface defined on an X.25 line description. It is not valid for permanent virtual circuits (PVCs).

*SAME

The value does not change.

1-600 Specify the number of seconds to be used for the idle virtual circuit timeout.

Top

X.25 maximum virtual circuits (MAXSVC)

Specifies the maximum number of concurrent switched virtual circuits (SVC) that can be established on an X.25 interface by the TCP/IP protocol stack.

With this parameter the line can be shared with other communications software such as Systems Network Architecture (SNA). It prevents the TCP/IP protocol stack from monopolizing the SVCs defined for the line. This parameter is valid only for an interface defined on an X.25 line description.

Note: The sum of the maximum switched virtual circuits (MAXSVC) and the number of PVCs cannot exceed 64.

*SAME

The value does not change.

0-64 Specify the number of SVCs that the TCP/IP protocol stack can use simultaneously. If 64 is specified, the number of SVCs that are configured is the sum of the number of *SVCIN, *SVCOUT and *SVCBOTH SVCs defined for the line description (LIND) being used by this interface. This is the maximum number of SVCs that can be authorized for processing by the TCP/IP protocol stack.

Top

X.25 DDN interface (DDN)

Specifies whether the X.25 interface is connected to the Defense Data Network (DDN). The DDN network is a special type of X.25 network used by TCP/IP customers with special security needs.

Note: This parameter is valid only for switched virtual circuits (SVCs) on an interface defined on an X.25 line description. It is not valid for permanent virtual circuits (PVCs).

Warning:

If multiple interfaces are specified to the same X.25 network, the DDN value should be equal for all of those interfaces. This is not enforced by the ADDTCPIFC or CHGTCPIFC commands.

If the X.25 network is on the DDN network, do not define the remote system information for any of the remote systems on the network. The remote system information for the DDN X.25 network is determined from the destination IP address.

*SAME

The value does not change.

***NO** The X.25 interface is not connected to the Defense Data Network.

***YES** The X.25 interface is connected to the Defense Data Network.

Top

TRLAN bit sequencing (BITSEQ)

Specifies the order, most or least significant bit first, in which the Address Resolution Protocol (ARP) places the bits in the hardware address. This parameter is valid only for a token-ring local area network (TRLAN) line.

Note: All interfaces defined to a single token-ring line must have the same BITSEQ value. This is checked to ensure consistent values.

***SAME**

The value does not change.

***MSB** The most significant bit is placed first.

***LSB** The least significant bit is placed first.

Top

Interface ID (IFCID)

Specifies the interface ID portion of the IPv6 address(es) generated when INTNETADR is *IP6SAC. The interface ID is the low-order 64 bits of an IPv6 address created as a result of IPv6 stateless address auto-configuration.

***SAME**

The value does not change.

***LIND**

Use the local adapter address in the associated line description to generate the interface ID.

***GEN** Generate a random local scope interface ID..

0000000000000001-FFFFFFFFFFFFFFEF

Specify the interface ID to be used.

Top

DAD maximum transmits (DADMAXTRN)

Specifies the maximum number of neighbor solicitation messages to send for IPv6 duplicate address detection (DAD). This parameter applies only if INTNETADR is an IPv6 address or *IP6SAC.

***SAME**

The value does not change.

0-10 Specify the number of neighbor solicitation messages to be sent. A value of zero indicates that duplicate address detection is not performed.

Top

Privacy extensions (PVYEXN)

Specifies whether privacy extensions are to be used for IPv6 stateless address auto-configuration. This parameter applies only when INTNETADR is *IP6SAC.

Note: Privacy extensions are not supported for communications resource types 2743, 2838, and 2849. If the line description associated with this interface specifies a resource name that is associated with one of these resource types, PVYEXN must be *NO.

***SAME**

The value does not change.

***NO** Do not use privacy extensions.

***YES** Use privacy extensions.

Top

Preferred interfaces (PREFIFC)

Specifies a list of preferred IPv4 interfaces that are to be used with the IPv4 interface being changed for proxy Address Resolution Protocol (ARP) agent selection. The IPv4 interface being changed must have a LIND value of *VIRTUALIP or specify a LIND for a virtual Ethernet line. Up to 10 associated interfaces may be specified in order of preference — the first being the most preferred, the second the next preferred, etc. Each associated interface must be a standard IPv4 interface, not a virtual interface.

Single values

*SAME

The value does not change.

*NONE

No associated interfaces are specified.

*AUTO

Interface selection is performed automatically by the system.

Other values (up to 10 repetitions)

character-value

Specify the IPv4 address of the preferred interface.

Top

Preferred line descriptions (PREFLIND)

Specifies a list of preferred line descriptions that are to be used with the IPv6 interface being changed for virtual IP address (VIPA) proxy Neighbor Discovery agent selection. The IPv6 interface being changed must have a LIND of *VIRTUALIP. Up to 10 line descriptions may be specified in order of preference — the first being the most preferred, the second the next preferred, etc. Each line description must be used by at least one IPv6 interface.

Single values

*SAME

The value does not change.

*NONE

No line descriptions are specified.

Other values (up to 10 repetitions)

name Specify the name of the preferred line description.

Top

Text 'description' (TEXT)

Specifies text that briefly describes the interface.

*SAME

The value does not change.

*BLANK

No text is specified.

character-value

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

Examples

Example 1: Changing Autostart Value

```
CHGTCPIFC  INTNETADR('130.14.3.5')  AUTOSTART(*NO)
```

Assuming that an interface identified by 130.14.3.5 exists, this command changes the autostart value from *YES to *NO. The interface is not automatically started when the STRTCP command is entered.

Example 2: Changing MAXSVC and IDLVCTTIMO

```
CHGTCPIFC  INTNETADR('8.77.0.21')  INDLVCTTIMO(45)  MAXSVC(15)
```

This command changes the idle virtual circuit time-out to 45 seconds and the maximum number of concurrent SVCs allowed to be used by TCP/IP on this interface to 15.

Example 3: Change an Interface for a Twinax Line that is Using an Associated Local Interface

```
CHGTCPIFC  INTNETADR('199.1.1.99')  LCLIFC('199.1.1.1')
```

This command will change the TCP/IP interface for the twinax line named TDLCLINE. This interface will be associated with local interface 199.1.1.1. This means that the devices attached to twinax line 199.1.1.99 can take advantage of 'appearing' to be on the same network as the local 199.1.1.1 interface (transparent subnetting). No special routing is required to ensure packets from the twinax connected hosts can travel to the local 199.1.1.0 network. Also, hosts on the 199.1.1.0 network can also reach the twinax hosts without any additional routing on the host systems.

Example 4: Changing ALIASNAME

```
CHGTCPIFC  INTNETADR('132.15.7.32')  ALIASNAME(TEST_NETWORK)
```

This command changes the alias name for this interface to TEST_NETWORK.

Example 5: Changing the interface using the ALIASNAME

```
CHGTCPIFC  ALIASNAME(TEST_NETWORK)  AUTOSTART(*YES)
```

This command changes the auto start value for the interface named TEST_NETWORK.

Example 6: Changing an IPv4 Virtual Interface

```
CHGTCPIFC  INTNETADR('192.168.2.1')  
           PREFIFC('192.168.2.2' '192.168.2.3')
```

This command changes virtual IPv4 interface 192.168.2.1 to have two interfaces as preferred IPv4 interfaces. Interface 192.168.2.2 is preferred over 192.168.2.3. Interface 192.168.2.1 was previously added specifying a LIND value of *VIRTUALIP.

Example 7: Changing an IPv6 Virtual Interface

```
CHGTCPIFC  INTNETADR('1234::5678')  
          PREFLIND(ETHLINE3 ETHLINE1 ETHLINE2)
```

This command changes virtual IPv6 interface 1234::5678 to have three line descriptions to be used for VIPA proxy Neighbor Discovery agent selection. Line description ETHLINE3 is preferred over ETHLINE1 and ETHLINE2, and ETHLINE1 is preferred over ETHLINE2.

Top

Error messages

*ESCAPE Messages

TCP1D03

&1 member record length not correct.

TCP1D04

Error occurred processing member &1 of &2/&3.

TCP1901

Internet address &2 not valid.

TCP1902

Internet address &1 not valid.

TCP1908

Internet address &1 not valid.

TCP8050

*IOSYSCFG authority required to use &1.

TCP9999

Internal system error in program &1.

Top

Change TCP/IP Route (CHGTCPRTE)

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

Parameters
Examples
Error messages

The Change TCP/IP Route (CHGTCPRTE) command is used to change an existing route in the Transmission Control Protocol/Internet Protocol (TCP/IP) configuration.

Five parameter values uniquely define an IPv4 route. These values are the route destination (RTEDEST), the subnet mask (SUBNETMASK), the type of service (TOS), the IPv4 address of the next system on the route (NEXTHOP), and the preferred binding interface (BINDIFC). For default routes and default multicast routes (*DFTRROUTE and *DFTMCAST), the NEXTHOP, TOS and BINDIFC values uniquely define the route because the SUBNETMASK is always *NONE.

Four parameter values uniquely define an IPv6 route. These values are the route destination (RTEDEST), the address prefix length (ADRPFXLEN), the IPv6 address of the next system on the route (NEXTHOP), and the binding line description (BINDLIND).

Restrictions:

- You must have input/output system configuration (*IOSYSCFG) special authority to run this command.
- Only three parameters — MTU value, duplicate route priority, and text description — can be changed on an existing route. The route cannot be in use when attempting to change the MTU value or duplicate route priority.
- Attempts to change a route that is required to reach an existing RSI entry will fail.

Top

Parameters

Keyword	Description	Choices	Notes
RTEDEST	Route destination	Character value, *DFTRROUTE, *DFTMCAST, *DFT6ROUTE, *DFT6MCAST	Required, Key, Positional 1
SUBNETMASK	Subnet mask	Character value, *NONE, *HOST	Optional, Key, Positional 2
TOS	Type of service	*MINDELAY, *MAXTHRPUT, *MAXRLB, *MINCOST, *NORMAL	Optional, Key, Positional 3
NEXTHOP	Next hop	Character value	Optional, Key
ADRPFXLEN	Address prefix length	1-128, 64, *HOST, *NONE	Optional, Key
BINDIFC	Preferred binding interface	Character value, *NONE	Optional, Key
BINDLIND	Binding line description	Name	Optional, Key
MTU	Maximum transmission unit	576-16388, *SAME, *IFC	Optional
METRIC	Route metric	1-16, *SAME	Optional
REDST	Route redistribution	*SAME, *YES, *NO	Optional
DUPRTEPTY	Duplicate route priority	1-10, *SAME, *HIGH, *MEDIUM, *LOW	Optional
TEXT	Text 'description'	Character value, *SAME, *BLANK	Optional

Top

Route destination (RTEDEST)

Specifies the route destination being changed.

For an IPv4 route, you must specify all 4 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 subnetwork is identified by entering 9.5.11.0 for the route destination. Used in combination with a subnetmask, type of service value, and next hop, the route destination uniquely identifies a route to a network or system.

For an IPv6 route, the entire 16 byte IPv6 address must be specified, and the suffix portion of the RTEDEST field must be zero. For example, a RTEDEST with value 1234:5678:: and address prefix length (ADRPFXLEN) of 32 is a valid combination, but a RTEDEST with value 1234:5678:8000:: and ADRPFXLEN of 32 is not.

This is a required parameter.

*DFTRROUTE

Specifies that a default IPv4 route is being changed. A default route is used by the system to send data to a remote destination for which a specific route is not defined. The default routes are used based on the availability of the next hop gateway and the type of service (TOS). If the application requests a specific TOS, the TOS of the default route used must match the TOS requested. If no default route is found that matches the requested TOS, the first available default route with a TOS of *NORMAL is used.

*DFTMCAST

Use the *DFTMCAST special value to indicate that the static IPv4 route you are changing is a default multicast route. A default multicast route is used by an application when sending data to a multicast destination address and a specific outgoing interface is not specified.

Note: When RTEDEST(*DFTMCAST) is specified, then SUBNETMASK(*NONE) must also be specified and the NEXTHOP parameter must be a local TCP/IP interface (on this system).

*DFT6ROUTE

Specifies that a default IPv6 route is being changed. A default IPv6 route is used by the system to send data to a remote IPv6 destination for which a specific route is not defined. If *DFT6ROUTE is specified, ADRPFXLEN must specify *NONE.

*DFT6MCAST

Specifies that a default IPv6 multicast route is being changed. A default IPv6 multicast route is used by an application when sending data to a IPv6 multicast destination address and a specific outgoing physical interface is not specified. If *DFT6MCAST is specified, ADRPFXLEN must specify *NONE.

character-value

Specify the route destination being changed. For an IPv4 route, 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.

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.

For an IPv6 route, the route destination is specified in the form *x::x::x::x::x*, where *x* is a hexadecimal number ranging from 0 through X'FFFF'. "::" may be used once in the route destination to indicate one or more groups of 16 bits of zeros. The "::" may be used to compress leading, imbedded, or trailing zeros in the route destination. The suffix portion of the route destination must contain zeros.

Top

Subnet mask (SUBNETMASK)

Specifies a bit mask that identifies to TCP/IP which bits of the value specified for the route destination (RTEDEST) compose the network and subnet portions of the internet address. By defining the network portion and subnetwork portion of the RTEDEST address, the subnet mask also defines which bits of the RTEDEST address make up the host portion.

The mask is a 32-bit combination that is logically ANDed with the internet address to determine a particular subnetwork. The bits of the mask set to the value one (1) determine the network and subnetwork portions of the address. The bits set to the value zero (0) determine the host portion of the address.

SUBNETMASK is ignored if RTEDEST contains an IPv6 address.

*NONE

No subnet mask is used. A subnet mask is not used when specifying default routes. For example, when RTEDEST(*DFTMCAST) or RTEDEST(*DFTRROUTE) is specified, SUBNETMASK(*NONE) must also be specified.

*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 129.35.192.0 identifies a Class B subnetwork. The network ID part of its address is 129.35. The portion of the subnetmask that is associated with the network portion of a particular class of address must equal 255. Therefore, the upper 2 bytes must be equal to 255.255 in the subnetmask. The subnetmask in this example may be 255.255.192.0 if the third octet is used as the subnetwork ID portion of the internet address.

Top

Type of service (TOS)

Specifies the type of service to be used. The type of service defines how the internet hosts and routers should make trade-offs between throughput, delay, reliability, and cost.

TOS is ignored if RTEDEST contains an IPv6 address.

*NORMAL

Normal service is used for delivery of data.

*MINDELAY

Minimize delay means that prompt delivery is important for data on this connection.

*MAXTHRPUT

Maximize throughput means that a high data rate is important for data on this connection.

***MAXRLB**

Maximize reliability means that a higher level of effort to ensure delivery is important for data on this connection.

***MINCOST**

Minimize monetary cost means that lower cost is important for data on this connection.

Top

Next hop (NEXTHOP)

Specifies the internet address of the next system (gateway) on the route.

Note: If RTEDEST specifies an IPv4 address, NEXTHOP must contain an IPv4 address. If RTEDEST specifies an IPv6 address, NEXTHOP must contain an IPv6 address.

character-value

Specify the internet address.

An IPv4 internet address is specified in the form *nnn.nnn.nnn.nnn*, where *nnn* is a decimal number ranging from 0 through 255. An IPv4 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.

An IPv6 internet address is specified in the form *x::x::x::x::x*, where *x* is a hexadecimal number ranging from 0 through X'FFFF'. "::" may be used once in the IPv6 address to indicate one or more groups of 16 bits of zeros. The "::" may be used to compress leading, imbedded, or trailing zeros in the address.

:: (null IPv6 address), ::1 (IPv6 loopback address) and addresses beginning with FF (IPv6 multicast address) are not allowed.

If the internet address is entered from a command line, the address must be enclosed in apostrophes.

Top

Address prefix length (ADRPFXLEN)

Specifies the IPv6 address prefix length (in bits) of the RTEDEST parameter. The address prefix length specifies how much of the leftmost portion of an IPv6 address is the subnet prefix. This parameter applies only if RTEDEST is an IPv6 address.

64 The default is 64 since most IPv6 networks have a 64 bit interface ID (address suffix).

***HOST**

The RTEDEST field specifies the IPv6 address of a specific host system. *HOST corresponds to a value of 128.

***NONE**

No address prefix length is specified..

1-128 Specify how much of the leftmost portion of the RTEDEST IPv6 address is the subnet prefix.

Top

Preferred binding interface (BINDIFC)

Specifies the IP interface this route is bound to.

BINDIFC is ignored if RTEDEST contains an IPv6 address.

*NONE

No particular IP interface is bound to this route. The first active IP interface on the network defined by the NEXTHOP and SUBNETMASK parameters is used. This is the default value.

character-value

Specify the internet address (IP address) of the interface this route is bound to.

Top

Binding line description (BINDLIND)

Specifies the line description (LIND) object to which this route is bound. This value must be specified for an IPv6 route and is ignored for an IPv4 route.

name Specify the name of the line description.

Top

Maximum transmission unit (MTU)

Specifies the maximum size (in bytes) of IP datagrams that can be transmitted through this route. A datagram is a basic unit of information passed over an internet network. For IPv4, the minimum size of any maximum transmission unit value is 576 bytes. For IPv6, the minimum value is 1280 bytes.

*SAME

The value does not change.

***IFC** For an IPv4 route, the maximum transmission unit (MTU) is the MTU of the interface that is associated with this route. For an IPv6 route, the MTU is the maximum frame size of the binding line description (BINDLIND) associated with the route.

576-16388

Specify a value for the maximum transmission unit in bytes. The maximum MTU that can be specified for this route depends on the type of physical connection to the network. The following table lists the maximum MTU values that can be specified based on the line type:

X.25 4096

Token ring (4 meg)
4060

Token ring (16 meg)
16388

Ethernet 802.3
8992

Ethernet Version 2
9000

DDI 4352

Frame relay
8177

Wireless 802.3

1492

Wireless Version 2

1500

Twinax (TDLC)

4105

Notes:

1. TCP/IP uses the route MTU value to calculate the size of the datagrams it sends. If you are using path MTU discovery, specify MTU(*IFC). This will allow the TCP/IP support to calculate the most efficient MTU for this route. If you are not using path MTU discovery, and you do not know the smallest MTU used by host systems along the entire path of this route, use 576 (for IPv4 routes) or 1280 (IPv6 routes).
2. The MTU of a route cannot exceed the MTU of the interface on which the NEXTHOP value is accessed. If the interface's MTU value was specified as *LIND, the interface's MTU value is derived from the line description. If the route's MTU value is specified as *IFC and the interface's MTU value is specified as *LIND, both values are derived from the line description.
3. The actual MTU value used for a route is resolved during interface activation. This value is the minimum of either the specified MTU value for the route or the MTU value determined from the associated interface used by the route.

Top

Route metric (METRIC)

Allows you to assign a routing metric "cost" value to this route. The metric cost of a route is a factor in determining the desirability of the route. The metric value range is from 1 to 16. A metric value of 1 is close (one router hop) and therefore desirable. Desirability decreases as the metric value (distance) increases. A metric value of 16 is considered unreachable (an infinite distance away).

You can discourage the routing table from choosing this route by specifying a metric value that is higher than the actual number of hops to the destination and therefore reduce traffic on this route.

METRIC is ignored if RTEDEST contains an IPv6 address.

*SAME

The value does not change.

1-16 Specify the metric value to be used.

Top

Route redistribution (REDST)

Specifies whether this static route information will be shared with other routers. You can reduce traffic on this route by specifying *NO.

REDST is ignored if RTEDEST contains an IPv6 address.

*SAME

The value does not change.

***NO** This route will not be shown or shared with other routers.

***YES** This route will be shown to any requesting router.

490 System i: Programming i5/OS commands Starting with CHGPFTRG (Change Physical File Trigger)

Note: REDST(*YES) is analogous to the RIPv1 specification of STATIC. REDST(*NO) is analogous to the RIPv1 specification of PASSIVE.

Top

Duplicate route priority (DUPRTEPTY)

Specifies the duplicate route priority of this static route. This value determines which route is selected when multiple routes with the same value for route destination, subnet mask, and type of service (for IPv4 routes) or route destination and address prefix length (for IPv6 routes) satisfy the primary route selection criteria. Routes with a higher duplicate route priority (DUPRTEPTY) are used before routes with a lower one. The values allowed for this parameter are 1 (lowest priority) to 10 (highest priority).

*SAME

The value does not change.

*HIGH

Specify high priority. *HIGH corresponds to a value of 10.

*MEDIUM

Specify medium priority. *MEDIUM corresponds to a value of 5.

*LOW Specify low priority. *LOW corresponds to a value of 1.

1-10 Specify the duplicate route priority value to be used.

Note: IPv4 routes have 10 different priority values. IPv6 routes have only 3: *HIGH, *MEDIUM, and *LOW. For an IPv6 route, if 1, 2, or 3 are specified for DUPRTEPTY, the route will have *LOW priority. If 4, 5, or 6 are specified for DUPRTEPTY, the IPv6 route will have *MEDIUM priority. If values 7, 8, 9, or 10 are specified for DUPRTEPTY, the IPv6 route will have *HIGH priority.

Top

Text 'description' (TEXT)

Specifies text that briefly describes the route.

*SAME

The value does not change.

*BLANK

No text is specified.

character-value

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

Top

Examples

Example 1: Changing a Route

```
CHGTCPRTE  RTEDEST('132.65.0.0') SUBNETMASK('255.255.0.0')
           TOS(*MINDELAY) NEXTHOP('132.65.34.98') MTU(1024)
```

This command changes the route identified by route destination 132.65.0.0 with a subnetmask of 255.255.0.0 and type of service of *MINDELAY. The change is to use a maximum transmission unit (MTU) of 1024.

Example 2: Changing an IPv4 Default Route

```
CHGTCP RTEDEST(*DFTRROUTE) SUBNETMASK(*NONE) TOS(*NORMAL)
        NEXTHOP('186.49.126.108') MTU(1024)
```

This command changes the default route identified by next-hop value 186.49.126.108 to use an MTU value of 1024.

Example 3: Changing an IPv6 Route

```
CHGTCP RTEDEST('1234:5678::') ADRPFLEN(32) BINDLIND(ETHLINE)
        NEXTHOP('AAAA::BBBB') DUPRTEPTY(*HIGH)
        TEXT('High priority route')
```

This command changes the route identified by route destination 1234:5678::, address prefix length 32, binding line description ETHLINE, and next hop AAAA::BBBB. The duplicate route priority is changed to *HIGH and the text description is changed to "High priority route".

Example 4: Changing an IPv6 Default Route

```
CHGTCP RTEDEST(*DFT6ROUTE) ADRPFLEN(*NONE) BINDLIND(ETHLINE2)
        NEXTHOP('AAAA::CCCC') MTU(1280)
```

This command changes the route identified by route destination *DFT6ROUTE, address prefix length *NONE, binding line description ETHLINE2, and next hop AAAA::CCCC. The MTU value is changed to 1280.

Top

Error messages

*ESCAPE Messages

TCP1D03

&1 member record length not correct.

TCP1D04

Error occurred processing member &1 of &2/&3.

TCP1901

Internet address &2 not valid.

TCP1902

Internet address &1 not valid.

TCP1908

Internet address &1 not valid.

TCP261C

Process completed successfully.

TCP2658

&2 &1 not changed.

TCP8050

*IOSYSCFG authority required to use &1.

TCP9509

Line &1 not found.

TCP9999

Internal system error in program &1.

Top

Change TCP/IP Server (CHGTCP SVR)

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

Parameters
Examples
Error messages

The Change TCP/IP Server (CHGTCP SVR) command is used to change a server that was previously defined using the Add TCP/IP Server (ADDTCPSVR) command. All values defined for the server can be changed except for the server special value (SRVSPCVL).

Restrictions:

- You must have input/output system configuration (*IOSYSCFG) and all object (*ALLOBJ) special authorities to run this command.

Top

Parameters

Keyword	Description	Choices	Notes
SVRSPCVL	Server special value	<i>Character value</i>	Required, Key, Positional 1
PGM	Program to call	Single values: *SAME Other values: <i>Qualified object name</i>	Optional, Positional 2
	Qualifier 1: Program to call	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i>	
SVRNAME	Server name	<i>Character value, *SAME</i>	Optional, Positional 3
SVRTYPE	Server type	<i>Character value, *SAME</i>	Optional, Positional 4
AUTOSTART	Autostart	*SAME, *YES, *NO	Optional, Positional 5
TEXT	Text 'description'	<i>Character value, *SAME, *BLANK</i>	Optional, Positional 6

Top

Server special value (SVRSPCVL)

Specifies the special value for the server to be changed.

This is a required parameter.

character-value

Specify the special value of the server to be changed.

Top

Program to call (PGM)

Specifies the program to be called when this server is started or ended by the following commands:

- Start TCP/IP Server (STRTCPSVR)
- End TCP/IP Server (ENDTCPSVR)
- Start TCP/IP (STRTCP) - if the server is defined as AUTOSTART(*YES)
- End TCP/IP (ENDTCP)

Single values

*SAME

The program to be called remains the same.

Qualifier 1: Program to call

name Specify the name of the program to be called when this server is started or ended.

Qualifier 2: Library

name Specify the name of library where the program is located.

Top

Server name (SVRNAME)

Specifies the textual server name that will be used by System i Navigator to display an entry for this server.

This is a required parameter.

*SAME

The textual server name remains the same.

character-value

Specify the text name of this server.

Top

Server type (SVRTYPE)

Specifies the server type that will be used by Work Management functions from System i Navigator to find job information, such as joblogs and server status, for this server.

*SAME

The server type remains the same.

character-value

Specify the server type name to be used by System i Navigator to find joblog information and server status. The following rules and restrictions apply:

- Imbedded blanks or null characters are not allowed.
- The server job running on the system must **also** have the server type defined for that job. This is done by adding the server type definition using the Change Job (QWTCHGJB) API **after** the server job is started. See the Change Job (QWTCHGJB) API for more detail on how to define the server type within the server job. If the server type is not set within the server job or if the server type does not match what is defined on the SVRTYPE parameter, joblog information and server status will not be available using System i Navigator.

Autostart (AUTOSTART)

Specifies whether the server being added should be started when the Start TCP/IP (STRTCP) command is run.

*SAME

The server autostart value remains the same.

***NO** The server being added should not start when the STRTCP command runs.

***YES** The server being added should start when the STRTCP command runs.

Text 'description' (TEXT)

Specifies a text description for the server being added.

*SAME

The text description remains the same.

***BLANK**

No text is specified.

character-value

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

Examples

```
CHGTCPSVR  SVRSPCVL(*XYZ)
           PGM(MYLIB/MYSTARTXYZ)
           AUTOSTART(*NO)
```

This command changes an existing server in the list of servers supported by the STRTCP (Start TCP/IP Server) and ENDTCP (End TCP/IP Server) CL commands. The user program that is to be called when the XYZ server is started or ended is changed to program MYSTARTXYZ in library MYLIB. The XYZ server will **not** be started automatically when the STRTCP command is run specifying SERVER(*AUTOSTART), or when the STRTCP (Start TCP/IP) command is run.

Error messages

*ESCAPE Messages

TCP1631

TCP/IP server &1 not changed.

Change TFTP Attributes (CHGTFTP)

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

Parameters
Examples
Error messages

The Change TFTP Server Attributes (CHGTFTP) command is used to change the Trivial File Transfer Protocol (TFTP) server attributes. The changes take effect the next time the TFTP server is started either by the Start TCP/IP (STRTCP) command or by the Start TCP/IP Server (STRTCPSVR) command.

Restrictions:

You must have *IOSYSCFG special authority to use this command.

Top

Parameters

Keyword	Description	Choices	Notes
AUTOSTART	Autostart server	*YES, *NO, <u>*SAME</u>	Optional, Positional 1
ENBBCAST	Enable subnet broadcast	*YES, *NO, <u>*SAME</u>	Optional
NBRSVR	Number of server jobs	<i>Element list</i>	Optional
	Element 1: Minimum	1-20, <u>*SAME</u> , *DFT	
	Element 2: Maximum	1-250, <u>*SAME</u> , *DFT	
INACTTMR	Server inactivity timer	1-1440, <u>*SAME</u> , *DFT	Optional
CCSID	ASCII single byte CCSID	<i>Element list</i>	Optional
	Element 1: Coded character set identifier	1-65532, <u>*SAME</u> , *DFT	
MAXBLKSIZE	Maximum block size	512-65464, <u>*SAME</u> , *DFT	Optional
RSPTIMO	Connection response timeout	1-600, <u>*SAME</u> , *DFT	Optional
ALWWRT	Allow file writes	*DFT, *NONE, *CREATE, *REPLACE, <u>*SAME</u>	Optional
ALTSRCDIR	Alternate source directory	<i>Character value</i> , <u>*SAME</u> , *NONE, *DFT	Optional
ALTTGDIR	Alternate target directory	<i>Character value</i> , <u>*SAME</u> , *NONE, *DFT	Optional

Top

Autostart server (AUTOSTART)

The AUTOSTART attribute determines whether or not the TFTP server starts automatically when TCP/IP is started using the STRTCP command, or when the STRTCPSVR SERVER(*AUTOSTART) command is issued.

This attribute is only used by the STRTCPSVR command if STRTCPSVR *AUTOSTART is specified. STRTCPSVR *TFTP or STRTCPSVR *ALL will start the TFTP server regardless of the value of the AUTOSTART attribute. If STRTCPSVR SERVER(*TFTP) is specified and the TFTP server is already running, then an additional server job is started.

*SAME

The AUTOSTART value does not change if it was previously set. Otherwise, *NO is used.

***YES** Specify a value of *YES if you want the number of TFTP server jobs specified in the NBRSVR parameter to start automatically each time TCP/IP is started by the STRTCP command, or each time the TCP/IP servers are started by the STRTCPSVR *AUTOSTART command.

***NO** Specify *NO if you do not want the number of TFTP server jobs specified in the NBRSVR parameter to start automatically each time TCP/IP is started by the STRTCP command, or each time the TCP/IP servers are started by the STRTCPSVR *AUTOSTART command.

When the value is set to *NO, only the STRTCPSVR *TFTP command or the STRTCPSVR *ALL command will start the TFTP server.

If you do not intend to use the TFTP server, set AUTOSTART to *NO.

Top

Enable subnet broadcast (ENBBCAST)

This parameter enables subnet directed TFTP broadcasts which allow multiple clients on the same subnet to load at the same time. Clients must be enabled to use this protocol.

*SAME

The value of the ENBBCAST parameter will not be changed if it was previously set.

***DFT** The subnet broadcast option is set to *YES.

***YES** Enable the TFTP Subnet broadcast.

***NO** Disable the TFTP Subnet broadcast.

Top

Number of server jobs (NBRSVR)

The number of servers (NBRSVR) parameter has two parts, minimum and maximum.

Minimum specifies the number of TFTP server jobs to start when TFTP is started by either the Start TCP/IP (STRTCP) command or the Start TCP/IP Server (STRTCPSVR) command. These jobs allow new clients to connect to the server without having to wait for the overhead associated with starting a new job. The server tries to keep at least this number of jobs available for connecting to new clients as the number of connected clients changes. This is a performance enhancement for the TFTP server that reduces the system overhead each time a client connects.

Note: The actual number of jobs seen in the job list may be slightly greater than the number defined due to the fact that one job is always listening and is not counted as an active job.

Maximum is the maximum number of TFTP server jobs.

Element 1: Minimum

*SAME

The number of server jobs previously set does not change. Otherwise two (2) is used.

***DFT** The number of server jobs is set to the default value of 2.

1-20 Specify the number of server jobs to start.

Element 2: Maximum

***SAME**

The number of server jobs previously set does not change. Otherwise six (6) is used.

***DFT** The number of server jobs is set to the default value of 6.

1-250 Specify the maximum number of server jobs to start. The number specified must be equal or greater than the minimum.

Top

Server inactivity timer (INACTTMR)

During periods of inactivity the number of active TFTP servers can drop to the minimum. The inactivity timer (INACTTMR) specifies, in minutes, how often the primary TFTP server checks TFTP activity to see if a server can be terminated.

***SAME**

The inactivity timer value does not change if it was previously set. Otherwise 10 minutes is used.

***DFT** The inactivity timer value is set to the default value of 10 minutes.

1-1440 Specify an inactivity timer value in minutes.

Top

ASCII single byte CCSID (CCSID)

Specifies the ASCII coded-character set identifier (CCSID) to use with integrated file system files. Integrated file system files will be read or write with this CCSID if they are not in the "qibm/proddata" directory. Files in the "qibm/proddata" directory will be read in CCSID 00819.

***SAME**

The CCSID value that was previously set does not change. Otherwise, 00819 (ISO 8859-1 8-bit ASCII) is used.

***DFT** The CCSID value is set to 00819 (ISO 8859-1 8-bit ASCII).

CCSID-value

Specify an ASCII CCSID value. This value is validated to ensure that you are specifying a valid ASCII CCSID.

Top

Maximum block size (MAXBLKSIZE)

Specifies the maximum block size, in bytes, to send or receive data in.

***SAME**

The block size does not change if it was previously set. Otherwise 1024 bytes is used.

***DFT** The block size is set to 1024 bytes.

512-65464

Specify the block size in number of bytes.

Top

Connection response timeout (RSPTIMO)

Specifies the number of seconds to wait for an expected response before terminating the requested transfer. Re-transmissions may occur during this time period based on an internally calculated re-transmission timeout value.

*SAME

The response timeout value does not change if it was previously set. Otherwise 60 seconds is used.

***DFT** The response timeout value is set to the default value of 60 seconds.

1-600 Specify a response timeout value in seconds.

Top

Allow file writes (ALWWRT)

The value of this parameter determines whether TFTP users are allowed to create and replace files on this system.

*SAME

The value does not change if it was previously set. Otherwise, *NONE is used.

***DFT** The value is set to *NONE.

***NONE**

Do not allow TFTP users to create new files on this system or replace existing files.

***REPLACE**

Allow TFTP users to replace existing files on this system.

***CREATE**

Allow TFTP users to create new files and replace existing files on this system.

Top

Assigned directories (ALTSRCDIR)

Specifies the authorized alternate path to the integrated file system directory containing files to be read. If the path of the read request matches the source directory path specified on this parameter, and the permission bit set on the integrated file system object allows access from the QTFTP profile, the read is allowed.

*SAME

The value that was previously set does not change.

***DFT** The path is set to *NONE.

***NONE**

No path (or access) is authorized except through the default directory for the IBM Network Station.

path-name

Specify the alternate authorized path to the source files. Note that imbedded spaces and single quotation marks (apostrophes) will be removed.

Top

Alternate target directory (ALTTGTDIR)

Specifies the alternate authorized path to the integrated file system directory containing files to be written to. The write is allowed if all of the following are true:

1. The path of the write request matches the target directory path specified on this parameter
2. The permission bit set on the integrated file system object allows access from the QTFTP profile
3. The allow write (ALWWRT) parameter is set to *CREATE or *REPLACE.

Note: The *REPLACE option works only when the file already exists.

*SAME

The value that was previously set does not change.

***DFT** The path is set to *NONE.

***NONE**

No path (or access) is authorized except through the default directory for the IBM Network Station.

path-name

Specify the alternate authorized path to the target directory for files to be written. Note that imbedded spaces and single quotation marks (apostrophes) will be removed.

Top

Examples

Example 1: Start the TFTP Server Automatically

```
CHGTFTP A  AUTOSTART(*YES)
```

This command indicates that the next time the STRTCP command is issued to start up TCP/IP and to automatically start the TCP/IP applications, the TFTP server will be automatically started.

Example 2: Changing the Number of Initial Server Jobs

```
CHGTFTP A  NBRSVR(5)
```

This command indicates that the next time the TFTP server is started, five TFTP server jobs will be started automatically.

Example 3: Changing the Number of Server Jobs

```
CHGTFTP A  NBRSVR(4 7)
```

This command indicates that the next time the TFTP server is started, four TFTP server jobs will be started automatically, and the maximum will be seven.

Top

Error messages

None

Change Time Zone Description (CHGTIMZON)

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

Parameters
 Examples
 Error messages

The Change Time Zone Description (CHGTIMZON) command changes a time zone description object that defines the properties of a time zone. 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 change (*CHANGE) authority to the time zone description being changed.
- You must have execute (*EXECUTE) authority to the QSYS library.

Top

Parameters

Keyword	Description	Choices	Notes
TIMZON	Time zone description	<i>Name</i>	Required, Key, Positional 1
OFFSET	Offset	-779-779, <u>*SAME</u>	Optional
STDNAME	Standard Time	Single values: <u>*SAME</u> , *GEN, *MSG Other values: <i>Element list</i>	Optional
	Element 1: Abbreviated name	<i>Character value</i>	
	Element 2: Full name	<i>Character value</i>	
DSTNAME	Daylight Saving Time (DST)	Single values: <u>*SAME</u> , *NONE, *GEN, *MSG Other values: <i>Element list</i>	Optional
	Element 1: Abbreviated name	<i>Character value</i>	
	Element 2: Full name	<i>Character value</i>	
STDMSG	Standard Time message	<i>Name</i> , <u>*SAME</u>	Optional
DSTMSG	Daylight Saving Time message	<i>Name</i> , <u>*SAME</u>	Optional
MSGF	Message file	Single values: <u>*SAME</u> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message file	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <u>*LIBL</u>	
DSTSTR	Daylight Saving Time start	<i>Element list</i>	Optional
	Element 1: Month	<u>*SAME</u> , *JAN, *FEB, *MAR, *APR, *MAY, *JUN, *JUL, *AUG, *SEP, *OCT, *NOV, *DEC	
	Element 2: Day	<u>*SAME</u> , *MON, *TUE, *WED, *THU, *FRI, *SAT, *SUN	
	Element 3: Relative day of month	<u>*SAME</u> , *LAST, 1, 2, 3, 4	
	Element 4: Time	<i>Time</i> , <u>*SAME</u>	

Keyword	Description	Choices	Notes
DSTEND	Daylight Saving Time end	<i>Element list</i>	Optional
	Element 1: Month	<u>*SAME</u> , *JAN, *FEB, *MAR, *APR, *MAY, *JUN, *JUL, *AUG, *SEP, *OCT, *NOV, *DEC	
	Element 2: Day	<u>*SAME</u> , *MON, *TUE, *WED, *THU, *FRI, *SAT, *SUN	
	Element 3: Relative day of month	<u>*SAME</u> , *LAST, 1, 2, 3, 4	
	Element 4: Time	<i>Time</i> , *SAME	
DSTSHIFT	Daylight Saving Time shift	0-120, <u>*SAME</u>	Optional
TEXT	Text 'description'	<i>Character value</i> , *SAME, *BLANK	Optional
YEAROFS	Year offset	-140-140, <u>*SAME</u>	Optional
ALTNAME	Alternate name	<i>Character value</i> , *SAME	Optional

Top

Time zone description (TIMZON)

Specifies the time zone description to be changed.

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.

*SAME

This value does not change.

-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

*SAME

This value does not change.

***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, a Standard Time message and message file must be specified for the time zone description.

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. When this parameter is changed to a value other than *NONE, Daylight Saving Time start and end information must be specified for the time zone description.

Single values

*SAME

This value does not change.

*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, a Daylight Saving Time message and message file must be specified for the time zone description.

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. A message identifier can be specified for this parameter only when *MSG is specified for the Standard Time name of the time zone description.

*SAME

This value does not change.

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. A message identifier can be specified for this parameter only when *MSG is specified for the Daylight Saving Time name of the time zone description.

*SAME

This value does not change.

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. A message file can be specified for this parameter only when *MSG is specified for the Standard Time name or the Daylight Saving Time name of the time zone description.

Qualifier 1: Message file

*SAME

This value does not change.

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 can be changed only when a value other than *NONE is specified for the Daylight Saving Time name of the time zone description. The Daylight Saving Time start information cannot be identical to the Daylight Saving Time end information.

Element 1: Month

*SAME

This value does not change.

- *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

*SAME

This value does not change.

- *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

*SAME

This value does not change.

*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

*SAME

This value does not change.

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 can be changed only when a value other than *NONE is specified for the Daylight Saving Time name of the time zone description. The Daylight Saving Time end information cannot be identical to the Daylight Saving Time start information.

Element 1: Month

*SAME

This value does not change.

- *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

***SAME**

This value does not change.

***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

***SAME**

This value does not change.

***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

***SAME**

This value does not change.

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.

***SAME**

This value does not change.

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.

*SAME

This value does not change.

*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).

*SAME

This value does not change.

-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. A value of zero means that this time zone is used with the Gregorian calendar. 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.

*SAME

This value does not change.

character-value

Specify the alternate name for this time zone, enclosed in apostrophes. The alternate name has a maximum length of 128 characters.

Top

Examples

Example 1: Changing the Offset

```
CHGTIMZON TIMZON(CENTRAL) OFFSET(-360)
```

This command changes the offset specified in the time zone description `CENTRAL` to negative six hours (-360 minutes).

Example 2: Changing the Daylight Saving Time Start and End Information

512 System i: Programming i5/OS commands Starting with CHGPFTRG (Change Physical File Trigger)

```
CHGTIMZON  TIMZON(CENTRALDST)
            DSTSTR(*OCT *SUN *LAST '02:00:00')
            DSTEND(*APR *SUN 1 '02:00:00')
```

This command changes the Daylight Saving Time start and end information for the time zone description CENTRALDST. Daylight Saving Time will start at 2:00 am on the last Sunday in October and will end at 2:00 am on the first Sunday in April.

[Top](#)

Error messages

*ESCAPE Messages

CPF09A0

Time zone description &1 not changed.

[Top](#)

Change User Auditing (CHGUSRAUD)

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

Parameters
Examples
Error messages

The CHGUSRAUD (Change User Audit) command allows a user with audit (*AUDIT) special authority to set up or change auditing for a user. The system value QAUDCTL controls turning auditing on and off. The auditing attributes of a user profile can be displayed with the Display User Profile (DSPUSRPRF) command.

Note: The changes made by CHGUSRAUD take effect the next time a job is started for this user.

Top

Parameters

Keyword	Description	Choices	Notes
USRPRF	User profile	Values (up to 50 repetitions): <i>Simple name</i>	Required, Positional 1
OBJAUD	Object auditing value	<u>*SAME</u> , *NONE, *CHANGE, *ALL	Optional, Positional 2
AUDLVL	User action auditing	Single values: <u>*SAME</u> , *NONE Other values (up to 31 repetitions): *AUTFAIL, *CMD, *CREATE, *DELETE, *JOBBAS, *JOBCHGUSR, *JOBDDTA, *NETBAS, *NETCLU, *NETCMN, *NETFAIL, *NETSCK, *OBJMGT, *OFCSRV, *OPTICAL, *PGMADP, *PGMFAIL, *PRTDTA, *SAVRST, *SECCFG, *SECDIRSRV, *SECIPC, *SECNAS, *SECRUN, *SECSCKD, *SECURITY, *SECVFY, *SECVLDL, *SERVICE, *SPLFDTA, *SYSMGT	Optional, Positional 3

Top

User profile (USRPRF)

Specifies one or more user profiles whose auditing values are to be changed. A maximum of 50 user names can be specified.

This is a required parameter.

Top

Object auditing value (OBJAUD)

Specifies the object auditing value for the user. This value only takes effect if the object auditing (OBJAUD) value for the object to be accessed has the value *USRPRF.

*SAME

The value does not change.

*NONE

The auditing value for the object determines when auditing is performed.

***CHANGE**

All change accesses by this user on all objects with the *USRPRF audit value are logged.

***ALL** All change and read accesses by this user on all objects with the *USRPRF audit value are logged.

Top

User action auditing (AUDLVL)

Specifies the level of activity that is audited for this user profile.

Note: The system values QAUDLVL and QAUDLVL2 are used in conjunction with this parameter. For example, if QAUDLVL is set to *DELETE and AUDLVL is set to *CREATE, then both *DELETE and *CREATE would be audited for this user. The default value for the QAUDLVL and QAUDLVL2 system values is *NONE.

Single values

***SAME**

The value does not change.

***NONE**

No auditing level is specified. The auditing level for this user is taken from system values QAUDLVL and QAUDLVL2.

Other values (up to 31 repetitions)

***AUTFAIL**

Authorization failures are audited. The following are some examples:

- All access failures (sign-on, authorization, job submission)
- Incorrect password or user ID entered from a device

***CMD** CL command strings, System/36 environment operator control commands, and System/36 environment procedures are logged for this user.

***CREATE**

All object creations are audited. Objects created into library QTEMP are not audited. The following are some examples:

- Newly-created objects
- Objects created to replace an existing object

***DELETE**

All deletions of external objects on the system are audited. Objects deleted from library QTEMP are not audited.

***JOBBAS**

Job base functions are audited. The following are some examples:

- Job start and stop data
- Hold, release, stop, continue, change, disconnect, end, end abnormal, PSR-attached to prestart job entries

***JOBCHGUSR**

Changes to a thread's active user profile or its group profiles are audited.

***JOBDTA**

Actions that affect a job are audited. The following are some examples:

- Job start and stop data

- Hold, release, stop, continue, change, disconnect, end, end abnormal, PSR-attached to prestart job entries
- Changing a thread's active user profile or group profiles

Note: *JOBDDTA is composed of two values to allow you to better customize your auditing. If you specify both of the values, you will get the same auditing as if you specified *JOBDDTA. The following values make up *JOBDDTA.

- *JOBDBAS
- *JOBCHGUSR

***NETBAS**

Network base functions are audited. The following are some examples:

- IP rules actions
- Sockets connections
- APPN Directory search filter
- APPN end point filter

***NETCLU**

Cluster or cluster resource group operations are audited. The following are some examples:

- Add, create, and delete
- Distribution
- End
- Fail over
- List information
- Removal
- Start
- Switch
- Update attributes

***NETCMN**

Networking and communications functions are audited. The following are some examples:

- Network base functions (See *NETBAS)
- Cluster or cluster resource group operations (See *NETCLU)
- Network failures (See *NETFAIL)
- Sockets functions (See *NETSCK)

Note: *NETCMN is composed of several values to allow you to better customize your auditing. If you specify all of the values, you will get the same auditing as if you specified *NETCMN. The following values make up *NETCMN.

- *NETBAS
- *NETCLU
- *NETFAIL
- *NETSCK

***NETFAIL**

Network failures are audited. The following are some examples:

- Socket port not available

***NETSCK**

Sockets tasks are audited. The following are some examples:

- Accept
- Connect

- Filtered mail
- Reject mail

***OBJMGT**

Generic object tasks are audited. The following are some examples:

- Moves of objects
- Renames of objects

***OFCSR**

OfficeVision are audited. The following are some examples:

- Changes to the system distribution directory
- Tasks involving electronic mail

***OPTICAL**

All optical functions are audited. The following are some examples:

- Add or remove optical cartridge
- Change the authorization list used to secure an optical volume
- Open optical file or directory
- Create or delete optical directory
- Change or retrieve optical directory attributes
- Copy, move, or rename optical file
- Copy optical directory
- Back up optical volume
- Initialize or rename optical volume
- Convert backup optical volume to a primary volume
- Save or release held optical file
- Absolute read of an optical volume

***PGMADP**

Adopting authority from a program owner is audited.

***PGMFAIL**

Program failures are audited. The following are some examples:

- Blocked instruction
- Validation value failure
- Domain violation

***PRTDTA**

Printing functions with parameter SPOOL(*NO) are audited.

***SAVRST**

Save and restore information is audited. The following are some examples:

- When programs that adopt their owner's user profile are restored
- When job descriptions that contain user names are restored
- When ownership and authority information changes for objects that are restored
- When the authority for user profiles is restored
- When a system state program is restored
- When a system command is restored
- When an object is restored

***SECCFG**

Security configuration is audited. The following are some examples:

- Create, change, delete, and restore operations of user profiles

- Changes to programs (CHGPGM) that will now adopt the owner's profile
- Changes to system values, environment variables and network attributes
- Changes to subsystem routing
- When the QSECOFR password is reset to the shipped value from DST
- When the password for the service tools security officer user ID is requested to be defaulted.
- Changes to the auditing attribute of an object

***SECDIRSRV**

Changes or updates when doing directory service functions are audited. The following are some examples:

- Audit change
- Successful bind
- Authority change
- Password change
- Ownership change
- Successful unbind

***SECIPC**

Changes to interprocess communications are audited. The following are some examples:

- Ownership or authority of an IPC object changed
- Create, delete or get of an IPC object
- Shared memory attach

***SECNAS**

Network authentication service actions are audited. The following are some examples:

- Service ticket valid
- Service principals do not match
- Client principals do not match
- Ticket IP address mismatch
- Decryption of the ticket failed
- Decryption of the authenticator failed
- Realm is not within client and local realms
- Ticket is a replay attempt
- Ticket not yet valid
- Remote or local IP address mismatch
- Decrypt of KRB_AP_PRIV or KRB_AP_SAFE checksum error
- KRB_AP_PRIV or KRB_AP_SAFE - timestamp error, replay error, sequence order error
- GSS accept - expired credentials, checksum error, channel bindings
- GSS unwrap or GSS verify - expired context, decrypt/decode, checksum error, sequence error

***SECRUN**

Security run time functions are audited. The following are some examples:

- Changes to object ownership
- Changes to authorization list or object authority
- Changes to the primary group of an object

***SECCKD**

Socket descriptors are audited. The following are some examples:

- A socket descriptor was given to another job
- Receive descriptor

- Unable to use descriptor

***SECURITY**

All security-related functions are audited.

- Security configuration (See *SECCFG)
- Changes or updates when doing directory service functions (See *SECDIRSRV)
- Changes to interprocess communications (See *SECIPC)
- Network authentication service actions (See *SECNAS)
- Security run time functions (See *SECRUN)
- Socket descriptor (See *SECSCKD)
- Use of verification functions (See *SECVFY)
- Changes to validation list objects (See *SECVLDL)

Note: *SECURITY is composed of several values to allow you to better customize your auditing. If you specify all of the values, you will get the same auditing as if you specified *SECURITY. The following values make up *SECURITY.

- *SECCFG
- *SECDIRSRV
- *SECIPC
- *SECNAS
- *SECRUN
- *SECSCKD
- *SECVFY
- *SECVLDL

***SECVFY**

Use of verification functions are audited. The following are some examples:

- A target user profile was changed during a pass-through session
- A profile handle was generated
- All profile tokens were invalidated
- Maximum number of profile tokens has been generated
- A profile token has been generated
- All profile tokens for a user have been removed
- User profile authenticated
- An office user started or ended work on behalf of another user

***SECVLDL**

Changes to validation list objects are audited. The following are some examples:

- Add, change, remove of a validation list entry
- Find of a validation list entry
- Successful and unsuccessful verify of a validation list entry

***SERVICE**

For a list of all the service commands and API calls that are audited, see the System i Security Reference, SC41-5302 publication.

***SPLFDTA**

Spooled file functions are audited. The following are some examples:

- Create, delete, display, copy, hold, and release a spooled file
- Get data from a spooled file (QSPGETSP)
- Change spooled file attributes (CHGSPLFA command)

*SYSMGT

System management tasks are audited. The following are some examples:

- Hierarchical file system registration
- Changes for Operational Assistant functions
- Changes to the system reply list
- Changes to the DRDA relational database directory
- Network file operations

Top

Examples

```
CHGUSRAUD  USRPRF(FRED)  OBJAUD(*CHANGE)
           AUDLVL(*CREATE *DELETE)
```

This command changes the auditing value in the user profile of the user FRED. All objects whose object auditing value is *USRPRF are audited when they are changed by user FRED. All objects that are created and all objects that are deleted will be audited for user FRED. Auditing records are sent to the auditing journal QAUDJRN in QSYS.

Top

Error messages

*ESCAPE Messages

CPF22B0

Not authorized to change the auditing value.

CPF22CC

Auditing value not changed for some user profiles.

Top

Change User Profile (CHGUSRPRF)

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

Parameters
 Examples
 Error messages

The Change User Profile (CHGUSRPRF) command changes the values specified in a user profile. The password validation rules are not verified by the system when a password is changed by this command. A description of the password validation rules is in the System i Security Reference, SC41-5302 book.

Restrictions:

- You must have security administrator (*SECADM) special authority, and object management (*OBJMGT) and use (*USE) authorities to the user profile being changed.
- You must have *USE authority to any of the following, if specified: the current library, program, menu, job description, message queue, print device, output queue, and ATTN key handling program.

Top

Parameters

Keyword	Description	Choices	Notes
USRPRF	User profile	<i>Simple name</i>	Required, Key, Positional 1
PASSWORD	User password	<i>Character value</i> , *SAME, *NONE	Optional, Positional 2
PWDEXP	Set password to expired	*SAME, *NO, *YES	Optional
STATUS	Status	*SAME, *ENABLED, *DISABLED	Optional
USRCLS	User class	*SAME, *USER, *SYSOPR, *PGMR, *SECADM, *SECOFR	Optional
ASTLVL	Assistance level	*SAME, *SYSVAL, *BASIC, *INTERMED, *ADVANCED	Optional
CURLIB	Current library	<i>Name</i> , *SAME, *CRTDFT	Optional
INLPGM	Initial program to call	Single values: *SAME, *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: *SAME, *SIGNOFF Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Initial menu	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
LMTCPB	Limit capabilities	*SAME, *NO, *PARTIAL, *YES	Optional
TEXT	Text 'description'	<i>Character value</i> , *SAME, *BLANK	Optional
SPCAUT	Special authority	Single values: *SAME, *USRCLS, *NONE Other values (up to 8 repetitions): *ALLOBJ, *AUDIT, *IOSYSCFG, *JOBCTL, *SAVSYS, *SECADM, *SERVICE, *SPLCTL	Optional, Positional 3
SPCENV	Special environment	*SAME, *SYSVAL, *NONE, *S36	Optional
DSPSGNINF	Display sign-on information	*SAME, *NO, *YES, *SYSVAL	Optional
PWDEXPITV	Password expiration interval	1-366, *SAME, *SYSVAL, *NOMAX	Optional
PWDCHGBLK	Block password change	1-99, *SAME, *SYSVAL, *NONE	Optional

Keyword	Description	Choices	Notes
LCLPDMGT	Local password management	*SAME , *YES, *NO	Optional
LMTDEVSSN	Limit device sessions	*SAME , *SYSVAL, *YES, *NO, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9	Optional
KBDBUF	Keyboard buffering	*SAME , *SYSVAL, *NO, *TYPEAHEAD, *YES	Optional
MAXSTG	Maximum allowed storage	Integer, *SAME , *NOMAX	Optional
PTYLMT	Highest schedule priority	0-9, *SAME	Optional
JOB	Job description	Single values: *SAME Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Job description	Name, QDFTJOB	
	Qualifier 2: Library	Name, *LIBL , *CURLIB	
GRPPRF	Group profile	Name, *SAME , *NONE	Optional
OWNER	Owner	*SAME , *USRPRF, *GRPPRF	Optional
GRPAUT	Group authority	*SAME , *NONE, *ALL, *CHANGE, *USE, *EXCLUDE	Optional
GRPAUTYP	Group authority type	*PRIVATE, *PGP, *SAME	Optional
SUPGRPPRF	Supplemental groups	Single values: *SAME , *NONE Other values (up to 15 repetitions): <i>Name</i>	Optional
ACGCDE	Accounting code	Character value, *SAME , *BLANK	Optional
DOCPWD	Document password	Name, *SAME , *NONE	Optional
MSGQ	Message queue	Single values: *SAME , *USRPRF Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Message queue	Name	
	Qualifier 2: Library	Name, *LIBL , *CURLIB	
DLVRY	Delivery	*SAME , *NOTIFY, *BREAK, *HOLD, *DFT	Optional
SEV	Severity code filter	0-99, *SAME	Optional
PRTDEV	Print device	Name, *SAME , *WRKSTN, *SYSVAL	Optional
OUTQ	Output queue	Single values: *SAME , *WRKSTN, *DEV Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Output queue	Name	
	Qualifier 2: Library	Name, *LIBL , *CURLIB	
ATNPGM	Attention program	Single values: *SAME , *SYSVAL, *NONE, *ASSIST Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Attention program	Name	
	Qualifier 2: Library	Name, *LIBL , *CURLIB	
SRTSEQ	Sort sequence	Single values: *SAME , *SYSVAL, *HEX, *LANGIDSHR, *LANGIDUNQ Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Sort sequence	Name	
	Qualifier 2: Library	Name, *LIBL , *CURLIB	
LANGID	Language ID	Character value, *SAME , *SYSVAL	Optional
CNTRYID	Country or region ID	Character value, *SAME , *SYSVAL	Optional
CCSID	Coded character set ID	Integer, *SAME , *SYSVAL, *HEX	Optional
CHRIDCTL	Character identifier control	*SAME , *SYSVAL, *DEV, *JOBCCSID	Optional
SETJOBATR	Locale job attributes	Single values: *SAME , *SYSVAL, *NONE Other values (up to 6 repetitions): *CCSID, *DATFMT, *DATSEP, *DECfmt, *SRTSEQ, *TIMSEP	Optional
LOCALE	Locale	Path name, *SAME , *SYSVAL, *NONE, *C, *POSIX	Optional
USROPT	User options	Single values: *SAME , *NONE Other values (up to 7 repetitions): *CLKWD, *EXPERT, *ROLLKEY, *NOSTMSG, *STMSG, *HLPFULL, *PRTMSG	Optional

Keyword	Description	Choices	Notes
UID	User ID number	1-4294967294, <u>*SAME</u>	Optional
GID	Group ID number	1-4294967294, <u>*SAME</u> , *GEN, *NONE	Optional
HOMEDIR	Home directory	<i>Path name</i> , *USRPRF, <u>*SAME</u>	Optional
EIMASSOC	EIM association	Single values: <u>*NOCHG</u> Other values: <i>Element list</i>	Optional
	Element 1: EIM identifier	<i>Character value</i> , *USRPRF	
	Element 2: Association type	*TARGET, *SOURCE, *TGTSRC, *ADMIN, *ALL	
	Element 3: Association action	<u>*REPLACE</u> , *ADD, *REMOVE	
Element 4: Create EIM identifier	<u>*NOCRTEIMID</u> , *CRTEIMID		

Top

User profile (USRPRF)

Specifies the user profile whose values are to be changed. A numeric user profile can be specified. If the user profile is numeric, it must begin with a **Q**.

This is a required parameter.

The following IBM-supplied objects are not valid on this parameter:

QANZAGENT, QAUTPROF, QCOLSRV, QDBSHR, QDBSHRDO, QDFTOWN, QDIRSRV, QDLFM, QDOC, QDSNX, QFNC, QGATE, QIPP, QLPAUTO, QLPINSTALL, QMGTC, QMSF, QNTP, QPEX, QPM400, QSNADS, QSPL, QSPLJOB, QSRVAGT, QSYS, QTCP, QTSTRQS, QYCMCIMOM, QYPSJSVR

name Specify the name of the user profile to be changed.

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.

*SAME

The value does not change.

*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.

*SAME

The value does not change.

*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.

*SAME

The value does not change.

*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.

*SAME

The value does not change.

*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.

*SAME

The value does not change.

*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.

***SAME**

The value does not change.

***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

***SAME**

The value does not change.

***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

***SAME**

The value does not change.

***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.

***SAME**

The value does not change.

***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.

***SAME**

The value does not change.

***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

*SAME

The value does not change.

*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.

***SAME**

The value does not change.

***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.

***SAME**

The value does not change.

***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).

***SAME**

The value does not change.

***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.

*SAME

The value does not change.

*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.

*SAME

The value does not change.

***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.

***SAME**

The value does not change.

***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/>.

***SAME**

The value does not change.

***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.

***SAME**

The value does not change.

***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.

***SAME**

The value does not change.

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.

Single values

***SAME**

The value does not change.

Qualifier 1: Job description

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

***SAME**

The value does not change.

***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.

***SAME**

The value does not change.

***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.

***SAME**

The value does not change.

***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.

***SAME**

The value does not change.

***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, QNFSPANON, QNTP, QPEX, QPM400, QRJE, QSNADS, QSPL, QSPLJOB, QSRV, QSRVAGT, QSRVBAS, QSYS, QTCM, QTCP, QTFTP, QTSTRQS, QYCMCIMOM, QYPSJSVR

***SAME**

The value does not change.

***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.

***SAME**

The value does not change.

***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.

***SAME**

The value does not change.

***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

*SAME

The value does not change.

*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.

*SAME

The value does not change.

*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.

*SAME

The value does not change.

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.

*SAME

The value does not change.

*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

*SAME

The value does not change.

*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

***SAME**

The value does not change.

***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

*SAME

The value does not change.

*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.

*SAME

The value does not change.

*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.

*SAME

The value does not change.

***SYSVAL**

The system value QCNTYID 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.

***SAME**

The value does not change.

***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.

***SAME**

The value does not change.

***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

*SAME

The value does not change.

*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.

*SAME

The value does not change.

*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

***SAME**

The value does not change.

***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.

***SAME**

The value does not change.

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.

*SAME

The value does not change.

*NONE

The user does not have a gid number or an existing gid number is removed.

Note: This value cannot be specified if the user is a group profile or the primary group of an object.

***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.

*SAME

The value does not change.

*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/>.

EIM association (EIMASSOC)

Specifies whether an EIM (Enterprise Identity Mapping) association to an EIM identifier for this user should be processed.

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**

The EIM association information does not change.

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

Examples

```
CHGUSRPRF  USRPRF(JJADAMS)  PASSWORD(SECRET)  SPCAUT(*JOBCTL)
           INLPGM(ARLIB/DSPMENU)
```

This command makes the following changes to the user profile named JJADAMS:

- Changes the password to SECRET.
- Authorizes JJADAMS to use the special job control authority.
- Changes the first program to start following a successful sign-on to a program named DSPMENU, which is located in a library named ARLIB.

All the other command parameters default to *SAME and do not change.

Top

Error messages

***ESCAPE Messages**

CPF22CD

Value for SUPGRPPRF parameter is not correct.

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.

CPF22DC

Not allowed to change UID of the user profile.

CPF22DD

Not allowed to change GID of the user profile.

CPF22DE
Not allowed to change the UID or GID of user profile &1.

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.

CPF2203
User profile &1 not correct.

CPF2204
User profile &1 not found.

CPF2209
Library &1 not found.

CPF2213
Not able to allocate user profile &1.

CPF2225
Not able to allocate internal system object.

CPF2228
Not authorized to change user profile.

CPF223F
Cannot set password to expired when password is *NONE.

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.

CPF2264

User profile &1 not allowed to be a group member.

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

Change User Print Info (CHGUSRPTI)

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

Parameters
Examples
Error messages

The Change User Print Information (CHGUSRPTI) command changes the user print information for a particular user by altering the user defined text value within the system.

Top

Parameters

Keyword	Description	Choices	Notes
USER	User	Name, <u>*CURRENT</u>	Optional, Key, Positional 1
TEXT	User defined text	Character value, <u>*SAME</u> , *BLANK	Optional, Positional 2

Top

User (USER)

Specifies the user whose print information is being changed.

***CURRENT**

The user profile under which the current job is running is used.

name Specify the name of the user whose print information is being changed.

Top

User defined text (TEXT)

Specifies the text that briefly describes the print information. This text is retrieved for the current user when spooled files are created and can be displayed using the Work with Spooled File Attributes (WRKSPLFA) command.

***SAME**

The value does not change.

***BLANK**

Text is not specified.

'description'

Specify a maximum of 100 characters of text enclosed in apostrophes to describe the user print information.

Top

Examples

```
CHGUSRPRTI  USER(FEIST)  TEXT('DEPT. 456 P.O. BOX 123')
```

This command changes the user print information for user profile FEIST. The user print information is changed to "DEPT. 456 P.O. BOX 123".

Top

Error messages

*ESCAPE Messages

CPF0011

Error detected by prompt override program.

CPF2204

User profile &1 not found.

CPF2213

Not able to allocate user profile &1.

CPF2217

Not authorized to user profile &1.

CPF2225

Not able to allocate internal system object.

CPF2247

Internal security object not available. Reason code &1.

CPF34D2

User print information not changed for user &1.

CPF34D5

CCSID translation error.

Top

Change User Trace (CHGUSRTRC)

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

Parameters
Examples
Error messages

The Change User Trace Buffer (CHGUSRTRC) command changes the user trace buffer associated with the specified job. Each user trace buffer is a user space (*USRSPC) object in library QUSRSYS by the name QP0Znnnnnn, where 'nnnnn' is the job number of the job using the user trace.

The user trace supports user-generated trace records written using the Qp0zUprintf, Qp0zDump, Qp0zDumpStack, and Qp0zDumpTargetStack APIs. Refer to the APIs topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>, **UNIX-type APIs** for more information on the Problem Determination APIs.

The trace records written to the user trace buffer with the Problem Determination APIs can be formatted and placed into a file or written to the **stdout** file by using the DMPUSRTRC (Dump User Trace Buffer) CL command.

User trace buffer spaces can be deleted by using the DLTUSRTRC (Delete User Trace Buffer) CL command.

Top

Parameters

Keyword	Description	Choices	Notes
JOB	Job name	Single values: * Other values: <i>Qualified job name</i>	Optional, Key, Positional 1
	Qualifier 1: Job name	<i>Name</i>	
	Qualifier 2: User	<i>Name</i>	
	Qualifier 3: Number	000000-999999	
CLEAR	Clear trace buffer	*NO, *YES	Optional
MAXSTG	Maximum storage to use	10-16382, *SAME	Optional
TRCFULL	Trace full	*WRAP, *STOPTRC, *SAME	Optional

Top

Job name (JOB)

Specifies the job for which the user trace buffer is being changed.

The possible values are:

* The user trace buffer for the job that the command is running in is changed.

job-name

Specify the name of the job whose user trace buffer is being changed. If no user name or job number qualifier is given, all of the jobs currently in the system are searched for the simple job name. If duplicates of the specified name are found, a qualified job name must be specified.

user-name

Specify the name of the user of the job whose user trace buffer is being changed.

job-number

Specify the six-digit number of the job whose user trace buffer is being changed.

Top

Clear trace buffer (CLEAR)

Specifies whether all trace records currently stored in the user trace buffer space should be removed.

The possible values are:

***NO** No trace records are removed from the user trace buffer.

***YES** All trace records currently stored in the user trace buffer are removed.

Top

Maximum storage to use (MAXSTG)

Specifies the size, in kilobytes, that the user trace buffer will be created to (if it doesn't exist) or resized to (if it exists). If this parameter is specified, *YES must also be specified for the CLEAR parameter.

The possible values are:

***SAME**

The user trace size is not changed. The default size (300 kilobytes) is used to create the user trace buffer when the first user trace API is called.

maximum-kilobytes

Specify the maximum amount of storage, in kilobytes, used to store user trace records. One kilobyte equals 1024 bytes.

Top

Trace full (TRCFULL)

Specifies whether the trace records wrap (replace oldest records with new records) or whether the trace stops when all of the storage specified by the MAXSTG parameter has been used.

The possible values are:

***SAME**

The current attribute does not change. The default when a user trace buffer space is created is TRCFULL(*WRAP).

***WRAP**

When the trace file is full, the trace wraps to the beginning. The oldest trace records are written over by new ones as they are collected.

***STOPTRC**

Tracing stops when the trace buffer space is full of trace records.

Top

Examples

Example 1: Changing the User Trace Buffer Size for the Current Job

```
CHGUSRTRC JOB(*) MAXSTG(100) CLEAR(*YES)
```

This command changes the user trace buffer size for the current job to 100 kilobytes.

Example 2: Clearing the User Trace Buffer for a Specific Job

```
CHGUSRTRC JOB(123581/DEPT2/WS1) CLEAR(*YES)
```

This command clears the user trace buffer for job WS1, which is associated with the user profile DEPT2, and has the job number 123581.

[Top](#)

Error messages

*ESCAPE Messages

CPFA98A

A User Trace option could not be changed for job &3/&2/&1.

CPFA98C

Job &3/&2/&1 not unique.

CPF1070

Job &3/&2/&1 not found.

[Top](#)

Change Variable (CHGVAR)

Where allowed to run:

- Batch program (*BPGM)
- Interactive program (*IPGM)

Parameters
Examples
Error messages

Threadsafe: Yes

The Change Variable (CHGVAR) command changes the value of a Control Language (CL) variable or part of a character variable. The value can be changed to the value of a constant, to the value of another variable, or to the value gotten from the evaluation of an expression or a built-in function. Expressions and built-in functions are described in "Expressions in CL Commands" in the CL topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>. Also, implicit conversion between decimal and character values is performed by the rules given in the VALUE parameter description.

The binary built-in function (%BINARY or %BIN) can be used in either the **CL variable name (VAR)** parameter or the **New value (VALUE)** parameter as a substitute for a decimal variable. When used with the VAR parameter, the specified portion of the character variable is changed to the signed binary integer equivalent value of the arithmetic expression given in the VALUE parameter. When used within the VALUE parameter, the specified portion of the character variable is treated as a signed binary integer converted to a decimal number when used in evaluating the value of the VALUE parameter. A 2-byte binary integer is converted to a decimal (5 0) number and a 4-byte binary number is converted to decimal (10 0) number. The result of the evaluated expression is then assigned to the specified in the VAR parameter.

The substring built-in function (%SUBSTRING or %SST) can be used in either the VAR or the VALUE parameter as a substitute for a character variable. When used with the VAR parameter, the specified portion of the character variable is changed to the value of the expression given in the VALUE parameter. When used within the VALUE parameter, the specified portion of the character variable is used in evaluating the value of the VALUE parameter. 2-byte binary integers are converted to decimal (5 0) numbers and 4-byte binary numbers are converted to decimal (10 0) numbers. The result of the evaluated expression is then assigned to the variable specified in the VAR parameter.

The substring built-in function can be used to retrieve or change all or part of the local data area associated with a job.

The %SWITCH built-in function can be used in the VALUE parameter as a substitute for a logical variable declared in the program. %SWITCH contains an 8-character mask that indicates which of the eight job switches in a job are tested for 1s and 0s. When %SWITCH is specified for the VALUE parameter, the logical variable specified by the VAR parameter is set to '1' if the logical results of the built-in function are all true. If any of the job switches tested results in a false condition, the variable is set to '0'.

Coding Decimal Values for Decimal Variables

When a numeric value is specified for a decimal variable:

- It can be coded with or without a decimal point (specified as either a period or a comma) and with or without a plus or minus sign.
- If a negative value is specified, a minus sign (-) must precede the value.
- If a decimal point is not specified in the coded value, it is assumed to be on the right of the last digit specified; that is, the coded value is assumed to be an integer (whole number).

- If the number of either integer or fractional digits specified is greater than the defined number of integer or fractional digits, an error message is sent to the user.

For example, if a decimal variable is defined as a five-position decimal value of which two positions are the fraction portion, the following values can be coded:

Specified Value	Assumed Value
2.7 or 2,7	2.70
27 or 27.00	27.00
-27	-27.00

Coding Character Values for Decimal Variables

When a character value is specified for a decimal variable:

- Only the digits 0 through 9, a decimal point (specified as either a period or a comma), and a plus sign (+) or minus sign (-) can be used.
- If a plus sign or minus sign is specified, it must be placed immediately in front of (no blanks between) the first digit in the character value. If no sign character is specified, the value is converted as a positive value.
- The number of decimal positions in the converted result is determined by the decimal point specified in the character value. If no decimal point is specified, it is assumed to be to the right of the last digit in the converted value.
- Decimal alignment occurs in the converted result. The number of decimal positions in the converted result is determined by the number declared for the variable. If the specified character value has more decimal positions than the declared variable, the extra positions on the right are truncated. If the integer portion of the character value has more digits than that declared for the variable, an error message is sent to the user.

The following examples show the results of converting the indicated character values for character variable &A to decimal values for decimal variable &B.

```
CHGVAR VAR(&B) VALUE(&A)
```

Character Variable &A		Decimal Variable &B	
Length	Specified Value	Length	Converted Result
10	'+123.1'	5, 2	123.10
10	'+123.00'	5, 0	123
10	'-123'	5, 2	-123.00

When the binary built-in function is used instead of the decimal variable &B, the decimal value is converted to a signed binary number.

Coding Character Values for Character Variables

When a character string is specified for a character variable, it must be enclosed in single quotation marks if it contains special characters or consists entirely of numeric characters. For example, 'ABC 67',

which contains a blank, or '37.92', which contains a decimal point and consists entirely of numeric characters. If 37.92 is not enclosed in apostrophes, it is handled as a decimal value instead of a character value.

Character variables are padded with blanks (or are truncated) on the right if the character string for the VALUE parameter is shorter (or longer) than the variable specified by the VAR parameter.

If a character variable is set equal to a portion of another character variable, specify, as parameters on the substring built-in function, the name of the variable containing the substring, the starting character position, and the number of characters being replaced. The starting position and the number of characters can be specified in CL variables.

Coding Decimal Values for Character Variables

When a decimal value is specified for a character variable:

- The same digits, decimal point, and sign character (if the value is negative) are used in the converted result. The value is right-justified in the character variable and padded on the left with zeros, if needed (this is unique to converted CL decimal values).
- The converted result has as many decimal positions as were specified in the decimal value or as defined for the decimal variable being used. If no decimal positions are specified in the decimal value or defined for the decimal variable, no decimal point is placed in the result.
- A minus sign is placed in the leftmost position of the character variable if the specified decimal value is negative. No plus sign is placed in the character variable for positive values.

The following examples show the results of converting the indicated decimal values for decimal variable &B to character values for character variable &A.

```
CHGVAR  VAR(&A) VALUE(&B)
```

When the binary built-in function is used instead of the decimal variable &B, the signed binary number is converted to a decimal number.

Decimal Variable &B		Character Variable &A	
Length	Specified Value	Length	Converted Result
5, 2	23.00 or +23	7	0023.00
5, 2	-3.9	7	-003.90
5, 2	-123.67	7	-123.67

Note: The character variable must be long enough to accommodate the decimal point and sign character if the value can have a decimal point and a negative value in it. In the last example, although the decimal value is defined as (5, 2), the character variable must be at least 7 characters long for the value shown. In the next-to-last example, the character variable could only be 5 characters long and the converted result -3.90 would be valid.

The substring built-in function can be used to change a substring of a character variable specified in the VAR parameter to a decimal value in the VALUE parameter.

Coding Logical or Character Values for Logical Variables

The value for a logical variable must be a logical value of either '1' or '0'. It must be enclosed in single quotation marks. However, the %SWITCH built-in function can be used in place of a logical variable in the VALUE parameter. Refer to for a description of the %SWITCH built-in function.

Note: Values for decimal and character variable types can be specified in hexadecimal form (X'580F' for decimal 58.0). However, if character values are specified in hexadecimal form, care should be used because no validity checking is performed on the hexadecimal string.

Restrictions:

- This command is valid only in a CL program or ILE CL procedure.

Top

Parameters

Keyword	Description	Choices	Notes
VAR	CL variable name	<i>CL variable name</i>	Required, Positional 1
VALUE	New value	<i>Character value</i>	Required, Positional 2

Top

CL variable name (VAR)

Specifies the CL variable whose value is to be changed. The type of variable does not have to be the same as the type of constant or variable specified in the VALUE parameter, unless an expression is being evaluated or the VAR parameter specifies a logical variable.

If the substring built-in function or the binary built-in function is used to change a portion of a character variable (that is, a substring of the character string in the variable) specified in VAR to a value specified in the VALUE parameter, specify the name of the character variable, followed by the starting position and the number of characters being changed within the character string specified by the variable name.

This is a required parameter.

Top

New value (VALUE)

Specifies the expression that is used to change the value of the variable. Variables, constants, or a built-in function can be used within the expression. For a description of expressions, see "Expressions in CL Commands" 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 constant is used as a simple expression, its value must be specified by the following rules, depending on the type of constant being specified and whether the variable was declared as a decimal, character, or logical variable.

This is a required parameter.

Top

Examples

Example 1: Changing Decimal Variables

```
CHGVAR  &A  &B
```

The value of variable &A is set to the value of the variable &B. If &B has a value of 37.2, then the value of &A becomes 37.2 also.

```
CHGVAR  &Y  (&Y + 1)
```

The value of variable &Y is increased by 1. If &Y has a value of 216, its value is changed to 217.

Example 2: Changing Logical Variables

```
CHGVAR  &X  (&Y *OR &Z)
```

The value of the logical variable &X is set to the value of the result of the OR operation of the logical variable &Y with the logical variable &Z. Both variables must be logical variables when *OR is used. If &Y equals '0' and &Z equals '1', then &X is set to '1'.

```
CHGVAR  &A  %SWITCH(10XXXX10)
```

The value of the logical variable &A is determined by the logical results of the built-in function, %SWITCH. Positions 1, 2, 7, and 8 of the 8-character mask indicate that the corresponding job switches for the job are to be tested for the values indicated in the mask. Job switches 1 and 7 are tested for 1s, and switches 2 and 8 are tested for 0s. (Switches 3 through 6 are not tested.) If all four switches contain the values specified in the %SWITCH mask, the logical result of the built-in function is true, and the variable &A is set to a '1'. If any of the four switches contain a value not indicated in the mask, the result is false and &A is set to '0'.

Example 3: Changing Character Variables

```
CHGVAR  VAR(&A)  VALUE(AB *CAT CD)  
CHGVAR  &A  ('AB' *CAT 'CD')
```

These two commands set the value of the variable &A equal to the character string ABCD, which is the result of the concatenation of the two character strings AB and CD. The first command is coded in keyword form with unquoted strings; the second command is coded in positional form with the VALUE parameter specifying two quoted character strings.

```
CHGVAR  &VAR1  &VAR2
```

This example shows a 6-character variable whose value is changed by a shorter character string. If &VAR1 = ABCDEF and &VAR2 = XYZ before the command is processed, the result in &VAR1 = XYZ padded on the right with three blanks.

```
CHGVAR  &VAR1  '12'
```

Assuming &VAR1 is a character variable that is 6 characters long, the result in &VAR1 = 12 padded on the right with four blanks. The apostrophes are required in this example.

```
CHGVAR  VAR(%SUBSTRING(&A 4 3))  VALUE(REP)
or
CHGVAR  VAR(%SST(&A 4 3))  VALUE(REP)
```

The substring built-in function is used to change 3 characters of the character constant in the variable named &A. If &A has a value of ABCDEFGH, the fourth, fifth, and sixth characters in &A are set to REP, and the result is ABCREPGH.

```
CHGVAR  VAR(%SST(*LDA 1 512))  VALUE(' ')
```

The substring built-in function is used to change all of the local data area to blanks.

```
CHGVAR  VAR(%BINARY(&A 1 2))  VALUE(20)
```

or

```
CHGVAR  VAR(%BIN(&A 1 2))  VALUE(20)
```

The binary built-in function is used to change the first 2 characters of the character variable named &A to the signed binary value of the number 20, or hexadecimal number X'0014'. If the character variable named &A has a length of 10, characters 3 through 10 of variable &A are not changed.

Top

Error messages

*ESCAPE Messages

CPF0816

%SWITCH mask &1 not valid.

Top

Change Work Station Entry (CHGWSE)

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

Parameters
 Examples
 Error messages

The Change Work Station Entry (CHGWSE) command changes one or more attributes of a work station entry in the specified subsystem description.

Notes:

1. When the **Job description (JOBDD)** parameter is specified, the work station entry will be changed; however, the value of this parameter is not changed for any jobs started through this entry that are active at the time.
2. If the value of the **Maximum active jobs (MAXACT)** parameter is reduced to a number less than the total number of work stations that are active through the work station entry, no additional work stations will be allowed to sign on. Active work stations will not be signed-off. Additional jobs can be created for an active work station by the Transfer Secondary Job (TFRSECJOB) command or the Transfer to Group Job (TFRGRPJOB) command. Other work stations will not be allowed to sign on until the number of active work stations is less than the value specified for the MAXACT parameter.

Restrictions:

1. To use this command, you must have:
 - object operational (*OBJOPR), object management (*OBJMGT), and read (*READ) authority to the specified subsystem description and execute (*EXECUTE) authority to the library containing the subsystem description.
 - object operational (*OBJOPR) and read (*READ) authority to the job description and execute (*EXECUTE) authority to the library containing that job description.
2. Only a user with all object (*ALLOBJ) special authority is allowed to change an entry for which the job description does not exist.

Top

Parameters

Keyword	Description	Choices	Notes
SBSD	Subsystem description	Qualified object name	Required, Positional 1
	Qualifier 1: Subsystem description	Name	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
WRKSTN	Work station name	Generic name, name	Optional, Positional 2
WRKSTNTYPE	Work station type	*ALL, 3179, 3180, 3196, 3197, 3277, 3278, 3279, 3476, 3477, 3486, 3487, 5251, 5291, 5292, 5555, *ASCII, CONS, *CONS, *NONASCII	Optional, Positional 3
JOBDD	Job description	Single values: *SAME, *USRPRF, *SBSD Other values: Qualified object name	Optional, Positional 4
	Qualifier 1: Job description	Name	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
MAXACT	Maximum active jobs	0-1000, *SAME, *NOMAX	Optional

Keyword	Description	Choices	Notes
AT	Allocation	* <u>SAME</u> , *SIGNON, *ENTER	Optional

Top

Subsystem description (SBSD)

Specifies the name and library of the subsystem description that contains the work station entry that is to be changed.

This is a required parameter.

Qualifier 1: Subsystem description

name Specify the name of the subsystem description where the work station job entry is being changed.

Note: The following IBM-supplied objects are not valid on this parameter:

- QLPINSTALL
- QSYSSBSD

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 subsystem description is located.

Top

Work station name (WRKSTN)

Specifies the name of the work station used by the subsystem. The device description name that was specified in the Create Device Desc (Display) (CRTDEV DSP) command associated with the work station is the name used.

Double-Byte Character Set Considerations: For double-byte character set (DBCS), a work station whose type is 5555 must be specified for either this parameter or the **Work station type (WRKSTNTYPE)** parameter, but not for both.

generic-name

Specify a generic name. Examples include: DSP*, RMT*,...

Note: Specifying a generic work station name does not result in multiple entries being added, changed, or removed.

name Specify the name of a specific work station. Examples include: DSP10, DSP11, RMT55,...

A value must be specified on either this parameter or the **Work station type (WRKSTNTYP)** parameter, but not for both.

Top

Work station type (WRKSTNTYPE)

Specifies the type of work station associated with the entry being added, changed, or removed. This entry applies to all work stations of this type that do not have specific entries for an individual work station.

***ALL** All work station devices. This includes devices with 5250, ASCII, and 327x device types.

3179 3179 work station.

3180 3180 work station.

3196 3196 work station.

3197 3197 work station.

3277 3277 work station.

3278 3278 work station.

3279 3279 work station.

3476 3476 work station.

3477 3477 work station.

3486 3486 work station.

3487 3487 work station.

5251 5251 work station.

5291 5291 work station.

5292 5292 color work station.

5555 5555 double-byte character set (DBCS) capable work station.

***ASCII**

All ASCII work station device types.

CONS System console display. This entry overrides a device type entry that specifies the same device type as the device being used as the console.

***CONS**

System console display. This entry overrides a device type entry that specifies the same device type as the device being used as the console.

***NONASCII**

All work station devices that use the 5250 data stream, as well as, 327x device types.

A value must be specified on either this parameter or the **Work station name (WRKSTN)** parameter, but not for both.

Top

Job description (JOBID)

Specifies the name and library of the job description used for jobs started through this work station entry. If the job description does not exist when the entry is added, a library qualifier must be specified because the qualified job description name is kept in the subsystem description.

Note: Only a user with all object (*ALLOBJ) special authority is allowed to add or change an entry for which the job description does not exist.

Single values

***SAME**

The job description does not change.

***USRPRF**

The job description named in the user profile that is used to sign on at this work station (or at this type of work station) is used for jobs started through this entry.

***SBSD**

The job description having the same name as the subsystem description, specified on the **Subsystem description (SBSD)** parameter, is used for jobs started through this entry.

Qualifier 1: Job description

name Specify the name of the job description.

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 job description is located.

Top

Maximum active jobs (MAXACT)

Specifies, for work stations that use this work station job entry, the maximum number of work station jobs that can be active at the same time.

***SAME**

The maximum number of jobs that can be active at the same time does not change.

***NOMAX**

There is no maximum number of jobs (work stations) that can be active at the same time through this work entry.

0-1000 Specify the maximum number of jobs that can be active at the same time through this work entry.

Top

Allocation (AT)

Specifies how the work stations associated with this job entry are allocated. For more information on how work stations are allocated to subsystems, see the Start Subsystem (STRSBS) command.

***SAME**

The job entry specification does not change.

***SIGNON**

The work stations are allocated when the subsystem is started if the work station is not already in use (signed on) in another subsystem. A sign-on prompt is displayed at each work station associated with this work entry. If a work station becomes allocated to a different subsystem, interactive jobs associated with the work station are allowed to enter this subsystem through the Transfer Job (TFRJOB) command.

*ENTER

The work stations associated with this work entry are not allocated when the subsystem is started. However, the interactive jobs associated with the work stations are allowed to enter this subsystem through the TFRJOB command.

Top

Examples

Example 1: Changing an Entry at Signon

```
CHGWSE  SBSDB(QGPL/BAKER) WRKSTN(A12) AT(*SIGNON)
```

This command changes the work station job entry for work station A12 in subsystem BAKER found in the general purpose library. A job is created for work station A12 when the user's password is entered on the sign-on prompt and the Enter key is pressed.

Example 2: Changing an Entry

```
CHGWSE  SBSDB(QGPL/BAKER) WRKSTN(B28) JOBD(*USRPRF)
```

This command changes the work station job entry for work station B28 in subsystem BAKER found in library QGPL. The job description named in the user profile that is used to sign on at this work station is used for jobs started through this entry. The other command parameters default to the *SAME value.

Top

Error messages

*ESCAPE Messages

CPF1619

Subsystem description &1 in library &2 damaged.

CPF1691

Active subsystem description may or may not have changed.

CPF1697

Subsystem description &1 not changed.

Top

Change Writer (CHGWTR)

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

Parameters
Examples
Error messages

The Change Writer (CHGWTR) command allows you to change the following attributes of an active printer writer:

- Change the form type to be processed by this writer
- Change the number of file separators for this writer
- Change the output queue to be used for this writer

This command lets you process all files of a given form type together. Spooled files are not necessarily in form type sequence when they reside on the output queue, so this helps the operator to manage the output without continually having to change forms. It also lets you change and use another output queue for this printer without ending and starting the writer each time.

If changes are made while the writer is in hold (HLD) status, the changes do not take effect until after the writer is released. The changes are then made based on the value specified on the OPTION parameter.

Top

Parameters

Keyword	Description	Choices	Notes
WTR	Writer	<i>Name</i> , *SYSVAL	Required, Positional 1
OUTQ	Output queue	Single values: * SAME , *DEV Other values: <i>Qualified object name</i>	Optional, Positional 2
	Qualifier 1: Output queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , * LIBL , *CURLIB	
FORMTYPE	Form type options	<i>Element list</i>	Optional, Positional 3
	Element 1: Form type	<i>Character value</i> , * SAME , *ALL, *STD, *FORMS	
	Element 2: Message option	* SAME , *INQMSG, *MSG, *NOMSG, *INFOMSG	
FILESEP	File separators	0-9, * SAME , *FILE	Optional
SEPDRAWER	Drawer for separators	1-255, * SAME , *DEV, *FILE	Optional
OPTION	When to change writer	* NORDYF , *FILEEND	Optional

Top

Writer (WTR)

Specifies the printer writer being changed.

This is a required parameter.

*SYSVAL

The writer started to the system default printer is to be changed.

name Specify the name of the printer writer you wish to change.

Output queue (OUTQ)

Specifies the output queue which this writer will use to process spooled files. The output queue must be available before the writer is changed. If the output queue is in a primary or secondary auxiliary storage pool, the output queue must be in the library name space of the writer job.

Single values

*SAME

The output queue being used remains the same.

***DEV** The output queue associated with the printer device for the spooled file is used.

Qualifier 1: Output queue

name Specify the name of 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 job 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 name of the library in which the output queue is located.

Form type options (FORMTYPE)

Specifies the form type to be used when processing output for the writer. A file's form type is originally derived from the form type that was used to produce the spooled file.

Note: The form load message is issued when the spooled file to be printed has a form type different from the form type of the last spooled file that was printed on the device. The last form type printed is kept from the last STRPRTWTR, CHGWTR, or VRYCFG command issued.

Consider the following example:

1. The last spooled file printed on printer PRT01 had the form type *STD.
2. The user changes the form type on PRT01 to XYZ using the following command:

```
CHGWTR PRT01 FORMTYPE(XYZ)
```
3. No spooled file with the form type XYZ is printed on PRT01.
4. The user then sends a spooled file with the form type *STD to PRT01. The form load message is not issued, despite the intervening CHGWTR command, because the last spooled file printed on PRT01 had the same form type as the spooled file being printed.
 The form load message would be issued if a spooled file with the form type XYZ were actually printed on PRT01.

Element 1: Form type

*SAME

The current form type value does not change.

***ALL** All form types are processed by the writer.

***FORMS**

All available files with the same form type are processed as a group before the writer moves on to the next form type. The writer initially chooses the first available file on the queue. After the first file is complete, all files with the same form type as the first are processed. Then, the writer again chooses the first available file on the queue, and the process is repeated.

***STD** The writer processes spooled files with form type ***STD**.

form-type

Specify the type of form to be used by the writer. Only files with this form type are processed.

Element 2: Message option

***SAME**

The current message attribute does not change.

***INQMSG**

An inquiry message is sent to the message queue when a spooled file has a form type that is different than the form type in the printer.

***INFOMSG**

An informational message is sent to the message queue when no spooled files requiring this form type remain in the output queue.

***MSG** An inquiry message is sent to the message queue when a spooled file has a form type that is different than the form type in the printer and an informational message is sent when no spooled files requiring this form type remain in the output queue.

***NOMSG**

Neither an inquiry message nor an informational message is sent to the message queue.

Top

File separators (FILESEP)

Specifies the number of file separator pages to print before each file.

***SAME**

The number of file separators remains the same.

***FILE** Print the number of file separator pages that is specified for each individual file.

0-9 Specify the number of file separator pages to print.

Top

Drawer for separators (SEPDRAWER)

Specifies which paper drawer is selected for printing separators.

***SAME**

The drawer specified for separator pages does not change.

***DEV**

The value stored in the device description for the printer is used.

***FILE** The separator pages are printed from the same drawer as the spooled file.

1 The separator pages are printed from drawer 1.

2 The separator pages are printed from drawer 2.

3 The separator pages are printed from drawer 3.

1-255 Specify a number to indicate the drawer from which the separator pages are printed.

Note: For some printers, SEPDRAWER(3) implies an envelope drawer.

Top

When to change writer (OPTION)

Specifies when the change occurs.

*NORDYF

The change occurs when there are no files on the output queue that meet the writer's current form type selection values.

*FILEEND

The change occurs at the end of the current file (For example, when the current report finishes printing).

Top

Examples

```
CHGWTR WTR(MYWTR) FORMTYPE(MYFORM *NOMSG) OPTION(*FILEEND)
```

This command changes writer MYWTR, which has been producing files of some other form type, to produce files with a form type of MYFORM at the end of the file now being produced. The writer is also prevented from sending an informational message when it runs out of eligible files with form type MYFORM.

Top

Error messages

*ESCAPE Messages

CPF1842

Cannot access system value &1.

CPF2207

Not authorized to use object &1 in library &3 type *&2.

CPF3313

Writer &1 not active nor on job queue.

CPF3330

Necessary resource not available.

CPF3331

Not authorized to control writer &3/&2/&1.

CPF3357

Output queue &1 in library &2 not found.

CPF3456

Cannot change writer &1 to output queue &4 in library &5.

CPF3457

Cannot change writer &1.

CPF3458

Change writer &1 not allowed. End writer pending.

CPF3459

Writer &1 not eligible for change.

CPF3460

Change writer &1 not allowed.

CPF3463

Output queue for device &1 not found.

CPF3464

Not authorized to output queue &1 in library &2.

CPF9803

Cannot allocate object &2 in library &3.

Top

Check ASP Balance (CHKASPBAL)

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

[Parameters](#)
[Examples](#)
[Error messages](#)

The Check ASP Balance (CHKASPBAL) command allows the user to check which auxiliary storage pool (ASP) balance function is currently active and which units have been marked to not allow new allocations (*ENDALC). Informational messages will be sent to the job log indicating which ASP function is active and which units are marked *ENDALC. Message CPI18A5 will indicate which ASP balancing function is active. Message CPI18A6 will indicate no ASP balancing is active. Message CPI18A4 will indicate that no units are marked *ENDALC. Message CPI18A3 is issued for each unit marked *ENDALC.

This command has no parameters.

[Top](#)

Parameters

None

[Top](#)

Examples

Example 1: Checking ASP Balancing

```
CHKASPBAL
```

This command will check which ASP balance function is currently active and which units, if any, are marked to not allow new allocations (*ENDALC). Informational messages will be sent to the job log for each configured ASP indicating which balance operation is active. An informational message will be sent to the job log for each unit that is marked *ENDALC.

[Top](#)

Error messages

None

[Top](#)

Check Communications Trace (CHKCMNTRC)

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

Parameters
Examples
Error messages

The Check Communications Trace (CHKCMNTRC) command returns the communications trace status for a specific line, a network interface description, a network server description, or for all of the traces of a specific type that exist on the system. The status is returned through a message.

Restrictions:

- To use this command, you must have service (*SERVICE) special authority, or be authorized to the Service trace function of i5/OS through System i 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.
- The following user profiles have authority to this command:
 - QSECOFR
 - QSRV

Top

Parameters

Keyword	Description	Choices	Notes
CFGOBJ	Configuration object	Name, *ALL	Required, Positional 1
CFGTYPE	Type	*LIN, *NWI, *NWS	Required, Positional 2

Top

Configuration object (CFGOBJ)

Specifies the name of the configuration description to check. The configuration description is either a line description or a network interface description.

This is a required parameter.

***ALL** The communications trace status is returned for all of the traces of a specific type.

name Specify the name of the configuration description to be checked.

Top

Type (CFGTYPE)

Specifies the object type of the configuration description to check.

This is a required parameter.

***LIN** Status for lines is shown.

*NWI Status for network interfaces is shown.

*NWS Status for network servers is shown.

Top

Examples

Example 1: Checking All Traces

```
CHKCMNTRC CFGOBJ(*ALL) CFGTYPE(*NWI)
```

This command shows the communications trace status of all network interface traces.

Example 2: Checking An Individual Trace

```
CHKCMNTRC CFGOBJ(QESLINE) CFGTYPE(*LIN)
```

This command shows the communications trace status of line QESLINE.

Top

Error messages

*ESCAPE Messages

CPF39A7

Trace storage not available in communications processor

CPF39A8

Not authorized to communications trace service tool

CPF39A9

Error occurred during communications trace function

CPF39BE

No communications traces of type &1 exist

CPF39B0

No communications traces exist.

CPF39B1

Trace &1 type &2 does not exist

CPF39B6

Communications trace function cannot be performed

CPF98A2

Not authorized to &1 command or API.

Top

Check Document Library Object (CHKDLO)

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

Parameters
Examples
Error messages

The Check Document Library Object (CHKDLO) command verifies that an object exists and that a user has authority to the object before trying to access it.

These checks can be particularly useful before the user tries to access several objects simultaneously. The CHKDLO command is also used to check the validity of object names contained in CL variables and to verify object authorizations under program control.

When the command runs, the system searches for the specified object. If the object is found, the system verifies that the user is authorized to that object as specified on the CHKDLO command. If the object is not found or the user does not have the authority specified on the CHKDLO command, an escape message is sent to the user.

When the CHKDLO command is used in a CL program, the Monitor Message (MONMSG) command follows the CHKDLO command to monitor for messages that result from running this command.

Top

Parameters

Keyword	Description	Choices	Notes
DLO	Document library object	Character value, *SYSOBJNAM	Required, Positional 1
FLR	Folder	Character value, *NONE	Optional, Positional 2
SYSOBJNAM	System object name	Name	Optional, Positional 3
OBJTYPE	Object type	*ANY, *DOC, *FLR	Optional
AUT	Authority	*NONE, *ALL, *CHANGE, *USE, *EXCLUDE	Optional
USRID	User identifier	Single values: *CURRENT Other values: <i>Element list</i>	Optional
	Element 1: User ID	Character value	
	Element 2: Address	Character value	

Top

Document library object (DLO)

Specifies the document library object that is checked.

This is a required parameter.

name Specify the name of the library document or folder that is checked.

***SYSOBJNAM**

The system object name is used to identify the document or folder that is checked. This

parameter must be used to check a document that is not in a folder and may be used instead of a folder name or document name when the system object name is known. The SYSOBJNAM parameter and DLO(*SYSOBJNAM) must be specified together.

Top

Folder (FLR)

Specifies the name of the folder containing the document or folder being checked.

*NONE

The object that is checked is not contained in a folder.

name Specify the name of the folder that contains the document or folder that is checked. A folder name can be specified only if a folder or document name is specified on the DLO parameter.

Top

System object name (SYSOBJNAM)

Specifies the system object name of the object that is checked.

name Specify the system object name of the document or folder that is checked. A system object name must be specified if DLO(*SYSOBJNAM) is specified.

Top

Object type (OBJTYPE)

Specifies the type of Document Library Object being checked. OBJTYPE(*DOC) cannot be specified when a document or a folder name is specified on the DLO parameter and FLR(*NONE) is also specified.

*ANY The object that is checked can be either a document or a folder.

*DOC The object that is checked is a document.

*FLR The object that is checked is a folder.

Top

Authority (AUT)

Specifies the type or kind of authority that is checked.

*NONE

Authority is not checked.

*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

User identifier (USRID)

Specifies the user ID and address of the user for whom the object is being checked. If a user ID and address of someone other than the user who is signed on is specified, the user must have all object (*ALLOBJ) special authority or both users must be enrolled in the system directory and the user who is signed on must be granted permission (using the GRTUSRPMN command) to work on behalf of the specified user. Specifies the user ID and address of the user checking the object.

Single values

***CURRENT**

The object is checked on the behalf of the user who is signed on the system. The user must be enrolled in the system directory or have *ALLOBJ special authority.

Element 1: User ID

user-ID

Specify the user ID of the user on whose behalf the object is checked.

Element 2: Address

address

Specify the address of the user on whose behalf the object is checked.

Note: If a user ID and address for someone other than the user who is signed on the system is specified, the user must have *ALLOBJ special authority, or both users must be enrolled in the system directory and the user who is signed on the system must be granted permission (by using the GRTUSRPMN command) to work on behalf of the specified user. This parameter is useful only when an AUT value other than *NONE is specified.

Top

Examples

```
CHKDLO  DLO(FLR1) OBJTYPE(*ANY) AUT(*NONE)
        USERID(USER1 ADDR1)
```

This command checks for the existence of a folder named FLR1 on behalf of a user whose user ID is USER1 and whose address is ADDR1. The user's authority to FLR1 is not checked.

Top

Error messages

*ESCAPE Messages

CPF8A11

CHKDLO command failed.

CPF8A75

Not authorized to access folder &1.

CPF8A77

Folder &1 not found.

CPF8A82

Document &2 not found in folder &1.

CPF8A83

Not authorized to access document &2 in folder &1.

[Top](#)

Check DNS Configuration (CHKDNSCFG)

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

Parameters
Examples
Error messages

The Check DNS Configuration (CHKDNSCFG) command checks the syntax (but not the semantics) of a Domain Name System (DNS) server's *named.conf* configuration file. This may include files from the */QIBM/UserData/OS400/DNS/_DYN* directory.

Restrictions:

- You must have execute (*X) authority to the directories in the path */QIBM/UserData/OS400/DNS/_DYN*
- You must have read (*R) authority to the */QIBM/UserData/OS400/DNS/_DYN* directory files.
- You must have execute (*X) authority to the directories in the path of the configuration file.
- You must have read (*R) authority to the configuration 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
CFGFILE	Configuration file	<i>Path name</i> , <u>*DFT</u>	Optional, Positional 1
CHKDNSJRN	Check journal files	<u>*NO</u> , *YES	Optional
CHKZONEF	Check zone files	<u>*NO</u> , *YES	Optional
TOSTMF	Output file	<i>Path name</i> , <u>*STDOUT</u>	Optional

Top

Configuration file (CFGFILE)

Specifies the *named.conf* configuration file to check.

*DFT Configuration file */QIBM/UserData/OS400/DNS/NS/named.conf* is checked.

path-name

Specify the path name for a stream file which is the DNS server configuration file to check.

Top

Check journal files (CHKDNSJRN)

Specifies, when loading a data zone file, whether or not to read the DNS journal file if it exists. A DNS journal file contains zone updates that need to be merged with the master zone data file.

***NO** Do not read any DNS journal files for the zone.

***YES** Read any DNS journal files for the zone.

Top

Check zone files (CHKZONEF)

Specifies whether or not to perform a check load of the master zone data files found in the named.conf configuration file being checked. If any errors are found, they will be displayed. If no errors are found, nothing will be displayed.

***NO** Do not check load the master zone data files.

***YES** Check load the master zone data files.

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: Checking the Default DNS Configuration File

```
CHKDNCFG CCFGFILE(*DFT) TOSTMF(*STDOUT)
```

This command will check configuration file */QIBM/UserData/OS400/DNS/NS/named.conf*. If any errors are found, they will be sent to the standard output device. If no errors are found, nothing will be sent.

Example 2: Checking DNS Journal Files and Zone Data Files

```
CHKDNCFG CCFGFILE('/QIBM/UserData/OS400/DNS/NS/named.conf')  
CHKDNSJRN(*YES) CHKZONEF(*YES)  
TOSTMF('/mydir/dnserr.txt')
```

This command will check the configuration file for the server NS and include checking the zone data files and any existing DNS journal files.

If any errors are found, they are written to stream file *'/mydir/dnserr.txt'*.

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](#)

Check DNS Zone (CHKDNSZNE)

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

Parameters
Examples
Error messages

The Check DNS Zone (CHKDNSZNE) command checks the syntax and integrity of a zone data file. It performs the same checks as the Domain Name System (DNS) server when loading a zone. This is useful for checking zone data files before configuring them into a DNS server.

Restrictions:

- You must have execute (*X) authority to the directories in the path of the zone file.
- You must have read (*R) authority to the zone 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
ZONEDMN	Zone name	<i>Character value</i>	Required, Positional 1
ZONEDTAF	Zone file	<i>Path name</i>	Required, Positional 2
DEBUG	Show debug information	<u>*NO</u> , *YES	Optional
QUIET	Quiet mode	<u>*NO</u> , *YES	Optional
CHKDNSJRNF	Check journal files	<u>*NO</u> , *YES	Optional
CLASS	Class	<u>*IN</u> , *CH, *HS	Optional
CHKDITG	Check load integrity	<u>*NONE</u> , *FULL, *FULLNOSIBL, *LOCAL, *LOCALNOSIBL	Optional
INFMT	Input format	<u>*DFT</u> , *TEXT, *RAW	Optional
OUTFMT	Output format	<u>*DFT</u> , *TEXT, *RAW	Optional
DETAIL	Dump style	<u>*DFT</u> , *FULL, *BASIC	Optional
CANONICAL	Dump canonical names	<u>*NO</u> , *YES	Optional
ZONESTMF	Zone output file	<i>Path name</i> , <u>*STDOUT</u>	Optional
CHKLBL	Check labels	<u>*WARN</u> , *FAIL, *IGNORE	Optional
CHKMXADR	Check MX for address	<u>*WARN</u> , *FAIL, *IGNORE	Optional
CHKMXNAME	Check MX for CNAME	<u>*WARN</u> , *FAIL, *IGNORE	Optional
CHKNSADR	Check servers	<u>*WARN</u> , *FAIL, *IGNORE	Optional
CHKSRVNAME	Check SRV for CNAME	<u>*WARN</u> , *FAIL, *IGNORE	Optional
CHKWLDCRD	Check for wildcards	<u>*WARN</u> , *IGNORE	Optional
TOSTMF	Output file	<i>Path name</i> , <u>*STDOUT</u>	Optional

Top

Zone name (ZONEDMN)

Specifies the domain name of the zone being checked.

This is a required parameter.

character-value

Specify a zone domain name defined in the zone data file.

Top

Zone file (ZONEDTAF)

Specifies the zone data file to check.

This is a required parameter.

path-name

Specify the path name for a stream file which is the zone data file to be checked.

Top

Show debug information (DEBUG)

Specifies whether or not to enable debugging.

*NO Disable debugging messages.

*YES Enable debugging messages.

Top

Quiet mode (QUIET)

Specifies whether or not to perform the check in quiet mode. Quiet mode will only use an exit code and not send any messages.

*NO Do not display messages; only display an exit code.

*YES Display messages and an exit code.

Top

Check journal files (CHKDNSJRN)

Specifies, when loading a data zone file, whether or not to read the DNS journal file if it exists. A DNS journal file contains zone updates that need to be merged with the master zone data file.

*NO Do not read any DNS journal files for the zone.

*YES Read any DNS journal files for the zone.

Top

Class (CLASS)

Specifies the protocol group of the information.

- *IN** The Internet class.
- *CH** The CHAOS class.
- *HS** The Hesiod class.

Top

Check load integrity (CHKDTAITG)

Specifies which post-load zone data integrity checks to perform.

***NONE**

Do not perform any post-load zone data integrity checks.

***FULL** Checks that MX records refer to A or AAAA record for both in-zone and out-of-zone hostnames. Checks that SRV records refer to A or AAAA record for both in-zone and out-of-zone hostnames. Checks that delegation NS records refer to A or AAAA record for both in-zone and out-of-zone hostnames. It also checks that glue addresses records in the zone match those advertised by the child.

***FULLNOSIBL**

Same as *FULL but disables sibling glue checks.

***LOCAL**

Same as *FULL but only checks in-zone hostnames. Out-of-zone hostnames are not checked.

***LOCALNOSIBL**

Same as *LOCAL but disables sibling glue checks.

Top

Input format (INFMT)

Specify the format of the zone data file to be read as input.

***DFT** Same as *TEXT.

***TEXT**

Human-readable text format.

***RAW** Binary file format.

Top

Output format (OUTFMT)

Specify the format of the output file specified by the TOSTMF parameter. This does not have any effect unless the utility dumps the zone data contents.

***DFT** Same as *TEXT.

***TEXT**

Human-readable text format.

***RAW** Binary file format.

Top

Dump style (DETAIL)

Specifies the detail level of records for the dumped zone data file. The *FULL format is most suitable for processing automatically by a separate script. The *BASIC format is more human-readable and is thus suitable for manual editing. This parameter will only have an effect if the utility dumps the zone data contents with the TOSTMF parameter. It also does not have any meaning if the OUTFMT parameter is not *TEXT.

***DFT** Same as *FULL.

***FULL** Dump using a format suitable for script processing.

***BASIC**

Dump using a format for manual editing.

Top

Dump canonical names (CANONICAL)

Specifies whether or not to dump the zone data file in canonical format. Since a Resource Record (RR) can have more than one name (aliases) associated with it, this allows you to dump the real (canonical) name instead of the aliases.

***NO** Do not dump zone data in canonical format (show aliases).

***YES** Dump zone data in canonical format (do not show aliases).

Top

Zone output file (ZONESTMF)

Specifies the output file to which the zone data will be written. The output format will be based on the OUTFMT, DETAIL and CANONICAL parameters.

***STDOUT**

All command output goes to the standard output device (normally the display).

path-name

Specify the path name for a stream file to which the zone data will be written.

Top

Check labels (CHKLBL)

Specifies how to handle domain name check errors.

Errors are handled using the following failure modes.

***WARN**

Show warning messages.

***FAIL** Show failure messages.

***IGNORE**

Do not show warning or failure messages.

Top

Check MX for address (CHKMXADR)

Specifies how to handle errors found when checking MX records to see if they are addresses.

Errors are handled using the following failure modes.

***WARN**

Show warning messages.

***FAIL** Show failure messages.

***IGNORE**

Do not show warning or failure messages.

Top

Check MX for CNAME (CHKMXNAME)

Specifies how to handle errors found when checking MX records to see if they refer to a CNAME.

Errors are handled using the following failure modes.

***WARN**

Show warning messages.

***FAIL** Show failure messages.

***IGNORE**

Do not show warning or failure messages.

Top

Check servers (CHKNSADR)

Specifies how to handle errors found when checking NS records to see if they are addresses.

Errors are handled using the following failure modes.

***WARN**

Show warning messages.

***FAIL** Show failure messages.

***IGNORE**

Do not show warning or failure messages.

Top

Check SRV for CNAME (CHKSRVNAME)

Specifies how to handle errors found when checking SRV records to see if they refer to a CNAME.

Errors are handled using the following failure modes.

***WARN**

Show warning messages.

***FAIL** Show failure messages.

***IGNORE**

Do not show warning or failure messages.

Top

Check for wildcards (CHKWLDCRD)

Specifies whether or not to check for non-terminal wildcards. Non-terminal wildcards are almost always the result of a failure to understand the wildcard matching algorithm (RFC 1034).

Errors are handled using the following failure modes.

***WARN**

Show warning messages.

***IGNORE**

Do not show warning or failure messages.

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

```
CHKDNSZNE ZONEDMN(i5os.ibm.com)
          ZONEDTAF('/QIBM/UserData/OS400/DNS/NS/i5os.ibm.com.DB')
          CHKDNSJRN(*YES)
```

This command checks the zone 'i5os.ibm.com' in the zone data file '/QIBM/UserData/OS400/DNS/NS/i5os.ibm.com.DB'. It also checks any DNS journal files that may apply to this zone. Output from this command might look like this:

```
zone i5os.ibm.com/IN: loaded serial 2
OK
```

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](#)

Check DBCS Font Table (CHKIGCTBL)

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

Parameters
Examples
Error messages

The Check DBCS Font Table (CHKIGCTBL) command checks the existence of a specified double-byte character set (DBCS) font table. Use this command to verify that one of the tables in the system prints and displays characters in the matrix pattern used by a given device. If the table does not exist, the system sends you a message. If the table exists, the system does not send you a message.

DBCS font tables contain the images, in a given dot matrix, of the double-byte extension characters used on the system. The system refers to the tables when printing and displaying these characters. There are separate tables for each character image matrix used by devices attached to the system.

Top

Parameters

Keyword	Description	Choices	Notes
IGCTBL	DBCS font table	Name, QIGC2424, QIGC2424K, QIGC2424C, QIGC2424S, QIGC3232, QIGC3232S	Optional, Positional 1

Top

DBCS font table (IGCTBL)

Specifies the name of the double-byte character set (DBCS) font table whose existence is being checked. Choose one of the following table names:

QIGC2424

The Japanese DBCS font table is used for displaying and printing extension characters in a 24 by 24 dot matrix image.

QIGC2424C

The Traditional Chinese DBCS font table is used for printing extension characters in a 24 by 24 dot matrix image.

QIGC2424K

The Korean DBCS font table is used for printing extension characters in a 24 by 24 dot matrix image.

QIGC2424S

The Simplified Chinese DBCS font table is used for printing extension characters in a 24 by 24 dot matrix image.

QIGC3232

The Japanese DBCS font table is used for displaying and printing extension characters in a 32 by 32 dot matrix image.

QIGC3232S

The Simplified Chinese DBCS font table is used for printing extension characters in a 32 by 32 dot matrix image.

QIGCrrcl

Specify the name of the DBCS font table being checked for. The name must always be in the format QIGCrrcl, where *rr* is the table row matrix size, *cc* is the table column matrix size, and *l* is an optional language identifier.

Top

Examples

```
CHKIGCTBL IGCTBL(QIGC2424)
```

This command causes the system to check for the Japanese DBCS font table that contains character images in a 24-by-24 dot matrix image.

Top

Error messages

*ESCAPE Messages

CPF8421

DBCS font table &1 not found.

Top

Check In Object (CHKIN)

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

Parameters
Examples
Error messages

The Check In Object (CHKIN) command checks in an object that had previously been checked out.

The CHKIN command can also be used to check in a directory tree so that the specified directory's contents, and the contents of all of its subdirectories, are checked in. If SUBTREE(*ALL) is specified, the command will attempt to check in as many objects as possible within the subtree. A diagnostic message will be sent for each object that cannot be checked in. When all of the objects have been attempted, an escape message will be sent if there were any errors. If all of the objects have been checked in with no errors, a completion message will be sent.

If a symbolic link object is encountered, either specified in the **Object (OBJ)** parameter or encountered in the processing of a subtree, the symbolic link will not be followed.

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:

- Only documents within QDLS and stream files can be checked in. If SUBTREE(*ALL) is specified, the check in will only be done for the object types which are supported by the CHKIN command.
- To check in an object that the user has checked out, the user must have write (*W) authority to all the objects being checked in.
- To check in an object that someone else has checked out, the user must own the object or have one of the following:
 - All (*ALL) authority to the object
 - All object (*ALLOBJ) special authority
- The user must have execute (*X) authority to each directory in the path.
- When doing subtree processing, the user must have read (*R) and execute (*X) authorities to the path name and all subdirectories within that path.
- Not all file systems support the CHKIN command.

Top

Parameters

Keyword	Description	Choices	Notes
OBJ	Object	<i>Path name</i>	Required, Positional 1
SUBTREE	Directory subtree	*NONE, *ALL	Optional

Top

Object (OBJ)

Specifies the path name of the object or a pattern to match the path name or names of objects to be checked in.

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

Directory subtree (SUBTREE)

Specifies whether or not to check in all of the objects within the subtree if the object specified by the **Object (OBJ)** parameter is a directory.

*NONE

The objects specified by the OBJ parameter are checked in.

***ALL** The objects specified by the OBJ parameter are checked in. If the object is a directory, its contents as well as the contents of all of its subdirectories will be checked in.

Note: Pattern matching on the OBJ parameter only applies to the first level objects. If the first level object is a directory, the pattern matching does not apply to its contents or the contents of its subdirectories.

Once the command has begun processing a specific directory subtree, the objects which will be found and processed may be affected by operations that update the organization of objects within the specified directory tree. This includes, but is not limited to, the following:

- Adding, removing, or renaming object links
- Mounting or unmounting file systems
- Updating the effective root directory for the process calling the command
- Updating the contents of a symbolic link

In order to process the directory subtree, the system code may increase the process-scoped maximum number of file descriptors that can be opened during processing. This is done so that the command is not likely to fail due to a lack of descriptors. This process-scoped maximum value is not reset when the command completes.

Top

Examples

The examples below assume the following directory structure:

```
      ---- dir2
      /
/--dir1 ----- dir3
      \ \         \
```


CPFA0A9

Object not found. Object is &1.

CPFA0AA

Error occurred while attempting to obtain space.

CPFA0AB

Operation failed for object. Object is &1.

CPFA0AD

Function not supported by file system.

CPFA0B2

No objects satisfy request.

CPFA0BE

&3 objects checked in. &4 objects failed.

CPFA0DA

Object is a directory. Object is &1.

Top

Check Master KVV (CHKMSTKVV)

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

Parameters
Examples
Error messages

The Check Master KVV (CHKMSTKVV) command returns the key verification value (KVV) for the specified master key in informational message CPI9ED3.

For more information on master keys, refer to the Cryptographic Services Master Keys article in the Cryptographic Services section of the APIs topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Note: If the KVV value returned for the Save/Restore Master Key is hexadecimal '16C1D3E3C073E77DB28F33E81EC165313318CE54', the key is set to its default value. The default value is not a secure setting for saving the master keys. Master keys can be saved by running the Save System (SAVSYS) command. To properly secure your master keys on the next SAVSYS operation, load and set the Save/Restore Master Key using the Add Master Key Part (ADDMSTPART) and Set Master Key (SETMSTKEY) CL commands, or by using the Qc3LoadMasterKeyPart and Qc3SetMasterKey APIs, or by using the Cryptographic Services Key Management interface in System i Navigator.

Restrictions:

None

Top

Parameters

Keyword	Description	Choices	Notes
MSTKEY	Master key	1-8, *ASP, *SAVRST	Required, Positional 1
VERSION	Master key version	*NEW, *CURRENT, *OLD, *PENDING	Required, Positional 2

Top

Master key (MSTKEY)

Specifies the master key on which to perform the action.

This is a required parameter.

The action will be performed on:

***ASP** The master key used for encrypting data stored on auxiliary storage pool (ASP) disk storage.

***SAVRST**

The master key used for encrypting all the other master keys on a SAVSYS operation.

1-8 One of the eight general purpose master keys.

Master key version (VERSION)

Specifies the version of the master key whose key verification value will be returned in informational message CPI9ED3.

This is a required parameter.

***NEW** Returns the key verification value (KVV) that would be created if a Set Master Key (SETMSTKEY) command were to be run for the key parts previously added by running the Add Master Key Part (ADDMSTPART) command.

***CURRENT**

Returns the KVV for the current version of the specified master key.

***OLD** Returns the KVV for the old version of the specified master key. An old master key was the current master key previous to a SETMSTKEY being done.

***PENDING**

Returns the KVV for the pending version of the specified master key. A pending master key is a master key restored from SAVSYS media, but the system was unable to decrypt it and make it useable. This value is not valid if *SAVRST is specified for the master key.

Top

Examples

```
CHKMSTKVV  MSTKEY(*ASP)  VERSION(*CURRENT)
```

This command checks whether there is a current version of the auxiliary storage pool (ASP) master key. If a current version exists, informational message CPI9E93 is sent with the version's KVV as a replacement data value.

Top

Error messages

*ESCAPE Messages

CPF3CF2

Error(s) occurred during running of &1 API.

CPF9872

Program or service program &1 in library &2 ended. Reason code &3.

CPF9DAF

Version &2 of master key &1 is not set.

CPF9DDA

Unexpected return code &1 from cryptographic service provider &2.

Top

Check Object (CHKOBJ)

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

Parameters
 Examples
 Error messages

The Check Object (CHKOBJ) command checks object existence and verifies the user's authority for the object before trying to access it. If the object exists and the user has the proper authority for the object, no error messages are sent to the user. For verification, as many as ten specific authorities can be specified on the command.

These checks are particularly useful before the user tries to access several objects at the same time. This command is also used to check the validity of object names contained in CL variables and to verify object authorizations under program control.

When the command runs, the system searches for the specified object. If the object is found, the system verifies that the user is authorized to that object as specified for the **Authority (AUT)** parameter. If the object is not found or the user does not have the authorities specified for the AUT parameter, an error message is sent to the user.

Top

Parameters

Keyword	Description	Choices	Notes
OBJ	Object	Qualified object name	Required, Positional 1
	Qualifier 1: Object	Name	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
OBJTYPE	Object type	*ALRTBL, *AUTL, *BNDDIR, *CFGL, *CHTFMT, *CLD, *CLS, *CMD, *CNL, *COSD, *CRG, *CRQD, *CSI, *CSPMAP, *CSPTBL, *CTLD, *DEVD, *DOC, *DTAARA, *DTADCT, *DTAQ, *EDTD, *EXITRG, *FCT, *FILE, *FLR, *FNTRSC, *FNNTBL, *FORMDF, *FTR, *GSS, *IGCDCT, *IGCSRT, *IGCTBL, *IMGCLG, *IPXD, *JOB, *JOBQ, *JOBSCD, *JRN, *JRNRCV, *LIB, *LIND, *LOCALE, *MEDDFN, *MENU, *MGTCOL, *MODD, *MODULE, *MSGF, *MSGQ, *M36, *M36CFG, *NODGRP, *NODL, *NTBD, *NWID, *NWSCFG, *NWS, *OUTQ, *OVL, *PAGDFN, *PAGSEG, *PDFMAP, *PDG, *PGM, *PNLGRP, *PRDDFN, *PRDLOD, *PSFCFG, *QMFORM, *QMQR, *QRYDFN, *RCT, *SBS, *SCHIDX, *SPADCT, *SQLPKG, *SQLUDT, *SRVPGM, *SSND, *SVRSTG, *S36, *TBL, *TIMZON, *USRIDX, *USRPRF, *USRQ, *USRSPC, *VLDL, *WSCST	Required, Positional 2
MBR	Member, if data base file	Name, *NONE, *FIRST	Optional, Positional 3
AUT	Authority	Single values: *NONE, *ALL, *CHANGE, *USE, *EXCLUDE, *AUTLMGT Other values (up to 10 repetitions): *OBJALTER, *OBJEXIST, *OBJMGT, *OBJOPR, *OBJREF, *ADD, *DLT, *EXECUTE, *READ, *UPD	Optional, Positional 4

Top

Object (OBJ)

Specifies the object to be checked.

This is a required parameter.

Qualifier 1: Object

name Specify the name of the object to be checked.

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

Object type (OBJTYPE)

Specifies the object type of the object to be checked.

To see a complete list of object types when prompting this command, position the cursor on the field for this parameter and press F4 (Prompt). For a description of the object types, see "Object types" in the CL topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

This is a required parameter.

object-type

Specify the type of object to be checked.

Top

Member, if data base file (MBR)

Specifies the file member, if a member of a database file is to be checked.

Note: The logical file member, and the physical file members on which it is based are checked.

***NONE**

Database file members are not checked, but the existence and (optionally) the authority for the file are checked. For all other object types (including device files), *NONE is the only valid value for this parameter.

***FIRST**

The first member of the specified file is used.

name Specify a physical or logical file member to be checked. Values specified for the **Object (OBJ)** and **Object type (OBJTYPE)** parameters must identify a database file and the member specified must be a member of the database file specified for the OBJ parameter.

Top

Authority (AUT)

Specifies the authority to be checked or specifies an authorization list to be checked. This parameter can be specified as a single value or as a list of one or more elements.

Single values

*NONE

Authority is not checked.

***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. You can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. You also can change ownership of the object.

***CHANGE**

Change (*CHANGE) authority provides the authority needed to perform all operations on the object except those limited to the owner or controlled by object existence (*OBJEXIST) and object management (*OBJMGT) authorities. You 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, you cannot add, change, or remove users.

***EXCLUDE**

Exclude authority prevents access to the object.

***AUTLMGT**

Authorization list management (*AUTLMGT) authority provides the authority needed to add user names to the authorization list, change users' authorities on the authorization list, to remove user names from the authorization list, to rename an authorization list, or to create a duplicate authorization list.

Note: You must use the object type of *AUTL when you specify *AUTLMGT authority.

Other values (up to 10 repetitions)

***OBJALTER**

Object alter (*OBJALTER) authority provides the authority needed to alter the attributes of an object. If the user has this authority for 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. If the user has this authority for a SQL package, the user can change the attributes of the SQL package. This authority is currently only used for database files and SQL packages.

***OBJEXIST**

Object existence (*OBJEXIST) authority provides the authority needed to control object ownership and existence. These authorities are necessary for a user who wants to delete, free storage, save, restore, or transfer ownership of an object. (If you have save system (*SAVSYS) special authority, you do not need *OBJEXIST authority.)

***OBJMGT**

Object management (*OBJMGT) authority provides the authority needed to specify the security for the object, move or rename the object, and add members to database files.

***OBJOPR**

Object operational (*OBJOPR) authority provides the authority needed to look at the description of an object and to use the object as determined by the user's data authority for the object. *OBJOPR authority has no data authorities associated with it.

***OBJREF**

Object reference (*OBJREF) authority provides the authority needed to reference an object from another object such that operations on that object may be restricted by the other object. If the user

has this authority for a physical file, the user can add a referential constraint in which the physical file is the parent. This authority is currently only used for database files.

***ADD** Add authority (*ADD) provides the authority needed to add entries to an object (for example, job entries to a queue or records to a file).

***DLT** Delete (*DLT) authority provides authority needed to remove entries from an object.

***EXECUTE**

Execute (*EXECUTE) authority provides the authority needed to run a program or locate an object in a library or directory.

***READ**

Read (*READ) authority provides the authority needed to show the contents of an object.

***UPD** Update (*UPDATE) authority provides authority needed to change the entries in an object.

Top

Examples

Example 1: Checking for Existence of a Program

```
CHKOBJ OBJ(LIB1/PROG1) OBJTYPE(*PGM)
```

This command checks for the existence of a program named PROG1 in library LIB1. Your authorities to PROG1 are not checked.

Example 2: Checking for User's Authority to File

```
CHKOBJ OBJ(SOURCE1) OBJTYPE(*FILE) MBR(MBR3) AUT(*CHANGE)
```

This command checks for the existence of file SOURCE1 and for the existence of member MBR3 in file SOURCE1. It also checks to see if you have change (*CHANGE) authority to file SOURCE1.

Example 3: Checking for Your Authority to Program

```
CHKOBJ OBJ(LIB1/PROG1) OBJTYPE(*PGM) AUT(*CHANGE)
```

This command checks the existence of program PROG1 in library LIB1. It also checks to see if you have change (*CHANGE) authority to PROG1.

Example 4: Checking User's Authority to a Logical File Member

```
CHKOBJ OBJ(FILEA) OBJTYPE(*FILE) MBR(MBR1) AUT(*USE)
```

This command checks your authority to use logical file member MBR1, and each physical file member on which MBR1 is based.

Example 5: Checking User's Add and Delete Authority

```
CHKOBJ OBJ(FILEA) OBJTYPE(*FILE) MBR(MBR1) AUT(*ADD *DLT)  
MONMSG MSGID(CPF9802) EXEC(GOTO ERROR1)
```


These two commands (CHKOBJ and MONMSG) are used to verify that you have both add (*ADD) and delete (*DLT) authorities for logical file FILEA and each of the physical file members on which the logical file member MBR1 in the logical file FILEA is based. If you do not have data authority for FILEA and each of the physical file members on which FILEA is based, escape message CPF9802 is sent to the program, and control in the program is passed to the command that has the label ERROR1.

Top

Error messages

*ESCAPE Messages

CPF9801

Object &2 in library &3 not found.

CPF9802

Not authorized to object &2 in &3.

CPF9810

Library &1 not found.

CPF9815

Member &5 file &2 in library &3 not found.

CPF9820

Not authorized to use library &1.

CPF9830

Cannot assign library &1.

CPF9899

Error occurred during processing of command.

Top

Check Object Integrity (CHKOBJITG)

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

Parameters
Examples
Error messages

The Check Object Integrity (CHKOBJITG) command checks the objects owned by the specified user profile, the objects that match the specified path name, or all objects on the system to determine if any objects have integrity violations. An integrity violation occurs if:

- a command has been tampered with.
- an object has a digital signature that is not valid.
- an object has an incorrect domain attribute for its object type.
- a program or module object has been tampered with.
- a library's attributes have been tampered with.
- an object failed a file system scan.

If an integrity violation has occurred, the object name, library name (or pathname), object type, object owner, and type of failure are logged to a database file.

The type of violations that can occur are:

- ALTERED - The object has been tampered with.
- BADSIG - The object has a digital signature that is not valid.
- DMN - The domain is not correct for the object type.
- PGMMOD - The runnable object has been tampered with.
- BADLIBUPDA - The library protection attribute is set incorrectly.
- SCANFSFAIL - The object has been scanned by a scan-related exit program, and at the time of that last scan request, the object failed the scan.

If a violation is logged for a Licensed Internal Code module, the object name will be the 8 character RU name where RU name is the replaceable unit name of the Licensed Internal Code module, the library name will be blank, and the object type will be *LIC. If a violation of this type is encountered, contact your service representative to recover.

Also logged to the database file, but not integrity violations, are objects that do not have a digital signature but can be signed, objects that could not be checked, and objects whose format requires changes to be used on this machine implementation.

The type of violations that can occur are:

- NOSIG - The object can be signed but does not have a digital signature.
- NOTCHECKED - The object cannot be checked, it is in debug mode, saved with storage freed, or compressed.
- NOTTRANS - The object has not been converted to the current format or is not compatible with the current version, release, and modification level.

Note: Objects that are compressed, damaged, saved with storage freed, or in debug mode may not be checked.

Note: IBM commands duplicated from a release prior to V5R2 will be logged as ALTERED violations. These commands should be deleted and re-created using the CRTDUPOBJ (Create Duplicate Object) command each time a new release is loaded.

Restrictions:

- To check object integrity, you must have audit (*AUDIT) special authority.

Note: The CHKOBJITG command may run a long time if:

- the user profile specified for the USRPRF parameter owns many objects.
- *ALL is specified for the USRPRF parameter.
- *SYSTEM is specified for the OBJ parameter.
- many objects match the path name pattern specified for the OBJ parameter.

Top

Parameters

Keyword	Description	Choices	Notes
USRPRF	User profile, or	Generic name, name, *ALL	Optional, Positional 1
OBJ	Object	Path name, *SYSTEM	Optional
OUTFILE	File to receive output	Qualified object name	Optional, Positional 2
	Qualifier 1: File to receive output	Name	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	
OUTMBR	Output member options	Element list	Optional
	Element 1: Member to receive output	Name, *FIRST	
	Element 2: Replace or add records	*REPLACE, *ADD	
CHKDMN	Check domain	*YES, *NO	Optional
CHKPGMMOD	Check program and module	*YES, *NO	Optional
CHKCMD	Check command	*YES, *NO	Optional
CHKSIG	Check signature	*SIGNED, *ALL, *NONE	Optional
CHKLIB	Check library	*YES, *NO	Optional
SCANFS	Scan file systems	*STATUS, *YES, *NO	Optional
SUBTREE	Directory subtree	*NONE, *ALL	Optional
CHKLIC	Check Licensed Internal Code	*YES, *NO, *ONLY	Optional

Top

User profile (USRPRF)

Specifies the user profiles for which owned objects will be checked for integrity violations.

Note: A value must be specified for either the USRPRF parameter or the OBJ parameter. You cannot specify values for both parameters.

***ALL** Objects owned by all user profiles on the system are to be checked.

generic-name

Specify the generic names of the user profiles whose owned objects are to be checked.

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 user profile whose owned objects are to be checked.

Top

Object (OBJ)

Specifies the objects that will be checked for integrity violations.

Note: A value must be specified for either the USRPRF parameter or the OBJ parameter. You cannot specify values for both parameters.

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.

***SYSTEM**

All objects in all available auxiliary storage pools (ASPs) are to be checked.

Note: When *SYSTEM is specified, the only value allowed for the CHKSIG parameter is *ALL.

path-name

Specify the path name of the objects that are to be checked.

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.

Top

File to receive output (OUTFILE)

Specifies the database file to which the output of the command is directed. If the file does not exist, this command creates a database file in the specified library. If the file is created, the public authority for the file is the same as the create authority specified for the library in which the file is created. Use the Display Library Description (DSPLIBD) command to show the library's create authority.

Qualifier 1: File to receive output

name Specify the name of the database file to which the command output is directed.

Qualifier 2: Library

***LIBL** The library list is used to locate the file. If the file is not found, one is created in the current library. If no current library exists, the file will be created in the QGPL library.

***CURLIB**

The current library for the thread is used to locate the 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.

Note: If a new file is created, system file QASYCHKI in system library QSYS with a format name of QASYCHKI is used as a model.

Top

Output member options (OUTMBR)

Specifies the name of the database file member that receives the output of the command.

Element 1: Member to receive output

*FIRST

The first member in the file receives the output. If OUTMBR(*FIRST) is specified and the member does not exist, the system creates a member with the name of the file specified for the **File to receive output (OUTFILE)** parameter. If the member already exists, you have the option to add new records to the end of the existing member or clear the member and then add the new records.

name Specify the name of the file member that receives the output. If it does not exist, the system creates it.

Element 2: Replace or add records

*REPLACE

The system clears the existing member and adds the new records.

***ADD** The system adds the new records to the end of the existing records.

Top

Check domain (CHKDMN)

Specifies whether or not to check object domain integrity.

***YES** Object domain integrity is to be checked.

Note: The following objects are valid in user domain so they are not checked:

- QTEMP library
- all objects of type *PGM
- all objects of type *SQLPKG
- all objects of type *SRVPGM

The following object types are valid in user domain only if the library they are in is specified in system value QALWUSRDMN (or if QALUSRDMN is *ALL).

- *USRSPC
- *USRQ
- *USRIDX

***NO** Object domain integrity is not to be checked.

Top

Check program and module (CHKPGMMOD)

Specifies whether or not the integrity of program and module objects will be checked.

***YES** Program and module integrity is to be checked.

*NO Program and module integrity is not to be checked.

Top

Check command (CHKCMD)

Specifies whether or not the integrity of commands will be checked.

*YES Command integrity is to be checked.

*NO Command integrity is not to be checked.

Top

Check signature (CHKSIG)

Specifies whether or not the digital signatures of objects that can be signed will be checked.

*SIGNED

Objects with digital signatures are checked. Any object with a signature that is not valid will be logged.

*ALL All objects that can be digitally signed are checked. Any object that can be signed but has no signature will be logged. Any object with a signature that is not valid will be logged.

*NONE

Digital signatures will not be checked.

Top

Check library (CHKLIB)

Specifies whether or not the integrity of library attributes will be checked.

*YES Library attribute integrity is to be checked.

*NO Library attribute integrity is not to be checked.

Top

Scan file systems (SCANFS)

Specifies whether objects in the integrated file systems identified by the QSCANFS system value should be scanned or if existing scan status should be returned.

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/>.

*STATUS

Objects will not be scanned, but if an object's status indicates it failed the most recent scan operation, a SCANFSFAIL integrity violation will be logged.

*YES Objects will be scanned according to the rules described in the scan-related exit programs. If an object fails the scan operation, a SCANFSFAIL integrity violation will be logged.

*NO Objects will not be scanned and their scan failure status will not be logged.

Top

Directory subtree (SUBTREE)

Specifies whether or not to check the objects within the subtree if the object specified by the **Object (OBJ)** parameter is a directory.

*NONE

The objects specified by the OBJ parameter are checked. If the object is a directory, it will be checked, but the directory contents will not be checked.

*ALL The objects specified by the OBJ parameter are checked. If the object is a directory, it will be checked as well as its contents and the contents of all subdirectories.

Note: Pattern matching from the OBJ parameter only applies to the first level objects. If the first level object is a directory, the pattern matching does not apply to its contents or the contents of its subdirectories.

Once the command has begun processing a specific directory subtree, the objects which will be found and processed may be affected by operations that update the organization of objects within the specified directory tree. This includes, but is not limited to, the following:

- Adding, removing, or renaming object links
- Mounting or unmounting file systems
- Updating the effective root directory for the process calling the command
- Updating the contents of a symbolic link

In order to process the directory subtree, the system code may increase the process-scoped maximum number of file descriptors that can be opened during processing. This is done so that the command is not likely to fail due to a lack of descriptors. This process-scoped maximum value is not reset when the command completes.

Top

Check Licensed Internal Code (CHKLIC)

Specifies whether or not to check the integrity of the Licensed Internal Code.

Note: This parameter can only be specified when *SYSTEM is specified for the **Object (OBJ)** parameter and *ALL is specified for the **Check signature (CHKSIG)** parameter.

*YES Licensed Internal Code digital signatures are checked in addition to the checks that are performed when *SYSTEM is specified for the **Object (OBJ)** parameter.

*NO Licensed Internal Code digital signatures are not checked. The checks that are performed when *SYSTEM is specified for the **Object (OBJ)** parameter will still be performed.

*ONLY

Only Licensed Internal Code digital signatures are checked. The checks that are performed when *SYSTEM is specified for the **Object (OBJ)** parameter will not be performed.

Top

Examples

Example 1: Check Objects Owned by One User Profile


```
CHKOBJITG  USRPRF(JOEPGMR)  OUTFILE(SECHECK)
           OUTMBR(*FIRST *REPLACE)
           CHKDMN(*YES)  CHKPGMMOD(*YES)
           CHKSIG(*YES)  CHKLIB(*YES)
```

This command checks all objects owned by user JOEPGMR for integrity violations. Objects with an incorrect domain, program and module objects that have been tampered with, objects with digital signatures that are not valid, and libraries whose attributes have been tampered with will cause integrity violation records to be logged in database file SECHECK. Database file SECHECK is first cleared of any existing records.

Example 2: Check Objects Owned by Multiple User Profiles

```
CHKOBJITG  USRPRF(ABC*)  OUTFILE(ABCHECK)
           OUTMBR(*FIRST *REPLACE)  CHKDMN(*YES)
           CHKPGMMOD(*YES)  CHKSIG(*NONE)  CHKLIB(*YES)
```

This command checks all objects owned by user profiles that start with ABC for integrity violations. Objects with an incorrect domain, program and module objects that have been tampered with, and libraries whose attributes have been tampered with will cause integrity violation records to be logged to database file ABCCHECK. Database file ABCCHECK will first be cleared of any existing records.

Example 3: Check Objects in One Library

```
CHKOBJITG  OBJ('/QSYS.LIB/LIB2.LIB/ABC*.*')  OUTFILE(SECHECK2)
           OUTMBR(*FIRST *REPLACE)
           CHKDMN(*YES)  CHKPGMMOD(*YES)
           CHKSIG(*ALL)  CHKLIB(*NO)
```

This command checks objects in library LIB2 that have names beginning with ABC that are of any object type for integrity violations. Objects with an incorrect domain, program and module objects that have been tampered with, and objects with not valid or missing digital signatures will cause integrity violation records to be logged to database file SECHECK2. Database file SECHECK2 will first be cleared of any existing records.

Example 4: Check Object in a Directory

```
CHKOBJITG  OBJ('/PartOrder/Forms.jar')  OUTFILE(SECHECK3)
           OUTMBR(*FIRST *REPLACE)
           CHKDMN(*NO)  CHKPGMMOD(*NO)
           CHKSIG(*ALL)  CHKLIB(*NO)
```

This command checks file Forms.jar in directory PartOrder for integrity violations. If the file has a digital signature that is not valid or is capable of being signed and has no signature, an integrity violation record will be logged to database file SECHECK3. Database file SECHECK3 will first be cleared of any existing records.

Note: Any Java programs associated with this stream file will be checked for valid signatures as well.

Example 5: Scan Files

```
CHKOBJITG  OBJ('/Parts/*')  OUTFILE(SECHECK4)
           CHKDMN(*NO)  CHKPGMMOD(*NO)  CHKSIG(*NONE)
           CHKLIB(*NO)  SCANFS(*YES)
```

This command scans all files in directory Parts for integrity violations. If a file fails the scan by the scan-related exit program, an integrity violation record will be logged to database file SECCHECK4.

Example 6: Check Licensed Internal Code

```
CHKOBJITG  OBJ(*SYSTEM)  OUTFILE(SECCHECK5)
           CHKDMN(*NO)  CHKPGMMOD(*NO)  CHKSIG(*ALL)
           CHKLIB(*NO)  SCANFS(*NO)  CHKLIC(*ONLY)
```

This command will check the Licensed Internal Code for integrity violations. If any of the Licensed Internal Code has a digital signature that is not valid, or does not have a signature, an integrity violation record will be logged to database file SECCHECK5.

Top

Error messages

*ESCAPE Messages

CPFA0AA

Error occurred while attempting to obtain space.

CPFA0A9

Object not found. Object is &1.

CPFA093

Name matching pattern not found.

CPF22D9

No user profiles of specified name exist.

CPF22F0

Unexpected errors occurred during processing.

CPF2204

User profile &1 not found.

CPF2213

Not able to allocate user profile &1.

CPF222E

&1 special authority is required.

CPF222F

Command not run.

CPF4AAC

User profile &2 not processed.

CPF4ABD

Licensed Internal Code not checked.

CPF9860

Error occurred during output file processing.

Top

Check Optical Volume (CHKOPTVOL)

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

Parameters
Examples
Error messages

The Check Optical Volume (CHKOPTVOL) command will validate that all directories and files on the volume can be read. If all directories and file data can be read successfully, the command will complete with no errors and the OUTPUT parameter specified determines whether or not to print a list of files and the number of bytes used. If any directory cannot be successfully read the command will complete in error with no output. If the directories can be read but all file data cannot be read, the command will complete in error and the OUTPUT parameter specified determines whether or not to print a list of damaged files, the number of files that are not damaged, and the number of bytes occupied for each.

Restrictions:

1. To use this command you must have *USE authority to the authorization list securing the volume.
2. If this command is being used to check a volume with the Universal Disk Format (UDF), the user must have *RWX authority to the volume root directory.

Top

Parameters

Keyword	Description	Choices	Notes
VOL	Volume identifier	<i>Character value</i> , *ALL, *MOUNTED	Required, Positional 1
OUTPUT	Output	* ERROR , *NONE, *PRINT	Optional, Positional 2
DEV	Optical device	<i>Name</i> , * ALL	Optional, Positional 3

Top

Volume identifier (VOL)

*ALL All optical volumes in the specified optical device (DEV parameter) are checked.

*MOUNTED

The volume mounted on the specified device (DEV parameter) is checked.

Note: This value is valid only for stand-alone optical devices, not for library devices.

volume-identifier

Specifies the volume identifier of the optical volume to be checked.

generic-volume-identifier*

Specify the generic name of the volume identifier. 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 will result in the check of all volumes which begin with the generic prefix and 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.

Output (OUTPUT)

Specifies whether or not the output from the command is printed with the job's spooled output.

*ERROR

Print the list of damaged files to the job's spooled output only if there are any damaged files.

*NONE

The number of damaged files and the number of not damaged files will be in the completion message, but no spooled output file is generated.

*PRINT

Print to the job's spooled output even if there are not any damaged files.

Top

Optical device (DEV)

Specifies the name of the optical device to use for the operation.

*ALL When the VOL parameter is a specific name or a generic name the names of all of the optical volumes in all of the devices will be compared for a match.

name When VOL(*MOUNTED) this is the name of the specified optical device. When the VOL(*ALL) all of the volumes in this device will be checked.

Note: This value is valid only when VOL(*ALL) or VOL(*MOUNTED) is specified. Otherwise this parameter is ignored.

Top

Examples

Example 1: Check an Optical Volume

```
CHKOPTVOL VOL(VOL01) OUTPUT(*ERROR)
```

This command checks the directories and files on VOL01. If any damaged files are found the file names are printed to the job's spooled output.

Example 2: Check an Optical Volume and Print the Results to the Job's Spooled Output

```
CHKOPTVOL VOL(VOL01) OUTPUT(*PRINT)
```

This command checks the directories and files on VOL01 and prints a list of damaged files, the number of files that are not damaged, and the number of bytes occupied for each.

Example 3: Check Optical Volumes Using a Generic Volume Identifier

```
CHKOPTVOL VOL(PAY*) OUTPUT(*ERROR) DEV(*ALL)
```

This command checks the directories and files on all volumes in all optical devices that start with PAY. Spooled output created only if error occurs.

Example 4: Check all Optical Volumes in an Optical Media Library

```
CHKOPTVOL VOL(*ALL) OUTPUT(*ERROR) DEV(OPTMLB01)
```

This command checks the directories and files on all volumes in optical media library OPTMLB01.

Top

Error messages

*ESCAPE Messages

OPT0125

Command &1 completed with errors, more information in job log.

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.

OPT1346

Operation not allowed to volume located in a remote optical device.

OPT1460

Optical volume &1 is not in an optical device.

OPT148A

Volume name matching pattern not found.

OPT1515

Unsupported or insufficient configuration on optical device &1.

OPT1530

&1 does not represent a valid optical device.

OPT1542

Operation not supported to optical volume.

OPT1555

Optical device &1 in use.

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.
- OPT1821**
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.
- OPT1864**
Insufficient allocated and operational optical drives.
- OPT1872**
Optical request timed out or was cancelled.
- OPT2046**
Check Optical Volume completed. &2 damaged files were found.
- OPT2051**
The check optical volume request for optical volume &1 failed.
- OPT2301**
Internal system object in use.
- OPT2420**
Not authorized to optical volume &2.
- OPT7740**
User not authorized to object &2 in library &3 type &4.

Top

Check Out Object (CHKOUT)

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

Parameters
Examples
Error messages

The Check Out Object (CHKOUT) command checks out an object. The object is checked out to the user profile associated with the current user of the job that is running the CHKOUT command.

When an object is checked out, other users can read and copy the object. Only the user who has the object checked out can change the object until it is checked in (see the Check In Object (CHKIN) command).

The CHKOUT command can also be used to check out a directory tree so that the specified directory's contents, and the contents of all of its subdirectories, are checked out. If SUBTREE(*ALL) is specified, the command will attempt to check out as many objects as possible within the subtree. A diagnostic message will be sent for each object that cannot be checked out. When all of the objects have been attempted, an escape message will be sent if there were any errors. If all of the objects have been checked out with no errors, a completion message will be sent.

If a symbolic link object is encountered, either specified in the **Object (OBJ)** parameter or encountered in the processing of a subtree, the symbolic link will not be followed.

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:

- Only documents within QDLS and stream files can be checked out. If SUBTREE(*ALL) is specified, the check out will only be done for the object types which are supported by the check out command.
- To check out an object the user must have write (*W) authority to all the objects being checked out.
- To check out an object the user must have at least execute (*X) authority to the directory prefixes in the path.
- When doing subtree processing, the user must have read (*R) and execute (*X) authorities to the path name and all subdirectories within that path.
- Not all file systems will support the CHKOUT command.

Top

Parameters

Keyword	Description	Choices	Notes
OBJ	Object	<i>Path name</i>	Required, Positional 1
SUBTREE	Directory subtree	*NONE, *ALL	Optional

Top

Object (OBJ)

Specifies the name of the object to check out or a pattern for multiple objects.

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

Directory subtree (SUBTREE)

Specifies whether or not to check out all of the objects within the subtree if the object specified by the **Object (OBJ)** parameter is a directory.

*NONE

The objects specified by OBJ parameter are checked out.

***ALL** The objects specified by OBJ are checked out. If the object is a directory, its contents as well as the contents of all of its subdirectories will be checked out.

Note: Pattern matching on the OBJ parameter only applies to the first level objects. If the first level object is a directory, the pattern matching does not apply to its contents or the contents of its subdirectories.

Once the command has begun processing a specific directory subtree, the objects which will be found and processed may be affected by operations that update the organization of objects within the specified directory tree. This includes, but is not limited to, the following:

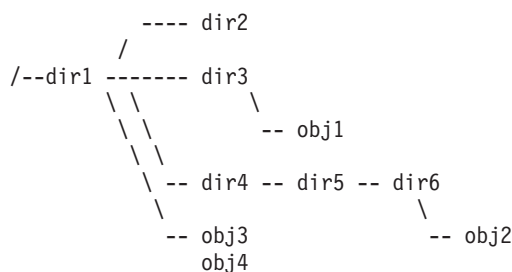
- Adding, removing, or renaming object links
- Mounting or unmounting file systems
- Updating the effective root directory for the process calling the command
- Updating the contents of a symbolic link

In order to process the directory subtree, the system code may increase the process-scoped maximum number of file descriptors that can be opened during processing. This is done so that the command is not likely to fail due to a lack of descriptors. This process-scoped maximum value is not reset when the command completes.

Top

Examples

The examples below assume the following directory structure:



Example 1: Checking an Object Out

```
CHKOUT OBJ('/dir1/obj4')
```

This command checks out object **obj4** in the **dir1** directory. The object is checked out to the current user for the job running this command.

Example 2: Checking Out Objects Using Subtree Processing

```
CHKOUT OBJ('/dir1') SUBTREE(*ALL)
```

This command checks out all the eligible objects in directory **dir1** as well as all objects in its subdirectories. In this example, objects **obj1**, **obj2**, **obj3**, and **obj4** will be checked out.

Example 3: Checking Out a Group of Objects

```
CHKOUT OBJ('/dir1/obj*') SUBTREE(*NONE)
```

In this example, objects **obj3** and **obj4** will be checked out.

Example 4: Checking Out a Group of Objects Using Subtree Processing

```
CHKOUT OBJ('/dir1/dir*') SUBTREE(*ALL)
```

In this example, objects **obj1** and **obj2** will be checked out.

Top

Error messages

*ESCAPE Messages

CPFA09C

Not authorized to object. Object is &1.

CPFA09D

Error occurred in program &1.

CPFA09E

Object in use. Object is &1.

CPFA0A1

An input or output error occurred.

CPFA0A3

Path name resolution causes looping.

CPFA0A7

Path name too long.

CPFA0A9

Object not found. Object is &1.

CPFA0AA

Error occurred while attempting to obtain space.

CPFA0AB

Operation failed for object. Object is &1.

CPFA0AD

Function not supported by file system.

CPFA0B2

No objects satisfy request.

CPFA0BF

&3 objects checked out. &4 objects failed.

CPFA0DA

Object is a directory. Object is &1.

CPFA1C5

Object is a read only object. Object is &1.

Top

Check Performance Collection (CHKPFRCOL)

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

[Parameters](#)
[Examples](#)
[Error messages](#)

The Check Performance Collection (CHKPFRCOL) command provides a method for determining the current status of the Collection Services server job (QYSPFRCOL). If the server job is not active, the command sends escape message CPF0AA5. If the server job is active, the command sends information message CPI0A16. This information message provides the name and library of the current management collection object and the current collection profile.

There are no parameters for this command.

[Top](#)

Parameters

None

[Top](#)

Examples

CHKPFRCOL

This command will return a message informing the user of the current status of the Collection Services server job (QYSPFRCOL).

[Top](#)

Error messages

*ESCAPE Messages

CPF0AA5

Collection Services not active.

[Top](#)

Check Product Option (CHKPRDOPT)

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

Parameters
Examples
Error messages

The Check Product Option (CHKPRDOPT) command reports differences between the correct structure and the actual structure of a software product. (For example, if an object is deleted from an installed product, CHKPRDOPT will report the error.) Use the informational and diagnostic messages to determine the condition of the product. CHKPRDOPT does not necessarily issue an escape message if the product has been deleted or is being created.

Top

Parameters

Keyword	Description	Choices	Notes
PRDID	Product identifier	Character value, *OPSYS	Required, Positional 1
RLS	Release	Character value, *ALL, *OPSYS, 'VxRxMx'	Optional
OPTION	Product option	1-99, *ALL, *BASE	Optional
LODID	Load identifier	Character value, *ALL, *CODEDFT, *PRIMARY	Optional
CHKSIG	Check signature	*SIGNED, *ALL, *NONE	Optional
DETAIL	Detail	*BASIC, *FULL	Optional

Top

Product identifier (PRDID)

Specifies the identifier of the software product being checked.

The possible values are:

***OPSYS**

The i5/OS licensed program is checked.

product-identifier

Specify a product identifier. The identifier must be seven characters in length.

Top

Release (RLS)

Specifies the release level of the product to be checked.

The possible values are:

***ALL** All releases of the product are checked.

***OPSYS**

The release level of the product being checked is the same as the release level of the operating system currently installed.

release-level

Specify the release level in VxRxMx format where Vx is the version number, Rx is the release number, and Mx is the modification number.

Top

Product option (OPTION)

Specifies the product option being checked.

The possible values are:

***ALL** All options of the product are checked.

***BASE**
The base option of the product is checked.

product-option

Specify an option number ranging from 1 through 99.

Top

Load identifier (LODID)

Specifies the product load being checked.

The possible values are:

***ALL** All product loads for a given option are checked.

***CODEDFT**
The code load is checked.

***PRIMARY**
The code load and the primary language load are checked.

product-load-identifier

Specify the product load identifier. The load identifier must be four characters in length.

Top

Check signature (CHKSIG)

Specifies if the digital signatures of objects are to be checked.

The possible values are:

***SIGNED**
Objects with digital signatures are checked. Any object that has been signed will have the signature verified. Objects with invalid signatures will be identified in messages sent to the job log and the product will be set to be in an erroneous state.

***ALL** All objects that can be digitally signed will have the signature verified. Any object that can be signed but has no signature will be identified in a message sent to the job log but the product will not be set to be in error. Any signed object with a signature that is not valid will be identified in a message sent to the job log. If an invalid signature is found, the product will be set to be in an erroneous state.

***NONE**

Digital signatures of objects will not be checked.

Top

Detail (DETAIL)

Specifies which set of messages is sent for each product.

The possible values are:

***BASIC**

Only the messages for the loads that actually exist are given. No messages are given for a load that is defined.

***FULL** All messages are given for the loads requested.

Top

Examples

CHKPRDOPT PRDID(5716WP1)

This command checks all releases of the product with identifier 5716WP1.

Top

Error messages

*ESCAPE Messages

CPF0C20

Errors found by CHKPRDOPT.

CPF0C2C

Errors found during digital signature verification.

CPF0C4A

Product record not found.

CPF0C4B

Product availability object &2/&1 recovery required.

CPF0C4C

Cannot allocate object &1 in library &2.

CPF0C4D

Error occurred while processing object &1 in library &2.

CPF0C54

Data in product record not correct.

CPF358A

Release not valid.

CPF8A06

Document &2 or folder &3 partially created in folder &1.

CPF8A78

Folder &1 in use.

CPF9012

Start of document interchange session not successful for &1.

CPF9032

Document interchange session not started.

CPF9830

Cannot assign library &1.

CPF9838

User profile storage limit exceeded.

[Top](#)

Check Password (CHKPWD)

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

Parameters
Examples
Error messages

The Check Password (CHKPWD) command checks a password for the user running the command and determines its validity. If the password is correct, no message is sent. If the password is not correct, an error message is sent.

The password is the security key that allows a user to sign on to the system.

[Top](#)

Parameters

Keyword	Description	Choices	Notes
PASSWORD	User password	<i>Character value</i>	Required, Positional 1

[Top](#)

User password (PASSWORD)

Specifies a password value that is checked for validity.

This is a required parameter.

character-string

Specify the password value to be checked.

[Top](#)

Examples

```
CHKPWD PASSWORD(JOHNJONES)
```

This command checks whether the current password is JOHNJONES.

[Top](#)

Error messages

*ESCAPE Messages

CPF2362

Password not correct.

CPF2363

Only 1 attempt left to check password.

CPF2364

Maximum number of attempts to check password reached.

[Top](#)

Check Record Locks (CHKRCDLCK)

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

[Parameters](#)
[Examples](#)
[Error messages](#)

The Check Record Locks (CHKRCDLCK) command supplies a method to detect whether a job has any record locks. This command sends an escape message if there are any record locks held by the routing step.

There are no parameters for this command.

[Top](#)

Parameters

None

[Top](#)

Examples

CHKRCDLCK

This command sends an escape message if there are any record locks held by the job.

[Top](#)

Error messages

*ESCAPE Messages

CPF321F

Job holds &1 record locks.

[Top](#)

Check Tape (CHKTAP)

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

Parameters
Examples
Error messages

The Check Tape (CHKTAP) command searches a volume on the specified device for a unique volume identifier or file label. If the correct tape is loaded, you may process this file on the next tape operation by specifying the same sequence number that was specified in the Check Tape (CHKTAP command). If the correct tape is not found, an escape message is sent.

Top

Parameters

Keyword	Description	Choices	Notes
DEV	Device	<i>Name</i>	Required, Positional 1
VOL	Volume identifier	<i>Character value, *MOUNTED</i>	Optional, Positional 2
SEQNBR	Sequence number	<i>Integer, *NONE, *FIRST, *NEXT, *SEARCH</i>	Optional, Positional 3
LABEL	File label	<i>Character value, *NONE</i>	Optional, Positional 4
CRTDATE	Creation date	<i>Date, *NONE</i>	Optional
ENDOPT	End of tape option	<i>*LEAVE, *REWIND, *UNLOAD</i>	Optional

Top

Device (DEV)

Specifies the device in which the volume being checked is placed.

This is a required parameter.

name Specify the name of the tape or media library device.

This is a required parameter.

Top

Volume identifier (VOL)

Specifies whether the volume identifier on the tape is being checked. This is valid only for a standard labeled tape.

Note: If the device specified is a media library device, or a virtual tape device, then the volume specified should be the cartridge identifier or virtual tape volume name to be mounted and used.

*MOUNTED

The volume identifier on the tape is not checked. The volume on the device is used. For a media

library device, the volume to be used is the next cartridge in the category mounted by the Set Tape Category (SETTAPCGY) command. For a virtual tape device, the volume to be used is the currently mounted one, or if there is not a currently mounted volume, the next volume in loaded status in the image catalog will be used.

character-value

If the device specified in the DEV parameter is a stand-alone tape device, specify the volume identifier of the labeled volume. The volume identifier read from the tape is compared to this value. If the volume identifier specified is not found on the tape, an escape message is sent. If the device specified in the DEV parameter is a library device description, specify the cartridge identifier of the volume to be used. If the device specified in the DEV parameter is a virtual tape device, specify the virtual tape volume name of the volume to be used.

Top

Sequence number (SEQNBR)

Specifies whether a check is made for a specific sequence number of a data file on the tape.

***NONE**

No check is made for a file on this volume.

***FIRST**

A check is made for the first file on this volume.

***NEXT**

A check is made for the next file on this volume. If the current sequence number is at the beginning of the volume, this value checks the first file on that volume.

***SEARCH**

A search is made for a data file that has an identifier that matches the value for the **File label (LABEL)** parameter. If *SEARCH is specified, the volume must be labeled and a file label must be specified for the **File label (LABEL)** parameter. An escape message is sent if the file is not found.

integer

Specify the sequence number of the data file to verify on this tape. If the sequence number is not found on the tape, an escape message is sent. Valid values range from 1 through 16777215.

Top

File label (LABEL)

Specifies whether a label identifier is checked. If a label is specified, a sequence number must be specified for the **Sequence number (SEQNBR)** parameter.

***NONE**

No check is made for a label identifier on the tape. *NONE must be specified both here and for the **Creation date (CRTDATE)** parameter for a volume that is not labeled.

character-value

Specify the data file identifier (17 characters maximum) of the data file to check. If a label is specified, *SEARCH or a sequence number must be specified for the **Sequence number (SEQNBR)** parameter. The file identifier of the file at that sequence number is compared with the label identified by this parameter. If the label does not match, an escape message is sent.

Top

Creation date (CRTDATE)

Specifies whether the date the file was created is checked. If *NONE is specified for the **Sequence number (SEQNBR)** parameter, *NONE must also be specified here.

*NONE

The date the file was created is not checked. *NONE must be specified both here and for the **File label (LABEL)** parameter for a volume that is not labeled.

date Specify the date that must match the date of the file being checked. The date must be specified in the job date format.

Top

End of tape option (ENDOPT)

Specifies whether the tape is rewound only or rewound and unloaded after the operation ends.

*LEAVE

The tape is not rewound. The next file operation starts at the beginning of the data file where the tape is currently positioned. This allows the file to be opened with the sequence number specified on the **Sequence number (SEQNBR)** parameter without having to change the tape position.

*REWIND

The tape is rewound, but not unloaded.

*UNLOAD

The tape is automatically rewound and unloaded after the operation ends.

Top

Examples

Example 1: Checking the Volume Identifier

```
CHKTAP  DEV(TAPE1)  VOL(TAPEVOL)
```

This command checks the volume identifier of the volume on the tape device TAPE1. If the volume identifier on the tape is TAPEVOL, the command completes normally and no message is sent. If the volume identifier on the tape is not TAPEVOL, an escape message is sent.

Example 2: Checking for a Specific Sequence Number

```
CHKTAP  DEV(TAPE2)  VOL(VOLID)  SEQNBR(5)  
        LABEL(FILE5)  CRTDATE('1/9/84')
```

This command checks the volume on the tape device TAPE2 for a volume identifier of VOLID. If that volume is found, sequence number 5 is located on the tape (it must be a standard-labeled tape). The sequence number in the file label is used to position to sequence number 5. If the sequence number is found and the header label contains both the file identifier FILE5 and the date of 1/9/84, the correct tape and file has been found, and a completion message is sent. The next tape operation can specify sequence number 5 to access this file without positioning the tape. If the specified volume is not found or the tape is not a standard labeled volume, an escape message is sent. If the volume is found and the sequence number is not found, an escape message is sent. If the file label at that sequence number is not FILE5, an escape message is sent. If the date at that sequence number is not 1/9/84, an escape message is sent.

Error messages

*ESCAPE Messages

CPF6708

Command ended due to error.

CPF6718

Cannot allocate device &1.

CPF6720

Incorrect volume &2 found on device &1.

CPF6721

Device &1 not a tape device.

CPF6728

LABEL(*NONE) or CRTDATE(*NONE) required.

CPF6734

File sequence number &3 not found on volume &2.

CPF6735

Label ID &6 not found at &3.

CPF6736

Creation date &6 not found at &3.

CPF6737

Label &4 not found on volume &2.

CPF6745

Device &1 not a media library device.

CPF6751

Load failure occurred on device &4.

CPF6752

SEQNBR(*FIRST) or SEQNBR(*NEXT) is not valid.

CPF6760

Device &1 not ready.

CPF6772

Volume on device &1 cannot be processed.

CPF67E6

Volume &2 is not correct

CPF9814

Device &1 not found.

CPF9825

Not authorized to device &1.

Close File (CLOF)

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

Parameters
Examples
Error messages

The Close File (CLOF) command closes a database file. This command works in conjunction with the Open Query File (OPNQRYF) and Open Database File (OPNDBF) commands.

Top

Parameters

Keyword	Description	Choices	Notes
OPNID	Open file identifier	<i>Name</i>	Required, Positional 1

Top

Open file identifier (OPNID)

Specifies the name used on the Open Query File (OPNQRYF) command or Open Database File (OPNDBF) command for identifying this open operation. This name is specified when closing this file; you cannot reuse it without first closing this file.

This is a required parameter.

name Specify the open file identifier.

Top

Examples

CLOF OPNID(APPL)

This command closes a database file that was opened with APPL as the OPNID. The file was previously opened using the OPNDBF or OPNQRYF command with APPL specified (or defaulted) as the OPNID.

Top

Error messages

*ESCAPE Messages

CPF4519

Member &3 file &1 not closed.

CPF4520

No file open with identifier &4.

Close Database File (CLOSE)

Where allowed to run:

- Batch program (*BPGM)
- Interactive program (*IPGM)

Threadsafe: Yes

Parameters
Examples
Error messages

The Close Database File (CLOSE) command will explicitly close a database file that was implicitly opened by a Receive File (RCVF) command run within the same CL program or ILE CL procedure. A file with the same open identifier must have been declared by a Declare File (DCLF) command within the same CL program or ILE CL procedure.

After the CLOSE command is run, the next RCVF command for this file will implicitly reopen the file and read a record from the file.

You can use CLOSE for a database file that is already closed or was never opened; no error message will be sent.

Restrictions:

- This command is valid only for database files within a CL program or ILE CL procedure. It cannot be used with display files.

Top

Parameters

Keyword	Description	Choices	Notes
OPNID	Open file identifier	Simple name, <u>*NONE</u>	Optional

Top

Open file identifier (OPNID)

Specifies the open file identifier that was declared on a preceding Declare File (DCLF) command in the same CL program or ILE CL procedure. A CL variable cannot be specified for this parameter value.

*NONE

No open file identifier is provided. This command will use the file associated with the DCLF command that had *NONE specified for the OPNID parameter. Only one file can be declared in a CL program or ILE CL procedure with *NONE as the open file identifier.

simple-name

Specify a name that matches the OPNID parameter value on a preceding DCLF command in the same CL program or ILE CL procedure.

Top

Examples

Example 1: Close a Database File Declared with No Open Identifier

```
DCLF  FILE(MYLIB/MYFILE1)
:
RCVF
:
CLOSE
RCVF
```

This CLOSE command explicitly closes database file MYFILE1 located in library MYLIB. The DCLF, RCVF, and CLOSE commands did not specify an open identifier (OPNID parameter) so a default open identifier of *NONE was used. The first Receive File (RCVF) command implicitly opened file MYFILE1. Assuming the CLOSE command successfully closes the file, the second RCVF command would reopen the file and read a record from the file.

Example 2: Close a Database File Specifying an Open Identifier

```
DCLF  FILE(*LIBL/MYFILE2) OPNID(FILE2)
:
RCVF  OPNID(FILE2)
:
CLOSE OPNID(FILE2)
RCVF  OPNID(FILE2)
```

This CLOSE command explicitly closes database file MYFILE2 located in a library that is in the library list for the job. The DCLF, RCVF, and CLOSE commands that operate on this file must all specify the same open identifier (OPNID parameter) value. The first Receive File (RCVF) command implicitly opened file MYFILE2. Assuming the CLOSE command successfully closes the file, the second RCVF command would reopen the file and read a record from file MYFILE2.

Top

Error messages

*ESCAPE Messages

CPF0777

File &1 in library &2 with open identifier &3 not closed.

Top

Clear Job Queue (CLRJOBQ)

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

Parameters
Examples
Error messages

The Clear Job Queue (CLRJOBQ) command removes, from the specified job queue, all the job entries for batch jobs (including jobs that are in the hold state). Any jobs that are currently being read in and any interactive jobs that have been rerouted to the job queue remain on the queue. The running of jobs that were started from the job queue is not affected.

Top

Parameters

Keyword	Description	Choices	Notes
JOBQ	Job queue	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Job queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
LOG	Job log	<i>*JOB, *NONE</i>	Optional

Top

Job queue (JOBQ)

Specifies the job queue that is to be cleared of all waiting or held jobs.

This is a required parameter.

Qualifier 1: Job queue

name Specify the name of the job queue that is to be cleared.

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 job queue. If no current library entry exists in the library list, QGPL is used.

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

Top

LOG (LOG)

Specifies whether to use the message logging values associated with a job for jobs removed from the job queue.

***JOB** Use the message logging values specified for each job when the job is removed from the job queue.

***NONE**

No job log spooled files will be generated for the removed jobs.

Top

Examples

CLRJOBQ JOBQ(QBATCH)

This command removes all jobs currently in the IBM-supplied job queue, QBATCH. Any job currently being read in is not affected.

Top

Error messages

*ESCAPE Messages

CPF2207

Not authorized to use object &1 in library &3 type *&2.

CPF3307

Job queue &1 in &2 not found.

CPF3330

Necessary resource not available.

CPF3416

&1 entries deleted. &2 entries not deleted from job queue &3 in library &4.

CPF9843

Object &1 in library &3 type &2 cannot be accessed.

Top

Clear Library (CLRLIB)

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

Parameters
Examples
Error messages

The Clear Library (CLRLIB) command deletes all of the objects that you have the authority to delete from the specified library. This command does not delete the specified library, only the objects in it for which you have object existence (*OBJEXIST) authority. The other objects remain in the library. If any object in the library is in use (locked by another thread or job), the object cannot be deleted.

Restrictions:

1. You must have object existence (*OBJEXIST) authority for every object being deleted and use (*USE) authority for the library.
2. This command cannot be used to clear the following libraries (where 'xxxxx' is the number of a primary auxiliary storage pool (ASP) and 'nnnn' is the number of a basic user ASP or a primary or secondary ASP):
 - QRECOVERY or QRCYxxxxx
 - QSPL or QSPLnnnn
 - QSYS or QSYSxxxxx
 - QSYS2 or QSYS2xxxxx
 - QSYSCGI
 - SYSIBM or SYSIBxxxxx
 - SYSIBMADM
 - SYSPROC
 - SYSTOOLS
3. This command is conditionally threadsafe. The following restriction applies:
 - 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
LIB	Library	Name, *CURLIB	Required, Positional 1
ASPDEV	ASP device	Name, *, *CURASPGRP, *SYSBAS	Optional

Top

Library (LIB)

Specifies the library to be cleared of all objects for which you have object existence (*OBJEXIST) authority. If you do not have *OBJEXIST authority for an object, that object remains in the library. If QGPL is specified or defaulted via *CURLIB, an inquiry message (CPA2129) is sent to verify that you want to clear the QGPL library.

This is a required parameter.

***CURLIB**

The current library for the thread is to be cleared. If no current library exists in the library list for the current thread, the QGPL library is cleared.

name Specify the name of the library to be cleared.

Top

ASP device (ASPDEV)

Specifies the auxiliary storage pool (ASP) device where storage is allocated for the library to be cleared. If the library to be cleared is not part of the thread's library name space, this parameter must be specified to ensure the correct library is the target of the clear library operation.

Note: If this parameter is specified when *CURLIB is specified for the **Library (LIB)** parameter, ASPDEV(*) is the only valid value.

*
- The ASPs that are currently part of the thread's library name space will be searched to find the library. This includes the system ASP (ASP 1), all defined basic user ASPs (ASPs 2-32), and, if the thread has an ASP group, all primary and secondary ASPs in the ASP group.

***CURASGRP**

If the thread has an ASP group, the primary and secondary ASPs in the ASP group will be searched to find the library. The system ASP (ASP 1) and defined basic user ASPs (ASPs 2-32) will not be searched.

***SYSBAS**

The system ASP (ASP 1) and all defined basic user ASPs (ASPs 2-32) will be searched to find the library. No primary or secondary ASPs will be searched, even if the thread has an ASP group.

name Specify the name of the primary or secondary ASP device to be searched to find the library. The primary or secondary ASP must have been activated (by varying on the ASP device) and have a status of 'Available'. The system ASP (ASP 1) and defined basic user ASPs (ASPs 2-32) will not be searched.

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

Examples

Example 1: Clearing a Library

```
CLRLIB LIB(A)
```

This command deletes all objects in library A that are not in use and for which you have object existence (*OBJEXIST) authority.

Example 2: Deleting a Library in an Independent Auxiliary Storage Pool (ASP)

```
CLRLIB LIB(INVENTORY) ASPDEV(SALES)
```


This command deletes all objects in library INVENTORY in the independent auxiliary storage pool (ASP) named SALES that are not in use and for which you have object existence (*OBJEXIST) authority. The SALES ASP must have been activated (by varying on the ASP device) and have a status of 'Available'.

Top

Error messages

*ESCAPE Messages

CPF8ED

Device description &1 not correct for operation.

CPF210D

Library &1 in use.

CPF2110

Library &1 not found.

CPF2113

Cannot allocate library &1.

CPF2129

Clear or delete of system library &1 canceled.

CPF216B

Library &1 cannot be cleared.

CPF2161

Cannot delete some objects in library &1.

CPF2173

Value for ASPDEV not valid with special value for library.

CPF218C

&1 not a primary or secondary ASP.

CPF2182

Not authorized to library &1.

CPF8122

&8 damage on library &4.

CPF9814

Device &1 not found.

CPF9825

Not authorized to device &1.

CPF9833

*CURASGRP or *ASPGRPPRI specified and thread has no ASP group.

Top

Clear Message Queue (CLRMSGQ)

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

Parameters
Examples
Error messages

The Clear Message Queue (CLRMSGQ) command clears (removes) all messages from a specified message queue. Once cleared, the data can no longer be displayed or printed. If the specified message queue is not allocated to a job, it is implicitly allocated by this command for the duration of the command. If the specified message queue is *WRKSTN or a work station message queue, it is not allocated and the message queue is cleared even if the work station device description is allocated to another job.

Restriction: You must have change (*CHANGE) authority to the message queue and use (*USE) authority to the library where the message queue is stored.

Top

Parameters

Keyword	Description	Choices	Notes
MSGQ	Message queue	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Message queue	<i>Name</i> , *WRKSTN	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	
CLEAR	Clear	*ALL, *KEEPUNANS	Optional

Top

Message queue (MSGQ)

Specifies the message queue to be cleared. If a specific message queue name is specified with a library qualifier of *LIBL, only the first message queue found with that name is cleared.

This is a required parameter.

Qualifier 1: Message queue

*WRKSTN

The work station message queue is cleared. This is not allowed in batch mode.

message-queue-name

Specify the name of the message queue to be cleared.

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 to locate the message queue to be cleared. If no current library exists in the library list, the QGPL library is used.

library-name

Specify a library name where the message queue is located. Only the library named in this parameter is searched.

Clear (CLEAR)

Specifies which messages to clear from the message queue.

***ALL** Clears all messages on the message queue. If there are any unanswered messages on the queue, the default reply for the message is sent before the message is removed.

***KEEPUNANS**

All messages except unanswered inquiry messages and sender copy messages are removed from the specified message queue.

Examples

Example 1: Clearing All Messages

```
CLRMSGQ MSGQ(*CURLIB/MQFIN) CLEAR(*ALL)
```

This command clears all messages from a message queue named MQFIN, which is located in the current library for the job.

Example 2: Keeping Unanswered Messages

```
CLRMSGQ MSGQ(*CURLIB/MQFIN) CLEAR(*KEEPUNANS)
```

This command clears all messages except unanswered inquiry messages from a message queue called MQFIN, which is located in the current library for the job.

Error messages

*ESCAPE Messages

CPF2357

Message queue &1 in &2 not cleared.

Clear Master Key (CLRMSTKEY)

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

Parameters
Examples
Error messages

The Clear Master Key (CLRMSTKEY) command clears the specified master key version. For all master keys except the Save/Restore Master Key, the key value and key verification value (KVV) are set to null (binary zeroes). Clearing the Save/Restore Master Key sets the key value for the specified version to the default value with a KVV of hexadecimal '16C1D3E3C073E77DB28F33E81EC165313318CE54'.

For more information on master keys, refer to the Cryptographic Services Master Keys article in the Cryptographic Services section of the APIs topic collection in the Programming category in the i5/OS Information Center at <http://www.ibm.com/systems/i/infocenter/>.

Restrictions:

- You must have all object (*ALLOBJ) and security administrator (*SECADM) special authorities to run this command.

Top

Parameters

Keyword	Description	Choices	Notes
MSTKEY	Master key	1-8, *ASP, *SAVRST	Required, Positional 1
VERSION	Master key version	*NEW, *CURRENT, *OLD, *PENDING	Required, Positional 2

Top

Master key (MSTKEY)

Specifies the master key on which to perform the action.

This is a required parameter.

The action will be performed on:

***ASP** The master key used for encrypting data stored on auxiliary storage pool (ASP) disk storage.

***SAVRST**

The master key used for encrypting all the other master keys on a SAVSYS operation.

1-8 One of the eight general purpose master keys.

Top

Master key version (VERSION)

Specifies the version of the master key to clear.

This is a required parameter.

***NEW** Clear the new version.

***CURRENT**
Clear the current version.

***OLD** Clear the old version.

Note: Before clearing an old master key version, ensure no keys or data are still encrypted under it.

***PENDING**
Clear the pending version. This value is not valid if *SAVRST is specified for the **Master key (MSTKEY)** parameter.

Top

Examples

Example 1: Clear the New Version of a Master Key

```
CLRMSTKEY MSTKEY(1) VERSION(*NEW)
```

This command clears the new version of Master Key 1. The new version consists of all key parts that were loaded since the last time the master key was set. The master key could have been set by running the Set Master Key (SETMSTKEY) command.

Example 2: Clear the Pending Version of a Master Key

```
CLRMSTKEY MSTKEY(4) VERSION(*PENDING)
```

This command clears the pending version of Master Key 4. The existence of a pending version indicates that the master key had been restored to the system, but the system was unable to decrypt it.

Top

Error messages

*ESCAPE Messages

CPF222E
&1 special authority is required.

CPF3CF2
Error(s) occurred during running of &1 API.

CPF9872
Program or service program &1 in library &2 ended. Reason code &3.

CPF9D88
An error occurred during exit program post-processing.

CPF9D89

An error occurred during exit program pre-processing.

CPF9D91

Master Key &1 was not cleared due to an exit program cancel.

CPF9DDA

Unexpected return code &1 from cryptographic service provider &2.

[Top](#)

Clear Output Queue (CLRROUTQ)

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

Parameters
Examples
Error messages

The Clear Output Queue (CLRROUTQ) command removes spooled files from the specified queue. The Clear Output Queue (CLRROUTQ) command removes all spooled files on the specified output queue if they are waiting to be written on an output device, including files that are in the hold state. Spooled files that are currently being produced by programs or that are being written to an output device are not removed from the queue.

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, *LIBL, *CURLIB</i>	

Top

Output queue (OUTQ)

Specifies the output queue to be cleared of spooled files.

This is a required parameter.

Qualifier 1: Output queue

name Specify the name of the output queue to be cleared.

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 output queue. If no current library entry exists in the library list, QGPL is used.

name Specify the name of the library in which the output queue is located.

Top

Examples

CLRROUTQ OUTQ(QPRINT)

This command removes the entries for all spooled files from the output queue, QPRINT, that are waiting to be printed or are being held. The entries for the file currently being printed and files still receiving data from programs that are currently running are not affected.

Top

Error messages

*ESCAPE Messages

CPF2207

Not authorized to use object &1 in library &3 type *&2.

CPF3330

Necessary resource not available.

CPF3357

Output queue &1 in library &2 not found.

CPF3417

&1 entries deleted. &2 entries not deleted.

CPF9843

Object &1 in library &3 type &2 cannot be accessed.

Top

Clear Physical File Member (CLRPFM)

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

Parameters
Examples
Error messages

The Clear Physical File Member (CLRPFM) command removes all the data (including deleted records) from the specified member of a physical file. If *NO was specified for the **Allocate storage (ALLOCATE)** parameter when the file was created, the record count for the member is set to zero, and the member size is set to the minimum size possible. If *YES was specified for the ALLOCATE parameter when the file was created, the CLRPFM command resets the member size to the value used when the file was initially created is reset.

Restrictions:

- This command is conditionally threadsafe. In multithreaded jobs, this command is not threadsafe for distributed files. This command is also not threadsafe and fails for Distributed Data Management (DDM) files of type *SNA.

Top

Parameters

Keyword	Description	Choices	Notes
FILE	Physical file	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Physical file	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
MBR	Member	<i>Name, *FIRST, *LAST, *ALL</i>	Optional, Positional 2

Top

Physical file (FILE)

Specifies the physical file that contains the member to be cleared.

This is a required parameter.

Qualifier 1: Physical file

name Specify the name of the physical 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 library is specified as the current library, QGPL is used.

name Specify the name of the library to be searched.

Top

Member (MBR)

Specifies the name of the member to be cleared.

*FIRST

The first member of the specified physical file is cleared.

*LAST

The last member of the specified physical file is cleared.

***ALL** All members of the specified physical file are cleared.

name Specify the name of the physical file member to be cleared.

Top

Examples

```
CLRPFM FILE(*CURLIB/INV) MBR(FEB)
```

This command clears the member named FEB in the physical file INV, found in the current library for the job *CURLIB. It is not cleared until all jobs currently using the member and all jobs using the access paths over the member are done with it.

Top

Error messages

*ESCAPE Messages

CPF3130

Member &2 already in use.

CPF3133

File &1 in library &3 contains no members.

CPF3134

Referential constraint error processing member &2.

CPF3136

File &1 in &3 not allowed on command.

CPF3137

No authority to clear, initialize, or copy member &2.

CPF3141

Member &2 not found.

CPF3142

File &1 in library &3 not found.

CPF3144

Member &2 not cleared or initialized.

CPF3156

File &1 in library &3 in use.

CPF3157

Triggers prevent requested operation.

CPF3159

Member &2 saved with STG(*FREE).

CPF3160

Operation on member &2 ended. Entry cannot be journaled.

CPF3179

Cannot clear or initialize DDM file &1 in &3.

CPF32B8

Distributed file error, reason code &3.

CPF32CF

Distributed file error, reason code &3.

CPF32C3

Distributed file error, level ID mismatch

CPF320B

Operation was not valid for database file &1.

CPF3203

Cannot allocate object for file &1 in &2.

Top

Clear Pool (CLRPOOL)

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

Parameters
 Examples
 Error messages

The Clear Pool (CLRPOOL) command clears all objects from a main storage pool. This allows the Set Object Access (SETOBJACC) command to report on storage usage within a pool.

Top

Parameters

Keyword	Description	Choices	Notes
POOL	Storage pool	<i>Element list</i>	Optional, Positional 1
	Element 1: Shared pool or subsystem name	<i>Name</i> , *JOB, *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	
	Element 2: Pool identifier	1-10	

Top

Storage pool (POOL)

Specifies the pool to be cleared of all objects.

The possible values are:

*JOB The pool associated with the job is cleared.

*SHRPOOLn

A general-purpose shared pool is cleared. Valid values range from 1 through 10. **Element 1: Subsystem**

subsystem

Specify a subsystem name. **Element 2: Pool Identifier**

pool-identifier

Specify a subsystem pool identifier.

Examples

CLRPPOOL POOL(*JOB)

This command clears the pool associated with the job in which the command was processed.

Error messages

*ESCAPE Messages

CPF1858

The specified pool does not exist.

CPF1859

Use of an access path was requested but none exists.

Clear Save File (CLRSAVF)

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

Parameters
Examples
Error messages

The Clear Save File (CLRSAVF) command clears the contents of a save file. This command clears all existing records from the save file and reduces the amount of storage used by this file.

A save file must be cleared before it can be used again to receive data from a save command or to receive another save file. If the user attempts to write new save data into a save file that already contains records, an inquiry message is sent to the work station for an interactive job, or to the system operator for a batch job, unless a save command is used and CLEAR(*ALL) is specified.

Note: This command ignores all file overrides that are currently in effect for the job.

Restrictions:

- You must have operational (*OBJOPR) and object management (*OBJMGT) authorities for the save file and read (*READ) authority for the specified library.

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, *LIBL, *CURLIB</i>	

Top

Save file (FILE)

Specifies the save file to be cleared.

This is a required parameter.

Qualifier 1: Save file

name Specify the name of the save file to be cleared.

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 save file. If no current library entry exists in the library list, the QGPL library is used.

name Specify the name of the library where the save file is located.

Top

Examples

CLRSAVF FILE(ONLINE)

This command clears the contents of save file ONLINE. Any existing records in the file are removed, and the file size is reduced to the minimum size possible.

Top

Error messages

*ESCAPE Messages

CPF3782

File &1 in &2 not a save file.

CPF3812

Save file &1 in &2 in use.

CPF9807

One or more libraries in library list deleted.

CPF9808

Cannot allocate one or more libraries on library list.

CPF9810

Library &1 not found.

CPF9812

File &1 in library &2 not found.

CPF9820

Not authorized to use library &1.

CPF9822

Not authorized to file &1 in library &2.

CPF9830

Cannot assign library &1.

Top

Clear Server Security Data (CLRSVRSEC)

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

[Parameters](#)
[Examples](#)
[Error messages](#)

The Clear Server Security Data (CLRSVRSEC) command clears decryptable authentication information that is associated with user profiles and validation list (*VLDL) entries. This is the same information that was cleared in releases previous to V5R2 when the QRETSVRSEC system value was changed from '1' to '0'.

Restrictions:

- You must have all object (*ALLOBJ) and security administrator (*SECADM) special authorities to use this command.
- QRETSVRSEC system value must be '0'.

[Top](#)

Parameters

None

[Top](#)

Examples

CLRSVRSEC

This command checks that the QRETSVRSEC system value is set to '0' and, if so, clears decryptable authentication information.

[Top](#)

Error messages

*ESCAPE Messages

CPF222E

&1 special authority is required.

CPF4AB4

QRETSVRSEC system value must be '0'.

[Top](#)

Clear Trace Data (CLRTRCDTA)

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

[Parameters](#)
[Examples](#)
[Error messages](#)

The Clear Trace Data (CLRTRCDTA) command clears (removes) all of the data from any previous trace operations in this debugging session. Once cleared, the data can no longer be displayed or printed.

Restriction: This command is valid only in debug mode.

There are no parameters for this command.

[Top](#)

Parameters

None

[Top](#)

Examples

CLRTRCDTA

This command clears all of the data recorded from any and all previous tracing operations in all of the programs currently being debugged.

[Top](#)

Error messages

*ESCAPE Messages

CPF1999

Errors occurred on command.

[Top](#)

Command Definition (CMD)

Parameters
Examples
Error messages

The Command (CMD) command definition statement specifies the prompt text for the command being created and allows many of the parameters specified on the Create Command (CRTCMD) command to be overridden. The prompt text is displayed when a user requests prompting while entering the command that is being defined.

- Specifying command creation options on the CMD command definition statement ensures that the generated *CMD object has the desired command attributes.
- The command creation parameters on CMD do not have default values. If no value is specified, the value specified or defaulted on the CRTCMD command is used to create the *CMD object.
- If a listing is generated by CRTCMD, the first page will show the parameters passed in from the CRTCMD command. Any of these parameters overridden on the CMD command definition statement will affect the generated *CMD, but will not be reflected on the first page of the CRTCMD listing.

The CMD statement can be anywhere in the source file referred to by the CRTCMD command; one and only one CMD statement must exist in the source file.

Top

Parameters

Keyword	Description	Choices	Notes
PROMPT	Prompt text or message ID	Character value, <u>*NONE</u>	Optional, Positional 1
PMTFILE	Message file for prompt text	Single values: *NONE Other values: <i>Element list</i>	Optional
	Element 1: Message file	<i>Qualified object name</i>	
	Qualifier 1: Message file	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <u>*LIBL</u> , *CURLIB	
	Element 2: Message text	<u>*STATIC</u> , *DYNAMIC	
MSGF	Message file	<i>Qualified object name</i>	Optional
	Qualifier 1: Message file	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <u>*LIBL</u> , *CURLIB	
TEXT	Text 'description'	Character value, *SRCMBRTXT, *CMDPMT, *BLANK	Optional
MAXPOS	Maximum positional parameters	0-99, *NOMAX	Optional
ALLOW	Where allowed to run	Single values: *ALL Other values (up to 9 repetitions): *BATCH, *INTERACT, *BPGM, *IPGM, *BREXX, *IREXX, *EXEC, *BMOD, *IMOD	Optional
MODE	Mode in which valid	Single values: *ALL Other values (up to 3 repetitions): *PROD, *DEBUG, *SERVICE	Optional
ALWLMTUSR	Allow limited users	*NO, *YES	Optional
THDSAFE	Threadsafe	*YES, *NO, *COND	Optional
MLTTHDACN	Multithreaded job action	*SYSVAL, *RUN, *MSG, *NORUN	Optional

Keyword	Description	Choices	Notes
VLDCR	Validity checking program	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Validity checking program	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
PMTOVRPGM	Prompt override program	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Prompt override program	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
HLPID	Help identifier	<i>Character value, *CMD, *NONE</i>	Optional
HLPPNLGRP	Help panel group	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Help panel group	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
HLPSCHIDX	Help search index	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Help search index	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
CURLIB	Current library	<i>Name, *NOCHG, *CRTDFT</i>	Optional
PRDLIB	Product library	<i>Name, *NOCHG, *NONE</i>	Optional
AUT	Authority	<i>Name, *LIBCRTAUT, *USE, *ALL, *CHANGE, *EXCLUDE</i>	Optional

Top

Prompt text or message ID (PROMPT)

Specifies the prompt text, if any, that is included in the heading (title) of the prompt display for the command being defined. The prompt text further describes the name of the command.

Note: Prompt text for each of the parameters of this command can be specified in the PROMPT parameters of the PARM, ELEM, and QUAL command definition statements, which specify the prompt text for the parameters, elements, and qualifiers, just as the PROMPT parameter in this statement specifies the prompt text for the command.

*NONE

No prompt text is included in the displayed heading of the prompt when the command is being prompted.

message-identifier

Specify the message identifier that specifies the message, containing no more than 30 bytes, for the prompt text displayed when the command is being prompted. If a message having the specified identifier cannot be found in the message file specified on the PMTFILE parameter of the Create Command (CRTCMD) command, the message identifier itself is used as the prompt text.

character-value

Specify the prompt text that is displayed during the command prompting. It must be a character string of no more than 30 bytes, enclosed in apostrophes.

Variables cannot be coded for this parameter.

Message file for prompt text (PMTFILE)

Specifies the message file from which the prompt text for the command is retrieved.

Single values

***NONE**

No message file is needed for the prompt text. The text, if any, is supplied in the definition statements that define the command.

Element 1: Message file for prompt text

Qualifier 1: Message file

name Specify the name of the message 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 used to locate the message file. If no library is specified as the current library for the thread, QGPL is used.

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

Element 2: Message text

Specifies how the command being created will use the prompt message information stored in the command object when the command is prompted.

***STATIC**

When the command is prompted, the prompt text will be retrieved from the static copies of the messages stored in the *CMD object when the command was created. If you want the command to have prompt text in more than one national language, you will need to create a separate *CMD for each national language.

***DYNAMIC**

When the command is prompted, prompt text messages will be dynamically retrieved from the message file specified for this parameter using the message identifiers stored in the *CMD object when the command was created. The message identifier specified for the PROMPT or CHOICE parameter on a CMD, PARM, QUAL, or ELEM command definition statement must be found in the prompt text message file **both** when the command is being created **and** when the command is being prompted.

If an error occurs locating the message file when the command is prompted, all prompt text will be retrieved from the static copies of prompt messages stored in the *CMD object. If the message file is found, but an individual prompt text message is not found in the message file, the static copy of the prompt text stored in the *CMD object is used for that one message.

Creating a command with message identifiers specified for PROMPT and CHOICE, a message file specified the first element of this parameter, and *DYNAMIC specified for the second element results in a single command that can have prompt text in more than one national language. By

having a copy of the prompt text message file in the desired national language found in the library list at prompt time, the same command can prompt in any national language. Starting in V6R1, CL commands for the operating system and most IBM products will use the *DYNAMIC option to enable a single copy of the command to handle all installed national language versions.

Top

Message file (MSGF)

Specifies the message file from which messages identified on the Dependency (DEP) command definition statements are retrieved. The **Message identifier (MSGID)** parameter on the DEP statements lets you specify the message identifier to be sent if a parameter syntax error is detected. For message identifiers with a three-character prefix other than 'CPF', the message file specified for this parameter will be used. QCPFMSG is always used for as the message file for messages that have the prefix 'CPF' in the message identifier.

Qualifier 1: Message file

name Specify the name of the message file from which DEP error messages are retrieved.

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 message file. If no library is specified as the current library for the thread, QGPL is used.

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

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

***SRCMBRTXT**

The text is taken from the source file member used to create the CL 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

Maximum positional parameters (MAXPOS)

Specifies the maximum number of parameters that can be specified positionally (without the parameter keyword) for this command. This parameter value must be greater than the number of nonconstant required parameters and less than the total number of nonconstant parameters. Parameters of TYPE(*ZEROELEM), parameters with the CONSTANT attribute, and lists and qualified names whose

ELEMs and QUALs have the CONSTANT attribute or are of TYPE(*ZEROELEM) are not included in the number of parameters that can be coded positionally for this command.

***NOMAX**

No maximum positional coding limit is specified for this command.

0-99 Specify the maximum number of positional parameters.

Top

Where allowed to run (ALLOW)

Specifies where the command can be processed.

Single values

***ALL** The command can be processed in a batch input stream, in a CL program, in a REXX procedure, in a CL ILE module, or when processed interactively. It can also be passed to the system API programs QCMDLEXC, QCAEXEC, and QCAPCMD for processing.

Other values (up to 9 repetitions)

***BATCH**

The command can be processed in a batch input stream, external to a compiled CL program.

***INTERACT**

The command can be processed interactively, external to a compiled CL program.

***BPGM**

The command can be processed in a compiled CL program that is called from batch entry.

***IPGM**

The command can be processed in a compiled CL program that is called from interactive entry.

***BREXX**

The command can be used in a REXX procedure run in a batch job.

***IREXX**

The command can be used in a REXX procedure run in an interactive job.

***BMOD**

The command can be used in a batch CL ILE program only.

***IMOD**

The command can be used in a interactive CL ILE program only.

***EXEC**

The command can be used as a parameter on the CALL command and be passed as a character string to the system API programs QCMDLEXC, QCAEXEC, and QCAPCMD for processing. If *EXEC is specified, either *BATCH or *INTERACT must also be specified.

Top

Mode in which valid (MODE)

Specifies the modes of operating environment to which the newly defined command applies.

Single values

***ALL** The command is valid in all the types of modes: production, debug, and service.

Other values (up to 3 repetitions)

***PROD**

The command is valid for production mode operations.

***DEBUG**

The command is valid for debug mode operations.

***SERVICE**

The command is valid for service mode operations.

Top

Allow limited users (ALWLMTUSR)

Specifies whether a user whose profile is set for limited capabilities is allowed to use the command by typing it in the command line on a menu.

***NO** This command cannot be entered in the command line on a menu by a user whose profile is set for limited capabilities.

***YES** This command can be entered in the command line on a menu by a user whose profile is set for limited capabilities.

Top

Threadsafe (THDSAFE)

Specifies whether the command is threadsafe and can be used safely in a job that has multiple threads.

***NO** The command is not threadsafe and should not be used in a job that has multiple threads.

***YES** The command is threadsafe and can be used safely in a job that has multiple threads.

***COND**

The command is threadsafe under certain conditions. See the online help or other documentation for the command to determine the conditions under which the command is threadsafe.

Top

Multithreaded job action (MLTTHDACN)

Specify the multithreaded job action for this command.

***SYSVAL**

The multithreaded job action specified in the QMLTTHDACN system value is used.

***RUN** Run the command.

***MSG** Run the command and send a diagnostic message.

***NORUN**

Do not run the command.

Top

Validity checking program (VLDCKR)

Specifies the program that performs additional validity checking on the parameters in the command being created. The same parameters that are passed to the command processing program (CPP) are also passed to the validity checking program. The validity checker performs additional parameter checking beyond that specified by the command definition statements in the source file, and beyond normal control language syntax checking. More information on validity checking is in the CL 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 separate validity checking program for this command. All validity checking is done by the command analyzer and the command processing program. Whenever the command is processed or checked for validity, provided variables and expressions are not used.

Qualifier 1: Validity checking program

name Specify the name and library of the validity checking program that checks the validity of the 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 used to locate the program. If no library is specified as the current library for the thread, QGPL is used.

name Specify the name of the library where the validity checking program is located.

Top

Prompt override program (PMTOVRPGM)

Specifies the name and library of the prompt override program (POP) that will replace (on the prompt display) the default values with the current actual values specified for the parameter. If a POP is specified, the key parameters (specified as KEYPARM(*YES) on the PARM statement in the command definition source) are the only parameters visible on the initial prompt display. When values are input for the key parameters, the remaining parameters are shown on the display with the actual values instead of the default values.

*NONE

No prompt override program is specified.

Note: If *NONE is specified when key parameters exist in the command definition source (that is when KEYPARM(*YES) is specified on the PARM statement), a warning message is issued when the command is created, and KEYPARM(*NO) will be assumed for all parameters.

name Specify the name of the prompt override program for the 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 used to locate the prompt override program. If no library is specified as the current library for the thread, QGPL is used.

name Specify the name of the library where the prompt override program is located.

Help identifier (HLPID)

Specifies the root name for all help section identifiers for this command. All help sections in the help panel group associated with this command will begin with this name.

*NONE

No help identifier is specified. *NONE is not allowed if a panel group name is specified for the **Help panel group (HLPPNLGRP)** parameter.

***CMD** The name of the command is to be used as the root for help section identifiers in the help panel group.

name Specify the root name for the help section identifiers for this command.

Help panel group (HLPPNLGRP)

Specifies the help panel group for this command.

Single values

*NONE

No help panel group is specified.

Qualifier 1: Help panel group

name Specify the name of the help panel group for this 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 used to locate the panel group. If no library is specified as the current library for the thread, QGPL is used.

name Specify the name of the library where the panel group is located.

Help search index (HLPSCHIDX)

Specifies the help search index to use when the search index function key is pressed from the help screen.

Single values

*NONE

No help search index is associated with this command.

Qualifier 1: Help search index

name Specify the name of the search index to be used when the search index function key is pressed.

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 search index. 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 search index is located.

Top

Current library (CURLIB)

Specifies the name of the current library associated with the job being run.

Note: This library is also the current library when the validity checker program (if any) is processed for the command.

***NOCHG**

The current library does not change for the processing of this command. If the current library is changed during processing of the command, the change remains in effect after command processing is complete.

***CRTDFT**

No current library is active during the processing of the command. The current library that was active before command processing began is restored when processing is completed.

If *CURLIB was specified as the to-value for any single values or special values for this command, or for any command processed while no current library is active, the QGPL library is used as the current library.

name Specify the name of the library that is used as the current library. The library need not exist when the command is created, but must exist when the command is processed. When command processing is completed, the current library is restored to its previous value. If the current library is changed during command processing by the Change Library List (CHGLIBL) command or Change Current Library (CHGCURLIB) command, the change is effective only until the command is processed. QTEMP cannot be specified for the current library.

Top

Product library (PRDLIB)

Specifies the product library that is to be in effect during the processing of the command.

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 menu started.

***NOCHG**

The product library is not changed when processing of the command starts. If the product library is changed during the processing of the command, the change remains in effect after command processing is complete.

***NONE**

There is no product library in the job's library list. The product library is restored to its previous value when command processing is complete.

name Specify the name of the library to be used as the product library during command processing. The library need not exist when the command is created, but must exist when the command is processed. When command processing is completed, the product library is restored to its previous value. QTEMP cannot be specified for the product library.

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

Example 1: Defining the Command-level Prompt Text

```
CMD PROMPT(UCD0001)
```

This statement describes a command that is prompted with additional text in the display heading. The command prompt text comes from the message identified by UCD0001. The message file which contains message identifier UCD0001 must be specified on the PMTFILE parameter of the Create Command (CRTCMD) command used to create the command definition object.

Example 2: Defining Prompt Text and Command Creation Options

```
CMD PROMPT(UCD0002) PMTFILE(MYCNDPMT *DYNAMIC) +
MSGF(MYCMDMSG) TEXT(*CMDPMT) MAXPOS(2) +
PRDLIB(MYAPPLIB) HLPID(*CMD) HLPPNLGRP(MYAPPLP)
```


This statement will set the prompt text for the command from message UCD0002 in message file MYCMDPMT which is located using the library list. All prompt text messages defined for the command will be retrieved dynamically when the command is prompted. Error messages sent from Dependency (DEP) statements in the command definition will be found in message file MYCMDMSG which is located using the library list. The text for the command object will be the same as the command prompt text. Only the first two parameters of the command will be allowed to be specified in positional form without the associated parameter keyword. When the command is run, library MYAPPLIB will be automatically added to the library list before the command is run and removed from the library list when the command completes. The help identifier for the command help modules in panel group MYAPPHLP will all start with the name of the command object being created by the CRTCMD command.

[Top](#)

Error messages

None

[Top](#)

Compare Journal Images (CMPJRNIMG)

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

Parameters
Examples
Error messages

The Compare Journal Images (CMPJRNIMG) command gives you the capability to compare and note the differences between (1) the *before* and *after* images of record-level changes (updates, deletes, rollback-updates, and rollback-deletes) for a specific file member (IMAGES(*BOTH) must be specified for the Start Journal Physical File (STRJRNPf) command), or (2) the *after* and *previous after* images of a particular relative record (IMAGES(*AFTER) is specified for the STRJRNPf command). The output of the command is directed to a printer.

If before and after images are compared, the journaled changes can be compared for only one or all of the records in the specific file or member. The comparison can also be limited by a specific journal receiver range, or by a range of journal entries in a specific journal receiver range.

The printed output shows the record image before the change was made, followed by the record image after the change, followed by a line that indicates (with asterisks) the specific change in the record on a character-by-character basis, instead of on a field-by-field basis. If the journaled file has null-capable fields, the null value indicators that correspond to the before-image of the record are compared with the null value indicators that correspond to the after-image of the record. This is done on a field-by-field basis.

If there is no journal entry satisfying the search value specified, the command ends.

Restrictions:

- The result of the comparison is sent only to the system printer.
- The file and member specified must currently exist on the system and must have been journaled.
- Only one member can be processed per command.
- The comparison of journal images ends if one of the following conditions occurs:
 - The member was saved with storage freed.
 - The member was restored.
 - The member was cleared.
 - The member was initialized.
 - The member was reorganized.
 - The member was deleted.
 - The member was in use when the system ended abnormally.
 - Journaling the member was stopped.
 - The member had the journaled changes applied or removed (by the Apply Journaled Changes (APYJRNCHG) command or the Remove Journaled Changes (RMVJRNCHG) command).
- If the sequence number is reset in the range of receivers specified, the first occurrence of the FROMENT, FROMENTLRG, TOENT, or TOENTLRG value is used if the prompt is specified.
- The FROMENT, FROMENTLRG, and FROMTIME parameters are mutually exclusive, as are the TOENT, TOENTLRG, and TOTIME parameters.
- The JOB, PGM, and USRPRF parameters cannot be used to specify selection criteria if one or more journal receivers in the specified receiver range was attached to a journal with a receiver size option (RCVSIZOPT) or a fixed length data option (FIXLENDTA) that would have omitted this data was in effect.

- This command cannot be used on or with a remote journal.
- If this command is used to compare journal images for a file that contains any fields of data type BLOB (binary large object), CLOB (character large object), or DBCLOB (double-byte character large object), these fields are not included in the comparison. All other fields in the file are compared.
- This command cannot be used if one or more journal receivers in the specified range was attached to a journal that had MINENTDTA (minimize entry specific data) specified for *FILE objects.

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>	
MBR	Member	<i>Name, *FIRST</i>	Optional, Positional 2
RCVRNG	Range of journal receivers	Single values: <u>*CURRENT</u> Other values: <i>Element list</i>	Optional, Positional 3
	Element 1: Starting journal receiver	<i>Qualified object name</i>	
	Qualifier 1: Starting journal receiver	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
	Element 2: Ending journal receiver	Single values: <u>*CURRENT</u> Other values: <i>Qualified object name</i>	
	Qualifier 1: Ending journal receiver	<i>Name</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	
FROMENTLRG	Starting large sequence number	<i>Character value, *FIRST</i>	Optional
FROMTIME	Starting date and time	<i>Element list</i>	Optional
	Element 1: Starting date	<i>Date</i>	
	Element 2: Starting time	<i>Time</i>	
TOENTLRG	Ending large sequence number	<i>Character value, *LAST</i>	Optional
TOTIME	Ending date and time	<i>Element list</i>	Optional
	Element 1: Ending date	<i>Date</i>	
	Element 2: Ending time	<i>Time</i>	
CMPOPT	Compare option	<u>*BOTH, *AFTER</u>	Optional
RCDNBR	Record number	<i>Unsigned integer, *ALL</i>	Optional
JOB	Job name	Single values: <u>*ALL</u> Other values: <i>Qualified job name</i>	Optional
	Qualifier 1: Job name	<i>Name</i>	
	Qualifier 2: User	<i>Name</i>	
	Qualifier 3: Number	000000-999999	
PGM	Program	<i>Name, *ALL</i>	Optional
USRPRF	User profile	<i>Name, *ALL</i>	Optional
CCIDLRG	Commit cycle large identifier	<i>Character value, *ALL</i>	Optional
OUTFMT	Output format	<u>*CHAR, *HEX</u>	Optional

Keyword	Description	Choices	Notes
FROMENT	Starting sequence number	1-999999999, <u>*FIRST</u>	Optional
TOENT	Ending sequence number	1-999999999, <u>*LAST</u>	Optional
CMTCYCID	Commit cycle identifier	1-999999999, <u>*ALL</u>	Optional

Top

File (FILE)

Specifies the name and library of the physical database file for which the journal record-level changes are being compared.

This is a required parameter.

physical-file-name

Specify the name of the physical file.

*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.

library-name

Specify the name of the library to be searched.

Top

Member (MBR)

Specifies the name of the file member whose journal entries are being compared.

*FIRST

Entries for the first member in the file are being compared.

member-name

Specify the name of the file member for which record-level changes are being compared.

Top

Range of journal receivers (RCVRNG)

Specifies the starting and ending journal receivers used in the comparison of *before* and *after* journal entry images. The system starts the comparison with the starting journal receiver (specified on the first value) and proceeds through receivers until the ending journal receiver (specified on the last value) is processed. If dual receivers are used at any time, the first of the dual receivers is always used when chaining through the receivers.

If any problem (such as damaged receivers or receiver not found) occurs in the receiver chain before the comparison starts, the system tries to use the second of the dual receivers. If the second of the receivers is damaged or not found, or if a problem occurs during the operation, the comparison ends.

Note: The second element (ending-journal-receiver) can only be specified if a value is specified for the first element (starting-journal-receiver).

Note: If the maximum number of receivers in the range is exceeded (1024), an exception is sent and no entries are compared.

Single values

*CURRENT

The journal receiver that is currently attached when starting to compare journal entries is used.

Element 1: Starting journal receiver

Qualifier 1: Starting journal receiver

name Specify the name of the first journal receiver that contains the journal entries being compared.

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 used to locate the journal receiver. If no library is specified as the current library for the job, QGPL is used.

name Specify the library where the journal receiver is located.

Element 2: Ending journal receiver

Single values

*CURRENT

The journal receiver that is currently attached when starting to compare journal entries is used.

Qualifier 1: Ending journal receiver

name Specify the name of the last journal receiver that contains the journal entries being compared.

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 used to locate the journal receiver. If no library is specified as the current library for the job, QGPL is used.

name Specify the library where the journal receiver is located.

Top

Starting large sequence number (FROMENTLRG)

Specifies the first journal entry (the *from* entry) being compared.

Note: You can input a value for either the **Starting sequence number** field (FROMENT) or the **Starting large sequence number** field (FROMENTLRG) but not for both.

***FIRST**

The first journal entry in the specified journal receiver range is the first entry considered for the comparison operation.

starting-sequence-number

Specify the journal entry sequence number at which the journal entry comparison operation begins. The acceptable range is 1 to 18,446,744,073,709,551,600.

Top

Starting date and time (FROMTIME)

Specifies the date and time of the first journal entry being compared.

Element 1: Starting date

starting-date

Specify the starting date. The starting date and time of the first journal entry occurring at or after the specified starting date and time becomes the starting point for the range of journal entries to be compared.

Element 2: Starting time

starting-time

Specify the starting time. The starting date and time of the first journal entry occurring at or after the specified starting date and time becomes the starting point for the range of journal entries to be compared.

The time can be specified in 24-hour format 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.
- With a time separator, specify a string of 5 or 8 digits where the time separator specified for your job is used to separate the hours, minutes, and seconds. If you enter this command 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

Ending large sequence number (TOENTLRG)

Specifies the last journal entry considered in the comparison.

Note: You can input a value for either the **Ending sequence number** field (TOENT) or the **Ending large sequence number** field (TOENTLRG) but not for both.

***LAST**

The last journal entry in the last journal receiver specified is the final entry being compared.

ending-sequence number

Specify the sequence number of the last journal entry being compared. The acceptable range is 1 to 18,446,744,073,709,551,600.

Note: The values specified for the FROM and TO parameters can be the same (for example, FROMENTLRG(234) and TOENTLRG(234) can be specified).

Ending date and time (TOTIME)

Specifies the date and time of the last journal entry being compared.

Element 1: Ending date

ending-date

Specify the ending date. The ending date and time of the first journal entry occurring at or before the specified ending date and time becomes the ending point for the range of journal entries to be compared.

Element 2: Ending time

ending-time

Specify the ending time. The ending date and time of the first journal entry occurring at or before the specified ending date and time becomes the ending point for the range of journal entries to be compared.

The time can be specified in 24-hour format 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.
- With a time separator, specify a string of 5 or 8 digits where the time separator specified for your job is used to separate the hours, minutes, and seconds. If you enter this command 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

Compare option (CMPOPT)

Specifies the types of record images (before or after images) being compared for record-level changes in the specified file.

*BOTH

The *before* images of the journal entries are compared with the *after* images of the journal entries.

*AFTER

The *after* images of the journal entries in the file record are compared with previous *after* images.

If this value is specified, the default value *ALL must be specified on the following parameters:

- **Job name (JOB)** parameter
- **Program (PGM)** parameter
- **User profile (USRPRF)** parameter
- **Commit cycle identifier (CMTCYCID)** parameter
- **Commit cycle large identifier (CCIDLRG)** parameter

Also, a relative record number must be specified on the **Record number (RCDNBR)** parameter.

Top

Record number (RCDNBR)

Specifies the relative record number in the file for which the journal entry images are being compared.

***ALL** The recorded changes for all journal entry records in the physical file member are compared.

relative-record-number

Specify the relative record number in the physical file member for which *before/after* or *after/after* images are being compared. If a value is specified, only changes for the specified journal entry record are compared.

Top

Job name (JOB)

Specifies that the comparison is of journal entries for a particular job.

Single values

***ALL** The comparison is not limited to entries for a particular job.

Other values

job-identifier

Specify the job name, the user name, and the job number of the job to use. You can also specify that the job name only, or that the job name and the user name be used.

job-name

Specify the job name of the job.

user-name

Specify the user name of the job.

job-number

Specify the system-assigned job number.

Top

Program (PGM)

Specifies that the comparison is of journal entries for a particular program.

***ALL** The comparison is not limited to entries for a particular program.

program-name

Specify the name of the program whose record-level journal entry changes are considered for comparison. Only journal changes for this program are considered for comparison.

Top

User profile (USRPRF)

Specifies that the comparison is of journal entries for a particular user profile name. The user profile name is the user profile under which the job that causes the entries to be journaled is run.

***ALL** The comparison is not limited to entries for a particular user profile.

user-profile-name

Specify the name of the user profile whose record-level changes are compared. Only journal changes for this user profile are considered for comparison.

Top

Commit cycle large identifier (CCIDLRG)

Specifies the commit cycle identifier of the specific journal that participated in a logical unit of work for which a comparison of journal entries is made.

Note: You can input a value for either the **Commit cycle identifier** field (CMTCYCID) or the **Commit cycle large identifier** field (CCIDLRG) but not for both.

***ALL** The journal entries for all commit cycle identifiers are included in the comparison.

commit-cycle-identifier

Specify the commit cycle identifier of the journal entries to be considered for comparison. A journal entry's commit cycle identifier can be found by using the Display Journal (DSPJRN) command and selecting option five. The acceptable range is 1 to 18,446,744,073,709,551,600.

Top

Output format (OUTFMT)

Specifies the format in which the record images being compared are shown.

***CHAR**

The record images are shown in character format.

***HEX** The record images are shown in hexadecimal format.

Top

Starting sequence number (FROMENT)

Specifies the first journal entry (the *from* entry) being compared.

Note: You can input a value for either the **Starting sequence number** field (FROMENT) or the **Starting large sequence number** field (FROMENTLRG) but not for both.

***FIRST**

The first journal entry in the specified journal receiver range is the first entry considered for the comparison operation.

starting-sequence-number

Specify the journal entry sequence number at which the journal entry comparison operation begins. The acceptable range is 1 to 9,999,999,999.

Top

Ending sequence number (TOENT)

Specifies the last journal entry considered in the comparison.

Note: You can input a value for either the **Ending sequence number** field (TOENT) or the **Ending large sequence number** field (TOENTLRG) but not for both.

***LAST**

The last journal entry in the last journal receiver specified is the final entry being compared.

ending-sequence number

Specify the sequence number of the last journal entry being compared. The acceptable range is 1 to 9,999,999,999.

Note: The values specified for the FROM and TO parameters can be the same (for example, FROMENT(234) and TOENT(234) can be specified).

Top

Commit cycle identifier (CMTCYCID)

Specifies the commit cycle identifier of the specific journal that participated in a logical unit of work for which a comparison of journal entries is made.

Note: You can input a value for either the **Commit cycle identifier** field (CMTCYCID) or the **Commit cycle large identifier** field (CCIDLRG) but not for both.

***ALL** The journal entries for all commit cycle identifiers are included in the comparison.

commit-cycle-identifier

Specify the commit cycle identifier of the journal entries to be considered for comparison. A journal entry's commit cycle identifier can be found by using the Display Journal (DSPJRN) command and selecting option five. The acceptable range is 1 to 9,999,999,999.

Top

Examples

Example 1: Comparing Before-Images with After-Images

```
CMPJRNIMG FILE(QGPL/PF)
```

This command compares the journaled record-level changes for the first member of file PF in the QGPL library. The entries compared are in the journal receiver that is currently attached when the comparison begins, starting with the first entry and ending with the last entry. All entries with both before-images and after-images that satisfy the selection values are eligible to be compared. The before-images of the entries are compared with the after-images of the entries.

Example 2: Comparing After-Images with Previous After-Images

```
CMPJRNIMG FILE(MYLIB/PAYROLL) MBR(APRIL)
RCVRNG((RCVLIB/RCV3) (*CURRENT))
FROMENT(200) TOENT(500)
CMPOPT(*AFTER) RCDNBR(999) OUTFMT(*HEX)
```

This command compares the journaled record-level changes for the member named APRIL in file PAYROLL in MYLIB, beginning with receiver RCV3 in RCVLIB and ending with the journal receiver that is currently attached at the start of the comparison. The range of entries compared starts with entry 200 and ends with entry 500. Only the after-images and previous after-images are compared. The comparison is limited to record number 999. The output is printed in hexadecimal format.

Example 3: Specifying Journal Entry Date and Time

```
CMPJRNIMG FILE(USERLIB/MYFILE) MBR(*FIRST)
RCVRNG((RCV2) (USERLIB/RCV5))
FROMTIME('7/04/87' 120000) TOENT(1000)
```

This command compares the journaled record-level changes for the first member of file MYFILE in USERLIB, beginning with receiver RCV2 in *LIBL and ending with receiver RCV5 in USERLIB. The date and time of the first journal entry to be compared is 7/4/87 12:00:00, and the ending record sequence number considered for the comparison is 1000.

Top

Error messages

*ESCAPE Messages

CPF7002

File &1 in library &2 not a physical file.

CPF7006

Member &3 not found in file &1 in &2.

CPF701B

Journal recovery of an interrupted operation failed.

CPF7027

Operation cannot be performed beyond entry &4.

CPF7028

Member &3 file &1 in &2 never journaled.

CPF7029

Image comparison failed. Ending sequence number &4.

CPF7036

File &1 in &2 not journaled with before images.

CPF7038

No entries compared for member &3.

CPF705A

Operation failed due to remote journal.

CPF7053

Values for RCVRNG parameter not correct; reason code &1.

CPF7054

FROM and TO values not valid.

CPF709C

JOB, PGM, and USRPRF not valid for receiver range.

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.

CPF9812

File &1 in library &2 not found.

CPF9815

Member &5 file &2 in library &3 not found.

CPF9820

Not authorized to use library &1.

CPF9822

Not authorized to file &1 in library &2.

CPF9825

Not authorized to device &1.

CPF9845

Error occurred while opening file &1.

CPF9846

Error while processing file &1 in library &2.

CPF9850

Override of printer file &1 not allowed.

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