IBM Systems - iSeries

i5/OS Commands
Starting with CHGPRXCMD (Change Proxy Command)

Version 5 Release 4

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Note

Before using this information and the product it supports, be sure to read the information in "Notices," on page 633.

Second Edition (February 2006)

This edition applies to version 5, release 4, modification 0 of i5/OS (product number 5722-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.

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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 Lanuage (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	*Qualified object name*	Required, Key, Positional 1
	Qualifier 1: Command	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
TGTCMD	Target command	Single values: ***SAME** Other values: *Qualified object name*	Optional, Positional 2
	Qualifier 1: Target command	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB, *SYSTEM, *NLVLIBL	
TEXT	Text 'description'	*Character value*, ***SAME**, *BLANK, *TGTCMD	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.

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Top

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.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

***SAME**
The text, if any, does not change.

***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.

'description'
Specify no more than 50 characters, enclosed in apostrophes.

Top

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)
Threadsafe: 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	*Qualified object name*	Required, Key, Positional 1
	Qualifier 1: PSF configuration	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
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): *Name*	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

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Keyword	Description	Choices	Notes
PDFMULT	Multiple PDF files	Single values: ***SAME**, *NO Other values: *Element list*	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: *Qualified object name*	Optional
	Qualifier 1: PDF data queue	*Name*	
	Qualifier 2: Library	*Name*	
PDFMAILSVR	PDF mail server name	Single values: ***SAME**, *SNDDST Other values (up to 4 repetitions): *Character value*, ***SAME**, *LOCAL	Optional
PDFSENDER	Sender of electronic mail	*Name*, ***SAME**, *SPLFOWN, QSPLJOB	Optional
PDFADMIN	PDF administrator	*Character value*, ***SAME**, *NONE	Optional
PDFMAPPGM	PDF user program	Single values: ***SAME**, *NONE, *IBMPGM Other values: *Qualified object name*	Optional
	Qualifier 1: PDF user program	*Name*	
	Qualifier 2: Library	*Name*	
PDFMAP	PDF mapping object	Single values: ***SAME**, *NONE Other values: *Qualified object name*	Optional
	Qualifier 1: PDF mapping object	*Name*	
	Qualifier 2: Library	*Name*	
PDFOUTQ	PDF output queue	*Qualified object name*	Optional
	Qualifier 1: PDF output queue	*Name*	
	Qualifier 2: Library	*Name*	
PDFDIR	PDF directory	*Character value*	Optional
AFPSAVE	Save AFP data	***SAME**, *NO, *YES	Optional
AFPOUTQ	AFP output queue	Single values: ***SAME** Other values: *Qualified object name*	Optional
	Qualifier 1: AFP output queue	*Name*	
	Qualifier 2: Library	*Name*	
TEXT	Text 'description'	*Character value*, ***SAME**, *BLANK	Optional
AUTOSSNRCY	Automatic session recovery	Single values: ***SAME**, *NO Other values: *Element list*	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
PSFDFNOPT	PSF defined option	Values (up to 6 repetitions): *Character value*, ***SAME**, *NONE	Optional
FNTSUBMSG	Font substitution messages	***SAME**, *NO, *YES	Optional

Keyword	Description	Choices	Notes
FNTCAPTURE	Capture host fonts at printer	***SAME**, *NO, *YES	Optional
FNTRSL	Font resolution for formatting	***SAME**, *SEARCH, 240, 300	Optional
FNTTBL	Font mapping table	Single values: ***SAME**, *NONE Other values: *Qualified object name*	Optional
	Qualifier 1: Font mapping table	*Name*	
	Qualifier 2: Library	*Name*	
CSEMODE	Cut sheet emulation mode	***SAME**, *NONE, *CHKFIRST, *CHKALL	Optional
MAPIGCFNT	Use DBCS simulation fonts	***SAME**, *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 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 utilitization. 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.

Top

Acknowledgment frequency (ACKFRQ)

Specifies the frequency, in pages, with which Print Services Facility (PSF) sends IPDS acknowledgment requests to a printer. The acknowledgment request responses from the printer contain information about the status of pages sent to the printer.

If a spooled file contains fewer pages than specified for ACKFRQ, an acknowledgment is requested after the last page of the spooled file is sent.

Consider adjusting this value when specifying AUTOSSNRCY(*YES). When a connection with a printer is abnormally ended, PSF may reprint pages because the printer was unable to return the status of pages printed. By increasing the frequency with which acknowledgments are sent, the number of pages which might be reprinted is decreased when a severed connection is restored. However, if acknowledgments are requested with great frequency, such as once per page, you may notice a performance degradation.

Acknowledgment frequency is supported on all attachments: twinaxial, APPC and TCP/IP. Note that AUTOSSNRCY is supported on APPC and TCP/IP attachments only.

***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.

***4028** Emulate a 4028 printer device.

***3812** 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 PRTERRMSG parameter of the printer device description. If PRTERRMSG(*INFO) is specified, the writer is ended. If PRTERRMSG(*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 (PDFMAPPGM)

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 and files created by the transform will be owned by the original spooled file owner and will have public authority of *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 OS/400. 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(*3812)  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)
Threadsafe: 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	*Element list*	Required, Positional 1
	Element 1: Program variable	*Character value*	
	Element 2: Basing pointer variable	Values (up to 5 repetitions): *Character value*	
SYSOBJ	System object	Single values: *NULL Other values: *Qualified object name*	Optional, Positional 2
	Qualifier 1: System object	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
OBJTYPE	Object type	*Character value*	Optional, Positional 3
ADR	Address to be pointed to	Single values: *NULL Other values: *Element list*	Optional
	Element 1: Program variable	*Character value*	
	Element 2: Basing pointer variable	Values (up to 5 repetitions): *Character value*	
OFFSET	New offset in space	*Integer*	Optional
PGM	Program	*Name*, ***DFTPGM**	Optional
PTRTYPE	Pointer type	***SAME**, *SYP, *SPP	Optional
RCRLVL	Recursion level	*Integer*, ***LAST**	Optional

Top

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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 information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/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 concepts and reference topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/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 concepts and reference topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/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 concepts and reference topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/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 concepts and reference topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/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 i5/OS system values. A description of the password validation rules is in the iSeries 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

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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.

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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.

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***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.

Top

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.

Top

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: *Qualified job name*	Optional, Key
	Qualifier 1: Job name	*Name*	
	Qualifier 2: User	*Name*	
	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: *Element list*	Optional
	Element 1: Processing option	*NBRTASKS	
	Element 2: Number of tasks	2-9999	
ASYNCJ	Asynchronous job usage	***SAME**, *DIST, *LOCAL, *ANY, *NONE	Optional
APYRMT	Apply CHGQRYA to remote	***SAME**, *YES, *NO	Optional
QRYOPTLIB	Query options file library	*Name*, ***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.

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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. Setting a query time limit of 0 can be useful when attempting to tune database queries for better performance because the technical description of the CPA4259 inquiry message explains 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 for OS/400, 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 for OS/400, 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 for OS/400, 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 for OS/400, 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.

Top

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 Multi-System for OS/400.

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.

Top

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 (QRYOPTLIB)** 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 QRYOPTLIB 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 (QRYOPTLIB)

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 SQL Programming information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter or Database information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

The initial value of the QRYOPTLIB 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. Setting a query temporary storage limit of 0 can be useful when attempting to tune database queries for better performance because the technical description of the CPA4259 inquiry message explains 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(*IO)
```

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 Operation information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/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*, ***SELECT**	Optional, Positional 1
LIB	Lib containing Q/A database	*Name*, ***QSTLIB**	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.

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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&rbl.&&rbl.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 iSeries Information Center at http://www.ibm.com/eserver/iseries/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, ***SAME**, *SYSDFT, *NONE, *MIN, *OFF	Optional, Positional 1
ASPRCYTIME	ASP recovery time	Values (up to 32 repetitions): *Element list*	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): *Element list*	Optional
	Element 1: ASP device	*Name*	
	Element 2: Recovery time	1-1440, *SAME, *NONE, *MIN	
INCACCPTH	Include access paths	***SAME**, *ALL, *ELIGIBLE	Optional

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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.

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 (INCACCPTH)

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.

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))
           INCACCPTH(*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))
           INCACCPTH(*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 acheive 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.

CPFB8ED
Device description &1 not correct for operation.

Top

Change RDB Directory Entry (CHGRDBDIRE)

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

Restriction: You must have execute authority to the application requester driver program to specify the program on this command.

Top

Parameters

Keyword	Description	Choices	Notes
RDB	Entry	*Element list*	Required, Key, Positional 1
	Element 1: Relational database	*Character value*	
	Element 2: Relational database alias	*Character value*, ***NONE**	
RMTLOCNAME	Remote location	Single values: *ARDPGM, *LOOPBACK Other values: *Element list*	Optional, Positional 2
	Element 1: Name or address	*Character value*, *LOCAL, ***SAME**	
	Element 2: Type	*SNA, *IP, ***SAME**	
TEXT	Text	*Character value*, *BLANK, ***SAME**	Optional
PORT	Port number or service program	*Character value*, *DRDA, ***SAME**	Optional
RMTAUTMTH	Remote authentication method	*Element list*	Optional
	Element 1: Preferred method	*USRID, *USRIDPWD, *ENCRYPTED, *KERBEROS, ***SAME**	
	Element 2: Allow lower authentication	*ALWLOWER, *NOALWLOWER, ***SAME**	
DEV	Device	*Element list*	Optional
	Element 1: APPC device description	*Name*, *LOC, ***SAME**	
LCLLOCNAME	Local location	*Communications name*, *LOC, *NETATR, ***SAME**	Optional
RMTNETID	Remote network identifier	*Communications name*, *LOC, *NETATR, *NONE, ***SAME**	Optional
MODE	Mode	*Communications name*, *NETATR, ***SAME**	Optional
TNSPGM	Transaction program	*Character value*, *DRDA, ***SAME**	Optional

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Keyword	Description	Choices	Notes
ARDPGM	Application requester driver	Single values: *DRDA, ***SAME** Other values: *Element list*	Optional
	Element 1: Program	*Qualified object name*	
	Qualifier 1: Program	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	

Top

Entry (RDB)

Specifies the relational database name information.

Note: Valid relational database names and aliases must begin with a letter and consist of uppercase A-Z, 0-9, and underscore.

Element 1: Relational database

Specifies the relational database name as identified on the remote location. You can specify a maximum of 18 characters for the name. MVS relational databases allow a maximum of 16 characters.

Element 2: Relational database alias

Specifies the relational database alias. The alias is used for locally identifing the relational database specified above. You can specify a maximum of 18 characters for the alias.

Top

Remote location (RMTLOCNAME)

Specifies the remote location name of the system on which the RDB is located.

The possible values are:

***SAME**
The remote location name does not change.

***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.

***LOOPBACK**
This value is an alias for the IP address of the host system. It can be used for a user database (ASP group) on the local 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.

***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 need not be specified, and if they are specified, they are ignored.

remote-location-name

The first element of this parameter can take 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.
- 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, and any value specified for the RMTNETID parameter must agree.
- IP address in dotted decimal form. Specify an internet protocol 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 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 application 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 *IP is not specified, the application 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 Support information in the iSeries Information Center at http://www.iseries.ibm.com/infocenter.

Top

Text (TEXT)

Specifies the text that briefly describes the object.

The possible values are:

***SAME**

The text does not change.

***BLANK**

The text is changed to blanks.

'description'

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

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.

The possible values are:

***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 iSeries servers. 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 Application Requester and Application Server systems.

Possible values are:

***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.

***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.

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 Application Server system. If the Application Server system 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
- *ENCRYPTED
- *USRIDPWD
- *USRID

Possible values are:

***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 name of the advanced program-to-program communications (APPC) device description on this system that is used with this RDB entry.

More information is in the APPC Programming book, SC41-5443, and the APPN Support information in the iSeries Information Center at http://www.iseries.ibm.com/infocenter.

The possible values are:

***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.

device-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.

The possible values are:

***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.

local-location-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.

The possible values are:

***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.

remote-network-identifier
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.

The possible values are:

***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.

mode-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.

The possible values are:

***SAME**
The transaction program name 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.

transaction-program-name
Specify the transaction program name in one of the following formats:

- A 4-byte hexadecimal name, which is entered by enclosing the 8 hexadecimal digits in apostrophes with a prefix of X. For example, X'07F6C4C2' is a 4-byte hexadecimal name.
- An 8-byte character name.

Note: If you are typing a hexadecimal value on a command prompt and the prompt is too small for the number of characters you want to type, type an ampersand (&) to expand the prompt to hold the necessary characters.

Top

Application requester driver (ARDPGM)

Specifies the qualified name of the application requester driver that is the program to be called to process SQL requests directed to the RDB. The program must exist and must be of the object type *PGM.

The possible values are:

***DRDA**
The Distributed Relational Database Architecture (DRDA) application requester is used.

The name of the program name 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**
Specify a value ranging from 0 through 255. Specify a value ranging from 0 through 255.

library-name
Specify the name of the library where the program name is created.

program-name
Specify the name of the application requester driver program to be called to process the SQL requests.

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	*Element list*	Required, Key, Positional 1
	Element 1: System name	*Character value*, *ANY	
	Element 2: System group	*Character value*	
TEXT	Text	*Character value*, ***SAME**, *BLANK	Optional, Positional 2
MTGNTCDOC	Meeting notice document type	***SAME**, *FFTDCA, *EMN	Optional
CALDTASTM	Calendar data stream	Single values: ***SAME**, *NONE Other values (up to 5 repetitions): *Communications name*, *OV400	Optional
RMTCALPWD	Calendar password	*Simple name*, ***SAME**, *NONE	Optional
RMTUSRAUT	Remote user authority	***SAME**, *PRIVATE, *PUBLIC, *MINIMUM, *EXCLUDE	Optional
RMTLOCNAME	Remote location	*Communications name*, ***SAME**, *SYSTEM	Optional
LCLLOCNAME	Local location	*Communications name*, ***SAME**, *LOC, *NETATR	Optional
RMTNETID	Remote network identifier	*Communications name*, ***SAME**, *LOC, *NETATR, *NONE	Optional
MODE	Mode	*Communications name*, ***SAME**, *NETATR	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.

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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 directory entry (RDB) must meet the following rules:
  - The communications protocol must be one of the remote journal function supported protocols.
  - The remote location name in the RDB cannot refer to the *LOCAL database.
  - The RDB cannot use an application requester driver program (*ARDPGM) to locate the target system.

Top

Parameters

Keyword	Description	Choices	Notes
RDB	Relational database	*Name*	Required, Positional 1

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Keyword	Description	Choices	Notes
SRCJRN	Source journal	*Qualified object name*	Required, Positional 2
	Qualifier 1: Source journal	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
TGTJRN	Target journal	Single values: ***SRCJRN** Other values: *Qualified object name*	Optional
	Qualifier 1: Target journal	*Name*	
	Qualifier 2: Library	*Name*	
JRNSTATE	Journal state	***SAME**, *ACTIVE, *INACTIVE	Optional
DELIVERY	Delivery	***ASYNC**, *SYNC	Optional
STRJRNRCV	Starting journal receiver	Single values: ***ATTACHED**, *SRCSYS Other values: *Qualified object name*	Optional
	Qualifier 1: Starting journal receiver	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
SNDTSKPTY	Sending task priority	1-99, ***SYSDFT**	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.

***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

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(*ASYNC) are specified.

***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).

sending-task-priority
Specify a value between 1 and 99 for the priority of the sending task on the source system.

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.

***CNTRLD**
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(*ASYNC)
            SNDTSKPTY(*SYSDFT)
```

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, and the system will set the priority of the sending task.

Example 2: 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 failure. 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
Systems or journal environments not compatible.

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 function failed.

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.

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.

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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 Globalization topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/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 allowed.

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 (STRTCPSVR) command.

Restrictions:

You must have *IOSYSCFG special authority to use this command.

Top

Parameters

Keyword	Description	Choices	Notes
AUTOSTART	Autostart	***SAME**, *YES, *NO	Optional
SUPPLY	Supply	***SAME**, *YES, *NO	Optional

Top

Autostart (AUTOSTART)

Specifies whether to automatically start the RouteD server when TCP/IP is started by the STRTCP command or STRTCPSVR SERVER(*AUTOSTART). When RouteD is started by the STRTCPSVR 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.

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***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)
Threadsafe: 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.

Notes:

1. The job associated with an active subsystem can only find objects that exist in the system auxiliary storage pool (ASP) or in a basic user ASP. Therefore, objects that are referenced by this command should exist in the system ASP or in a basic user ASP.

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.

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	
SEQNBR	Routing entry sequence number	1-9999	Required, Positional 2
CMPVAL	Comparison data	Single values: ***SAME**, *ANY Other values: *Element list*	Optional, Positional 3
	Element 1: Compare value	*Character value*	
	Element 2: Starting position	1-80, ***SAME**	
PGM	Program to call	Single values: ***SAME**, *RTGDTA Other values: *Qualified object name*	Optional, Positional 4
	Qualifier 1: Program to call	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
CLS	Class	Single values: ***SAME**, *SBSD Other values: *Qualified object name*	Optional
	Qualifier 1: Class	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
MAXACT	Maximum active routing steps	0-1000, ***SAME**, *NOMAX	Optional
POOLID	Storage pool identifier	1-10, ***SAME**	Optional

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Keyword	Description	Choices	Notes
THDRSCAFN	Thread resources affinity	Single values: ***SAME**, *SYSVAL Other values: *Element list*	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 program 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   SBSD(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   SBSD(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	*Name*	Required, Positional 1
RMTPWD	Remote password	*Simple name*	Required, Positional 2
LCLLOCNAME	Local location	*Communications name*, ***LOC**	Optional
MODE	Mode	*Communications name*, ***LOC**, *NETATR	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:

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***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)  RMTPWD(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

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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)

Threadsafe: No

Parameters
Examples
Error messages

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*, ***SAME**	Optional
FLIB	Default files library	*Name*, ***SAME**	Optional
LIBL	Use library list for file	*YES, *NO, ***SAME**	Optional
DATDIFF	Date differentiated files	*YES, *NO, ***SAME**	Optional
S36ESHARE	S/36 shared opens of files	*YES, *NO, ***SAME**	Optional
RCDBLK	Shared file record blocking	*YES, *NO, ***SAME**	Optional
CACHEDLTF	Store deleted files in cache	*YES, *NO, ***SAME**	Optional
LPPAGE	Default lines per page	1-112, ***SAME**	Optional
FORMTYPE	Forms type	*Character value*, *STD, ***SAME**	Optional
DFTMSGACN	Default message action	*CONTINUE, *HALT, *IGNORE, *CANCEL, ***SAME**	Optional
HALTOPT	Halt options	***SAME**, 0, 1, 2, 3, 01, 02, 03, 012, 013, 123, 0123, 023, 12, 13, 23	Optional
EVKJOBINIT	Evoke job initiation	*IMMED, *JOBQ, ***SAME**	Optional
EVKJOBPOL	Evoke storage pool	*BASE, *CURRENT, ***SAME**	Optional
EVKJOBPTY	Evoke job priority	1-99, *SUBMITTER, ***SAME**	Optional
SRCRCDLEN	Source file record length	52-132, ***SAME**	Optional
CHGACT	Allow CHGS36 while active	*YES, *NO, ***SAME**	Optional
ADDS36ONLY	Add only S/36 users	*YES, *NO, ***SAME**	Optional
ICFSUBST	Substitute ICF procedure data	*YES, *NO, ***SAME**	Optional
MRTUSRPRF	MRT user profile	*OWNER, *FRSTUSR, ***SAME**	Optional
MRTAUT	Check authority to files	*ALLUSR, *FRSTUSR, ***SAME**	Optional
MRTDLY	MRT delay value	0-32767, ***SAME**	Optional
MRTJOBINIT	MRT job initiation	*IMMED, *JOBQ, ***SAME**	Optional
MRTJOBPOL	MRT storage pool	*BASE, *CURRENT, ***SAME**	Optional

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Keyword	Description	Choices	Notes
MRTJOBPTY	MRT job priority	1-99, *SUBMITTER, ***SAME**	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 (SRCRCDLEN)

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.

Top

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): *Element list*	Optional, Positional 1
	Element 1: Message list	Values (up to 100 repetitions): *Name*, *ANY	
	Element 2: Action	*CONTINUE, *IGNORE, *HALT, *CANCEL, *GOTO	
	Element 3: Label or halt option	*Character value*	
DFTACN	Default action	Single values: ***SAME** Other values: *Element list*	Optional
	Element 1: Action	*CONTINUE, *IGNORE, *HALT, *CANCEL, *GOTO	
	Element 2: Label or halt option	*Character value*	
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.

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***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	*Qualified object name*	Required, Key, Positional 1
	Qualifier 1: S/36 program	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
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.

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Top

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.

Top

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.

Top

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.

Top

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	*Name*	Required, Key, Positional 1
FILE	Source file	*Qualified object name*	Optional, Key, Positional 2
	Qualifier 1: Source file	*Name*, **QS36PRC**	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
MRT	MRT procedure	***SAME**, *NO, *YES	Optional
MRTDLY	MRT delay	***SAME**, *NO, *YES	Optional
LOG	Log OCL statements	***SAME**, *NO, *YES	Optional
PGMDTA	Contains program data	***SAME**, *NO, *YES	Optional
RCDLEN	Logical record length	40-120, ***SAME**, *FILE	Optional
REFNBR	Reference number	0-999999, ***SAME**, *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:

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***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.

Top

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.

Top

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.

Top

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.

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 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	*Name*	Required, Key, Positional 1
FILE	Source file	*Qualified object name*	Optional, Key, Positional 2
	Qualifier 1: Source file	*Name*, **QS36SRC**	
	Qualifier 2: Library	*Name*, ***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:

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***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 iSeries member

RPT36 RPG for iSeries 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	*Qualified object name*	Required, Key, Positional 1
	Qualifier 1: Save file	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
MAXRCDS	Maximum records	1-2146762800, ***SAME**, *NOMAX	Optional
TEXT	Text 'description'	*Character value*, ***SAME**, *BLANK	Optional
WAITFILE	Maximum file wait time	*Integer*, ***SAME**, *IMMED, *CLS	Optional
SHARE	Share open data path	***SAME**, *NO, *YES	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

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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 x 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 x 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 1 terabyte. 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 2146762800 records is used.

1-2146762800
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:

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.
   - all object (*ALLOBJ) and security administration (*SECADM) special authority to specify a system library list entry.
2. You cannot specify the *RMV value on the POOLS parameter while the subsystem is active, because a job may become suspended.

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	

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Keyword	Description	Choices	Notes
POOLS	Storage pools	Single values: ***SAME** Other values (up to 10 repetitions): *Element list*	Optional, Positional 2
	Element 1: Pool identifier	1-10	
	Element 2: Storage size	*Integer*, *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	*Integer*	
MAXJOBS	Maximum jobs	0-1000, ***SAME**, *NOMAX	Optional, Positional 3
TEXT	Text 'description'	*Character value*, ***SAME**, *BLANK	Optional
SGNDSPF	Sign-on display file	Single values: ***SAME**, *QDSIGNON Other values: *Qualified object name*	Optional
	Qualifier 1: Sign-on display file	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
SYSLIBLE	Subsystem library	*Name*, ***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.

Top

Maximum jobs (MAXJOBS)

Specifies the maximum number of jobs that can be active at the same time in the subsystem controlled by this subsystem description. The maximum applies to all jobs that are started and are waiting or running, except for jobs on the job queue or jobs that have finished running.

***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.

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

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 (SYSLIBLE)

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 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

Examples

Example 1: Changing Storage Size and Activity Level

```
CHGSBSD   SBSD(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 COMPANYA and is located in the QGPL library. If the subsystem is active when this command is issued, COMPANYA is not used until the next time the subsystem is started.

Example 2: Changing Multiple Attributes

```
CHGSBSD   SBSD(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   SBSD(QGPL/SPANISH)  SGNDSPF(QSYS2931/QDSIGNON)
          SYSLIBLE(QSYS2931)
```

This command changes subsystem description SPANISH to a Spanish secondary language.

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 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	*Qualified object name*	Required, Key, Positional 1
	Qualifier 1: Search index	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
TITLE	Display title	*Character value*, ***SAME**	Optional, Positional 2
TEXT	Text 'description'	*Character value*, ***SAME**, *BLANK, *TITLE	Optional
CHRID	Character identifier	Single values: ***SAME**, *SYSVAL Other values: *Element list*	Optional
	Element 1: Graphic character set	*Integer*	
	Element 2: Code page	*Integer*	

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.

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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, ***SAME**	Optional
GID	Group ID number	101-4294967294, ***SAME**	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.

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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: ***SAME**, *ALL, *NONE Other values (up to 3 repetitions): *OBJAUD, *AUDLVL, *NOQTEMP	Optional
QAUDLVL	Auditing values	Single values: ***SAME**, *ALL, *DFTSET, *NONE Other values (up to 115 repetitions): *ATNEVT, *AUTFAIL, *CREATE, *DELETE, *JOBDTA, *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
INLJRNRCV	Initial journal receiver	*Qualified object name*	Optional
	Qualifier 1: Initial journal receiver	*Name*, **AUDRCV0001**	
	Qualifier 2: Library	*Name*, **QGPL**, *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).

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***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.

***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

***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

***OFCSRV**
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

***SECSCKD**

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 iSeries Security Reference 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

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 +
                    *JOBDTA  *NETBAS *NETFAIL +
                    *OBJMGT  *OPTICAL *PGMADP +
                    *PGMFAIL *PRTDTA *SAVRST +
                    *SECCFG  *SECDIRSRV *SECRUN +
                    *SERVICE *SPLFDTA *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, *JOBDTA, *NETBAS, *NETFAIL, *OBJMGT, *OPTICAL, *PGMADP, *PGMFAIL, *PRTDTA, *SAVRST, *SECCFG, *SECDIRSRV, *SECRUN. QAUDLVL2 system value will contain *SERVICE, *SPLFDTA, *SYSMGT.

Top

Error messages

***ESCAPE Messages**

CPFB304

User does not have required special authorities.

Top

Change Shared Storage Pool (CHGSHRPOOL)

Where allowed to run: All environments (*ALL)
Threadsafe: 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 (in use by a subsystem or active job) 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**	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

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Pool identifier (POOL)

Specifies the shared pool being changed. More information about storage pools is in the Work Management information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter or the Backup and Recovery book, SC41-5304.

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.

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.

***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).

***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).

***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.

***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.

***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.

***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.

***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

```
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.

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.

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 OS/400 SNMP agent. The command also is used to specify which SNMP managers receive traps generated by the local AS/400 system.

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

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Keyword	Description	Choices	Notes
TRPMGR	Trap managers	Single values: ***SAME**, *NONE Other values (up to 300 repetitions): *Element list*	Optional
	Element 1: Manager internet address	*Character value*	
	Element 2: Community name	*Character value*	
	Element 3: Translate community name	***YES**, *NO	

Top

System contact (SYSCONTACT)

Specifies the name of the contact person for this AS/400 system, 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 AS/400 system. 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.

Top

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.

Top

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.

Top

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.

Top

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 AS/400 system.

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 iSeries 400 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.

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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 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

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Parameters

Keyword	Description	Choices	Notes
FILE	Spooled file	*Name*, *SELECT	Required, Key, Positional 1

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Keyword	Description	Choices	Notes
JOB	Job name	Single values: ***** _ Other values: *Qualified job name*	Optional, Key, Positional 2
	Qualifier 1: Job name	*Name*	
	Qualifier 2: User	*Name*	
	Qualifier 3: Number	000000-999999	
SPLNBR	Spooled file number	1-999999, ***ONLY**, *LAST, *ANY	Optional, Key, Positional 3
JOBSYSNAME	Job system name	*Name*, ***ONLY**, *CURRENT, *ANY	Optional, Key
CRTDATE	Spooled file created	Single values: ***ONLY**, *LAST Other values: *Element list*	Optional, Key
	Element 1: Creation date	*Date*	
	Element 2: Creation time	*Time*, ***ONLY**, *LAST	
SELECT	Select files for	*Element list*	Optional
	Element 1: User	*Name*, ***CURRENT**, *ALL	
	Element 2: Print device	*Name*, ***ALL**, *OUTQ	
	Element 3: Form type	*Character value*, ***ALL**, *STD	
	Element 4: User data	*Character value*, ***ALL**	
	Element 5: ASP	1-32, ***ALL**, *ASPDEV	
ASPDEV	ASP device	*Name*, *****, *SYSBAS, *CURASPGRP	Optional
DEV	Printer	*Name*, ***SAME**, *OUTQ	Optional
PRTSEQ	Print sequence	***SAME**, *NEXT	Optional
FORMTYPE	Form type	*Character value*, ***SAME**, *STD	Optional
COPIES	Copies	1-255, ***SAME**	Optional
RESTART	Restart printing	*Integer*, ***SAME**, *STRPAGE, *ENDPAGE, *NEXT	Optional
VOL	Volume	Single values: ***SAME**, *NONE Other values (up to 50 repetitions): *Character value*	Optional
LABEL	Diskette label	*Character value*, ***SAME**	Optional
OUTQ	Output queue	Single values: ***SAME**, *DEV Other values: *Qualified object name*	Optional
	Qualifier 1: Output queue	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
FILESEP	File separators	0-9, ***SAME**	Optional
PAGERANGE	Page range to print	*Element list*	Optional
	Element 1: Starting page	*Integer*, ***SAME**, *ENDPAGE	
	Element 2: Ending page	*Integer*, ***SAME**, *END	
SCHEDULE	File becomes available	***SAME**, *JOBEND, *FILEEND, *IMMED	Optional
SAVE	Save file	***SAME**, *NO, *YES, *IMMED	Optional
EXPDATE	Expiration date for file	*Date*, ***SAME**, *NONE, *DAYS	Optional
DAYS	Days until file expires	1-366	Optional
OUTPTY	Output priority	1-9, ***SAME**, *JOB	Optional
USRDTA	User data	*Character value*, ***SAME**	Optional
ALIGN	Align page	***SAME**, *NO, *YES	Optional
PRTQLTY	Print quality	***SAME**, *STD, *DEVD, *DRAFT, *NLQ, *FASTDRAFT	Optional
FORMFEED	Form feed	***SAME**, *DEVD, *CONT, *CUT, *AUTOCUT, *CONT2	Optional
DRAWER	Source drawer	1-255, ***SAME**, *E1, *FORMDF	Optional
FIDELITY	Print fidelity	***SAME**, *ABSOLUTE, *CONTENT	Optional
DUPLEX	Print on both sides	***SAME**, *NO, *YES, *TUMBLE, *FORMDF	Optional

Keyword	Description	Choices	Notes
MULTIUP	Pages per side	1-4, ***SAME**	Optional
PAGDFN	Page definition	Single values: ***SAME**, *NONE Other values: *Qualified object name*	Optional
	Qualifier 1: Page definition	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
FORMDF	Form definition	Single values: ***SAME**, *NONE, *DEVD, *INLINE, *INLINED Other values: *Qualified object name*	Optional
	Qualifier 1: Form definition	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
AFPCHARS	AFP Characters	Single values: ***SAME**, *NONE Other values (up to 4 repetitions): *Character value*	Optional
FRONTOVL	Front side overlay	Single values: *NONE Other values: *Element list*	Optional
	Element 1: Overlay	Single values: ***SAME** Other values: *Qualified object name*	
	Qualifier 1: Overlay	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
	Element 2: Offset down	0.0-57.79, ***SAME**	
	Element 3: Offset across	0.0-57.79, ***SAME**	
BACKOVL	Back side overlay	Single values: *FRONTOVL, *NONE Other values: *Element list*	Optional
	Element 1: Overlay	Single values: ***SAME** Other values: *Qualified object name*	
	Qualifier 1: Overlay	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
	Element 2: Offset down	0.0-57.79, ***SAME**	
	Element 3: Offset across	0.0-57.79, ***SAME**	
	Element 4: Constant back	***SAME**, *NOCONSTANT, *CONSTANT	
USRDFNOPT	User defined option	Single values: ***SAME**, *NONE Other values (up to 4 repetitions): *Character value*	Optional
USRDFNDTA	User Defined Data	*Character value*, ***SAME**, *NONE	Optional
USRDFNOBJ	User defined object	Single values: *NONE, ***SAME** Other values: *Element list*	Optional
	Element 1: Object	*Qualified object name*	
	Qualifier 1: Object	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
	Element 2: Object type	*DTAARA, *DTAQ, *FILE, *PSFCFG, *USRIDX, *USRQ, *USRSPC	
IPDSPASTHR	IPDS pass through	***SAME**, *DEVD, *NO, *YES	Optional
FNTRSL	Font resolution for formatting	***SAME**, *DEVD, *SEARCH, 240, 300	Optional
EXCHTYPE	Diskette file exchange type	***SAME**, *STD, *BASIC, *H, *I	Optional
CODE	Code	***SAME**, *EBCDIC, *ASCII	Optional

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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.

***DEVD**
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.

***DEVD**
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, *AFPDSLINE, 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 iSeries family system.

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 (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 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.

***DEVD**
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 USRDFNDTA parameter in a printer file. You may continue using this support with existing printer files and PSF configuration objects by specifying IPDSPASTHR(*DEVD) in the printer file. If you specify a value of anything other than *DEVD for the IPDSPASTHR parameter, any IPDS pass-through value in the USRDFNDTA 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 Basic Printing information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/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.

***DEVD**
The value specified in the FNTRSL parameter of the PSF configuration object for the device is used. If no PSF configuration object is specified for the device, a value of *SEARCH is used.

***SEARCH**
Specifies to search the library list for the first occurrence of a host font with a name match. The resolution of that font is used to print the spool file. Message PQT3546 is sent to specify the resolution of the font that was selected.

240 The font resolution is 240 pels per inch.

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
*CURASPGRP 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)
Threadsafe: 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	*Qualified object name*	Required, Key, Positional 1
	Qualifier 1: Physical file	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
SYSTEM	System	***LCL**, *RMT, *FILETYPE	Optional, Key
EXPDATE	Expiration date for member	*Date*, ***SAME**, *NONE	Optional
MAXMBRS	Maximum members	*Integer*, ***SAME**, *NOMAX	Optional
ACCPTHSIZ	Access path size	***SAME**, *MAX4GB, *MAX1TB	Optional
MAINT	Access path maintenance	***SAME**, *IMMED, *REBLD, *DLY	Optional
RECOVER	Access path recovery	***SAME**, *NO, *AFTIPL, *IPL	Optional
FRCACCPTH	Force keyed access path	***SAME**, *NO, *YES	Optional
SIZE	Member size	Single values: *NOMAX Other values: *Element list*	Optional
	Element 1: Initial number of records	1-2147483646, ***SAME**	
	Element 2: Increment number of records	0-32767, ***SAME**	
	Element 3: Maximum increments	0-32767, ***SAME**	
ALLOCATE	Allocate storage	*NO, *YES, ***SAME**	Optional
UNIT	Preferred storage unit	1-255, ***SAME**, *ANY	Optional
FRCRATIO	Records to force a write	*Integer*, ***SAME**, *NONE	Optional
WAITFILE	Maximum file wait time	*Integer*, ***SAME**, *IMMED, *CLS	Optional
WAITRCD	Maximum record wait time	*Integer*, ***SAME**, *IMMED, *NOMAX	Optional
SHARE	Share open data path	***SAME**, *NO, *YES	Optional
DLTPCT	Max % deleted records allowed	1-100, *NONE, ***SAME**	Optional
TEXT	Text 'description'	*Character value*, ***SAME**, *BLANK	Optional
CCSID	Coded character set ID	1-65535, ***SAME**, *HEX	Optional

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Top

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 (ACCPTHSIZ)

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.

Top

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 (FRCACCPTH)

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 in each part that is automatically added to the member size, and the number of times the part added is automatically applied.

The change in the initial number of records takes effect when a new member is added to the file or when a current member is cleared, restored, or reorganized. A change to the number of records to add, and the number of times the part added is automatically applied, takes effect the next time a member of the file needs a part added.

The total size of the member (initial part added plus the number of records added per part added times the number of additions) must be larger than the current size of the member. If it is smaller than the current size of the member, an error message is sent, and the size does not change.

Single values

***NOMAX**
The number of records inserted into each member of the file is not limited by the user. The maximum size of 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 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 does not change.

0-32767
Specify a value for the number of additional records which, if greater than 10% of the size of the member when the maximum number of records is reached, are to be inserted into the member after an automatic extension occurs.

If the number specified is not greater than 10% of the member size and not equal to zero, the member size is increased by 10%.

Enter 0 to prevent automatic extensions. If the number of additions is 0, the increment value is 0.

Element 3: Maximum increments

***SAME**
The value does not change does not change.

0-32767
Specify the maximum number of parts to be automatically added to the member. Enter 0 to prevent automatic extensions. If the increment value is 0, the number of parts added is also 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 Backup and Recovery 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 Backup and Recovery 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

```
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 letters should be copied into *SERVICE when PTFs are loaded from a tape or optical device

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
RPTSRVPVD	Report problem to	Single values: ***SAME**, *IBMSRV, *SELECT Other values: *Element list*	Optional
	Element 1: Control point name	*Communications name*	
	Element 2: Network ID	*Communications name*, *LCLNETID	
SRVPVDCNN	Service provider connection	*Character value*, ***SAME**	Optional

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Keyword	Description	Choices	Notes
PTFINSTYP	PTF install type	***SAME**, *DLYIPL, *DLYALL, *IMMONLY, *IMMDLY	Optional
CPYPTF	Copy PTFs	***SAME**, *NO, *YES	Optional
SNDDTAPKT	Send data packet	***SAME**, *NO, *YES	Optional
CRITMSGUSR	Critical messages to user	Single values: ***SAME** Other values (up to 50 repetitions): *Name*, *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

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

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)
Threadsafe: 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	*Element list*	Optional
	Element 1: Start time and date	*Element list*	
	Element 1: Start time	*Time*	
	Element 2: Start date	*Date*	
	Element 2: End time and date	*Element list*	
	Element 1: End time	*Time*	
	Element 2: End date	*Date*	
IGNPRB	Ignore	*YES, *NO	Optional
CRTJOBLOG	Create job logs	*YES, *NO	Optional
ANZIMMED	Analyze immediately	***YES**, *NO	Optional
ANZSTRDATE	Analysis start date	*Date*, ***NOCHG**	Optional
ANZSTRTIME	Analysis start time	*Time*, ***NOCHG**	Optional
ENBCVG	Enable coverage	***NO**, *YES	Optional
CVGSTRTIME	Coverage start time	*Time*, **080000**	Optional
CVGENDTIME	Coverage end time	*Time*, **200000**	Optional
WEEKEND	Call over weekends	***YES**, *NO	Optional
DATA	Data	***CHG**, *ALL	Optional
CURPWD	Current password	*Character value*	Optional
NEWPWD	New password	*Character value*	Optional
VFYPWD	Verify password	*Character value*	Optional
SUBTYPE	Subtype	*DEVICE, *SYSREFCDE	Optional
ACTION	Action	*ADD, *CHG, *RMV	Optional
DEVICE	Device	*Character value*	Optional
CATEGORY	Category	*DASD, *TAPE, *PROCESSOR, *OPTICAL, *FSIOP, *OTHER	Optional
SENSEFMT	Sense byte format	**0**, 4, 2, 8, C	Optional

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Keyword	Description	Choices	Notes
RPTERRCLS	Error classes	Values (up to 27 repetitions): *Element list*	Optional
	Element 1: Class	*PERMANENT, *THRESHOLD, *TEMPORARY, *STATISTICAL, *INFORMATIONAL, *SOFTWARE, *RECOVERABLE, *BUFFERED, *MACHINECHECK, *VARYON, *VARYOFF, *RECOVERED, *IOPDUMP, *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	Authorize users	Values (up to 2 repetitions): *Character value*	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 Authorize users (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 CVGSTRTIME 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

Authorize users (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.

Top

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)
Threadsafe: 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	***SAME**, *YES, *NO, *SRVINF, *PRBRPT	Optional, Positional 1
AUTORPT	Auto report	***SAME**, *YES, *NO	Optional
AUTORPTRTY	Auto report retry	*Element list*	Optional
	Element 1: Retry	***SAME**, *YES, *NO	
	Element 2: Frequency	5-720, ***SAME**	
	Element 3: Number of times to retry	1-999, ***SAME**, *NOMAX	
	Element 4: Notify users	***SAME**, *YES, *NO	
PALANZ	Product activity log analysis	*Element list*	Optional
	Element 1: Enable	***SAME**, *YES, *NO	
	Element 2: Start hour	0-23, ***SAME**	
	Element 3: Interval	***SAME**, 1, 2, 3, 4, 6, 8, 12, 24	
	Element 4: Send message	***SAME**, *YES, *NO	
RUNPTY	Run priority	1-99, ***SAME**	Optional
NOTIFYUSR	Notify user ID	Single values: ***SAME** Other values (up to 5 repetitions): *Simple name*	Optional
AUTOPTF	Auto PTF	*Element list*	Optional
	Element 1: Enable	***SAME**, *YES, *NO	
	Element 2: Schedule day	***SAME**, *SUN, *MON, *TUE, *WED, *THU, *FRI, *SAT	
	Element 3: Download PTFs	***SAME**, *YES, *NO, *CVRLTR	
AUTOTEST	Auto test	*Element list*	Optional
	Element 1: Schedule day	***SAME**, *SUN, *MON, *TUE, *WED, *THU, *FRI, *SAT	
	Element 2: Schedule time	*Time*, ***SAME**	
SRVINF	Service information	*Element list*	Optional
	Element 1: Select information	Values (up to 9 repetitions): *Character value*, ***SAME**, ***SAME**	
	Element 2: Collect time	*Time*, ***SAME**, *CURRENT	
	Element 3: Send time	*Time*, ***SAME**, *COLLECT	
	Element 4: Connection verification timer	1-21, ***SAME**	
	Element 5: Task hold interval	1-30, ***SAME**	

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Keyword	Description	Choices	Notes
SRVPVDID	Report problem to	*Element list*	Optional
	Element 1: Control point name	*Communications name*, ***SAME**, *IBMSRV	
	Element 2: Network ID	*Communications name*, ***SAME**, *NETATR	
LINECTL	Line control	*Element list*	Optional
	Element 1: Enable	***SAME**, *YES, *NO	
	Element 2: Configuration object	Values (up to 12 repetitions): *Element list*	
	Element 1: Line description	*Name*, *SAME	
	Element 2: Controller description	*Name*, *SAME, ***ANY**	
	Element 3: Device description	*Name*, *SAME, ***ANY**	
RPTRMTPRB	Report remote problem	***SAME**, *YES, *NO	Optional
ACTPWD	Activation password	*Character value*, *SAME	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 (SRVINF)

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 iSeries must be installed and configured.

Top

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.

Top

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.

Top

Error messages

***ESCAPE Messages**

CPF9899
Error occurred during processing of command.

Top

Change Service Configuration (CHGSRVCFG)

Where allowed to run: All environments (*ALL)
Threadsafe: 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), Electronic Service Agent, and Information Center Update. 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
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	

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Keyword	Description	Choices	Notes
CNNPNTPRX	Connection point proxy	*Element list*	Optional
	Element 1: Port number	1-65535, ***SAME**, *IBMSVR	
	Element 2: Authentication user ID	*Character value*, ***SAME**, *NONE	
	Element 3: Authentication password	*Character value*, ***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**
The connection type does not change.

***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.

Top

Country or region ID (CNTRYID)

Specifies the country or region identifier used for the service configuration.

Note: This parameter is only valid when *PRIMARY is specified for the **Role (ROLE)** parameter.

***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 (TELNBR1)

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.

Top

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 confuguration. 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 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

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 Version 4 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)  TELNBR1(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.

Top

Error messages

***ESCAPE Messages**

CPFB040
If RSRCNAME(*SELECT) is specified, MODEM(*RSRCNAME) cannot be specified.

TCP8050
*IOSYSCFG authority required to use &1.

TCP8290
No TCP/IP point-to-point modem information

CPF8813
No entries exist.

CPF9899
Error occurred during processing of command.

TCP8205
Required object &2/&1 type *&3 not found.

TCP8211
Point-to-point profile &1 not found.

Top

Change Service Program (CHGSRVPGM)

Where allowed to run: All environments (*ALL)
Threadsafe: 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 (ENBPFRCOL), 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 *SNGLVL 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
ENBPFRCOL	Enable performance collection	Single values: ***SAME**, *NONE, *PEP Other values: *Element list*	Optional
	Element 1: Collection level	***FULL**, *ENTRYEXIT	
	Element 2: Procedures	***ALLPRC**, *NONLEAF	
PRFDTA	Profiling data	***SAME**, *NOCOL, *COL, *CLR, *APYBLKORD, *APYPRCORD, *APYALL	Optional
TERASPACE	Teraspace	***SAME**, *YES, *NO	Optional
FRCCRT	Force recreation	***NO**, *YES, *NOCRT	Optional
TEXT	Text 'description'	*Character value*, ***SAME**, *BLANK	Optional

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Keyword	Description	Choices	Notes
LICOPT	Licensed Internal Code options	Single values: ***SAME**, *NONE Other values: *Element list*	Optional
	Element 1: Options	*Character value*	
	Element 2: Action	***REPLACE**, *ADD	

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

Enable performance collection (ENBPFRCOL)

Specifies whether collection of performance data is enabled.

Single values

***SAME**
The value does not change.

***PEP or *NONE**
Performance data is collected for the Program Entry Procedure entry and exit. There are no entry or exit hooks in the module's internal procedures and no precall or postcall hooks around calls to other procedures.

Element 1: Collection level

***FULL** Performance data is collected for procedure entry and exit. Performance data is also collected before and after calls to external procedures.

***ENTRYEXIT**
Performance data is collected for procedure entry and exit.

Element 2: Procedures

***ALLPRC**
Performance data is collected for all procedures. This is useful to capture information on all procedures.

***NONLEAF**
Performance data is collected for procedures that are not leaf procedures and for the PEP. This is useful to capture information on most routines but not at the expense of destroying the 'leaf-ness' of the leaf procedure.

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

Teraspace (TERASPACE)

This parameter allows the teraspace storage enablement to be changed to the specified value for all the bound modules in the service program. Changing the enable teraspace storage parameter to any value other than *SAME causes the system to re-create the service program.

***SAME**
The teraspace storage enablement does not change.

***NO** The teraspace storage enablement of eligible bound modules is changed to no. This requires the bound modules to be single level storage model.

***YES** The teraspace storage enablement of eligible bound modules is changed to yes. This requires the bound modules to be at least V4R4M0 or later.

Top

Force recreation (FRCCRT)

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 (ENBPFRCOL)** 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 ENBPFRCOL 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, ENBPFRCOL, 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.

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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.

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Parameters

Keyword	Description	Choices	Notes
RMTLOCNAME	Remote location	*Communications name*	Required, Positional 1
MAXSSN	Maximum sessions	1-512	Optional
DEV	Device	*Name*, ***LOC**	Optional, Positional 2
MODE	Mode	*Communications name*, ***NETATR**	Optional, Positional 3
LCLLOCNAME	Local location	*Communications name*, ***LOC**, *NETATR	Optional
RMTNETID	Remote network identifier	*Communications name*, ***LOC**, *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.

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Parameters

Keyword	Description	Choices	Notes
USRPRF	User profile	*Simple name*, *CURRENT	Required, Positional 1
SERVER	Server	*Character value*	Required, Positional 2
USRID	User ID	*Character value*, ***SAME**, *USRPRF	Optional
PASSWORD	User password	*Character value*, ***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.

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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'
Spcify 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)
Threadsafe: 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, ***SAME**	Optional, Positional 1
SCHPGM	Search program	Single values: ***SAME**, *NONE Other values: *Qualified object name*	Optional, Positional 2
	Qualifier 1: Search program	*Name*	
	Qualifier 2: Library	*Name*, *LIBL, *CURLIB	
VRFPGM	Verification program	Single values: ***SAME**, *NONE Other values: *Qualified object name*	Optional
	Qualifier 1: Verification program	*Name*	
	Qualifier 2: Library	*Name*, *LIBL, *CURLIB	
SUPPGM	Supplier program	Single values: ***SAME**, *NONE Other values: *Qualified object name*	Optional
	Qualifier 1: Supplier program	*Name*	
	Qualifier 2: Library	*Name*, *LIBL, *CURLIB	
RTYITV	Retry interval	1-999, ***SAME**	Optional
RTYLMT	Retry limit	0-9, ***SAME**	Optional
ALWDSPNUI	Display network user ID	*NO, *YES, ***SAME**	Optional
MSGQ	Message queue	Single values: ***SAME** Other values: *Qualified object name*	Optional
	Qualifier 1: Message queue	*Name*	
	Qualifier 2: Library	*Name*, *LIBL, *CURLIB	
RMTSHD	Shadow remote users	*NO, *YES, ***SAME**	Optional
RMVJOBLOG	Remove shadowing job logs	*NO, *YES, ***SAME**	Optional
ALWSCH	Allow search	*NO, *YES, ***SAME**	Optional

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Keyword	Description	Choices	Notes
USRDFNFLD	User-defined fields	Single values: ***SAME** Other values (up to 100 repetitions): *Element list*	Optional
	Element 1: Field name	*Character value*	
	Element 2: Product ID	*Character value*, *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 Application programming interfaces information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/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.

Top

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 Application programming interfaces information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/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.

Top

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 Application programming interfaces information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/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	*Name*	Required, Key, Positional 1
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.

name Specify the name of the system job.

Top

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.

Top

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Examples

```
CHGSYSJOB   JOB(QDBSRVXR2)  RUNPTY(20)
```

This command changes the run priority of the system job QDBSRVXR2 to 20.

Top

Error messages

***ESCAPE Messages**

CPF1070
Job &3/&2/&1 not found.

CPF137A
Not authorized to change system job.

CPF1379
Job &1 cannot be changed.

Top

Change System Library List (CHGSYSLIBL)

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

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	*Name*	Required, Positional 1
OPTION	Option	***ADD**, *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.

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Top

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, QUPSMSGQ, 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
   QHOUR
   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        QPWDMINLEN      QSPLFACN
   QALWJOBITP      QKBDBUF         QPWDPOSDIF      QSTGLOWACN
   QALWOBJRST      QLIBLCKLVL      QPWDRQDDGT      QSTGLOWLMT
   QALWUSRDMN      QLMTDEVSSN      QPWDRQDDIF      QSVRAUTITV
   QATNPGM         QLMTSECOFR      QPWDVLDPGM      QSYSLIBL
   ```

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```
QAUTORMT        QMAXJOB         QPWRRSTIPL      QTHDRSCADJ
QAUTOSPRPT      QMAXSGNACN      QQRYDEGREE      QTHDRSCAFN
QAUTOVRT        QMAXSIGN        QQRYTIMLMT      QUSEADPAUT
QCRTAUT         QMLTTHDACN      QRETSVRSEC      QVFYOBJRST
QDEVNAMING      QPRCMLTTSK      QRMTIPL
QDSPSGNINF      QPRTDEV         QRMTSIGN
QDYNPTYADJ      QPWDEXTPITV     QRMTSRVATR
QDYNPTYSCD      QPWDLMTAJC      QSCANFS
QFRCCVNRST      QPWDLMTCHR      QSCANFSCTL
QINACTITV       QPWDLMTREP      QSECURITY
QINACTMSGQ      QPWDLVL         QSHRMEMCTL
QIPLDATTIM      QPWDMAXLEN      QSPCENV
```

4. Only user profiles with audit (*AUDIT) special authority are allowed to change the following system values:

```
QAUDCTL
QAUDENDACN
QAUDFRCLVL
QAUDLVL
QAUDLVL2
QCRTOBJAUD
```

5. Only user profiles with input/output system configuration (*IOSYSCFG) special authority are allowed to change the following system values:

```
QCFGMSGQ
```

6. Only user profiles with job control (*JOBCTL) special authority are allowed to change the following system values:

```
QCMNARB
QLOGOUTPUT
QPASTHRSVR
```

7. 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      QPWDLVL         QSHRMEMCTL
QALWOBJRST      QDSCJOBITV      QPWDMAXLEN      QUSEADPAUT
QALWUSRDMN      QDSPSGNINF      QPWDMINLEN      QVFYOBJRST
QAUDCTL         QFRCCVNRST      QPWDPOSDIF
QAUDENACN       QINACTMSGQ      QPWDRQDDGT
QAUDFRCLVL      QLMTDEVSSN      QPWDRQDDIF
QAUDLVL         QLMTSECOFR      QPWDVLDPGM
QAUDLVL2        QMAXSGNACN      QRETSVRSEC
QAUTOCFG        QMAXSIGN        QRMTSIGN
QAUTORMT        QPWDEXPITV      QRMTSRVATR
QAUTOVRT        QPWDLMTAJC      QSCANFS
QCRTAUT         QPWDLMTCHR      QSCANFSCTL
QCRTOBJAUD      QPWDLMTREP      QSECURITY
```

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, QCNTRYID, QCRTAUT, QCRTOBJAUD, QCTLSBSD, QCURSYM, QDATE, QDATETIME, QDATFMT, QDATSEP, QDAY, QDBFSTCCOL, QDBRCVYWT, QDECFMT, QDEVNAMING, QDEVRCYACN, QDSCJOBITV, QDSPSGNINF, QDYNPTYADJ, QDYNPTYSCD, QENDJOBLMT, 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, QMLTTHDACN, QMONTH, QPASTHRSVR, QPFRADJ, QPRBFTR, QPRBHLDITV, QPRCMLTTSK, QPRTDEV, QPRTKEYFMT, QPRTTXT, QPWDEXPITV, QPWDLMTAJC, QPWDLMTCHR, QPWDLMTREP, QPWDLVL, QPWDMAXLEN, QPWDMINLEN, QPWDPOSDIF, QPWDRQDDGT, QPWDRQDDIF, QPWDVLDPGM, QPWRDWNLMT, QPWRRSTIPL, QQRYDEGREE, QQRYTIMLMT, QRCLSPLSTG, QRETSVRSEC, QRMTIPL, QRMTSIGN, QRMTSRVATR, QSAVACCPTH, QSCANFS, QSCANFSCTL, QSCPFCONS, QSECOND, QSECURITY, QSETJOBATR, QSFWERRLOG, QSHRMEMCTL, QSPCENV, QSPLFACN, QSRTSEQ, QSRVDMP, QSTGLOWACN, QSTGLOWLMT, QSTRUPPGM, QSTSMSG, QSVRAUTITV, QSYSLIBL, QTHDRSCADJ, QTHDRSCAFN, QTIMADJ, QTIME, QTIMSEP, QTIMZON, QTOTJOB, QTSEPOOL, QUPSDLYTIM, QUPSMSGQ, QUSEADPAUT, QUSRLIBL, QUTCOFFSET, QVFYOBJRST, QYEAR	Required, Positional 1
VALUE	New value	*Not restricted*	Required, Positional 2

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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 iSeries Information Center contains information on using job interrupt exit programs. The Change Job Interrupt Status (QWCCJITP) API in the iSeries Information Center 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.
- *PWRDWNSYS - The Power Down System (PWRDWNSYS) 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.
- *JOBDTA - Actions that affect a job are audited.
- *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.
- *OFCSRV - 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.
- *SECSCKD - 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
  - *SECSCKD
  - *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 iSeries Security Reference 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.
- *JOBDTA - Actions that affect a job are audited.
- *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.

- *OFCSRV - 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.
- *SECSCKD - 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
  – *SECSCKD
  – *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 iSeries Security Reference 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 19**XX**.
- 1 indicates years 20**XX**.

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 QLUS 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.

QCNTRYID
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 iSeries 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.
- *ENDJOBNOLIST 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.

QDSCJOBITV

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 and objects with validation errors will 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 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.

QHOUR
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 (RTVSYSVAL) 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.

QINACTITV

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 information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/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 QINACTITV 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. Changes made to this system value take effect immediately.

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 you can sign on at multiple devices.
- 1 means you cannot sign on at more than one device.

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, iSeries 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.

QPFRADJ
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 QPFRADJ is changed from 2 to 0 or 1, dynamic performance tuning is stopped.
- 3 means dynamic performance tuning is started. If QPFRADJ is changed from 3 to 0 or 1, dynamic performance tuning is stopped.

If you create journal QPFRADJ 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.

QPRBHLDITV
Problem log entry hold interval. Changes made to this system value take effect immediately.

QPRCFEAT
Processor feature. The 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. If enabled, more than one set of task data will be resident in each CPU. Some workloads may experience increased performance due to caching implications. **Note:** The operating system will set the system value to 0 on the next IPL if it detects that the hardware does not support multitasking. Setting the value to system controlled will allow the system to manage the multitasking. Changes made to this system value take effect at the next IPL.

- 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 iSeries Information Center at http://www.ibm.com/eserver/iseries/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.

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.

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.

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.

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.

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 iSeries Security Reference 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. iSeries 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. iSeries 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.

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.

QPWDPOSDIF
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.

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.

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.

QPWDVLDPGM
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, 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 iSeries Information Center at http://www.ibm.com/eserver/iseries/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 topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/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, 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 iSeries Information Center at http://www.ibm.com/eserver/iseries/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.

QSAVACCPTH

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.

QSCANFSCTL

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.

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.
- *PWRDWNSYS: 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.

QSTSMSG

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.

QSVRAUTITV
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. The system value QUTCOFFSET will be changed as well 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 at the next 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 powers only the PRC, IOP cards, and Load Source Disk.
- *CALC means the appropriate wait time will be calculated.
- *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 iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

QUPSMSGQ
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.

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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.

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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.

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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.

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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.

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Parameters

Keyword	Description	Choices	Notes
DEV	Library device	*Name*	Required, Positional 1
CTG	Cartridge ID	Values (up to 40 repetitions): *Character value*, *ALL	Optional
CGY	Category	Single values: *SHARE400 Other values: *Element list*	Optional
	Element 1: Category name	*Character value*, ***SAME**, *NOSHARE, *IPL, *NL, *CNV	
	Element 2: Category system	*Character value*, ***SAME**, *CURRENT	

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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.

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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.

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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.

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Change Tape File (CHGTAPF)

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

Parameters
Examples
Error messages

The Change Tape File (CHGTAPF) command changes the attributes of the specified tape device file.

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Parameters

Keyword	Description	Choices	Notes
FILE	File	*Qualified object name*	Required, Key, Positional 1
	Qualifier 1: File	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
DEV	Tape device	Single values: ***SAME**, *NONE Other values (up to 4 repetitions): *Name*	Optional, Positional 2
VOL	Volume identifier	Single values: ***SAME**, *NONE Other values (up to 50 repetitions): *Character value*	Optional
REELS	Tape reels specifications	*Element list*	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	*Character value*, ***SAME**, *NONE	Optional
TEXT	Text 'description'	*Character value*, ***SAME**, *BLANK	Optional
RCDLEN	Record length	*Integer*, ***SAME**, *CALC	Optional
BLKLEN	Block length	1-524288, ***SAME**, *CALC	Optional
BUFOFSET	Buffer offset	*Integer*, ***SAME**, *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: *Element list*	Optional
	Element 1: Extend file	*YES	
	Element 2: Check file	***NOCHECK**, *CHECK	
DENSITY	Tape density	*Character value*, ***SAME**, *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**, *DEVD, *NO	Optional
CODE	Code	***SAME**, *EBCDIC, *ASCII	Optional
CRTDATE	Creation date	*Date*, ***SAME**, *NONE	Optional
EXPDATE	File expiration date	*Date*, ***SAME**, *NONE, *PERM	Optional
ENDOPT	End of tape option	***SAME**, *REWIND, *LEAVE, *UNLOAD	Optional

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Keyword	Description	Choices	Notes
USRLBLPGM	User label program	Single values: ***SAME**, *NONE Other values: *Qualified object name*	Optional
	Qualifier 1: User label program	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
IGCDTA	User specified DBCS data	***SAME**, *NO, *YES	Optional
WAITFILE	Maximum file wait time	*Integer*, ***SAME**, *IMMED, *CLS	Optional
SHARE	Share open data path	***SAME**, *NO, *YES	Optional

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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.

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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.

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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.

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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 an iSeries system, 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.

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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**

RCDFBLKFMT	FILETYPE(*DATA)	FILETYPE(*SRC)
*F *FB *U	18 - 32767	30 - 32767
*V *VB	1 - 32759	13 - 32767
*VS *VBS	1 - 32759	13 - 32767

Table 2. **Figure: ASCII RCDLEN Ranges**

RCDFBLKFMT	FILETYPE(*DATA)	FILETYPE(*SRC)
*F *FB *U	18 - 32767	30 - 32767
*D *DB	1 - 9995	13 - 10007
*VS *VBS	1 - 32759	13 - 32767

Top

Block length (BLKLEN)

Specifies the 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 iSeries system machine support functions.

The maximum block length is always 524288 bytes for an input file, but is limited to 9999 bytes if block descriptors must be created for an ASCII output file.

The following table shows the minimum and maximum block length values allowed for an output file:

Table 3. **Figure: Minimum and Maximum BLKLEN Values**

CODE	BUFOFSET	MIN BLKLEN	MAX BLKLEN
*EBCDIC	Ignored	18	524288
*ASCII	0	18	524288
*ASCII	*BLKDSC	18	9999

Top

Buffer offset (BUFOFSET)

Specifies the buffer offset value for the start of the first record in each block in the tape data file. A buffer offset value can be used for any record block format 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	RCDBLKFMT	BLKLEN1
*EBCDIC	*F *U	= RCDLEN
*ASCII	*F *U	= RCDLEN + BUFOFSET
*EBCDIC	*FB	= RCDLEN * n
*ASCII	*FB	= (RCDLEN * n) + BUFOFSET (where n is the number of records in a maximum-length block)
*EBCDIC	*V	= RCDLEN * 8
*ASCII	*D	= RCDLEN * 4 + BUFOFSET
*EBCDIC	*VB	>= RCDLEN + 8
*ASCII	*DB	>= RCDLEN + 4 + BUFOFSET
*EBCDIC	*VS *VBS	>= 18
*ASCII	*BS *VBS	>= 6 + BUFOFSET (18 minimum)

NOTE: Block length (BLKLEN) is a function of record length (RCDLEN) and buffer offset (BUFOFSET).

Top

Extend file (EXTEND)

Specifies, for output operations to tape, whether new records are added to the end of a data file that is currently on the tape. 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
3590-Bxx	*FMT3590
3590-Exx	*FMT3590E
3590-Hxx	*FMT3590H
3592-J1A	*FMT3592A1
4685-001	*VXA2
6335	*QIC3040
6343	*QIC1000
6344	*QIC2GB
6348	*QIC1000
6349	*QIC2GB
6368	*QIC1000
6369	*QIC2GB
6379	*QIC1000
6380	*QIC2GB
6381	*QIC2DC
6382	*QIC4DC
6383	*QIC5010
6384	*SLR60
6385	*QIC5010

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.

***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. The data format is written on the tape volume with a 3592 device. This density is used for 1/2 inch cartridge tapes.

***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.

***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.

Note: Self-configured tape devices may define additional valid values for the density parameter. Use iSeries 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.

***DEVD**
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)  IGCDTA(*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 default values for the keywords follow. These values are also used if *DFT is specified for the keyword.

Keyword
Default Value

TCPKEEPALV
120 minutes

TCPURGPTR
*BSD

TCPRCVBUF
8192 bytes

TCPSNDBUF
8192 bytes

TCPR1CNT
3

TCPR2CNT
16

TCPMINRTM
250 milliseconds

TCPCLOTIMO
120 seconds

TCPCNNMSG
*THRESHOLD

UDPCKS
*YES

IPPATHMTU
*YES, 10 minutes

IPDTGFWD
*NO

IPSRCRTG
*YES

IPRSBTIMO
10 seconds

IPTTL 64

IPQOSENB
*NO

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IPDEADGATE
*YES, 2 minutes

ARPTIMO
15 minutes

ECN *NO

NFC *YES, 300 seconds, 10MB

LOGPCLERR
*NO

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
UDPCKS	UDP checksum	***SAME**, *YES, *NO	Optional
IPPATHMTU	Path MTU discovery	Single values: ***SAME**, *DFT, *NO Other values: *Element list*	Optional
	Element 1: Enablement	*YES	
	Element 2: Interval	5-40320, *ONCE	
IPDTGFWD	IP datagram forwarding	***SAME**, *YES, *NO	Optional
IPSRCRTG	IP source routing	***SAME**, *YES, *NO	Optional
IPRSBTIMO	IP reassembly time-out	5-120, ***SAME**, *DFT	Optional
IPTTL	IP time to live (hop limit)	1-255, ***SAME**, *DFT	Optional
IPQOSENB	IP QoS enablement	***SAME**, *TOS, *YES, *NO	Optional
IPDEADGATE	IP dead gateway detection	Single values: ***SAME**, *DFT, *NO Other values: *Element list*	Optional
	Element 1: Enablement	*YES	
	Element 2: Interval	1-60	
ARPTIMO	ARP cache timeout	1-1440, ***SAME**, *DFT	Optional
ECN	Enable ECN	***SAME**, *YES, *NO	Optional

Keyword	Description	Choices	Notes
NFC	Network file cache	Single values: *DFT, *CLEAR Other values: *Element list*	Optional
	Element 1: Enablement	***SAME**, *YES, *NO	
	Element 2: Cached file timeout	30-604800, ***SAME**, *NOMAX	
	Element 3: Cache size	10-100000, ***SAME**	
LOGPCLERR	Log protocol errors	***SAME**, *YES, *NO	Optional
IPQOSBCH	IP QoS datagram batching	***SAME**, *NORMAL, *MINDELAY	Optional
IPQOSTMR	IP QoS timer resolution	5-5000, ***SAME**, *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 Sockets Programming information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

***SAME**
The keep-alive time interval value does not change from its current setting.

***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 urgent pointer value does not change from its current setting.

***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. Decreasing this value may improve performance in situations where many retransmissions occur due to the overrunning of a network adapter.

Notes:

1. This value is also used by the User Datagram Protocol (UDP) as its default receive buffer size.
2. This value is also used as the default receive buffer size by IP over SNA processing.
3. Setting this parameter does not guarantee the size of the TCP receive buffer. This is the default buffer size that is used for initial TCP connection negotiations. An individual application can override this value by using the SO_RCVBUF socket option. For more information see the Sockets Programming information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

***SAME**
The TCP receive buffer size does not change from its current value.

***DFT** The default TCP receive buffer size of 8192 (8K) 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.
2. UDP does not have a configurable send buffer size.
3. Setting this parameter does not guarantee the size of the TCP send buffer. This is the default buffer size that is used for initial TCP connection negotiations. An individual application can override this value by using the SO_SNDBUF socket option. For more information see the Sockets Programming information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

***SAME**
The TCP send buffer size does not change from its current value.

***DFT** The default TCP send buffer size of 8192 (8K) 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 TCP R1 retransmission count does not change from its current setting.

***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 TCP R2 retransmission count does not change from its current setting.

***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 TCP minimum retransmit time value does not change from its current value.

***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 TCP time wait timeout value does not change from its current setting.

***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 closed TCP connection message value does not change from its current value.

***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 status of checksum protection for UDP data does not change from its current value.

***YES** Checksum protection is provided for UDP data. UDPCKS(*YES) is the initial value.

***NO** Checksum protection is not provided for UDP data.

Top

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 path MTU discovery enablement status and path MTU discovery time interval do not change from their current values.

***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.

Top

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 IP datagram forwarding status does not change from its current value.

***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**
If the IP Source Routing value was previously set, that setting will remain in effect. If the IP Source Routing parameter was not previously set, use of the *SAME value will default to the *YES or on value.

***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 assembly time does not change from its current setting.

***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 time-to-live value does not change from its current setting.

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.

***DFT** The default time-to-live value of 64 is used.

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 QoS enablement value does not change from its current value.

***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 dead gateway detection enablement status and dead gateway interval do not change from their current values.

***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 default ARP cache time-out interval does not change from its current setting.

***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**
ECN does not change from its current value.

***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 NFC enablement status does not change from its current value.

***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 cached file timeout does not change from its current value.

***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 affect until NFC is enabled.

SAME The cache file size does not change from its current value.

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 status of logging protocol errors does not change from its current value. LOGPCLERR(*NO) is the shipped value.

***NO** Protocol errors are not logged.

***YES** Protocol errors are logged.

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)  IPRSBTIMO(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   TCPR1CNT(3)  TCPR2CNT(10)  TCPCLOTIMO(300)
          IPQOSENB(*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

Change Local Domain and Remote DNS information

Use the Change TCP/IP Domain Information (CHGTCPDMN) command 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:	*Character value*, ***SAME**, *NONE	
	Element 3:	*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: 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 Domain Name Server (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.

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***NONE**
No host name is defined for this system.

character-value
Specify a TCP/IP host name for this system.

Example of how to use the HOSTNAME parameter to specify a TCP/IP host name where ″asac1″ is the name of the local system:

```
CHGTCPDMN HOSTNAME ('asac1')
```

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.

Example of how to use the DMNNAME parameter to specify this system's TCP/IP domain name:

```
CHGTCPDMN DMNNAME ('dom1.abc.com')
```

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. Up to six domain names may be specified, separated by spaces and enclosed in apostrophes. 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.

Example of how to use the DMNSCHLIST parameter to specify this system's domain search list:

```
CHGTCPDMN DMNSCHLIST('dom1.abc.com  dom2.abc.com  abc.com')
```

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 Domain Name Service (DNS) to resolve TCP/IP host names before searching the local TCP/IP host table. The Domain Name Server (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)

Use this parameter to specify up to three Domain Name Servers (DNS) to be used by this system. Specify a Domain Name Server (DNS) by entering its Internet address. You may add none, one, two, or three Domain Name Server (DNS) Internet addresses.

If the first Domain Name Server (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 contacted.

The Domain Name Server (DNS) Internet address must be in decimal form, with a maximum of 15 characters.

This is an example of how to use the INTNETADR parameter to specify a primary and secondary Domain Name Server for use by this system:

```
CHGTCPDMN   INTNETADR('9.131.42.251'  '9.131.39.251')
```

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.

1-65532r
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-retries, and time-interval.

The first element; number-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.

Element 1: Number of retries

***SAME**
This is the default value. The number-retries value will not be changed if it was previously set. If the number-retries value was not previously set, the number-retries value of 2 will be used.

1-99 Specify the number of communication retry attempts.

Element 2: Time interval Specifies the length of time in seconds this system will wait before initiating a retry attempt.

***SAME**
The time-interval value will not be changed if it was previously set. If the time-interval value was not previously set, the time-interval value of 2 will be used.

1-99 Specify the time-interval in seconds between retry attempts.

Here is an example of how to use the Domain Name Server Retry (DMNSVRRTY) parameter to set the number of retries to three, and the interval between each retry to ten seconds:

```
CHGTCPDMN   DMNSVRRTY(3 10)
```

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 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.

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 fields for an existing host table entry in the local host table. A host table entry consists of one internet address, up to four host names, and one text description.

See also the following host table commands:

- Add TCP/IP Host Table Entry (ADDTCPHTE) command adds a new entry in the local host table
- 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 four 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 local system, the search order used (whether the remote name server or local host table is searched first) for a resolution between a host name and an internet address depends on how the searched-first value was configured on the configuration panel of the remote name server. To change the search order, use option 13 on the Configure TCP/IP (CFGTCP) command.

The TCP/IP host table is shipped with the loopback entry. This entry has an internet address of 127.0.0.1 and two host names: LOOPBACK and LOCALHOST. The loopback host name can be associated only with an internet address that has a first-byte value equal to 127.

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.

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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	*Character value*	Required, Key, Positional 1
HOSTNAME	Host names	Values (up to 4 repetitions): *Element list*	Optional
	Element 1: Name	*Character value*, ***SAME**, *BLANK	
TEXT	Text 'description'	*Character value*, ***SAME**, *BLANK	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. The internet address is specified in the form *nnn.nnn.nnn.nnn*, where *nnn* is a decimal number ranging from 0 through 255. An internet address is not valid if it has a value of all binary ones or all binary zeros for the network identifier (ID) portion or the host ID portion of the address. If the internet address is entered from a command line, the address must be enclosed in apostrophes.

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. Specify from 1 to 4 different host names to be associated with the internet address. Host names may be up to 255 characters in length.

A domain name or a host name can be a text string having 1 to 255 characters. Domain names consist of one or more labels separated by periods. Each label can contain up to 63 characters. The first character of each label must be an alphabetic character or a digit. The last character of each label must be an alphabetic character, a digit, or a period. The following characters are allowed in domain names:

- Alphabetical characters A through Z
- Digits 0 through 9
- Underscore (_)
- Minus sign (-)

- Period (.). Periods are allowed only when they separate labels of the domain style name or as the last character in the domain name. (Refer to RFC 1034.) A domain name cannot have two consecutive periods.

Note: These characters are part of the Syntactic Character Set (character set number 640). This character set is also commonly referred to as invariant.

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:

  COM Commercial organizations

  EDU Educational institutions

  GOV Government institutions

  MIL Military groups

  NET Major network support centers

  ORG Organizations other than those listed previously

  ARPA Temporary ARPANET domain

  Country or Region Code
  Countries or regions other than the USA

***SAME**
This host-name value is not to be modified.

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.

name 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, *name* is in the form:

```
location.netid.SNA.IBM.COM
```

Top

Text 'description' (TEXT)

Specifies a comment associated with this host table entry.

Note: If the host table will be copied to a system using a different code page than the system it was created on, it is suggested that you avoid using certain characters in a comment. Host table entry comments will be more portable if they are limited to characters in the Syntactic Character Set (invariant).

***SAME**
The text-description field for this host table entry is not to be modified.

***BLANK**
The text-description field for this host table entry is to be changed to blanks.

character-value
Specify a text-description field to be associated with the specified internet address. Comments can contain a maximum of 64 characters.

Top

Examples

Example 1: Changing a Host Name

```
CHGTCPHTE   INTNETADR('132.28.71.5')
            HOSTNAME((*SAME) (*SAME) (NEWAS400HOST))
            TEXT(*BLANK)
```

This command changes the third host name associated with internet address 132.28.71.5 to NEWAS400HOST but does not modify the first, second, or fourth host names. The text of the descriptive comment for this host table entry is set to blanks.

Example 2: Changing All Host Names

```
CHGTCPHTE   INTNETADR('9.130.25.21')
            HOSTNAME((MYHOST) (MYHOST.MYNET)
                     (MYHOST.MYNET.MYCORP)
                     (MYHOST.MYNET.MYCORP.MYFIELD))
            TEXT(*SAME)
```

This command changes all host names associated with internet address 121.14.32.5. The first host name is specified in the short form, MYHOST. The fourth host name is specified in the fully qualified form, MYHOST.MYNET.MYCORP.MYFIELD. The descriptive comment for this host table entry is not changed.

Example 3: Changing Host Names and Text Description

```
CHGTCPHTE   INTNETADR('132.28.71.5')
            HOSTNAME((AS400ETH.SALES.ABC.COM)
                     (AS400ETH.SALES.ABC) (*BLANK) (*BLANK))
            TEXT('THIS ENTRY UPDATED ON 19 FEB 1994 BY T.J.')
```

This command changes the first and second host names associated with internet address 132.28.71.5 to AS400ETH.SALES.ABC.COM and AS400ETH.SALES.ABC. The third and fourth host names, if they existed, are changed to blanks. The descriptive comment for this host table entry is changed to 'THIS ENTRY UPDATED ON 19 FEB 1994 BY T.J.'.

Top

Error messages

***ESCAPE Messages**

TCP1901
Internet address &1 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 &1 not valid.

TCP1929
Host table not available.

TCP1936
All host names for internet address &1 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 defined 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 you to specify either a single interface or multiple interfaces per line description. You can have your system 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 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.

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 Information (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:

- You must have input/output system configuration (*IOSYSCFG) special authority 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.

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Parameters

Keyword	Description	Choices	Notes
INTNETADR	Internet address	*Character value*	Optional, Positional 1
ALIASNAME	Alias name	*Simple name*, ***SAME**, *NONE	Optional
LIND	Line description	*Name*, ***SAME**, *VIRTUALIP, *LOOPBACK, *OPC	Optional, Positional 2
SUBNETMASK	Subnet mask	*Character value*, ***SAME**, *HOST	Optional, Positional 3
LCLIFC	Associated local interface	*Character value*, ***SAME**, *NONE	Optional
TOS	Type of service	***SAME**, *MINDELAY, *MAXTHRPUT, *MAXRLB, *MINCOST, *NORMAL	Optional
MTU	Maximum transmission unit	576-16388, ***SAME**, *LIND	Optional
AUTOSTART	Autostart	***SAME**, *YES, *NO	Optional
PVCLGLCHLI	PVC logical channel identifier	Values (up to 64 repetitions): *Character value*, ***SAME**, *NONE	Optional
IDLVCTTIMO	X.25 idle circuit timeout	1-600, ***SAME**	Optional
MAXSVC	X.25 maximum virtual circuits	0-64, ***SAME**	Optional
DDN	X.25 DDN interface	***SAME**, *YES, *NO	Optional
BITSEQ	TRLAN bit sequencing	***SAME**, *MSB, *LSB	Optional

Top

Internet address (INTNETADR)

Specifies the internet address. The internet address is specified in the form *nnn.nnn.nnn.nnn*, where *nnn* is a decimal number ranging from 0 through 255. An internet address is not valid if it has a value of all binary ones or all binary zeros for the network identifier (ID) portion or the host ID portion of the address. If the internet address is entered from a command line, the address must be enclosed in apostrophes.

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

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 current alias name is used.

***NONE**
No alias name is associated with the TCP/IP interface you are currently defining.

simple-name
Specify a name for the interface. The alias name must be 25 characters or less.

Line description (LIND)

Specifies the name of the line description associated with the to be changed interface. The following conditions are based on the interface type that the user defines:

Token-ring
The name must be previously defined on the Create Line Description (Token-Ring Network) (CRTLINTRN) command.

X.25 The name must be previously defined on the Create Line Description (X.25) (CRTLINX25) command.

Ethernet
The name must be previously defined on the Create Line Description (Ethernet) (CRTLINETH) command.

DDI The name must be previously defined on the Create Line Description (DDI Network) (CRTLINDDI) command.

Frame relay
The name must be previously defined on the Create Line Description (Frame Relay Network) (CRTLINFR) command.

Wireless
The name must be previously defined on the Create Line Description (Wireless Network) (CRTLINWLS) command.

Twinax (TDLC)
The name must be previously defined on 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 same line description existing for this interface is used.

***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 you are adding an OptiConnect interface over TCP/IP. This interface is attached to the optical bus (OptiConnect).

***LOOPBACK**
The interface being changed by this command 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 internet address that has a first octet value of 127.

name Specify the name of the line description to be used for this interface.

Top

Subnet mask (SUBNETMASK)

Specifies the subnet mask, which is a bit mask that defines the part of the network where this interface attaches. 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.

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.

***SAME**
The same subnetmask existing for this interface is used.

***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 subnet mask for the network 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

Associated local interface (LCLIFC)

Use this parameter to associate the interface you are currently defining with an existing local TCP/IP interface.

The associated local interface (LCLIFC) is used to allow 'transparent subnetting' (also known as 'Proxy Arp') between the associated interfaces, to define Frame Relay unnumbered networks or for load balancing.

Condition for using the LCLIFC for unnumbered networks:

- The line type of the interface you are changing MUST be Frame Relay.

Conditions for using LCLIFC for transparent subnetting:

- The network of the associated local interface must be broadcast capable.
- The interface you are changing must be defined as a subnet of the network you are associating it with (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: You can only use LCLIFC to associate this interface to another interface that is already defined. Once associated, the interface defined in LCLIFC must always be started prior to starting this interface.

***SAME**
The current associated local interface is used.

***NONE**
No TCP/IP interface is associated with the interface you are currently defining.

character-value
Specify the internet address of the interface you want to associate with the interface you are currently defining.

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.

***SAME**
The type of service 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

*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. The minimum size of any maximum transmission unit value is 576 bytes. If this value is changed it affects the MTUs of routes using this interface.

***SAME**
The existing maximum transmission unit value for this interface is used.

***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.

maximum-transmission-unit
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
1492

Ethernet Version 2
1500

DDI 4352

Frame relay
8177

Wireless 802.3
1492

Wireless Version 2
1500

Twinax (TDLC)
4105

Notes:

1. It is suggested that the same MTU values be used for all interfaces on the same network.
2. 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.
3. The same MTU value does not need to be specified for all interfaces defined on the same subnet. However, all interfaces must have an MTU that does not exceed the value used when *LIND is specified for the interface MTU.
4. To view the MTU value actually used for an interface, do the following:
   a. Use the ADDTCPIFC command to add the interface.
   b. Use the Start TCP/IP Interface (STRTCPIFC) command to activate the interface.
   c. Use the Work with TCP/IP Status (WRKTCPSTS 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 using the Start TCP/IP (STRTCP) command.

***SAME**
The existing autostart value for this interface is used.

***YES** The interface is automatically started by the STRTCP command. time.

***NO** The interface is not started by the STRTCP command.

Note: The Start TCP/IP Interface (STRTCPIFC) command can be used to start an interface any time after TCP/IP has been activated (STRTCP).

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 exist in the X.25 line description.

With this parameter you can share the line 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 must have this 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 existing PVC logical channel identifier values for this interface are used.

***NONE**
All existing PVC logical channel identifier values for this interface are removed. If no PVC values are defined, *NONE is shown.

001-FFF
Specify the PVC logical channel identifier value. Up to 64 PVC logical channel identifiers can be specified.

Top

X.25 idle circuit timeout (IDLVCTTIMO)

Specifies the duration (in seconds) that the TCP/IP Network Access Manager (NAM) 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 existing idle virtual circuit timeout value for this interface is used.

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 you can share the line 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 existing maximum SVC value for this interface is used.

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 calculated by adding 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. 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 you specify multiple interfaces 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 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 existing DDN value for this interface is used.

***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 by the CHGTCPIFC code to ensure consistent values.

***SAME**
The existing bit sequence value for this interface is used.

***MSB** The most significant bit is placed first.

***LSB** The least significant bit is placed first.

Top

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 connnected 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.

Top

Error messages

***ESCAPE Messages**

TCP1D03
&1 member record length not correct.

TCP1D04
Error occurred processing member &1 of &2/&3.

TCP1901
Internet address &1 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 a route. These values are the route destination (RTEDEST) the subnet mask (SUBNETMASK), the type of service (TOS), the internet address of the next system on the route (NEXTHOP), and the preferred binding interface (BINDIFC). For default routes and default multicast routes (*DFROUTE and *DFTMCAST), the NEXTHOP, TOS and BINDIFC values uniquely define the route because the SUBNETMASK is always *NONE.

Restrictions:

- You must have input/output system configuration (*IOSYSCFG) special authority to run this command.
- Only one parameter, the MTU value, can be changed on an existing route entry. The route cannot be in use when attempting to change its MTU value.
- 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*, *DFTROUTE, *DFTMCAST	Required, Key, Positional 1
SUBNETMASK	Subnet mask	*Character value*, *NONE, *HOST	Required, Key, Positional 2
TOS	Type of service	*MINDELAY, *MAXTHRPUT, *MAXRLB, *MINCOST, ***NORMAL**	Optional, Key, Positional 3
NEXTHOP	Next hop	*Character value*	Optional, Key
BINDIFC	Preferred binding interface	*Character value*, ***NONE**	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**	Optional

Top

Route destination (RTEDEST)

Specifies the route destination being changed. 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.

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***DFTROUTE**
Specifies that a default route entry is being changed. A default route entry is used by the system to route data that is being sent to a remote destination that does not have a specific route defined. The default route entries 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 route you are changing is a default Multicast route. The default Multicast route is used by an application when no specific route is 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).

character-value
Specify the route destination being changed. 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.

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.

***NONE**
No subnet mask is used. A subnet mask is not used when specifying default routes. For example, when RTEDEST(*DFTMCAST) or RTEDEST(*DFTROUTE) 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 129.35.11.0 is a Class B subnet. The network ID part of its address is 129.35. The upper 2 bytes must designate 255 in the subnetmask. The subnetmask must appear like

255.255.x.x, where x is determined by the user. The portion of the subnetmask that is associated with the network portion of a particular class of address must equal 255.

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.

*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.

character-value

Specify the internet address of the next system on the route. The internet address is specified in the form *nnn.nnn.nnn.nnn*, where *nnn* is a decimal number ranging from 0 through 255. An internet address is not valid if it has a value of all binary ones or all binary zeros for the network identifier (ID) portion or the host ID portion of the address. If the internet address is entered from a command line, the address must be enclosed in apostrophes.

Top

Preferred binding interface (BINDIFC)

Specifies the IP interface this route will be bound to. The bind is absolute.

Note: This parameter is useful only when there are multiple interfaces defined on your system for the same network. BINDIFC allows you to define which interface should be used to reach the network for a particular route destination. In this way you can distribute traffic (load balancing) across multiple interfaces so all routes do not use the same interface to reach the network.

If the IP interface you specify is active, this route will bind to it, otherwise it will follow the normal route binding rules (which are also used when BINDIFC is defined as *NONE).

***NONE**

No particular IP interface will be bound to this route. The first active IP interface on the network defined by the NEXTHOP and SUBNETMASK parameters will be used. This is the default value.

character-value

Enter the internet address (IP address) of the interface you want this route to bind to.

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. The minimum size of any maximum transmission unit value is 576 bytes.

***SAME**
The existing maximum transmission unit value for this route is used.

***IFC** The maximum transmission unit (MTU) is the MTU of the interface that is associated with this 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
1492

Ethernet Version 2
1500

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. For best performance, specify a value that is no smaller than the smallest MTU used by host systems along the entire path of this route. If this information is not available, use the default value of 576.
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.

***SAME**
The value of the route metric will not change from its current value.

1-16 Specify a metric value.

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.

***SAME**
The route distribution value will not change from its current setting.

***YES** *YES means that this route will be shown to any requesting router.

NO *NO means this route will not be shown or shared with other routers.

Note: REDST(*YES) is analogous to the RIPv1 specification of STATIC. REDST(*NO) is analogours to the RIPv1 SPECIFICATION OF passive.

Top

Duplicate route priority (DUPRTEPTY)

Specify the duplicate route priority of this static route. Routes with a high duplicate route priority (DUPRTEPTY) will be tried before routes with a low one.

***SAME**
The priority value metric will not change from its current value.

1-10 Specify a priority value.

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 a Default Route

```
CHGTCPRTE   RTEDEST(*DFTROUTE)  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.

Top

Error messages

***ESCAPE Messages**

TCP1D03
&1 member record length not correct.

TCP1D04
Error occurred processing member &1 of &2/&3.

TCP1901
Internet address &1 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 (CHGTCPSVR)

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

Parameters
Examples
Error messages

The Change TCP/IP Server (CHGTCPSVR) 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 (SRVSPCVAL).

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
SVRSPCVAL	Server special value	*Character value*	Required, Key, Positional 1
PGM	Program to call	Single values: ***SAME** Other values: *Qualified object name*	Optional, Positional 2
	Qualifier 1: Program to call	*Name*	
	Qualifier 2: Library	*Name*	
SVRNAME	Server name	*Character value*, ***SAME**	Optional, Positional 3
SVRTYPE	Server type	*Character value*, ***SAME**	Optional, Positional 4
AUTOSTART	Autostart	***SAME**, *YES, *NO	Optional, Positional 5
TEXT	Text 'description'	*Character value*, ***SAME**, *BLANK	Optional, Positional 6

Top

Server special value (SVRSPCVAL)

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

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Program to call (PGM)

Specifies the program to be called when this server is started or ended by the following commands:

- STRTCPSVR (Start TCP/IP Server)
- ENDTCPSVR (End TCP/IP Server)
- STRTCP (Start TCP/IP) - if the server is defined as AUTOSTART(*YES)
- ENDTCP (End TCP/IP)

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 iSeries 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 iSeries 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 iSeries 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 iSeries Navigator.

Top

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.

Top

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.

Top

Examples

```
CHGTCPSVR   SVRSPCVAL(*XYZ)
            PGM(MYLIB/MYSTARTXYZ)
            AUTOSTART(*NO)
```

This command changes an existing server in the list of servers supported by the STRTCPSVR (Start TCP/IP Server) and ENDTCPSVR (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 STRTCPSVR command is run specifying SERVER(*AUTOSTART), or when the STRTCP (Start TCP/IP) command is run.

Top

Error messages

***ESCAPE Messages**

TCP1631
TCP/IP server &1 not changed.

Top

Change TFTP Attributes (CHGTFTPA)

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

Parameters
Examples
Error messages

The Change TFTP Server Attributes (CHGTFTPA) 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, ***SAME**	Optional, Positional 1
ENBBCAST	Enable subnet broadcast	*YES, *NO, ***SAME**	Optional
NBRSVR	Number of server jobs	*Element list*	Optional
	Element 1: Minimum	1-20, ***SAME**, *DFT	
	Element 2: Maximum	1-250, ***SAME**, *DFT	
INACTTMR	Server inactivity timer	1-1440, ***SAME**, *DFT	Optional
CCSID	ASCII single byte CCSID	*Element list*	Optional
	Element 1: Coded character set identifier	1-65532, ***SAME**, *DFT	
MAXBLKSIZE	Maximum block size	512-65464, ***SAME**, *DFT	Optional
RSPTIMO	Connection response timeout	1-600, ***SAME**, *DFT	Optional
ALWWRT	Allow file writes	*DFT, *NONE, *CREATE, *REPLACE, ***SAME**	Optional
ALTSRCDIR	Alternate source directory	*Character value*, ***SAME**, *NONE, *DFT	Optional
ALTTGTDIR	Alternate target directory	*Character value*, ***SAME**, *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.

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***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 that 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

```
CHGTFTPA   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

```
CHGTFTPA   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

```
CHGTFTPA   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

Top

Change Time Zone Description (CHGTIMZON)

Where allowed to run: All environments (*ALL)
Threadsafe: 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	*Name*	Required, Key, Positional 1
OFFSET	Offset	-779-779, ***SAME**	Optional
STDNAME	Standard Time	Single values: ***SAME**, *GEN, *MSG Other values: *Element list*	Optional
	Element 1: Abbreviated name	*Character value*	
	Element 2: Full name	*Character value*	
DSTNAME	Daylight Saving Time (DST)	Single values: ***SAME**, *NONE, *GEN, *MSG Other values: *Element list*	Optional
	Element 1: Abbreviated name	*Character value*	
	Element 2: Full name	*Character value*	
STDMSG	Standard Time message	*Name*, ***SAME**	Optional
DSTMSG	Daylight Saving Time message	*Name*, ***SAME**	Optional
MSGF	Message file	Single values: ***SAME** Other values: *Qualified object name*	Optional
	Qualifier 1: Message file	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**	
DSTSTR	Daylight Saving Time start	*Element list*	Optional
	Element 1: Month	***SAME**, *JAN, *FEB, *MAR, *APR, *MAY, *JUN, *JUL, *AUG, *SEP, *OCT, *NOV, *DEC	
	Element 2: Day	***SAME**, *MON, *TUE, *WED, *THU, *FRI, *SAT, *SUN	
	Element 3: Relative day of month	***SAME**, *LAST, 1, 2, 3, 4	
	Element 4: Time	*Time*, ***SAME**	

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Keyword	Description	Choices	Notes
DSTEND	Daylight Saving Time end	*Element list*	Optional
	Element 1: Month	***SAME**, *JAN, *FEB, *MAR, *APR, *MAY, *JUN, *JUL, *AUG, *SEP, *OCT, *NOV, *DEC	
	Element 2: Day	***SAME**, *MON, *TUE, *WED, *THU, *FRI, *SAT, *SUN	
	Element 3: Relative day of month	***SAME**, *LAST, 1, 2, 3, 4	
	Element 4: Time	*Time*, ***SAME**	
TEXT	Text 'description'	*Character value*, ***SAME**, *BLANK	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

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

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

```
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): *Simple name*	Required, Positional 1
OBJAUD	Object auditing value	***SAME**, *NONE, *CHANGE, *ALL	Optional, Positional 2
AUDLVL	User action auditing	Single values: ***SAME**, *NONE Other values (up to 13 repetitions): *CMD, *CREATE, *DELETE, *JOBDTA, *OBJMGT, *OFCSRV, *OPTICAL, *PGMADP, *SAVRST, *SECURITY, *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.

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***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 13 repetitions)

***CMD** CL command strings, System/36 environment operator control commands, and System/36 environment procedures are logged for this user.

***CREATE**
Auditing entries are sent when objects are created by this user.

***DELETE**
Auditing entries are sent when objects are deleted by this user.

***JOBDTA**
The following actions taken by this user that affect a job are audited:
- Job start and stop data
- Hold, release, stop, continue, change, disconnect, end, end abnormal
- Program start request (PSR) is attached to a prestart job

***OBJMGT**
Object management changes made by this user, such as move or rename, are audited.

***OFCSRV**
Office services changes made by this user, such as changes to the system directory and use of OfficeVision mail, are audited.

***OPTICAL**
The following optical functions are audited:
- 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**
Authority obtained through program adoption is audited for this user.

***SAVRST**
Save and restore actions performed by this user are audited.

***SECURITY**
Security changes made by this user are audited.

***SERVICE**
Use of the system service tools by this user is audited.

***SPLFDTA**
Spooled file operations made by this user are audited.

***SYSMGT**
Use of system management functions by this user is audited.

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)
Threadsafe: 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 iSeries 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	*Simple name*	Required, Key, Positional 1
PASSWORD	User password	*Character value*, ***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	*Name*, ***SAME**, *CRTDFT	Optional
INLPGM	Initial program to call	Single values: ***SAME**, *NONE Other values: *Qualified object name*	Optional
	Qualifier 1: Initial program to call	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
INLMNU	Initial menu	Single values: ***SAME**, *SIGNOFF Other values: *Qualified object name*	Optional
	Qualifier 1: Initial menu	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
LMTCPB	Limit capabilities	***SAME**, *NO, *PARTIAL, *YES	Optional
TEXT	Text 'description'	*Character value*, ***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
LCLPWDMGT	Local password management	***SAME**, *YES, *NO	Optional

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Keyword	Description	Choices	Notes
LMTDEVSSN	Limit device sessions	***SAME**, *NO, *YES, *SYSVAL	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
JOBD	Job description	Single values: ***SAME** Other values: *Qualified object name*	Optional
	Qualifier 1: Job description	*Name*, **QDFTJOBD**	
	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
GRPAUTTYP	Group authority type	*PRIVATE, *PGP, ***SAME**	Optional
SUPGRPPRF	Supplemental groups	Single values: ***SAME**, *NONE Other values (up to 15 repetitions): *Name*	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: *Qualified object name*	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: *Qualified object name*	Optional
	Qualifier 1: Output queue	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
ATNPGM	Attention program	Single values: ***SAME**, *SYSVAL, *NONE, *ASSIST Other values: *Qualified object name*	Optional
	Qualifier 1: Attention program	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
SRTSEQ	Sort sequence	Single values: ***SAME**, *SYSVAL, *HEX, *LANGIDSHR, *LANGIDUNQ Other values: *Qualified object name*	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, *DEVD, *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, *NOSTSMSG, *STSMSG, *HLPFULL, *PRTMSG	Optional
UID	User ID number	1-4294967294, ***SAME**	Optional

Keyword	Description	Choices	Notes
GID	Group ID number	1-4294967294, ***SAME**, *GEN, *NONE	Optional
HOMEDIR	Home directory	*Path name*, *USRPRF, ***SAME**	Optional
EIMASSOC	EIM association	Single values: ***NOCHG** Other values: *Element list*	Optional
	Element 1: EIM identifier	*Character value*, *USRPRF	
	Element 2: Association type	*TARGET, *SOURCE, *TGTSRC, *ADMIN, *ALL	
	Element 3: Association action	***REPLACE**, *ADD, *REMOVE	
	Element 4: Create EIM identifier	***NOCRTEIMID**, *CRTEIMID	

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, QEJBSVR, 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 created.

Top

User password (PASSWORD)

Specifies the password that allows the user to sign on the system. The password is associated with a user profile and is used by the system to represent the user in the system. The passwords should be known only to the individual user. A numeric password can be specified.

When the system is operating at password level 0 or 1 and the password is numeric, then the password must begin with a **Q**, for example, **Q1234** where **1234** is the password used for signing on the system.

Note: The password level is controlled by the Password Level (QPWDLVL) system value.

Note: The new password is not checked against the password validation rules. The password validation rules are defined by i5/OS system values. For a description of the password validation rules, see the iSeries 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 that do password synchronization (for example, iSeries Integration for Windows Server). See the documentation for the product for information on managing the passwords for the product 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 sign-on 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 nameof 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

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 that do password synchronization (for example, iSeries Integration for Windows Server).

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 that do password synchronization, like iSeries Integration for Windows Server. See the documentation for the product 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 to 1. 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 single device session.

***NO** The user is not limited to a single device session.

***YES** The user is limited to a single device session.

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 System API Reference information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/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 (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

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 is be the primary group for newly-created objects, with the authority value determined by the GRPAUT parameter. If the authority value in the GRPAUT parameter is *NONE, this value is ignored.

Top

Supplemental groups (SUPGRPPRF)

Specifies the user's supplemental group profiles. The profiles specified here, along with the group profile specified for the **Group profile (GRPPRF)** parameter, are used to determine what authority the user has if no specific user authority is given for the job. If profiles are specified for this parameter, a group profile name must be specified on the GRPPRF parameter for this user profile (either on this command or on a previous Create User Profile (CRTUSRPRF) or Change User Profile (CHGUSRPRF) command. The current user of this command must have object management (*OBJMGT) and change (*CHANGE) authority to the profiles specified for this. The required *OBJMGT authority cannot be given by a program adopt operation.

Notes:

1. When a group profile is specified, the user is automatically granted *CHANGE and *OBJMGT authority to the group profile.
2. The following IBM-supplied user profiles are not valid for this parameter:

   QANZAGENT, QAUTPROF, QCLUMGT, QCLUSTER, QCOLSRV, QDBSHR, QDBSHRDO, QDFTOWN, QDIRSRV, QDLFM, QDOC, QDSNX, QEJB, QFNC, QGATE, QIBMHELP, QIPP, QLPAUTO, QLPINSTALL, QMGTC, QMSF, QNETSPLF, QNFSANON, QNTP, QPEX, QPM400, QRJE, QSNADS, QSPL, QSPLJOB, QSRV, QSRVAGT, QSRVBAS, QSYS, QTCM, QTCP, QTFTP, 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 then 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 Globalization topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/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 QCNTRYID is used.

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

Top

Coded character set ID (CCSID)

Specifies the coded character set identifier (CCSID) to be used for this user.

A CCSID is a 16-bit number identifying a specific set of encoding scheme identifiers, character set identifiers, code page identifiers, and additional coding-related information that uniquely identifies the coded graphic representation used.

Note: If the value for CCSID is changed, the change does not affect jobs that are currently running.

***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/iseries/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.

***DEVD**
The *DEVD 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.

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.

***NOSTSMSG**
Status messages are not displayed when sent to the user.

***STSMSG**
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
Spcify 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.

***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 concepts and reference topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

Top

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 identifer 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 *STSMSG and *NOSTSMSG.

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 (CHGUSRPRTI)

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

Parameters
Examples
Error messages

The Change User Print Information (CHGUSRPRTI) 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*, ***CURRENT**	Optional, Key, Positional 1
TEXT	User defined text	*Character value*, ***SAME**, *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')
```

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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 'nnnnnn' 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 System API Reference information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter, **OS/400 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: *Qualified job name*	Optional, Key, Positional 1
	Qualifier 1: Job name	*Name*	
	Qualifier 2: User	*Name*	
	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.

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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)

Threadsafe: Yes

Parameters
Examples
Error messages

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 concepts and reference topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/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).

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- 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      Assumed
Value          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    | Length | Converted      |
|         | Value        |        | 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 apostrophes 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 apostrophes. 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:

- The CHGVAR command is valid only in CL procedures.

Top

Parameters

Keyword	Description	Choices	Notes
VAR	CL variable name	*CL variable name*	Required, Positional 1
VALUE	New value	*Character value*	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 concepts and reference topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/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)
Threadsafe: 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 (JOBD)** 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.
3. The job associated with an active subsystem can only find objects that exist in the system auxiliary storage pool (ASP) or in a basic user ASP. Therefore, objects that are referenced by this command should exist in the system ASP or in a basic user ASP.

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

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Keyword	Description	Choices	Notes
JOBD	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
AT	Allocation	***SAME**, *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) (CRTDEVDSP) 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 (JOBD)

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   SBSD(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   SBSD(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	*Name*, *SYSVAL	Required, Positional 1
OUTQ	Output queue	Single values: ***SAME**, *DEV Other values: *Qualified object name*	Optional, Positional 2
	Qualifier 1: Output queue	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
FORMTYPE	Form type options	*Element list*	Optional, Positional 3
	Element 1: Form type	*Character value*, ***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**, *DEVD, *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.

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Top

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.

Top

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.

***DEVD**
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

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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 Operating System through iSeries Navigator's Application Administration support. The Change Function Usage (CHGFCNUSG) command, with a function ID of QIBM_SERVICE_TRACE, can also be used to change the list of users that are allowed to perform trace operations.
- 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.

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***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.

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: *Element list*	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

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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 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.

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QIGCrrccl

Specify the name of the DBCS font table being checked for. The name must always be in the format QIGCrrccl, 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.

For more information about integrated file system commands, see the Integrated file system information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

Restrictions:

1. To check in an object that the user has checked out, the user must have write (*W) authority to the object.
2. 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
3. The user must have execute (*X) authority to each directory in the path.
4. Not all file systems support the CHKIN command.

Top

Parameters

Keyword	Description	Choices	Notes
OBJ	Object	*Path name*	Required, Positional 1

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 concepts and reference topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

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Examples

Example 1: Checking an Object In

```
CHKIN   OBJ('W')
```

This command checks in file W in your current directory. If another user has the file checked out and this user has sufficient authority, the file is checked in.

Top

Error messages

***ESCAPE Messages**

CPFA09C
Not authorized to object. Object is &1.

CPFA09D
Error occurred in program &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.

CPFA0AB
Operation failed for object. Object is &1.

CPFA0AD
Function not supported by file system.

CPFA0B2
No objects satisfy request.

CPFA0BE
&1 objects checked in. &2 objects failed.

CPFA0BF
&1 objects checked out. &2 objects failed.

CPFA0DA
Object is a directory. Object is &1.

Top

Check Object (CHKOBJ)

Where allowed to run: All environments (*ALL)
Threadsafe: 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, *CNNL, *COSD, *CRG, *CRQD, *CSI, *CSPMAP, *CSPTBL, *CTLD, *DEVD, *DOC, *DTAARA, *DTADCT, *DTAQ, *EDTD, *EXITRG, *FCT, *FILE, *FLR, *FNTRSC, *FNTTBL, *FORMDF, *FTR, *GSS, *IGCDCT, *IGCSRT, *IGCTBL, *IMGCLG, *IPXD, *JOBD, *JOBQ, *JOBSCD, *JRN, *JRNRCV, *LIB, *LIND, *LOCALE, *MEDDFN, *MENU, *MGTCOL, *MODD, *MODULE, *MSGF, *MSGQ, *M36, *M36CFG, *NODGRP, *NODL, *NTBD, *NWID, *NWSCFG, *NWSD, *OUTQ, *OVL, *PAGDFN, *PAGSEG, *PDFMAP, *PDG, *PGM, *PNLGRP, *PRDDFN, *PRDLOD, *PSFCFG, *QMFORM, *QMQRY, *QRYDFN, *RCT, *SBSD, *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

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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 concepts and reference topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/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 a 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.

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 (IMPI to RISC conversion).

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 RISC format.

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:

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- 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

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.

***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 System API Reference information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/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.

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Examples

Example 1: Check Objects Owned by One User Profile

```
CHKOBJITG   USRPRF(JOEPGMR)  OUTFILE(SECCHECK)
            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 SECCHECK. Database file SECCHECK is first cleared of any existing records.

Example 2: Check Objects Owned by Multiple User Profiles

```
CHKOBJITG   USRPRF(ABC*)  OUTFILE(ABCCHECK)
            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(SECCHECK2)
            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 SECCHECK2. Database file SECCHECK2 will first be cleared of any existing records.

Example 4: Check Object in a Directory

```
CHKOBJITG   OBJ('/PartOrder/Forms.jar')  OUTFILE(SECCHECK3)
            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 SECCHECK3. Database file SECCHECK3 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: Check Object in a Directory

```
CHKOBJITG   OBJ('/Parts/*')  OUTFILE(SECCHECK4)
            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.

Top

Error messages

***ESCAPE Messages**

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.

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	*Character value*, *ALL, *MOUNTED	Required, Positional 1
OUTPUT	Output	***ERROR**, *NONE, *PRINT	Optional, Positional 2
DEV	Optical device	*Name*, ***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.

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Top

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. A user profile is used to determine who is checking out the object.

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).

For more information about integrated file system commands, see the Integrated file system information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

Restrictions:

1. Only documents within QDLS, and byte stream files can be checked out.
2. The user who submits this command must have write (*W) authority to the object and at least execute (*X) authority to the directory prefixes in the path.
3. Not all file systems will support the CHKOUT command.

Top

Parameters

Keyword	Description	Choices	Notes
OBJ	Object	*Path name*	Required, Positional 1

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 concepts and reference topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

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Examples

Example 1: Checking an Object Out

```
CHKOUT   OBJ('MYDIR/FILE1')
```

This command checks out FILE1 in the directory, MYDIR, to the job's user profile owner.

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.

CPFA0AB
Operation failed for object. Object is &1.

CPFA0AD
Function not supported by file system.

CPFA0B2
No objects satisfy request.

CPFA0BE
&1 objects checked in. &2 objects failed.

CPFA0BF
&1 objects checked out. &2 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 (QYPSPFRCOL). 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 (QYPSPFRCOL).

Top

Error messages

***ESCAPE Messages**

CPF0AA5
Collection Services not active.

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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.

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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	*Character value*	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.

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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.

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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	*Name*	Required, Positional 1
VOL	Volume identifier	*Character value*, ***MOUNTED**	Optional, Positional 2
SEQNBR	Sequence number	*Integer*, ***NONE**, *FIRST, *NEXT, *SEARCH	Optional, Positional 3
LABEL	File label	*Character value*, ***NONE**	Optional, Positional 4
CRTDATE	Creation date	*Date*, ***NONE**	Optional
ENDOPT	End of tape option	***LEAVE**, *REWIND, *UNLOAD	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

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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.

Top

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.

Top

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	*Name*	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.

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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	*Qualified object name*	Required, Positional 1
	Qualifier 1: Job queue	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
LOG	Job log	***JOB**, *NONE	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.

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***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 QRECOVERY, QRCYxxxxx, QSPL, QSPLnnnn, QSYS, QSYSxxxxx, QSYS2, QSYS2xxxxx, QSYSCGI, SYSIBM, or SYSIBxxxxx 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.)
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

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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.

***CURASPGRP**
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**

CPFB8ED
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
*CURASPGRP 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	*Qualified object name*	Required, Positional 1
	Qualifier 1: Message queue	*Name*, *WRKSTN	
	Qualifier 2: Library	*Name*, ***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.

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Top

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.

Top

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.

Top

Error messages

***ESCAPE Messages**

CPF2357
Message queue &1 in &2 not cleared.

Top

Clear Output Queue (CLROUTQ)

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

Parameters
Examples
Error messages

The Clear Output Queue (CLROUTQ) command removes spooled files from the specified queue. The Clear Output Queue (CLROUTQ) 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	*Qualified object name*	Required, Positional 1
	Qualifier 1: Output queue	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	

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

```
CLROUTQ   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.

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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	*Qualified object name*	Required, Positional 1
	Qualifier 1: Physical file	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
MBR	Member	*Name*, ***FIRST**, *LAST, *ALL	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

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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)
Threadsafe: 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	*Element list*	Optional, Positional 1
	Element 1: Shared pool or subsystem name	*Name*, *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.

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Top

Examples

```
CLRPOOL   POOL(*JOB)
```

This command clears the pool associated with the job in which the command was processed.

Top

Error messages

***ESCAPE Messages**

CPF1858
The specified pool does not exist.

CPF1859
Use of an access path was requested but none exists.

Top

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	*Qualified object name*	Required, Positional 1
	Qualifier 1: Save file	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	

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

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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'.

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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

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Command Definition (CMD)

Parameters
Examples
Error messages

The Command (CMD) command definition statement specifies the prompt text for the command being created. The prompt text is displayed when a user requests prompting while entering the command that is being defined. The CMD statement can be anywhere in the source file referred to by the Create Command (CRTCMD) command; one and only one CMD statement must be used in the source file even if no prompt text is specified for the created command.

Top

Parameters

Keyword	Description	Choices	Notes
PROMPT	Prompt text or message ID	*Character value*, ***NONE**	Optional, Positional 1

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 characters, 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.

'prompt-text'
: Specify the prompt text that is displayed during the command prompting. It must be a character string of no more than 30 characters, enclosed in apostrophes.

  Variables cannot be coded for this parameter.

Top

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Examples

```
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.

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.

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- 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	*Qualified object name*	Required, Positional 1
	Qualifier 1: File	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
MBR	Member	*Name*, ***FIRST**	Optional, Positional 2
RCVRNG	Range of journal receivers	Single values: ***CURRENT** Other values: *Element list*	Optional, Positional 3
	Element 1: Starting journal receiver	*Qualified object name*	
	Qualifier 1: Starting journal receiver	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
	Element 2: Ending journal receiver	Single values: ***CURRENT** Other values: *Qualified object name*	
	Qualifier 1: Ending journal receiver	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
FROMENTLRG	Starting large sequence number	*Character value*, ***FIRST**	Optional
FROMTIME	Starting date and time	*Element list*	Optional
	Element 1: Starting date	*Date*	
	Element 2: Starting time	*Time*	
TOENTLRG	Ending large sequence number	*Character value*, ***LAST**	Optional
TOTIME	Ending date and time	*Element list*	Optional
	Element 1: Ending date	*Date*	
	Element 2: Ending time	*Time*	
CMPOPT	Compare option	***BOTH**, *AFTER	Optional
RCDNBR	Record number	*Unsigned integer*, ***ALL**	Optional
JOB	Job name	Single values: ***ALL** Other values: *Qualified job name*	Optional
	Qualifier 1: Job name	*Name*	
	Qualifier 2: User	*Name*	
	Qualifier 3: Number	000000-999999	
PGM	Program	*Name*, ***ALL**	Optional
USRPRF	User profile	*Name*, ***ALL**	Optional
CCIDLRG	Commit cycle large identifier	*Character value*, ***ALL**	Optional
OUTFMT	Output format	***CHAR**, *HEX	Optional

Keyword	Description	Choices	Notes
FROMENT	Starting sequence number	1-9999999999, ***FIRST**	Optional
TOENT	Ending sequence number	1-9999999999, ***LAST**	Optional
CMTCYCID	Commit cycle identifier	1-9999999999, ***ALL**	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-reveiver).

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).

Top

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

Commit (COMMIT)

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

Parameters
Examples
Error messages

The Commit (COMMIT) command is used to complete the current transaction and to establish a new commitment boundary for the commitment definition associated with the program issuing the command.

The Start Commitment Control (STRCMTCTL) command must be issued first to establish the commitment definition before the COMMIT command is issued; otherwise, a message is sent.

When the COMMIT command is issued, all pending changes made to resources under commitment control for the commitment definition since the last commitment boundary was started are made permanent. A commitment identifier can be specified that is associated with this set of changes. If any files or API commitment resources associated with a journal are under commitment control, the commitment identifier is placed in the changes committed (CM) journal entry of each journal.

The commitment identifier is also used by the system when updating the notify object if it needs updating during activation group end, job end, or IPL (initial program load) processing.

No error occurs if there are no resources under commitment control for the commitment definition at the time the commit is issued. All record locks held for files opened under commitment control for the commitment definition are released when the commit is issued. Locks on object level commitment control resources, acquired when the resources are created or changed during the transaction, are released when the commit is issued.

More information on commitment control is in the ″Commitment control″ article is in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

Top

Parameters

Keyword	Description	Choices	Notes
CMTID	Commit identification	*Character value*, ***NONE**, *LUWID	Optional, Positional 1

Top

Commit identification (CMTID)

Specifies the text used to identify a group of changes committed with the commitment boundary. This text is placed in the object specified on the NFYOBJ parameter of the STRCMTCTL command during IPL processing if an abnormal system failure occurs, or if a job ends with uncommitted changes or with a nonzero completion code.

***NONE**
No text is used to identify the transaction committed with this commitment boundary.

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***LUWID**
The logical unit of work identifier and the default journal name for this logical unit of work are used to identify the group of changes being committed with this commitment boundary.

'description'
Specify a maximum of 3000 characters, enclosed in apostrophes, to identify the group of changes being committed with this commitment boundary.

Top

Examples

```
COMMIT   CMTID('Account #123456 changes end')
```

This command specifies that all changes made to this point for the commitment definition associated with the program issuing the command are committed. The commitment identifier is 'Account #123456 changes end' and may be used by the system when updating the notify object if it needs updating during activation group end, job end, or IPL processing.

Top

Error messages

***ESCAPE Messages**

CPF5030
Partial damage on member &4.

CPF509F
Job has successfully connected after I/O error.

CPF5104
Cancel reply received for message &7.

CPF511D
Parameter integrity error occurred with reason code &1.

CPF5134
Not authorized to process request on member &4.

CPF5149
Operation for program device or member &4, file &2 in library &3 is not valid.

CPF5168
Cannot open member &3 file &1 in &2.

CPF5169
Cannot complete input or output (I/O) to DDM file &2 in &3.

CPF5173
&6 records in buffer not valid.

CPF5235
Entry for member &4 not journaled.

CPF5257
Failure for device or member &4 file &2 in library &3.

CPF5272
Records not added to member &4.

CPF83DB
Commit operation resulted in rollback.

CPF83D0
Commitment operation not allowed.

CPF83E1
Commit operation failed due to constraint violation.

CPF83E2
Rollback operation required.

CPF835F
Commit or rollback operation failed.

CPF8350
Commitment definition not found.

CPF8363
Commit operation failed.

CPF8367
Cannot perform commitment control operation.

CPF9203
Reply &1 received from DDM target system not expected.

CPF9255
Commitment control operation failed.

***STATUS Messages**

CPF5001
End of file &2 detected in library &3.

CPF83E6
Commitment control operation completed with resynchronization in progress.

***NOTIFY Messages**

CPF5018
Member &4 at maximum size. Increment not allowed.

CPF502A
Variable length record error on member &4.

CPF502B
Error occurred in trigger program.

CPF502D
Referential constraint violation on member &4.

CPF502E
Referential constraints could not be validated for member &4.

CPF502F
Check constraint violation on member &4.

CPF5026
Duplicate key not allowed for member &4.

CPF5029
Data mapping error on member &4.

CPF503A
Referential constraint violation on member &4.

CPF503B
Record could not be inserted or updated in member &4.

CPF503F
Partition key error on member &4.

CPF5030
Partial damage on member &4.

CPF5033
Select/omit error on member &4.

CPF5034
Duplicate key on access path.

CPF5079
Commitment control resource limit exceeded for this job.

CPF5084
Duplicate key not allowed for member &4.

CPF5085
Duplicate key on access path for based-on member of &4.

CPF5090
Unique access path problems prevent updates to member &4.

CPF5097
Key mapping error on member &4.

Top

Copy Object (COPY)

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

Parameters
Examples
Error messages

The Copy Object (COPY) command copies a single object or a group of objects.

By default, if the target object already exists, the copy of that individual object will fail. If the REPLACE(*YES) parameter is specified the target object is overwritten. The newly created object must be renamed if it is stored in the same directory as the original object. If it is stored in a directory other than the one that contains the original object, it can retain the name of the original object.

An object name pattern can be used to copy a group of related objects. A pattern cannot be used to copy a group of objects from one file system to another unless the names in the source meet the requirements of the target file system. For example, a file named /OBJA in QOpenSys cannot be copied to directory /QSYS.LIB/MYLIB.LIB/FILEA.FILE, because the QSYS.LIB file system requires a name in the form OBJA.MBR when writing to a file. All names found within the pattern would fail if they did not meet the requirement of name.object-type.

The copy command can also be used to copy a directory tree where the directory, its contents, and the contents of all of its subdirectories are copied. A subtree copy will attempt to preserve as many attributes from the original objects as possible. This would make it possible to migrate data from one file system to another.

If the original object is a read-only file (a file that has the PC read-only attribute flag turned on), and SUBTREE(*NODIR) is specified, the newly created object will **not** be read-only. This follows the conventions of the OS/2 hierarchical file system (HFS).

Note: When the value of the **Directory subtree (SUBTREE)** parameter is *NONE or *ALL, the PC read-only attribute flag will be copied. The subtree copy is intended to preserve as many attributes of the original objects as possible.

When the **To directory (TODIR)** parameter is specified, the object is copied to that directory with the same name. The copied object is authorized the same as the original object. The user who issues the command owns the copied object if the **Owner (OWNER)** parameter value is *NEW.

When copying a file with SUBTREE(*NODIR) specified to the "root" (/), QOpenSys, QDLS, and UDFS file systems, the Last access date/time and the Data change date/time are preserved in the new file, and the Attribute change date/time is updated to the current time. The Last access date/time of the original file is updated to the current time. In the case of copying to a database file member (*MBR) in the QSYS.LIB or independent ASP QSYS.LIB file systems, the Data change date/time is updated as well.

Note: If the parameter SUBTREE(*YES) is specified the Create date/time is updated as well.

This command is an alias for the Copy Object (CPY) command and can also be issued using the following alternative command name:

- CPY

In addition to the COPY command, the Copy To Stream File (CPYTOSTMF) and Copy From Stream File (CPYFRMSTMF) commands can be used to copy between stream files and database member files or save files.

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For more information about integrated file system commands, see the Integrated file system information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

Restrictions:

1. The copy command will copy the object's public and private authorities where it is supported.

Note: The authority requirements for this command are complex with respect to file systems, object types, requested operations etc.. Therefore, see the iSeries Security Reference, SC41-5302 book for information about the required authorities for this command.

QSYS.LIB and independent ASP QSYS.LIB File System Differences

- If copying to a database file member from a different object type, or copying to or from a member not in the current job's library name space, some attributes are copied, see Integrated file system information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter for more information.
- When copying a database member to another member within the same library name space, attributes are handled in the same manner as the Copy File (CPYF) command (this only applies if the **Data Format (DTAFMT)** parameter is *BINARY).
- Other object types copied are handled the way the Create Duplicate Object (CRTDUPOBJ) command handles attributes (this only applies if the DTAFMT parameter is *BINARY).
- The REPLACE(*YES) option is only supported on file members, user spaces, and save files when the target object exists. All other object types will fail when the target object exists.

QOPT File System Differences

- If copying a file within the QOPT file system, the Create date/time is always updated to the current time.

QNetWare File System Differences

- If copying a file or directory to a location on the same server, the owner of the target object is always the caller of the command and the PC read-only flag is not copied.
- The scan-related attributes are not copied.

QFileSvr.400 File System Differences

- The OWNER(*KEEP) parameter is not supported when copying an object to the QFileSvr.400 File System. The copy will fail with error message CPFA0AD.
- The scan-related attributes are not copied.

Network File System (NFS) Differences

- The OWNER(*KEEP) parameter is not supported when copying an object to or from a mounted Network File System (NFS) directory. The copy will fail with error message CPFA0AD.
- The scan-related attributes are not copied.

Top

Parameters

Keyword	Description	Choices	Notes
OBJ	Object	*Path name*	Required, Positional 1
TODIR	To directory	*Path name*, **'.'**	Optional, Positional 2
TOOBJ	To object	*Path name*	Optional

Keyword	Description	Choices	Notes
SYMLNK	Symbolic link	***NO**, *YES	Optional
FROMCCSID	From CCSID	1-65533, ***OBJ**, *PCASCII, *JOBCCSID	Optional
TOCCSID	To CCSID	1-65533, ***OBJ**, *CALC, *STDASCII, *PCASCII, *JOBCCSID	Optional
DTAFMT	Data Format	***BINARY**, *TEXT	Optional
SUBTREE	Directory subtree	***NODIR**, *NONE, *ALL	Optional
REPLACE	Replace object	***NO**, *YES	Optional
OWNER	Owner	***NEW**, *KEEP	Optional
FROMCODPAG	From Code Page	1-32767, ***OBJ**, *PCASCII	Optional
TOCODEPAGE	To Code Page	1-32767, ***OBJ**, *CALC, *STDASCII, *PCASCII	Optional

Top

Object (OBJ)

Specifies the path name of the object or a pattern to match the name of the object to be copied.

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 concepts and reference topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

Note: An object name pattern can be used to copy multiple objects only when the **To directory (TODIR)** parameter is specified.

Top

To directory (TODIR)

Specifies the path name of the directory to copy the object into. When this parameter is used, the copied object has the same name as the **Object (OBJ)** parameter specified.

. The object is copied to the current directory with the same name as the existing object.

directory-path-name
Specify the path name of the existing directory to copy the object into.

For more information on specifying path names, refer to ″Object naming rules″ in the CL concepts and reference topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

Top

To object (TOOBJ)

Specifies the path name of the copied object. This is the name of the new object, including the path or relative path.

For more information on specifying path names, refer to ″Object naming rules″ in the CL concepts and reference topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

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Symbolic link (SYMLNK)

Specifies whether to copy the object or a symbolic link to the object.

***NO** The object, not a symbolic link to the object, is copied.

***YES** If the object to be copied is a symbolic link, the symbolic link is copied, instead of copying the object that the symbolic link points to.

Note: If a symbolic link is encountered during the copy of a subtree, the object it points to is copied. If the symbolic link points to a directory, the directory is copied but its contents are not. This is true even when the top-level directory of the directory tree is actually a symbolic link to a directory.

Top

From CCSID (FROMCCSID)

Specifies the method for obtaining the coded character set identifier (CCSID) for the source of the copy operation. This CCSID will be used for data conversion, if requested. This parameter is ignored if the object specified on the **Object (OBJ)** parameter is not a regular file. A regular file is a file that supports the integrated file system input/output (I/O) operations open, read, and write.

***OBJ** Use the data CCSID of the object to be copied.

***PCASCII**
Use the data CCSID of the object to be copied to compute a CCSID in the Microsoft Windows encoding scheme (x4105) (Microsoft, Windows, Windows NT, and the Windows 95 logo are registered trademarks of Microsoft Corporation). Use this as the CCSID from which the data will be converted when DTAFMT(*TEXT) is specified. This option allows data from PCs to be converted properly if the data was created using Microsoft Windows.

***JOBCCSID**
The CCSID from the default job CCSID is used.

1-65533
Specify a CCSID value.

Top

To CCSID (TOCCSID)

Specifies the data coded character set identifier (CCSID) for the target of the copy operation. This parameter is ignored if the object specified on the **Object (OBJ)** parameter is not a regular file. A regular file is a file that supports the integrated file system input/output (I/O) operations open, read, and write.

***OBJ** Use the data CCSID of the object to be copied. If this CCSID cannot be used by the file system that the object is to be copied into, the copy operation will fail.

***CALC**
Use the data CCSID of the object to be copied. If this CCSID cannot be used by the file system that the object is to be copied into, allow the file system to determine a different CCSID and continue with the copy.

***STDASCII**
Compute a CCSID in the IBM PC Data encoding scheme (x2100), based on the source file's CCSID. Associate this CCSID for the target of the copy operation and, if DTAFMT(*TEXT) is

specified, also use this CCSID for the data conversion. If this CCSID cannot be used by the file system that the object is to be copied into, the copy operation will fail.

***PCASCII**
Compute a CCSID in the Microsoft Windows encoding scheme (x4105), based on the source file's CCSID (Microsoft, Windows, Windows NT, and the Windows 95 logo are registered trademarks of Microsoft Corporation). Associate this CCSID with the target of the copy operation and, if DTAFMT(*TEXT) is specified, also use this CCSID for the data conversion. This option allows the resulting data to be used by Microsoft Windows applications. If this CCSID cannot be used by the file system that the object is to be copied into, the copy operation will fail.

***JOBCCSID**
The CCSID from the default job CCSID is used.

1-65533
Specify a CCSID value.

Top

Data Format (DTAFMT)

Specifies the format of the data in the file to be copied.

***BINARY**
The file contains data in binary format (such as an executable file).

Do not convert data on the copy. However, if the object to be copied to has a different CCSID than the source object, all extended attributes will be converted into the CCSID of the new object before being set.

***TEXT**
The file contains data in textual form. Convert data to the CCSID of the new object during the copy. The data is processed as text during the copy.

If a database member is to be copied to a stream file, any line-formatting characters (such as carriage return, tab, and end-of-file) are just converted from one CCSID to another.

If a stream file is to be copied to a database member, the stream file must contain end-of-line characters or the copy will fail. If the stream file does contain end-of-line characters, the following actions are performed during the copy to a database file.

- End-of-line characters are removed.
- Records are padded with blanks (for a source physical file member) or nulls (for a data physical file member).
- Tab characters are replaced by the appropriate number of blanks to the next tab position.

Top

Directory subtree (SUBTREE)

Specifies whether or not to copy a directory subtree if the object specified by **Object (OBJ)** is a directory.

***NODIR**
The object or objects specified by OBJ are copied. If an object is a directory, the copy will fail unless the target directory specified on the TODIR keyword is the directory in which the source object already exists. In this case, no action is performed and a successful completion message is issued.

***NONE**
The objects specified by OBJ are copied. Directory objects are copied but their contents are not copied.

***ALL** The objects specified by OBJ are copied. Directory objects are copied as well as their contents and the contents of all subdirectories.

Pattern matching on the OBJ parameter only applies to the first level object. If the first level object is a directory, the pattern matching does not apply to its contents or the contents of its subdirectories.

If SUBTREE(*ALL) is specified, individual completion messages for each object are not issued. A final message is issued to indicate how many copies succeeded and how many failed. If objects did fail to copy, the command will issue a diagnostic message for each copy that failed.

There are a few differences in how attributes are copied when SUBTREE(*NONE) or SUBTREE(*ALL) is specified instead of the default SUBTREE(*NODIR). A directory subtree copy preserves as much of the original objects' attributes as possible.

- The PC read-only attribute flag is turned off in the copied object. If SUBTREE(*NONE) or SUBTREE(*ALL) is specified the flag will be copied.
- The Create date/time will be copied if SUBTREE(*NONE) or SUBTREE(*ALL) is specified (by default it is updated to the current time).

Note: The copy will fail if the target object is a subdirectory of the source object, or if the target object matches the source object.

Top

Replace object (REPLACE)

Specifies whether the target object is replaced if it already exists.

***NO** The target object is not replaced if it already exists.

***YES** If the target object already exists, it is replaced. If REPLACE(*YES) is specified with a directory object, the attributes of the existing target directory are changed but the objects that the directory contains are not removed.

Top

Owner (OWNER)

Specifies the owner of the newly created object.

***NEW** The owner of the new object is the current user profile of the job. Even if the target object already exists and is owned by someone other than the current user profile of the job, the owner of the target object will be changed to be the current user profile of the job.

***KEEP**
The owner of the new object is the same as the owner of the original object to be copied.

Some file systems do not support changing the owner of certain object types. For example, the owner of *MBR objects in the QSYS.LIB and independent ASP QSYS.LIB file systems will be determined by the owner of the *FILE object that they are copied into.

Top

From Code Page (FROMCODPAG)

Specifies the method for obtaining the code page for source of the copy operation. This code page will be used for data conversion, if requested. This parameter is ignored if the object specified on the **Object (OBJ)** parameter is not a regular file. A regular file is a file that supports the integrated file system input/output (I/O) operations open, read, and write.

Note: This parameter is replaced by **From CCSID (FROMCCSID)** but the FROMCODPAG parameter can still be used. However, because this parameter may be removed in a later release, whenever possible use the FROMCCSID parameter.

***OBJ** Use the data code page of the object to be copied.

***PCASCII**
Use the data code page of the object to be copied to compute a code page in the Microsoft Windows encoding scheme (x4105) (Microsoft, Windows, Windows NT, and the Windows 95 logo are registered trademarks of Microsoft Corporation). Use this as the code page from which the data will be converted when DTAFMT(*TEXT) is specified. This option allows data from PCs to be converted properly if the data was created using Microsoft Windows.

1-32767
Specify a code page value.

Top

To Code Page (TOCODEPAGE)

Specifies the data code page for the target of the copy operation. This parameter is ignored if the object specified on the **Object (OBJ)** parameter is not a regular file. A regular file is a file that supports the integrated file system input/output (I/O) operations open, read, and write.

Note: This parameter is replaced by **To CCSID (TOCCSID)** but the TOCODEPAGE parameter can still be used. However, because this parameter may be removed in a later release, whenever possible use the TOCCSID parameter.

***OBJ** Use the data code page of the object to be copied. If this code page cannot be used by the file system that the object is to be copied into, the copy operation will fail.

***CALC**
Use the data code page of the object to be copied. If this code page cannot be used by the file system that the object is to be copied into, allow the file system to determine a different code page and continue with the copy.

***STDASCII**
Compute a code page in the IBM PC Data encoding scheme (x2100), based on the source file's code page. Associate this code page for the target of the copy operation and, if DTAFMT(*TEXT) is specified, also use this code page for the data conversion. If this code page cannot be used by the file system that the object is to be copied into, the copy operation will fail.

***PCASCII**
Compute a code page in the Microsoft Windows encoding scheme (x4105), based on the source file's code page. Associate this code page with the target of the copy operation and, if DTAFMT(*TEXT) is specified, also use this code page for the data conversion. This option allows the resulting data to be used by Microsoft Windows applications. If this code page cannot be used by the file system that the object is to be copied into, the copy operation will fail.

1-32767
Specify a code page value. If this code page cannot be used by the file system that the object is to be copied into, the copy operation will fail.

Top

Examples

The alternative command name for COPY is CPY. The following examples use the alternative command name, but COPY can be replaced directly for CPY in all of them.

Example 1: Copying a File

```
CPY   OBJ('DECEMBER-1994-MONTHLY-PAYROLL-FILE')  TOOBJ('PAY')
```

This command creates another file named PAY that is a duplicate of the file named DECEMBER-1994-MONTHLY-PAYROLL-FILE.

Example 2: Copying a File to Another Directory

```
CPY   OBJ('PAY')  TODIR('MYDIR')
```

This command creates another file named PAY in directory MYDIR.

Example 3: Copying a Symbolic Link

```
CPY   OBJ('SL1')  TOOBJ('YOURDIR/SL2')  SYMLNK(*YES)
```

If SL1 is a symbolic link, the new object YOURDIR/SL2 is also a symbolic link. If SYMLNK(*NO) was specified, the new object would be a copy of whatever SL1 pointed to, as long as it was a legal candidate for the copy function.

Example 4: Copying with Conversion

```
CPY   OBJ('/DATAFB')
      TOOBJ('/QSYS.LIB/APP1.LIB/DATA.FILE/DATAFB.MBR')
      TOCCSID(*CALC)  DTAFMT(*TEXT)
```

This command copies stream file 'DATAFB' to the database file 'DATAFB.MBR'. By specifying TOCCSID(*CALC), the file system being copied to (the QSYS.LIB file system in this case) will try to create the new member in the same coded character set identifier (CCSID) as '/DATAFB'. If this fails (in this case, if 'DATA.FILE is not in the same CCSID as 'DATAFB'), the file system will be allowed to choose an appropriate CCSID and complete the copy. By specifying DTAFMT(*TEXT), the data in 'DATAFB' is handled as text and is converted into the CCSID chosen for the new file 'DATAFB.MBR'.

Example 5: Copying a Directory Subtree

```
CPY   OBJ('/QDLS/MYINFO')  TODIR('/myfolder')  SUBTREE(*ALL)
      OWNER(*KEEP)  REPLACE(*YES)
```

The *FLR object (QDLS file system folder) is created in the '/myfolder' directory in the "root" (/) file system with the path name '/myfolder/MYINFO'. Its contents are copied as well. Since OWNER(*KEEP) is specified, the new objects created will belong to the same profiles as the old objects. With the REPLACE parameter set to *YES if any of the target files already exist they will be overwritten.

Top

Error messages

***ESCAPE Messages**

CPFA082

*ADD authority required to owner's user profile.

CPFA083
Insufficient authority to replace object. Object is &1.

CPFA085
Home directory not found for user &1.

CPFA08E
More than one name matches pattern.

CPFA093
Name matching pattern not found.

CPFA09C
Not authorized to object. Object is &1.

CPFA09D
Error occurred in program &1.

CPFA0A1
An input or output error occurred.

CPFA0A3
Path name resolution causes looping.

CPFA0A6
Number of links exceeds maximum allowed for the file system.

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.

CPFA0B0
Request not allowed to operate from one file system to another.

CPFA0B1
Requested operation not allowed. Access problem.

CPFA0B2
No objects satisfy request.

CPFA0BB
&1 objects copied. &2 objects failed.

CPFA0C4
Object not a file. Object is &1.

CPFA0DA
Object is a directory. Object is &1.

CPFB41E
Object type must match replaced object type.

Top

Copyright (COPYRIGHT)

Where allowed to run:

- Batch ILE CL module (*BMOD)
- Interactive ILE CL module (*IMOD)

Threadsafe: Yes

Parameters
Examples
Error messages

The Copyright (COPYRIGHT) command defines the text of a copyright statement to be added to a CL module.

Restrictions:

- The COPYRIGHT command is valid only within an ILE CL module.
- If used, the COPYRIGHT command must follow the PGM command and must precede any other commands except for DCL, DCLF, and DCLPRCOPT.
- Only one COPYRIGHT command will be used by the CL compiler; if more than one are specified, only the first one is used, and warning messages will be issued for additional COPYRIGHT statements.

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Parameters

Keyword	Description	Choices	Notes
TEXT	Copyright text	*Character value*	Required, Positional 1

Top

Copyright text (TEXT)

Specifies the copyright text to be inserted into the module.

'copyright-text'

Specify the text to be used for the copyright statement. The text will be used exactly as specified. The maximum length allowed is 256 characters.

Top

Examples

Example 1: Setting the Copyright Text for a CL Module

```
COPYRIGHT   TEXT('Copyright ACME Corp. 1995.  All rights reserved.')
```

This command specifies the copyright text for the module being created. This text will be displayed when a user runs the Display Module (DSPMOD) command, specifying DETAIL(*COPYRIGHT), for the module.

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Error messages

None

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Compress Object (CPROBJ)

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

Parameters
Examples
Error messages

The Compress Object (CPROBJ) command allows you to compress programs, panel groups, menus, display files, printer files, modules, and service programs.

- Compressed Objects are objects that consume less storage space than decompressed objects. When a compressed object is used or a compressed program is called, a decompressed version of the object automatically becomes available to the user.
- Decompressed Objects are objects that use the system storage space allocated to them and are in a final, ready-to-use state.
- Temporarily Decompressed Objects are temporarily decompressed copies of compressed objects. The system allocates storage space for the temporary copies until the system or the user determines that the temporary storage space needs to be reclaimed.

  Temporary storage is automatically reclaimed when:

  – The RCLTMPSTG command is run
  – The next initial program load (IPL) is run
  – The object is used often enough to cause the system to permanently decompress it

  When an object is permanently decompressed, the compressed version of the object is destroyed as well as any temporary forms of the object; however, compressed versions remain intact as long as the objects are temporarily decompressed.

Restrictions:

1. The user must have *OBJMGT authority to the object specified and *EXECUTE authority to the library containing the object.
2. Objects that were saved with storage freed cannot be compressed or decompressed.
3. Objects that are compressed cannot be saved for a release prior to Version 2, Release 1 of the operating system.
4. Programs without a valid validation value are not compressed.
5. Programs that were created before Version 1, Release 3 of the operating system and have not been retranslated (using the Change Program (CHGPGM) command) can not be compressed because no validation value has been generated.
6. A program, service program, or module that was created prior to Version 3, Release 6 of the operating system must be retranslated before the object can be compressed. Retranslate the object using the CHGPGM, CHGSRVPGM, or CHGMOD commands.
7. To compress a system program, the user must end all active subsystems.
8. To prevent abnormal end of a program, the program must not be running in the system when it is compressed.

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Parameters

Keyword	Description	Choices	Notes
OBJ	Object	*Qualified object name*	Required, Positional 1
	Qualifier 1: Object	*Generic name, name*, *ALL	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB, *ALL, *ALLUSR, *USRLIBL	
OBJTYPE	Object type	Values (up to 6 repetitions): *ALL, *FILE, *MENU, *MODULE, *PGM, *PNLGRP, *SRVPGM	Required, Positional 2
DAYS	Days unused	1-366, ***NONE**	Optional
PGMOPT	Program option	***ALL**, *OBS	Optional

Top

Object (OBJ)

Specifies the name and library of the object to be compressed.

This is a required parameter.

The possible values are:

***ALL** All objects in the specified library of the object type specified on the **Object type** prompt (OBJTYPE parameter) are compressed.

generic*-object-name
Specify the generic name of the object to be compressed. A generic name is a character string that contains one or more characters followed by an asterisk (*).

object-name
Specify the name of the object to be compressed.

The possible library values are:

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

***USRLIBL**
If a current library entry exists in the library list for the current thread, the current library and the libraries in the user portion of the library list are searched. If there is no current library entry, only the libraries in the user portion of the library list are searched.

***CURLIB**
Only the current library is searched. If no current library entry exists in the library list, QGPL is used.

***ALL** All libraries in the system, including QSYS, are searched.

***ALLUSR**
All user libraries are searched. All libraries with names that do not begin with the letter Q are searched except for the following:

```
#CGULIB     #DSULIB     #SEULIB
#COBLIB     #RPGLIB
#DFULIB     #SDALIB
```

Although the following Qxxx libraries are provided by IBM, they typically contain user data that changes frequently. Therefore, these libraries are considered user libraries and are also searched:

```
QDSNX       QRCLxxxxx   QUSRIJS     QUSRVxRxMx
QGPL        QSRVAGT     QUSRINFSKR
QGPL38      QSYS2       QUSRNOTES
```

```
QMGTC       QSYS2xxxxx  QUSROND
QMGTC2      QS36F       QUSRPOSGS
QMPGDATA    QUSER38     QUSRPOSSA
QMQMDATA    QUSRADSM    QUSRPYMSVR
QMQMPROC    QUSRBRM     QUSRRDARS
QPFRDATA    QUSRDIRCL   QUSRSYS
QRCL        QUSRDIRDB   QUSRVI
```

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.

library-name
Specify the name of the library to be searched.

Top

Object type (OBJTYPE)

Specifies the type of object to be compressed. You can specify *ALL, or you can specify one or more of the other possible values.

This is a required parameter.

You can enter multiple values for this parameter.

The possible values are:

***ALL** All menus, panel groups, display and printer device files, programs, modules, and service programs with the name and library specified on the **Object** prompt (OBJ parameter) are compressed.

***FILE** Display and printer device files with the name and library specified on the **Object** prompt (OBJ parameter) are compressed.

***MENU**
Menus with the name and library specified on the **Object** prompt (OBJ parameter) are compressed.

***MODULE**
Modules with the name and library specified on the **Object** prompt (OBJ parameter) are compressed.

***PNLGRP**
Panel groups with the name and library specified on the **Object** prompt (OBJ parameter) are compressed.

***PGM** Programs with the name and library specified on the **Object** prompt (OBJ parameter) are compressed.

***SRVPGM**
Service programs with the name and library specified on the **Object** prompt (OBJ parameter) are compressed.

Top

Days unused (DAYS)

Specifies the number of days the object has not been used or changed. If the object has not been used or changed for more than the specified number of days, it is compressed. If it has been used or changed, it is left decompressed.

The possible values are:

***NONE**
The object is compressed regardless of the number of days it has not been used or changed.

1-366 Specify the number of days. Valid values range from 1 through 366.

Top

Program option (PGMOPT)

Specifies whether the entire program or service program or only the observability tables are compressed.

The possible values are:

***ALL** The entire program or service program (instruction stream and observability tables) is compressed.

***OBS** Only the observability tables are compressed.

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Examples

```
CPROBJ   OBJ(QGPL/*ALL)  OBJTYPE(*FILE)
```

This command compresses all display and printer files in library QGPL.

Top

Error messages

***ESCAPE Messages**

CPF2110
Library &1 not found.

CPF2113
Cannot allocate library &1.

CPF2176
Library &1 damaged.

CPF3B01
Cannot compress or decompress object &1 in &2.

CPF3B02
Cannot compress or decompress file &1 in &2.

CPF3B03
No objects compressed.

CPF3B04
&1 objects compressed; &3 not compressed; &8 not included.

CPF3B08
Cannot allocate object &1 in &2.

CPF3B09
Not all subsystems ended.

CPF3B10
Cannot compress object &1 in &2 type *&3.

CPF3B11
Cannot compress object &1 in &2 type *&3.

CPF8108
Device file or save file &4 in &9 damaged.

CPF812E
Module &4 in &9 damaged.

CPF8129
Program &4 in &9 damaged.

CPF813D
Service program &4 in &9 damaged.

CPF8150
Panel group &4 in &9 damaged.

CPF8151
Menu &4 in &9 damaged.

CPF9570
Error occurred creating or accessing debug data.

CPF9802
Not authorized to object &2 in &3.

CPF9803
Cannot allocate object &2 in library &3.

CPF9804
Object &2 in library &3 damaged.

CPF9806
Cannot perform function for object &2 in library &3.

CPF9807
One or more libraries in library list deleted.

CPF9808
Cannot allocate one or more libraries on library list.

CPF9811
Program &1 in library &2 not found.

CPF9812
File &1 in library &2 not found.

CPF9821
Not authorized to program &1 in library &2.

CPF9822
Not authorized to file &1 in library &2.

CPF9838
User profile storage limit exceeded.

Top

Copy Object (CPY)

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

Parameters
Examples
Error messages

The Copy Object (CPY) command copies a single object or a group of objects.

By default, if the target object already exists, the copy of that individual object will fail. If the REPLACE(*YES) parameter is specified the target object is overwritten. The newly created object must be renamed if it is stored in the same directory as the original object. If it is stored in a directory other than the one that contains the original object, it can retain the name of the original object.

An object name pattern can be used to copy a group of related objects. A pattern cannot be used to copy a group of objects from one file system to another unless the names in the source meet the requirements of the target file system. For example, a file named /OBJA in QOpenSys cannot be copied to directory /QSYS.LIB/MYLIB.LIB/FILEA.FILE, because the QSYS.LIB file system requires a name in the form OBJA.MBR when writing to a file. All names found within the pattern would fail if they did not meet the requirement of name.object-type.

The copy command can also be used to copy a directory tree where the directory, its contents, and the contents of all of its subdirectories are copied. A subtree copy will attempt to preserve as many attributes from the original objects as possible. This would make it possible to migrate data from one file system to another.

If the original object is a read-only file (a file that has the PC read-only attribute flag turned on), and SUBTREE(*NODIR) is specified, the newly created object will **not** be read-only. This follows the conventions of the OS/2 hierarchical file system (HFS).

Note: When the value of the **Directory subtree (SUBTREE)** parameter is *NONE or *ALL, the PC read-only attribute flag will be copied. The subtree copy is intended to preserve as many attributes of the original objects as possible.

When the **To directory (TODIR)** parameter is specified, the object is copied to that directory with the same name. The copied object is authorized the same as the original object. The user who issues the command owns the copied object if the **Owner (OWNER)** parameter value is *NEW.

When copying a file with SUBTREE(*NODIR) specified to the "root" (/), QOpenSys, QDLS, and UDFS file systems, the Last access date/time and the Data change date/time are preserved in the new file, and the Attribute change date/time is updated to the current time. The Last access date/time of the original file is updated to the current time. In the case of copying to a database file member (*MBR) in the QSYS.LIB or independent ASP QSYS.LIB file systems, the Data change date/time is updated as well.

Note: If the parameter SUBTREE(*YES) is specified the Create date/time is updated as well.

This command can also be issued using the following alternative command name:

- COPY

In addition to the CPY command, the Copy To Stream File (CPYTOSTMF) and Copy From Stream File (CPYFRMSTMF) commands can be used to copy between stream files and database member files or save files.

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For more information about integrated file system commands, see the Integrated file system information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

Restrictions:

1. The copy command will copy the object's public and private authorities where it is supported.

Note: The authority requirements for this command are complex with respect to file systems, object types, requested operations etc.. Therefore, see the iSeries Security Reference, SC41-5302 book for information about the required authorities for this command.

QSYS.LIB and independent ASP QSYS.LIB File System Differences

- If copying to a database file member from a different object type, or copying to or from a member not in the current job's library name space, some attributes are copied, see Integrated file system information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter for more information.
- When copying a database member to another member within the same library name space, attributes are handled in the same manner as the Copy File (CPYF) command (this only applies if the **Data Format (DTAFMT)** parameter is *BINARY).
- Other object types copied are handled the way the Create Duplicate Object (CRTDUPOBJ) command handles attributes (this only applies if the DTAFMT parameter is *BINARY).
- The REPLACE(*YES) option is only supported on file members, user spaces, and save files when the target object exists. All other object types will fail when the target object exists.

QOPT File System Differences

- If copying a file within the QOPT file system, the Create date/time is always updated to the current time.

QNetWare File System Differences

- If copying a file or directory to a location on the same server, the owner of the target object is always the caller of the command and the PC read-only flag is not copied.
- The scan-related attributes are not copied.

QFileSvr.400 File System Differences

- The OWNER(*KEEP) parameter is not supported when copying an object to the QFileSvr.400 File System. The copy will fail with error message CPFA0AD.
- The scan-related attributes are not copied.

Network File System (NFS) Differences

- The OWNER(*KEEP) parameter is not supported when copying an object to or from a mounted Network File System (NFS) directory. The copy will fail with error message CPFA0AD.
- The scan-related attributes are not copied.

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Parameters

Keyword	Description	Choices	Notes
OBJ	Object	*Path name*	Required, Positional 1
TODIR	To directory	*Path name*, **'.'**	Optional, Positional 2
TOOBJ	To object	*Path name*	Optional

Keyword	Description	Choices	Notes
SYMLNK	Symbolic link	***NO**, *YES	Optional
FROMCCSID	From CCSID	1-65533, ***OBJ**, *PCASCII, *JOBCCSID	Optional
TOCCSID	To CCSID	1-65533, ***OBJ**, *CALC, *STDASCII, *PCASCII, *JOBCCSID	Optional
DTAFMT	Data Format	***BINARY**, *TEXT	Optional
SUBTREE	Directory subtree	***NODIR**, *NONE, *ALL	Optional
REPLACE	Replace object	***NO**, *YES	Optional
OWNER	Owner	***NEW**, *KEEP	Optional
FROMCODPAG	From Code Page	1-32767, ***OBJ**, *PCASCII	Optional
TOCODEPAGE	To Code Page	1-32767, ***OBJ**, *CALC, *STDASCII, *PCASCII	Optional

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Object (OBJ)

Specifies the path name of the object or a pattern to match the name of the object to be copied.

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 concepts and reference topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

Note: An object name pattern can be used to copy multiple objects only when the **To directory (TODIR)** parameter is specified.

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To directory (TODIR)

Specifies the path name of the directory to copy the object into. When this parameter is used, the copied object has the same name as the **Object (OBJ)** parameter specified.

. The object is copied to the current directory with the same name as the existing object.

directory-path-name
Specify the path name of the existing directory to copy the object into.

For more information on specifying path names, refer to ″Object naming rules″ in the CL concepts and reference topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

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To object (TOOBJ)

Specifies the path name of the copied object. This is the name of the new object, including the path or relative path.

For more information on specifying path names, refer to ″Object naming rules″ in the CL concepts and reference topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

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Symbolic link (SYMLNK)

Specifies whether to copy the object or a symbolic link to the object.

***NO** The object, not a symbolic link to the object, is copied.

***YES** If the object to be copied is a symbolic link, the symbolic link is copied, instead of copying the object that the symbolic link points to.

Note: If a symbolic link is encountered during the copy of a subtree, the object it points to is copied. If the symbolic link points to a directory, the directory is copied but its contents are not. This is true even when the top-level directory of the directory tree is actually a symbolic link to a directory.

Top

From CCSID (FROMCCSID)

Specifies the method for obtaining the coded character set identifier (CCSID) for the source of the copy operation. This CCSID will be used for data conversion, if requested. This parameter is ignored if the object specified on the **Object (OBJ)** parameter is not a regular file. A regular file is a file that supports the integrated file system input/output (I/O) operations open, read, and write.

***OBJ** Use the data CCSID of the object to be copied.

***PCASCII**
Use the data CCSID of the object to be copied to compute a CCSID in the Microsoft Windows encoding scheme (x4105) (Microsoft, Windows, Windows NT, and the Windows 95 logo are registered trademarks of Microsoft Corporation). Use this as the CCSID from which the data will be converted when DTAFMT(*TEXT) is specified. This option allows data from PCs to be converted properly if the data was created using Microsoft Windows.

***JOBCCSID**
The CCSID from the default job CCSID is used.

1-65533
Specify a CCSID value.

Top

To CCSID (TOCCSID)

Specifies the data coded character set identifier (CCSID) for the target of the copy operation. This parameter is ignored if the object specified on the **Object (OBJ)** parameter is not a regular file. A regular file is a file that supports the integrated file system input/output (I/O) operations open, read, and write.

***OBJ** Use the data CCSID of the object to be copied. If this CCSID cannot be used by the file system that the object is to be copied into, the copy operation will fail.

***CALC**
Use the data CCSID of the object to be copied. If this CCSID cannot be used by the file system that the object is to be copied into, allow the file system to determine a different CCSID and continue with the copy.

***STDASCII**
Compute a CCSID in the IBM PC Data encoding scheme (x2100), based on the source file's CCSID. Associate this CCSID for the target of the copy operation and, if DTAFMT(*TEXT) is

specified, also use this CCSID for the data conversion. If this CCSID cannot be used by the file system that the object is to be copied into, the copy operation will fail.

***PCASCII**
Compute a CCSID in the Microsoft Windows encoding scheme (x4105), based on the source file's CCSID (Microsoft, Windows, Windows NT, and the Windows 95 logo are registered trademarks of Microsoft Corporation). Associate this CCSID with the target of the copy operation and, if DTAFMT(*TEXT) is specified, also use this CCSID for the data conversion. This option allows the resulting data to be used by Microsoft Windows applications. If this CCSID cannot be used by the file system that the object is to be copied into, the copy operation will fail.

***JOBCCSID**
The CCSID from the default job CCSID is used.

1-65533
Specify a CCSID value.

Top

Data Format (DTAFMT)

Specifies the format of the data in the file to be copied.

***BINARY**
The file contains data in binary format (such as an executable file).

Do not convert data on the copy. However, if the object to be copied to has a different CCSID than the source object, all extended attributes will be converted into the CCSID of the new object before being set.

***TEXT**
The file contains data in textual form. Convert data to the CCSID of the new object during the copy. The data is processed as text during the copy.

If a database member is to be copied to a stream file, any line-formatting characters (such as carriage return, tab, and end-of-file) are just converted from one CCSID to another.

If a stream file is to be copied to a database member, the stream file must contain end-of-line characters or the copy will fail. If the stream file does contain end-of-line characters, the following actions are performed during the copy to a database file.

- End-of-line characters are removed.
- Records are padded with blanks (for a source physical file member) or nulls (for a data physical file member).
- Tab characters are replaced by the appropriate number of blanks to the next tab position.

Top

Directory subtree (SUBTREE)

Specifies whether or not to copy a directory subtree if the object specified by **Object (OBJ)** is a directory.

***NODIR**
The object or objects specified by OBJ are copied. If an object is a directory, the copy will fail unless the target directory specified on the TODIR keyword is the directory in which the source object already exists. In this case, no action is performed and a successful completion message is issued.

***NONE**
The objects specified by OBJ are copied. Directory objects are copied but their contents are not copied.

***ALL** The objects specified by OBJ are copied. Directory objects are copied as well as their contents and the contents of all subdirectories.

Pattern matching on the OBJ parameter only applies to the first level object. If the first level object is a directory, the pattern matching does not apply to its contents or the contents of its subdirectories.

If SUBTREE(*ALL) is specified, individual completion messages for each object are not issued. A final message is issued to indicate how many copies succeeded and how many failed. If objects did fail to copy, the command will issue a diagnostic message for each copy that failed.

There are a few differences in how attributes are copied when SUBTREE(*NONE) or SUBTREE(*ALL) is specified instead of the default SUBTREE(*NODIR). A directory subtree copy preserves as much of the original objects' attributes as possible.

- The PC read-only attribute flag is turned off in the copied object. If SUBTREE(*NONE) or SUBTREE(*ALL) is specified the flag will be copied.
- The Create date/time will be copied if SUBTREE(*NONE) or SUBTREE(*ALL) is specified (by default it is updated to the current time).

Note: The copy will fail if the target object is a subdirectory of the source object, or if the target object matches the source object.

Top

Replace object (REPLACE)

Specifies whether the target object is replaced if it already exists.

***NO** The target object is not replaced if it already exists.

***YES** If the target object already exists, it is replaced. If REPLACE(*YES) is specified with a directory object, the attributes of the existing target directory are changed but the objects that the directory contains are not removed.

Top

Owner (OWNER)

Specifies the owner of the newly created object.

***NEW** The owner of the new object is the current user profile of the job. Even if the target object already exists and is owned by someone other than the current user profile of the job, the owner of the target object will be changed to be the current user profile of the job.

***KEEP**
The owner of the new object is the same as the owner of the original object to be copied.

Some file systems do not support changing the owner of certain object types. For example, the owner of *MBR objects in the QSYS.LIB and independent ASP QSYS.LIB file systems will be determined by the owner of the *FILE object that they are copied into.

Top

From Code Page (FROMCODPAG)

Specifies the method for obtaining the code page for source of the copy operation. This code page will be used for data conversion, if requested. This parameter is ignored if the object specified on the **Object (OBJ)** parameter is not a regular file. A regular file is a file that supports the integrated file system input/output (I/O) operations open, read, and write.

Note: This parameter is replaced by **From CCSID (FROMCCSID)** but the FROMCODPAG parameter can still be used. However, because this parameter may be removed in a later release, whenever possible use the FROMCCSID parameter.

***OBJ** Use the data code page of the object to be copied.

***PCASCII**
Use the data code page of the object to be copied to compute a code page in the Microsoft Windows encoding scheme (x4105) (Microsoft, Windows, Windows NT, and the Windows 95 logo are registered trademarks of Microsoft Corporation). Use this as the code page from which the data will be converted when DTAFMT(*TEXT) is specified. This option allows data from PCs to be converted properly if the data was created using Microsoft Windows.

1-32767
Specify a code page value.

Top

To Code Page (TOCODEPAGE)

Specifies the data code page for the target of the copy operation. This parameter is ignored if the object specified on the **Object (OBJ)** parameter is not a regular file. A regular file is a file that supports the integrated file system input/output (I/O) operations open, read, and write.

Note: This parameter is replaced by **To CCSID (TOCCSID)** but the TOCODEPAGE parameter can still be used. However, because this parameter may be removed in a later release, whenever possible use the TOCCSID parameter.

***OBJ** Use the data code page of the object to be copied. If this code page cannot be used by the file system that the object is to be copied into, the copy operation will fail.

***CALC**
Use the data code page of the object to be copied. If this code page cannot be used by the file system that the object is to be copied into, allow the file system to determine a different code page and continue with the copy.

***STDASCII**
Compute a code page in the IBM PC Data encoding scheme (x2100), based on the source file's code page. Associate this code page for the target of the copy operation and, if DTAFMT(*TEXT) is specified, also use this code page for the data conversion. If this code page cannot be used by the file system that the object is to be copied into, the copy operation will fail.

***PCASCII**
Compute a code page in the Microsoft Windows encoding scheme (x4105), based on the source file's code page. Associate this code page with the target of the copy operation and, if DTAFMT(*TEXT) is specified, also use this code page for the data conversion. This option allows the resulting data to be used by Microsoft Windows applications. If this code page cannot be used by the file system that the object is to be copied into, the copy operation will fail.

1-32767
Specify a code page value. If this code page cannot be used by the file system that the object is to be copied into, the copy operation will fail.

Top

Examples

Example 1: Copying a File

```
CPY   OBJ('DECEMBER-1994-MONTHLY-PAYROLL-FILE')  TOOBJ('PAY')
```

This command creates another file named PAY that is a duplicate of the file named DECEMBER-1994-MONTHLY-PAYROLL-FILE.

Example 2: Copying a File to Another Directory

```
CPY   OBJ('PAY')  TODIR('MYDIR')
```

This command creates another file named PAY in directory MYDIR.

Example 3: Copying a Symbolic Link

```
CPY   OBJ('SL1')  TOOBJ('YOURDIR/SL2')  SYMLNK(*YES)
```

If SL1 is a symbolic link, the new object YOURDIR/SL2 is also a symbolic link. If SYMLNK(*NO) was specified, the new object would be a copy of whatever SL1 pointed to, as long as it was a legal candidate for the copy function.

Example 4: Copying with Conversion

```
CPY   OBJ('/DATAFB')
      TOOBJ('/QSYS.LIB/APP1.LIB/DATA.FILE/DATAFB.MBR')
      TOCCSID(*CALC)  DTAFMT(*TEXT)
```

This command copies stream file 'DATAFB' to the database file 'DATAFB.MBR'. By specifying TOCCSID(*CALC), the file system being copied to (the QSYS.LIB file system in this case) will try to create the new member in the same coded character set identifier (CCSID) as '/DATAFB'. If this fails (in this case, if 'DATA.FILE is not in the same CCSID as 'DATAFB'), the file system will be allowed to choose an appropriate CCSID and complete the copy. By specifying DTAFMT(*TEXT), the data in 'DATAFB' is handled as text and is converted into the CCSID chosen for the new file 'DATAFB.MBR'.

Example 5: Copying a Directory Subtree

```
CPY   OBJ('/QDLS/MYINFO')  TODIR('/myfolder')  SUBTREE(*ALL)
      OWNER(*KEEP)  REPLACE(*YES)
```

The *FLR object (QDLS file system folder) is created in the '/myfolder' directory in the "root" (/) file system with the path name '/myfolder/MYINFO'. Its contents are copied as well. Since OWNER(*KEEP) is specified, the new objects created will belong to the same profiles as the old objects. With the REPLACE parameter set to *YES if any of the target files already exist they will be overwritten.

Top

Error messages

***ESCAPE Messages**

CPFA082

*ADD authority required to owner's user profile.

CPFA083

Insufficient authority to replace object. Object is &1.

CPFA085
Home directory not found for user &1.

CPFA08E
More than one name matches pattern.

CPFA093
Name matching pattern not found.

CPFA09C
Not authorized to object. Object is &1.

CPFA09D
Error occurred in program &1.

CPFA0A1
An input or output error occurred.

CPFA0A3
Path name resolution causes looping.

CPFA0A6
Number of links exceeds maximum allowed for the file system.

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.

CPFA0B0
Request not allowed to operate from one file system to another.

CPFA0B1
Requested operation not allowed. Access problem.

CPFA0B2
No objects satisfy request.

CPFA0BB
&1 objects copied. &2 objects failed.

CPFA0C4
Object not a file. Object is &1.

CPFA0DA
Object is a directory. Object is &1.

CPFB41E
Object type must match replaced object type.

Top

Copy Audit Journal Entries (CPYAUDJRNE)

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

Parameters
Examples
Error messages

The Copy Audit Journal Entries (CPYAUDJRNE) command allows you to copy security audit records from the security auditing journal (QAUDJRN) into one or more outfiles. Each audit entry type selected is copied to a separate output file.

To view the audit journal entries copied to the output file, you can use the Run Query (RUNQRY) command to display the records with column headings. The combination of CPYAUDJRNE followed by RUNQRY provides function that is similar to the Display Audit Journal Entries (DSPAUDJRNE) command but with the advantages that:

- All journal entry types are supported.
- All audit journal entry fields are copied and available.

For information on all of the possible audit entries, see Chapter 9 of the Security Reference manual.

Restrictions:

1. You must have *AUDIT special authority to use this command.
2. You must have *EXECUTE and *ADD authority to the specified library to create a new output file in that library.
3. You must have *OBJOPR *OBJMGT *ADD *DLT authority to add or update a member in an existing output file.

Top

Parameters

Keyword	Description	Choices	Notes
ENTTYP	Journal entry types	Single values: *ALL Other values (up to 73 repetitions): AD, **AF**, AP, AU, CA, CD, CO, CP, CQ, CU, CV, CY, DI, DO, DS, EV, GR, GS, IM, IP, IS, JD, JS, KF, LD, ML, NA, ND, NE, OM, OR, OW, O1, O2, O3, PA, PG, PO, PS, PW, RA, RJ, RO, RP, RQ, RU, RZ, SD, SE, SF, SG, SK, SM, SO, ST, SV, VA, VC, VF, VL, VN, VO, VP, VR, VS, VU, VV, X0, X1, YC, YR, ZC, ZR	Optional, Positional 1
OUTFILE	Output file prefix	*Qualified object name*	Optional
	Qualifier 1: Output file prefix	*Name*, **QAUDIT**	
	Qualifier 2: Library	*Name*, **QTEMP**, *CURLIB	
OUTMBR	Output member options	*Element list*	Optional
	Element 1: Member to receive output	*Name*, ***FIRST**	
	Element 2: Replace or add records	***REPLACE**, *ADD	
USRPRF	User profile	*Name*, ***ALL**	Optional

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Keyword	Description	Choices	Notes
JRNRCV	Journal receiver searched	Single values: ***CURRENT**, *CURCHAIN Other values: *Element list*	Optional
	Element 1: Starting journal receiver	*Qualified object name*	
	Qualifier 1: Starting journal receiver	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
	Element 2: Ending journal receiver	Single values: ***CURRENT** Other values: *Qualified object name*	
	Qualifier 1: Ending journal receiver	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
FROMTIME	Starting date and time	Single values: ***FIRST** Other values: *Element list*	Optional
	Element 1: Starting date	*Date*	
	Element 2: Starting time	*Time*	
TOTIME	Ending date and time	Single values: ***LAST** Other values: *Element list*	Optional
	Element 1: Ending date	*Date*	
	Element 2: Ending time	*Time*	

Top

Journal entry types (ENTTYP)

Specifies the journal entry types to be copied to an output file.

Single value

***ALL** All audit record entry types are selected.

Entry types (up to 73 repetitions)

AF Authorization failure.

AD Auditing changes.

AP Obtaining adopted authority.

AU Attribute changes.

CA Change authority.

CD Command string.

CO Create object.

CP Change user profile.

CQ Change of *CRQD object.

CU Cluster management operations.

CV Connection verification.

CY Cryptographic configuration.

DI Directory services.

DO Delete object.

DS DST security password reset.

EV Environment variable operations.

GR Generic record.

GS Socket descriptor was given to another job.

IM Intrusion monitor.

IP Interprocess communication.

IS Internet security management.

JD Change to a user parameter of a job description.

JS Actions against jobs entries.

KF Key ring file.

LD Link, unlink, or lookup directory entry.

ML Office services mail actions.

NA Network attribute changed.

ND Directory search filter violations.

NE End point filter violations.

OM Object move or rename.

OR Object restored.

OW Object ownership changed.

O1 (Optical access) single file or directory.

O2 (Optical access) dual file or directory.

O3 (Optical access) volume.

PA Program changed to adopt authority.

PG Change of an object's primary group.

PO Printed output entries.

PS Profile swap.

PW Invalid password entries.

RA Authority change during restore.

RJ Restoring job description with user profile specified.

RO Change of object owner during restore.

RP Restoring adopted authority program.

RQ Restoring a *CRQD object.

RU Restoring user profile authority.

RZ Changing a primary group during restore.

SD Changes to system distribution directory.

SE Subsystem routing entry changed.

SF Action on spooled files entries.

SG Asynchronous signals.

SK Secure sockets connections.

SM System management changes.

SO Server security user information actions.

ST Use of service tools.

SV System values changed entries.

VA Changing an access control list.

VC Starting or ending a connection.

VF Closing server files.

VL Account limit exceeded.

VN Logging on and off the network.

VO Validation list actions.

VP Network password error.

VR Network resource access.

VS Starting or ending a server session.

VU Changing a network profile.

VV Changing service status.

X0 Network Authentication.

X1 Identity token.

YC DLO object changed entries.

YR DLO object read entries.

ZC Object changed entries.

ZR Object read entries.

Top

Output file prefix (OUTFILE)

Specifies the prefix for each database file to which the output of the command is directed. If an output file does not exist, this command creates the file in the specified library. If an output file is created by this command, the public authority for the file is set to *EXCLUDE.

Qualifier 1: Output file prefix

QAUDIT
Each output database file name will begin with 'QAUDIT' with the audit entry type appended to form the complete file name. For example, QAUDITZR would be the file name if ENTTYP(ZR) was specified.

name prefix
Specify the first 1 to 8 characters of the name of each database file to which the audit entries will be copied. The audit entry type will be appended to the name prefix to form the complete database file name. For example, if FEB2004 is specified as the name prefix and ENTTYP(AF) is specified, the database file name used is FEB2004AF.

Qualifier 2: Library

QTEMP
The QTEMP library for the job is used to locate the file.

***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.

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 file has no members, the system creates a member with the name of the file generated from the **Output file prefix (OUTFILE)** and **Journal entry types (ENTTYP)** parameters. 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

User profile (USRPRF)

Specifies which user profile's journal entries are to be included in the output files.

***ALL** The output files will include entries for all user profiles.

name Specify the name of the user profile whose journal entries are to be copied to the output files.

Top

Journal receiver searched (JRNRCV)

Specifies the starting (first) and ending (last) journal receivers whose journal entries are searched.

Note: If the maximum number of receivers (256) in the range is surpassed, an error occurs and no journal entries are copied.

Single values

***CURRENT**
Journal entries in the currently attached journal receiver are searched.

***CURCHAIN**
Journal entries in the currently attached journal receiver chain are searched. If there is a break in the chain, the receiver range is from the most recent break in the chain through the receiver that is attached when starting to convert journal entries.

Element 1: Starting journal receiver

Qualifier 1: Starting journal receiver

name Specify the name of the first journal receiver from which entries are searched.

Qualifier 2: Library

***LIBL** The library list is used to locate the 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 Specify the name of the library where the journal receiver is located.

Element 2: Ending journal receiver

Single values

***CURRENT**
The journal receiver that is currently attached is used as the ending journal receiver.

Qualifier 1: Ending journal receiver

name Specify the name of the last journal receiver from which entries are searched.

Qualifier 2: Library

***LIBL** The library list is used to locate the 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 Specify the name of the library where the journal receiver is located.

Top

Starting date and time (FROMTIME)

Specifies the date and time of the first journal entry to be searched.

Single values

***FIRST**
The search is to begin with the first record in the journal receiver.

Element 1: Starting date

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 entries to be searched.

Element 2: Starting time

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 entries to be searched.

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.
- 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 date and time (TOTIME)

Specifies the creation date and time of the last journal entry to be searched.

Single values

***LAST**
The search is to end with the last record in the journal receiver.

Element 1: Ending date

date Specify the ending date. The ending date and time of the first journal entry occurring at or before the specified ending time on the specified ending date becomes the ending point for the range of entries to be searched.

Element 2: Ending time

time Specify the ending time. The ending date and time of the first journal entry occurring at or before the specified ending time on the specified ending date becomes the ending point for the range of entries to be searched.

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.
- 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

Examples

Example 1: Copy Authority Failure (AF) Records

```
CPYAUDJRNE   ENTTYP(AF)
```

This command copies all 'Authority Failure' audit records in the current journal receiver and puts them in member QAUDITAF in database file QTEMP/QAUDITAF.

The copied audit records can be displayed by a RUNQRY command, such as:

```
RUNQRY   QRY(*NONE) QRYFILE((QTEMP/QAUDITAF))
```

Example 2: Copy Two Entry Types

```
CPYAUDJRNE   ENTTYP(CO DO) OUTFILE(AUDITLIB/SYSTEM1)
```

This command copies all 'Create Object' and 'Delete Object' audit records in the current journal receiver and puts them in database files AUDITLIB/SYSTEM1CO and AUDITLIB/SYSTEM1DO respectively.

The copied audit records can be displayed by RUNQRY commands, such as:

```
RUNQRY   QRY(*NONE) QRYFILE((AUDITLIB/SYSTEM1CO))
         OUTTYPE(*DISPLAY) OUTFORM(*RUNOPT)
RUNQRY   QRY(*NONE) QRYFILE((AUDITLIB/SYSTEM1DO))
         OUTTYPE(*DISPLAY) OUTFORM(*RUNOPT)
```

Example 3: Copy All Entry Types

```
CPYAUDJRNE   ENTTYP(*ALL) OUTFILE(SAVEAUDIT/JUNE)
             OUTMBR(SMITHJ *REPLACE) USRPRF(SMITHJ)
             JRNRCV(*CURCHAIN)
             FROMTIME('06/01/2004' '00:00:00')
             TOTIME('07/01/2004' '00:00:00')
```

This command copies all audit entries for user profile SMITHJ to a set of database files in library SAVEAUDIT that have names like JUNExx where the xx is the audit record entry type. The search for audit records will be performed for all journal receivers in the current chain of journal receivers. Only audit records that were written between midnight on June 01, 2004 and midnight on July 01, 2004 will be copied.

Note: This command may run for a very long time. The entire chain of journal receivers will be searched repeatedly for each audit record entry type.

Top

Error messages

***ESCAPE Messages**

CPFB303
Cannot access data from QAUDJRN.

CPFB304
User does not have required special authorities.

CPFB30A
Record format name &2 does not match expected name &1.

CPF4AA4
No records copied for some ENTTYP values.

CPF9801
Object &2 in library &3 not found.

CPF9802
Not authorized to object &2 in &3.

CPF9810
Library &1 not found.

CPF9820
Not authorized to use library &1.

Top

Copy Configuration List (CPYCFGL)

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

Parameters
Examples
Error messages

The Copy Configuration List (CPYCFGL) command creates a configuration list as a copy of an existing configuration list.

Note: The asynchronous network address list is the only type of configuration list that can be copied.

Top

Parameters

Keyword	Description	Choices	Notes
FROMCFGL	From configuration list	*Name*	Required, Positional 1
CFGL	Configuration list	*Name*	Required, Positional 2
TEXT	Text 'description'	*Character value*, ***BLANK**	Optional
AUT	Authority	***CHANGE**, *ALL, *USE, *EXCLUDE	Optional

Top

From configuration list (FROMCFGL)

Specifies the configuration list from which to copy.

from-configuration-list
Specify the configuration list being copied from.

Top

Configuration list (CFGL)

Specifies the name of the configuration list.

list-to-create
Specify the configuration list being created.

This is a required parameter.

Top

Text 'description' (TEXT)

Specifies the text that briefly describes the object.

***BLANK**
No text is specified.

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

Top

Authority (AUT)

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

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

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

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

***EXCLUDE**
The user cannot access the object.

Top

Examples

```
CPYCFGL   FROMCFGL(CONFIG01)  CFGL(CONFIG02)
```

This command copies the configuration list named CONFIG01 to a new configuration list name CONFIG02.

Top

Error messages

***ESCAPE Messages**

CPF2182
Not authorized to library &1.

CPF260D
Configuration list &1 already exists.

CPF260E
Configuration list &1 not created.

CPF260F
Configuration list &1 not found.

CPF2612
List type &1 not correct for copy.

CPF2625
Not able to allocate object &1.

CPF2634
Not authorized to object &1.

CPF2663
Configuration list &1 previously deleted.

Top

Copy Document (CPYDOC)

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

Parameters
Examples
Error messages

The Copy Document (CPYDOC) command allows you to copy a document from one folder into another folder or to copy a document that is not in a folder into a folder.

Restrictions:

- If you are replacing a document in a folder, you must have change (*CHANGE) authority to that document.
- If you are creating a new document in a folder, you must have *CHANGE authority to that folder. The new document will have the same authorization as the document from which it is copied.
- You must have use (*USE) authority to the document being copied.

Top

Parameters

Keyword	Description	Choices	Notes
FROMDOC	From document	*Character value*, *SYSOBJNAM	Required, Positional 1
FROMFLR	From folder	*Character value*, ***NONE**	Optional, Positional 2
TODOC	To document	*Character value*, ***FROMDOC**	Optional, Positional 3
TOFLR	To folder	*Character value*, ***FROMFLR**	Optional, Positional 4
REPLACE	Replace document	***NO**, *YES	Optional
SYSOBJNAM	System object name	*Name*	Optional

Top

From document (FROMDOC)

Specifies the name of the document being copied.

This is a required parameter.

name Specify the name of the document that is copied.

If FROMDOC(name) is specified, a folder name must be specified on FROMFLR.

***SYSOBJNAM**

A system object name is used to identify the document that is copied.

If FROMDOC(*SYSOBJNAM) is specified, then SYSOBJNAM(name), TODOC(name) and TOFLR(name) must be specified.

Top

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From folder (FROMFLR)

Specifies the name of the folder that contains the document that is copied.

***NONE**
A folder name is not specified for the document. FROMFLR(*NONE) must be specified if the document is not in a folder. FROMFLR(*NONE) cannot be specified if FROMDOC(name) is specified.

name Specify the name of the folder that contains the document that is copied.

Top

To document (TODOC)

Specifies the output document name.

***FROMDOC**
The output document name is the same as that specified on the **From document (FROMDOC)** parameter.

If TODOC(*FROMDOC) is specified, then TOFLR(*FROMFLR) cannot be specified.

name Specify the output document name.

If FROMDOC(*SYSOBJNAME) is specified, then TODOC(name) must be specified.

Top

To folder (TOFLR)

Specifies the folder into which the output document is copied.

***FROMFLR**
The folder name is the same as that specified on the **From folder (FROMFLR)** parameter; the document is copied into the same folder.

name Specify the name of the folder into which the document is copied.

If FROMDOC(*SYSOBJNAME) is specified, then TOFLR(name) must be specified.

Top

Replace document (REPLACE)

Specifies whether the document specified on TODOC can be replaced.

***NO** The output document is a new document created within the folder specified on the **To folder (TOFLR)** parameter. If a document with the same name already exists in the folder, no copy is made.

***YES** The output document replaces an existing document with the same name in the folder specified on the TOFLR parameter. If no document with the same name exists in the folder, a new document is created.

Top

System object name (SYSOBJNAM)

Specifies the system object name. This parameter is valid only when DLO(*SYSOBJNAM) is specified.

name Specify the system object name of the document that is copied. A full ten characters must be specified.

Top

Examples

Example 1: Copying a Document

```
CPYDOC   FROMDOC(MYDOC)  FROMFLR(MYFLR)
         TODOC(MYDOC2)  TOFLR(MYFLR2)
         REPLACE(*YES)
```

This command copies document MYDOC located in folder MYFLR to document MYDOC2 located in folder MYFLR2. If document MYDOC2 already exists in MYFLR2, the system replaces it with a copy of document MYDOC; otherwise, MYDOC2 is created in MYFLR2 as a copy of MYDOC in MYFLR.

Example 2: Copying Document and Keeping Source Document Name

```
CPYDOC   FROMDOC(*SYSOBJNAM)  SYSOBJNAM(AMBT133080)
         TODOC(MYDOC4)  TOFLR(MYFLR)
```

This command copies a document, identified by the system object name, to document MYDOC4 located in folder MYFLR. The document name will be the same as the name of the source document.

Example 3: Copying Document to Document in Same Folder

```
CPYDOC   FROMDOC(XYZ)  FROMFLR('MYFLR/TEST')  TODOC(NEW)
```

This command copies document XYZ located in folder MYFLR/TEST to document NEW in the same folder. If document NEW already exists, an error message is sent.

Top

Error messages

***ESCAPE Messages**

CPF8A12

Document &2 in folder &1 not copied.

Top

Copy File (CPYF)

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

Parameters
Examples
Error messages

The Copy File (CPYF) command copies all or part of a file from the database or from an external device to the database or to an external device. It can:

- Copy data and source files between database files. Records can be copied from physical or logical files. However, records can be copied only to physical files, not to logical files.
- Copy data and source files from external devices, such as diskette and tape, to the database.
- Copy data and source files from the database to external devices.
- Copy data and source files from external devices to other external devices.
- Copy data and source files from inline data files to the database or to external devices.

Restrictions:

- During the time a CPYF request is run, the file specified for the **To file (TOFILE)** parameter may be locked (similar to an *EXCL lock with no timeout) so that no access is possible.
- When the CRTFILE(*YES) parameter is specified and the file copied (FROMFILE parameter) has an associated trigger, the file created (TOFILE parameter) does not have the associated trigger. The Add Physical File Trigger (ADDPFTRG) command must be used to add a trigger to the file.
- This command is conditionally threadsafe. In multithreaded jobs, this command is not threadsafe when copying from or to multiple database file members, device files (except SPOOL(*YES) print files), distributed files, or DDM files of type SNA. This command fails for distributed files that use relational databases of type *SNA and DDM files of type *SNA. It is threadsafe only when copying from and to single database file members (local or DDM of type *IP) or SPOOL(*YES) print files.

Top

Parameters

Keyword	Description	Choices	Notes
FROMFILE	From file	*Qualified object name*	Required, Positional 1
	Qualifier 1: From file	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
TOFILE	To file	Single values: *PRINT Other values: *Qualified object name*	Required, Positional 2
	Qualifier 1: To file	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
FROMMBR	From member	*Generic name, name*, ***FIRST**, *ALL	Optional, Positional 3
TOMBR	To member or label	*Name*, ***FIRST**, *FROMMBR, *ALL	Optional, Positional 4
MBROPT	Replace or add records	***NONE**, *ADD, *REPLACE, *UPDADD	Optional, Positional 5
CRTFILE	Create file	***NO**, *YES	Optional, Positional 6
OUTFMT	Print format	***CHAR**, *HEX	Optional

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Keyword	Description	Choices	Notes
PRINT	Which records to print	Single values: ***NONE** Other values (up to 3 repetitions): *EXCLD, *COPIED, *ERROR	Optional
RCDFMT	Record format of logical file	*Name*, ***ONLY**, *ALL	Optional
FROMRCD	Copy from record number	*Unsigned integer*, ***START**	Optional
TORCD	Copy to record number	*Unsigned integer*, ***END**	Optional
FROMKEY	Copy from record key	Single values: ***NONE** Other values: *Element list*	Optional
	Element 1: Number of key fields	*Integer*, *BLDKEY	
	Element 2: Key value	Values (up to 50 repetitions): *Character value*	
TOKEY	Copy to record key	Single values: ***NONE** Other values: *Element list*	Optional
	Element 1: Number of key fields	*Integer*, *BLDKEY	
	Element 2: Key value	Values (up to 50 repetitions): *Character value*	
NBRRCDS	Number of records to copy	*Unsigned integer*, ***END**	Optional
INCCHAR	Include records by char test	Single values: ***NONE** Other values: *Element list*	Optional
	Element 1: Field	*Name*, *RCD, *FLD	
	Element 2: Character position	*Integer*	
	Element 3: Relational operator	*EQ, *GT, *LT, *NE, *GE, *NL, *LE, *NG, *CT	
	Element 4: Value	*Character value*	
INCREL	Include records by field test	Single values: ***NONE** Other values (up to 50 repetitions): *Element list*	Optional
	Element 1: Relationship	*IF, *AND, *OR	
	Element 2: Field	*Name*	
	Element 3: Relational operator	*EQ, *GT, *LT, *NE, *GE, *NL, *LE, *NG	
	Element 4: Value	*Character value*, *NULL	
FMTOPT	Record format field mapping	Single values: ***NONE**, *NOCHK, *CVTSRC Other values (up to 2 repetitions): *MAP, *DROP, *CVTFLOAT, *NULLFLAGS	Optional
SRCOPT	Source update options	Single values: ***SAME** Other values (up to 2 repetitions): *SEQNBR, *DATE	Optional
SRCSEQ	Source sequence numbering	*Element list*	Optional
	Element 1: Starting sequence number	0.01-9999.99, **1.00**	
	Element 2: Increment number	0.01-9999.99, **1.00**	
ERRLVL	Errors allowed	*Unsigned integer*, **0**, *NOMAX	Optional
COMPRESS	Compress out deleted records	***YES**, *NO	Optional

Top

From file (FROMFILE)

Specifies the database file or device file that contains the records to be copied. A database file can be a physical file or a logical file. A device file can be a diskette file or a tape file.

This is a required parameter.

Qualifier 1: From file

name Specify the name of the database or device file that contains the records to be copied.

Qualifier 2: Library

***LIBL** All libraries in the user and system portions of 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 database file or device 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

To file (TOFILE)

Specifies the file that receives the copied records.

This is a required parameter.

Note: A device file can be a diskette file, tape file, or printer file. However: (1) If the from-file and to-file are both diskette files, the to-file must be spooled (SPOOL(*YES) must be specified on the Create Diskette File (CRTDKTF), Change Diskette File (CHGDKTF), or Override Diskette File (OVRDKTF) command). (2) An externally described printer file cannot be specified.

If the device file is a print file or if TOFILE(*PRINT) is specified, shift-out and shift-in (SO-SI) characters are not added around the graphic data. OUTFMT(*HEX) can be specified to print the data in hexadecimal format.

Single values

***PRINT**
The data is copied to a system printer device file (QSYSPRT) and formatted according to the value specified for the **Print format (OUTFMT)** parameter.

Qualifier 1: To file

name Specify the name of the physical file or device file that receives the copied records.

Qualifier 2: Library

***LIBL** All libraries in the user and system portions of 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 physical file or device file. If no library is specified as the current library, QGPL is used.

name Specify the name of the library to be searched.

Top

From member (FROMMBR)

Specifies the database file member, or the diskette file label or tape file label, in the from-file that is to be copied.

***FIRST**
The first member in the database from-file is copied. For a diskette, a label identifier must be specified in the device file or on an Override with Diskette File (OVRDKTF) command. If the from-file is an inline file, *FIRST is the only value that is allowed.

***ALL** All members of a database from-file, or all file label identifiers for a diskette from-file are copied. *ALL is not valid for a tape file or inline file.

name Specify the name of the database from-file member, or the diskette from-file label or tape from-file label of the file member being copied.

generic-name
Specify a generic name to copy all database members that have names with the same prefix, or all diskette data files with the same prefix label identifier. Refer to the description of FROMMBR(*ALL) for more information about copying many from-file members or label identifiers.

Top

To member or label (TOMBR)

Specifies the database file member name, or the diskette or tape file label identifier of the to-file member that receives the copied data records. If *PRINT is specified for the **To file (TOFILE)** parameter, either *FIRST or *FROMMBR must be specified on this parameter.

***FIRST**
The first member of the specified file is used.

***FROMMBR**
Corresponding from-file and to-file member names or device label identifiers are used.

***ALL** The data is copied to the correct to-member of the partitioned table. *ALL is only valid for partitioned tables.

name Specify the name of the physical to-file member, or the label identifier of the diskette or tape device to-file that receives the copied records.

Top

Replace or add records (MBROPT)

Specifies whether the new records replace or are added to the existing records.

Note: If the records are being copied to an existing physical file, this parameter must specify *ADD, *UPDADD, or *REPLACE. If the to-file does not exist but CRTFILE(*YES) is specified, the copy operation assumes MBROPT(*ADD) for all records copied to the file after it is created, regardless of the value specified on this parameter.

If *ADD or *UPDADD is specified and the from-file is empty (contains no records), the copy operation completes normally. If *REPLACE is specified and the from-file is empty, the copy operation ends abnormally.

***NONE**
This parameter does not apply to this copy operation. When the to-file is an existing physical file, *NONE is not allowed.

***ADD** The system adds the new records to the end of the existing records.

***REPLACE**
The system clears the existing member and adds the new records.

***UPDADD**
The system updates the duplicate key records and adds the new records to the end of the existing records. Additional information is available in the Files and file systems topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

Top

Create file (CRTFILE)

Specifies, when this command is used to copy from a physical file or a logical file, whether a physical file is created to receive the data if the specified to-file does not exist. If the to-file is a Distributed Data Management (DDM) file that identifies a remote file that does not exist, the to-file file is created on the target system.

***NO** The to-file must exist when this command is started. A physical file is not created to receive the data.

***YES** If the to-file does not exist, a physical file is created with the name specified on the **To file (TOFILE)** parameter. If the from-file is an SQL table, view, or index, that contains a user defined type, datalink, or LOB field type, the physical file created will be an SQL table. In all other instances the to-file created will be a database physical file that is not an SQL table. In addition to the normal copy operation validity checks, the following special conditions must all be true for the copy operation to create a to-file:

- The from-file must be either a physical or logical file.
- A library name must be specified on the **To file (TOFILE)** parameter. The default value, *LIBL, is not allowed.
- There cannot be an override to a different file or library name. The values specified on this command for the to-file must be used.
- The user running this command must be authorized to add the file to the to-file library, and must also have operational authority to the Create Physical File (CRTPF) command.
- A single record format must be used in the from-file. If the from-file is a logical file with multiple formats, the **Record format of logical file (RCDFMT)** parameter must specify a record format name.

Top

Print format (OUTFMT)

Specifies whether records are printed in character format, or in both character and hexadecimal format. This parameter is used only when *PRINT is specified for the **To file (TOFILE)** parameter or *EXCLD or *COPIED is specified for the **Which records to print (PRINT)** parameter.

***CHAR**
Records are printed in character format.

***HEX** Records are printed in both character and hexadecimal format.

Top

Which records to print (PRINT)

Specifies whether copied records, excluded records, or both, are printed.

Single values

***NONE**
No copied, excluded, or error records are printed.

Other values (up to 3 repetitions)

***EXCLD**
Records excluded from the copy operation by the **Include records by char test (INCCHAR)** parameter and the **Include records by field test (INCREL)** parameter are printed.

***COPIED**
Copied records are printed.

***ERROR**
The number of recoverable output error records specified for the **Errors allowed (ERRLVL)** parameter are printed.

Top

Record format of logical file (RCDFMT)

Specifies, for copying from a database file only, the name of the record format that is copied. If the from-file is not a logical or physical file, *ONLY is the only value allowed. A record format name is optional if the logical file has only a single record format, but either a format name or *ALL must be specified if the from-file has more than one record format.

***ONLY**
The only record format in the from-file is copied. When the from-file is a logical file, this value is allowed only if the file has a single record format.

***ALL** All record formats in the logical from-file are used.

name Specify the name of the record format that is copied when the from-file is a logical or physical file.

Top

Copy from record number (FROMRCD)

Specifies the record number from which to start the copy. A record number is not valid if a value other than *NONE is specified for the **Copy from record key (FROMKEY)** parameter or for the **Copy to record key (TOKEY)** parameter, and it is not allowed if the from-file is a keyed logical file.

***FIRST**
The copy operation begins with the first record in the file.

1-4294967288
Specify the record number of the first record to be copied from the from-file.

Top

Copy to record number (TORCD)

Specifies the record number of the last record in the from-file (or each from-file member) that is copied. A record number is not valid if a value other than *NONE is specified for the **Copy from record key (FROMKEY)** parameter or the **Copy to record key (TOKEY)** parameter, if a value other than *END is specified for the **Number of records to copy (NBRRCDS)** parameter, or if the from-file is a keyed logical file.

***END** Records are copied until the end-of-file condition is indicated.

1-4294967288
Specify the record number of the last record to be copied from the from-file.

Top

Copy from record key (FROMKEY)

Specifies, when a file with key fields is copied, the key value of the first record in the from-file (or each from-file member) is copied. This parameter is valid only for a from-file that is a keyed database file, and is not allowed if record number values are specified for the **Copy from record number (FROMRCD)** parameter or for the **Copy to record number (TORCD)** parameter.

Single values

***NONE**
The first record copied is not selected by key.

Element 1: Number of key fields

***BLDKEY**
A list of values (up to 256 characters each) is provided for key fields (as opposed to a single character string value for all fields in the key). *BLDKEY is not valid if any value (up to 50) in the list corresponds to a null-capable key field.

The list of values specified for element 2 is applied (in order) to corresponding fields in the from-file key. For character fields, the character strings are converted from the current job CCSID to the from-file field CCSID. For date, time, or timestamp fields, corresponding input values are converted to the format and separator form of the from-file field. For variable-length fields, only enter the character data, not the 2-byte length portion. When a DBCS graphic field is specified, the input string (DBCS data) must be enclosed between shiftout (SO) and shiftin (SI) characters. The SO-SI characters are removed from the input string and the remaining DBCS data is converted from the associated DBCS CCSID of the current job to the DBCS CCSID of the DBCS graphic field.

integer-number
Specify the number of key fields used to locate the first record to be copied.

Element 2: Key value

character-value
Specify a character string that gives the actual key value for the number of key fields specified for the first element. The key string value must be specified in quotation marks if it contains blanks or special characters, and it may be specified in hexadecimal format, which is useful if the key contains packed decimal or binary numeric fields, or is a variable-length character field. CCSID conversions are not performed on character fields when a single string is specified.

Top

Copy to record key (TOKEY)

Specifies, when a file with key fields is copied, the key value of the last record in the from-file (or each from-file member) that is copied. This parameter is valid only for a from-file that is a keyed database file, and it is not allowed if record number values are specified for the **Copy from record number (FROMRCD)** parameter or for the **Copy to record number (TORCD)** parameter, or if a number of records is specified for the **Number of records to copy (NBRRCDS)** parameter.

Single values

***NONE**
The last record copied is not selected by key.

Element 1: Number of key fields

***BLDKEY**
A list of values (up to 256 characters each) is provided for key fields (as opposed to a single character string value for all fields in the key). *BLDKEY is not valid if any value (up to 50) in the list corresponds to a null-capable key field.

The list of values specified for element 2 is applied (in order) to corresponding fields in the from-file key. For character fields, the character strings are converted from the current job CCSID to the from-file field CCSID. For date, time, or timestamp fields, corresponding input values are converted to the format and separator form of the from-file field. For variable-length fields, only enter the character data, not the 2-byte length portion. When a DBCS graphic field is specified, the input string (DBCS data) must be enclosed between shiftout (SO) and shiftin (SI) characters. The SO-SI characters are removed from the input string and the remaining DBCS data is converted from the associated DBCS CCSID of the current job to the DBCS CCSID of the DBCS graphic field.

integer-number
Specify the number of key fields used to locate the last record to be copied.

Element 2: Key value

character-value
Specify a character string that gives the actual key value for the number of key fields specified for the first element. The key string value must be specified in quotation marks if it contains blanks or special characters, and it may be specified in hexadecimal format, which is useful if the key contains packed decimal or binary numeric fields, or is a variable-length character field. CCSID conversions are not performed on character fields when a single string is specified.

Top

Number of records to copy (NBRRCDS)

Specifies the number of records copied to the to-file.

***END** Records are copied until the end-of-file condition is indicated for the from-file, unless either the TOKEY or TORCD parameter has been specified.

1-4294967288
Specify the number of records to be copied to the to-file.

Top

Include records by char test (INCCHAR)

Specifies that records are copied based on a comparison of a character string value and the data in some position of either a field in the record or the entire record.

Single values

***NONE**
No comparison should be used to select which records are copied.

Comparison values

To specify the comparison that determines which records are to be copied, four values must be entered. Either *RCD or the name of a field must be entered, followed by the three values that control the comparison: starting position, operator, and character string value. All records that satisfy the relationship are copied to the to-file.

Element 1: Field

***RCD** The character string value is compared with the data at the specified starting position in each record in the from-file.

***FLD** This value is the same as the *RCD value.

name Specify the name of a field in the record format that is used to make the comparison. The field must be defined as a character field in the data description specification (DDS) for the from-file.

Element 2: Character position

starting-position
Specify the starting position where the comparison starts in the field or record. For variable-length fields, the position is the position in the data portion of the variable-length field. For DBCS graphic fields, the position is the DBCS character position. For any operator except *CT, the comparison is done for the length of the specified character string value (up to a maximum of 256 characters). For the *CT operator, the field or record is scanned from the specified starting position to the end of the field or record to determine whether it contains the specified character string.

Element 3: Relational operator

Specify the operator that indicates the relationship that must exist between the record or field and the specified character string.

***EQ** Equal

***GT** Greater than

***LT** Less than

***NE** Not equal

***GE** Greater than or equal

***NL** Not less than

***LE** Less than or equal

***NG** Not greater than

***CT** Contains

Element 4: Value

character-value
Specify the character string (up to 256 characters long) to be compared with the specified field or record. The character string value must be specified in apostrophes if it contains blanks or special characters, and it may be specified in hexadecimal format. If a field name is specified, the character string value is converted from the current job CCSID to the field CCSID prior to running the comparison. If the field name of a variable-length field is specified, only the character data to be compared should be specified, not the 2-byte length portion. If a field name is specified, **any** comparison to a field value that is the null value will test false. For DBCS graphics, specify the input (DBCS data) string within shiftout and shiftin (SO-SI) characters. The SO-SI characters are removed from the input string and the remaining DBCS data is converted from the associated DBCS CCSID of the current job to the DBCS CCSID of the DBCS graphic field.

Top

Include records by field test (INCREL)

Specifies that records are copied based on whether certain fields in the record contain data that satisfies specified relationships. This parameter is not valid for a copy from all record formats of a logical file with more than one format.

Single values

***NONE**
No field value relationships are used to select which records are copied.

Relationship values

To specify the conditions under which records are copied, a set of values is specified for each condition. Up to 50 sets of realtionship values can be specified. Each set must contain exactly four values:

1. A logical operator
2. The name of the field to be compared
3. A relational operator
4. The comparison value

Element 1: Relationship

***IF** This must be specified as the first value in a set of comparisons.

***AND** The field value relational groups on both sides of the *AND value must all be satisfied before a record is copied.

***OR** If the field value relational group on either side of the value *OR is satisfied, the record is copied.

Element 2: Field

name Specify the name of the field being compared. The field must exist in the from-file record format, and may be defined as either character or numeric in the data description specification (DDS) for the file.

Element 3: Relational operator

Specify the operator that indicates the relationship which must exist between the field in the record and the specified field value.

***EQ** Equal

***GT** Greater than

***LT** Less than

***NE** Not equal

***GE** Greater than or equal

***NL** Not less than

***LE** Less than or equal

***NG** Not greater than

Element 4: Value

***NULL**

*NULL can be used as the value to test whether the field value in a record is or is not null. Only the operators *EQ and *NE are allowed if *NULL is specified. A ″*EQ *NULL″ relation is true only if a field value in a record is null. A ″*NE *NULL″ relationship is true only if a field value in a record is not null.

character-value

Specify the value (up to 256 characters) to be compared with the contents of the specified field. The specified value cannot be another field name. The field value must be specified in apostrophes if it contains blanks or special characters, and it may be specified in hexadecimal format. Any non-*NULL comparison to a field value in a record that is null will test false, regardless of the operator used. For variable-length fields, specify only the data portion of the value, not the 2-byte length portion. For character fields, the data is converted from the current job CCSID to the field CCSID prior to comparing the data to the field data. When a DBCS graphic field is specified, the input string (DBCS data) must be enclosed within shiftout and shiftin (SO-SI) characters. The SO-SI characters are removed from the input string and the remaining DBCS data is converted from the associated DBCS CCSID of the current job to the DBCS CCSID of the DBCS graphic field.

Top

Record format field mapping (FMTOPT)

Specifies, when a physical or logical from-file is copied to a physical to-file, what field-level record format processing (if any) is done. If the from-file and to-file are database files with different file types (one is *SRC and the other is *DATA), *CVTSRC must be specified.

Single values

***NONE**

No field mapping or dropping is done during the copy operation. This value is valid only if the from-file and to-file are not both database files, or if they are both database files and have the same record format. The record formats are the same only if every field exists in both the from-file and to-file formats, and if each has the same starting position and attributes in both records. Attributes include whether or not a field is null-capable, and the date/time format and separator (if the field is a date/time field). Null values are copied if *NONE is valid.

***NOCHK**

If the record formats of the database files are different, the copy operation continues despite the differences. Record data is copied directly (left to right) from one file to the other. *NOCHK is required when copying all record formats from a logical file with more than one format to a physical file that is of the same type (source or data) as the from-file. If this value is specified, null values are ignored and no conversion of date/time data occurs.

***CVTSRC**

This value is used to copy between database files, from a source file to a data file, or from a data

file to a source file. It is valid only when the from-file and to-file are different types (source and data). The file type conversion is done as follows:

- If the to-file is a data file, the from-file sequence number and date fields are dropped, and the source data part of each from-file record is copied to the to-file.
- If the to-file is a source file, sequence number and date fields are added, and the from-file record data is copied to the source data part of each to-file record. Null values are ignored and no conversion of date/time data is performed.
- When either the from-file or the to-file is not a database file, FMTOPT(*CVTSRC) is not required for copying from a source file to a data file or from a data file to a source file. Sequence number and date fields are appended or dropped automatically, depending on the file types. If the to-file is a source physical file, the SRCOPT and SRCSEQ parameters can be used to control the sequence numbers created for records copied to the to-file.

Other values (up to 2 repetitions)

***MAP** Fields with the same name in the from-file and to-file record formats are copied, and any fields in the to-file that do not exist in the from-file format are set to the default value specified on the DFT keyword for the data description specification (DDS) of the to-file or zero for numeric fields, blanks for character fields, current date/time for date/time fields, or null value for null-capable fields.

If *MAP is specified, *DROP can also be specified. Mapped fields may have different starting positions in the from-file and to-file record formats.

If *MAP is specified and a valid conversion is defined between the from-file field CCSID and the to-file field CCSID, the character data is converted to the to-file field CCSID. However, if either the from-file field CCSID or the to-file field CCSID is 65535, the character data is not converted.

*MAP allows for the conversion of date/time data and the copying of null values.

***DROP**

This value must be specified for field-level mapping if any of the field names in the from-file record format do not exist in the to-file format. If *DROP is specified, *MAP can also be specified. When *DROP is specified, all the field names that exist in both record formats must have the same attributes and relative positions in the from-file and to-file record formats, or *MAP must also be specified. Null values are copied.

***CVTFLOAT**

Specifies CPYF to process each floating point field identified by the external description of the output database physical file and convert it from System/370 hexadecimal format to the IEEE format used by AS/400.

***NULLFLAGS**

Specifies CPYF to take the byte following each field identified as being null-capable by the external description of the output file, and use it as a flag to indicate if the corresponding input field is null. If the byte is blank ('40'X) or contains '00'X, the data is considered to be not null. Any other value for the flag causes the corresponding input field data to be ignored and the output value set to null.

Note: If *CVTFLOAT or *NULLFLAGS is specified and the input file is externally described, the input file external description will not be used in doing the mapping of the copied data. If *CVTFLOAT or *NULLFLAGS is specified, any other value is ignored (unless both are specified). TOFILE must be an externally-described physical data file. The following parameter values cannot be specified when *CVTFLOAT or *NULLFLAGS is specified:

- RCDFMT(*ALL) when the from-file is a multiple format logical file
- A value other than default for CRTFILE (unless the TOFILE already exists causing *YES to be ignored), FROMKEY, TOKEY, INCCHAR, INCREL, SRCOPT and SRCSEQ.

***** ATTENTION *****

*CVTFLOAT and *NULLFLAGS must only be used for conversion of data to OS/400 format, and they must be used correctly to avoid possible data corruption.

****

Top

Source update options (SRCOPT)

Specifies, only for copying to a source physical file, whether new sequence numbers are inserted in the sequence number fields and whether the date fields are set to zero. Both *SEQNBR and *DATE can be specified.

Single values

***SAME**
New source sequence numbers are not inserted and the source date fields are not set to zero in the records copied to the to-file. *SAME is required if the to-file is not a source physical file.

Other values (up to 2 repetitions)

***SEQNBR**
New source sequence numbers are inserted in the records copied to the to-file. The new sequence numbers are controlled by the **Source sequence numbering (SRCSEQ)** parameter value.

***DATE**
The source date field is set to zero in the records copied to the to-file.

Top

Source sequence numbering (SRCSEQ)

Specifies, only when *SEQNBR is specified for the **Source update options (SRCOPT)** parameter, the sequence number that is given to the first record copied to the to-file, and what value is added to renumber all other records that are copied.

Element 1: Starting sequence number

1.00 The first source record copied to the to-file has a sequence number of 0001.00.

0.01-9999.99
Specify the sequence number of the first source record copied to the to-file.

Element 2: Increment number

1.00 The copied source records are renumbered in the to-file with whole number additions of 1.

0.01-9999.99
Specify the value added for renumbering all source records copied after the first record.

Top

Errors allowed (ERRLVL)

Specifies the maximum number of recoverable read or write errors for the file that are tolerated during the copy operation for a single database from-file member or tape from-file label identifier.

0 If any recoverable error occurs, the copy operation ends at the file member in which the error occurs.

***NOMAX**
No maximum number of errors is specified, and all recoverable errors are tolerated.

integer-number
Specify the maximum number of recoverable errors that is allowed in each from-file member or label that is copied.

Top

Compress out deleted records (COMPRESS)

Specifies whether the to-file contains a compressed form of the from-file. Compression occurs when deleted records in the from-file are not copied to the to-file. *NO is used to copy all records when the from-file and to-file are both physical files. If from-file is delete-capable and the to-file is not delete-capable, then *YES must be specified.

***YES** The records copied to the to-file are compressed. Deleted records that exist in the from-file are not copied to the to-file.

***NO** Both the deleted and nondeleted records are copied to the to-file.

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Examples

Example 1: Physical File to Physical File

```
CPYF   FROMFILE(PERSONNEL/PAYROLL)  TOFILE(TESTPAY/PAYROLL)
       MBROPT(*ADD)  CRTFILE(*YES)  ERRLVL(10)
```

This command copies all of the records in the physical file named PAYROLL in the PERSONNEL library to the file PAYROLL in the TESTPAY library. If the from-file contains more than one member, only the first member is copied. If TESTPAY/PAYROLL does not exist, it is created before the records are copied and a member with the same name as the from-file is added to TESTPAY/PAYROLL to receive the copied records.

Because MBROPT(*ADD) is specified, the copied records are added to any existing records in the to-file member. Because RCDFMT(*NONE) is assumed, the to-file TESTPAY/PAYROLL must have the same record format as the from-file. If the to-file (TESTPAY/PAYROLL) is created by the copy operation, it will have the same record format and access path as the from-file (PERSONNEL/PAYROLL). If more than ten recoverable errors occur during the copy operation, the operation ends.

If FROMMBR(*ALL) and TOMBR(*FROMMBR) had also been specified, all of the members in the from-file would be copied to corresponding members (having the same names) in the to-file. For each from-member that has no corresponding to-member, a member is added to the to-file and all the records in the from-member are copied to the new member. For each to-member that already exists, only new records are added to the member. No updates are made to existing records on any type of copy operation. If the to-file contains members for which there are no corresponding members in the from-file, the to-file contains more members than the from-file after the copy operation.

If more than ten recoverable errors occur within a member being copied, the copy operation ends at that point, and remaining members are not copied. ERRLVL(*NOMAX) can be specified to tolerate all recoverable errors, so the copy operation does not end no matter how many recoverable errors occur in a particular file member.

Example 2: Physical File to Physical File

```
CPYF   FROMFILE(PERSONNEL/EMP1)  TOFILE(PERSONNEL/VACLEFT)
       FROMMBR(VAC)  MBROPT(*REPLACE)
       FROMKEY(1 X'0008872F')  TOKEY(1 X'0810199F')
       INCREL((*IF VAC *GT 5.0))  FMTOPT(*MAP *DROP)
```

In this example, the to-file (VACLEFT) is an existing physical file, but its record format differs from that of the physical file named EMP1, which is being copied. Both files are in the PERSONNEL library. The from-file contains employee records and has a key (employee number). The records selected in the from-file are those with employee numbers ranging from 008872 through 810199. Only records for employees with more than five days of vacation (VAC) are mapped to the receiving file. Records are selected from member VAC, and they replace existing records in the first member of file VACLEFT.

Because the key for the file is a packed decimal number, the FROMKEY and TOKEY values must be specified as hexadecimal strings, and the leading zeros and hexadecimal sign are required in the value. An alternative way of specifying the same key value range follows:

```
       FROMKEY(*BLDKEY 8872)  TOKEY(*BLDKEY 810199)
```

When *BLDKEY is specified, the copy operation converts each number to the format required for the file key definition. Because only a single value is specified, only one key field is used. The *BLDKEY form of the FROMKEY and TOKEY parameters allows omission of leading zeros and a positive sign value when the key is numeric.

If the key for a file is a composite of more than one key field, the *BLDKEY form is used with a list of values for the FROMKEY and TOKEY parameters. For instance, if the key fields for a file are a sales region (10 characters) and the sales for the last month (7 packed decimal numbers with 2 decimal positions), a complete key is specified in either of the following ways:

```
       FROMKEY(*BLDKEY (GEORGIA  99.50))
       - or -
       FROMKEY(2 X'C7C5D6D9C7C9C14040400009950F')
```

When the *BLDKEY form is used, each character field is padded with blanks, and each numeric field is converted to the actual key format with the value shifted left or right to correctly align the decimal point.

Example 3: Physical Data File to Physical Source File

```
CPYF   FROMFILE(MYLIB/DATAFILE)  TOFILE(QIDU/QTXTSRC)
       FROMMBR(A1)  TOMBR(*FROMMBR)  MBROPT(*REPLACE)
       FMTOPT(*CVTSRC)
```

This command copies records from physical file DATAFILE in library MYLIB, which is defined as FILETYPE(*DATA), to physical file QTXTSRC in library QIDU, which is defined as FILETYPE(*SRC). Because the two database files are of different types, FMTOPT(*CVTSRC) must be specified. Records are copied to member A1, which has the same name as the from-file member. Values are assigned to the sequence number source field of the records copied to the source file, starting with 1.00 and incremented by 1.00. If SRCOPT(*SEQNBR) is specified, the SRCSEQ parameter is used to control the sequence numbers that are created. The date source field is always set to zeros.

Example 4: Logical File to Physical File

```
CPYF   FROMFILE(DEPTS/SALES)  TOFILE(DEPTS/YTDSALES)
       FROMMBR(TOTSALES)  TOMBR(MARCH)  RCDFMT(AA)
       NBRRCDS(5)  MBROPT(*REPLACE)
```

This command copies five records from member TOTSALES of logical file SALES (in library DEPTS) to member MARCH in the physical file YTDSALES (in library DEPTS). If member MARCH does not exist, it is created and added to the to-file automatically by the copy operation. Only records from the logical file SALES in library DEPTS that use record format AA are copied, and they are copied to YTDSALES, which has the same format. After the copy operation, the MARCH member contains only five nondeleted

records, because all records in that member are first cleared, then only the data in the first five records (in keyed sequence) in the TOTSALES member are copied to it.

Example 5: Device File to a Physical File

```
CPYF   FROMFILE(QDKT)  TOFILE(QGPL/QCLSRC)  FROMMBR(PAY*)
       TOMBR(*FROMMBR)  MBROPT(*REPLACE)
       SRCOPT(*SEQNBR)  SRCSEQ(1  .25)
```

This command copies records from the generic set of diskette labels with names that start with the characters PAY. They are copied to like-named members in source file QCLSRC in the QGPL library. Even though the to-file is a source file, a diskette file (QDKT) defined as FILETYPE(*DATA) is used as the from-file, because QDKT is more efficient than a device file defined as FILETYPE(*SRC). For each label copied, the sequence number of the first record is 1.00 and is incremented by .25 for each subsequent record. The source date field is automatically set to zeros.

Example 6: Physical File to the Printer

```
CPYF   FROMFILE(TEMPFILE)  TOFILE(*PRINT)  FROMMBR(EMP1)
       FROMKEY(1 448762)  NBRRCDS(20)  OUTFMT(*HEX)
```

This command copies records from member EMP1 in the file named TEMPFILE. The records are employee records. One key field, the employee number, is used to search the record keys. Twenty records, starting with employee number 448762, are copied to the IBM-supplied printer file QSYSPRT and listed in both character and hexadecimal format. The IBM-supplied printer file is indicated by coding TOFILE(*PRINT).

Example 7: Physical File to a Device File

```
CPYF   FROMFILE(PERSONNEL/PAYROLL)  TOFILE(DISK1)
       FROMMBR(VAC1)  INCCHAR(NAME 1 *CT SMITH)
       INCREL((*IF VAC *GT 10.5)(*AND HOLIDAYS *EQ 0))
```

This command copies all employee records of employees whose last name is SMITH and that have accumulated more than ten and a half vacation days, none of which is holidays, from the PAYROLL file in the PERSONNEL library to a diskette. The file member name copied is VAC1. The vacation (VAC) and holiday (HOLIDAYS) fields are defined as packed decimal, but a value is specified in character form on the INCREL parameter. The diskette device file used is DISK1, which contains the label of the file being copied to, and other diskette attributes such as location and volume ID.

Example 8: Physical File to Device Files

```
CPYF   FROMFILE(PERSONNEL/PAYROLL)  TOFILE(DISK1)
       FROMMBR(*ALL)  TOMBR(*FROMMBR)
```

This command copies all members of file PAYROLL in the PERSONNEL library to data files on diskette (device file DISK1). Each from-file member name must be a valid diskette label identifier; if not, use the RNMM (Rename Member) command to rename the members in the from-file before they are copied.

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Error messages

***ESCAPE Messages**

CPF2807
Cancel reply received for message &7.

CPF2816
File &1 in &2 not copied because of error.

CPF2817
Copy command ended because of error.

CPF2818
*FROMMBR value is not allowed on TOMBR parameter.

CPF2835
INCCHAR starting position and length too long.

CPF2857
Multiple member or label copy not allowed with override.

CPF2858
File attributes not valid for printed output.

CPF2859
Shared open data path not allowed.

CPF2864
Not authorized to file &1 in library &2.

CPF2875
Wrong file member or label opened.

CPF2883
Error creating file &1 in library &2.

CPF2888
Member &3 not added to file because of error.

CPF2904
Diskette labels not valid for multiple label copy.

CPF2906
Value not valid for INCREL field.

CPF2909
Error clearing member &3 in file &1 in &2.

CPF2949
Error closing member &3 in file &1 in &2.

CPF2952
Error opening file &1 in library &2.

CPF2968
Position error occurred copying file &1 in &2.

CPF2971
Error reading member &3 in file &1.

CPF2972
Error writing to member &3 in file &1.

CPF2975
Error while reading from keyed file.

CPF2976
Number of errors greater than ERRLVL value.

CPF3140
Initialize or copy of member &2 canceled.

CPF3143
Increments not allowed for member &2.

CPF3148
New records need too much space for member &2.

CPF3150
Data base copy failed for member &2.

CPF9212
Cannot load or unload DDM file &2 in &3.

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Copy From Directory (CPYFRMDIR)

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

Parameters
Examples
Error messages

The Copy From Directory (CPYFRMDIR) command is used to copy system distribution directory data from the local system to a tape or diskette unit. This directory data can then be copied to other remote systems by using the Copy To Directory (CPYTODIR) command on the remote systems. This function allows the remote system to begin a directory shadowing environment with the local system by shadowing changes made to the directory data from the local system.

Caution: Do not use this command as a backup utility to save and restore directory data for data recovery purposes. Follow the normal backup and recovery procedure guidelines described in the Backup and Recovery book, SC41-5304.

Restriction: The user must have security administrator (*SECADM) authority to use this command.

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Parameters

Keyword	Description	Choices	Notes
LABEL	File label	*Character value*	Required, Positional 1
DEV	Device	Values (up to 4 repetitions): *Name*	Required, Positional 2
SYSNAME	System name	Values (up to 50 repetitions): *Character value*	Optional
VOL	Volume identifier	Single values: *NONE Other values (up to 50 repetitions): *Character value*	Optional
SEQNBR	Sequence number	1-9999, ***END**	Optional
ENDOPT	End of tape option	***REWIND**, *LEAVE, *UNLOAD	Optional
EXPDATE	File expiration date	*Date*, ***PERM**	Optional

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File label (LABEL)

Specifies the name that identifies the device file label on the tape or diskette to be copied. A maximum of 17 characters can be specified for tape devices and 8 characters for diskette units.

This is a required parameter.

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Device (DEV)

Specifies the names of the tape or diskette units used for the copy operation. Each tape or diskette unit name must already be known on the system by a device description.

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diskette-device-name
Specify the name of the diskette unit to be used for the copy operation.

tape-device-name
Specify the names of one or more tape devices used for the copy operation. If more than one tape device is used, specify the names of the devices in the order in which they are used. When more than one tape volume is used, using more than one tape device permits one tape volume to be rewound or unloaded while another tape device processes the next tape volume.

This is a required parameter.

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System name (SYSNAME)

Specifies the names of the remote systems that copy the system distribution directory data from the tapes or diskettes created by this command. The names of the remote systems on this parameter are added to the list of system names that are collecting changes to directory data from the local system.

Note: You must include the names of all the remote systems that use the tapes or diskettes created by this command to ensure that all changes to directory data are sent to the remote systems during a normal shadowing session.

Top

Volume identifier (VOL)

Specifies one or more volume identifiers used by the file.

***NONE**
No volume identifiers are specified for the file. No volume identifiers are checked.

volume-identifier
Specify the identifiers of one or more volumes in the order in which they are placed in a device.

Top

Sequence number (SEQNBR)

Specifies the sequence number of the data file on the tape being processed. The four-position file sequence number is read from the first header label of the data file.

***END** The copy operation begins after the last sequence number on the tape volume.

file-sequence-number
Specify the sequence number of the file that is used. Valid values range from 0001 through 9999.

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.

***REWIND**
The tape is automatically rewound, but not unloaded, after the operation has ended.

***LEAVE**
The tape does not rewind or unload after the operation ends. It remains at the current position on the tape drive.

***UNLOAD**
The tape is automatically rewound and unloaded after the operation ends.

Top

File expiration date (EXPDATE)

Specifies the expiration date. The files cannot be overwritten until the expiration date. The expiration date must be later than or equal to the current date.

***PERM**
The data file is permanently protected. An expiration date of 999999 is assigned.

expiration-date
Specify the date when protection for the file ends.

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Examples

```
CPYFRMDIR   DEV(TAP01)  SYSNAME(CHICAGO NEWYORK)
```

This command copies all of the directory data from the local system to tape device TAP01. CHICAGO and NEWYORK are added to the list of systems that collect changes to the directory data from the local system.

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Error messages

***ESCAPE Messages**

CPF90A8
*SECADM special authority required to do requested operation.

CPF90FB
Directory data not copied because of errors.

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Copy From Import File (CPYFRMIMPF)

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

Parameters
Examples
Error messages

The Copy From Import File (CPYFRMIMPF) command copies all or part of an import file to the TOFILE. The term import file is used to describe a file created for purposes of copying data between heterogeneous databases. The import file (FROMSTMF or FROMFILE parameter) is called the from-file for this command.

An important aspect of this command is its ability to copy the data in parallel. Parallelism is activated for files with at least 50,000 records. Records are not copied in parallel when the FROMSTMF is specified. By using the Change Query Attributes (CHGQRYA) command, the number of tasks used to perform the copy is determined by the DEGREE parameter of the CHGQRYA command. For the best performance in implementing this command, the number of tasks should be set to the number of CPUs + 1.

For example, if the system has two CPUs, specify CHGQRYA DEGREE(*NBRTASKS 3)

To use multiple tasks, you must have the Symmetric Multiprocessing Product (SMP) feature installed on the system.

When copying from a tape file, any file in library QTEMP, a distributed file, or a logical file, only one task will be used. See the CHGQRYA command for more information.

Some of the specific functions that can be performed by the CPYFRMIMPF command include the following:

- Copying a from-file to an externally-described physical file. The to-file must exist on the system before the copy can occur.
- Limiting the range of records copied based on starting and ending relative record numbers.
- Adding records to an existing file member or replacing the contents of a receiving file member (MBROPT parameter).

Error Handling: The escape message CPF2817 is sent for many different error conditions that can occur during a copy operation. At least one diagnostic message that indicates the specific error condition always comes before the escape message. More information on handling errors is in the Files and file systems topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

Overrides: Overrides are processed for all files.

Status Message: During the running of the CPYFRMIMPF command, message CPI2801 is sent as a status message informing the interactive user that a copy operation is occurring. More information on preventing status messages from appearing is in the Files and file systems topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

Performance:

To increase the performance of the copy:

1. Delete any logical keyed files based on the to-file.
2. Disable all constraints and triggers of the to-file.
3. Ensure the from-file records will be copied correctly by attempting to copy a few of the records, by using the FROMRCD and number of records option, before copying all the records.

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4. Use the ERRLVL(*NOMAX) parameter after knowing the data can be copied correctly.

Notes For Delimited Data:

1. A delimiter can not be a blank(' ') character.
2. A blank(' ') can not be contained within a numeric field.
3. Fields in the from-file that are longer than the corresponding fields in the to-file will be truncated (on the right).
4. If the data of the from-file does not represent all the fields in the to-file, the fields of the to-file will be set to null. If this happens and the to-file fields do not allow a null value, an error will occur and the record will not be copied to the to-file.
5. A null field in the from-file can be specified by two adjacent field delimiters, two adjacent string delimiters or a field delimiter followed by a record delimiter.
6. From-file field of all blank characters to be stored in a fixed-length field in the to-file, will preserve blank characters even though removal blanks is specified.
7. From-file field of all blank characters to be stored in a variable-length field in the to-file, will be represented as only one significant blank character when removal blanks is specified.

Notes For Fixed Data: The information for each field of the fixed format file must be in the following order:

```
Field     Starting      Ending      Null
Name      Position      Position    Character Position
_____________________________________________________
Field1   1              10          11
Field2   12             15          16
*END
```

The information for this Field Definition File would be:

1. The Field Name is the name of the field in the to-file.
2. The Starting Position indicates the byte position in the from-file to start copying data for the field.
3. The Ending Position indicates the byte position in the from-file to end copying data for the field.
4. The Null Character Position is the byte position in the from-file to indicate if the field is null. A value of 'Y' means the field is null. A value of 'N' means the field is not null. If this value is 0, no null character is provided.
5. The *END is the indicator for the end of the Field Definition File.

   The Field Definition File for the above example would be:

   ```
   Field1   1              10          11
   Field2   12             15          16
   *END
   ```

6. An alternative for creating the Field Definition File is using the keyword *COL instead of the actual column names. *COL indicates the positions of the data in the stream file for all the columns in the target files listed in order.

   An example of the corresponding file above Field Definition File using *COL:

   ```
   *COL     1              10          11
   *COL     12             15          16
   *END
   ```

Notes For LOB data fields:

LOB data fields require the use of secondary stream files that contain the LOB data and a Field Definition File that describes the offsets of the fields in the data file. Each record that represents a LOB in the import file contains the name of a secondary stream file, instead of the data.

Note: In the following example, there are 3 secondary stream files (lob1.dat, lob2.dat, and lob3.dat) inside of the directory "/lobdata", which contain the actual LOB data to import.

Using the following FDF:

```
Field     Starting      Ending      Null
Name      Position      Position    Character Position
_____________________________________________________
Field1    1             10          42
Field2    12            40          44
*END
```

The import file would be 44 characters (based on the above FDF) in record length, containing the following data:

```
0        1         2         3         4      /Character
12345678901234567890123456789012345678901234  /Position
aaaaaaaaaa   /lobdata/lob1.dat           N N
bbbbbb       /lobdata/lob2.dat           N N
             /lobdata/lob3.dat           Y N
ccccccccccc                              N Y
```

Restrictions:

- The from-file and to-file cannot be the same file.
- The to-file must exist prior to the copy.
- The to-file will not have the same relative record numbers as the from-file.
- The from-file must be a source file, or a valid file with 1 field that is not a numeric data type.
- If the from-file is defined with the SHARE(*YES) option for the file, unpredictable results can occur. Therefore, if the file is defined with SHARE(*YES), the user should make sure the file is not opened by any process prior to the copy.

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Parameters

Keyword	Description	Choices	Notes
FROMSTMF	From stream file	*Path name*	Optional, Positional 2
FROMFILE	From file	*Element list*	Optional, Positional 3
	Element 1: File	*Qualified object name*	
	Qualifier 1: File	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
	Element 2: Member	*Name*, ***FIRST**, *ALL	
TOFILE	To data base file	*Element list*	Required, Positional 1
	Element 1: File	*Qualified object name*	
	Qualifier 1: File	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
	Element 2: Member	*Name*, ***FIRST**, *FROMMBR, *ALL	
MBROPT	Replace or add records	***ADD**, *REPLACE, *UPDADD	Optional
STMFLEN	Stream file record length	*Integer*, ***TOFILE**	Optional
FROMCCSID	From CCSID	1-65533, ***FILE**	Optional
TOCCSID	To CCSID	1-65533, ***FILE**	Optional
RCDDLM	Record delimiter	*Character value*, *ALL, *CRLF, *LF, *CR, *LFCR, ***EOR**	Optional
DTAFMT	Record format of import file	***DLM**, *FIXED	Optional

Keyword	Description	Choices	Notes
STRDLM	String delimiter	*Character value*, ***DBLQUOTE**, *NONE	Optional
STRESCCHR	String escape character	*Character value*, ***STRDLM**, *NONE	Optional
RMVBLANK	Remove blanks	*NONE, ***LEADING**, *TRAILING, *BOTH	Optional
FLDDLM	Field delimiter	*Character value*, **','**, *TAB	Optional
FLDDFNFILE	Field definition file	*Element list*	Optional
	Element 1: File	*Qualified object name*	
	Qualifier 1: File	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
	Element 2: Member	*Name*, ***FIRST**, *ALL	
DECPNT	Decimal point	***PERIOD**, *COMMA	Optional
DATFMT	Date format	***ISO**, *USA, *EUR, *JIS, *MDY, *DMY, *YMD, *JUL, *YYMD	Optional
DATSEP	Date separator	**'/'**, '-', '.', ',', *BLANK	Optional
TIMFMT	Time format	***ISO**, *USA, *EUR, *JIS, *HMS	Optional
TIMSEP	Time separator	**':'**, '.', *BLANK	Optional
FROMRCD	Copy from record number	*Element list*	Optional
	Element 1: Copy from record number	*Unsigned integer*, ***FIRST**	
	Element 2: Number of records to copy	*Unsigned integer*, ***END**	
ERRLVL	Errors allowed	*Unsigned integer*, ***NOMAX**	Optional
ERRRCDFILE	Error record file	Single values: ***NONE** Other values: *Element list*	Optional
	Element 1: File	*Qualified object name*	
	Qualifier 1: File	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
	Element 2: Member	*Name*, ***FIRST**, *ALL	
ERRRCDOPT	Replace or add records	***ADD**, *REPLACE	Optional
RPLNULLVAL	Replace null values	***NO**, *FLDDFT	Optional
IDCOL	Identity column	***GEN**, *FROMFLD	Optional

Top

From stream file (FROMSTMF)

Specifies the path name of the stream file from which data is to be copied. Either this parameter or the FROMFILE parameter is required.

path-name

Specify the path name of the input stream file.

Top

From file (FROMFILE)

Specifies the from-file and file member that contains the records to be copied. Either this parameter or the FROMSTMF parameter is required.

The from-file can be any of the following file types:

- source physical file
- DDM file
- distributed physical file
- program-described physical file
- single-format logical file
- physical file with one (non-numeric) field
- tape file.

Element 1: File

Qualifier 1: File

name Specify the name of the file that contains the records to be copied.

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: Member

***FIRST**
The first member (in order of creation date) of the from-file is used. Specifying *FIRST is not allowed if the from-file has no members, unless a member name was specified on an OVRDBF (Override with Database File) command for the from-file.

***ALL** All members of the specified from-file are to be copied. *ALL is not valid for a tape file.

name Specify the name of the file member to be used.

Top

To data base file (TOFILE)

Specifies the output database file and member to receive the copied records. The output file is also referred to as the to-file .

The to-file can be any of the following file types:

- source physical file
- DDM file

- distributed physical file
- program-described physical file
- externally-described physical file.

This is a required parameter.

Element 1: File

Qualifier 1: File

name Specify the name of the file to receive the copied records.

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: Member

***FIRST**
The first member (in order of creation date) of the output file is used. Specifying *FIRST is not allowed if the to-file has no members, unless a member name was specified on an OVRDBF (Override with Database File) command for the to-file.

***ALL** The data is copied to the correct to-member of the partitioned table. *ALL is only valid for partitioned tables.

***FROMMBR**
Corresponding from-file and to-file member names are used.

name Specify the name of the file member to receive the copied records. If a member with the specified name does not already exist in the file, the member will be created.

Top

Replace or add records (MBROPT)

Specifies whether the copy operation replaces, adds, or updates the records in a database file member if a member with the specified name already exists. If the member does not exist, it is created and added to the database file.

Note: If *ADD or *UPDADD is specified and the to-file contains no records, the copy operation completes normally. If *REPLACE is specified and the to-file contains no records, the copy operation ends abnormally.

***ADD** The copied records are added to the end of the existing member records.

***REPLACE**
The copied records replace the existing member records.

***UPDADD**
The system updates the duplicate key records and adds the new records to the end of the existing records. Additional information is available in the Files and file systems topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

Top

Stream file record length (STMFLEN)

The maximum record length of any record of the stream file when *DLM is specified for the **Record format of import file (DTAFMT)** parameter, or the actual record length of all the records of the stream file when *FIXED is specified for the DTAFMT parameter.

***TOFILE**
The record length of the to-file record is used.

record-length
Specify the length to be used for each record of the stream file.

Top

From CCSID (FROMCCSID)

Specifies the coded character set identifier (CCSID) of the from-file.

***FILE** The from-file CCSID is used. If the from-file is a tape file, the job's default CCSID is used.

1-65533
Specify the CCSID to be used when the CCSID of the from-file is 65535, or if the from-file is a tape file. If the from-file CCSID is not 65535, or the from-file is not a tape file, an error message will be sent.

Top

To CCSID (TOCCSID)

Specifies the coded character set identifier (CCSID) to use for the to-file fields.

***FILE** The data is converted to the to-file field CCSID. If the CCSID of the to-file field is 65535, the field is not converted and it is treated as binary data.

1-65533
Specify the CCSID to be used when the CCSID of the to-file field is 65535. If the CCSID of the to-file field is not 65535, this parameter is ignored.

Top

Record delimiter (RCDDLM)

Specifies the record delimiter to be used.

If the FROMFILE parameter is specified, valid values are *EOR or a character value. If the FROMSTMF parameter is specified, valid values are *CR, *CRLF, *LF, *LFCR or *ALL.

***EOR** End of record.

***ALL** First occurrence of any single or double character combination of carriage-return and line-feed.

***CRLF**
Carriage-return followed by line-feed.

***LF** Line-feed.

***CR** Carriage-return.

***LFCR**
Line-feed followed by carriage-return.

character-value
Specify the single character which indicates the end of a single record.

Top

Record format of import file (DTAFMT)

Specifies the format of the data in the from-file.

***DLM** The data contains delimiter characters. Refer to parameter descriptions for STRDLM, FLDDLM, and RCDDLM for information on string, field, and record delimiter characters.

***FIXED**
The data format is fixed. The data is in fixed columns in each record. The description of the format of the data is contained in the file member identified by the FLDDFNFILE parameter. Refer to the parameter description for RCDDLM for information on the record delimiter character.

Top

String delimiter (STRDLM)

Specifies the string delimiter for the data of the fields being copied from. This character indicates the start and end of character, date, time, and timestamp strings in the from-file. Depending on the utility used to create the from-file, some types of strings may appear in the from-file without string delimiter characters.

The specified delimiter character will be converted from the coded character set identifier (CCSID) of the job to the CCSID of the from-file.

***DBLQUOTE**
The double quote character is used as the string delimiter.

***NONE**
No delimiter is expected as the string delimiter. The blank character ( ) represents the *NONE value.

character-value
Specify the character value for the string delimiter.

Top

String escape character (STRESCCHR)

Specifies the character to be looked for within string fields in the from-file. Character fields in the from-file may contain characters that have a special meaning to CPYFRMIMPF. These characters include the string delimiter and the string escape character itself. As a result, CPYFRMIMPF could misinterpret the data and produce unexpected results.

The string escape character precedes such characters in the data and revokes their special meaning. CPYFRMIMPF can then determine if the character is data or a string delimiter. The escape characters are not imported into the to-file.

This parameter describes the method that the export utility used for character fields that contained the string escape character or string delimiter.

The specified string escape character will be converted from the coded character set identifier (CCSID) of the job to the CCSID of the from-file. If the from-file CCSID is 1200, 1208, or 13488 the string escape character is converted to the job CCSID, or the job's default CCSID when the job CCSID is 65535.

***STRDLM**
The string delimiter is used as the escape character. If a character data field contains two adjacent string delimiter characters, they are interpreted as a single data character.

***NONE**
No string escape character is present in the data. If any string delimiter characters are present in the data, they will be treated as string delimiters.

character-value
Specify the character to be used as the escape character.

Top

Remove blanks (RMVBLANK)

Specifies whether blanks are removed or retained.

***LEADING**
Leading blanks are removed.

***TRAILING**
Trailing blanks are removed.

***BOTH**
Leading and trailing blanks are removed.

***NONE**
All leading and trailing blanks are retained.

Top

Field delimiter (FLDDLM)

Specifies the field delimiter for the record being copied from. This value is used to determine where one field ends and the next field begins.

',' The comma character is the default name of the field delimiter.

TAB The horizontal tab character is used as field delimiter.

character-value
Specify the character value for the field delimiter.

Top

Field definition file (FLDDFNFILE)

Specifies the field definition file which defines the format of the data when *FIXED is specified for the **Record format of import file (DTAFMT)** parameter. If DTAFMT(*FIXED) is specified, this parameter is required.

The field definition file can be any of the following file types:

- source physical file
- DDM file
- distributed physical file
- program-described physical file
- externally-described physical file with one field.

Element 1: File

Qualifier 1: File

name Specify the name of the file that contains the fixed field 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.

Element 2: Member

***FIRST**
The first member (in order of creation date) in the field definition file is used.

name Specify the name of the field definition file member to use.

Top

Decimal point (DECPNT)

Specifies the decimal point character to be used when copying numeric data from the from-file.

***PERIOD**
A period (.) is used for the decimal point character.

***COMMA**
A comma (,) is used for the decimal point character.

Top

Date format (DATFMT)

Specifies the date format to be used when copying date fields from the from-file.

***ISO** The International Organization for Standardization (ISO) date format **yyyy-mm-dd** is used.

***USA** The United States date format **mm/dd/yyyy** is used.

***EUR** The European date format **dd.mm.yyyy** is used.

***JIS** The Japanese Industrial Standard date format **yyyy-mm-dd** is used.

***MDY** The date format **mm/dd/yy** is used.

***DMY** The date format **dd/mm/yy** is used.

***YMD** The date format **yy/mm/dd** is used.

***JUL** The Julian date format **yy/ddd** is used.

***YYMD**
The date format **yyyymmdd** is used.

Top

Date separator (DATSEP)

Specifies the date separator for the date format. The separator is ignored for DATFMT of *ISO, *USA, *EUR, and *JIS because these formats have a fixed date separator.

'/' A forward slash is used as the date separator character.

'-' A hyphen is used as the date separator character.

'.' A period is used as the date separator character.

',' A comma is used as the date separator character.

***BLANK**
A blank is used as the date separator character.

Top

Time format (TIMFMT)

Specifies the time format to be used when copying time fields from the from-file.

***ISO** The International Organization for Standardization (ISO) time format **hh.mm.ss** is used.

***USA** The United States time format **hh:mmxx** is used, where **xx** is AM or PM.

***EUR** The European time format **hh.mm.ss** is used.

***JIS** The Japanese Industrial Standard time format **hh:mm:ss** is used.

***HMS** The **hh:mm:ss** format is used.

Top

Time separator (TIMSEP)

Specifies the time separator for the time format. This parameter is ignored if *ISO, *USA, *EUR, or *JIS is specified for the **Time format (TIMFMT)** parameter because those time formats define the required time separator character.

':' A colon is used as the time separator character.

'.' A period is used as the time separator character.

***BLANK**
A blank is used as the time separator character.

Top

Copy from record number (FROMRCD)

Specifies which records are copied from the from-file.

Element 1: Copy from record number

***FIRST**
The copy operation begins with the first record in the from-file.

1-4294967288
Specify the record number of the first record to be copied from the from-file.

Element 2: Number of records to copy

***END** Records are copied until the end-of-file condition is indicated.

1-4294967288
Specify the number of records to be copied from the from-file. If an end-of-file condition is reached before this number of records has been copied, no error message is issued and the copy operation ends normally.

Top

Errors allowed (ERRLVL)

Specifies the maximum number of recoverable read or write errors for the to-file that are tolerated during the copy operation.

***NOMAX**
No maximum number of errors is specified, and all recoverable errors are tolerated. The copy operation continues regardless of the number of recoverable errors found.

number-of-errors
Specify the maximum number of recoverable errors allowed. If one more recoverable error occurs than the value specified here, the copy operation ends.

Top

Error record file (ERRRCDFILE)

Specifies the database file where the records that are in error should be written.

The error record file can be any of the following file types:

- source physical file
- DDM file
- distributed physical file
- program-described physical file
- externally-described physical file.

Single values

***NONE**
No error record file is provided.

Element 1: File

Qualifier 1: File

name Specify the name of the error record file.

Qualifier 2: Library

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

***CURLIB**
The current library for the thread is searched. If no library is specified as the current library for the thread, the QGPL library is searched.

name Specify the name of the library to be searched.

Element 2: Member

***FIRST**
The first member (in order of creation date) in the error file is used.

name Specify the error file member to be used to contain the from-file records which contained errors.

Top

Replace or add records (ERRRCDOPT)

Specifies how error records are added to the error record file.

***ADD** The system adds the new records to the end of the existing records.

***REPLACE**
The system deletes any existing records and adds the new records.

Top

Replace null values (RPLNULLVAL)

Specifies whether null field values will be replaced when copying import file records.

***NO** If a field in the to-file is null capable a null value will be used. Otherwise an error will be sent.

***FLDDFT**
If a null value is detected when parsing an import file record, the corresponding field in the database file record is assigned a default value based on the field type or DDS default value.

Top

Identity column (IDCOL)

Specifies, if the to-file is an SQL table which contains a column with the IDENTITY attribute or a column with the ROWID data type, whether the value for the column will be generated by the system or the default value is used.

***GEN** A system-generated value will be inserted into the Identity Column or ROWID column.

***FROMFLD**
If a value exists in the Identity Column or ROWID column of the fromfile field, this value will be inserted into the Identity Column of the to-file.

Top

Examples

Example 1: Copying Physical File Import File

```
CHGQRYA   DEGREE(*NBRTASKS 3)
  :
CPYFRMIMPF   FROMFILE(IMPFILE)  TOFILE(DB2FILE)
             FLDDLM(';') RCDDLM(X'07')
             DATFMT(*JIS) TIMFMT(*JIS)
```

The Change Query Attribute (CHGQRYA) is run prior to CPYFRMIMPF to allow the copy processing to be done by three tasks running in parallel.

All records of file IMPFILE will be copied to the externally-described physical file DB2FILE. Fields in the from-file are delimited by semi-colon (;) characters. Each record in the from file is delimited by a hexadecimal '07' character. Input date fields are are in **yyyy-mm-dd** format. Input time fields are in **hh:mm:ss** format.

Example 2: Copying Tape File Import File

```
OVRTAPF   FILE(QTAPE)  DEV(TAP02)  SEQNBR(3)
  :
CPYFRMIMPF   FROMFILE(QTAPE) TOFILE(DB2WHS)  ERRFILE(IMPERR)
```

The Override Tape File (OVRTAPF) parameter is run prior to CPYFRMIMPF to indicate that tape device TAP02 should be used for doing the copy. The from-file must be the third file on the tape mounted on TAP02.

All records of the from-file will be copied to the externally described physical file DB2WHS. Fields in the from-file are delimited by comma (,) characters. Input date fields are are in **yyyy-mm-dd** (ISO) format. Input time fields are in **hh.mm.ss** (ISO) format. From-file records that are found to contain errors and cannot be added to file DB2WHS are added to error file IMPERR.

Top

Error messages

***ESCAPE Messages**

CPF2817
Copy command ended because of error.

Top

Copy From PC Document (CPYFRMPCD)

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

Parameters
Examples
Error messages

The Copy From PC Document (CPYFRMPCD) command copies the data in a PC document to a system database file.

Note: Do not precede an entry with an asterisk unless that entry is a ″special value″ that is shown (on the display itself or in the help information) with an asterisk.

Error messages for CPYFRMPCD

***ESCAPE Messages**

IWS1603
PC document copied to file with &6 truncated records.

IWS1611
PC document &1 not copied.

Top

Parameters

Keyword	Description	Choices	Notes
FROMFLR	From folder	*Character value*	Required, Positional 1
TOFILE	To file	*Qualified object name*	Required, Positional 2
	Qualifier 1: To file	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
FROMDOC	From document	*Character value*	Required, Positional 3
TOMBR	To member	*Name*, ***FIRST**, *FROMDOC	Optional, Positional 4
MBROPT	Replace or add records	***REPLACE**, *ADD	Optional, Positional 5
TRNTBL	Translate table	Single values: ***DFT**, *NONE Other values: *Qualified object name*	Optional
	Qualifier 1: Translate table	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
TRNFMT	Format of PC data	***TEXT**, *NOTEXT	Optional
TRNIGC	DBCS code page	***DFT**, *JPN, *CHT, *BG5, *CHS, *KOR, *KSC, *SCGS, *NONE	Optional
IGCSOSI	Insert DBCS SO/SI	***YES**, *NO	Optional

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From folder (FROMFLR)

Specifies the name of a folder containing the PC document that is copied. This parameter can also specify the name of a folder path in the form:

- folder1/folder2/folder3/.../foldern

The path name can be up to 63 characters in length.

This is a required parameter.

Top

To file (TOFILE)

Specifies the name and library of the physical database file that you are copying the PC document to.

If this file is a source file and you choose to translate the PC document, a sequence number is added and a system date of zeroes is added as it is copied to the file.

This is a required parameter.

The possible library values are:

***LIBL** The library list is used to locate the database file.

***CURLIB**
The current library for the job is used to locate the database file. If no current library entry exists in the library list, QGPL is used.

library-name
Specify the library where the database file is located.

Top

From document (FROMDOC)

Specifies the name of the PC document that is copied. The name has the following format:

- filename.extension

The filename can be from 1 to 8 characters, and the extension can be from 1 to 3 characters. The extension is not required.

This is a required parameter.

Top

To member (TOMBR)

Specifies the name of the member to contain the copied PC document. If no member is specified, the first member of the file is the member that is copied to. If the member does not exist, it is created.

***FIRST**
The PC document is copied to the first member.

***FROMDOC**
The member being copied to has the same name as the PC document. (The PC document name must be a valid system member name.)

member-name
Specify the member name that the PC document is copied to.

Top

Replace or add records (MBROPT)

Specifies if the copied records are added to or replace the existing records in the physical file.

***REPLACE**
The copied records replace the existing records in the physical file member.

***ADD** The copied records are added to the existing records in the physical file member.

Top

Translate table (TRNTBL)

Specifies if translation is performed and, if so, the name of the translation table used to translate the data from ASCII to EBCDIC.

Note: For a user defined double-byte character set, this parameter also specifies if translation is performed and, if so, which translation table is used for single-byte translation.

***DFT** The default translation table is used.

translation-table-name
Specify the name and library of the translation table.

The possible library values are:

***LIBL** The library list is used to locate the table.

***CURLIB**
The current library for the job is used to locate the table. If no current library entry exists in the library list, QGPL is used.

library-name
Specify the library where the table is located.

***NONE**
No translation from ASCII to EBCDIC is performed. Data is copied byte for byte.

Top

Format of PC data (TRNFMT)

Specifies the format of the records in the PC document.

This parameter is not valid if *NONE is specified on the **Translate table** prompt (TRNTBL parameter).

***TEXT**
The PC document records in standard DOS ASCII variable length format are transformed to the fixed length format of the database file. The carriage return, line feed, and end of file characters

are removed. Imbedded tab characters are expanded to blanks, and the record is padded with EBCDIC blanks to fill out the fixed length format.

***NOTEXT**
The records in the PC document are considered fixed length records of the same length as the physical database file records they are copied to.

Top

DBCS code page (TRNIGC)

Specifies the double-byte character set used for translation. Unless overridden by the **Translate table** prompt (TRNTBL parameter), this parameter also specifies the single-byte translation table.

***DFT** The default country or region's double-byte character set.

***JPN** IBM Japanese.

***CHT** IBM Traditional Chinese.

***BG5** Taiwan Industry standard (BIG-5).

***CHS** IBM Simplified Chinese.

***KOR** IBM Korean (KS).

***KSC** Korean Industry standard.

***SCGS**
The People's Republic of China National standard (GB).

***NONE**
No double-byte translation is performed.

Top

Insert DBCS SO/SI (IGCSOSI)

Specifies if shift-out and shift-in characters are inserted during translation. This parameter is valid only for double-byte character set users. This parameter is not valid if *NONE is specified on the **Translate table** prompt (TRNTBL parameter).

***YES** Shift-out and shift-in characters are inserted during translation.

***NO** Shift-out and shift-in characters are not inserted during translation.

Top

Examples

None

Top

Error messages

***ESCAPE Messages**

IWS1603
PC document copied to file with &6 truncated records.

IWS1611

PC document &1 not copied.

Top

Copy From PCF File (CPYFRMPCFF)

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

Parameters
Examples
Error messages

The Copy From Portable Compiled Format File (CPYFRMPCFF) command copies all user-defined DBCS character fonts contained in a Portable Compiled Format (PCF) file to a double-byte character set (DBCS) font table. During the copy operation, a dot matrix conversion is automatically performed.

The following table lists the supported dot matrix conversions.

From DBCS font table	To PCF file
24-by-24	16-by-16
24-by-24	24-by-24
24-by-24	32-by-32
24-by-24	48-by-48
32-by-32	16-by-16
32-by-32	24-by-24
32-by-32	32-by-32
32-by-32	48-by-48

There are differences in the number of supported user-defined DBCS characters between a DBCS font table and PCF file.

The following table lists the maximum number of user-defined DBCS character fonts that can be copied for each type of DBCS font table.

DBCS font table	Maximum number	First DBCS code	Last DBCS code
Japanese	1880	6941	72EA
Korean	1880	D441	DDEA
Traditional Chinese	2660	D041	DDFE
Simplified Chinese	1880	7641	7FEA

Restrictions: You must have the following authority:

1. *USE authority to the CPYIGCTBL, CRTPF, CHKIN and CHKOUT commands.
2. *CHANGE authority to the DBCS font table.
3. *X authority to directories in the PCF file path name prefix.
4. *RW authority to the PCF file.

Top

Parameters

Keyword	Description	Choices	Notes
FROMPCFF	From PCF file	*Path name*	Required, Positional 1
TOIGCTBL	To DBCS font table	QIGC2424, QIGC2424K, QIGC2424C, QIGC2424S, QIGC3232, QIGC3232S	Required, Positional 2
RPLFNT	Replace font	***NO**, *YES	Optional

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From PCF file (FROMPCFF)

Specifies the path name of the PCF file from which user-defined DBCS character fonts are copied. The PCF file is a stream file object, and it must be a user-defined character set with UCS-2 encoding.

This is a required parameter.

Top

To DBCS font table (TOIGCTBL)

Specifies the name of the DBCS font table to which user-defined DBCS character fonts are copied.

This is a required parameter.

QIGC2424
The Japanese DBCS font table used for displaying and printing extension characters in a 24-by-24 dot matrix font.

QIGC2424C
The Traditional Chinese DBCS font table used for printing extension characters in a 24-by-24 dot matrix font.

QIGC2424K
The Korean DBCS font table used for printing extension characters in a 24-by-24 dot matrix font.

QIGC2424S
The Simplified Chinese DBCS font table used for printing extension characters in a 24-by-24 dot matrix font.

QIGC3232
The Japanese DBCS font table used for displaying and printing extension characters in a 32-by-32 dot matrix font.

QIGC3232S
The Simplified Chinese DBCS font table used for printing extension characters in a 32-by-32 dot matrix font.

QIGCrrccl
The name of the DBCS font table to be copied must always be in the format QIGCrrccl, where *rr* is the table row matrix size, *cc* is the table column matrix size, and the letter *l* is an optional language identifier.

Top

Replace font (RPLFNT)

Specifies whether user-defined DBCS character fonts in the specified DBCS font table are replaced with those from the specified PCF file.

***NO** The system does not replace user-defined DBCS character fonts in the DBCS font table with those from the specified PCF file.

***YES** The system replaces user-defined DBCS character fonts in the DBCS font table with those from the specified PCF file.

Top

Examples

Example 1: Copying Without Replacing Existing Fonts

```
CPYFRMPCFF
         '/QIBM/ProdData/NetworkStation/fonts/pcf/IBM_JPN17.pcf'
           TOIGCTBL(QIGC2424)  RPLFNT(*NO)
```

This command copies all user-defined DBCS character fonts contained in the Japanese PCF file named IBM_JPN17.pcf (24-by-24 dot matrix font) in directory /QIBM/ProdData/NetworkStation/fonts/pcf to the Japanese DBCS font table QIGC2424 (24-by-24 dot matrix font). Only user-defined DBCS character fonts that are not found in the DBCS font table are copied.

Example 2: Copying User-Defined DBCS Character Fonts From DBCS Font Table to PCF File Replacing Existing Fonts

```
CPYFRMPCFF '/QIBM/ProdData/NetworkStation/fonts/pcf/Chtpc17.pcf'
           TOIGCTBL(QIGC2424C)  RPLFNT(*YES)
```

This command copies all user-defined DBCS character fonts contained in the Traditional Chinese PCF file named Chtpc17.pcf (24-by-24 dot matrix font) in directory /QIBM/ProdData/NetworkStation/fonts/pcf to the Traditional Chinese DBCS font table QIGC2424C (24-by-24 dot matrix). User-defined DBCS character fonts in the DBCS font table are replaced with those found in the PCF file.

Top

Error messages

***ESCAPE Messages**

CPFB7A7
&1 command ended due to error.

Top

Copy From Query File (CPYFRMQRYF)

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

Parameters
Examples
Error messages

The Copy From Query File (CPYFRMQRYF) command copies either all or part of a file that is opened with the Open Query File (OPNQRYF) command to a physical program-described printer, diskette, a DDM file, or tape file, or *PRINT can be specified on the TOFILE parameter to print the records by using the IBM-supplied printer file, QSYSPRT.

Note: For more information on DDM files, see the Distributed Data Management information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

This command can:

- Add records to an existing physical file member or replace contents of a receiving physical file member by using the MBROPT parameter.
- Copy records from an open query file format that is different than the to-file record format and convert records when copying to a source physical file. When the formats are different, the copy operation can:
  - Map fields that have the same name in the open query file format and the to-file record format
  - Drop fields from the open query file format that do not exist in the to-file record format
  - Copy the records directly, disregarding the differences between the open query file format and the to-file record format
- Select a printout format when TOFILE(*PRINT) is specified. The records can be listed in character format, or in both character and hexadecimal format (OUTFMT parameter).
- If the to-file does not exist before the copy operation, create the file (CRTFILE parameter) so that it has the same format as the open query file. Only the name, type, length, and decimal positions of each field in the open query format are used.
- Copy a specified number or all of the records from an open query file depending if NBRRCDS(*END) was used or if a specific number was specified on the NBRRCDS parameter.

Additional information about CPYFRMQRYF is in the Files and file systems topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter and the Database information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

Restrictions:

1. The open query file used by the CPYFRMQRYF command must not use any DDM files (specified on the FILE parameter of the OPNQRYF command).
2. A member cannot be copied to itself. This restriction means that a member specified by the TOFILE and TOMBR parameters of the CPYFRMQRYF command cannot have the same name as any member specified on the FILE parameter of the OPNQRYF command, nor can the member have the same qualified name as any physical file members used by logical files that are on the FILE parameter of the OPNQRYF command.
3. When the CRTFILE(*YES) parameter is specified and the FROMOPNID parameter identifies a query file that has an associated trigger, the file created (TOFILE parameter) does not have the associated trigger. The Add Physical File Trigger (ADDPFTRG) command must be used to add a trigger to the file.
4. In multithreaded jobs, this command is not threadsafe if the OPNQRYF command is not run in a threadsafe manner, or if copying to multiple database members, device files (except SPOOL(*YES) print files), distributed files, or DDM files of type *SNA. This command fails for distributed files that

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use relational databases of type *SNA and DDM files of type *SNA. It is threadsafe ONLY when copying to single database file members (local or DDM of type *IP) or SPOOL(*YES) print files provided the OPNQRYF command is run in a threadsafe manner.

Top

Parameters

Keyword	Description	Choices	Notes
FROMOPNID	From open file identifier	*Name*	Required, Positional 1
TOFILE	To file	Single values: *PRINT Other values: *Qualified object name*	Required, Positional 2
	Qualifier 1: To file	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
TOMBR	To member or label	*Name*, ***FIRST**	Optional
MBROPT	Replace or add records	***NONE**, *ADD, *REPLACE	Optional
CRTFILE	Create file	***NO**, *YES	Optional
OUTFMT	Print format	***CHAR**, *HEX	Optional
NBRRCDS	Number of records to copy	*Unsigned integer*, ***END**	Optional
FMTOPT	Record format field mapping	Single values: ***NONE**, *NOCHK, *CVTSRC Other values (up to 2 repetitions): *MAP, *DROP	Optional
ERRLVL	Errors allowed	*Unsigned integer*, **0**, *NOMAX	Optional

Top

From open file identifier (FROMOPNID)

Specifies the name used on the OPNQRYF command for identifying the open identifier for the query file. You must specify an open identifier associated with an open query file that allows input, update, or all operations specified by the OPNID and OPTION parameters on the OPNQRYF command.

Top

To file (TOFILE)

Specifies the file that receives the copied records.

Note: A device file can be a diskette file, tape file, or a program-described printer file.

The possible values are:

***PRINT**
The data is copied to a system printer device file (QSYSPRT) and formatted according to the value specified for the **Print format (OUTFMT)** parameter.

The IBM-supplied printer file, QSYSPRT, may not be overridden to a different file name, and it must have the RPLUNPRT(*YES) and CTLCHAR(*NONE) attributes.

The possible library values are:

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

***CURLIB**
The current library for the job is used to locate the physical file or device file. If no library is specified as the current library, QGPL is used.

library-name
Specify the name of the library where the physical file or device file is located.

file-name
Specify the name and library of the physical file or device file that receives the copied records. If no library qualifier is specified, *LIBL is used to locate the file. However, if CRTFILE(*YES) is specified and the specified file cannot be found, the file name must be qualified with a library name. When the physical to-file is created, it is placed in the specified library.

Top

To member or label (TOMBR)

Specifies the name of the file member that receives the copied records.

If the to-file is a printer file, *FIRST must be specified for the **To member or label** prompt (TOMBR parameter).

The possible values are:

***FIRST**
The first member of the specified file is used.

member-name
Specify the name of the physical to-file member, or the label identifier of the diskette to-file, or tape to-file that receives the records. If a member with the specified name does not already exist in the physical to-file, the copy operation attempts to add a member with the specified name to the file.

Top

Replace or add records (MBROPT)

Specifies whether the new records replace or are added to the existing records.

Note: If the copy is to an existing physical file, this parameter must specify either *ADD or *REPLACE. If the to-file does not exist but CRTFILE(*YES) is specified, the copy operation assumes MBROPT(*ADD) for all records copied to the file after it is created, regardless of the value specified on this parameter. The copied records are always physically added to the end of a database file member in the same order that they are retrieved from the open query file.

The possible values are:

***NONE**
This parameter does not apply to this copy operation. When the to-file is an existing physical file, *NONE is not allowed; either *ADD or *REPLACE must be specified to indicate whether records should be added or replaced in each to-file member used.

***ADD** The copied records are added to the existing records in each to-file member that is used.

***REPLACE**
The system clears the existing member and adds the new records.

Top

Create file (CRTFILE)

Specifies whether a physical file is created to receive the data if the to-file does not exist. If the to-file already exists when this command is started, this parameter is ignored.

The possible values are:

***NO** The to-file must exist when this command is started. A physical file is not created to receive the data.

***YES** If the to-file does not exist, a physical file is created that has the name specified on the **To file** prompt (TOFILE parameter). If the open query file format contains a user defined type, datalink, or LOB field type, the physical file created will be an SQL table. In all other instances the to-file created will be a database physical file that is not an SQL table. In addition to the normal copy operation validity checks, the following special conditions must all be true for the copy operation to create a to-file:

- A library name must be specified on the **To file** prompt (TOFILE parameter). The default value *LIBL is not allowed.
- There cannot be an override to a different file or library name. The values specified on this command for the to-file must be used.
- The user running this command must be authorized to add the file to the TOFILE library and must have operational authority to the Create Physical File (CRTPF) command.

Top

Print format (OUTFMT)

Specifies whether records are printed in character format, or in both character and hexadecimal format. This parameter is used only when *PRINT is specified for the **To file (TOFILE)** parameter.

The possible values are:

***CHAR**
Records are printed in character format.

***HEX** Records are printed in both character and hexadecimal format.

Top

Number of records to copy (NBRRCDS)

Specifies the number of records copied to the to-file.

The possible values are:

***END** Records are copied until the end-of-file condition is indicated.

number-of-records
Specify a record number, ranging from 1 through 4294967288, that identifies the number of records copied to the to-file. Fewer records are copied if an end-of-file condition occurs before the specified number of records have been copied.

Top

Record format field mapping (FMTOPT)

Specifies, when the open query file is copied to a physical to-file, what field-level record format processing (if any) is done. If the to-file is a source physical file, *CVTSRC must be specified on this parameter. The CCSIDs for character and DBCS fields in the open query format are determined by the CCSID of the job in which the Open Query File (OPNQRYF) command is run. All CCSIDs other than 65535 are reset to the job CCSID of the OPNQRYF command, unless the OPNQRYF job CCSID is 65535, in which case the CCSIDs are unchanged. If the open query file format and to-file record formats are identical and the to-file is a data physical file, any FMTOPT value except *CVTSRC can be specified to perform the copy operation.

Note: Change the job CCSID to 65535 before running the OPNQRYF command if you plan to use the CPYFRMQRYF command.

The possible values are:

***NONE**
No field mapping or field dropping is done during the copy operation. This value is valid only if the open query file and to-file have the same record format, or if the to-file is not a database file. The record formats are the same only if every field exists in both the open query file and to-file formats, and has the same starting position and attributes in both formats. Attributes include CCSIDs, whether or not a field is null-capable, and the date/time format and separator (if the field is a date/time field). Null values are copied if *NONE is valid and both files are database files.

***NOCHK**
If the record formats of the open query file and the to-file are different, the copy operation continues despite the differences. Record data is copied directly (left to right) from one file to the other.

***CVTSRC**
This value is used to copy to a source file. It is valid only when the to-file is a source file. If the to-file is a source file, sequence number and date fields are added, and the open query file record data is copied to the source data part of each to-file record. Null values are ignored and no conversion of date/time data occurs.

***MAP** Fields with the same name in the open query file and to-file record formats are copied, and fields in the to-file that do not exist in the open query file format are set to the default value specified on the DFT keyword for the data description specification (DDS) of the to-file (or zero for numeric fields, blanks for character fields, current date/time for date/time fields, or the null value for null-capable fields). If *MAP is specified, *DROP can also be specified. Mapped fields may have different starting positions in the open query file and to-file record formats. *MAP allows for the conversion of date/time data and for the copying of null values.

***DROP**
This value must be specified for field-level mapping if any of the field names in the open query file record format do not exist in the to-file format. If *DROP is specified, *MAP can also be specified. When *DROP is specified, all the field names that exist in both record formats must have the same attributes and relative positions in the open query file and to-file record formats, or *MAP must also be specified.

Top

Errors allowed (ERRLVL)

Specifies the maximum number of recoverable read or write errors that are tolerated for the file during the copy operation. The recoverable error count is reset at the beginning of each CPYFRMQRYF operation. If the number of recoverable errors handled is larger than the number specified on the ERRLVL parameter, the copy operation ends and a message is sent.

The possible values are:

0 If a recoverable error occurs, the copy operation ends.

***NOMAX**
No maximum number of errors is specified. All recoverable errors are tolerated. The copy operation continues regardless of the number of recoverable errors found.

number-of-errors
Specify a value that specifies the maximum number of recoverable errors that is allowed for the copy operation. If one or more errors occur than the value specified here, the copy operation ends.

Top

Examples

Example 1: Building a File with a Subset of Records

```
OPNQRYF   FILE(CUSTOMER/ADDRESS)  QRYSLT('STATE *EQ "TEXAS"')
  :
CPYFRMQRYF   FROMOPNID(ADDRESS)  TOFILE(TEXAS/ADDRESS)
             CRTFILE(*YES)
```

These commands create a file from the CUSTOMER/ADDRESS file containing records that have a value of Texas in the STATE field.

Example 2: Printing Records Based on Selection

```
OPNQRYF   FILE(FILEA)  QRYSLT('CITY *EQ "CHICAGO"')
  :
CPYFRMQRYF   FROMOPNID(FILEA)  TOFILE(*PRINT)
```

These commands print all records from FILEA where the value of the CITY field is Chicago.

Example 3: Copying a Subset of Records to a Diskette

```
OPNQRYF   FILE(FILEB)  QRYSLT('FIELDB *EQ "10"')  OPNID(MYID)
  :
CPYFRMQRYF   FROMOPNID(MYID)  TOFILE(DISK1)
```

These commands copy to a diskette file all records from FILEB where the value of FIELDB is 10.

Example 4: Creating a Copy of the Output from a Dynamic Join

Assume a user wants to create a physical file with the format and data of FILEA and FILEB. Assume the files contain the following fields:

```
FILEA        FILEB      JOINAB
-----        -----      ------
Cust         Cust       Cust
Name         Amt        Name
addr                    Amt
```

```
OPNQRYF   FILE(FILEA FILEB)  FORMAT(JOINAB)
          JFLD((FILEA/CUST FILEB/CUST))
          MAPFLD((CUST 'FILEA/CUST'))  OPNID(QRYFILE)
  :
CPYFRMQRYF   FROMOPNID(QRYFILE)  TOFILE(MYLIB/FILEC)
             CRTFILE(*YES)
```

These commands join FILEA and FILEB and save a copy of the results in a new physical file MYLIB/FILEC. The format of the file will be like JOINAB. The file will contain the data from the join of FILEA and FILEB using the Cust field. File FILEC in library MYLIB can be processed like any other physical file with CL commands (for example, Display Physical File Member (DSPPFM)) and utilities (for example, Query/400).

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Error messages

***ESCAPE Messages**

CPF2816
File &1 in &2 not copied because of error.

CPF2817
Copy command ended because of error.

CPF2858
File attributes not valid for printed output.

CPF2859
Shared open data path not allowed.

CPF2864
Not authorized to file &1 in library &2.

CPF2875
Wrong file member or label opened.

CPF2883
Error creating file &1 in library &2.

CPF2888
Member &3 not added to file because of error.

CPF2909
Error clearing member &3 in file &1 in &2.

CPF2949
Error closing member &3 in file &1 in &2.

CPF2952
Error opening file &1 in library &2.

CPF2971
Error reading member &3 in file &1.

CPF2972
Error writing to member &3 in file &1.

CPF2975
Error while reading from keyed file.

CPF2976
Number of errors greater than ERRLVL value.

CPF3140
Initialize or copy of member &2 canceled.

CPF3143
Increments not allowed for member &2.

CPF3148
New records need too much space for member &2.

CPF3150
Data base copy failed for member &2.

CPF9212
Cannot load or unload DDM file &2 in &3.

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Copy From Stream File (CPYFRMSTMF)

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

Parameters
Examples
Error messages

The Copy From Stream File (CPYFRMSTMF) command copies the data in a stream file to either a database file member or a save file. Optional conversion of the data and reformatting is performed when copying a database file member. This command cannot be used to copy to or from a database file member on a remote system. Any overrides in effect for the database file member or the save file are not used by this command.

This command can operate on regular files and on the /dev/null character special file. A regular file is a file that supports the integrated file system input/output (I/O) operations open, read, and write.

For more information about integrated file system commands, see the Integrated file system information in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

Note: The sequence numbers in the resulting database file member may be out of order. If a function will be used that requires the sequence numbers to be ordered, use the Reorganize Physical File Member (RGZPFM) command on the member, with the SRCOPT(*SEQNBR) parameter specified.

Restrictions:

1. The database-member-path-name must be of the form **name.object-type**. For example, **/QSYS.LIB/LIBA.LIB/FILEA.FILE/MBRA.MBR** is the form required by the QSYS.LIB file system.
2. The save-file-path-name must be of the form **name.object-type**. For example, **/QSYS.LIB/LIBA.LIB/SAVEFILEA.FILE** is the form required by the QSYS.LIB file system.
3. The following authorities are required:
   - Execute (*X) authority to directories in the path name prefix of the database file, save file, stream file or conversion table.
   - Read (*R) authority to the stream file.
   - One of the following authorities to the database file:
     - *X and add (*ADD) to do MBROPT(*ADD)
     - *X, object management (*OBJMGT), *ADD, and delete (*DLT) to do MBROPT(*REPLACE)
   - If a new member is created in the database file, the following authorities are required:
     - *X, *OBJMGT, and *ADD to the database file.
     - *X and *ADD to the directory containing the database file.
   - Read, execute (*RX), *OBJMGT, and *ADD to the save file if the save file already exists.
   - *RX and *ADD to the save file's parent directory if the save file does not already exist.
   - If a conversion table was specified, object operational (*OBJOPR) to the conversion table.

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Parameters

Keyword	Description	Choices	Notes
FROMSTMF	From stream file	*Path name*	Required, Positional 1

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Keyword	Description	Choices	Notes
TOMBR	To file member or save file	*Path name*	Required, Positional 2
MBROPT	Member option	***NONE**, *ADD, *REPLACE	Optional
CVTDTA	Data conversion options	***AUTO**, *TBL, *NONE	Optional
STMFCODPAG	Stream file code page	1-32767, ***STMF**, *PCASCII	Optional
DBFCCSID	Database file CCSID	1-65533, ***FILE**	Optional
TBL	Conversion table	*Path name*	Optional
ENDLINFMT	End of line characters	***ALL**, *CRLF, *LF, *CR, *LFCR, *FIXED	Optional
TABEXPN	Tab character expansion	***YES**, *NO	Optional

Top

From stream file (FROMSTMF)

Specifies the path name of the stream file from which data is copied. This command can operate on files of type *STMF and on the /dev/null character special file.

For more information on specifying path names, refer to ″Object naming rules″ in the CL concepts and reference topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

Top

To file member or save file (TOMBR)

Specifies the path name of the database file member or save file to which data is copied. All directories in the path name must exist.

When copying to a save file, the save file will be created if it does not exist.

When copying to a database file member, the database file must exist. If the member does not exist, it is created. The file may be either a source physical file or a program-described physical file. Source physical files with multiple data fields are not supported.

If the database file is a source physical file, a sequence number and a date stamp of zeros is added to each record as it is copied to the database file member.

For more information on specifying path names, refer to ″Object naming rules″ in the CL concepts and reference topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

Top

Member option (MBROPT)

Specifies whether the copy operation replaces, adds, or fails to copy the records if the object specified on the **To file member or save file (TOMBR)** parameter already exists. If the object does not exist, it is created.

***NONE**
No records are copied and the operation will fail if the object exists.

***ADD** The copied records are added to the end of the existing records.

***REPLACE**
The copied records replace the existing records.

Top

Data conversion options (CVTDTA)

Specifies the process for converting the data from the stream file to the database file member.

This parameter is ignored when copying to a save file.

***AUTO**
The data is converted during the copy operation using the coded character set identifier (CCSID) of the stream file and the database file CCSID. Single-byte, double-byte and mixed character sets are supported. The stream file data code page must be specified on the **Stream file code page (STMFCODPAG)** parameter, and the database file CCSID must be specified on the **Database file CCSID (DBFCCSID)** parameter.

***TBL** The data is converted using a conversion table. Only single-byte character sets are supported. The conversion table must be specified on the **Conversion table (TBL)** parameter.

***NONE**
Only insertion of the sequence numbers and date stamp to source physical files and the optional removal of specified line-formatting characters from the stream file are performed. Stream file code page to database file CCSID conversion of other characters is not performed.

Top

Stream file code page (STMFCODPAG)

Specifies the method of obtaining the stream file code page.

This parameter is ignored when copying to a save file.

***STMF**
The code page associated with the stream file is used.

***PCASCII**
Use the code page associated with the file to be copied from to compute a code page in the Microsoft Windows encoding scheme (x4105) (Microsoft, Windows, Windows NT, and the Windows 95 logo are registered trademarks of Microsoft Corporation). This code page is used if data conversion is requested. This option allows data to be converted properly if the data was created using Microsoft Windows.

For example, if the code page associated with the stream file is 37, the stream file data is instead assumed to be in code page 1252 for data conversion.

1-32767
Specify the stream file code page.

Top

Database file CCSID (DBFCCSID)

Specifies the method of obtaining the database file CCSID.

This parameter is ignored when copying to a save file.

***FILE** The database file CCSID is used, unless it is 65535. If the database file CCSID is 65535, and the file is not a program-described file, the operation will fail. If the database file CCSID is 65535, and the file is a program-described file, the default job CCSID is used.

1-65533
Specify the database file coded character set identifier (CCSID). This option is valid only if the database file CCSID is 65535 or is the same as the CCSID specified. Otherwise, the operation will fail.

Top

Conversion table (TBL)

Specifies the path name of the conversion table to be used to convert data from the stream file to the database file member.

For more information on specifying path names, refer to ″Object naming rules″ in the CL concepts and reference topic in the iSeries Information Center at http://www.ibm.com/eserver/iseries/infocenter.

Note: This parameter is required and valid only if CVTDTA(*TBL) is specified. This parameter is ignored when copying to a save file.

Top

End of line characters (ENDLINFMT)

Specifies the end-of-line characters which are recognized in the stream file during copying of records.

This parameter is ignored when copying to a save file.

All records are transformed to a fixed-length format as they are copied to the database file. The fixed-length is equal to the length of the database file records to which they are copied. If one of the end-of-line character options is selected (ENDLINFMT(*FIXED) is not specified) the stream file is read up to first occurrence of that character. The end-of-line character is stripped from the record. The remainder of the record is padded with blanks. The data is converted to the destination data format (if specified) and copied to the database file member. If a record is too long to fit in the fixed-length format, it is truncated, then copied.

***ALL** Any single or double character combination of carriage-return and line-feed is appended to the end of each line.

***CRLF**
Carriage-return followed by line-feed is appended to the end of each line.

***LF** Line-feed is appended to the end of each line.

***CR** Carriage-return is appended to the end of each line.

***LFCR**
Line-feed followed by carriage-return is appended to the end of each line.

***FIXED**
Text lines in the stream file are considered fixed-length records of the same length as the database file records to which they are to be copied. Any encountered CR, LF, or EOF characters are not stripped from the stream file. Tab expansion is not allowed and the **Tab character expansion (TABEXPN)** parameter is not valid. If the last record in the stream file does not fill the database file record, that record is padded with blanks.

Only stream files and database files with compatible encoding schemes, which do not result in the expansion of data record lengths, are valid with this option. If an incompatible encoding scheme combination is detected, the operation will fail.

The following encoding scheme combinations are supported:

- Single-byte to single-byte
- Double-byte to double-byte
- Mixed ASCII to mixed ASCII
- Mixed EBCDIC to mixed EBCDIC

Top

Tab character expansion (TABEXPN)

Specifies whether embedded tab characters are expanded to blanks up to the next eight-character tab position.

This parameter is ignored when copying to a save file.

***YES** Tab characters are not copied to the database file member. Any encountered tab character is expanded with blanks up to the next tab position.

Note: If ENDLINFMT(*FIXED) is specified, *YES is not a valid value for this parameter.

***NO** Tab characters are copied to the database file member. No tab expansion occurs.

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Examples

Example 1: Copying Data from a Stream File to a Database File Using Automatic Conversion

```
CPYFRMSTMF   FROMSTMF('STMF.TXT')
             TOMBR('/QSYS.LIB/MYLIB.LIB/MYFILE.FILE/MYMBR.MBR')
```

This command copies the data contained in stream file STMF.TXT in the current working directory to database file member /QSYS.LIB/MYLIB.LIB/MYFILE.FILE/MYMBR.MBR. Automatic conversion of data takes place using the stream file data code page and the database file CCSID. Any single-byte or double-byte character combination of CR and LF will be recognized as the end of a line in the stream file, and any embedded tabs are expanded with blanks out to the next tab position since these are the default values. If member MYMBR.MBR does not exist in the file, it is created. If member MYMBR.MBR exists, no records are copied since MBROPT(*NONE) is the default value.

Example 2: Copying Data from a Stream File to a Database File Using a Conversion Table

```
CPYFRMSTMF   FROMSTMF('FINANCE.NEW')
             TOMBR('/QSYS.LIB/FINANCE.LIB/STAFF.FILE/MNGR.MBR')
             CVTDTA(*TBL)  STMFCODPAG(437)
             TBL('/QSYS.LIB/QUSRSYS.LIB/TBL1.TBL')
             ENDLINFMT(*CRLF)  TABEXPN(*NO)
```

This command copies the data in stream file FINANCE.NEW in the current working directory to the database file member /QSYS.LIB/FINANCE.LIB/STAFF.FILE/MNGR.MBR. The data in the stream file is converted using the user-specified conversion table TBL1.TBL contained in the directory /QSYS.LIB/QUSRSYS.LIB. The double character combination of CR and LF is recognized as the end of a stream file line. Any embedded tabs are not expanded with blanks. The line-formatting characters are recognized from code page 437 specified on the STMFCODPAG parameter.

Example 3: Copying Data from a Stream File to a Data-base File Without Data Conversion

```
CPYFRMSTMF   FROMSTMF('FINANCE.NEW')
             TOMBR('/QSYS.LIB/FINANCE.LIB/STAFF.FILE/MNGR.MBR')
             CVTDTA(*NONE)  ENDLINFMT(*FIXED)
```

This command copies the data in stream file 'FINANCE.NEW' in the current working directory to the database file member /QSYS.LIB/FINANCE.LIB/STAFF.FILE/MNGR.MBR without data conversion. The stream file data lines are considered to be fixed length records of the same length as the database file records. Because TABEXPN(*NO) is specified, any tab characters encountered are not expanded to blanks during copying. If the encoding scheme of the stream file and the database file differ, the copy ends with an error message.

Example 4: Copying Data from a Stream File to a Save File

```
CPYFRMSTMF   FROMSTMF('/MYDIR/SOFTWARE')
             TOMBR('/QSYS.LIB/PACKAGE.LIB/SOFTWARE.FILE')
```

This command copies the data contained in stream file /MYDIR/SOFTWARE to the save file /QSYS.LIB/PACKAGE.LIB/SOFTWARE.FILE. The stream file data is copied as fixed-length records with length of 528. No line-formatting characters are inserted, nor is any data conversion performed.

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Error messages

***ESCAPE Messages**

CPFA085
Home directory not found for user &1.

CPFA095
Stream file not copied.

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Copy From Tape (CPYFRMTAP)

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

Parameters
Examples
Error messages

The Copy From Tape (CPYFRMTAP) command copies records from a tape file to an output file or to the printer.

The from-file must be a tape file, but the to-file can be a physical file, diskette file, tape file, or program-described printer file. *PRINT can be specified for the **To file** prompt (TOFILE parameter) to produce a printed listing of the records in the file.

This command offers a subset of the parameters available on the Copy File (CPYF) command, along with more specific tape-oriented parameters.

If you need parameters that are not available on this command, you can either use overrides for the from-file or to-file, or use the Copy File (CPYF) command.

Only a single tape file (sequence number) can be copied with one call of this command.

The to-file must exist when the command is started. This command does not create the to-file, but it does add a member to an existing physical file if the member does not already exist in the to-file.

Restrictions:

1. A file's open data path (ODP) cannot be shared with any other program in the job (routing step) during the copy operation.

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Parameters

Keyword	Description	Choices	Notes
FROMFILE	Tape file	*Qualified object name*	Required, Positional 1
	Qualifier 1: Tape file	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
TOFILE	To file	Single values: *PRINT Other values: *Qualified object name*	Required, Positional 2
	Qualifier 1: To file	*Name*	
	Qualifier 2: Library	*Name*, ***LIBL**, *CURLIB	
FROMSEQNBR	Sequence number	1-16777215, ***TAPF**, *NEXT	Optional
FROMLABEL	Tape label	*Character value*, ***TAPF**, *NONE	Optional
TOMBR	Member	*Name*, ***FROMLABEL**, *FIRST	Optional
FROMDEV	Device	Single values: ***TAPF** Other values (up to 4 repetitions): *Name*	Optional
FROMREELS	Copy from reels	*Element list*	Optional
	Element 1: Label processing type	***TAPF**, *SL, *NL, *NS, *BLP, *LTM	
	Element 2: Number of reels	1-255, ***TAPF**	
FROMRCDLEN	Record length	*Integer*, ***TAPF**, *CALC	Optional

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Keyword	Description	Choices	Notes
FROMENDOPT	End of tape option	***TAPF**, *REWIND, *UNLOAD, *LEAVE	Optional
MBROPT	Replace or add records	***NONE**, *ADD, *REPLACE	Optional
OUTFMT	Print format	***CHAR**, *HEX	Optional
FROMVOL	Volume identifier	Single values: ***TAPF**, *NONE Other values (up to 50 repetitions): *Character value*	Optional
FROMBLKLEN	Block length	1-524288, ***TAPF**, *CALC	Optional
FROMRCDBLK	Record block type	***TAPF**, *F, *FB, *V, *VB, *D, *DB, *VS, *VBS, *U	Optional
NBRRCDS	Number of records to copy	*Unsigned integer*, ***END**	Optional

Top

Tape file (FROMFILE)

Specifies the name and library of the tape file that contains the records that are copied.

Top

To file (TOFILE)

Specifies the file that receives the copied records.

***PRINT**
The output is printed with the job's spooled output.

***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.

to-file-name
Specify the name of the physical file or device file that receives the copied records.

Top

Sequence number (FROMSEQNBR)

Specifies the sequence number of the tape file that is copied.

If the tapes for the from-file have standard labels, the file sequence number is read from the first header label of the data file. When bypass label processing has been specified for the from-file (that is, FROMREELS(*BLP) has been specified on this command or on the command used to describe the tape file) or when tapes with standard labels are not being used, the system uses the tape marks and the value specified on this parameter to locate the correct data file that is copied.

***TAPF** The sequence number specified in the tape file or override is used to indicate the file that is copied.

***NEXT**
The next file on the tape is processed. If the tape is currently positioned before the first file, the first file on the tape is processed.

sequence-number
Specify the sequence number of the file on the tape that is copied. For a labeled tape file, the label specified in the FROMLABEL parameter must be found at this sequence number. Valid sequence numbers range from 1 through 16777215.

Top

Tape label (FROMLABEL)

Specifies the data file identifier of a file that is copied from the tape. The file identifier specified must be found at the sequence number specified in the FROMSEQNBR parameter.

***TAPF** The file identifier in the tape file description or override is used to identify the tape file that is copied.

***NONE**
The file identifier is not specified. Any label identifier is accepted.

data-file-identifier
Specify the name of the file label that is copied from the tape from-file. A label can be up to 17 characters in length.

generic-data-file-identifier*
Specify the generic name of the file label that is copied from the tape from-file.

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Member (TOMBR)

Specifies the database file member name, or the diskette or tape file label identifier in the to-file that receives the copied data records. If *PRINT is specified for the **To file** prompt (TOFILE parameter), either *FIRST or *FROMLABEL must be specified on this parameter.

***FROMLABEL**
The file specified by the FROMLABEL and FROMSEQNBR parameters is copied into a corresponding member or label in the to-file.

The name of the from-file tape label identifier is used as the member or label identifier for a physical to-file, diskette to-file, or tape to-file. If the to-file is a diskette or tape file, the from-file label identifier is used without modification.

If the to-file is a database file, the last 10 characters that appear before all consecutive blanks for the from-file label are used for the to-file member name. If the last 10 characters that appear before all consecutive blanks are not valid, then the characters to the right of the last period (.) are used for the to-file member name.

If the from-file is a nonlabeled tape file, then a to-file member or label name is created that corresponds to the data file on the tape from-file in the form of CPYnnnn, where nnnn is the tape sequence number of the data-file. If the to-file is a tape or diskette device file, the label in the device file description or override is used.

***FIRST**
The first member in the physical to-file receives the copied records.

to-member-name
Specify the name of the physical to-file member, or diskette or tape to-file label identifier, that receives the copied records. If the tape label identifier is longer than 10 characters or contains special characters, it must be specified on a CRTTAPF, CHGTAPF, or OVRTAPF command before starting the CPYFRMTAP command.

Top

Device (FROMDEV)

Specifies the name of up to four tape devices, one virtual tape device, or one media library device from which the tape from file is copied.

***TAPF** The value specified in the tape file is used to indicate the devices used.

device-name
Specify the names of up to four tape devices, one virtual tape device, or one media library device used when copying records from the from-file. The order in which the device names are specified is the order in which tapes on the devices are successively read. Each device must already be known on the system by a device description.

Top

Copy from reels (FROMREELS)

Specifies the type of labeling used on the tape reels that contain the from-file. The number of reels value specified on this parameter is not a limiting value for tape with standard labels. For standard-label tape, the labels on the tape indicate an end-of-file condition that limits the number of volumes processed. The number of reels information is used only if there is no list of volume identifiers specified and if the from-file is either *NL, *NS or *BLP. When the number of reels value is used, the volume identifiers on the volumes that are placed in the device are ignored if the from-file resides on labeled tapes. In that case, the order in which the reels are placed in the device must be checked by the operator.

The possible values for type of labeling are:

***TAPF** The value specified in the tape file or override for the from-file is used for label-type values.

***SL** Each tape volume has standard labels.

***NL** Each tape volume has no labels. Tape marks are used to indicate the end of each data file on the tape.

***NS** Each tape volume has nonstandard labels. Only a single data file can exist on a nonstandard tape reel (volume).

***BLP** Standard label processing is bypassed when copying the from-file volumes.

***LTM** The volumes of the from-file have no labels but have a single leading tape mark before the first file on the tape.

The possible values for number of reels are:

***TAPF** The number-of-reels value that is used is the value specified in the tape file or override for the from-file.

number-of-reels
Specify the maximum number of reels used. If the next reel is not on the device when the end of a tape is reached, a message is sent to the operator requesting that the next tape be placed in the device.

Top

Record length (FROMRCDLEN)

Specifies (in bytes) the length of the records contained in the tape from-file. This parameter should be specified in this command or a tape file command for *NS, *NL, *BLP, or *LTM tapes, or for the tapes that do not have HDR2 labels. For *SL tapes, the record length is obtained from the label itself.

***TAPF** The record length defined in the tape file or override is used.

***CALC**
The system calculates the value to use.

record-length
Specify a value ranging from 1 through 32767 to be used as the tape from-file record length. The record length must be consistent with the block length and record block format parameter values.

Top

End of tape option (FROMENDOPT)

Specifies the positioning operation that is performed automatically on the last from-file tape volume when the tape device file is closed. For a multi-volume tape from-file, this parameter applies to the last reel (volume) only; all intermediate volumes are copied with *UNLOAD as the positioning attribute.

***TAPF** The tape is repositioned according to the value specified in the device file or override.

***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

Replace or add records (MBROPT)

Specifies whether the new records replace or are added to the existing records.

***NONE**
This parameter does not apply to this copy operation. When the to-file is an existing physical file, *NONE is not allowed.

***ADD** The system adds the new records to the end of the existing records.

***REPLACE**
The system clears the existing member and adds the new records.

Top

Print format (OUTFMT)

Specifies whether records are printed in character format, or in both character and hexadecimal format. This parameter is used only when *PRINT is specified for the **To file (TOFILE)** parameter.

***CHAR**
Records are printed in character format.

***HEX** Records are printed in both character and hexadecimal format.

Top

Volume identifier (FROMVOL)

Specifies one or more volume identifiers of the tapes used when copying records from the (tape) from-file. These volumes must be placed in the devices in the same order as the identifiers are specified (and in the same order as the device names are specified in the FROMDEV parameter).

You can enter multiple values for this parameter. If you are on an entry display and you need additional entry fields to enter these multiple values, type a plus sign (+) in the entry field opposite the phrase ″+ for more″, and press the Enter key.

***TAPF** The value specified in the tape file or override is used.

***NONE**
No tape volume identifiers are specified for this file. No volume checking is done beyond verifying that the correct label type volume is placed in the tape device.

volume-identifier
Specify up to 50 volume identifiers from which the tape file is copied. The identifiers of volumes must be entered in the same order in which they are placed in the devices.

Top

Block length (FROMBLKLEN)

Specifies the length (in bytes) of data blocks transferred from the tape from-file. This parameter should be specified for nonstandard or nonlabeled tapes, for tapes whose label processing has been bypassed, or for tapes that do not have HDR2 labels. For standard labeled tapes, the block length is obtained from the label itself, and this parameter is ignored.

***TAPF** The block length value from the tape file or override is used.

***CALC**
The system calculates the value to use.

block-length
Specify a value ranging from 18 through 524288 that specifies the block length of each block in the tape from-file. The block length must be consistent with record length and record block format values.

Top

Record block type (FROMRCDBLK)

Specifies the record block format and blocking attribute of records in the tape from-file.

***TAPF** The record block format value from the tape file or override is used.

***F** Fixed-length, deblocked records in either EBCDIC or ASCII format are used.

***FB** Fixed-length, blocked records in either EBCDIC or ASCII format are used.

***V** Variable-length, deblocked records in EBCDIC format are used.

***VB** Variable-length, blocked records in EBCDIC format are used.

***D** Variable-length, deblocked records in ASCII type D format are used.

***DB** Variable-length, blocked records in ASCII type D format are used.

***VS** Variable-length spanned records are used.

***VBS** Variable-length, spanned blocked records are used.

***U** Records in an undefined format are used.

Top

Number of records to copy (NBRRCDS)

Specifies the number of records copied to the to-file.

***END** Records are copied until the end-of-file condition is indicated.

number-of-records
Specify a record number, ranging from 1 through 4294967288, that identifies the number of records copied to the to-file. Fewer records are copied if an end-of-file condition occurs before the specified number of records have been copied.

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Examples

Example 1: Adding Copied Records to Existing Records

```
CPYFRMTAP   FROMFILE(QTAPE)  TOFILE(DEPT/YTDSALES)
            FROMSEQNBR(3)  FROMLABEL(DAILY)
            FROMDEV(QTAPE1)  MBROPT(*ADD)
```

This command copies records from tape by using the tape device file QTAPE. The data file at sequence number 3 labeled DAILY on device QTAPE1 is copied. The specific attributes of the data file, such as record length and record block format, is determined by the system from the label on the tape. The records are added to the existing records in the member DAILY, which is implied by the parameter default of (TOMBR(*FROMLABEL), in file YTDSALES, which is in library DEPT.

Example 2: Replacing Existing Records

```
CPYFRMTAP   FROMFILE(QTAPE)  TOFILE(MYLIB/KEN)  FROMSEQNBR(2)
            FROMDEV(QTAPE1)  FROMREELS(*NL 1)  FROMRCDLEN(100)
            FROMBLKLEN(1000)  FROMRCDBLK(*FB)  TOMBR(*FIRST)
            MBROPT(*REPLACE)
```

This command copies records from tape by using the tape device file QTAPE. Records in the data file at sequence number 2 of a nonlabeled tape file on tape device QTAPE1, with fixed-length records that are blocked 1000 bytes (or 10 records) to a block, are copied, and replace the existing records in the first member in file KEN, which is in library MYLIB.

Top

Error messages

***ESCAPE Messages**

CPF2816
File &1 in &2 not copied because of error.

CPF2817
Copy command ended because of error.

CPF2818
*FROMMBR value is not allowed on TOMBR parameter.

CPF2858
File attributes not valid for printed output.

CPF2859
Shared open data path not allowed.

CPF2875
Wrong file member or label opened.

CPF2888
Member &3 not added to file because of error.

CPF2909
Error clearing member &3 in file &1 in &2.

CPF2949
Error closing member &3 in file &1 in &2.

CPF2952
Error opening file &1 in library &2.

CPF2971
Error reading member &3 in file &1.

CPF2972
Error writing to member &3 in file &1.

CPF9212
Cannot load or unload DDM file &2 in &3.

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