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iSeries

CL Commands Volume 4





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Command Descriptions

CHGFTR (Change Filter) Command Description

CHGFTR Command syntax diagram

Purpose

The Change Filter (CHGFTR) command allows you to change the text description of a filter object.

Required Parameter

FILTER

Specifies the qualified name of the filter whose description is being changed.

The name of the filter can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

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

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

filter-name: Specify the name of the filter that is to be changed.

Optional Parameter

TEXT Specifies the text that briefly describes the filter. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

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

Example for CHGFTR

```
CHGFTR FILTER(MYLIB/MYFILTER) TEXT('New text here')
```

This command changes the description of the filter called MYFILTER in the library MYLIB.

Error messages for CHGFTR

***ESCAPE Messages**

CPF812D

&8 damage on filter &4.

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.

CPF9830

Cannot assign library &1.

CHGFNTRSC (Change Font Resource) Command Description

CHGFNTRSC Command syntax diagram

Purpose

The Change Font Resource (CHGFNTRSC) command allows you to mark font character sets and code pages as eligible to be captured. Fonts and code pages that are marked with FNTCAPTURE(*YES) are eligible to be captured after downloading on printers that support font capturing. This allows IPDS printers that support font capturing “capture” or cache a host downloaded font to dynamically which has been marked with font capture *YES. The captured font then appears to PSF/400 like a printer resident font and remains in the printer even after it has been powered off and then on again. Printing performance is improved by eliminating subsequent font downloads to the printer.

Caution must be used when marking security sensitive fonts as FNTCAPTURE(*YES). There exists a possibility that someone could access the captured font in the printer from another print job on the same system or another print job on a different system if the printer is LAN attached.

To use a host font referenced in a print job, you must have authority to the font object and its library on the OS/400 regardless if it is marked as eligible to be captured or not.

In addition to marking the font character set and code page, you must also activate font capturing on the printer you are using. To activate font capturing on an IPDS printer, you must specify FNTCAPTURE(*YES) on the CRTPSFCFG or CHGPSFCFG command.

Notes:

- Font character set and code page pairs that are marked as eligible to be captured will be downloaded to printers that do not support font capturing.
- Marking coded fonts is not supported. No change will take effect when attempting to mark a coded font.

Required Parameters

FNTRSC

Specifies the name and library of the font character set or code page to be marked. Marking coded fonts is not supported. No change will take effect when attempting to mark a coded font.

The possible library values are:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** Only the libraries in the current library for the job are searched. If no library is specified as the current library for the job, QGPL is used.

library-name: Specify a library name. Only the library named in this parameter is searched.

font-resource-name: Specify the name of the font character set or code page being marked.

Optional Parameter

FNTCAPTURE

Specifies whether the font character set or code page is to be marked as eligible for font capturing.

***SAME:** The value for this parameter remains unchanged.

***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.

: The font character set or code page is not eligible for font capturing. It will also be downloaded to the printer.

Example for CHGFNTRSC

```
CHGFNTRSC QFNT61/X0G16F FNTCAPTURE(*YES)
```

This example font character sets X0G16F in library QFNT61 as eligible for font capturing.

Error messages for CHGFNTRSC

*ESCAPE Messages

None.

CHGFNTTBLE (Change Font Table Entry) Command Description

CHGFNTTBLE Command syntax diagram

Purpose

The Change Font Table Entry (CHGFNTTBLE) command changes an entry in the specified font table. This command changes an existing entry in the user font or code page tables used by PSF/400 that controls:

1. Host resident to printer resident font character set mapping
2. Printer resident to host resident font character set mapping
3. Host resident to printer resident code page mapping
4. Printer resident to host resident code page mapping
5. Printer resident to printer resident font substitution mapping


The entry must have first been added to the user tables with the ADDFNTTBLE (Add Font Table Entry) command.

In performing the printer to host and host to printer font mapping (first four tables above), the user tables are searched first for a match. If no match is found, then the System font or code page tables are searched.

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 Appendix D in the Printer Device Programming  book for more information on font mapping tables.

Restriction: The PSF/400 feature is required to use this command.

Required Parameter

FNTTBL

Specifies the name of the font table to be changed.

***PHFCS:** The printer resident to host resident font character set table is to be changed.

This table would be used when your application (like Office Vision/400, DDS, etc) references printer resident fonts and the printer (3827, 3825, 3820, 3900 Model 1, etc) does not support resident fonts. PSF/400 must map the references from printer resident fonts to host resident fonts and download them.

***PHCP:** The printer resident to host resident code page mapping table is to be changed.

This table is like the QPHFCS table, in that it is used when the application references printer resident code pages and the printer being used does not support printer resident code pages. The printer resident code page must be mapped to a host resident code page and downloaded to the printer by PSF/400.

***HPFCS:** The host resident to printer resident font character set table is to be changed.

This table is used when your application references host resident fonts (font character sets and code pages) and the printer (4224, 4234, 4230, 64XX, etc) does not support downloading of host resident fonts. PSF/400 must map the references from host resident fonts to printer resident fonts.

***HPCP:** The host resident to printer resident code page mapping table is to be changed.

This table is like the QHPFCS table, in that it is used when the application references host resident code pages and the printer being used does not support host resident code pages. The host resident code page must be mapped to a printer resident code page and downloaded to the printer by PSF/400.

The name of the font table must be specified when a printer resident to printer resident font substitution table is to be changed. This printer resident font substitution table should be used when all three of the following conditions exist.

- You are printing to a PSF/400 attached printer
- Your application specifies a printer resident font which is not supported by the printer you are using.
- You want to specify a different substitute printer resident font than the one selected by the system.

To use a printer resident to printer resident font substitution table with a particular PSF/400 printer, you need to specify the name of the font table on the FNTTBL parameter of the Create PSF Configuration (CRTPSFCFG) or Change PSF Configuration (CHGPSFCFG) command.

The name of the printer resident to printer resident font substitution table can be qualified by one of the following library values:

***CURLIB:** The current library is used to store the font table. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library where you want to store the font table.

font-table-name: Specify the name of the printer resident to printer resident font substitution table to be created.

Optional Parameters

PHFCS

Specifies the printer resident to host resident font character set mapping. The printer resident font, along with its specified attributes will be mapped to a host resident font character set.

Element 1: From Font Identifier


from-font-identifier: Specify the printer resident font identifier to be mapped to a host resident font.

Element 2: Font Width

***PTSIZE:** The width for this font identifier will be calculated from the point size specified. When ***PTSIZE** is specified for width, the point size parameter can not be ***NONE** or ***WIDTH**. When mapping a typographic raster font (2304 - 3839, 4096 - 53247, 61440 - 65534), a point size value should be specified. The width value can be ***PTSIZE** or a value can be given.

***NONE:** No width is specified for this font identifier. ***NONE** should be specified when mapping to an outline font.

font-width: Specify a width for the font identifier. When mapping a fixed pitch raster font (1 - 750, 3840 - 4095), a width should be specified. The point size value can be ***WIDTH** or a value can be

given. See Appendix D in the Printer Device Programming  book for more information on font widths for printer resident fonts.

Element 3: Font Attributes

***NONE:** No special font attributes are specified on this font.

***BOLD:** The printer resident font is a bold font.

***ITALIC:** The printer resident font is an italic font.

***BOLDITC:** The printer resident font is a bold italic font.

***DBLWIDE:** The printer resident font is a double wide font.

***ITCDBLWIDE:** The printer resident font is an italic double wide font.

Element 4: Graphic Character Set

Specifies the graphic character set for the font identifier. This parameter allows you to map a font identifier to more than one host font character set (based upon graphic character set). The value specified is mapped to a superset graphic character set. See the Printer Device Programming



book for information on superset graphic character sets.

***SYSVAL:** The graphic character set specified in the system value QCHRID is used. A change to this system value will only take effect for the font mapping tables when the print writer is started. If QCHRID is changed and a printer is currently active, you must end the print writer and start it again.

graphic-character-set: Specify the graphic character set for the font identifier. The graphic character set is the first part of the graphic character identifier which consists of the graphic character set and code page. For example, for the graphic character identifier 697 500, 697 is the graphic character set and 500 is the code page. In this example, specify 697 for the graphic character set.

Element 5: Point Size

***WIDTH:** The font point size is computed from the font width value specified. When mapping a fixed pitch raster font (1 - 750, 3840 - 4095), it is recommended that a width value should be specified and the point size value should be *WIDTH.

***NONE:** No point size is specified for this font identifier. *NONE should be specified when mapping to an outline font.

point-size: Specify a point size ranging from 0.1 through 999.9. When mapping a typographic raster font (2304 - 3839, 4096 - 53247, 61440 - 65534), a point size value should be specified.

Element 6: To Font Character Set

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

to-font-character-set: Specify the font character set.

Element 7: Font Type

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

***RASTER:** The host resident font is a raster font.

***OUTLINE:** The host resident font is an outline font.

HPFCS

Specifies the host resident to printer resident font character set mapping. The host resident font, along with its specified attributes will be mapped to a printer resident font.

Element 1: From Host Font Character Set

from-font-character-set: Specify the font character set.


Element 2: Font Type

***RASTER:** The host resident font is a raster font.

***OUTLINE:** The host resident font is an outline font.

Element 3: To Font Identifier

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

***NONE:** To disable the mapping of a host resident to printer resident font, specify *NONE for the font identifier. See the Printer Device Programming  book for more information on disabling the mapping of host resident to printer resident fonts.

to-font-identifier: Specify the printer resident font identifier to be mapped from a host resident font.

Element 4: Font Width


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

***PTSIZE:** The width for this font identifier will be calculated from the point size specified. When *PTSIZE is specified for width, the point size parameter can not be *NONE or *WIDTH. When

mapping a typographic raster font (2304 - 3839, 4096 - 53247, 61440 - 65534), a point size value should be specified. The width value can be *PTSIZE or a value can be given.

***NONE:** No width is specified for this font identifier. *NONE should be specified when mapping to an outline font.

font-width: Specify a width for the font identifier. When mapping a fixed pitch raster font (1 - 750, 3840 - 4095), a width should be specified. The point size value can be *WIDTH or a value can be

given. See Appendix D in the Printer Device Programming  book for more information on font widths for printer resident fonts.

Element 5: Font Attributes

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

***NONE:** No special font attributes are specified on this font.

***BOLD:** The printer resident font is a bold font.

***ITALIC:** The printer resident font is an italic font.

***BOLDITC:** The printer resident font is a bold italic font.

***DBLWIDE:** The printer resident font is a double wide font.

***ITCDBLWIDE:** The printer resident font is an italic double wide font.

Element 6: Graphic Character Set

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

Specifies the graphic character set for the font identifier. This parameter allows you to map a font identifier to more than one host font character set (based upon graphic character set). The value specified is mapped to a superset graphic character set. See the Printer Device Programming



book for information on superset graphic character sets.

***SYSVAL:** The graphic character set specified in the system value QCHRID is used. A change to this system value will only take effect for the font mapping tables when the print writer is started. If QCHRID is changed and a printer is currently active, you must end the print writer and start it again.

graphic-character-set: Specify the graphic character set for the font identifier. The graphic character set is the first part of the graphic character identifier which consists of the graphic character set and code page. For example, for the graphic character identifier 697 500, 697 is the graphic character set and 500 is the code page. In this example, specify 697 for the graphic character set.

Element 7: Point Size

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

***WIDTH:** The font point size is computed from the font width value specified. When mapping a fixed pitch raster font (1 - 750, 3840 - 4095), it is recommended that a width value should be specified and the point size value should be *WIDTH.

***NONE:** No point size is specified for this font identifier. *NONE should be specified when mapping to an outline font.


point-size: Specify a point size ranging from 0.1 through 999.9. When mapping a typographic raster font (2304 - 3839, 4096 - 53247, 61440 - 65534), a point size value should be specified.

PPFCS

Specifies the printer resident font substitution mapping. When a printer resident font is not supported by a printer, you can specify the substitute printer resident font to be used instead of the substitute printer resident font selected by the system.

Element 1: From Font Identifier

from-font-identifier: Specify the printer resident font identifier for which the substitution printer

resident font is to be changed. See Appendix D in the Printer Device Programming  book for more information on printer resident fonts that are supported, and which ones are scalable (require point size) and which ones are not scalable (specify point size *NONE).

Element 2: From Point Size

***NONE**: No font point size is specified. This should be specified for all non-scalable fonts.

***ALL**: Specifies that all point sizes for a scalable font will be mapped. If the font is not scalable, then this will be treated the same as *NONE.

from-point-size: Specify a point size ranging from 0.1 through 999.9.

Element 3: To Font Identifier

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

to-font-identifier: Specify the substitute printer resident font. printer resident font.

Element 4: To Point Size

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

***NONE**: No font point size is specified. This should be specified for all non-scalable fonts.

***ALL**: Specifies that all point sizes for a scalable font will be mapped. If the font is not scalable, then this will be treated the same as *NONE.

to-point-size: Specify a point size ranging from 0.1 through 999.9.

PHCP Specifies the printer resident to host resident code page mapping. The printer resident host code page will be mapped to a host resident code page.

Element 1: From Graphic Character Set

***SYSVAL**: The graphic character set specified in the system value QCHRID is used. A change to this system value will only take effect for the font mapping tables when the print writer is started. If QCHRID is changed and a printer is currently active, you must end the print writer and start it again.

from-graphic-character-set: Specify the graphic character set for the printer resident code page. The graphic character set is the first part of the graphic character identifier which consists of the graphic character set and code page. For example, for the graphic character identifier 697 500, 697 is the graphic character set and 500 is the code page. In this example, specify 697 for the graphic character set.

Element 2: From Code Page

***SYSVAL**: The code page specified in the system value QCHRID is used. A change to this system value will only take effect for the font mapping tables when the print writer is started. If QCHRID is changed and a printer is currently active, you must end the print writer and start it again.

from-code-page: Specify the printer resident code page value. For example, for the graphic character identifier 697 500, 697 is the graphic character set and 500 is the code page. In this example, specify 500 for the code page.

Element 3: To Host Code Page

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

to-host-code-page: Specify the host resident code page value

HPCP Maps a host resident code page to a printer resident code page. The host resident code page will be mapped to a printer resident code page.

Element 1: From Host Code Page

from-code-page: Specify the name of the host resident code page

Element 2: To Graphic Character Set

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

***SYSVAL:** The graphic character set specified in the system value QCHRID is used. A change to this system value will only take effect for the font mapping tables when the print writer is started. If QCHRID is changed and a printer is currently active, you must end the print writer and start it again.

to-graphic-character-set: Specify the graphic character set for the printer resident code page. The graphic character set is the first part of the graphic character identifier which consists of the graphic character set and code page. For example, for the graphic character identifier 697 500, 697 is the graphic character set and 500 is the code page. In this example, specify 697 for the graphic character set.

Element 3: To Code Page

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

***SYSVAL:** The code page specified in the system value QCHRID is used. A change to this system value will only take effect for the font mapping tables when the print writer is started. If QCHRID is changed and a printer is currently active, you must end the print writer and start it again.

to-code-page: Specify the printer resident code page value

Examples for CHGFNTTBLE

Example 1: Changing Font Entry

```
CHGFNTTBLE FNTTBL(*PHFCS)
  PHFCS((254 84 *NONE 2039 7.0) (C0D0GT18 *RASTER))
```

This command changes an entry in the QPHFCS table (printer resident to host resident font character set table). The entry must have been already added to the table using the ADDFNTTBLE (Add Font Table Entry) command. In this example, font identifier 254, width of 84, and point size 7.0 is to be changed in the user font table (QPHFCS). The entry has no special attributes (*NONE) and graphic character set 2039 is used.

In performing the font mapping, the attributes of the resident font specified in the print application are compared to those in the font table QPHFCS. If a match is found, then the specified host resident font (C0D0GT18) is down loaded to the printer. If no match is found, then the System printer resident to host resident font character set table is searched.

Note that the print application may specify the normal graphic character set (for example, 697 in 697 500 specified in QCHRID system value). The 697 is mapped to 2039 and will result in a match for this entry.

Example 2: Changing Font Symbol Entry

```
CHGFNTTBLE FNTTBL(*PHFCS)
  PHFCS((254 84 *NONE 1275 7.0) (C0SYMBOL *RASTER))
```

This command changes an entry in the QPHFCS table (printer resident to host resident font character set table) for use when using the special symbols code page (code page 259). As specified in Example 1, the entry must have already been added using the ADDFNTTBLE (Add Font Table Entry) command. As in the previous example, font identifier 254, width of 84, and point size 7.0 is to be changed in the user font table (QPHFCS). The width of 84 and point size of 7.0 is gotten from the system table. The entry has no special attributes (*NONE) and graphic character set 1275 is used.

We now have two entries in the printer resident to host resident font character set table. Both entries have the same font identifier, width, and point size. The first entry will be used when the standard code page and graphic set is used by the application (697 500 in this example). The second entry will be used when a print application specifies special symbols (340 259).

Example 3: Change Code Page Entry

```
CHGFNTTBL FNTTBL(*PHCP)
  PHCP>(*SYSVAL 38) (T1V00038)
```

This command changes an entry in the QPHCP table (printer resident to host resident code page table). In the above example, the mapping for code page 38 is changed.

In performing the font mapping, the attributes of the resident code page specified in the print application are compared to those in the code page table (QPHCP). If a match is found, then the specified host resident code page (T1V00038) is down loaded to the printer. If no match is found, then the System printer resident to host resident code page table is searched.

Error messages for CHGFNTTBL

*ESCAPE Messages

CPF2182

Not authorized to library &1.

CPF2283

Authorization list &1 does not exist.

CPF88D2

Font table &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.

CHGFCNARA (Change Functional Area) Command Description

Note: To use this command, you must have the 5722-PT1 (Performance Tools for iSeries) licensed program installed.

CHGFCNARA Command syntax diagram

Purpose

The Change Functional Area (CHGFCNARA) command allows you to change functional areas on your system. Functional areas are used by Performance Tools for reports and graphics. A functional area is a predefined list of job names or user names that are to be included in a report or graph.

Required Parameter

FCNARA

Specifies the name of the functional area to be created or changed. Enclose the name in apostrophes if it contains any spaces between characters.

Optional Parameters

LIB Specifies the library where the functional area is located.

QPFRDATA: The IBM-supplied performance data library, QPFRDATA, is where the functional area is located.

library-name: Specify the name of the library where the functional area is located.

TEXT Specifies text that briefly describes the functional area. More information on this parameter is in Commonly used parameters.

***SAME:** The text does not change.

***BLANK:** No text is specified.

'description': Specify no more than 30 characters of text, enclosed in apostrophes.

JOB Specifies a list of jobs to include in a functional area. A job identifier is either the special value *SAME, *NONE, or a qualified name with up to two elements, for example:

*SAME

*NONE

job-name

user-name/job-name

*N may be used in place of an element that follows the values being specified. For example, USER1/*N specifies the user name USER1, regardless of the job name. Without specifying *N, USER1 would have been interpreted as the job name, not the user name.

***SAME:** The jobs do not change.

***NONE:** The functional area is cleared of all jobs.

job-name: Specify the name of the jobs to include in the functional area. This can be either a specific or generic name.

user-name: Specify the name of the user of the jobs to include in the functional area. It can be either a specific or generic name.

Examples for CHGFCNARA

Example 1: Changing functional area to three entries

```
CHGFCNARA FCNARA(PERSONNEL)
JOB(DAN/*N MARCY/*N RANDY/QPG*)
```

This command changes the functional area PERSONNEL to three entries:

- The user DAN.
- The user MARCY.
- Any job beginning with QPG submitted by RANDY.

The functional area is changed in the QPFRDATA library.

Example 2: Changing functional area to four entries

```
CHGFCNARA FCNARA('Performance Tools') LIB(RPFT)
JOB(PRT* TERESA/*N KAREN/*N JIM/QPFRXXX)
```

This command changes the functional area 'Performance Tools' to four entries:

- Any job beginning with PRT.
- The user TERESA.

- The user KAREN.
- Any QPFRXXX job submitted by JIM.

The functional area is created in library RPFT.

Error messages for CHGFCNARA

*ESCAPE Messages

CPF0011

Error detected by prompt override program.

PFR9064

Cannot change functional area &2.

CHGGPHFMT (Change Graph Format) Command Description

Note: To use this command, you must have the 5722-PT1 (Performance Tools for iSeries) licensed program installed.

CHGGPHFMT Command syntax diagram

Purpose

The Change Graph Format (CHGGPHFMT) command changes a graph format used to display performance and historical graphs.

Required Parameter

GPHFMT

Specifies the graph format to be changed.

The possible library values are:

- **QPFRDATA:** The graph format is located in the IBM-supplied performance data library, QPFRDATA.
- *library-name:* Specify the name of the library where the graph format is located.

format-name: Specify the name of the graph format to be changed.

Optional Parameters

TEXT Specifies the user-defined text that briefly describes the graph format or graph package.

***SAME:** The text does not change.

***BLANK:** The text description for the graph format or graph package is left blank.

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

TITLE Specifies the title for the graph.

***SAME:** The title does not change.

***BLANK:** The title is left blank.

***MBRTEXT:** The text of the database member used in creating the graph with this format is used as the title.

'graph-title': Specify a graph title of no more than 50 characters. Enclose the user-defined title in apostrophes.

SUBTITLE

Specifies the subtitle for the graph.

***SAME:** The subtitle does not change.

***BLANK:** The subtitle for the graph is left blank.

***MBRTEXT:** The text of the database member used in creating the graph with this format is used as the subtitle.

'graph-subtitle': Specify a graph subtitle of no more than 50 characters. Enclose the user-defined subtitle in apostrophes.

GPHTYPE

Specifies the type of graph that is created with this format.

***SAME:** The type of graph to produce does not change.

***SURFACE:** The graph is a surface graph.

***LINE:** The graph is a line graph.

***CBAR:** The graph is a composite bar graph.

***FBAR:** The graph is a floating bar graph.

***SCATTER:** The graph is a scatter diagram.

DATATYPE

Specifies the type of data to include in the graph.

***SAME:** The data type does not change.

***ALL:** The graph presents information for all jobs.

***FCNARA:** The value puts jobs into each of the functional areas that are to be graphed. Functional areas must be unique over the data that is graphed. For example, if a job exists in more than one of the functional areas selected for the graph, an error message is issued that indicates that the job exists in more than one functional area. In addition, you cannot use functional areas to graph historical data.

***JOBTYPE:** This value includes individual job types, such as interactive, and conglomerate types, such as *ALLINTER (all interactive), *ALLBATCH (all batch), and *ALLSYSTEM (all system). All interactive refers to a job with a job type of I and includes interactive, iSeries Access, System/36, MRT, and display station pass-through jobs.

***PRIORITY:** This value puts jobs into priority ranges. For example, the range 10-20 includes all jobs that have priorities between 10 and 20, inclusive.

***IOP:** This value allows you to graph maximum and average utilization lines for the particular type of input/output processor.

If you specify DATATYPE(*IOP), one of the following combinations must be specified:

- YAXIS(*CMNIOP) and XAXIS(*TIME)
- YAXIS(*DSKIOP) and XAXIS(*TIME)
- YAXIS(*LWSIOP) and XAXIS(*TIME)
- YAXIS(*MFCIOP) and XAXIS(*TIME)
- YAXIS(*MFDIOP) and XAXIS(*TIME)

***DISK:** This value allows you to graph maximum and average utilization lines for the disk arms. It also allows maximum and average lines for the percentage of disk occupied.

If you specify DATATYPE(*DISK), then one of the following combinations must be specified:

- YAXIS(*DSKARM) and XAXIS(*TIME)
- YAXIS(*PCTDSKOCC) and XAXIS(*TIME)

***CMNLINE:** This value allows you to graph individual communications line use or the maximum use of all communications lines.

This value is valid only if YAXIS(*CMNLINE) and XAXIS(*TIME) are specified.

AREAFILL

Specifies whether areas on the graph are filled in.

***SAME:** The area-fill value does not change.

***NO:** The areas on the graph are not filled in.

***YES:** The areas on the graph are filled in.

REFLINE

Specifies where to place a reference line on the graph. The reference line is placed on the Y-axis. The line is parallel to the X-axis.

***SAME:** The reference line value does not change.

***NONE:** No reference line is placed on the graph.

reference-line-number: Specify the number on the Y-axis on which the reference line is placed.

XAXIS Specifies the list of characteristics that are used for changing the X-axis on the graph.

Element 1: X-axis Variable

***SAME:** The X-axis variable does not change.

***TIME:** Time is mapped along the X-axis.

***CPU:** Use of the CPU is mapped along the X-axis.

***TNS:** The number of transactions per hour is mapped along the X-axis.

***NBRTNS:** The total number of transactions is mapped along the X-axis.

***RSP:** Response time is mapped along the X-axis.

***SYNCIO:** Synchronous disk I/O per second is mapped along the X-axis.

***NBRSYNC:** The total number of synchronous disk I/O operations is mapped along the X-axis.

***ASYNCIO:** Asynchronous disk I/O per second is mapped along the X-axis.

***NBRASYNC:** The total number of asynchronous disk I/O operations is mapped along the X-axis.

***TOTDSKIO:** Total disk I/O per second is mapped along the X-axis.

***NBRDSKIO:** The total number of disk I/O operations is mapped along the X-axis.

Element 2: X-axis Title

***SAME:** The X-axis title does not change.

***DFT:** The default title is used. This is the value specified for the X-axis variable.

***BLANK:** The title for the X-axis is left blank.

'x-axis-title': Specify a title of no more than 30 characters for the X-axis. Enclose the title in apostrophes.

Element 3: Starting and Ending Range for X-axis

***SAME:** The X-axis range values do not change.

***AUTO:** The X-axis range is automatically calculated. This value must be specified if *TIME is specified for the X-axis variable.

starting-number: Specify the starting number for the range on the X-axis. If you specify a starting number, you must also specify an ending number.

ending-number: Specify the ending number for the range on the X-axis. If you specify an ending number, you must also specify a starting number.

YAXIS Specifies the list of characteristics that are used for changing the Y-axis on the graph.

Element 1: Y-axis Variable

***SAME:** The Y-axis variable does not change.

***CPU:** Use of the CPU is mapped along the Y-axis.

***TNS:** The number of transactions per hour is mapped along the Y-axis.

***NBRTNS:** The total number of transactions is mapped along the Y-axis.

***RSP:** Response time is mapped along the Y-axis.

***SYNCIO:** Synchronous disk I/O per second is mapped along the Y-axis.

***NBRSYNC:** The total number of synchronous disk I/O operations is mapped along the Y-axis.

***ASYNCIO:** Asynchronous disk I/O per second is mapped along the Y-axis.

***NBRASYNC:** The total number of asynchronous disk I/O operations is mapped along the Y-axis.

***TOTDSKIO:** Total disk I/O per second is mapped along the Y-axis.

***NBRDSKIO:** The total number of disk I/O operations is mapped along the X-axis.

***CMNIOP:** Use of the communications input/output processor (IOP) is mapped along the Y-axis. If YAXIS(*CMNIOP) is specified, XAXIS(*TIME) must be specified.

***DSKIOP:** Use of the disk IOP is mapped along the Y-axis. If YAXIS(*DSKIOP) is specified, XAXIS(*TIME) must be specified.

***LWSIOP:** Use of the local work station IOP is mapped along the Y-axis. If YAXIS(*LWSIOP) is specified, XAXIS(*TIME) must be specified.

***MFCIOP:** Use of the multifunction IOP for communications is mapped along the Y-axis. If YAXIS(*MFCIOP) is specified, XAXIS(*TIME) must be specified.

***MFDIOP:** Use of the multifunction IOP for disks is mapped along the Y-axis. If YAXIS(*MFDIOP) is specified, XAXIS(*TIME) must be specified.

***DSKARM:** Use of the disk arm is mapped along the Y-axis. IF YAXIS(*DSKARM) is specified, XAXIS(*TIME) must be specified.

***PCTDSKOCC:** The percentage of information occupying the disk is mapped along the Y-axis. If YAXIS(*PCTDSKOCC) is specified, XAXIS(*TIME) must be specified.

***CMNLINE:** Use of communications lines is mapped along the Y-axis. If YAXIS(*CMNLINE) is specified, XAXIS(*TIME) must also be specified.

***LGLDBIO:** The total number of logical database I/O operations is mapped along the Y-axis.

Element 2: Y-axis Title

***SAME:** The Y-axis title does not change.

***DFT:** The default title is used. This is the value specified for the Y-axis variable.

***BLANK:** The title for the Y-axis is left blank.

'y-axis-title': Specify a title of no more than 30 characters for the Y-axis. Enclose the title in apostrophes.

Element 3: Starting and Ending Range for Y-axis

***SAME:** The Y-axis range values do not change.

***AUTO:** The Y-axis range is automatically calculated.

starting-number: Specify the starting number for the range on the Y-axis. If you specify a starting number, you must also specify an ending number.

ending-number: Specify the ending number for the range on the Y-axis. If you specify an ending number, you must also specify a starting number.

FCNARA

Specifies the list of characteristics to be used for each functional area on the graph. The FCNARA parameter is valid only when DATATYPE(*FCNARA) is specified. When DATATYPE(*FCNARA) is specified, at least 1 but not more than 16 functional area entries must be specified.

***SAME:** The characteristics of the functional areas do not change.

Element 1: Name of Functional Area

***OTHER:** All jobs that do not belong in one of the functional areas specified on the FCNARA parameter are grouped together.

functional-area-name: Specify the name of the functional area.

Element 2: Functional Area Legend Description

***DFT:** The default legend description is used. This is the value or name specified for the functional area name.

***BLANK:** The legend description for the functional area is left blank.

'legend-description': Specify the legend description for the functional area. Enclose the description in apostrophes.

Element 3: Graphic Display Line Type

There are eight types of lines from which the user can choose:

- 1. Dotted
- 2. Short-dashed
- 3. Dash-dot
- 4. Double-dot
- 5. Long-dashed
- 6. Dash-dot-dot
- 7. Solid
- 8. Invisible

7: The solid line is used for the lines representing the functional area on graphic terminals.

line-type-number: Specify the number of the line type to use for lines representing the functional area on graphic terminals.

Element 4: Non-Graphic Work Station Symbol

*: The asterisk symbol is used for graphic representation of the functional area on non-graphic terminals.

character: Specify a character to use for graphic representation of the functional area on non-graphic terminals.

JOBTYPE

Specifies the list of characteristics to be used for changing job type information on the graph. The JOBTYPE parameter is valid only when DATATYPE(*JOBTYPE) is specified. When DATATYPE(*JOBTYPE) is specified, at least 1, but not more than 16 job type entries must be specified.

***SAME**: The characteristics of the job types do not change.

Element 1: Job Type

***ALL**: All job types are grouped together.

***ALLINTER**: All interactive job types include:

- DDM jobs
- Pass-through jobs
- iSeries Access server jobs, except those that process batch activities only.
- Interactive jobs
- System/36 environment jobs
- Multiple requester terminal jobs

***ALLBATCH**: All batch job types include:

- Batch jobs
- iSeries Access server jobs, those that process batch activities only.
- Evoke jobs
- Writer jobs
- Reader jobs
- Prestart jobs
- Autostart jobs
- Print driver jobs

***ALLSYSTEM**: All system jobs include:

- System jobs
- Subsystem monitor jobs

***ASJ**: Autostart jobs.

***BCH**: Batch jobs.

***CA4**: iSeries Access server jobs.

***DDM**: Distributed Data Management (DDM) jobs.

***EVK**: Jobs that are started by a procedure start request.

***INT**: Interactive jobs.

***MRT**: Multiple requester terminal jobs.

***PCS**: iSeries Access server jobs.

***PDJ**: Print Driver jobs.

***PJ**: Prestart jobs.

***PTH**: Pass-through jobs.

***RDR**: Reader jobs.

***S36**: System/36 environment jobs.

***SBS**: Subsystem monitor jobs.

***SYS**: System jobs.

***WTR**: Writer jobs.

***OTHER**: All job types that have not been specified on the JOBTYPED parameter are grouped together.

Element 2: Job Type Legend Description

***DFT**: The default legend description is used. This is the value specified for the job type.

***BLANK**: The legend description for the job type is left blank.

'legend-description': Specify the legend description for the job type. Enclose the description in apostrophes.

Element 3: Graphic Display Line Type

There are eight types of lines from which the user can choose:

- 1. Dotted
- 2. Short-dashed
- 3. Dash-dot
- 4. Double-dot
- 5. Long-dashed
- 6. Dash-dot-dot
- 7. Solid
- 8. Invisible

7: The solid line is used for lines representing the job type on graphic terminals.

line-type-number: Specify the number of the line type to use for lines representing the job type on graphic terminals.

Element 4: Non-Graphic Work Station Symbol

*: The asterisk symbol is used for graphic representation of the job type on non-graphic terminals.

character: Specify a character to use for graphic representation of the job type on non-graphic terminals.

PRIORITY

Specifies the characteristics to be used for changing job priority information on the graph. The PRIORITY parameter is valid only when DATATYPE(*PRIORITY) is specified. When DATATYPE(*PRIORITY) is specified, at least 1 but not more than 16 job priority entries must be specified.

***SAME:** The characteristics for the job priorities do not change.

Element 1: Job Priority Boundaries

***ALL:** All job priorities are grouped together.

***OTHER:** All job priorities that do not fall within the job priority boundaries specified on the PRIORITY parameter are grouped together.

lower-priority-boundary: Specify the lower job priority boundary. The user can specify a value ranging from 0 through 99.

upper-priority-boundary: Specify the upper job priority boundary. The user can specify a value ranging from 0 through 99. The upper boundary value must be greater than or equal to the lower boundary value.

Element 2: Job Priority Legend Description

***DFT:** The value specified for the boundaries is used as the legend description.

***BLANK:** The legend description for the job priority is left blank.

'legend-description': Specify the legend description for the job priority. Enclose the description in apostrophes.

Element 3: Graphic Display Line Type

There are eight types of lines from which the user can choose:

- 1. Dotted
- 2. Short-dashed
- 3. Dash-dot
- 4. Double-dot
- 5. Long-dashed
- 6. Dash-dot-dot
- 7. Solid
- 8. Invisible

7: The solid line is used for lines representing the job priority on graphic terminals.

line-type-number: Specify the number of the line type to use for lines representing the job priority on graphic terminals.

Element 4: Non-graphic Work Station Symbol

***:** The asterisk symbol is used for graphic representation of the job priority on non-graphic terminals.

character: Specify a character to use for graphic representation of the job priority on non-graphic terminals.

IOP

Specifies the characteristics to be used for changing input/output processor (IOP) information on the graph. The IOP parameter is valid only when DATATYPE(*IOP) is specified. When DATATYPE(*IOP) is specified, at least 1 but not more than 2 IOP data entries must be specified.

***SAME:** The characteristics of the IOP information do not change.

Element 1: Amount of Utilization for IOP Type

***AVG:** The average utilization of the IOP type is presented on the graph.

***MAX:** The maximum utilization of the IOP type is presented on the graph.

Element 2: IOP Type Legend Description

***DFT:** The default legend description is used. This is the value specified for the amount of utilization for the IOP.

***BLANK:** The legend description for the IOP data is left blank.

'legend-description': Specify the legend description for the IOP data. Enclose the description in apostrophes.

Element 3: Graphic Display Line Type for IOP Type

There are eight types of lines from which the user can choose:

- 1. Dotted
- 2. Short-dashed
- 3. Dash-dot
- 4. Double-dot
- 5. Long-dashed
- 6. Dash-dot-dot
- 7. Solid
- 8. Invisible

7: The solid line is used for lines representing the IOP type on graphic terminals.

line-type-number: Specify the number of the line type to use for lines representing the IOP type on graphic terminals.

Element 4: Non-graphic Work Station Symbol

***:** The asterisk symbol is used for graphic representation of the IOP type on non-graphic terminals.

character: Specify a character to use for graphic representation of the IOP type on non-graphic terminals.

DISK Specifies the characteristics to be used for changing disk data information on the graph. The DISK parameter is valid only when DATATYPE(*DISK) is specified. When DATATYPE(*DISK) is specified, at least 1 but not more than 2 disk data entries must be specified. The types of disk data are the:

- Disk arm utilization, and
- Percent of disk space that is occupied.

***SAME:** The characteristics of the disk data information do not change.

Element 1: Amount of Utilization for Disk Data Type

***AVG:** The average utilization of the disk data type is presented on the graph.

***MAX:** The maximum utilization of the disk data type is presented on the graph.

Element 2: Disk Data Type Legend Description

***DFT:** The default legend description is used. This is the value specified for the amount of utilization for disk data.

***BLANK:** The legend description for the disk data type is left blank.

'legend-description': Specify the legend description for the disk data type. Enclose the description in apostrophes.

Element 3: Graphic Display Line Type

There are eight types of lines from which the user can choose:

- 1. Dotted
- 2. Short-dashed
- 3. Dash-dot
- 4. Double-dot
- 5. Long-dashed
- 6. Dash-dot-dot
- 7. Solid
- 8. Invisible

7: The solid line is used for lines representing the disk data type on graphic terminals.

line-type-number: Specify the number of the line type to use for lines representing the disk data type on graphic terminals.

Element 4: Non-graphic Work Station Symbol

*****: The asterisk symbol is used for graphic representation of the disk data type on non-graphic terminals.

character: Specify a character to use for graphic representation of the disk data type on non-graphic terminals.

CMNLINE

Specifies the characteristics used for changing communications line information on the graph. This parameter is valid only if DATATYPE(*CMNLINE) is specified. If DATATYPE(*CMNLINE) is specified, at least 1 but no more than 16 communications line entries must be specified.

***SAME:** The characteristics of the communications lines do not change.

Element 1: Communications Line Name

***MAX:** The maximum utilization of all the communications lines is presented on the graph.

communications-line-name: Specify the name of the communications line to be presented on the graph.

Element 2: Communications Line Legend Description

***DFT:** The default legend description is used. This is the value or name specified for the communications line name.

***BLANK:** The legend description for the communications line is left blank.

'legend-description': Specify the legend description for the communications line. Enclose the description in apostrophes.

Element 3: Graphic Display Line Type

There are eight types of lines from which the user can choose:

1. Dotted
2. Short-dashed
3. Dash-dot
4. Double-dot
5. Long-dashed
6. Dash-dot-dot
7. Solid
8. Invisible

7: The solid line is used for lines representing the communications line on graphic terminals.

line-type-number: Specify the number of the line type to use for lines representing the communications line on graphic terminals.

Element 4: Non-graphic Work Station Symbol

*: The asterisk symbol is used for graphic representation of the communications line on non-graphic terminals.

character: Specify a character to use for graphic representation of the communications line on non-graphic terminals.

ALLDATA

Specifies the characteristics to be used for changing information on the graph for all jobs. The ALLDATA parameter is valid only when DATATYPE(*ALL) is specified.

*SAME: The characteristics of the job data do not change.

Element 1: Legend Description

*DFT: The default legend description of *ALL is used.

*BLANK: The legend description for the data is left blank.

'legend-description': Specify the legend description for the data. Enclose the description in apostrophes.

Element 2: Graphic Display Line Type

There are eight types of lines from which the user can choose:

- 1. Dotted
- 2. Short-dashed
- 3. Dash-dot
- 4. Double-dot
- 5. Long-dashed
- 6. Dash-dot-dot
- 7. Solid
- 8. Invisible

7: The solid line is used for lines representing all of the job data on graphic terminals.

line-type-number: Specify the number of the line type to use for lines representing all of the job data on graphic terminals.

Element 3: Non-graphic Work Station Symbol

*: The asterisk symbol is used for graphic representation of all of the job data on non-graphic terminals.

character: Specify a character to use for graphic representation of all of the job data on non-graphic terminals.

Example for CHGGPHFMT

```
CHGGPHFMT GRAPH(FORMAT1) DATATYPE(*ALL)
ALLDATA(ABCCOMPANY *DFT 7)
```

This command changes the graph format named FORMAT1 in the QPFRDATA library and groups all the data together. The data legend description is ABCCOMPANY, and it is represented on the graph with a solid line.

Error messages for CHGGPHFMT

***ESCAPE Messages**

CPF0011

Error detected by prompt override program.

PFR9001

DATATYPE(*IOP) must be specified to use IOP variable.

PFR9002

DATATYPE(*DISK) must be specified to use a disk variable.

PFR9003

An IOP variable must be specified for YAXIS.

PFR9004

Disk variable must be specified for YAXIS.

PFR9006

*TIME must be specified for XAXIS.

PFR9007

*TIME must be specified for XAXIS.

PFR9009

Graph format &2 not found in library &1.

PFR9010

No functional area &2 exists.

PFR9014

Graph axis range specified not correct.

PFR9015

Priority boundaries specified not correct.

PFR9016

Value for FCNARA parameter must be specified.

- PFR9017**
Value for JOBTYP parameter must be specified.
- PFR9018**
Value for PRIORITY parameter must be specified.
- PFR9019**
Value for IOP parameter must be specified.
- PFR9020**
Value for DISK parameter must be specified.
- PFR9021**
Both axis variables cannot be the same.
- PFR9030**
Package &1 contains format &2.
- PFR9040**
Specify *AUTO for range with *TIME for variable.
- PFR9081**
Functional area name not valid.
- PFR9090**
DATATYPE(*CMNLINE) must be specified to use a communications line variable.
- PFR9091**
Communications line variable must be specified for YAXIS.
- PFR9092**
Value for CMNLINE parameter must be specified.
- PFR9094**
Graph format &3 not found in library &2.
- PFR9106**
Too many data lines specified for scatter graph.
- PFR9116**
*LGLDBIO only valid when *JOBTYP specified for DATATYPE parameter.
- PFR9117**
*DDM must be specified for Job type parameter.

CHGGPHPKG (Change Graph Package) Command Description

Note: To use this command, you must have the 5722-PT1 (Performance Tools for iSeries) licensed program installed.

CHGGPHPKG Command syntax diagram

Purpose

The Change Graph Package (CHGGPHPKG) command changes a graph package that includes one or more graph formats.

Required Parameter

GPHPKG

Specifies the graph package to create or change.

The possible library values are:

- **QPFRDATA:** The IBM-supplied performance data library, QPFRDATA, is where the graph package is located.
- ***LIBL:** The library list is used to locate the graph package.
- ***CURLIB:** The current library for the job is used to locate the graph package. If no library is specified as the current library for the job, the QGPL library is used.
- *library-name:* Specify the name of the library where the graph package is located.

graph-package: Specify the name of the graph package.

Optional Parameters

TEXT Specifies the user-defined text that briefly describes the graph format or graph package. More information on this parameter is in Commonly used parameters.

***SAME:** The text does not change.

***BLANK:** The text description for the graph format or graph package is left blank.

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

GPHFMT

Specifies the graph formats to include in the graph package.

***SAME:** The list of graph formats does not change.

***SELECT:** Shows a list of graph formats that can be included in the graph package. This value is valid only in an interactive environment.

format-name: Specify the graph formats to be included in the graph package. Up to 25 format names can be specified.

Examples for CHGGPHPKG

Example 1: Changing Graph Package to Contain Three Formats

```
CHGGPHPKG GPHPKG(EXAMPLE) TEXT('THIS IS AN
EXAMPLE') GPHFMT(GPH1 GPH9 GPH12)
```

This command changes a graph package called EXAMPLE to contain three formats, GPH1, GPH9, and GPH12. This package is located in the default library, QPFRDATA.

Example 2: Changing Graph Package to Contain Two Formats

```
CHGGPHPKG GPHPKG(MYLIB/MYPKG)
TEXT('MY PACKAGE') GPHFMT(MYGPH1 MYGPH2)
```

This command changes a graph package called MYPKG to contain the formats of MYGPH1 and MYGPH2. MYPKG is located in the MYLIB library.

Error messages for CHGGPHPKG

*ESCAPE Messages

CPF0011

Error detected by prompt override program.

PFR9012

Graph package &2 not found in library &1.

PFR9013

Graph format &2 cannot be added.

CHGGRPA (Change Group Attributes) Command Description

CHGGRPA Command syntax diagram

Purpose

The Change Group Attributes (CHGGRPA) command changes the group attributes of a job. The following attributes can be changed:

- An interactive job can be changed to a group job.
- A group job can be changed to a nongroup, interactive job.
- A message queue can be associated with a group.
- A message queue can be disassociated from a group.
- A group job's descriptive text can be changed.

Optional Parameters

GRPJOB

Specifies the group job name assigned to the job in which this CHGGRPA command is used.

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

***NONE:** The only active job in a group is changed to a nongroup interactive job, the group data area (*GDA) is deleted, and the group message queue (if there is one) is disassociated from the group; the mode of the disassociated message queue, however, does not change.

group-job-name: Specify the group job name that is assigned to the interactive job in which this command is used. This causes the job to become a group job and also causes the group data area (*GDA) to be created.

Specifying a group job name is valid only when the job is not a group job. Once a group job name is assigned to a job, that name cannot be changed (except by setting it to *NONE if it is the only active job in the group).

When a job becomes a group job by means of the CHGGRPA command, the group data area is created. This character type data area is 512 bytes long, and at first, it is filled with blanks. Jobs in a group may communicate with each other by using the group data area; it is accessible from any of the jobs in the group, but not from outside that group. The group data area is supported on the Change Data Area (CHGDTAARA), Retrieve Data Area (RTVDTAARA), and the Display Data Area (DSPDTAARA) commands by using the special value *GDA.

MSGQ

Specifies the qualified name of a message queue associated with a group.

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

***NONE:** No message queue is associated with the group. If a message queue is currently associated with the group, this value disassociates the message queue from the group, but the mode does not change.

The name of the message queue can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

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

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

message-queue-name: Specify the name of the message queue associated with the group. This message queue must exist, but not necessarily be allocated to the job when this CHGGRPA command is issued.

The message queue is available to the active job in the group. If one group job either starts or transfers to another group job, and the message queue is in break or notify mode in the job that is issuing the Transfer Group Job (TFRGRPJOB) command, the message queue is placed in the same mode as that of the group job to which it is transferred. If the message queue is not in break or notify mode in the job that is issuing the TFRGRPJOB command, then no special processing is done for the message queue even though it has been associated with the group.

It is possible to have two groups associated with the same work station when a secondary interactive job exists (the Transfer Secondary Job (TFRSECJOB) command is entered, or option 1 on the system request menu is entered). If two groups are associated with a work station and both groups specify the same message queue, only one of the groups can have the message queue in break or notify mode at a time. For both groups to share the same group message queue, the message queue mode must be set to either the hold mode or to the default mode before the TFRSECJOB command or System Request option 1 is issued.

Note: Work station message queues, and the QHST, QSRV, and QCHG system message queues are not valid for this parameter.

TEXT Specifies the text that briefly describes the group job. More information is in Commonly used parameters.

Note: This text appears on the Group Job Selection display for the TFRGRPJOB command.

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

***BLANK:** Text is not specified.

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

Examples for CHGGRPA

Example 1: Changing an Interactive Job to a Group Job

```
CHGGRPA GRPJOB(GROUPJ1) MSGQ(QGPL/GRPMSGQ)
```

An interactive job is first changed to a group job before it is allowed to create other group jobs at the work station. This command changes a work station job into a group job with the group job name GROUPJ1; a message queue is associated with the group and (as long as it is in break or notify mode in the job issuing a TFRGRPJOB or End Group Job (ENDGRPJOB) command) is allocated to the active job in the group. The group data area (*GDA) is also created.

Example 2: Changing a Group Job to a Nongroup Job

```
CHGGRPA GRPJOB(*NONE)
```

Assume that the job in the previous example issues this command. Assume also that the job is the only active job in the group. Group job GROUPJ1 is changed into a nongroup, interactive job. The group job name is removed, and the group data area (*GDA) is deleted. The change from a group job into a nongroup job occurs only if it is the only active job in the group.

Additional Considerations

- It is not necessary to change the group job into a nongroup job; it could have remained a group job until sign-off.
- The job's work station message queue is automatically passed (if the message queue is in *BREAK or *NOTIFY mode) from job to job through System Request and TFRGRPJOB.

Error messages for CHGGRPA

***ESCAPE Messages**

CPF1305

Changing group job name not allowed.

CPF1306

Specifying GRPJOB(*NONE) not allowed at this time.

CPF1307

Group job &1 already belongs to this group.

CPF1308

Parameters that do not agree were found.

CPF1309

Subsystem cannot complete the &1 command.

CPF1312

Change group attribute request not valid; job not group job.

CPF1313

Value &1 for parameter &2 not allowed name.

CPF1316

&1 in &2 not allowed as group message queue.

CPF1317

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

CPF1328

No authority to use queue &2 in &3.

CPF1329

Message queue &1 in &2 not found.

CPF1330

Message queue &1 in &2 not available.

CPF1331

&1 in &2 not allowed as group message queue.

CPF1351

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

CHGHLLPTR (Change High-Level Language Pointer) Command

Description

CHGHLLPTR Command syntax diagram

Purpose

The Change High Level Language Pointer (CHGHLLPTR) command allows the user to change or copy a pointer variable declared in a high-level language (HLL) program.

The following functions can be requested:

- Copy the value of one HLL pointer into another HLL pointer variable (REFPTR parameter).
- Set an HLL pointer variable to point to a variable in the program (ADR parameter).
- Set the value of the HLL pointer variable to a null pointer (ADR parameter).

HLL pointers are pointer variables that are declared in the source of an HLL program; they are contrasted with internal compiler-created pointers. Compiler-created pointers are pointer variables that are declared in the machine-interface (MI) program, by a compiler, to support various processing functions. Not all languages allow the user to declare HLL pointers.

Restrictions:

1. This command is valid only in debug mode. To start debug mode, refer to the STRDBG (Start Debug) command.
2. 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.
3. This command cannot be used to change variables in a bound program.
4. This command cannot be used to change variables that are write-protected or within the system domain, unless the user has *SERVICE special authority.


Required Parameters

PTR Specifies the name of the pointer (program variable) whose value is being changed, allowing the pointer to point to a different address.

Element 1: Program Variables

'program-variable': Specify the name of the pointer variable whose value is being changed. The pointer variable must be an HLL pointer (HLLPTR). A machine-interface object-definition-table-vector (MI ODV) number cannot be specified for the variable name, even though the variable that it defines is an HLL pointer. The name must be enclosed in apostrophes if it contains special characters.

If the pointer (program variable) is in 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 used. An integer, MI ODV number, or numeric variable name can be specified for a subscript. For more

information on changing program variables during testing, refer to the CL Programming  book and parameter values used for testing and debugging.

Some examples are:

```
PTR('PTR_ARRAY(2)')  
PTR(P1)
```

Element 2: Basing Pointers

'basing-pointer': Specify up to five basing pointers. In some languages, the pointer (program-variable) may be based on a pointer variable. This set of values allows the user to specify the basing pointers for the pointer to be changed. The basing pointers must be HLL pointers (HLLPTR). An MI ODV number cannot be specified for the name, even though the pointer that defines it is an HLL pointer. Each basing pointer name must be enclosed in apostrophes if it contains special characters. If the basing pointer is an array, the subscripts representing an element in the array must be specified. Up to 132 characters can be specified for a basing pointer name. This includes any qualifiers, subscripts, embedded blanks, parentheses, and commas. It does not include the enclosing apostrophes when special characters are used. For more information on the basing pointer value, refer to parameter values used for testing and debugging.

Some examples are:

```
PTR('P@(B,5)' 'Q@(I)')  
PTR(PTR1 (BASEPTRA BASEPTRB))
```

REFPTR

Specifies the name of the pointer (program variable) whose value is being copied into the pointer identified in the PTR parameter.

Element 1: Program Variables

'program-variable': Specify the name of the pointer variable whose value is copied into the specified pointer. The pointer variable must be an HLL pointer (HLLPTR). An MI ODV number cannot be specified for the variable name, even though the variable that it defined is an HLL pointer. The name must be enclosed in apostrophes if it contains special characters. If the pointer (program variable) is in an array, the subscripts representing the element in the array to be copied 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 used. An integer, MI ODV number, or numeric variable name can be specified for a subscript.

Some examples are:

```
REFPTR('PRT1(2,3)')  
REFPTR(C2PTR)
```

Element 2: Basing Pointers

'basing-pointer': Specify up to five basing pointers. The pointer (program variable) may be based on a pointer variable. This set of values allows the user to specify the basing pointers for the pointer to be copied. The basing pointer must be an HLL pointer (HLLPTR). An MI ODV number cannot be specified for the name, even though the pointer that defines it is an HLL pointer. Each basing pointer name must be enclosed in apostrophes if it contains special characters. If the basing pointer is an array, the subscripts representing an element in the array must be specified. Up to 132 characters can be specified for a basing pointer name. This includes any qualifiers, subscripts, embedded blanks, parentheses, and commas. It does not include the enclosing apostrophes when special characters are used. For more information on the basing-pointer value, refer to parameter values used for testing and debugging.

Some examples are:

```
REFPTR('P@(B,5)' 'Q@(I)')  
REFPTR(PRT1 (BASEPTRA 'Q@(/1F)'))
```

ADR Specifies the name of the program variable, if any, to which the specified HLL pointer is to point.

***NULL:** The HLL pointer is set to null; it no longer points to the address of any space object, and it no longer contains a space pointer or any type of pointer value.

Element 1: Program Variables

'program-variable': Specify the name of the variable to which the HLL pointer is to point. An HLL variable name must be entered; an MI ODV number cannot be used. The name must be enclosed in apostrophes if it contains special characters. If an array is specified without 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 on the program-variable value, refer to parameter values used for testing and debugging.

Some examples are:

```
ADR('VAR1(2,3)')  
ADR(ARRAY2)
```

Element 2: Basing Pointers

'basing-pointer': Specify up to five basing pointers. In some languages, the program-variable may be based on a pointer variable. This set of values allows the user to specify the basing pointers for the variables to be addressed. The basing pointers must be HLL pointers (HLLPTR). An MI ODV number cannot be specified for the name, even though the pointer that defines it is an HLL pointer. Each basing pointer name must be enclosed in apostrophes if it contains special characters. If the basing pointer is an array, the subscripts representing an element in the array must be specified. Up to 132 characters can be specified for a basing pointer name. This includes any qualifiers, subscripts, embedded blanks, parentheses, and commas. It does not include the enclosing apostrophes when special characters are used. For more information on the basing-pointer value, refer to parameter values used for testing and debugging.

Some examples are:

```
ADR('VAR(2,5)' 'PGMPTR(5)')  
ADR(VAR5 (BASEPTRA BASEPTRB))
```

Optional Parameters

PGM Specifies the name of the program that contains the pointer whose value is being changed.

***DFTPGM**: The program currently specified as the default program contains the pointer whose value is changed.

program-name: Specify the name of the program that contains the pointer whose value is being changed. The name must already have been specified in the STRDBG or Add Program (ADDPGM) command.

RCRLVL

Specifies which recursion level of the program contains the pointer whose value is being 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 recursion of the program, and so on to the last (most recent) recursion level in the stack. For example, if program A calls program B, and then program B calls program A, a new recursion level of program A is formed. If the first recursion level of program A contains the pointer being changed, RCRLVL(1) must be specified. Some high-level languages also allow recursive procedures. More information on these programs is in the appropriate high-level language manual.

***LAST**: The last, most recent, call of the specified program contains the pointer being changed.

recursion-level-number: Specify the number of the recursion level of the program containing the pointer being changed.

Examples for CHGHELLPTR

Example 1: Setting a Pointer to a Variable Address

```
CHGHLLPTR PTR(STACKPTR) ADR(FIRSTELEM)
```

This command sets the pointer STACKPTR to the address of the variable FIRSTELEM.

Example 2: Copying the Value of a Pointer

```
CHGHLLPTR PTR(NEXT@) REFPTR(CURRENT@)
```

This command copies the value of the pointer CURRENT@ into the pointer NEXT@. The value copied could be a null pointer.

Error messages for CHGHLLPTR

*ESCAPE Messages

None.

CHGHTTPA (Change HTTP Attributes) Command Description

Note: To use this command, you must have the 5722-DG1 (HTTP Server) product installed.

Purpose

You can use the Change HTTP Attributes (CHGHTTPA) command to change the World Wide Web Hypertext Transfer Protocol (HTTP) server attributes.

Take special note...: When you use this command to change HTTP attributes, then the changes apply to all servers and server instances, with the following exceptions:

- Values specified on Configuration and Administration forms for a particular instance take precedence over the values that you specify with the CHGHTTPA command.
- Values specified as instance startup values on the HTTPSVR parameter of the Start TCP/IP Server (STRTCPSVR) command take precedence over values that you specify elsewhere.

The changes take effect the next time the server is started either by the Start TCP/IP (STRTCP) command or by the Start TCP/IP Server (STRTCPSVR) command.

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

Parameters

AUTOSTART

Specifies whether to automatically start the server when you start TCP/IP (Transmission Control Protocol/Internet Protocol) by using the STRTCP command. When you start HTTP by using the STRTCPSVR command, then the server starts regardless of the value of this parameter. If you start STRTCPSVR *HTTP, and the server is already running, then the server denies the start request.

If you have multiple server instances of your server configured, make sure that they all work together before enabling AUTOSTART. If you specify CHGHTTPA AUTOSTART(*YES), when you use the STRTCP command, all server instances start.

The possible values are:

*SAME

The AUTOSTART value does not change if it was previously set. Otherwise, *NO is used.

*NO

Do not start the HTTP server when the STRTCP command is issued. If you do not intend to use HTTP, set this parameter to *NO.

***YES** Start the HTTP server when the STRTCP command is issued.

NBRSVR

Specifies the minimum number of requests the server can process simultaneously. This parameter also specifies the maximum number of requests the server can process simultaneously.

You can use the maximum value to help prevent system resources from being exhausted during peak HTTP activity. Set this value in accordance with the amount of HTTP activity that you anticipate and the system resources that are available. If you reach the maximum number during peak loads, additional connection requests remain on the sockets connection request backlog until a server job becomes available to service the connection request.

The number of threads that you specify is the number of worker threads that the server will use for handling requests.

The actual number of threads for the server will be greater than the minimum and the maximum value that you specify on NBRSVR. The server does not count other threads that it uses for an instance in the number of threads that you specify for NBRSVR. See Example 4 in STRTCP SVR SERVER(*HTTP) for information on threads started.

The maximum number of server threads that you specify cannot be less than the minimum number of server threads specified.

Element 1: Minimum number of server threads

The possible values are:

***SAME**

The minimum number of server threads that was previously set does not change. The default value is 10.

***DFT** Specifies the default value of 10 for the minimum number of server threads.

minimum-number-of-server-threads

The minimum number of server threads requested to start. The valid range is 1 through 200 server threads.

Element 2: Maximum number of server threads

The possible values are:

***SAME**

The maximum number of server threads previously set does not change. Otherwise, 40 is used.

***NOMAX**

There is no limit to the maximum number of server threads that is allowed to start.

***DFT** The maximum number of server threads is set to the default value of 40. If you allow this parameter to default, the minimum number of server threads specified cannot be greater than 40.

maximum-number-of-server-threads

The maximum number of server threads that is allowed to start. The valid range is 1 through 999 server threads. This value must be greater than the value specified for the minimum number of server threads.

CCSID

Use this value to determine the American National Standard Code for Information Interchange (ASCII) coded-character set identifier (CCSID) value. Use this value for translations when doing ASCII-to-extended binary-coded decimal interchange code (EBCDIC) and EBCDIC-to-ASCII mapping. Use this value if the World Wide Web (WWW) browser does not define the character set and code page in the MIME header. Mapping is determined using one of the following:

- The MIME header values
- Both the specified ASCII CCSID and the EBCDIC default CCSID of the job.

You can optionally use outgoing and incoming mapping with the mapping tables that the TBLHTTPOUT and TBLHTTPIN parameters define. Normally, you set the TBLHTTPOUT and TBLHTTPIN parameters to the default of *CCSID or *DFT. Both should indicate that the server uses the CCSID parameter value for mapping.

If you use a mapping table for outgoing mapping, you can specify a table object in the TBLHTTPOUT parameter. Then you use this table object for outgoing mapping instead of the CCSID value.

You can change incoming mapping to use a mapping table in the same manner by specifying a table object in the TBLHTTPIN parameter. This mapping table then overrides the specified CCSID value and works with incoming mapping.

The possible values are:

***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 00819 "ISO 8859-1 8-bit ASCII".

CCSID-value

The requested CCSID value is used. This value is validated to ensure a valid ASCII CCSID has been requested.

TBLHTTPOUT

Specifies the table object that is to be used to map all outgoing server data in HTTP. Outgoing server data is mapped from EBCDIC to ASCII.

If a table object is specified for the TBLHTTPOUT parameter, the table object is used for outgoing mapping. Otherwise, the CCSID parameter is used to determine outgoing mapping.

The possible values are:

***SAME**

The TBLHTTPOUT value does not change if it was previously set; otherwise, *CCSID is used.

***CCSID**

The server uses the CCSID parameter to determine outgoing mapping.

***DFT** The server uses the CCSID parameter to determine outgoing mapping.

You can qualify the name of the outgoing mapping table by using one of the following library values:

***LIBL** The server searches all libraries in the job's library list until it finds a match.

***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

Specifies the name of the library to search.

outgoing-mapping-table

Specify the table object to be used for mapping the outgoing HTTP server data.

TBLHTTPIN

Specifies the table object that is used to map all incoming server data in HTTP. Incoming server data is mapped for ASCII to EBCDIC.

If a table object is specified for the TBLHTTPIN parameter, the table object is used for incoming mapping. Otherwise, the CCSID parameter is used to determine incoming mapping.

The possible values are:

***SAME**

The TBLHTTPIN value does not change if it was previously set; otherwise, *CCSID is used.

***CCSID**

The CCSID parameter is used to determine incoming mapping.

***DFT**

The CCSID parameter is used to determine incoming mapping.

You can qualify the name of the incoming mapping table by using one of the following library values:

***LIBL** All libraries in the job's library list are searched until the first match is found.

***CURLIB**

The server searches the current library for the job. If you do not specify a library as the current library for the job, then the server uses the QGPL library.

library-name

Specifies the name of the library to be searched.

incoming-mapping-table

Specify the table object to use for mapping the incoming server data.

Examples for CHGHTTPA

Example 1: Changing the HTTP Attributes to Automatically Start the Server when you use the Start TCP/IP (STRTCP) CL command.

```
CHGHTTPA AUTOSTART(*YES)
```

This command indicates that the server will automatically start up the next time that you use the STRTCP command. Server instances will start automatically if they do not have AUTOSTART overridden.

Example 2: Changing the HTTP Attributes to have a minimum of 10 and a maximum of 50 server threads.

```
CHGHTTPA NBRSRV(10 50)
```

This command indicates that 10 server threads will start automatically when you next start up HTTP. The server allows a maximum of 50 server threads to start to handle incoming HTTP requests.

Example 3: Using the Server Mapping Tables

```
CHGHTTPA TBLHTTPOUT(*LIBL/TSTHTTPO)
        TBLHTTPIN(*LIBL/TSTHTTPI)
```

This command indicates that the next time the server is started, the server will have the following characteristics:

- The ASCII-to-EBCDIC and EBCDIC-to-ASCII conversion is done using the outgoing and incoming mapping tables, rather than with a CCSID value.
- The server uses a copy of the information that you find in the TSTHTTPO table object for mapping outgoing data in HTTP. You can find the table object in one of the libraries in the library list.
- The server uses a copy of the information that you find in the TSTHTTPI table object for mapping incoming data in HTTP. You can find the table object in one of the libraries in the library list.

Error messages for CHGHTTPA

*ESCAPE messages

TCP8050

*IOSYSCFG authority required to use &1.

CHGICFDEVE (Change ICF Program Device Entry) Command Description

CHGICFDEVE Command syntax diagram

Purpose

The Change Intersystem Communications Function Program Device Entry (CHGICFDEVE) command changes the attributes of the specified program device entry in the specified Intersystem Communications Function (ICF) file.

Required Parameters

FILE Specifies the qualified name of the ICF file for which the ICF program device entry is being changed.

The name of the ICF file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

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

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

file-name: Specify the name of the file that contains the program device entry to be changed.

PGMDEV

Specifies the program device entry name in the ICF file whose attributes are being changed. The program device entry must exist in the specified ICF file.

Optional Parameters

RMTLOCNAME

Specifies the remote location name of the system with which this object communicates.

More information on how the system uses the RMTLOCNAME parameter to select an APPC device description is in APPC, APPN, and HPR.

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

***REQUESTER:** The name used to refer to the communications device through which the program is started is used. The session that is assigned when the program device is acquired is the same session in which the program start request is received. If the program is not started as a result of a program start request, the acquire operation of the program device fails. The target program uses *REQUESTER as the remote location name in the intersystem communications function (ICF) file to connect to the session that the source program used to send the program start request.

The *REQUESTER value can be specified on only one program device entry and is valid only for a target communication job. If *REQUESTER is specified in any other type of job, a message is sent.

remote-location-name: Specify the full name of a remote location. The remote location need not exist at the time this command is run, but must exist (be configured on the system as a device description or in the advanced peer-to-peer networking (APPN) system for this remote location) when the program acquires the program device. This value cannot be specified with CNVTYPE(*SRCPGM).

CMNTYPE

Specifies which types of communications parameters show on the prompt screen. This parameter is used only for prompting purposes. The value specified for this parameter determines the subset of other parameters that are shown (prompted) for the user.

***ALL:** The parameters for all of the communications types appear in the prompt.

***APPC:** The advanced program-to-program communications (APPC) parameters appear in the prompt.

***ASYNC:** The asynchronous (ASYNC) parameters appear in the prompt.

***BSCCEL:** The binary synchronous communications equivalence link (BSCCEL) parameters appear in the prompt.

***FINANCE:** The finance parameters appear in the prompt.

***INTRA:** The intrasystem (INTRA) parameters appear in the prompt.

***RETAIL:** The retail parameters appear in the prompt.

***SNUF:** The SNA upline facility (SNUF) parameters appear in the prompt.

DEV Specifies the communications device used in the remote location. This parameter can only be specified for APPC, FINANCE, RETAIL, INTRA, and SNUF communications types.

More information on how the system uses the DEV parameter to select an APPC device description is in APPC, APPN, and HPR.

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

***LOC:** The device associated with the remote location is used. If several devices are associated with the remote location, the system determines which device is used.

device-name: Specify the name of a communications device associated with the remote location. If the device name is not valid for the remote location, a message is sent when the program device entry is acquired. More information on device names is in APPC, APPN, and HPR.

LCLLOCNAME

Specifies the local location name.

This parameter applies to the APPC communications type only and is ignored for all other communications types.

More information on how the system uses the LCLLOCNAME parameter to select an APPC device description is in APPC, APPN, and HPR.

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

***LOC**: The device associated with the remote location is used. If several devices are associated with the remote location, the system determines which device is used.

***NETATR**: The LCLLOCNAME value specified in the system network attributes is used.

local-location-name: Specify the local location name associated with the program device entry. The local location name is specified only in APPC to indicate a specific local location name for the remote location. If the local location name is not valid for the remote location, or for the remote location and device, an escape message is sent when the program device entry is acquired.

MODE Specifies the mode name used. This parameter applies only to the APPC communications type and is ignored for all other communication types.

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

***NETATR**: The mode name specified in the network attributes is used.

***BLANK**: The mode name consisting of 8 blank characters is used.

mode-name: Specify a mode name for the APPC communications device. If the mode name is not valid for any combination of remote location device, local location, and remote network ID, an escape message is sent when the program device entry is acquired.

RMTNETID

Specifies the remote network identifier (ID) used with the remote location. This parameter applies to the APPC communications type only and is ignored for all other communications types.

More information on how the system uses the RMTNETID parameter to select an APPC device description is in APPC, APPN, and HPR.

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

***LOC**: The remote network identifier (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 identifier (ID) is used.

remote-network-ID: Specify a remote network ID for the APPC communications device.

FMTSLT

Specifies the record format selection used for input operations.

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

***PGM**: The program determines which record formats are selected. If an input (read) operation with a record format name is specified, that format is selected. If an input operation without a record format is specified, the default format (the first record format in the file) is selected. This also means that if there are any record identification (RECID) parameters specified in the data

description specifications (DDS) for the file, or if any remote formats are received, they are not taken into consideration when the record is selected.

***RECID:** The record identification (RECID) keywords specified in the DDS for the file are used for record selection. If there are no RECID keywords in the file, an error message is sent, the acquire operation of the program device ends, and the device is not acquired.

***RMTFMT:** The remote format names received from the sending system are used for record selection. If the device is not an APPC or INTRA device and *RMTFMT is specified, a run time error occurs when the program device entry is acquired.

APPID

Specifies (in characters) the Virtual Telecommunications Access Method (VTAM) identifier (ID) of the Customer Information Control System for Virtual Storage (CICS/VS) or Information Management System/Virtual Storage (IMS/VS) host subsystem sent with the sign-on message. This parameter applies to the SNUF communications type only and is ignored for all other communications type.

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

***DEVD:** The application identifier specified in the device description is sent without the sign-on message.

***USER:** The application program can send messages or a logon to the host. This is valid only when using the 3270 program interface.

application-ID: Specify the application identifier sent with the sign-on message.

BATCH

Specifies, for both CICS/VS and IMS/VS, whether this session is used for batch jobs. This parameter applies to the SNUF, RETAIL and INTRA communications types only and is ignored for all other communications types.

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

***NO:** Batch jobs do not occur.

***YES:** Batch jobs occur.

HOST Specifies the host or remote subsystem with which this session communicates. This parameter applies to the SNUF communications type only and is ignored for all other communications types.

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

***DEVD:** The host system specified in the device description is used.

***CICS:** The session communicates with CICS/VS.

***IMS:** The session communicates with IMS/VS.

***IMSRTR:** The session communicates with IMS/VS using the ready-to-receive option.

ENDSSNHOST

Specifies how SNUF ends the session with the host. This parameter is valid only for SNUF communications.

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

***RSHUTD:** SNUF sends a request-shut-down command to the host.

***TERMSELF:** SNUF sends a terminate-self command to the host. It may be necessary to specify this value if the value *RSHUTD fails to end a session with a non-IBM host.

SPCHOSTAPP

Specifies whether SNUF customizes support for special host applications outside the CICS or IMS application layer.

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

***DEVD:** The special host application specified in the device description is used.

***NONE:** SNUF does not customize support for special host applications.

***FLASH:** SNUF customizes support for the Federal Link Access for Secondary Half-sessions (*FLASH) protocol application.

INZSELF

Specifies whether a formatted INIT-SELF is built in place of the unformatted sign-on normally sent by SNUF to the host.

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

***NO:** The unformatted default sign-on provided by SNUF is used.

***YES:** The formatted INIT-SELF provided by SNUF is used.

HDRPROC

Specifies, for both CICS/VS and IMS/VS, whether received function management headers are passed to the application program. This parameter applies to the SNUF communications type only and is ignored for all other communications types.

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

***SYS:** SNA upline facility (SNUF) removes function management headers before passing data to the program.

***USER:** Function management headers are passed with the data to the program.

MSGPTC

Specifies, for both CICS/VS and IMS/VS, whether message protection is used for this session. This parameter applies to the SNUF communications type only and is ignored for all other communications types.

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

***YES:** Message protection is used. SNUF saves messages until they are responded to and tries synchronization again if errors occur. *YES is valid only when BATCH(*NO) is also specified.

***NO:** Message protection is not used.

EMLDEV

Specifies that the program device entry is used to send and receive data streams to and from specific types of 3270 display or printer devices being emulated. This parameter consists of an emulation device type and an emulation device data format. The emulation device data format specifies the format of the type 3270 data stream being sent or received. A 20- or 32-byte common header that contains type 3270 command and data flow information is located at the start of the I/O buffer that is sending or receiving the type 3270 data stream. This parameter applies to the SNUF communications type only. This parameter can be specified as a list of two values (elements) or as a single value (*NONE).

Element 1: Type of Device

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

3278: The data stream is for a 3279, 3278, or 3277 display device.

3284: The data stream is for a 3284 printer.

3286: The data stream is for a 3286 printer.

3287: The data stream is for a 3287 printer.

3288: The data stream is for a 3288 printer.

3289: The data stream is for a 3289 printer.

Element 2: Format of the Data Stream

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

***UNFORMAT:** An unformatted 3270 data stream is sent or received. The application program must translate the data stream into a display or printer image.

***FIELD:** A formatted 3270 data stream is sent or received. The formatted 3270 data stream contains a display or printer image followed by field definitions. The field definitions indicate the location and characteristics of each field.

***NOFIELD:** A formatted 3270 data stream that has no field definitions but contains a display or printer image is sent or received.

***EXTFIELD:** A formatted 3270 data stream contains extended field attribute information. The extended field attribute information is in the field definitions which follow the display image. The field definitions indicate the location and characteristics of each field. The value *EXTFIELD is valid only when 3278 is specified for the type of device on the EMLDEV parameter.

Note: If *FIELD, *NOFIELD, or *EXTFIELD is specified, BATCH(*NO) must also be specified.

Other Single Values

***NONE:** This program device entry is not used for sending and receiving 3270 data streams.

CNVTYPE

Specifies the conversation type for which the application program is designed. This parameter only applies to the APPC communications type, and is ignored for all other communications types.

More information on the APPC communications type is in APPC, APPN, and HPR.

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

***SYS:** The advanced program-to-program communications (APPC) mapped conversation support is used.

***USER:** The advanced program-to-program communications (APPC) basic conversation support is used.

***SRCPGM:** The target program accepts the conversation type specified by the source program. If this value is specified, RMTLOCNAME(*REQUESTER) must also be specified.

BLOCK

Specifies whether the system or the user controls whether records are combined into blocks when they are sent. This parameter applies to the BSC communications type only and is ignored for all other communications types.

With this parameter, one of the following conditions of record formatting can be specified:

- No blocking or deblocking: The record format described in the DDS is the format used for both the record and the block.
- User blocking and/or deblocking: Give the BSC controls needed to describe the record format of the system.
- System blocking with record separator characters: Specify the record separator character used by the system to determine record boundaries in the block.
- System blocking of fixed-length records: The system uses fixed-length records, and blocks and/or deblocks them accordingly.

If a parameter value other than *NONE or *USER is specified, records are blocked as required by the system for output and are deblocked on input.

Element 1: Blocking Option

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

***DEV D:** The block option specified in the device description is used.


***NONE:** Blocking or deblocking is not done by the system.

***ITB:** The records are blocked or deblocked based on the location of an intermediate text block (ITB) control character. For input files, a record is delimited by locating the next intermediate text block character. An end-of-text or end-of-transmission block character is used as an intermediate text block character to delimit a block. For output files, an ITB character is added after the record. If it is the last character of the block, the ITB is replaced by an end-of-text or end-of-transmission block character.

***IRS:** The records are blocked or deblocked based on the location of an interrecord separator (IRS) character. For input files, a record is delimited by locating the next IRS character. For output files, an IRS character is added after the record.

***NOSEP:** No record separator character is contained in the transmission block sent to or received from the device. The system blocks and deblocks the records by using a fixed-length record, as specified in the DDS format specifications.

***USER:** The program provides all the control characters (including record separator characters, binary synchronous communications (BSC) framing characters, and transparency characters) necessary to send records. More information about the device and binary synchronous communications equivalence link (BSC) support characteristics is in the BSC Equivalence Link

Programming  book.

***SEP:** The records are blocked or deblocked, based on the location of a record separator character that is specified by the user. For input files, a record is delimited by locating the next record separator character. For output files, a record separator character is added following the record.

Element 2: Record Separator

X '1E': The record separator character X '1E' is used.

record-separator-character: Specify a unique 1-byte record separator character. The record separator character can be specified as 2 hexadecimal characters, as in BLOCK(*SEP X'FD'), or as a single character by specifying a value ranging from 0 through 9 or A through Z, as in BLOCK(*SEP A).

The following are BSC control characters that cannot be used as record separator characters:

Table 1. Characters Unavailable for Record Separators (Used for BSC Control)

EBCDIC	ASCII	BSC)EL Control
X'01'	X'01'	SOH (start-of-header)
X'02'	X'02'	STX (start-of-text)
X'03'	X'03'	ETX (end-of-text)
X'10'	X'10'	DLE (data-link escape)
X'1D'	X'1D'	IGS (interchange group separator)
X'1F'	X'1F'	ITB (intermediate text block)
X'26'	X'17'	ETB (end-of-transmission block)

EBCDIC	ASCII	BSCCEL Control
X'2D'	X'05'	ENQ (enquiry)
X'32'	X'16'	SYN (synchronization)
X'37'	X'04'	EOT (end-of-transmission)
X'3D'	X'15'	NAK (negative acknowledgment)

RCDLEN

Specifies the maximum record length (in bytes) for data sent and received. This parameter applies to the BSCCEL and the SNUF communications types only and is ignored for all other communications types.

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

***DEV D:** The record length specified in the device description is used. If a record is longer than the specified record length, a run time error occurs when the record is sent or received.

record-length: Specify the maximum record length (in bytes) to use with this device file. The value must be at least the size of the largest record sent. If a record is longer than the specified record length, a run time error occurs when the record is sent or received. Valid values range from 1 through 32767 bytes for SNUF communications. For BSCCEL communications, the maximum record length is 8192 bytes.

BLKLEN

Specifies the maximum block length (in bytes) for data sent. This parameter applies to the BSCCEL and the SNUF communications types and is ignored for all other communications types.

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

***DEV D:** The block length specified in the device description is used.

block-length: Specify the maximum block length (in bytes) of records sent. The value must be at least the size of the largest record sent. Valid values range from 1 through 32767 for SNA upline facility (SNUF). For binary synchronous communications equivalence link (BSCCEL) communications, the maximum block length is 8192.

TRNSPY

Specifies whether data is sent in transparent text mode. Transparent text mode allows all 256 extended binary-coded decimal interchange code (EBCDIC) character codes to be sent. Use this function when sending packed or binary data fields. This parameter applies to the BSCCEL communications type only and is ignored for all other communications types.

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

***DEV D:** The text transparency option specified in the device description is used.

***NO:** Text transparency is not used.

***YES:** Text transparency is used, which permits the transmission of all 256 EBCDIC character codes. *YES is valid only when BLOCK(*NONE), BLOCK(*NOSEP), or BLOCK(*USER) is specified.

Note:

Transparency of received data is determined by the data stream; therefore, this parameter is not relevant for received data. If TRNSPY(*YES) is specified with BLOCK(*USER), the BSCCEL communications type ignores the transparency indicator during write operations. Correct controls must be given with the data to get transparent transmission of data. For example, the data-link escape (DLE) and start-of-text (STX) character control characters must first be specified; the system gives the remaining control characters for transparent sending of data.

DTACPR

Specifies whether data compression is performed.

Note:

DTACPR(*YES) cannot be specified if TRNSPY(*YES) is specified. This parameter applies to the BSC_{CEL} communications type only and is ignored for all other communications types.

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

***DEV D:** The data compression option specified in the device description is used.

***NO:** No data compression or decompression occurs.

***YES:** Data is compressed for output and decompressed for input.

TRUNC

Specifies whether trailing blanks are removed from output records. This parameter is for the BSC_{CEL} communications type only and is ignored for all other communications types.

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

***DEV D:** The truncation option specified in the device description is used.

***NO:** Trailing blanks are not removed from output records.

***YES:** Trailing blanks are removed from output records.

Note:

TRUNC(*YES) cannot be specified if BLOCK(*NOSEP) or BLOCK(*ITB) is specified. If TRUNC(*YES) is specified when DTACPR(*YES) or BLOCK(*USER) is specified, then truncation is ignored.

OVRFLWDTA

Specifies whether overflow data is discarded or retained.

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

***DISCARD:** Overflow data is not kept.

***RETAIN:** Overflow data is kept.

GRPSEP

Specifies a separator for groups of data (for example, data sets and documents). This parameter applies to the BSC_{CEL} communications type only and is ignored for all other communications types.

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

***DEV D:** The group separator option specified in the device description is used.

***DEV3740:** A null record (STXETX) is used as a data group separator.

***EOT:** An end-of-transmission (EOT) BSC control character is used as a data group separator.

***OFCSYS:** A block sent that ends with the BSC control character ETX (end-of-text) is used as a data group separator.

RMTBSC_{CEL}

Specifies the type of BSC_{CEL} session with the remote system. This parameter applies to the BSC_{CEL} communications type only and is ignored for all other communications types.

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

***DEV D:** The RMTBSC EL option specified in the device description is used.

***NO:** The remote system cannot recognize BSC EL commands or messages. In most cases, *NO is used when communicating with remote systems such as a 3741 Data Entry Station, an Office System 6, a 5230 Data Collection System, or a System/38.

***YES:** The remote system can recognize the BSC EL transaction starting commands, transaction ending commands, and online messages. In most cases, *YES indicates that the remote system is another iSeries 400, System/38, System/36, or a System/34 with BSC EL support.

INLCNN

Specifies the method used to make a connection on the line for the session being acquired. This parameter applies to the binary synchronous communications equivalence link (BSC EL) communications types only.

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

***CTLD:** The initial connection value specified in the controller description is used.

***ANS:** The remote system starts the call and the local system answers the call.

***DIAL:** The local system starts the call.

Examples for CHGICFDEVE

Example 1: Changing the Record Format Selection

```
CHGICFDEVE FILE(ICFTEST) PGMDEV(BSC EL2)
RMTLOCNAME(BSCNYC) FMTSLT(*RECID)
```

This command changes the program device entry named BSC EL2 in ICF file ICFTEST. The program device is changed to attributes of FMTSLT(*RECID). The remote location name is changed to BSCNYC.

Example 2: Changing the Conversation Type

```
CHGICFDEVE FILE(QGPL/ICF1) PGMDEV(APPC1)
RMTLOCNAME(*REQUESTER)
FMTSLT(*RMTFMT) CNVTYPE(*SYS)
```

This command changes the program device entry named APPC1 in ICF file ICF1 to have the remote location name *REQUESTER. This program device entry is changed to the FMTSLT(*RMTFMT) and CNVTYPE(*SYS) attributes.

Example 3: Changing the Communications Device

```
CHGICFDEVE FILE(ICFLIB/ICFAPPL1) PGMDEV(APPC)
RMTLOCNAME(APPCMPLS) DEV(MPLSLINE2)
```

This command changes the program device entry named APPC in file ICFAPPL1. The remote location name is changed to APPCMPLS and the device is changed to MPLSLINE2.

Error messages for CHGICFDEVE

*ESCAPE Messages

CPF7367

Device not changed in file &1 in &2.



CHGIMGCLG (Change Image Catalog) Command Description

CHGIMGCLG Command syntax diagram

Purpose

The Change Image Catalog (CHGIMGCLG) command is used to change the attributes of an image catalog object (*IMGCLG) in library QUSRSYS.

Restrictions:

1. You must have *SECADM and *ALLOBJ special authorities to use this command.

Required Parameter

IMGCLG

Specifies the name of the image catalog to be changed.

image-catalog-name: Specify the name of the image catalog to be changed.

Optional Parameters

DIR Specifies the name of the directory to be associated with this image catalog.

***SAME**: The directory will not be changed.

'directory-name': Specify the name of the directory to be associated with this image catalog.

TEXT Specifies the text that briefly describes the image catalog being changed.

***SAME**: The text description will not be changed.

***BLANK**: The text description will be blank.

'text-description': Specify up to 50 characters of text for this image catalog.

Examples for CHGIMGCLG

Example 1: Changing the text associated with an image catalog

```
CHGIMGCLG IMGCLG(MYCLG) TEXT('New Text')
```

This command changes the text associated with image catalog **MYCLG**.

Example 2: Changing the directory associated with an image catalog

```
CHGIMGCLG IMGCLG(MYCLG) DIR('/MyDir2')
```

This command changes the directory associated with image catalog **MYCLG** to **/MyDir2**.

Error messages for CHGIMGCLG

*ESCAPE Messages

CPFBC08

Image catalog &1 not changed.

CPFBC40

Not authorized to command &1.

CPFBC41

&1 command failed.



CHGIMGCLGE (Change Image Catalog Entry) Command Description

CHGIMGCLGE Command syntax diagram

Purpose

The Change Image Catalog Entry (CHGIMGCLGE) command is used to change the attributes of an image catalog (*IMGCLG object) entry. Each entry of an image catalog describes a file that contains a copy of an entire CD-ROM or DVD image file. The image catalog can be used as an alternative to loading and unloading a set of optical media.

Restrictions:

1. You must have *SECADM and *ALLOBJ special authorities to use this command.

Required Parameters

IMGCLG

Specifies the name of the image catalog that contains the entry to be changed.

image-catalog-name: Specify the name of the image catalog that contains the entry to be changed.

IMGCLGIDX

Specify an index number from 1 to 64 of the image catalog entry to be changed.

image-catalog-index-number: Specify a new index number from 1 to 64 of catalog entry to be changed.

Optional Parameters

NEWCLGIDX

Specify a new index number from 1 to 64. If an entry currently exists at the selected index location then the new entry will be inserted and all entries at or below the selected index number will be moved down.

***SAME**: The index number will not be changed.

new-catalog-index-number: Specify an existing index number from 1 to 64 for the selected catalog entry.

TEXT Specifies the text that briefly describes the image catalog entry being changed.

***SAME**: The text description will not be changed.

'text-description': Specify up to 50 characters of text for this image catalog entry.

Examples for CHGIMGCLGE

Example 1: Changing the Catalog Index Number

```
CHGIMGCLGE IMGCLG(MYCLG) IMGCLGIDX(5) NEWCLGIDX(2)
```

This command changes the index number associated with the selected image catalog entry from **5** to **2**.

Example 2: Changing the Catalog Entry Text

```
CHGIMGCLGE IMGCLG(MYCLG) IMGCLGIDX(5) TEXT('MyText')
```

This command changes the text associated with image catalog entry **5** to **MyText**.

Error messages for CHGIMGCLGE

***ESCAPE Messages**

CPFBC0C

Image catalog entry &1 not changed.

CPFBC40

Not authorized to command &1.

CPFBC41

&1 command failed.



CHGICFF (Change Intersystem Communications Function File) Command Description

CHGICFF Command syntax diagram

Purpose

The Change Intersystem Communications Function File (CHGICFF) command changes attributes in the file description of an ICF file.

Required Parameter

FILE Specifies the qualified name of the ICF file whose description is being changed.

The name of the ICF file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

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

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

file-name: Specify the name of the file whose description is being changed.

Note: The library and file name have up to 10 characters.

Optional Parameters

ACQPGMDEV

Specifies which program device is acquired when the file is opened.

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

***NONE:** The file is opened without a program device being acquired. All program devices used with this file must be explicitly acquired before input/output operations can be started with them.

program-device-name: Specify the name of the first program device acquired when the file is opened. The program device is defined to the file when the file is opened. The name must be specified on the PGMDEV parameter on an Add Intersystem Communications Function Program Device Entry (ADDICFDEVE) command, Change Intersystem Communications Function Program

Device Entry (CHGICFDEVE) command, or Override Intersystem Communications Function Program Device Entry (OVRICFDEVE) command before the file is opened.

MAXPGMDEV

Specifies the maximum number of program devices that can be used with the ICF file. The program devices are defined using the ADDICFDEVE, CHGICFDEVE, or OVRICFDEVE command. The number also determines the maximum number of program devices that can be added to the ICF file by the ADDICFDEVE command.

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

number-of-program-devices: Specify a value, ranging from 1 through 256, that specifies the maximum number of program devices that can be added to this ICF file.

MAXRCLEN

Specifies the maximum record length (bytes) used when the file is opened.

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

***CALC:** The length calculated for the largest record in the file is used when the file is opened.

record-length: Specify the maximum record length (in bytes) used when the file is opened. Valid values range from 1 through 32767.

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 those resources are not allocated within the specified wait time, an error message is sent to the program. More information on this parameter is in Commonly used parameters.

Note:

An immediate allocation of the device by the device resource is required when an acquire operation is performed to the file.

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

***IMMED:** The program does not wait; when the file is opened, an immediate allocation of the file resources is required.

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

number-of-seconds: Specify the number of seconds, ranging from 1 through 32767, that the program waits for resource allocation.

WAITRCD

Specifies the number of seconds the program waits for the completion of a read-from-invited-device operation to a multiple device file in a high-level language program. Refer to the appropriate high-level language reference manual to determine when a file is treated as a multiple device file. The program performing the read operation waits for input from all invited devices currently accessing the file. If a record is not returned from an invited device in the specified amount of time, a notify message is sent to the program. This parameter has no effect on an input operation directed to a specific device.

Note:


This parameter is also used to specify the time (seconds) that a CL program waits to complete a WAIT command. If a record is not returned from any of the devices that should return a record, an escape message is sent to the CL program. More information on the WAITRCD parameter is in the Receive File (RCVF), Send File (SNDF), Send/Receive File (SNDRCVF), and WAIT (Wait) command descriptions.

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

***NOMAX:** There is no limit on the time the system waits for the completion of the operation.

***IMMED:** The program does not wait for the read-from-invited-device operation for the completion of the file. A record must be available from an invited program device when the read-from-invited-program-device operation is performed. If a record is not already available when the read-from-invited-program-device operation is performed, a notify message is sent to the program.

number-of-seconds: Specify the number of seconds, ranging from 1 through 32767 seconds, that the program waits for the completion of the read-from-invited-program-devices.

DTAQ Specifies the name of the data queue that receives an entry from the system when a data-available event is signaled from an invited display device. The data queue need not exist when the display file is created since the name specified on this parameter is not evaluated until the file is used. More information on the data queue function is in the CL Programming  book.

Note:

Keyed data queues are not supported for this parameter. If a keyed data queue is specified, a run-time error will occur; but because it is not required that a data queue exist at the time the command is issued, the error will not be flagged.

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

***NONE:** A data queue does not receive an entry from the system.

The name of the data queue can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

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

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

data-queue-name: Specify the name of the data queue that receives an entry from the system when the data-available event is signaled.

SHARE

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

More information on shared database files is in the Database Programming topic in the Information Center.

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

***NO:** The ODP created by the program with this attribute is not shared with other programs in the routing step. Every time a program opens the file with this attribute, a new ODP to the file is created and activated.

***YES:** The ODP created with this attribute is shared with each program in the routing step that also specifies SHARE(*YES) when it opens the file.

Note:

When SHARE(*YES) is specified and control is passed to a program, a read operation in that program retrieves the next input record. A write operation produces the next output record.

LVLCHK

Specifies whether the record format level identifiers in the program are checked against those in the device file when the file is opened. If so, the record format identifiers in the program must match those in the device file. Because the same record format name can exist in more than one file, each record format is given an internal system identifier when it is created.

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

***YES:** The format-level identifiers of the record formats are checked when the file is opened. If the format-level identifiers are not all the same, or if they have not been specified in the program, an open error message is sent to the program that tried to open the file.

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

TEXT Specifies the text that briefly describes the file. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

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

Example for CHGICFF

```
CHGICFF FILE(ICFHIST) MAXPGMDEV(10)
```

This command changes the maximum number of program devices that can be added to the ICF file ICFHIST.

Error messages for CHGICFF

*ESCAPE Messages

CPF7304

File &1 in &2 not changed.

CHGIPSIFC (Change IP over SNA Interface) Command Description

CHGIPSIFC Command syntax diagram

Purpose

The Change IP over SNA Interface (CHGIPSIFC) command changes an existing AF_INET Sockets over SNA interface (an IP address by which this local host is known on the SNA transport). This command changes only the subnetmask. It does not change the internet address. The internet address identifies the interface being changed.

Restrictions:

1. The user must have *IOSYSCFG authority to use this command.
2. The interface cannot be active when you submit this command. Use the End IP over SNA Interface (ENDIPSIFC) CL command to deactivate the interface.
3. There can be no configured routes whose NEXTHOP internet address can be reached through the network associated with the IP over SNA interface to be changed.

Required Parameter

INTNETADR

Specifies the internet address of an interface that has previously been added to the SNA configuration with the Add IP over SNA Interface (ADDIPSIFC) CL command. The internet address is specified in the form *nnn.nnn.nnn.nnn*, where *nnn* is a decimal number ranging from 0 through 255. If the internet address is entered from a command line, the address must be enclosed in apostrophes.

Optional Parameter

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.

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.

Note: The bits that identify the subnetwork are not required to be adjacent in the address. However, it is strongly recommended that the subnet bits be contiguous and located in the most significant bits of the host address.

***SAME:** The subnet mask value does not change.

subnet-mask: Specify the mask for the network subnet field and host address field of the internet address that defines a subnetwork. The subnetwork 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 Add IP over SNA Interface (ADDIPSIFC) CL command.

Example for CHGIPSIFC

```
CHGIPSIFC INTNETADR('9.5.1.248') SUBNETMASK('255.255.0.0')
```

This command changes the subnet mask of the interface with IP address 9.5.1.248 to 255.255.0.0.

Error messages for CHGIPSIFC

***ESCAPE Messages**

TCP8050

*IOSYSCFG authority required to use &1.

TCP9999

Internal system error in program &1.

CHGIPSLOC (Change IP over SNA Location) Command Description

CHGIPSLOC Command syntax diagram

Purpose

The Change IP over SNA Location (CHGIPSLOC) command is used to change an existing AF_INET sockets over SNA location entry. This command only changes the remote network identifier (RMTNETID) and the location name template (LOCTPL). The remote route destination and subnet mask identify the location entry being changed.

Restriction: The user must have *IOSYSCFG authority to use this command.

Required Parameters

RMTDEST

Specifies the remote route destination of the location entry to be changed. The remote route destination is specified in the form *nnn.nnn.nnn.nnn* where *nnn* is a decimal number from 0 through 255.

SUBNETMASK

Specifies the subnet mask of the location entry to be changed.

***HOST:** The internet address value specified in the remote route destination field is a host address.

subnet-mask: Specify the subnet mask in the form *nnn.nnn.nnn.nnn* where *nnn* is a decimal number ranging from 0 through 255.

Optional Parameters

RMTNETID

Specifies the name of the remote SNA network associated with the IP network or IP address specified by the remote route destination.

***SAME:** The SNA remote network identifier value does not change.

***NETATR:** The remote network identifier specified in the network attributes is used.

remote-network-identifier Specify a 1 to 8-character remote network identifier. The first character must be A (or a) through Z (or z), or special characters \$, #, or @ followed by 0 through 9, A (or a) through Z (or z), \$, #, or @.

LOCTPL

Specifies the SNA location names associated with the IP network or subnetwork specified by the remote route destination or a single location name if the remote route destination address is for a single host.

***SAME:** The SNA location name template or location does not change.

location-name-template: Specify an 8 character template to be used by the system for generating remote location names based on the remote IP address specified on socket system calls. The first character must be A (or a) through Z (or z), or special characters \$, #, or @ followed by 0 through

9, A (or a) through Z (or z), \$, #, @, or ?. The template must specify some of the characters for the location name. The system generates the remaining characters based on the class of the IP address.

If the RMTDEST is for a group of hosts, a location name template must be specified. A single location name will not work.

For additional information about location name templates, see the Add IP over SNA Location (ADDIPSLOC) CL command.

location-name: Specify the remote location name. This name can be one to eight characters in length. The first character must be A (or a) through Z (or z), or special characters \$, #, or @ followed by 0 through 9, A (or a) through Z (or z), \$, #, or @.

If the RMTDEST is for a single host, a single location name must be specified. A location template will not work.

Example for CHGIPSLOC

```
CHGIPSLOC RMTDEST('128.2.0.0')
          SUBNETMASK('255.255.255.128') LOCTPL('ABCD????')
```

This command changes the location name template associated with AF_INET sockets over SNA location entry for a subnetwork with network 128.2 and subnet mask of 255.255.255.128.

Error messages for CHGIPSLOC

None

CHGIPSTOS (Change IP over SNA Type of Service) Command Description

CHGIPSTOS Command syntax diagram

Purpose

The Change IP over SNA Type of Service (CHGIPSTOS) command is used to change the SNA mode associated with each IP type of service.

Note:

For AF_INET sockets over SNA, the sockets application must select the desired IP type of service before the connection is established. After the connection is established, the sockets application can change the IP type of service, but it has not affect on the SNA mode associated with the underlying APPC conversation carrying the socket connection. The APPC conversation will continue to use the SNA mode that was in effect when the conversation was established.

Note:

Changes to a SNA mode made with the Change Mode Description (CHGMODD) CL command will not take effect for an APPC device that is currently using that mode until the mode has been started again for the APPC device.

Restriction: The user must have *IOSYSCFG authority to use this command.

Required Parameters

TOS Specifies the IP type of service to be changed.

***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.

***NORMAL:** Normal service is used for delivery of data.

MODE Specifies the SNA mode description used with this type of service. The mode can be one to eight characters in length. The first character must be A (or a) through Z (or z), or special characters \$, #, or @ followed by 0 through 9, A (or a) through Z (or z), \$, #, or @.

***NETATR:** The default mode name defined in the network attributes is used.

mode: Specify the name of an SNA mode description.

Restriction: The SNASVCMG and CPSVCMG modes are reserved for system use and cannot be specified for the MODE parameter.

Example for CHGIPSTOS

```
CHGIPSTOS TOS(*MINDELAY) MODE(MODE1)
```

This command changes the SNA mode for IP type of service *MINDELAY to MODE1.

Error messages for CHGIPSTOS

*ESCAPE Messages

CPFA112

IP over SNA type of service not changed.

CHGIPLA (Change IPL Attributes) Command Description

CHGIPLA Command syntax diagram

Purpose

The Change IPL Attributes (CHGIPLA) command allows you to change the settings of attributes that are used during the initial program load (IPL).

Restriction: To run this command, the user must have security administrator (*SECADM) and all object (*ALLOBJ) special authority.

Optional Parameters

RESTART

Specifies the point from which the initial program load (IPL) restarts when RESTART(*YES) or RESTART((*YES *IPLA)) are specified on the Power Down System (PWRDWN SYS) command. Specifying *SYS rather than *FULL can reduce the time required to restart the system. The initial (shipped) value for this parameter is *SYS.

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

***SYS:** The operating system is restarted. The hardware is restarted only if a PTF that requires a hardware restart is to be applied.

***FULL:** All portions of the system, including the hardware, are restarted.

KEYLCKPOS

Specifies the keylock position. A change to this attribute takes affect immediately. The following restrictions apply when the keylock position is being changed:

- The keylock position cannot be set to MANUAL for security reasons.
- If the keylock position is currently SECURE, the keylock position cannot be changed.
- If the system has a keylock and the key is not inserted, the keylock position cannot be changed.

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

***NORMAL:** The keylock position is changed to NORMAL.

***AUTO:** The keylock position is changed to AUTO.

***SECURE:** The keylock position is changed to SECURE.

HDWDIAG

Specifies whether certain hardware diagnostics should be performed during the IPL. The list of diagnostics is pre-determined by the system and cannot be modified by the user. This attribute cannot be changed from a secondary partition. The initial (shipped) value for this attribute is *MIN.

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

***MIN:** The minimum set of hardware diagnostics is run.

***ALL:** All hardware diagnostics are run.

CPRJOBTL

Specifies when the job tables should be compressed to remove excess unused entries. The Display Job Tables (DSPJOBTL) command can be used to determine the number of unused entries in the job tables. Excessive unused entries can result in poor performance during both IPL steps that process the table and runtime functions that work with jobs. The initial (shipped) value for this attribute is *NONE.

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

***NONE:** The job tables are not compressed during any IPL.

***NORMAL:** The job tables are compressed during normal IPLs only.

***ABNORMAL:** The job tables are compressed during abnormal IPLs only.

***ALL:** The job tables are compressed during all IPLs.

CHKJOBTL

Specifies when particular damage checks on the job tables should be performed. The initial (shipped) value for this attribute is *ABNORMAL.

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

***ABNORMAL:** The job table checks are performed during an abnormal IPL only.

***ALL:** The job table checks are performed during all IPLs.

***SYNC:** The job table checks are performed synchronously during all IPLs.

RBDPRDIR

Specifies when the product directory information should be fully rebuilt. A full rebuild is required during the IPL following the install of the operating system. This attribute is overridden during that IPL. The initial (shipped) value for this attribute is *NONE.

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

***NONE:** The product directory information is not fully rebuilt.

***NORMAL:** The product directory information is fully rebuilt during a normal IPL only.

***ABNORMAL:** The product directory information is fully rebuilt during an abnormal IPL only.

***ALL:** The product directory information is fully rebuilt during all IPLs.

MSFRCY

Specifies whether Mail Server Framework recovery is done during abnormal IPLs. The initial (shipped) value for this attribute is *NONE.

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

***NONE:** Mail Server Framework recovery is not done during IPL. Recovery is done when Mail Server Framework starts.

***ABNORMAL:** Mail Server Framework recovery is done during an abnormal IPL.

DSPSTS

Specifies whether the status of OS/400 IPL steps is displayed at the console during IPL. Status is not displayed during install IPLs or when the console is not powered on. The initial (shipped) value for this attribute is *ALL.

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

***SYS:** The status of OS/400 IPL steps is displayed during attended IPLs and abnormal IPLs.

***NONE:** The status of OS/400 IPL steps is not displayed during IPL.

***ATTEND:** The status of OS/400 IPL steps is displayed during attended IPLs.

***ABNORMAL:** The status of OS/400 IPL steps is displayed during abnormal IPLs.

***ALL:** The status of OS/400 IPL steps is displayed during all IPLs, except as noted above.

STRTCP

Specifies whether the Start TCP/IP (STRTCP) command is automatically submitted at the completion of IPL and when the controlling subsystem is restarted from the restricted state. The STRTCP command is not submitted during install IPLs or when the system is starting to the restricted state. If you are using Operations Console, a value of *YES is recommended for this attribute. See the STRTCP command help for more information. The initial (shipped) value for this attribute is *YES.

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

***NO:** STRTCP command is not automatically submitted. The STRTCP command must be used to start TCP/IP.

***YES:** STRTCP command is automatically submitted at the completion of IPL.

CLRJOBQ

Specifies whether or not to clear the jobs from all job queues. The initial (shipped) value for this attribute is *NO. This attribute is reset to its initial value after each IPL.

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

***NO:** The job queues are not cleared.

***YES:** The job queues are cleared during the IPL. This attribute is then reset to *NO.

CLRROUTQ

Specifies whether or not to clear all output queues, thus removing all spooled output from the system. The initial (shipped) value for this attribute is *NO. This attribute is reset to its initial value after each IPL.

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

***NO:** The output queues are not cleared.

***YES:** The output queues are cleared during the IPL. This attribute is then reset to ***NO**.

CLRINCJOB

Specifies whether or not to delete the joblogs for jobs that were active at the time of the last system power down. The initial (shipped) value for this attribute is ***NO**. This attribute is reset to its initial value after each IPL.

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

***NO:** The joblogs are not deleted.

***YES:** The joblogs are deleted during the IPL. This attribute is then reset to ***NO**.

STRPRTWTR

Specifies whether or not print writers should be started at IPL time. The initial (shipped) value for this attribute is ***YES**. This attribute is reset to its initial value after each IPL.

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

***NO:** Print writers are not started at IPL time. This attribute is then reset to ***YES**.

***YES:** Print writers are started at IPL time.

STRRSTD

Specifies whether or not the system should be started in the restricted state, which means that only the system console will be active. The initial (shipped) value for this attribute is ***NO**. This attribute is reset to its initial value after each IPL.

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

***NO:** The system is not started to the restricted state.

***YES:** The system is started to the restricted state. This attribute is then reset to ***NO**.

Example for CHGIPLA

```
CHGIPLA  CPRJOBTL(*ABNORMAL)
```

This command causes the job tables to be compressed on abnormal IPLs.

Error messages for CHGIPLA

***ESCAPE Messages**

CPF1886

User not authorized to change IPL attributes.

CPF1887

Error occurred changing IPL attributes.

CHGJVAPGM (Change Java Program) Command Description

CHGJVAPGM Command syntax diagram

Purpose

The Change Java Program (CHGJVAPGM) command changes the attributes of the Java program attached to a Java class file, or to the set of Java programs attached to a Java archive (JAR) file. A file is assumed to be a JAR file if the file name ends with '.jar' or '.zip'.

Java programs may be recreated if the attributes specified differ from those of the current programs, or if MERGE(*YES) is specified. CHGJVAPGM will not create Java programs for class files, or classes within JAR files, that do not have attached Java programs. Java program(s) can be created dynamically when Java code invokes a Java class and either a Java program has not been created from this class file or the

Java program created from the class file is older than the class file. There may be classes in a JAR file from which no Java programs have been created. Create Java Program (CRTJVAPGM) command may be used to create Java programs from these classes. CHGJVAPGM replaces existing Java programs only, including those that are older than the class from which they were created.

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

Required Parameter

CLSF Specifies the class file name or the Java archive (JAR) file name to which the Java program(s) to change are attached. The file name may be qualified by one or more directory names.

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

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

Optional Parameters

OPTIMIZE

Specifies the optimization level of each iSeries 400 Java program attached to the class object or the JAR file object. For OPTIMIZE(*INTERPRET), the resulting Java program(s) will interpret the class file byte codes when invoked. For other optimization levels, the Java program(s) will contain machine instruction sequences that are run when the Java program(s) are invoked.

OPTIMIZE(*INTERPRET) Java programs will be smaller but will run slower than Java programs created with higher optimization levels. As you increase the optimization level beyond 10, the Java program performance will generally improve, but the time required to create the Java program will increase and you will have less ability to debug the Java program.

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

10: The Java program(s) will contain a compiled version of the class file byte codes but will have only minimal additional compiler optimization. Variables can be displayed and modified while debugging.

***INTERPRET:** The Java program(s) will not be optimized. When invoked, the Java program(s) will interpret the class file byte codes. Variables can be displayed and modified while debugging.

20: The Java program(s) will contain a compiled version of the class file byte codes and will have some additional compiler optimization performed. Variables can be displayed but not modified while debugging.

30: The Java program(s) will contain a compiled version of the class file byte codes and will have more compiler optimization performed than optimization level 20. During a debug session, user variables cannot be changed, but can be displayed. The presented values may not be the current value of the variable.

40: The Java program(s) will contain a compiled version of the class file byte codes and will have more compiler optimization performed than optimization level 30. In addition, it includes optimization that disables call and instruction tracing.

ENBPRFCOL

Specifies whether collection of performance data is enabled.

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

***NONE:** The collection of performance data is not enabled. No performance data is to be collected.

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

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

» PRFDTA

Specifies whether profiling data will be enabled to be collected on the Java program(s), whether profiling data will be cleared from the Java program(s), or whether the Java program(s) will be optimized using the profiling data.

***SAME:** If any of the Java program(s) attached to a JAR file contain applied profiling data, the Java programs are not changed. If the OPTIMIZE, ENBPRFCOL, or LICOPT parameters do not specify changes to the values currently in effect, Java programs are not changed. If these parameters specify changes to the values currently in effect and the Java programs are enabled to collect profiling data, previously collected profiling data will be lost.

***NOCOL:** Java program(s) will not be enabled to collect profiling data. Specifying *NOCOL will remove all applied profiling data if the Java programs(s) have profiling data applied.

***COL:** Existing Java program(s) will be enabled to collect profiling data. Specifying *COL will remove all applied profiling data if the Java programs(s) have profiling data applied. Previously collected profiling data will be lost.

***CLR:** All previously collected profiling data is discarded. The Java program(s) remain enabled to collect profiling data.

***APYALL:** Re-optimize the Java program(s) using the collected profiling data, if the Java program(s) are enabled to collect profiling data. The collection of profiling data is no longer enabled. «

MERGE

Specifies whether Java programs attached to a Java archive (JAR) file are to be merged into the minimum number of Java programs possible. This parameter is ignored if processing a Java class file.

***RPL:** Specifies that Java programs attached to the JAR file will be merged only if the Java programs need to be recreated and replaced because other Java program attributes are being changed. If no attributes are changed and no Java programs need to be recreated and replaced, no merging of Java programs will occur.

***YES:** Merge all Java programs attached to a JAR file into the minimum number of Java programs possible. Java programs that contain applied profiling data and are not being recreated because of attributes being changed will not be merged because the resulting Java programs would not be optimized based on the applied profiling data.

SUBTREE

Specifies whether subdirectories are processed when looking for files that match the name pattern specified on the CLSF parameter.

***NONE:** Only the files that match the CLSF name pattern are processed. No subtrees are processed. If the directory has subdirectories, neither the subdirectories nor the objects in the subdirectories are processed.

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

LICOPT

Specifies one or more Licensed Internal Code compile-time optimization options.

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

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

Examples for CHGJVAPGM

Example 1: Change Java Program to Interpreted

```
CHGJVAPGM CLSF('/projectA/team2/myJavaclassname.class')
          OPTIMIZE(*INTERPRET)
```

This command will change the Java program associated with the class file myJavaclassname so that the Java program will interpret the class file byte codes when invoked via the RUNJVA (Run Java) or JAVA CL command. The Java program is re-created only if the attributes specified differ from those of the current program.

Example 2: Change Optimized Java Programs in a JAR File

```
CHGJVAPGM CLSF('/projectB/myJavaappfile.jar')
          OPTIMIZE(10)
```

This command will change the Java programs currently attached to Java archive (JAR) file myJavaappfile. The Java programs will contain compiled machine instruction sequences which will be run when the Java program is invoked via the RUNJVA (Run Java) or JAVA CL command.

Error messages for CHGJVAPGM

*ESCAPE Messages

JVAB524

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

JVAB532

Unable to create Java program for "&1".

JVAB535

Unmonitored exception received.

CHGJOB (Change Job) Command Description

CHGJOB Command syntax diagram

Purpose

The Change Job (CHGJOB) command changes some of the attributes of a job. With the exception of a change in job queue, the job can be in a job or output queue, or it can be active in a subsystem. The job queue can only be changed when the job is a batch job and is in a job queue. If the job is in the output queue, the only thing that can be changed is the OUTQ priority. With the exception of the class attributes, the new attributes remain in effect for the duration of the job unless they are changed by another CHGJOB command. The class attributes remain in effect until the routing step that is currently active ends. If no routing step is active when the changes are made, they apply to the next routing step that is started. If an attribute that no longer affects the job is changed, a message is sent to the user of the command. For example, if the job has already completed running, it is too late to change the OUTQ and JOBPTY parameters. If any output files are still on the output queue, however, changing the OUTPTY parameter changes their output priority.

Restrictions:

1. The command must be issued from within the job being changed, or the issuer of the command must be running under a user profile which is the same as the job user identity of the job being changed, or the issuer of the command must be running under a user profile which has job control (*JOBCTL) special authority.

The job user identity is the name of the user profile by which a job is known to other jobs. It is

described in more detail in the Work Management  book.

2. Only a user with job control (*JOBCTL) special authority can change the RUNPTY, TIMESLICE, PURGE, or DFTWAIT values.
3. To change JOBQ or OUTQ, the user changing the job must have authority to the new queue. This authority cannot come from program adoption. To change the OUTQ, authority to the old queue is needed.
4. This command is conditionally threadsafe. Refer to “Considerations for Attribute Thread Safety” on page 74 for additional information.

Optional Parameters

JOB Specifies the qualified name of the job and consists of as many as three elements. For example:

job-name

user-name/job-name

job-number/user-name/job-name

*N may be used in place of the user-name element to maintain position in the sequence. More information is in Commonly used parameters.

*: This command is issued within the job whose attributes are changed.

job-name: Specify the name of the job whose attributes are being changed. If no job qualifier is given, all of the jobs currently in the system are searched for the simple job name. If duplicates of the specified name are found, a qualified job name must be specified.

user-name: Specify the name of the user of the job whose attributes are being changed.

job-number: Specify the number of the job whose attributes are being changed.

JOBQ Specifies the qualified name of the job queue on which this job is placed.

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

The name of the job queue can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

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

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

job-queue-name: Specify the qualified name of the job queue on which the submitted job is placed.

JOBPTY

Specifies the scheduling priority used for the job being changed. Valid values range from 0 through 9, where 0 is the highest priority and 9 is the lowest priority. More information is in Commonly used parameters.

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

scheduling-priority: Specify a value, ranging from 0 through 9, for the job's scheduling priority. If the job is currently on the job queue, its position on the queue in relation to other jobs may be changed. The scheduling priority specified cannot be higher than the priority specified in the user profile under which the job, in which this command is entered, is running.

OUTPTY

Specifies the priority that the job's spooled files have for producing output. Valid values range from 1 through 9, where highest priority is 1 and the lowest priority is 9. More information is in Commonly used parameters.

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

output-priority: Specify a value, ranging from 1 through 9, for the priority of the job's output files. The output priority specified cannot be higher than the priority specified in the user profile in which the job entering the command is running.

PRTTXT

Specifies up to 30 characters of text to be printed at the bottom of each page of output. More information is in Commonly used parameters.

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

***SYSVAL:** The system value, QPRTTXT, is used.

***BLANK:** Text is not specified.

'print-text': Specify the character string that is printed at the bottom of each page. Up to 30 characters can be entered (enclosed in apostrophes).

LOG

Specifies the message logging values used to determine the amount and type of information sent to the job log by this job. This parameter has three elements: the message (or logging) level, the message severity, and the level of message text. If no values are specified on this parameter, the values specified in the job description associated with this job are used.

Note:

For an interactive job, the values specified for the LOG parameter on the Sign Off (SIGNOFF) command take precedence over those specified on the LOG parameter on the Change Job (CHGJOB) command.

Element 1: Message Level

The message level specifies the type of information that is logged.

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

message-level: Specify a value, ranging from 0 through 4, that specifies the message logging level used for the job's messages. For additional information on the message levels, refer to the *message-level* value on the LOG parameter of the Create Job Description (CRTJOB) command description.

Element 2: Message Severity

The severity level that is used in conjunction with the logging level to determine which error messages are logged in the job log.

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

message-severity: Specify a value, ranging from 00 through 99, that is used in conjunction with the logging level to determine which error messages are logged in the job log. More information on message severity is in Commonly used parameters.

Element 3: Message Text Level

The level of message text that is written in the job log when a message is logged according to the logging level and logging severity.

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

***MSG:** Only message text is written to the job's log.

***SECLVL:** Both the message text and the message help (cause and recovery) of the error message are written to the job log.

***NOLIST:** If the job ends normally, no job log is produced. If the job ends abnormally (if the job end code is 20 or higher), a job log is produced. The messages that appear in the job log contain both the message text and the message help.

LOGCLPGM

Specifies whether the commands that are run in a control language (CL) program are logged to the job log by way of the CL program's message queue. This parameter sets the status of the job's logging flag. If LOG(*JOB) value has been specified in the Create CL Program (CRTCLPGM) command, the flag set in the LOGCLPGM parameter is used. Other values for the LOG parameter override the LOGCLPGM parameter. The commands are logged in the same manner as requests are logged.

For more information on request logging, refer to the LOG parameter in the CRTCLPGM command description.

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

***YES:** Commands that come later in a CL program, which are capable of being logged, are logged to the job log.

***NO:** Commands that come later in a CL program are not logged to the job log.

INQMSGRPY

Specifies the way that inquiry messages, which occur as a result of running a job, are answered. The user can specify that no change is made in the way replies to inquiry messages are sent, that all inquiry messages require a reply by the receiver of the inquiry message, that a default reply be issued, or that the system reply list is checked for a matching reply list entry. The conditions to be met are listed in the system reply list entries; refer to the ADDRPLYE (Add Reply List Entry) command description for more information.

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

***RQD:** A reply is required from the receiver of the inquiry messages that are sent during the running of this 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.

***SYSRPYL:** The system reply list is checked to see whether there is an entry for inquiry messages issued during the running of this job. If a match occurs, the reply value in that entry is used. If no entry exists for that inquiry message, a reply is required.

BRKMSG

Specifies how break messages are handled for all message queues allocated in *BREAK or *NOTIFY mode for the job.

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

***NORMAL:** Break message handling is determined by the message queue status. Messages from the Send Break Message (SNDBRKMSG) command are shown at work stations to which a user is signed on.

***NOTIFY:** An audible alarm sounds to indicate the presence of a message. *NOTIFY is allowed only for interactive jobs. An alarm sounds if:

- The job was previously in BRKMSG(*HOLD) and there are messages on the queue that caused the alarm to sound
- Messages arrive from SNDBRKMSG, or messages arrive that exceed the severity of a message queue in *NOTIFY or *BREAK delivery mode; the messages are not shown

***HOLD:** Break messages are not shown either for message queues in *BREAK delivery mode or for messages sent to a signed on work station through the SNDBRKMSG command. The alarm does not sound for messages sent to message queues in *NOTIFY delivery mode. The user break message handling program is not started.

STSMSG

Specifies whether status messages are shown on the display for this job.

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

***USRPRF:** Status messages are shown or not shown as specified in the user profile under which this job was initially running.

***SYSVAL:** The value in the QSTSMSG system value is used.

***NONE:** Status messages are not shown on the display.

***NORMAL:** Status messages are shown on the display. Text on the bottom line of the display is lost.

PRTDEV

Specifies the qualified name of the default printer device for this job. If OUTQ(*DEV) is specified, the file is placed on an output queue with the same name as the printer.

Note:

This assumes the defaults are specified on the OUTQ parameter for the printer file, job description, user profile and workstation.

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

***USRPRF:** The printer device name specified in the user profile under which this job was initially running is used.

***SYSVAL:** The value specified in the system value QPRTDEV is used.

***WRKSTN:** The output queue assigned to the user's work station is used.

The name of the printer device can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

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

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

printer-device-name: Specify the name of the printer device used for this job.

OUTQ Specifies the qualified name of the output queue used for spooled files that specify OUTQ(*JOB). This parameter applies only to printer files that have *JOB specified on the OUTQ parameter.

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

***USRPRF:** The output queue specified in the user profile under which this job was initially running is used.

***DEV:** The output queue specified on the PRTDEV parameter is used.

***WRKSTN:** The output queue assigned to the user's work station is used.

The name of the output queue can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

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

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

output-queue-name: Specify the name of the output queue.

DDMCNV

Specifies whether the connections using distributed data management (DDM) protocols remain

active when they are not being used. The connections include APPC conversations, active TCP/IP conversations or OptiConnect connections. The DDM protocols are used in Distributed Relational Database Architecture (DRDA) applications, DDM applications, or DB2 Multisystem applications.

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

***KEEP:** The system keeps DDM conversations open when there are no users, except when:

- The routing step ends on the source system either at the job or when the job starts a reroute of the job.
- There is an explicit request that conversations be dropped, using the Reclaim Distributed Data Management Conversation (RCLDDMCNV) command or the Reclaim Resources (RCLRSC) command.
- There is a communications failure or internal systems failure.
- A DRDA connection to an application server not running on the iSeries 400 ends.

***DROP:** The system ends a DDM-allocated conversation when there are no users. Examples include when an application closes a DDM file, or when a DRDA application runs an SQL DISCONNECT statement.

Note:

Regardless of the value of DDMCNV, the RCLDDMCNV and RCLRSC commands end a DDM conversation if there are no users.

SCDDATE

Specifies the date on which the submitted job becomes eligible to run.

If your system or your job is configured to use the Julian date format, the *MONTHSTR and *MONTHEND values are calculated as if the system or job did not use the Julian date format.

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

***CURRENT:** The submitted job becomes eligible to run on the current date.

***MONTHSTR:** The submitted job becomes eligible to run on the first day of the month. If you specify *MONTHSTR, and if today is the first day of the month, and if the time you specify on the SCDTIME parameter has not passed, job is eligible to run today. Otherwise, the job becomes eligible to run on the first day of the next month.

***MONTHEND:** The submitted job becomes eligible to run on the last day of the month. If you specify *MONTHEND, and if today is the last day of the month, and if the time you specify on the SCDTIME parameter has not passed, job is eligible to run today. Otherwise, the job becomes eligible to run on the last day of the next month.

***MON:** The job becomes eligible to run on Monday.

***TUE:** The job becomes eligible to run on Tuesday.

***WED:** The job becomes eligible to run on Wednesday.

***THU:** The job becomes eligible to run on Thursday.

***FRI:** The job becomes eligible to run on Friday.

***SAT:** The job becomes eligible to run on Saturday.

***SUN:** The job becomes eligible to run on Sunday.

date: Specify a date in the job date format with or without separators.

SCDTIME

Specifies the time on the scheduled date at which the job becomes eligible to run.

Note:

Although the time can be specified to the second, the activity involved in submitting a job and the load on the system may affect the exact time at which the job becomes eligible to run.

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

***CURRENT:** The current time is used.

time: Specify a time in the system format with or without separators defined for the job.

DATE Specifies the date that is assigned to the job. More information on possible date formats is in the

CL Programming  book.

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

job-date: Specify the job date for the job. If no job date is specified for a job, the system date is used as the default for any function requiring a job date. The date specified in this parameter overrides the system date for the running of the job only.

DATFMT

Specifies the date format used for the job.

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

***SYSVAL:** The value specified in the system value QDATFMT is used.

***YMD:** The date format used is year, month, and day.

***MDY:** The date format used is month, day, and year.

***DMY:** The date format used is day, month, year.

***JUL:** The Julian date format is used.

DATSEP

Specifies the date separator used for the job.

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

***SYSVAL:** The value specified in the system value QDATSEP is used.

***BLANK:** A blank is used for the date separator.

'/': A slash (/) is used for the date separator.

'-': A dash (-) is used for the date separator.

'.': A period (.) is used for the date separator.

',': A comma (,) is used for the date separator.

TIMSEP

Specifies the time separator used for the job.

Note:

On other CL commands, time can be specified with or without a time separator. If a time separator is used on another command, it must be the same as the time separator specified on this parameter. If a different time separator is used to specify time on another command, the command will fail.

***SAME:** The time separator does not change.

***SYSVAL:** The value specified in the system value QTIMSEP is used.

'.': A colon (:) is used for the time separator.

',' : A comma (,) is used for the time separator.

'.' : A period (.) is used for the time separator.

***BLANK:** A blank is used for the time separator.

SWS Specifies the switch settings for a group of eight job switches used with the job. These switches can be set or tested in a CL program and used to control the flow of the program. For example, if a certain switch is on, another program can be called. The job switches may also be valid in other high-level language (HLL) programs. The only values that are valid for each 1-digit switch are 0 (off), 1 (on), or X. The X indicates that a switch value does not change.

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

switch-settings: Specify any combination (within quotation marks or not) of eight zeros, ones, or Xs to change the job switch settings. If a switch value does not change, enter an X in the position representing that switch.

RUNPTY

Specifies the run priority for the job. Run priority is a value, ranging from 1 (highest priority) through 99 (lowest priority), that represents the priority at which the job competes for the processing unit relative to other jobs that are active at the same time. This value represents the relative (not the absolute) importance of the job. For example, a job with a run priority of 25 is not twice as important as one with a run priority of 50. This value is the highest run priority allowed for any thread within the job. Individual threads within the job may have a lower priority. Changing the run priority of the job will affect the run priorities of all threads within the job. For example, the job is running at priority 10, thread A within the job is running at priority 10 and thread B within the job is running at priority 15. The priority of the job is changed to 20. The priority of thread A would then be adjusted to 20 and the priority of thread B would be adjusted to 25.

If the job consists of multiple routing steps, a change to this attribute during a routing step does not apply to subsequent routing steps.

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

run-priority: Specify the run priority, ranging from 1 through 99, that the job uses.

TIMESLICE

Specifies the maximum amount of processor time (in milliseconds) given to each thread in the job before other threads in this job and in other jobs are given the opportunity to run. The time slice establishes the amount of time needed by a thread in the job to accomplish a meaningful amount of processing. At the end of the time slice, the thread might be put in an inactive state so that other threads can become active in the storage pool.

If the job consists of multiple routing steps, a change to this attribute during a routing step does not apply to subsequent routing steps.

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

time-slice: Specify the amount of time (in milliseconds) that each thread in the job has to run when it is given processing time. Valid entries range from 1 through 9999999 (9 999 999 milliseconds or 9999.999 seconds).

Note:

Although you can specify a value of less than 8, the system takes a minimum of 8 milliseconds to run a process. If you display a job's run attributes, the time slice value is never less than 8.

PURGE

Specifies whether the job is marked to be moved out of main storage and put into auxiliary storage at the end of a time slice or when entering a long wait, such as waiting for a work station user's response. This attribute is ignored when more than one thread is active within the job.

If the job consists of multiple routing steps, a change to this attribute during a routing step does not apply to subsequent routing steps.

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

***YES:** The job is to be moved out of main storage and put into auxiliary storage. However, a job with multiple threads is never purged from main storage.

***NO:** The job is not eligible to be moved out of main storage and put into auxiliary storage. However, when main storage is needed, pages belonging to a thread in this job may be moved to auxiliary storage. Then, when a thread in this job runs again, its pages are returned to main storage as they are needed.

DFTWAIT

Specifies the default maximum time (in seconds) that a thread in the job waits for a system instruction, such as a LOCK machine interface (MI) instruction, to acquire a resource. This default wait time is used when a wait time is not otherwise specified for a given situation. Normally, this is the amount of time the user is willing to wait for the system before the request is ended.

If the wait time for any instruction is exceeded, an error message can be either shown or automatically handled by a Monitor Message (MONMSG) command.

The wait time specified for this parameter is ignored for read operations to database files; to specify that attribute, use the WAITRCD parameter of the appropriate database command (create, change, or override) for a physical, logical, or database file command.

If the job consists of multiple routing steps, a change to this attribute during a routing step does not apply to subsequent routing steps.

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

***NOMAX:** There is no maximum wait time.

seconds-to-wait: Specify a value, ranging from 1 through 9999999 seconds, for the maximum time that the system waits for the system instruction to acquire a resource.

DEVRCYACN

Specifies the work station device recovery action to use for the job when an input/output error is encountered on the *REQUESTER device (the device on which the user signed on the system) for interactive jobs.

Note: This parameter can be specified only for interactive jobs.

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

***SYSVAL:** The system value, QDEVRCYACN, is used as the device recovery action for this job.

***MSG:** The application program requesting the input/output operation receives an error message, which indicates that the input/output operation failed.

***DSCMSG:** The job is automatically disconnected. After the job is reconnected, it receives an error message indicating that an input/output error has occurred and that the device has been recovered. Even though the device has been recovered, the contents of the display prior to the error must be shown again.

***DSCENDRQS:** The job is automatically disconnected. After the job is reconnected, the End Request (ENDRQS) command is issued specifying the processor that made the previous request. If no request processor is available, the ENDRQS command fails, and the message issued when the *DSCMSG value is specified is signaled.

***ENDJOB:** The job is ended with the *IMMED option, and a job log is produced for the job.

***ENDJOBNO LIST:** The job is ended with the *IMMED option. No job log list is produced for the job.

TSEPOOL

Specifies whether threads in interactive jobs are moved to another main storage pool when the time slice end is reached. When a long wait occurs, the thread is moved back to the pool in which it was originally running. This may minimize the effect on the interactive response time of other interactive jobs. This parameter can be specified only for interactive jobs.

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

***SYSVAL:** The value specified in the system value QTSEPOOL is used.

***NONE:** A thread in the job is not moved to another main storage pool when it reaches the end of its time slice.

***BASE:** A thread in the job is moved to the base pool when the time slice end is reached.

PRTKEYFMT

Specifies the information to be printed when the print key is pressed.

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

***SYSVAL:** The value specified in the system value QPRTKEYFMT is used.

***PRTHDR:** Header information is included with output from the print key.

***PRTBDR:** Border information is included with output from the print key.

***PRTALL:** Header and border information is included with output from the print key.

***NONE:** Header and border information is not printed.

SRTSEQ

Specifies the sort sequence table to be used for string comparisons for this job.

***SAME:** This value does not change.

***SYSVAL:** The system value QSRTSEQ is used.

***USRPRF:** The sort table specified in the user profile under which this job was initially running 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.

The name of the sort sequence table can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

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

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

table-name: Specify the name of the sort sequence table to be used with this job.

LANGID

Specifies the language identifier to be associated with this job. The language identifier is used when *LANGIDUNQ or *LANGIDSHR is specified on the sort sequence prompt (SRTSEQ parameter). If the job CCSID is 65535, this parameter is also used to determine the value of the job default CCSID (DFTCCSID).

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

***SYSVAL**: The system value QLANGID is used.

***USRPRF**: The language ID specified in the user profile under which this job was initially running is used.

language-ID: Specify the language identifier to be used by the job.

CNTRYID

Specifies the country or region identifier to be used by the job.

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

***SYSVAL**: The system value QCNTRYID is used.

***USRPRF**: The country or region ID specified in the user profile under which this job was initially running is used.

country-or-region-ID: Specify the country or region identifier to be used by the job.

CCSID

Specifies the coded character set identifier (CCSID) used for the job.

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.

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

***SYSVAL**: The value specified in the system value QCCSID is used.

***USRPRF**: The CCSID specified in the user profile under which this job was initially running is used.

***HEX**: The CCSID 65535 is used.

coded-character-set-identifier: Specify the CCSID. More information on valid CCSIDs is in the Globalization topic in the Information Center.

DUPJOB OPT

Specifies the action taken when duplicate jobs are found by this command.

***SELECT**: The selection display is shown when duplicate jobs are found during an interactive session. For other types of sessions, a message is issued.

***MSG**: A message is issued when duplicate jobs are found.

JOBMSGQFL

Specifies the action that should be taken when the job message queue is full.

***SAME**: The job message queue full option does not change.

***SYSVAL**: The value specified for the QJOBMSGQFL system value is used.

***NOWRAP**: The message queue does not wrap when it is full. This action ends the job.

***WRAP:** The message queue wraps to the start of the message queue when full and starts filling the message queue again.

***PRTWRAP:** The message queue wraps the job message queue when full and prints the messages that are being overlaid because of wrapping.

DECfmt

Specifies the decimal format used for the job.

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

***SYSVAL:** The value specified for the QDECfmt system value is used.

***BLANK:** A period (.) is used for the decimal format, zero suppression

'J': A comma (,) is used for the decimal format, one leading zero

'I': A comma (,) is used for the decimal format, zero suppression

CHRIDCTL

Specifies the character identifier control used 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 on the CHRID command 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 value specified for the QCHRIDCTL system value will be used.

***USRPRF:** The character identifier control specified in the user profile under which this job was initially running is used.

***DEVd:** The *DEVd special value performs the same function as the *DEVd value on the CHRID command parameter for display files, printer files and panel groups.

***JOBCCSID:** The *JOBCCSID special value performs the same function as the *JOBCCSID value on the CHRID command parameter for display files, printer files and panel groups.

» SPLFACN

Specifies whether or not spooled files are accessed through job interfaces after the job ends. Keeping spooled files with jobs allows job commands such as Work with Submitted Jobs (WRKSBJOB) 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 jobs end.

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

***SYSVAL:** The value specified in the system value QSPLFACN is used.

***KEEP:** When the job ends, the spooled files are kept with the job and the status of the job is updated to indicate that the job has completed.

***DETACH:** When the job ends, the spooled files are detached from the job and the job is removed from the system. If the job has already ended, this change will immediately detach the spooled files from the job and remove the job from the system. <<

Examples for CHGJOB

Example 1: Changing Message Logging Values

```
CHGJOB JOB(123581/DEPT2/WS1) LOG(2 40 *SECLVL)
```

This command changes the job WS1, which is associated with the user profile DEPT2, and has the job number 123581. It receives only commands and associated diagnostic messages (help text) if the messages have a severity level greater than or equal to 40. Help text, in addition to the message text, is logged in the job log.

Example 2: Changing Scheduling Priority and Job Switches

```
CHGJOB JOB(PAYROLL) JOBPTY(4) OUTPTY(3)
      SWS(10XXXX00)
```

This command changes the scheduling priority for the job PAYROLL to 4 and the priority of the job's output to 3. Also, four of the eight job switches are changed: switches 1 and 2 are set to 1 and 0, switches 3 through 6 remain the same, and switches 7 and 8 are both set to 0. Because only the simple name of the job is specified, there can be only one job named PAYROLL in the system.

Example 3: Moving a Job to Another Queue

```
CHGJOB JOB(MYJOB) JOBQ(MYLIB/MYJOBQ)
      INQMSGRPY(*SYSRPYL)
```

This command moves the job from the job queue it is currently in to the job queue MYJOBQ in library MYLIB. For this change to be made, the job must not have begun running and must be a batch job. Also, the job is changed so that any inquiry message that is issued on behalf of this job that has an entry in the system automatic reply list is answered according to the reply in that system reply list entry. For any inquiry message not represented in the system reply list, a reply is required.

Example 4: Changing Run Priority and Default Wait Time

```
CHGJOB JOB(MYJOB) RUNPTY(10) DFTWAIT(150)
```

This command changes the run priority of the job MYJOB to 10 and the default wait time to 150 seconds, if the issuer of the command has job control authority. If the job is active, these changes take effect immediately. If the job is on a job queue, when the next routing step for the job is started, the run priority and default wait times become these values and not what was specified in the class associated with the routing entry used to start the step.

Additional Considerations

Warning: Temporary Level 3 Header

Considerations for Attribute Thread Safety

This command is intended to be used to change the job attributes for the target job (either the job that the command is issued in or another job on the system). All attributes that are to be changed are scoped to the job.

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

- Yes:** Attributes marked with this value are considered to be threadsafe. These attributes can be changed safely by issuing this command from either an initial thread or from a secondary thread. The target job may also be either single threaded or multi threaded.
- No:** Attributes marked with this value are not threadsafe. An attempt to change these attributes will be denied if multiple threads are active in the job issuing this command or in the target job.

Table 1. Attribute and Thread Safety

Attribute	Threadsafe
Break message handling (BRKMSG)	Yes
Character identifier control (CHRIDCTL)	Yes

Attribute	Threadsafe
Coded character set ID (CCSID)	Yes
Country or region ID (CNTRYID)	Yes
Date format (DATFMT)	Yes
Date separator (DATSEP)	Yes
DDM conversation (DDMCNV)	No
Decimal format (DECFMT)	Yes
Default wait time (DFTWAIT)	Yes
Device recovery action (DEVRCYACN)	Yes
Eligible for purge (PURGE)	Yes
Inquiry message reply (INQMGRPYPY)	Yes
Job date (DATE)	Yes
Job message queue full action (JOBMSGQFL)	Yes
Job priority (on JOBQ) (JOBPTY)	Yes
Job queue (JOBQ)	Yes
Job switches (SWS)	Yes
Language ID (LANGID)	Yes
Log CL program commands (LOGCLPGM)	Yes
Message logging (LOG)	Yes
Output priority (on OUTQ) (OUTPTY)	Yes
Output queue (OUTQ)	Yes
Print key format (PRTKEYFMT)	Yes
Print text (PRTTXT)	Yes
Print device (PRTDEV)	Yes
Run priority (RUNPTY)	Yes
Schedule date (SCDDATE)	No
Schedule time (SCDTIME)	No
Sort sequence (SRTSEQ)	Yes
▶▶ Spooled file action (SPLFACN)	Yes ◀◀
Status message (STSMMSG)	Yes
Time separator (TIMSEP)	Yes
Time slice (TIMESLICE)	Yes
Time slice end pool (TSEPOOL)	Yes

Error messages for CHGJOB

*ESCAPE Messages

CPF1317

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

CPF1321

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

CPF1332

End of duplicate job names.

CPF1334

Must be an interactive job for requested change.

CPF1336

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

CPF1337

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

CPF1340

Job control function not performed.

- CPF1341**
Reader or writer &3/&2/&1 not allowed as job name.
- CPF1343**
Job &3/&2/&1 not valid job type for function.
- CPF1344**
Not authorized to control job &3/&2/&1.
- CPF1351**
Function check occurred in subsystem for job &3/&2/&1.
- CPF1352**
Function not done. &3/&2/&1 in transition condition.
- CPF1634**
Specified date or time has passed.
- CPF1635**
Requested change no longer allowed.
- CPF1642**
Schedule date &1 not correct.
- CPF1644**
Scheduled date and time not changed.
- CPF1650**
Both scheduled date and time must be changed.
- CPF1651**
Sort sequence table not accessed.
- CPF180E**
&4 not changed.
- CPF1846**
Request did not complete. System value not available.
- CPF1854**
Value &1 for CCSID not valid.

CHGAUTJS (Change Job Authority using Job Scheduler) Command Description

Note: To use this command, you must have the 5722-JS1 (Job Scheduler for iSeries) licensed program installed.

CHGAUTJS Command syntax diagram

Purpose

The Change Job Authority using Job Scheduler (CHGAUTJS) command allows you to change the job authority that you have set up for Job Scheduler jobs.

Note: When referring to a job in this command, we are referring to an entry in Job Scheduler. An **entry** in Job Scheduler is a user-defined name for commands or programs that you want to process at scheduled times and dates. Job Scheduler jobs (entries) are not OS/400 objects.

You can select specific jobs, generic jobs or all jobs as well as group and application whose authority you want to change.

After you select the parameters in the change command and press Enter, the authority that you have specified for the jobs are changed.

Required Parameters

JOB Specifies the name of the job, generic job or all jobs whose authority that you want to change. You must specify the job. You can optionally specify the group that the job belongs to and the associated sequence number within the group.

Element 1: Job

***ALL:** All the job entries that meet this command's other parameter values are changed.

generic-job-name:* Specify the generic name of the job schedule entries whose job schedule entries that you want to change. A generic job is a character string of one or more characters followed by an asterisk (*); for example, ABC*. If the generic name is specified, then all entries with jobs that begin with the generic name are changed. If an asterisk is not included with the generic (prefix) name, the system assumes it to be the complete job.

job-name: Specify the user-defined name of the job entry whose authority that you want to change.

Element 2: Group

***NONE:** This job does not belong to a group.

***ALL:** All the group entries that meet this command's other parameter values are changed.

generic-group-name:* Specify the generic name of the group entry. A generic name is a character string of one or more characters followed by an asterisk (*); for example, ABC*. If the generic name is specified, then all entries with groups that begin with the generic name are changed. If an asterisk is not included with the generic (prefix) name, the system assumes it to be the complete group.

group-name: Specify the user-defined name of the group entries you want to change.

Element 3: Group sequence

***NONE:** The job does not have a sequence number.

***ALL:** All sequence numbers in the group are included in the authority change.

group-sequence-number: Specify the sequence number of the job in the group whose authority you are changing. Sequence numbers can range from 1 to 99.

USER Specifies the name of a user to whom authority for the named job is being given.

This is a required parameter.

***PUBLIC:** All enrolled users (or their group) of the system who do not have specific authority to the job are changed.

user-name: Specify the user profile whose authority you want to change.

Optional Parameters

APP Specifies the name of the application, generic application or all applications whose authority that you want to change.

***ALL:** All the applications that meet this command's other parameter values are changed.

generic-application-name:* Specify the generic name of the application whose job schedule entries that you want to change. A generic name is a character string of one or more characters followed by an asterisk (*); for example, ABC*. If the generic name is specified, then all entries with application names that begin with the generic name are changed. If an asterisk is not included with the generic (prefix) name, the system assumes it to be the complete application name.

application-name: Specify the user-defined name of the application whose authority that you want to change.

AUT Specifies the authority given to the user specified in the USER parameter.

***CHANGE:** Change authority allows the user to perform all operations on the job except authority maintenance.

***ALL:** The user can perform all operations on the job. The user can control the job's existence, specify the security for the job, change the job, and perform basic functions on the job.

***OPER:** Operational authority provides job submission, job management and display authorities.

***USE:** Use authority provides display authority.

***EXCLUDE:** Exclude authority prevents the user from accessing the job.

***REMOVE:** Removes the authority entry for the specified user.

Example for CHGAUTJS

Example 1: Changing Authority for a Job

```
CHGAUTJS JOB(JOB02) USER(SAM) AUT(*USE)
```

In this example, job JOB02 is changed to allow *USE authority which provides screen display authority to user SAM.

Error messages for CHGAUTJS

None

CHGJOB (Change Job Description) Command Description

CHGJOB Command syntax diagram

Purpose

The Change Job Description (CHGJOB) command changes the job-related attributes specified for a job description object through the Create Job Description (CRTJOB) command.

Any attribute, except the public authority attribute, may be changed. More information on changing object authorizations is in the descriptions of the Revoke Object Authority (RVKOBJAUT) command and Grant Object Authority (GRTOBJAUT) command.

Restrictions:

1. The user of this command must have operational authority for the user profile named in the USER parameter.
2. The user of this command must have object operational and object management authorities for the job description, and execute authority for the library in which the job description resides is also required.
3. To change the ACGCDE parameter to a value other than *USRPRF, the user must have *USE authority to the Change Accounting Code (CHGACGCDE) command.

Required Parameter

JOB Specifies the qualified name of the job description being changed.

Note:

You cannot specify the job description QSYSJOB on this parameter. This job description is the backup job description for the system and cannot be changed by the user.

The name of the job description can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

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

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

job-description-name: Specify the job description name being changed.

Optional Parameters

USER Specifies the name of the user profile associated with this job description. The names QSECOFR, QSPL, QDOC, QDBSHR, QRJE, QTSTRQS, QDFTOWN, and QSYS are not valid entries for this parameter.

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

***RQD:** A user profile name is required to get access to the job description. For work station entries, a password must be entered when signing on the work station; the associated user name becomes the user profile name used for the job. *RQD is not valid for job descriptions specified for job entries that start automatically, or for those used by the Batch Job (BCHJOB) command. It is valid on the Submit Job (SBMJOB) command only if USER(*CURRENT) is specified.

user-name: Specify the user name that identifies the user profile associated with batch jobs using this job description. For interactive jobs, this is the default user name used for signing on the system without typing a password.

JOBQ Specifies the qualified name of the job queue on which this job is placed.

***SAME:** The name of the job queue does not change.

The name of the job queue can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

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

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

job-queue-name: Specify the qualified name of the job queue associated with this job description.

If the job queue does not exist when the job description is changed, a library qualifier must be specified because the job queue name is retained in the job description.

JOBPTY

Specifies the scheduling priority for jobs that use this job description. Valid values range from 1 through 9, where 1 is the highest priority and 9 is the lowest priority. More information is in Commonly used parameters.

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

scheduling-priority: Specify a value, ranging from 1 through 9, for the scheduling priority for jobs that use this job description.

OUTPTY

Specifies the output priority of spooled files produced by jobs that use this job description. Valid values range from 1 through 9. The highest priority is 1 and the lowest priority is 9. More information is in Commonly used parameters.

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

output-priority: Specify a value, ranging from 1 through 9, for the output priority of the spooled files produced by jobs that use this job description.

PRTTXT

Specifies up to 30 characters of text to be printed at the bottom of each page of output. More information is in Commonly used parameters.

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

***SYSVAL:** The system value, QPRTTXT, is used.

***BLANK:** Text is not specified.

'print-text': Specify up to 30 characters, enclosed in apostrophes, to be printed at the bottom of each page.

ACGCDE

Specifies the accounting code used when logging system resource use for a job having this job description. To specify an accounting code other than *USRPRF, the user must have *USE authority for the Change Accounting Code (CHGACGCDE) command.

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

***USRPRF:** The accounting code for jobs using this job description is obtained from the user profile for the job.

***BLANK:** An accounting code consisting of 15 blanks is assigned to jobs that use this job description.

'accounting-code': Specify the character string that is used as the accounting code for jobs that use this job description and have accounting statistics logged in the system accounting journal QSYS/QACGJRN. If less than 15 characters are entered, the string is padded with blanks on the right. Note that the character string '*USRPRF' is considered a special value that cannot be used as an accounting code on this command.

RTGDTA

Specifies the routing data used with this job description to start jobs. The routing data determines the routing entry in the subsystem description that identifies the program in which the job runs.

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

***RQSDTA:** Up to the first 80 characters of the request data specified in the RQSDTA parameter are used as the routing data for the job.

'routing-data': Specify the character string, enclosed in apostrophes, that is used as the routing data for jobs that use this job description. For example, the value QCMDI is the routing data used

by the IBM-supplied interactive subsystem (QINTER and QBASE) to route interactive jobs to the IBM-supplied control language processing unit, QCMD. Up to 80 characters can be specified.

RQSDTA

Specifies the request data placed as the last entry in the job's message queue for jobs using this job description. For example, when a CL command is supplied as request data, it becomes a message that can be read by the control language processing unit, QCMD if the job is routed to QCMD.

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

***NONE:** No request data is placed in the job's message queue.

***RTGDTA:** The routing data specified in the RTGDTA parameter is placed as the last entry in the job's message queue.

'request-data': Specify the character string placed as the last entry in the job's message queue as a single request. Up to 256 characters can be entered, enclosed in apostrophes. When a CL command is entered, it must be enclosed in single apostrophes, and where single apostrophes would normally be used *inside* the command, double apostrophes must be used instead.

SYNTAX

Specifies whether requests placed on the job message queue for jobs using this job description are syntax-checked as CL commands. When syntax checking is specified, the commands are checked for syntax as they are submitted instead of when the job is run. This provides an earlier diagnosis of syntax errors. If checking is specified, the message severity that causes a syntax error to end processing of a job is also specified.

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

***NOCHK:** The request data is not checked for syntax as CL commands.

message-severity: Specify a value, ranging from 00 through 99, that specifies the lowest message severity that can cause running of a job to end. The request data is checked for syntax as CL commands; if a syntax error occurs that has severity equal to or greater than the error message severity specified here, the running of the job containing the erroneous command is suppressed. More information on message severity is in Commonly used parameters.

If the message severity is specified, it is used only when the job description is used by a job command that also has RQSDTA(*) specified and the requests are CL commands.

INLLIBL

Specifies the initial user part of the library list used for jobs that have this job description.

Note:

Duplicating libraries in the library list is not allowed.

More information on the use of library lists is in the CL Programming  book.

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

***SYSVAL:** The system default user library list is used for jobs that use this job description. The default library list contains the library names specified in the system values when a job using this job description is started.

***NONE:** The user part of the initial library list is empty; only the system portion is used.

library-name: Specify the names of one or more libraries in the user part of the library list for jobs that use this job description. No more than 250 names can be specified; the libraries are searched in the same order as they are listed here.

ENDSEV

Specifies the message severity level of escape messages that can cause running of a batch job to end. The batch job is ended when a request in the batch input stream sends to the request processing program QCMD or QCL an escape message whose severity code is equal to or greater than that specified. This parameter value is compared with the severity of an escape message not monitored that occurs as a result of running a noncompiled CL command in a batch job. More information on message severity is in Commonly used parameters.

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

message-severity: Specify a value ranging from 00 through 50 for the message severity of an escape message that results from a request in the batch input stream and ends the jobs that use this job description. Because escape messages typically have a maximum severity level of 50, a value of 50 or lower must be specified to end a job as a result of an escape message. An unhandled escape message whose severity is equal to or greater than the value specified causes the job to be canceled. More information on message severity is in Commonly used parameters.

LOG Specifies the message logging values used to determine the amount and type of information sent to the job log by this job. This parameter has three elements: the message (or logging) level, the message severity, and the level of message text. If no values are specified on this parameter, the values specified in the job description associated with this job are used.

Element 1: Message Level

The message level specifies the type of information that is logged.

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

message-level: Specify a value, ranging from 0 through 4, for the message logging level used for the job's messages. For a description of the message levels, refer to the *message level* variable description in the LOG parameter of the CRTJOB command.

Element 2: Message Severity

The severity level that is used in conjunction with the logging level to determine which error messages are logged in the job log of jobs using this job description.

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

message-severity: Specify a value, ranging from 00 through 99, that is used in conjunction with the logging level to determine which error messages are logged in the job log. More information on message severity is in Commonly used parameters.

Element 3: Message Text Level

The level of message text that is written to the job log when a message is logged according to the logging level and the logging severity.

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

***MSG:** Only the message text is written to the job log.

***SECLVL:** Both the message text and the message help (cause and recovery) of the error message are written to the job log.

***NOLIST:** If the job ends normally, no job log is produced. If the job ends abnormally (if the job end code is 20 or higher), a job log is produced. The messages that appear in the job log contain both the message text and the message help.

LOGCLPGM

Specifies whether the loggable commands logged and run in a control language program are logged to the job log by way of the CL program's message queue. This parameter sets the status of the job's logging flag. If *NO is specified, the logging flag status is *off* and CL commands are

not logged. If *YES is specified and the LOG(*JOB) value is specified in the Create CL Program (CRTCLPGM) command, all commands in the CL program that can be logged are logged to the job log.

For more information on request logging, refer to the LOG parameter in the CRTCLPGM command description.

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

***NO:** The commands in a CL program are not logged to the job log.

***YES:** The commands in a CL program are logged to the job log.

INQMSGRPY

Specifies the action taken when a predefined inquiry message is issued by a job that uses this job description. The conditions that must be met are listed in the system reply list entries. Refer to the ADDRPLYE (Add Reply List Entry) command description for more information.

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

***RQD:** A reply is required for any predefined inquiry message issued by a job that uses this job description.

***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.

***SYSRPLY:** The system reply list is checked to determine whether an entry matches the message identifier and optional compare value for any inquiry message issued by a job that uses this job description. If a match occurs, the reply value in that reply list entry is used. If no entry exists for that message, a reply is required.

PRTDEV

Specifies the name of the default printer device for this job. If the printer file being used to create the output specifies to spool the file, 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 on the OUTQ parameter for the printer file, job description, user profile and workstation.

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

***USRPRF:** The name of the printer device for jobs using this job description is taken from the user profile for the job when the job is started.

***SYSVAL:** The value specified in the system value QPRTDEV is used.

***WRKSTN:** The output queue assigned to the user's work station is used.

printer-device-name: Specify the name of the printer device used with this job description.

OUTQ Specifies the qualified name of the output queue used for spooled printer files that specify OUTQ(*JOB). This change does not affect files already created in active jobs or files in completed jobs in which the files were spooled.

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

***USRPRF:** The output queue name for jobs using this job description is taken from the user profile for the job at the time the job is started.

***DEV:** The output queue specified on the PRTDEV parameter is used.

***WRKSTN:** The output queue assigned to the user's work station is used.

The name of the output queue can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

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

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

output-queue-name: Specify the name of the default output queue used by jobs that use this job description.

If the output queue does not exist when the job description is changed, a library qualifier must be specified, because the qualified output queue name is retained in the job description.

HOLD Specifies whether jobs using this job description are placed on the job queue in the hold condition. A job placed on the job queue in the hold condition is held until it is either released by the Release Job (RLSJOB) command or canceled by the End Job (ENDJOB) or Clear Job Queue (CLRJOBQ) command. If the job is not run before the next power-down of the system, the job queue can be cleared (and the job ended) when the next initial program load (IPL) is done.

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

***NO:** Jobs using this job description are not held when they are put on the job queue.


***YES:** The spooled file is held until released by the Release Spool File (RLSSPLF) command.

DATE Specifies the date that is assigned for jobs that use this job description.

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

***SYSVAL:** The value in the QDATE system value at the time the job is started is used as the job date.

job-date: Specify the value used as the job date for the job being started. The format currently

specified for the system value QDATFMT must be used. The Work Management  book describes the QDATFMT system value.

SWS Specifies the initial job switch settings for a group of eight job switches for jobs that use this job description. These switches can be set or tested in a CL program and used to control the flow of the program. For example, if a certain switch is on, another program may be called. The job switches may also be valid in other high-level language (HLL) programs. The only values that are valid for each single-digit switch are 0 (off) or 1 (on).

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

switch-settings: Specify any combination of eight 0's or 1's to change the job switch settings.

DEVRCYACN

Specifies the recovery action to take for the job when an input/output error is encountered on the *REQUESTER device (the device on which the user signed on the system) for interactive jobs that use this job description.

Note: This attribute is ignored for non-interactive jobs.

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

***SYSVAL:** The system value, QDEVRCYACN, is used as the device recovery action for this job.

***MSG:** The application program requesting the input/output operation receives an error message which indicates that the input/output operation has failed.

***DSCMSG:** The job is automatically disconnected. After the job is reconnected, it receives an error message indicating that an input/output error has occurred and that the device has been recovered. Even though the device has been recovered, the contents of the display when the error occurred must be shown again on the display.

***DSCENDRQS:** The job is automatically disconnected. After the job is reconnected, the ENDRQS command is issued specifying the processor that made the previous request. If a request processor is unavailable, the ENDRQS command fails, and the error message issued during the DSCMSG case is signaled.

***ENDJOB:** The job is ended with the *IMMED option. A job log is produced for the job.

***ENDJOBNOLOG:** The job is ended with the *IMMED option. No job log is produced for the job.

TSEPOOL

Specifies whether interactive jobs are moved to another main storage pool when the end of the time slice is reached. When a long wait occurs, the job is moved back to the pool in which it was originally running. This may help minimize the effect on interactive response time.

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

***SYSVAL:** The system value in QTSEPOOL is used as the time slice end pool action for this job description.

***NONE:** The job is not moved when the end of the time slice is reached.

***BASE:** The job is moved to the base pool when the end of the time slice is reached.

TEXT Specifies the text that briefly describes the job description. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

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

JOBMSGQMX

Specifies the maximum size of the job message queue.

***SAME:** The job message queue maximum size will not change.

***SYSVAL:** The value in QJOBMSGQMX (system value) at the time the job is started is used as the maximum size of the job message queue.

maximum-size-of-job-message-queue: Specify a value in the range of 2 to 64 megabytes.

JOBMSGQFL

Specifies the action that should be taken when the job message queue is full.

***SAME:** The job message queue full option will not change.

***SYSVAL:** The value specified for the QJOBMSGQFL system value is used.

***NOWRAP:** The message queue does not wrap when it is full. This action ends the job.

***WRAP:** The message queue wraps to the start of the message queue when full and starts filling the message queue again.

***PRTWRAP:** The message queue wraps the job message queue when full and prints the messages that are being overlaid because of wrapping.

ALWMLTTHD

Specifies whether or not the job can run with multiple user threads. This attribute does not prevent the operating system from creating system threads in the job. This job attribute is not allowed to be changed once a job starts. This attribute applies to autostart jobs, prestart jobs, batch jobs submitted from job schedule entries and jobs started using the Submit Job (SBMJOB) and Batch Job (BCHJOB) commands. This attribute is ignored when starting all other types of jobs. This attribute should be set to *YES only in job descriptions used exclusively with functions that create multiple user threads.

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

***NO:** The job cannot run with multiple user threads.

***YES:** The job can run with multiple user threads.

» INLASGRP

Specifies the initial setting for the auxiliary storage pool (ASP) group name for the initial thread of jobs using this job description. A thread can use the Set Auxiliary Storage Pool Group (SETASGRP) command to change its library name space. When an ASP group is associated with a thread, all libraries in the independent ASPs in the ASP group are accessible and objects in those libraries can be referenced using regular library-qualified object name syntax. The libraries in the independent ASPs in the specified ASP group plus the libraries in the system ASP (ASP number 1) and basic user ASPs (ASP numbers 2-32) form the library name space for the thread.

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

***NONE:** Specifies the initial thread of jobs using this job description will be started with no ASP group. The library name space will not include libraries from any ASP group. Only the libraries in the system ASP and any basic user ASPs will be in the library name space.

auxiliary-storage-pool-group-name: Specify the name of the ASP group to be set for the initial thread of jobs using this job description. The ASP group name is the name of the primary ASP device within the ASP group. All libraries from all ASPs in this ASP group will be included in the library name space.

SPLFACN

Specifies whether or not spooled files are accessed through job interfaces after the job ends. Keeping spooled files with jobs allows job commands such as Work with Submitted Jobs (WRKSBMJOB) 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 jobs end.

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

***SYSVAL:** The value specified in the system value QSPLFACN is used.


***KEEP:** When the job ends, the spooled files are kept with the job and the status of the job is updated to indicate that the job has completed.

***DETACH:** When the job ends, the spooled files are detached from the job and the job is removed from the system. <<

Examples for CHGJOB

Example 1: Setting Job Running and Output Priorities

```
CHGJOB JOB(QGPL/QPGMR) JOBPTY(2) OUTPTY(2)
```

This command allows jobs using the IBM-supplied job description QPGMR in the QGPL library to process with a higher job and output priority than originally specified for QPGMR. QPGMR originally sets job running and output priorities at level 5. More information about the IBM-supplied job description parameter values is in the CL Programming  book.

Example 2: Changing Priority Limits

Assume that the user profile was created as follows:

Part 1:

```
CRTUSRPRF USRPRF(JLRAY) PASSWORD(GAMMA)
  SPCAUT(*JOBCTL) PTYLM(4) AUT(*NONE)
```

Then attempt to change the priority limits of the job description BATCH5 with the following command:

Part 2:

```
CHGJOB JOB(BATCH5) USER(JLRAY) JOBPTY(1)
  OUTPTY(1)
```

Because the priority limit specified in the user profile takes precedence over any limit specified in a job description, an error message is sent and a priority of 4 is assumed for both job and output priority levels.

Example 3: Requiring a Password to Sign On at Work Station

```
CHGJOB JOB(INT4) USER(*RQD) RTGDTA(QCMDI)
  LOG(*SAME) ACGCDE('USERXYZ CODE123') TEXT(*BLANK)
```

The USER parameter indicates the user of the job description INT4 must enter a password to sign on at a work station. The characters QCMDI are used as the routing data being compared with the routing table of the subsystem under which the job is run. All values of the LOG parameter list are not changed. Jobs that use this job description have accounting data recorded under the accounting code, 'USERXYZ CODE123', when job accounting is active. The text for this job description is changed to all blanks.

Example 4: Directing Jobs Using This System to a Specific Job Queue

```
CHGJOB JOB(BATCH3) JOBQ(NIGHTQ) JOBPTY(4)
  OUTPTY(4) RTGDTA(QCMDDB) INQMSGRPY(*DFT)
  TEXT('Batch #3 JOB for high priority night work')
```

This command changes a job description named BATCH3 found in the library search list. The jobs using this description are now placed on the job queue NIGHTQ. The priority for jobs using this description and their spooled files is 4. QCMDDB is the routing data that is compared with entries in the routing table of the subsystem where the job is run. The text is changed to indicate that this job description is for high priority night work. The INQMSGRPY parameter specifies that all messages of type *INQ that are issued from a job using this job description automatically causes the default reply message to be issued.

Error messages for CHGJOB

*ESCAPE Messages

CPF1618

Job description &1 in library &2 damaged.

CPF1625

Job description &1 in library &2 not changed.

CPF88D2

PSF configuration &1 in library &2 not changed.

CHGJOBMLBA (Change Job Media Library Attributes) Command Description

CHGJOBMLBA Command syntax diagram

Purpose

The Change Job Media Library Attribute (CHGJOBMLBA) command allows a user to change the media library resource allocation attributes for the specified job. More information about using this command is in the Use tape library article in the Information Center.

Restrictions:

1. The job being changed must have the same user profile as the user issuing the command, or the issuer must have job control special authority (*JOBCTL).
2. Only a user with job control special authority (*JOBCTL) can change the RSCALCPTY value.

Optional Parameters

JOB Specifies the job whose media library attributes are to be changed. If no job qualifier is given, a search for the simple job name is made of all of the jobs currently in the system. If duplicates of the specified name are found, a list of messages that contains the qualified job names of all duplicates is displayed.

A job identifier is a special value or a qualified name with up to three elements. For example:

```
*  
job-name  
user-name/job-name  
job-number/user-name/job-name
```

More information on this parameter is in Commonly used parameters.

*: This job whose information is changed is the job from which this command is entered.

job-name: Specify the name of the job whose attributes are being changed. If no job qualifier is given, all of the jobs currently in the system are searched for the simple job name. If duplicates of the specified name are found, a qualified job name must be specified.

user-name: Specify the name of the user of the job whose attributes are being changed.

job-number: Specify the number of the job whose attributes are being changed.

MLB Specifies the tape media library device whose attributes are to be change.

*ALL: The attribute change is to apply to all the media library devices.

tape-media-library-device-name: Specify a tape media library device whose attributes are to be changed.

RSCALCPTY

Specifies the media library device resource allocation priority for this job. If the resource allocation priority has not been changed for a media library device for the job, *DEV is used.

*SAME: The value does not change.

*DEV: Retrieve the value from the device description.

*JOB: The priority of the job is used as the resource allocation priority.

resource-allocation-priority: Specify the priority this job is given when requesting a resource. Valid values range from 1 (highest) through 99 (lowest).

INLMNTWAIT

Specifies the maximum amount of time a request will wait for allocation of a tape resource for the initial mount. If the initial mount wait time has not been changed for a media library device for the job, *DEV is used.

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

***DEV:** Retrieve the value from the device description.

***JOB:** The allocation wait time is determined by rounding the default wait time attribute of the job requesting the allocation to the next highest minute.

***IMMED:** The request will not wait for a tape resource to become available.

***NOMAX:** The request will wait until a tape resource is available.

initial-mount-wait-time: Specify the number of minutes a request will wait for allocation of a tape resource. Valid values range from 1 through 600 minutes.

EOVMNTWAIT

Specifies the maximum amount of time a request will wait for allocation of a tape resource for the end of volume mount. If the end of volume mount wait time has not been changed for a media library device for the job, *DEV is used.

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

***DEV:** Retrieve the value from the device description.

***JOB:** The allocation wait time is determined by rounding the default wait time attribute of the job requesting the allocation to the next highest minute.

***IMMED:** The request will not wait for a tape resource to become available.

***NOMAX:** The request will wait until a tape resource is available.

end-of-volume-mount-wait-time: Specify the number of minutes a request will wait for allocation of a tape resource. Valid values range from 1 through 600 minutes.

Examples for CHGJOBMLBA

Example 1: Changing the resource allocation priority for the current job

```
CHGJOBMLBA RSCALCPTY(50)
```

This command changes the resource allocation priority for all tape media library devices for the current job to 50.

Example 2: Changing the initial mount wait time for a specific job

```
CHGJOBMLBA JOB(002345/USERX/QDFTJOB) INLMNTWAIT(2)
```

This command changes the initial mount wait time for all tape media library devices for the specified job to 2 minutes.

Example 3: Changing the resource allocation priority for all tape media libraries used by the current job

```
CHGJOBMLBA MLB(*ALL) RSCALCPTY(50)
```

This command changes the resource allocation priority for all tape media library devices for the current job to 50.

Example 4: Changing the resource allocation priority for a specific tape media library used by the current job

```
CHGJOBMLBA MLB(TAPMLB01) RSCALCPTY(50)
```

This command changes the resource allocation priority for TAPMLB01 for the current job to 50.

Error messages for CHGJOBMLBA

*ESCAPE Messages

CPF1069

End of duplicate names.

CPF1070

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

CPF1343

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

CPF1344

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

CPF6708

Command ended due to error.

CPF6745

Device &1 not a media library device.

CPF67B5

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

CPF9814

Device &1 not found.

CPF9825

Not authorized to device &1.

CHGJOBQE (Change Job Queue Entry) Command Description

CHGJOBQE Command syntax diagram

Purpose

The Change Job Queue Entry (CHGJOBQE) command changes an existing job queue entry in the specified subsystem description. This command can be issued while a subsystem is either active or inactive. A job queue entry identifies the job queue from which jobs are selected to run in the subsystem. Jobs can be placed on a job queue by spooling readers or by using the following commands:

- Submit Database Jobs (SBMDBJOB)
- Submit Diskette Jobs (SBMDKTJOB)
- Submit Job (SBMJOB)
- Transfer Job (TFRJOB)
- Transfer Batch Job (TFRBCHJOB)

In a subsystem, job queues with lower sequence numbers are processed first. For more information, refer to the SEQNBR parameter description.

Restriction: To use this command, the user must have object operational and object management authorities for the subsystem description being changed.

Required Parameters

SBSD Specifies the qualified name of the subsystem description that contains the job queue entry being changed.

The name of the subsystem description can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

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

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

subsystem-description-name: Specify the name of the subsystem description that contains the job queue entry.

JOBQ Specifies the qualified name of the job queue that is a source of batch jobs started by the subsystem.

The name of the job queue can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

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

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

If the job queue does not exist when the entry is changed, a library qualifier must be specified because the job queue name is retained in the subsystem description.

job-queue-name: Specify the name of the job queue.

Optional Parameters

MAXACT

Specifies the maximum number of jobs that can be started at the same time from this job queue. More information on this parameter is in Commonly used parameters.

***SAME:** The value does not change. However, the maximum activity level of the routing entries might prevent routing steps from being started. If *NOMAX is specified, all the jobs on the job queue are started (within the limit specified by the MAXJOBS parameter in the subsystem description), even though the activity level of the storage pool being used might prohibit them from running at the same time.

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

maximum-active-jobs: Specify a value for the new maximum for the number of jobs that can be active at the same time from this job queue.

MAXPTYn

Specifies the number of jobs that can be started for a specified job priority level.

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

***NOMAX:** There is no disconnect limit.

maximum-active-jobs: Specify the number of jobs started in a specific priority level. Valid values range from 0 through 99. If zero (0) is specified, no jobs are started from a specific priority level.

SEQNBR

Specifies a sequence number for this job queue that is used by the subsystem to determine the order in which the job queues are processed.

***SAME:** The sequence number assigned to this job queue does not change.

sequence-number: Specify the sequence number assigned to the job queue. The sequence number must be unique in the subsystem description. Valid values range from 1 through 9999.

The subsystem first selects jobs from the job queue with the lowest sequence number. When all jobs on that queue have been processed or the number of jobs specified on the MAXACT parameter has been reached, the subsystem processes jobs on the queue with the next higher sequence number. This process continues until all job queue entries have been processed or until the subsystem has reached its limit for overall maximum jobs (as specified on the MAXJOBS parameter in the subsystem description). In some cases, the sequence is interrupted and the subsystem processes a queue with a lower sequence number. This occurs for this subsystem when one of the following conditions occurs:

- A held job or job queue is released.
- A job is placed on or transferred to a queue.
- A new queue is allocated.
- A job ends.

Example for CHGJOBQE

```
CHGJOBQE  SBSDB(QGPL/QBATCH)  JOBQ(QGPL/QBATCH)
          MAXACT(4)  MAXPTY1(1)  MAXPTY2(*NOMAX)
```

This command changes the maximum number of jobs submitted from the job queue QBATCH via the job queue entry to the QBATCH subsystem for processing at the same time. Up to four jobs from the QBATCH job queue can be active at the same time. The sequence number of the job queue entry does not change. Up to one job can be active from priority level 1. There is no maximum for the number of jobs that can be active at the same time from priority level 2. Priority levels 3 through 9 do not change.

Error messages for CHGJOBQE

*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.

CHGJOBSCDE (Change Job Schedule Entry) Command Description

CHGJOBSCDE Command syntax diagram

Purpose

The Change Job Schedule Entry (CHGJOBSCDE) command changes an entry in the job schedule.

The job schedule entry contains all of the information needed to automatically run a batch job. You can use this command to change:

- The command the job runs
- The date and time at which a job is scheduled to run
- The recovery action the system takes if the job cannot be submitted at the scheduled time
- The job description and user profile under which the job is run
- The job queue on which the job is placed when it is submitted
- The message queue to which messages are sent

Each job schedule entry is identified by the job name, which is specified on the JOB parameter of this command, and an entry number, which is assigned by the system when the entry is added. The message replacement text for the message sent when an entry is added contains the entry number. If there is more than one entry with the same job name, you may need to specify the number when changing the entry using this command, removing the entry using the Remove Job Schedule Entry (RMVJOBSCDE) command, or holding or releasing the entry using the Hold Job Schedule Entry (HLDJOBSCDE) or Release Job Schedule Entry (RLSJOBSCDE) command. You can use the Work with Job Schedule Entries (WRKJOBSCDE) command to show or print entries.

More information is in the Work Management  book.

Restrictions:

1. You must have *JOBCTL special authority to use this command; otherwise you can change only those entries that you added.
2. The user must have use authority to the job description and the user profile.
3. The user must have use and add authorities to the message queue.
4. The user must have read authority to the job queue.
5. The user must have execute authority to all libraries associated with the specified objects.

Required Parameter

JOB Specifies the name of the job schedule entry.

Optional Parameters

ENTRYNBR

Specifies the number of the job schedule entry you want to change. The message replacement text for the message that is sent when an entry is successfully added contains the entry number. You can also determine the entry number by using the Work with Job Schedule Entries (WRKJOBSCDE) command. Press F11 from the Work with Job Schedule Entries display to show the entry numbers of the selected entries.

***ONLY:** One entry in the job schedule has the job name specified on the JOB parameter. If ***ONLY** is specified and more than one entry has the specified job name, no entries are changed and a message is sent.

entry-number: Specify the number of the job schedule entry you want to change.

CMD Specifies the command that runs in the submitted job. The IBM-supplied default routing program QCMD must be used when the job is started or the job will not run. Because the command you specify is used for the request data, the value specified on the RQSDTA parameter in the job description is ignored. The command you specify is syntax-checked when the entry is added.

You can specify a maximum of 512 characters. You can use command prompting for the command you are specifying on this parameter if you are using command prompting for the CHGJOBSCDE command.

Note:

If you do not specify a value on this parameter, the command that runs in the submitted batch job does not change.

FRQ Specifies how often the job is submitted to run.

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

***ONCE:** The job is submitted once.

***WEEKLY:** The job is submitted on the same day or days of each week at the scheduled time.

***MONTHLY:** The job is submitted on the same day or days of each month at the scheduled time.

If you specify *MONTHLY and a month does not contain the date specified on the SCDDATE parameter, the job is not run that month. For example, if SCDDATE(01/31/91) and FRQ(*MONTHLY) are specified, the job will run on 01/31, 03/31, 5/31, 7/31, 8/31, 10/31, and 12/31, but will not run in February, April, June, September, or November. To submit a job on the last day of every month, specify SCDDATE(*MONTHEND).

If you specify *MONTHLY and your system or your job is configured to use Julian date format, the job is submitted to run on the day of the month that it would run if the system or job did not use Julian date format.

SCDDATE

Specifies the date on which the job is submitted to run.

If your system or your job is configured to use the Julian date format, the *MONTHSTR and *MONTHEND values are calculated as if the system or job did not use the Julian date format.

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

***CURRENT:** The current date is used.

***MONTHSTR:** The job is submitted on the first day of the month. If you specify *MONTHSTR, and if today is the first day of the month, and if the time you specify on the SCDDATE parameter has not passed, the job is submitted today. Otherwise, the job is submitted on the first day of the next month.

***MONTHEND:** The job is submitted on the last day of the month. If you specify *MONTHEND, and if today is the last day of the month, and if the time you specify on the SCDDATE parameter has not passed, the job is submitted today. Otherwise, it is submitted on the last day of the next month.

***NONE:** No date is specified for when a job should be submitted.

date: Specify the date in the job date format.

SCDDAY

Specifies the day of the week on which the job is submitted.

If today is the day of the week specified on this parameter and the time specified on the SCDDATE parameter has not passed, the job is submitted today. Otherwise, the job is submitted on the next occurrence of the specified day. For example, if SCDDAY(*FRI) and SCDDATE(12:00:00) are specified, and you are adding this job schedule entry at 11:00 a.m. on a Friday, the job is submitted today. If you are adding the entry at 4:00 p.m. on a Friday, or at 11 a.m. on a Monday, the job is submitted the following Friday.

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

***NONE:** No day is specified for when a job should be submitted.

***ALL:** The job is submitted every day.

***MON:** The job is submitted on Monday.

***TUE:** The job is submitted on Tuesday.

***WED:** The job is submitted on Wednesday.

***THU:** The job is submitted on Thursday.

***FRI:** The job is submitted on Friday.

***SAT:** The job is submitted on Saturday.

***SUN:** The job is submitted on Sunday.

SCDTIME

Specifies the time on the scheduled date at which the job is submitted to run.

Note:

Although the time can be specified to the second, the activity involved in submitting a job and the load on the system may affect the exact time at which the job is submitted.

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

***CURRENT:** The job is submitted at the current time. If you specify *CURRENT on this parameter and SCDDATE(*CURRENT), the job is immediately submitted to the job queue with a status of released (RLS).

time: Specify the time you want the job to start. The time is specified in 24-hour format with or without a time separator as follows:

- With a time separator, specify a string of 5 or 8 digits, where the time separator for the job separates the hours, minutes, and seconds. If you issue 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 fails.
- 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.

RELDAYMON

Specifies the relative day of the month on which the job is submitted to run.

You can specify a value on this parameter only if the SCDDAY parameter and FRQ(*MONTHLY) are specified.

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

1: The job is submitted on the specified day of the week the first time it occurs in the month. For example, if you specify SCDDAY(*TUE), FRQ(*MONTHLY), and RELDAYMON(1), the job is submitted on the first Tuesday of every month.

2: The job is submitted on the specified day the second time it occurs in the month.

3: The job is submitted on the specified day the third time it occurs in the month.

4: The job is submitted on the specified day the fourth time it occurs in the month.

5: The format of this tape is FMT3570E. The data format is written on the tape volume with a 3570E device.

***LAST:** The job is submitted on the specified day the last time it occurs in the month.

OMITDATE

Specifies a list of dates on which the job is not submitted. You can, for example, use this parameter to prevent recurring jobs from running on holidays. The date must be specified in the job date format.

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

***NONE:** No dates are specified when the job should not be submitted.

date: Specify the dates on which the job is not submitted.

RCYACN

Specifies the recovery action to be taken if the scheduled job cannot be submitted at the designated time because the system is powered down or in restricted state. The action specified on this parameter occurs at the next initial program load (IPL) or when the system comes out of restricted state.

Jobs submitted during IPL or when the system comes out of restricted state are submitted in the order that they would have been had they been submitted at the times specified in the job schedule entries. If multiple occurrences of a recurring job are missed, the job is submitted only once. The first missed occurrence of a recurring job is used to order the jobs. The next occurrence of the job is calculated from the current date.

Since the scheduler portion of IPL need not be complete for the IPL of the system to be complete, other jobs may start on the system before all of the scheduled jobs have been submitted.

This parameter does not apply in the following instances:

- When a job is released after being held at the date and time it was to be submitted
- When the date and time at which a job is to be submitted passes because of changes to date and time system values

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

***SBMRLS:** The job is submitted in the released (RLS) state.

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

***NOSBM:** The job is not submitted.

Specifying *NOSBM affects only missed occurrences of the job. If the job schedule entry is a recurring job, future occurrences are not affected.

SAVE Specifies whether the entry for a job that is submitted only once is kept after the job is submitted. This parameter is valid only if FRQ(*ONCE) is specified.

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

***NO:** The entry is not kept after the job is submitted.

***YES:** The entry is kept after the job is submitted. If you specify *YES, the job is submitted once. The job is not submitted again until the Change Job Schedule Entry (CHGJOBSCDE) command is used to specify a new date and time.

JOB Specifies the qualified name of the job description used when submitting the job.

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

***USRPRF:** The job description specified in the user profile under which the submitted job runs is used. The user profile is specified on the USER parameter.

The name of the job description can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

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

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

job-description-name: Specify the name of the job description.

JOBQ Specifies the qualified name of the job queue on which this job is placed.

You must have authority to the queue to specify a name on this parameter. Authority to the queue cannot be received through program adoption.

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

***JOBQ:** The submitted job is placed on the job queue specified in the job description. The job description is specified on the JOBQ parameter.

The name of the job queue can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

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

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

job-queue-name: Specify the name of the job queue.

USER Specifies the name of the user profile under which the scheduled job is submitted.

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

***CURRENT:** The user profile that is currently running is used.

***JOBQ:** The user profile specified on the USER parameter of the job description is used. The job description is specified on the JOBQ parameter of this command. This value is not valid if USER(*RQD) is specified in the job description.

user-name: Specify the name of the user profile that is used. You must be authorized to the user profile. The user profile must be authorized to the job queue, job description, and message queue specified on this command.

MSGQ

Specifies the qualified name of the message queue to which messages are sent.

Messages are sent when the job is submitted and when a submitted job has completed running. Messages indicating a serious error are sent to the QSYSOPR message queue regardless of the value specified on this parameter when:

- The message queue specified on this parameter is damaged.
- MSGQ(*NONE) is specified.
- MSGQ(*USRPRF) and USER(*JOBQ) are specified, and the job description specified on the JOBQ parameter is changed to USER(*RQD) after the entry is added.

Note:

When MSGQ(*USRPRF) is specified and the user profile contains a message queue name with *LIBL as its library, the results can be unpredictable. When the job is submitted, the library list from the system value object is used.

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

***USRPRF:** The message queue specified in the user profile under which the submitted job runs is used. The user profile is specified on the USER parameter.

***NONE:** Completion messages are not sent. Error messages are sent to the QSYSOPR message queue.

The name of the message queue can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

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

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.

TEXT Specifies the text that briefly describes the job schedule entry. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

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

Examples for CHGJOBSCDE

Example 1: Changing a Job Schedule Entry

```
CHGJOBSCDE JOB(BACKUP) ENRYNBR(001584)
JOBQ(QGPL/QBATCH)
```

This command changes job schedule entry BACKUP number 001584 so that its jobs are submitted to job queue QBATCH in library QGPL.

Example 2: Changing a Job Schedule Entry

```
CHGJOBSCDE JOB(EXAMPLE) ENRYNBR(*ONLY)
CMD('CALL PGM(A)') FRQ(*WEEKLY)
SCDDATE(121591) SCDTIME(110000)
```

This command schedules a batch job to run program A at 11 a.m. on 12/15/91 and every week on that same day.

Error messages for CHGJOBSCDE

*ESCAPE Messages

CPF1620

Job schedule entry &3 number &4 not changed.

CHGSCDBRM (Change Job Scheduler for BRM) Command Description

Note: To use this command, you must have the 5722-BR1 (Backup Recovery and Media Services for iSeries) licensed program installed. For detailed information on the parameters of this command, see the online help.

CHGSCDBRM Command syntax diagram

Purpose

BRMS uses the OS/400 job scheduler as the default job scheduler. You can also choose to use the IBM Job Scheduler for iSeries job scheduler as your default scheduler or select any other OS/400 job scheduler as your default.

The Change Job Scheduler for BRM (CHGSCDBRM) command allows you to change the job scheduler interface used by BRMS. You can change the commands that BRMS uses to add, list and select job schedule entries. You can also specify whether you want to be prompted when BRMS uses these commands.

The following substitution variables can be used in these commands to pass values from BRMS to the scheduler: BRMS passes information to the four substitution variables. The substitution variables are:

- &JOBNAME - QBRMBKUP or QBRMARC
- &REQUEST - will be either STRARCBRM or STRBKUBRM
- &APPL - BRMS
- &GROUP - control group name

You can change these to your operation requirements or choose to use the defaults.

Example for CHGSCDBRM

Example 1: Changing the Command Used by BRMS to Add a Job Schedule Entry

```
CHGSCDBRM TYPE(*USRDFN) ADDCMD('ADDJOBJS  
JOB(&JOBNAME) APP(&APPL) SCDCDE(*DAILY)  
TIME (2300) CMD(&REQUEST)') ADDPMT(*YES)
```

In this example, an alternative scheduler is being used. When adding a back up job to the schedule BRMS will use the ADDJOBJS command and the substitution variables specified here.

Error messages for CHGSCDBRM

None

CHGJOBTYP (Change Job Type) Command Description

CHGJOBTYP Command syntax diagram

Purpose

The Change Job Type (CHGJOBTYP) command allows you to change the job type for jobs that appear on the reports you produce using the Print Transaction Report (PRTTNSRPT) command. With this command you can change the characteristics of a job (for example, from batch to interactive), correct a missing job type, or assign a job type.

Required Parameters

- MBR** Specifies the performance data member used. This name should correspond to the name used on the MBR parameter of the End Performance Trace (ENDPFRTRC) command.
- LIB** Specifies the library where the performance data is located.

The possible values are:

- **QPFRDATA:** The performance data files are located in the IBM-supplied performance data library, QPFRDATA.
- *library-name:* Specify the name of the library where the performance data is located.

Example for CHGJOB TYP

Example 1: Start a New Session

```
CHGJOB TYP MBR(TEST)
LIB(QPFRDATA)
```

This command will show a list of all the jobs in member TEST (within QAPMDMPT file, in QPFRDATA library), from which the job type can be changed, for example from batch (B) to interactive (I).

Error messages for CHGJOB TYP

*ESCAPE Messages

PFR3280

Performance data files for this report do not exist.

CHGJOBJS (Change Job Using Job Scheduler) Command Description

Note: To use this command, you must have the 5722-JS1 (Job Scheduler for iSeries) licensed program installed.

CHGJOBJS Command syntax diagram

Purpose

The Change Job Job Scheduler (CHGJOBJS) command allows you to change a job in the job schedule.

Note:

When referring to a job in this command, we are referring to an entry in Job Scheduler. An **entry** in Job Scheduler is a user-defined name for commands or programs that you want to process at scheduled times and dates. Job Scheduler jobs (entries) are not OS/400 objects.

Jobs can be a single job or a member of a group of jobs or an application. You can use this command to change the schedule of a batch job to be submitted once and so on, based on the schedule code you specify. You can schedule jobs with user-defined calendars, holiday exception calendars and fiscal year calendars.

The job schedule entry contains all of the information needed to submit the job, including the commands to process, the job description and user profile under which the job is run, the job queue to which the job is submitted, the message queue to which messages are sent and so on.

At the date and time you specify or Job Scheduler calculates, the job is submitted to the specified job queue. This command does not guarantee that the job will begin running at the scheduled time, however.

The job will not begin running if the job queue is held or attached to an inactive subsystem, or if the maximum number of active jobs allowed to run in the subsystem or on the system at one time has been reached.

Each job schedule entry is identified by a user-defined job, which is specified on the JOB parameter of this command.

Restrictions:

1. The user must have use authority to the job description and the user profile.
2. The user must have use and add authorities to the message queue and the output queue.
3. The user must have read authority to the job queue and to all libraries associated with the specified objects.
4. The user must have use authority to the *ADDJOB function.

Required Parameter

JOB Specifies the name of the job schedule entry that you want to change. You must specify a job and alternately can specify a group to which the job belongs as well as a sequence number for the job within the group.

The first job of a group must be sequence number 1. Subsequent sequence numbers should leave gaps (10, 20, 30 and so on) to allow job insertions if necessary. An entire group can be held or released by holding or releasing the first member of the group. Individual jobs within a group may also be held or released.

Element 1: Job

job-name: Specify the job that you want to change.

Element 2: Group

***NONE:** There is not a group associated with this job.

group-name: Specify the name of the group of which this job is a member.

Element 3: Group sequence

***NONE:** There is not a sequence number assigned to the job.

group-sequence-number: Specify the sequence number of the job. Sequence numbers can range from 1 to 99.

Optional Parameters

APP Specifies the name of the application to which the job specified in the JOB parameter belongs.

***SAME:** The current value for the parameter does not change.

***NONE:** This job does not belong to an application.

application-name: Specify the name of the application to which the job that you are adding belongs.

SCDCDE

Specifies the schedule code that you want to assign to the job.

***SAME:** The current value for the parameter does not change.

***DAILY:** The job is scheduled to run on a daily basis or on selected days every week. For example, it may be scheduled to run on Wednesday only, or every day of the week.

***CALENDAR:** You are using a calendar to schedule the job. Calendars are user defined in the Work with Calendars display.

***DATE:** The job is scheduled to run on specific dates throughout the year. They are retained in the system in month day (mddd) or day month (ddmm) format depending on the system value and will be submitted on the specified dates. Up to 13 dates can be scheduled.

***DAY:** The job is to be run on particular calendar days of the month, every month. These are entered in day (dd) format.

***NUMDAY:** The job runs every specified number of days. The number of days specified must be 99 or less.

Note: If the scheduled time to run is greater than the current time, Job Scheduler will count that time as a whole day (if you enter a Job Scheduler job on Monday at 3:00 p.m. to run every 2 days at 5:00 p.m., the job will run the first time on Tuesday at 5:00 p.m.).

***MINUTES:** The job runs every specified number of minutes.

***ONCE:** The job is to be run once. The SAVE parameter prompt indicates whether the job is to be saved (*YES) or deleted (*NO) after it is run. If it is a job group, the SAVE parameter will not be shown and will assume saved (*YES). The date that the job is scheduled to be run is typed into the SNGDAY parameter. Leaving the date blank will run the job when the scheduled time is reached.

***MONTHEND:** The job runs on the last day of the month.

***FIRST:** The job is to run on the first designated day of every month or specified fiscal periods. This option is used in conjunction with the SNGDAY parameter. For instance, if *TUE is specified in the SNGDAY parameter, the job will be scheduled to run on the first Tuesday of each month.

***SECOND:** The job is to run on the second designated day of every month or specified fiscal periods. This option is used in conjunction with the SNGDAY parameter. For instance, if *TUE is specified in the SNGDAY parameter, the job will be scheduled to run on the second Tuesday of each month.

***THIRD:** The job is to run on the third designated day of every month or specified fiscal periods. This option is used in conjunction with the SNGDAY parameter. For instance, if *TUE is specified in the SNGDAY parameter, the job will be scheduled to run on the third Tuesday of each month.

***FOURTH:** The job is to run on the fourth designated day of every month or specified fiscal periods. This option is used in conjunction with the SNGDAY parameter. For instance, if *TUE is specified in the SNGDAY parameter, the job will be scheduled to run on the fourth Tuesday of each month.

***FIFTH:** The job is to run on the fifth designated day of every month or specified fiscal periods. This option is used in conjunction with the SNGDAY parameter. For instance, if *TUE is specified in the SNGDAY parameter, the job will be scheduled to run on the fifth Tuesday of each month. If there is not a fifth occurrence in a month, the job will not run and will be scheduled for the next time there is a fifth occurrence of a selected day in a month.

***LAST:** The job is to run on the last designated day of every month or specified fiscal periods. This option is used in conjunction with the SNGDAY parameter. For instance, if *TUE is specified in the SNGDAY parameter, the job will be scheduled to run on the last Tuesday of each month.

***FIRSTWRK:** The job is to run on the first working day of every month or specified fiscal periods. This option is used in conjunction with the **Working days** prompt in the system controls.

***LASTWRK:** The job is to run on the last working day of every month or specified fiscal periods. This option is used in conjunction with the **Working days** prompt in the system controls.

***DEPJOB:** The job is to run depending on the outcome or processing of another job.

***ALTERNATE:** The job is to run when a regular job ends abnormally and has this job defined as its alternate job.

***NONE:** The job is a subordinate job group and does not have a schedule code. Subordinate job groups assume the schedule code of the first job in the group.

***JOBCTL:** The job is scheduled to run based on the schedule code specified in the job controls.

TIME Specifies the time or times that you want the job to process on specified days. Times are entered in hour, minute (HHMM) format and can range from 0001 to 2400 (midnight).

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.

***SAME:** The current value for the parameter does not change.

scheduled-time: Specify the time that you want the job to run.

ITVMIN

Specifies the number of minutes that you want to use as an interval with the *MINUTES schedule code. Interval times can range from 1 to 720 minutes. The ITVMIN parameter is required when you use the *MINUTES schedule code.

***SAME:** The current value for the parameter does not change.

number-of-minutes: Specify the number of minutes between submissions of the job.

CAL Specifies the name of the calendar that you want to use to schedule the job. A calendar is a user-defined set of days or dates used with the *CALENDAR schedule code. It can be used to specify Job Scheduler processing.

***SAME:** The current value for the parameter does not change.

***NONE:** This job does not use a calendar.

calendar-name: Specify the name of the calendar that you want to use for this job.

HDYCAL

Specifies the name of the holiday calendar that you want to use with a job. A holiday calendar is a user-defined set of exception days or dates used with the *CALENDAR schedule code. It can be used to determine whether a job will process.

***SAME:** The current value for the parameter does not change.

***NONE:** This job does not use a holiday calendar.

holiday-calendar-name: Specify the name of the holiday calendar that you want to use for this job.

FSCCAL

Specifies the name of the fiscal year calendar that you want to use with the job specified in the JOB parameter. Fiscal year calendars are made up of 12 or 13 periods with starting and ending dates for each period.

***SAME:** The current value for the parameter does not change.

***NONE:** There is not a fiscal calendar for this job.

fiscal-calendar-name: Specify the name of the user-defined fiscal year calendar that you want to use for this job.

DAY Specifies the days that you want this job to process. Days of the week are used with the *DAILY and *MINUTES schedule codes or job groups with a sequence greater than 1.

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.

***SAME:** The current value for the parameter does not change.

***ALL:** The job runs on all days of the week.

***MON:** The job is scheduled to run on Monday.

***TUE:** The job is scheduled to run on Tuesday.

***WED:** The job is scheduled to run on Wednesday.

***THU:** The job is scheduled to run on Thursday.

***FRI:** The job is scheduled to run on Friday.

***SAT:** The job is scheduled to run on Saturday.

***SUN:** The job is scheduled to run on Sunday.

SNGDAY

Specifies the day of the week that you want this job to process. Single day is used with the *FIRST, *SECOND, *THIRD, *FOURTH, *FIFTH AND *LAST schedule codes.

Note:

*SUN is the default day of the week when *FIRST, *SECOND, *THIRD, *FOURTH, *FIFTH or *LAST is specified.

***SAME:** The current value for the parameter does not change.

***SUN:** The job is scheduled to run on Sunday.

***MON:** The job is scheduled to run on Monday.

***TUE:** The job is scheduled to run on Tuesday.

***WED:** The job is scheduled to run on Wednesday.

***THU:** The job is scheduled to run on Thursday.

***FRI:** The job is scheduled to run on Friday.

***SAT:** The job is scheduled to run on Saturday.

ITVDAY

Specifies the number of days that you want to use as an interval with the *NUMDAY schedule code. Intervals can range from 1 to 99 days.

Note: The ITVDAY parameter is required when you use the *NUMDAY schedule code.

***SAME:** The current value for the parameter does not change.

number-of-days: Specify the number of days between submissions of the job.

DATE Specifies the dates that a job is scheduled to be processed. Dates are entered in month, day (MMDD) format or (DDMM) format depending on the system value. The DATE parameter is required when the SCDCDE parameter contains *DATE.

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.

***SAME:** The current value for the parameter does not change.

dates-of-the-year: Specify the dates that you want to schedule a job to run.

SNGDATE

Specifies the date that a job is scheduled to be processed. Dates are entered in month, day (MMDD) format. The SNGDAY parameter is used when the SCDCDE parameter contains *ONCE.

***SAME:** The current value for the parameter does not change.

***NEXT:** The job is to be processed when the scheduled time is reached.

single-date: Specify the single date of the year that the job is to be submitted.

SAVE Specifies whether this job is to be saved after it has run. The SAVE parameter is used with the *ONCE schedule code.

***SAME:** The current value for the parameter does not change.

***YES:** The job is to be saved after it has run.

***NO:** The job is to be deleted after it has run.

DAYMONTH

Specifies the days of the month that you want this job to process. Days of the month are used with the *DAY schedule code. Days of the month can range from 1 to 31.

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.

***SAME:** The current value for the parameter does not change.

day-of-month: Specify the days of the month that you want the job to run.

FSCPERIOD

Specifies the periods within a fiscal year for the job. Periods are used when a fiscal calendar name is specified in the FSCCAL parameter. Periods can range from 1 to 13.

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.

***SAME:** The current value for the parameter does not change.

***ALL:** All periods are to be included for the job.

fiscal-period-number: Specify the fiscal periods that you want to include for the job.

TEXT Specifies the text related to the job.

***SAME:** The current value for the parameter does not change.

***NONE:** The job does not have any text description associated with it.

print-text: Specify the text description associated with the job.

RMTLOCNAME

Specifies the location and network identification of the remote location name on which to run the job.

Note: A value specified in the RMTLOCNAME parameter will be ignored when used with schedule code *ALTERNATE.

***SAME:** The current value for the parameter does not change.

***JOBCTL:** Use the remote location name specified in the job controls.

***LCL:** Run the job on the local iSeries 400.

remote-location-name: Specify the name of the location associated with the system on which to run the job.

network-ID.location-name: Specify the network identifier and the name of the location associated with the system. Specify these values using the format nnnnnnnn.cccccc where nnnnnnnn is the network identifier and cccccc is the location name.

RANGE

Specifies the starting and ending time and date range for the job.

Note:

If you are using the *MINUTES schedule code, the **Beginning time** value is used in conjunction with the **Ending time**. The *MINUTES schedule code is the only schedule code that uses these two values to indicate when a job starts and stops. The **Beginning date** and **Ending date** can be used with most schedule codes.

Note:

A value specified in the RANGE parameter will be ignored when used with schedule codes *ALTERNATE, *DEPJOB and *GROUP (subordinate job group).

This parameter contains two lists of two elements each.

Element 1: Beginning time

***SAME:** The current value for the parameter does not change.

***NONE:** No beginning time is specified for this job.

beginning-time: Specify the beginning time for the job in hour, minute (HHMM) format.

Element 2: Beginning date

***SAME:** The current value for the parameter does not change.

***NONE:** No beginning date is specified for this job.

beginning-date: Specify the beginning date for this job in job date format.

Element 3: Ending time

***SAME:** The current value for the parameter does not change.

***NONE:** No ending time is specified for this job.

ending-time: Specify the ending time for this job in hour, minute (HHMM) format.

Element 4: Ending date

***SAME:** The current value for the parameter does not change.

***NONE:** No ending date is specified for this job.

ending-date: Specify the ending date for this job in job date format.

MAXRUN

Specifies the maximum run duration in minutes for the job.

Note: A value specified in the MAXRUN prompt will be ignored when used with schedule code *ALTERNATE.

***SAME:** The current value for the parameter does not change.

***NOMAX:** There is no maximum duration for the job.

maximum-run-time: Specify the number of minutes that is the maximum duration for this job. After this number of minutes has passed, Job Scheduler will end the job whether it has completed or not. The maximum minutes can range from 1 to 9999 minutes.

PGRRCPNORM

Specifies the pager recipient who is to receive normal completion messages for the job that you are submitting. This field is used in conjunction with command specified in the CHGPGRJS command.

Note: A paging product must be installed before this feature may be used.

You can specify the pager message that you want to send to the specified recipient when the job completes normally. The values that you specify for Pager recipient normal and Pager message are the substitution values used for the &RCP and &MSGTXT variables respectively in the CHGPGRJS.

Element 1: Pager recipient normal

***SAME:** The current value for the parameter does not change.

***JOBCTL:** You are using the pager recipient specified in the Job Scheduler job controls.

***NONE:** No pager recipient is assigned to receive messages when this job completes normally.

recipient-name: Specify the name of a recipient who is to receive messages from the job when it completes normally.

Element 2: Pager message

***SAME:** The current value for the parameter does not change.

***JOBCTL:** The pager recipient is sent the pager message from the Job Scheduler job controls.

***COMP:** The job completion of the job is sent.

pager-message: Specify the pager message that you want to send to the pager recipient when this job completes normally.

PGRRCPABN

Specifies the pager recipient who is to receive abnormal completion messages for the job that you are submitting. This field is used in conjunction with the CHGPGRJS command.

Note: A paging product must be installed before this feature may be used.

You can specify the pager message that you want to send to the specified recipient when the job completes abnormally. The values that you specify for Pager recipient abnormal and Pager message are the substitution values used for the &RCP and &MSGTXT variables respectively in the CHGPGRJS command.

Element 1: Pager recipient abnormal

***SAME:** The current value for the parameter does not change.

***JOBCTL:** You are using the pager recipient specified in the Job Scheduler job controls.

***NONE:** No pager recipient is assigned to receive messages when this job completes abnormally.

recipient-name: Specify the name of a recipient who is to receive messages from the job when it completes abnormally.

Element 2: Pager message

***SAME:** The current value for the parameter does not change.

***JOBCTL:** The pager recipient is sent the pager message from the Job Scheduler job controls.

***COMP:** The job completion of the job is sent.

pager-message: Specify the pager message that you want to send to the pager recipient when this job completes abnormally.

ALTJOB

Specifies the name of the alternate job for the job. Alternate jobs only run when a regular job ends abnormally. Jobs are not required to have alternate jobs. You can also specify the group and sequence number for the alternate job that you specify.

***SAME:** The current value for the parameter does not change.

***NONE:** The job does not have an alternate job.

Element 1: Alternate job

alternate-job-name: Specify the name of the alternate job that you want to use with the job that you are adding.

Element 2: Group

***NONE:** The alternate job does not have an alternate group.

group-name: Specify the name of the group associated with the alternate job for this job.

Element 3: Group sequence

***NONE:** The alternate job does not have a sequence number assigned.

group-sequence-number: Specify the sequence number assigned to the alternate job. Sequence numbers can range from 1 to 99.

RPTDSTID

Specifies the report distribution ID that is used to distribute the reports generated as a result of processing the job.

***SAME:** The current value for the parameter does not change.

***NONE:** The job does not have a report distribution ID.

report-distribution-ID: Specify the report distribution ID that you want to associate with this job.

RCYACN

Specifies the recovery action to be taken if the job cannot be submitted at the designated time because the system is powered down or in restricted state. The action specified on the parameter occurs at the next IPL or when the Job Scheduler system becomes active.

Jobs submitted during IPL or when the system comes out of restricted state are submitted in the same order that they would have been had the jobs been submitted at the times specified in the job schedule entries. If multiple occurrences of a recurring job are missed, the job is submitted only once. The first missed occurrence of the job is calculated from the current date.

Since the scheduler portion of IPL need not be complete for the IPL of the system to be complete, other jobs may start on the system before all of the jobs have been submitted.

This parameter does not apply:

- When a job is released after being held at the date and time it was to be submitted.

Note: A value specified in the RCYACN prompt will be ignored when used with schedule code *ALTERNATE, *DEPJOB and *GROUP (subordinate job group).

***SAME:** The current value for the parameter does not change.

***JOBCTL:** The job uses the recovery action specified in the Job Scheduler job controls.

***SBMRLS:** The job is submitted in release state (RLS).

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

***NOSBM:** The job is not submitted.

Specifying *NOSBM affects only missed occurrences of the job. If the job schedule entry is a recurring job, future occurrences are not affected.

JOB Specifies the name of the job description used with this job.

***SAME:** The current value for the parameter does not change.

***JOBCTL:** The system default job description is used for this job.

***USRPRF:** The job description in the user profile under which the submitted job runs is used as the job description of the submitted job.

job-description-name: Specify the name (library-name/job-description-name) of the job description used for the job.

***LIBL:** The library list is used to locate the job description name.

***CURLIB:** The current library for the job is used to locate the job description name. If no library is specified as the current library for the job, QGPL is used.

library-name: Specify the name of the library where the job description name is located.

JOBQ Specifies the name of the job queue in which this job is placed.

***SAME:** The current value for the parameter does not change.

***JOBCTL:** The system default job queue is used for this job.

***JOB**: The submitted job is placed on the job queue named in the specified job description.

job-queue-name: Specify the name (library-name/job-queue-name) of the job queue on which the submitted job is placed.

***LIBL:** The library list is used to locate the job queue name.

***CURLIB:** The current library for the job is used to locate the job queue name. If no library is specified as the current library for the job, QGPL is used.

library-name: Specify the name of the library where the job queue name is located.

JOBPTY

Specifies the job queue scheduling priority. Valid values range from 1 through 9, where 1 is the highest priority and 9 is the lowest priority.

***SAME:** The current value for the parameter does not change.

***JOBCTL:** The scheduling default specified in the Job Scheduler job controls is used for the job.

***JOB**: The scheduling priority specified in the job description is used for the job.

scheduling-priority: Specify a value, ranging from 1 through 9, for the scheduling priority for the job.

OUTPTY

Specifies the output queue priority for spooled output files that are produced by this job. Valid values range from 1 through 9, where 1 is the highest priority and 9 is the lowest priority.

***SAME**: The current value for the parameter does not change.

***JOBCTL**: The output priority default specified in the Job Scheduler job controls is used for the job.

***JOB**: The output priority specified in the job description is used for the job.

output-priority: Specify a value, ranging from 1 through 9, for the output priority for the job.

PRTDEV

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

***SAME**: The current value for the parameter does not change.

***JOBCTL**: The printer specified in the Job Scheduler job controls is used by the job as the printer device.

***USRPRF**: The printer device specified in the user profile where the submitted job runs is used as the printer device for this job. The printer device name is obtained from the profile when the job is submitted.

***SYSVAL**: The printer device specified in the system value, QPRTDEV, when this job is submitted is used.

***JOB**: The printer device specified in the job description is used for the submitted job.

printer-device-name: Specify the name of the printer device used for the submitted job.

OUTQ Specifies the qualified name of the output queue that is used for spooled output produced by the job. This parameter only applies to spooled printer files that specify *JOB for the output queue.

***SAME**: The current value for the parameter does not change.

***JOBCTL**: The output queue specified in the Job Scheduler job controls is used as the job's output queue.

***JOB**: The output queue named in the job description used with the submitted job is the job's default output queue.

output-queue-name: Specify the name (library-name/output-queue-name) of the output queue that is used as the default output queue by the submitted job.

***LIBL**: The library list is used to locate the output queue name.

***CURLIB**: The current library for the job is used to locate the output queue name. If no library is specified as the current library, QGPL is used.

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

USER Specifies the name of the user profile for the job being submitted. If *RQD is specified in the job description, *JOB cannot be specified; a user name must be specified instead.

Note: The following IBM-supplied objects are not valid on this parameter:

- QDBSHR
- QDFTOWN
- QDOC
- QLPAUTO
- QLPINSTALL

- QRJE
- QSECOFR
- QSPL
- QSYS
- QTSTRQS

***SAME:** The current value for the parameter does not change.

***JOBCTL:** The user profile specified in the Job Scheduler defaults is used for the job being submitted.

***CURRENT:** The same user profile used by the job that is currently running is used for the submitted job.

***JOB:** The user profile named in the specified job description is used for the job being submitted.

user-name: Specify the name of the user profile that is used for the job being submitted. You must be authorized to the user profile; the user profile must be authorized to the job description.

PRTTXT

Specifies up to 30 characters of text that is printed at the bottom of each page of printed output and on separator pages.

***SAME:** The current value for the parameter does not change.

***JOBCTL:** The value in the Job Scheduler job control is used for this job.

***BLANK:** No text is printed.

***JOB:** The value in the job description is used for this job.

***SYSVAL:** The system value, QPRTTXT, is used for this job.

print-text: Specify the character string that is printed at the bottom of each page. A maximum of 30 characters can be entered, enclosed in apostrophes. The text on the listing will be centered in the same way it is entered.

RTGDTA

Specifies the routing data used to start the first routing step in the job. The routing data is used to determine the routing entry that identifies the program that the job runs.

***SAME:** The current value for the parameter does not change.

***JOBCTL:** The value in the Job Scheduler job controls for routing data is used for this job.

***JOB:** The routing data specified in the job description is used to start the routing steps.

routing-data: Specify the character string that is used as routing data for the job. A maximum of 80 characters can be entered, enclosed in apostrophes if necessary.

CURLIB

Specifies the name of the current library associated with the job being run.

***SAME:** The current value for the parameter does not change.

***JOBCTL:** The Job Scheduler job control is used for the submitted job.

***USRPRF:** The current library in the user profile where the submitted job runs is used as the current library for the submitted job.

***CRTDFT:** There is no current library for the submitted job. If objects are created in the current library, QGPL is used as the default current library.

current-library-name: Specify the name of a library used as the current library of the submitted job.

LIBL Specifies the name of the library list that is used to search for any operating system object names that were specified without a library qualifier. If you want to select a library list from a list, place the cursor within the LIBL parameter and press F4.

***SAME:** The current value for the parameter does not change.

***JOB:** The library list in the job description used with this job is used as the initial user part of the library list for the job.

***SYSVAL:** The system default user library list is used by this job. It contains the library names that were specified in the system value, QUSRLIBL, at the time that the job is started.

***NONE:** The user portion of the initial library list for this job will be empty.

***JOBCTL:** The Job Scheduler job control is used for the library list.

library-list-name: Specify the name of the library list that you want to use for this job.

LOG Specifies the message logging values used to determine the amount and type of information sent to the log by this job. This parameter has three elements: the message (or logging) level, the message severity, and the level of message text. If no values are specified on this parameter, the values specified in the job description associated with this job are used.

Element 1: Level

***SAME:** The current value for the parameter does not change.

***JOBCTL:** The value specified in the Job Scheduler job controls for logging is used for this job.

***JOB:** The value specified for message logging in the job description is used for this job.

message-level: Specify a value, ranging from 0 to 4, that specifies the message logging level used for this job's messages.

0: No information is logged for the job.

1: The following information is logged: All messages sent to the job's external message queue with a severity level greater than or equal to the message severity specified (this includes the indications of job start, job end and job completion status).

2: The following information is logged:

- Logging level 1 information
- Requests or commands being logged from a CL program for which messages are issued with a severity code greater than or equal to the severity level specified.
- All messages associated with a request, or commands being logged from a CL program, that results in a high-level message with a severity level greater than or equal to the severity specified.

3: The following information is logged:

- Logging level 1 information
- All requests or commands being logged from a CL program.
- All messages associated with a request, or commands being logged from a CL program, that results in a high-level message with a severity level greater than or equal to the severity specified.

4: The following information is logged:

- All requests or commands being logged from a CL program and all messages with a severity code greater than or equal to the severity specified, including trace messages.

Note:

A high-level message is one that is sent to the program message queue of the program that received the request or commands being logged from a CL program.

- Message severity
 - ***SAME**: The current value for the parameter does not change.
 - ***JOBCTL**: The value specified in the Job Scheduler job controls for message severity is used for this job.
 - ***JOB**: The value specified for message logging in the job description is used for this job.
 - message-severity*: Specify a value, ranging from 00 to 99, that specifies the lowest severity level that causes an error message to be logged in the job's log.
- Message text
 - ***SAME**: The current value for the parameter does not change.
 - ***JOBCTL**: The value specified in the Job Scheduler job controls for message text is used for this job.
 - ***JOB**: The value specified for message logging in the job description is used for this job.
 - ***MSG**: Only message text is written to the job's log or shown to the user.
 - ***SECLVL**: Both the message text and message help of the error message is written to the job's log or shown to the user.
 - ***NOLIST**: No job log is produced if the job competes normally. If the job ends abnormally (if the end of job code is 20 or higher), a job log is produced. The messages appearing in the job's log contain both message text and online help information.

LOGCLPGM

Specifies whether the commands that are run in a control language program are logged to the job log by way of the CL program's message queue. This parameter sets the status of the job's logging flag. If *JOB has been specified for the Message logging prompt (LOG parameter) in the Create CL Program (CRTCLPGM) command, the flag set in the LOGCLPGM parameter Log CL program commands prompt (LOGCLPGM parameter) is used. Other values for the Message logging prompt (LOG parameter) override the Log CL program commands prompt (LOGCLPGM parameter). The commands are logged in the same manner as the requests.

- ***SAME**: The current value for the parameter does not change.
- ***JOBCTL**: The value in the Job Scheduler job controls is used for this job.
- ***JOB**: The value specified in the job description is used.
- ***YES**: The commands in a CL program are logged to the job log.
- ***NO**: The commands in a CL program are not logged to the job log.

INQMSGRPY

Specifies the way that predefined messages that are sent as a result of running this job are answered. You can specify that no change is made in the way that predefined messages are answered, or that all inquiry messages require a reply, or that a default reply is issued, or that the system reply list is checked for a matching reply as each predefined inquiry message is sent.

- ***SAME**: The current value for the parameter does not change.
- ***JOBCTL**: The value in the Job Scheduler job controls for inquiry message reply is used for this job.
- ***JOB**: The inquiry message reply control specified in the job description used with this job is used.
- ***RQD**: A reply is required by the receiver of the inquiry message for all inquiry messages that occur when this command is run.
- ***DFT**: The default message reply is used to answer any inquiry messages that occur when this command is run.

***SYSRPYL:** The system reply list is checked to see if there is an entry for any inquiry message that is issued as a result of running this job that has a message identifier and any comparison data that match the inquiry message identifier and message data. If a match occurs, the reply value in that entry is used. If no entry exists for that message, a reply is required.

HOLD Specifies whether this job is held at the time that it is put on the job queue. A job placed on the job queue in the hold state is held until it is released by the Release Job (RLSJOB) command or ended, either by the End Job (ENDJOB) command or by the Clear Job Queue (CLRJOBQ) command.

***SAME:** The current value for the parameter does not change.

***JOBCTL:** The value in the Job Scheduler job controls for hold on job queue is used for this job.

***JOB:** The value specified in the job description determines whether the job is held when it is put on the job queue.

***YES:** The job is held when it is put on the job queue until it is released by a Release Job (RLSJOB) command or ended by an End Job (ENDJOB) command.

***NO:** The job is not held when it is put on the job queue.

SWS Specifies the first settings for a group of eight job switches used with this job. These switches can be set or tested in a CL program and used to control the flow of the program. Only 0's (off) and 1's (on) can be specified in the 8-digit character string.

***SAME:** The current value for the parameter does not change.

***JOBCTL:** The value in the Job Scheduler job controls for job switches is used for this job.

***JOB:** The value specified in the job description is the first setting for the job's switches.

switch-settings: Specify any combination of eight zeros and ones that is used as the first switch setting for the submitted job.

MSGQ

Specifies the name of the message queue to which a completion message is sent when the submitted job has completed running, either normally or abnormally. If an abnormal ending occurs, the help information for the completion message specifies the possible causes.

***SAME:** The current value for the parameter does not change.

***JOBCTL:** The value in the Job Scheduler job controls for message queue is used for this job.

***USRPRF:** A completion message is sent to the message queue specified in the user profile of the submitter.

***NONE:** No completion message is sent.

message-queue-name: Specify the name (library-name/message-queue-name) of the message queue on which the completion message is to be sent.

***LIBL:** The library list is used to locate the message queue name.

***CURLIB:** The current library is used to locate the message queue name.

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

ACGCDE

Specifies the accounting code that is used when logging system resource use for jobs that use this description.

***SAME:** The current value for the parameter does not change.

***JOBCTL:** The accounting code for jobs using this description is obtained from the job controls.

***JOB:** The accounting code for jobs using this description is obtained from the description.

***USRPRF:** The accounting code for jobs using this description is obtained from the user profile associated with the job.

***BLANK:** An accounting code of 15 blanks is assigned to jobs that use this description.

accounting-code: Specify the accounting code that you want to use for jobs using this description.

RUNPTY

Specifies the run for the job. 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 machine resources. This value represents the relative (not absolute) importance of the job. If the job is rerouted, this value is reset according to the job's importance within the job class.

***SAME:** The current value for the parameter does not change.

***JOBCTL:** The run priority is obtained from the job controls.

***NOCHG:** The run priority is not changed when job processing starts.

machine-running-priority: Specify the run priority, ranging from 1 through 99, that the job uses.

Example for CHGJOBJS

Example 1: Changing a Job

```
CHGJOBJS JOB(JOB02) APP(ACCTG)
SCDCDE(*DAILY) FSCPERIOD(*ALL)
TEXT('Change to JOB02')
```

In this example JOB02 is changed. It's application is changed to the accounting application, it is changed to run according to schedule code *DAILY for all fiscal periods.

Error messages for CHGJOBJS

None

CHGJRN (Change Journal) Command Description

CHGJRN Command syntax diagram

Purpose



The Change Journal (CHGJRN) command changes the journal receiver, the journal message queue, the manage receivers attribute, the delete receivers attribute, the receiver size options, the journal state, allowing minimized entry specific data, > journal caching, < or the text associated with the specified journal. The command allows one journal receiver to be attached to the specified journal. This replaces the previously attached journal receiver. The newly-attached journal receiver begins receiving journal entries for the journal immediately.

The sequence numbering of journal entries can be reset when the receiver is changed. If the sequencing is not reset, an informational message is sent indicating the first sequence number in the newly attached receiver. If RCVSIZOPT(*MAXOPT1 or *MAXOPT2) is in effect for the journal, informational message (CPF7019) is sent to the system operator recommending that the sequence numbers be reset when the first sequence number is greater than 9,500,000,000. Otherwise, CPF7019 is sent when the first sequence number is greater than 2,000,000,000.

If JRNRCV is *SAME, the currently attached journal receiver remains attached.

The journal receiver can be changed when these journal functions are in progress: comparing images, displaying journals, receiving or retrieving journal entries, applying or removing journal changes, working with journal attributes, or display journal receiver attributes.

Restrictions:

1. This command is shipped with public *EXCLUDE authority and the QPGMR, QSYSOPR, and QSRV user profiles have private authorities to use the command.
2. The receiver specified must be created before issuing this command, and it must be empty (that is, the receiver must not have been previously attached to a journal or have been in the process of being attached to a journal).
3. No more than one journal receiver can be attached to the journal at any specific time.
4. Resetting of sequence numbers is not valid if JRNRCV is *SAME, if any objects being journaled contain changes that have not yet been forced to auxiliary storage, or if any commitment control changes associated with the journal are pending. When the maximum sequence number is reached, an error message is sent (entry not journaled) and all subsequent operations that require journaling fail.
5. If RCVSIZOPT(*MAXOPT1 or *MAXOPT2) is not to be in effect for the journal, the maximum threshold value that can be specified for any journal receiver being attached is 1,919,999 kilobytes.
6. SEQOPT(*RESET) must be specified if the journal currently has RCVSIZOPT(*MAXOPT1 or *MAXOPT2) in effect, and neither *MAXOPT1 or *MAXOPT2 is being specified as part of the CHGJRN request.
7.  If the library containing the journal is on an independent ASP then the journal receiver specified must be located on an independent ASP that is in the same ASP group as the journal's library. Likewise, if the library containing the journal is not on an independent ASP, then the journal receiver specified cannot be located on an independent ASP.
8. RCVSIZOPT(*MINFIXLEN) and FIXLENDTA cannot be used for the system security audit journal QSYS/QAUDJRN. Journal entries in the security audit journal are required to contain all possible data that could be used for auditing purposes. 

Required Parameter

JRN Specifies the qualified name of the journal for which journal receivers or operational attributes are being changed.

The name of the journal can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

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

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

journal-name: Specify the journal having journal receivers or operational attributes changed.

Optional Parameters

JRNRCV

Specifies which journal receiver to attach to the specified journal.

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

***GEN:** The journal receiver is created by the system and then attached to the specified journal. The journal receiver is created with the same attributes, with the same owner, with the same authorities, with the same audit level, and in the same library as the currently-attached journal receiver. The name of the new journal receiver is derived by appending a 4-digit number to a portion of the name of the current receiver, or by adding 1 to the number in the name of the current journal receiver. The name of the journal receiver that was created and attached is returned in an informational message. More information on generated journal receiver names is in the Journal management article in the Information Center.

The name of the journal receiver can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

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

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

receiver-name: Specify the name of the journal receiver being attached to the identified journal. The journal receiver must have been previously created in the specified library, and must not have been previously attached to a journal or have been in the process of being attached to a journal.

Up to 2 journal receivers can be specified, but the second journal receiver is ignored.

SEQOPT



Specifies whether the journal sequence number is continued from the currently attached journal receiver or the journal sequence number is reset to 1 in the newly attached journal receiver.

***CONT:** The journal sequence number of the next journal entry created is 1 greater than the sequence number of the last journal entry in the currently attached journal receiver.

***RESET:** The journal sequence number of the first journal entry in the newly attached journal receiver is reset to 1. *RESET is not valid if JRNRCV(*SAME) is specified, if any object being journaled contains changes that have not yet been forced to auxiliary storage, or if any commitment control changes associated with the journal are pending.

MSGQ

Specifies the qualified name of the message queue associated with the journal. A message is sent to this queue when one of the following occurs:

- When an attached journal receiver's threshold is surpassed, the message CPF7099 is sent if the journal has the MNGRCV(*USER) attribute.
- When an attached journal receiver's threshold is surpassed, the system attempts to create and attach a new receiver if the journal has the MNGRCV(*SYSTEM) attribute. When the old receiver is detached, the message CPF7020 is sent. If the attempt fails due to lock conflicts, the system sends the message CPI70E5 and then tries again every ten minutes  (or as often as requested via the MNGRCVDLY parameter)  until the change journal operation is successful.
- If the journal receiver was attached while RCVSIZOPT(*MAXOPT1 or *MAXOPT2) was in effect for the journal, message CPI70E7 is sent when the sequence number exceeds 9,900,000,000. Otherwise, message CPI70E7 is sent when a journal receiver's sequence number exceeds 2,147,000,000.
- When the system cannot determine if the journal has the MNGRCV(*SYSTEM) attribute, or if the attempt to create and attach a new journal receiver fails because of something other than a lock conflict, the message CPI70E3 is sent.

- When remote journal operations occur. See the Journal management article in the Information Center for more details.
- When the system cannot delete a receiver due to a lock conflict, an exit program indicating that the receiver cannot be deleted, or the receiver is not yet fully replicated to all remote journals, CPI70E6 is sent and the operation will be retried every 10 minutes » (or as often as requested via the DLTRCVDLY parameter). « If a delete fails for any other reason, CPI70E1 is sent.

To set the threshold value, refer to the Create Journal Receiver (CRTJRNRCV) command description.

Note:

A message queue that is in library QTEMP cannot be specified on this parameter.

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

journal-message-queue: Specify the name of the journal message queue to which the journal messages are sent. If this message queue is not available when a message is to be sent, the message is sent to the QSYSOPR message queue.

The name of the journal message queue can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

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

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

MNGRCV

Specifies how the changing of journal receivers (detaching the currently attached journal receiver and attaching a new journal receiver) is managed.

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

***USER:** The user manages the changing of journal receivers by issuing the CHGJRN command to attach a new receiver and detach an old receiver.

***SYSTEM:** The system manages the changing of journal receivers (this function is called system change-journal management). When an attached journal receiver reaches its size threshold, the system detaches the attached journal receiver and creates and attaches a new journal receiver. Message CPF7020 is sent to the journal message queue when the journal receiver is detached. Additionally, during an initial program load (IPL), the system performs a CHGJRN command to create and attach a new journal receiver and to reset the journal sequence number of journals that are not needed for commitment control recovery for that IPL. Also, if the journal receiver was attached while RCVSIZOPT(*MAXOPT1 or *MAXOPT2) was in effect for the journal, the system attempts to perform a CHGJRN command to reset the sequence number when the journal receiver's sequence number exceeds 9,900,000,000. For all other journal receivers, the system attempts this CHGJRN when the sequence number exceeds 2,147,000,000.

Notes:

1. The storage space threshold value must be specified on the Create Journal Receiver (CRTJRNRCV) command before this value is specified.
2. Specifying MNGRCV(*SYSTEM) does not prevent you from using this command to manage journal receivers.

DLTRCV

Specifies whether the system deletes journal receivers when they are no longer needed or leaves them on the system for the user to delete after they have been detached by system change-journal management or by a user-issued CHGJRN command.



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

***NO:** The journal receivers are not deleted by the system.

***YES:** The journal receivers are deleted by the system. To specify this value, no receivers other than the currently attached receiver can be in the receiver directory.

Note:

To find out which journal receivers are in the receiver directory, you can view the Work with Receiver Directory display, which can be accessed using the Work with Journal Attributes (WRKJRNA) command.



When the journal has the DLTRCV(*YES) attribute, the following conditions can prevent the system from deleting the receiver. When one of these conditions occurs, the system sends message CPI70E6 to the journal message queue, and then retries the delete operation every 10 minutes  (or as often as requested via the DLTRCVDLY parameter)  until the operation is successful.

- A lock conflict occurs for either the journal receiver or its journal.
- An exit program that was registered by way of the QIBM_QJO_DLT_JRNRCV exit point indicates that a receiver is not eligible for deletion.
- A journal has remote journals associated with it and one or more of the associated remote journals do not yet have full copies of this receiver.



RCVSIZOPT

Specifies the options that affect the size of the receiver attached to the journal.

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

***NONE:** No options affect the size of the journal entries attached to the receiver. All journal entries placed on the receiver are permanent.  The fixed length data as defined by FIXLENDTA will be included in every journal entry deposited into the attached journal receiver. 

***RMVINTENT:** The size of the receiver attached to the journal is reduced by automatic removal of the internal entries required only for initial program load (IPL) recovery when these entries are no longer required.

***MINFIXLEN:** The size of the journal entries that are deposited into the attached journal receiver is reduced by the automatic removal of  fixed-length data that is deemed not to be required for recovery purposes. This option is not valid when FIXLENDTA is also specified. 

***MAXOPT1:** If this is specified for the journal, the journal receiver attached to that journal can have a maximum receiver size of approximately one terabyte (1,099,511,627,776 bytes) and a maximum sequence number of 9,999,999,999. Additionally, the maximum size of the journal entry which can be deposited is 15,761,440 bytes. These journal receivers cannot be saved and restored to any releases prior to V4R5M0 nor can they be replicated to any remote journals on any systems at releases prior to V4R5M0.

***MAXOPT2:** If this is specified for the journal, the journal receiver attached to that journal can have a maximum receiver size of approximately one terabyte (1,099,511,627,776 bytes) and a maximum sequence number of 9,999,999,999. Additionally, the maximum size of the journal entry which can be deposited is 4,000,000,000 bytes. These journal receivers cannot be saved and restored to any releases prior to V5R1M0 nor can they be replicated to any remote journals on any systems at releases prior to V5R1M0.

Note: To remove a receiver size option, specify all the receiver size options you want to keep and do not specify the one you want to remove.

JRNSTATE

Specifies whether journal entries are allowed to be deposited into the journal.

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

***ACTIVE:** Journal entries are allowed to be deposited into the journal.

***INACTIVE:** Journal entries are not allowed to be deposited into the journal. If an attempt is made to deposit an entry into the journal, then an error indicating “Entry not journaled” will be received.

➤ ***STANDBY:** Journal entries are not deposited into the journal. If an attempt is made to deposit an entry into the journal, then there will be no errors indicating that the entry was not deposited. While in standby state, journaling can be started or stopped. However, using commitment control is not allowed while in standby state. ⏪

Note: See the Journal management article in the Information Center for which journal entries are allowed to be deposited in these states.

MINENTDTA

Specifies which object types allow journal entries to have minimized entry specific data.

Journal receivers with object types allowing minimized entry specific data cannot be saved and restored to any release prior to V5R1M0 nor can they be replicated to any remote journal on a system at a release prior to V5R1M0. See the Journal management article in the Information Center for restrictions and usage of journal entries with minimized entry specific data.

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

***NONE:** No object type allows a journal entry with minimized entry specific data. Journal entries for all journaled objects will be deposited in the journal with complete entry specific data.

***FILE:** Journaled files may have journal entries deposited with minimized entry specific data.

***DTAARA:** Journaled data areas may have journal entries deposited with minimized entry specific data.

➤ JRNCACHE

Specifies whether journal entries will be cached before written out to disk.

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

***NO:** Journal entries are written to disk immediately if needed to assure single system recovery.

***YES:** Journal entries are written to main memory. When there are several journal entries in main memory then the journal entries are written from main memory to disk. If the application performs large numbers of changes, this may result in fewer synchronous disk writes resulting in improved performance. However, it is **not** recommended to use this option if it is unacceptable to lose even one recent change in the event of a system failure where the contents of main memory are not preserved. This type of journaling is directed primarily toward batch jobs and may not be suitable for interactive applications where single system recovery is the primary reason for using journaling.

Note: Applications using commitment control will likely see less performance improvement because commitment control already performs some journal caching.

MNGRCVDLY

Specifies the time (in minutes) to be used to delay the next attempt to attach a new journal receiver to this journal if the journal is system managed (MNGRCV(*SYSTEM)).

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

manage-receiver-delay-time: When the system cannot allocate an object needed to attach a new journal receiver to this journal, it will wait the specified number of minutes before trying again. Valid values range from 1 through 1440.

DLTRCVDLY

Specifies the time (in minutes) to be used to delay the next attempt to delete a journal receiver associated with this journal if the journal has DLTRCY(*YES) specified.

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

delete-receiver-delay-time: When the system cannot allocate an object needed to delete a journal receiver associated with this journal, it will wait the specified number of minutes before trying again. Valid values range from 1 through 1440.

FIXLENTA

Specifies the data that is included in the fixed-length portion of the journal entries that are deposited into the attached journal receiver. This parameter is not valid when RCVSIZOPT(*MINFIXLEN) is also specified.

***JOBUSRPGM:** The job name, user name and program name will be included in the journal entries deposited into the attached journal receiver.

***JOB:** The job name will be included in the journal entries deposited into the attached journal receiver.

***USR:** The effective user profile name will be included in the journal entries deposited into the attached journal receiver.

***PGM:** The program name will be included in the journal entries deposited into the attached journal receiver.

***PGMLIB:** The program library name and the auxiliary storage pool device name that contains the program library will be included in the journal entries deposited into the attached journal receiver.

***SYSSEQ:** The system sequence number will be included in the journal entries deposited into the attached journal receiver. The system sequence number gives a relative sequence to all journal entries in all journal receivers on the system.

***RMTADR:** If appropriate, the remote address, the address family and the remote port will be included in the journal entries deposited into the attached journal receiver.

***THD:** The thread identifier will be included in the journal entries deposited into the attached journal receiver. The thread identifier helps distinguish between multiple threads running in the same job.

***LUW:** If appropriate, the logical unit of work identifier will be included in the journal entries deposited into the attached journal receiver. The logical unit of work identifies work related to specific commit cycles.

***XID:** If appropriate, the transaction identifier will be included in the journal entries deposited into the attached journal receiver. The transaction identifier identifies transactions related to specific commit cycles. <<

TEXT Specifies the text that briefly describes the journal. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

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

Examples for CHGJRN

Example 1: Detaching Journal Receiver and Resetting Sequence Numbers

```
CHGJRN JRN(JRNLA) JRNRCV(RCV10) SEQOPT(*RESET)
```

This command detaches the journal receiver currently attached to journal JRNLA (JRNLA is found by using the library search list *LIBL). Journal receiver RCV10 (found using the library search list *LIBL) is attached to journal JRNLA. Because SEQOPT(*RESET) is specified, the first journal entry in journal receiver RCV10 has a sequence number of one.

Example 2: Creating and Attaching a New Journal Receiver

```
CHGJRN JRN(JRNLA) JRNRCV(*GEN)
```

This command detaches the journal receiver currently attached to journal JRNLA. A new journal receiver is created and attached to journal JRNLA. The library, owner, authority, and auditing level of the new journal receiver is the same as that of the detached receiver. The name of the new receiver depends on the name of the detached receiver. (For example, if the receiver is named RCVJRNA, the new receiver is named RCVJRN0001. If the receiver is named RCVJRN0001, the new receiver is named RCVJRN0002.) The first journal entry in the new journal receiver has a sequence number one greater than the last sequence number in the detached receiver. ➤

Example 3: Changing to Use System Receiver Management

```
CHGJRN JRN(LIBY/JRN) JRNRCV(LIBX/RCV0001) MNGRCV(*SYSTEM) DLTRCV(*YES)  
RCVSIZOPT(*MAXOPT2) MNGRCVDLY(10) DLTRCVDLY(30)
```

This command detaches the journal receiver currently attached to journal JRN. The user previously created the journal receiver RCV0001 in library LIBX. This specified journal receiver is attached to the journal JRN. This new journal receiver will have a maximum size of approximately one terabyte. It will allow the sequence number to reach 9,999,999,999 and the maximum size of a journal entry that can be deposited in the journal receiver is 4,000,000,000 bytes. The first journal entry in the new journal receiver has a sequence number one greater than the last sequence number in the detached receiver. From this point on the system will manage attaching and detaching journal receivers. If the system cannot allocate an object during this process, it will wait 10 minutes and try again. From this point on, the system will also manage deleting the detached receivers. If the system cannot allocate an object while trying to delete the journal receiver it will wait 30 minutes and try again. ⬅

Error messages for CHGJRN

*ESCAPE Messages

➤ CPF70A0

FIXLENDTA parameter not allowed.

CPF70A1

FIXLENDTA parameter not allowed with RCVSIZOPT(*MINFIXLEN).

CPF70A2

JRNRCV(*SAME) not allowed.

CPF70C9

State of journal &1 in &2 not changed.

⬅ CPF70CF

Cannot inactivate remote journal with given parameters.

CPF70DB
Remote journal function failed.

CPF70DD
Cannot attach dual receivers to journal &1.

CPF70DE
State of journal &1 in &2 not changed.

CPF70DF
Cannot change attribute for a remote journal.

CPF70D1
Cannot activate remote journal through CHGJRN command.

CPF70D2
Cannot detach journal receiver &3.

CPF70D9
Changing journal state not allowed. Reason code &3.

» **CPF70E0**
Operation on &1 not allowed.◀◀

CPF70E2
DLTRCV(*YES) not allowed.

CPF70E3
Only attached receivers allowed in receiver directory

CPF70E4
MNGRCV(*SYSTEM) not allowed.

CPF70E5
RCVSIZOPT values specified not allowed.

CPF70E7
MINENTDTA value not allowed with JRNRCV(*SAME).

CPF70F1
Journal receiver threshold too big for journal.

CPF70F5
Receiver threshold value is not valid.

» **CPF70F6**
RCVSIZOPT value specified not allowed.◀◀

CPF70F8
RCVSIZOPT and FIXLENTA value not allowed with JRNRCV(*SAME).

CPF7003
Entry not journaled to journal &1. Reason code &3.

CPF7004
Maximum number of objects journaled to journal &1.

CPF701A
Journal receiver not eligible for operation.

CPF701B
Journal recovery of an interrupted operation failed.

CPF7011
Not enough storage.


- CPF7013**
Journal receiver not created.
- CPF7015**
Error on JRNRCV specifications.
- CPF7017**
Library QTEMP not valid for message queue parameter.
- CPF7018**
Resetting sequence number not allowed. Reason code &3.
- CPF704E**
RCVSIZEOPT(*MINFIXLEN) not allowed.
- CPF708D**
Journal receiver found logically damaged.
- CPF708E**
Journal receiver not allowed with *MAXOPT1 or *MAXOPT2.
- » **CPF708F**
Cannot place a remote journal in standby.
- CPF709F**
Start of journal caching not allowed. Reason code &3.◀
- CPF9801**
Object &2 in library &3 not found.
- 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.
- CPF9810**
Library &1 not found.
- CPF9820**
Not authorized to use library &1.
- » **CPF9825**
Not authorized to device &1.◀
- CPF9830**
Cannot assign library &1.
- » **CPF9873**
ASP status is preventing access to object.
- CPF9875**
Resources exceeded on ASP &1.◀

CHGKBDMAP (Change Keyboard Map) Command Description

CHGKBDMAP Command syntax diagram

Purpose

The Change Keyboard Map (CHGKBDMAP) command allows the user to change the Program Attention (PA) and Program Function (PF) key assignment defaults provided either by the iSeries 400 or by a previously specified keyboard mapping. This command assigns the specified F-to-PF map to the device on which the command was entered (if it is a 3270 work station device), or to the 3270 work station specified if the user has authority to that device. More information on user-assignable keyboard mapping is in the

Remote Work Station Support  book.

Optional Parameters

DEV Specifies a valid 3270 display station to which keyboard changes are assigned by using the keyboard mapping command. The user must have allocation authority to the specified device before entering the command. In a program environment, the user should either acquire or allocate the specified device before entering this command.

***REQUESTER:** These PF key changes are assigned to the device on which the command was entered.

device-name: Specify a device other than the device on which the command was entered (*REQUESTER).

KEY SEQUENCE PARAMETERS

Specifies the function assigned to the keys or key sequences ranging from PF1 through PF24, PA1PF1 through PA1PF12, and PA2PF1 through PA2PF12.

***SAME:** The PA and PF key assignments do not change.

function: Specify the function assigned to the PA and PF keys or key sequences.

Each valid key or key sequence is a separate parameter which, except for the restrictions noted below, may be assigned any function. If the user does not specify a function for a particular key or key sequence, the current value for that key or key sequence does not change. The abbreviated and spelled-out function names are:

***ATTN** Attention

***BCKSPC**
Record Backspace

***CLEAR**
Clear Screen

***DOWN**
Roll Down

***DSPATR**
Display Imbedded Attributes

***F1-*F24**
F1 through F24 Function Keys

***HELP**
5250 Help

***HLP3270**
3270 Help Text (Display Active Keyboard Map)

- *NONE** No Assignment
- *PRINT** Print Screen
- *RESET** Error reset
- *SAME** No Change
- *SYSREQ** System Request
- *TEST** Test Request
- *UP** Roll up

Additional Considerations

- *HELP, *HLP3270, and *RESET must be assigned to PF1 through PF12, PA1/PF1 through PF12, or PA2/PF1 through PF12. Because these functions are required for 3270 work station device support to function properly and not all keyboards have 24 PF keys, *HELP, *HLP3270, or *RESET may not be assigned to keys PF13 through PF24, unless that function is also assigned to keys PF1 through PF12, PA1/PF1 through PF12, or PA2/PF1 through PF12.
- It is recommended that *F1 and *SYSREQ be assigned to PF1 through PF12, PA1/PF1 through PF12, or PA2/PF1 through PF12.
- The value *ATTN cannot be explicitly assigned to a 3270 remote attach work station. If the value *ATTN is explicitly chosen, a diagnostic message is sent.

Example for CHGKBDMAP

```
CHGKBDMAP PF1(*F1) PA1PF1(*HELP)
```

This command would be entered if the user is generally satisfied with the keyboard mapping (either the default mapping or a user-defined mapping) except for one or two PF key assignments. No other PF key sequences are affected by this command. The above command could also be started in the program that started the application (thus tailoring the work station to whatever application is run).

Error messages for CHGKBDMAP

*ESCAPE Messages

CPF8701

Specified device &1 not a 3270 device type.

CPF8702

&1 function key not correctly defined.

CPF8703

Device &1 not ready.

CHGLANADPI (Change LAN Adapter Information) Command Description

CHGLANADPI Command syntax diagram

Purpose

The Change Local Area Network Adapter Information (CHGLANADPI) command changes an adapter address, or the text associated with the name of an adapter entry, in the adapter file.

Note:

If a default name is associated with an address that changes, the default name will also change to reflect the new address. The default name consists of the last nine digits of the adapter address, prefixed by the character D.

Required Parameter

ADPTNAME

Specifies the name of the adapter being changed in the adapter file.

Optional Parameters

ADPTADR

Specifies the 12-character hexadecimal adapter address.

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

adapter-address: Specify the adapter address being changed.

TEXT Specifies the text that briefly describes the LAN adapter. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

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

Example for CHGLANADPI

```
CHGLANADPI ADPTNAME(ACCOUNTING) ADPTADR(00000000110F)
```

This command changes the address of adapter ACCOUNTING to 0000000110F.

Error messages for CHGLANADPI

***ESCAPE Messages**

CPF8B68

Line description &23 not found.

CPF8B71

Change failed. Adapter &29 already exists in network adapter file.

CPF8B72

Change failed. Adapter &29 not found in network adapter file.

CPF8B74

Request to display active adapters failed.

CPF8B75

No adapter entries in network adapter file.

CPF8B76

No functional addresses for adapter.

CHGLIB (Change Library) Command Description

CHGLIB Command syntax diagram

Purpose

The Change Library (CHGLIB) command changes the type attribute, the text description of a library, the default create authority value of a library, and the default object auditing value of a library.

Restrictions:

1. You must have *OBJMGT authority to the library that is changed.
2. You must have *AUDIT special authority to specify a value other than *SAME on the CRTOBJAUD parameter. To change only the CRTOBJAUD parameter, only *AUDIT special authority is required.

Required Parameter

LIB Specifies the name of the library to be changed.

***CURLIB:** The current library for the job is changed. 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 changed.

Optional Parameters

TYPE Specifies the new library type.

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

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

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

TEXT Specifies the text that briefly describes the library and its function. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

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

CRTAUT

Specifies, when an object is created into this library, the authority given to users who do not have specific authority to the object (public authority), who are not on the authorization list, and whose user groups have no specific authority to the object.

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

***SYSVAL:** The QCRTAUT system value is used.

***USE:** The user can perform basic operations on the library, such as running a program or reading a file. The user cannot change the library. *USE authority provides object operational authority, read authority, and execute authority.

***CHANGE:** The user can perform all operations on the object except those limited to the owner or controlled by object existence authority and object management authority. The user can change and perform basic functions on the object. Change authority provides object operational authority and all data authority.

***ALL:** The user can perform all operations on the object except those limited to the owner or controlled by authorization list management authority. The user can control the object's existence, specify the security for the object, change the object, and perform basic functions on the object. The user can also transfer ownership of the object. If the object is an authorization list, the user cannot add, change, or remove user IDs.

***EXCLUDE:** The user cannot access the library.

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

CRTOBJAUD

Specifies the auditing value for objects created in this library.

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

***SYSVAL:** The value specified in the system value QCRTOBJAUD is used.

***NONE:** Using or changing this object will not cause an audit entry to be sent to the security journal.

***USRPRF:** The user profile of the user accessing this object is used to determine if an audit record will be sent for this access. The OBJAUD keyword of the CHGUSRAUD command is used to turn on auditing for a specific user.

***CHANGE:** All change accesses to this object by all users are logged.

***ALL:** All change or read accesses to this object by all users are logged.

Example for CHGLIB

```
CHGLIB LIB(LIB1) TYPE(*TEST)
      TEXT('NEW TEXT FOR LIB1')
```

This command changes the TYPE attribute of the library named LIB1 to *TEST and changes the text description to the value specified by the TEXT parameter.

Error messages for CHGLIB

***ESCAPE Messages**

CPF21A0

*AUDIT required to create or change libraries.

CPF210C

Library &1 not changed.

CPF2150

Object information function failed.

CPF2151

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

CPF2283

Authorization list &1 does not exist.

CPF9810

Library &1 not found.

CPF9820

Not authorized to use library &1.

CPF9830

Cannot assign library &1.

CHGLIBL (Change Library List) Command Description

CHGLIBL Command syntax diagram

Purpose

The Change Library List (CHGLIBL) command changes the user's portion of the current job's library list with the list of libraries specified by the user. This command does not affect the system portion of the library list, nor does it affect any other job's library list.

Restriction: The user must have *USE authority for all the specified libraries before the job's current library list is changed. If the user is not authorized to one of the libraries, the library list is not changed.

Optional Parameters

LIBL Specifies the libraries that are placed in the user's portion of the current job's library list.

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

***NONE:** No libraries are in the user's portion of the job's library list.

library-name: Specify the names of the libraries in the order in which they are searched. The number of libraries that can be specified ranges from 1 through 250.

CURLIB

Specifies the library that replaces the current library entry in the job's library list.

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

***CRTDFT:** No library is in the current library entry of the library list. If objects are created into the current library, the QGPL library is used as the default current library.

library-name: Specify the name of the library that replaces the current library entry in the job's library list.

Example for CHGLIBL

```
CHGLIBL LIBL(ULIB10 ULIB15 QGPL)
```

This command changes the user's portion of the current job's library list that existed before this command was entered. The new library list contains libraries ULIB10, ULIB15, and QGPL. They are searched in that order.

Error messages for CHGLIBL

*ESCAPE Messages

CPF2106

Library list not changed.

CPF2110

Library &1 not found.

CPF2113

Cannot allocate library &1.

CPF2176

Library &1 damaged.

CPF2182

Not authorized to library &1.

CPF2184

Library list not replaced.



CHGLICCRQA (Change License CRQ Activity) Command Description

Note: To use this command, you must have the 5722-SM1 (System Manager for iSeries) licensed program installed.

CHGLICCRQA Command syntax diagram

Purpose

The Change License CRQ Activity (CHGLICCRQA) command changes a license key distribution activity in a change request description.

A prompt override program will be provided to display the current activity information.

Restrictions:

1. This command is shipped with public *EXCLUDE authority.
2. The user must have *CHANGE authority to the change request description object and *EXECUTE authority to the library.
3. The user changing the activity does not need to be authorized to any objects that are to be manipulated.
4. If a node list (NODL) value is specified, the node list can only contain entries that have a value of *SNA for the address type.
5. The license key information does not need to exist in the license repository when a license activity is being added to a change request, but it must exist by the time the activity runs.

Notes:

1. All conditions must be satisfied before the activity can be performed.
2. The start times indicate when the activity can be started. Actual start times may be later due to network and system delays.
3. All the existing records in the central site license repository containing the license key information for the specified product will be sent to the specified managed system or systems. Only those ones that match the system serial number are added to the managed system license repository.

Required Parameters

CRQD Change request description object name.

The possible library values are:

***LIBL:** All of the libraries in the user and system portions of the job's library list are searched.

***CURLIB:** The current library for the job is used to locate the object.

library-name: Only the library named in this parameter is searched.

change-request-description: The name of the change request description object.

ACTIVITY

The name of the activity to change in the change request description.

***LAST**: The activity is the last to run in the change request. Only one activity named *LAST can exist in the change request description.

activity-name: A 10-character activity name.

ACTION

The license distribution function that is to be performed.

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

***SND**: Send the license keys of the specified product and license term to the specified managed systems.

PRDID

Specifies the 7-character identifier of the product for which the license key information will be distributed.

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

***ALL**: The license keys for all the products existing in the central site license repository will be distributed.

Product-Identifier: Specifies the 7-character identifier of the product for which the license key information will be distributed.

LICTRM

Specifies the license term for which the licenses key information will be sent.

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

***ALL**: The product licenses for all license term found will be sent.

license-term: Specify the license term in one of the following formats:

Vx The authorized usage limit is valid for the entire version of the product or feature.

VxRy The authorized usage limit is valid for the entire release of the product or feature.

VxRyMz

The authorized usage limit is valid only for a modification of the product.

where x and y can be a number from 0 through 9, and z can be a number 0 through 9 or a letter A through Z.

Optional Parameters

NODL Node list object name that contains a list of systems that are the destinations for the request. Cannot be specified if the control point names (CPNAME) parameter is also specified

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

***NONE**: The systems on which this activity is to be performed are not identified by a node list. Individual control point names must be specified.

The possible library values are:

***LIBL:** All of the libraries in the user and system portions of the job's library list are searched for the node list object.

***CURLIB:** The current library for the job is used to locate the node list object.

library-name: Only the library named in this keyword is searched.

node-list-name: Node list object name which contains the list of systems on which the command is to be performed.

CPNAME

The APPN control point names of the managed systems on which this activity is to be performed. Control point names cannot be specified if the node list (NODL) parameter is specified.

***SAME:** The value does not change

***NONE:** The systems on which this activity is to be performed are not identified individually. A node list must be specified.

***NETATR:** The network ID of the local system will be used. This is useful when the node being specified is in the same network as the local system.

network-identifier: The APPN network identifier of the managed system on which the activity is to be performed, it is a character field of length 8.

control-point-name: The APPN control point name of the managed system on which the activity is to be performed, it is a character field of length 8.

COND Specifies which conditions must be met before this activity can be performed. Each condition identifies an activity that must be run before this activity and the value the end code from that activity must have to allow this activity to run. The default condition is that the previous activity (in alphabetical order) must complete successfully before this activity can be run.

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

***NONE:** There are no conditions for this activity.

Element 1: Conditioning Activity

The activity that must run before this activity.

***PRV:** This activity is conditioned on the previous activity. Activities are ordered alphabetically by activity name. If the activity being added is the first activity, a previous activity does not exist and any condition with *PRV is marked as having been met.

conditioning-activity-name: Specify the name of the activity that must run before this activity. The activity name specified in the activity (ACTIVITY) parameter cannot be specified in the conditioning activity name. An activity cannot be conditioned on itself.

generic-conditioning-activity-name:* Specify the generic name of the activities that must be run before this activity.

Element 2: Relational Operator

This element is the relational operator to use when comparing the end code from a conditioning activity.

***EQ:** Equal

***GT:** Greater than

***LT:** Less than

***NE:** Not equal

***GE:** Greater than or equal

***LE:** Less than or equal

Element 3: Condition Code

This element is the value compared to the actual end code of the conditioning activity.

***SUCCESS:** The activity ended successfully (0 <= end code <= 9). This end code can only be specified with relational operator *EQ or *NE.

***FAIL:** The activity failed (10 <= end code <= 89). This end code can only be specified with relational operator *EQ or *NE.

***NOTRUN:** The activity was never started (90 <= end code <= 99). This end code is only specified with relational operator *EQ or *NE.

***ANY:** The activity ended with any end code. This end code is only specified with relational operator *EQ.

end-code: Specify an integer value (0-99) that indicates the result of an activity (success or failure). The end codes used by the change request manager and recommended for applications are:

00 Activity completed successfully.

01-09 Activity completed with warning messages.

10-29 Activity did not complete successfully.

30-39 Activity was canceled by the user before it completed.

- 30 = Activity ended with *CNTRLD option
- 35 = Activity ended with *IMMED option
- 39 = Activity ended with *FRCFAIL option

40-49 Activity was not run due errors detected by the application.

- 40 = Activity not run for security reasons

90-99 Activity was not run because conditions or schedules were not met.

- 95 = Scheduled start time expired
- 99 = Conditions cannot be met

Element 4: Condition Mode

This element indicates which systems the conditioning activity must have completed on or before this activity can be performed.

***ALLNODES:** The conditioning activity specified must complete on all nodes before this activity runs.

***SAMENODE:** When the conditioning activity specified completes for a given node, the activity specified on the ACTIVITY parameter may run for that same node even though the conditioning activity specified may not have completed for all other nodes. In the case where this activity lists a node not in the conditioning activity, this activity may run for that node; the condition is ignored.

STRTIME

Specifies the date and time when this activity can start on the central site system. The current date and time values and next date values are determined when the change request is submitted.

Element 1: Start After Time

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

***CURRENT:** This activity can start any time on or after the time when the change request was submitted.

start-after-time: Specify the time when this activity can start. The time can be entered as 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds. Seconds are optional. The time can be specified with or without a time separator such as a colon (:). With a time separator, specify a string of 5 or 8 digits (hh:mm or hh:mm:ss).

Element 2: Start After Date

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

***CURRENT:** This activity can start on or after the date on which the change request is submitted.

***NEXT:** The activity can start on any date after the date the change request is submitted.

start-after-date: Specify the date after this activity can start. The date must be specified in the job date format.

Element 3: Start Before Time

This element is ignored if the start before date is *ANY.

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

***ANY:** The activity can start at any time on or before the start before date.

***CURRENT:** The activity must start before the time when the change request was submitted on the date specified on the start before date element.

start-before-time: Specify the time before the activity must be started. If the activity cannot be started before this time, it is never started. The time can be entered as 4 or 6 digits (hhmm or hhmmss) where h = hours, m = minutes, and s = seconds. Seconds are optional. The time can be specified with or without a time separator such as a colon (:). With a time separator, specify a string of 5 or 8 digits (hh:mm or hh:mm:ss).

Element 4: Start Before Date

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

***ANY:** The activity can start at any time after the start after time and the start after date.

***CURRENT:** The activity must start on the date the change request is submitted.

***NEXT:** The activity must start by the day after the date the change request is submitted.

start-before-date: Specify the date before the activity must start. If the activity cannot be started by this date, it never starts. The date must be specified in the job date format.

HOLD Specifies that the activity be held when the change request is submitted.

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

***NO:** The activity is not held and will run when all conditions are met.

***YES:** The activity is held for all nodes when the change request is submitted. It must be released by a user before it will run.

TEXT Specifies the activity description.

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

***GEN:** A text description is generated based upon the action chosen.

text-description: Specify a 50-character description of the activity.

Error messages for CHGLICCRQA

*ESCAPE Messages

None <<

CHGLICINF (Change License Information) Command Description

CHGLICINF Command syntax diagram

Purpose

The Change License Information (CHGLICINF) command can be used to change the following license information for a product or feature:

- The usage limit for products that do not have keyed compliance. (**Keyed compliance** requires that you have a software license key from the software provider in order to change the usage limit of the license information.)
- The threshold.
- The users to notify when the threshold is exceeded, when an attempt to exceed the usage limit is made, or when the usage limit is changed.
- The logging of usage requests.

Restriction: This command is shipped with public *EXCLUDE authority.

Required Parameter

PRDID

Specifies the seven-character identifier (ID) of the product for which license information is to be changed.

Optional Parameters

LICTRM

Specifies the license term for which license information is to be changed.

***ONLY:** Only one license term of the product is on the system and that license term identifies the product to be changed.

license-term: Specify the license term in Vx, VxRy, or VxRyMz format, where x and y can be a number from 0 through 9, and z can be a number from 0 through 9 or a letter from A through Z. Use the Work with License Information (WRKLICINF) command to determine the license term.

FEATURE

Specifies the feature of the product specified on the PRDID parameter for which license

information is to be changed. You can use the Work with License Information (WRKLICINF) command to identify the feature number of the product.

5001: The license information for the feature 5001 is to be changed.

feature: Specify the feature for which license information is to be changed. Valid values range from 5001 through 9999.

USGLMT

Specifies the maximum number of users (usage limit) for this product or feature. The software provider authorizes the usage limit. For a concurrent usage limit, this is the maximum number of jobs allowed to access the product or feature at any given time. For a registered usage limit, this is the maximum number of license users that can be registered to use this product or feature.

Note:

To change the usage limit for products using keyed compliance, you must use the Add License Key Information (ADDLICENSE) command.

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

***NOMAX:** The number of users is not limited.

usage-limit: Specify the maximum number of users for this product or feature. Valid values range from 0 through 999999.

THRESHOLD

Specifies the threshold for this product or feature. When the number of users for this product exceeds the threshold, a message is sent to the system operator's message queue (QSYS/QSYSOPR) and to the message queues specified on the MSGQ parameter.

Note:

If you specify a value equal to the usage limit, no threshold messages are sent. Messages are sent only when an attempt to exceed the usage limit is made, or when the usage limit is changed.

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

***CALC:** The system calculates the threshold for this product or feature. The calculated threshold is equal to 90 percent of the usage limit (maximum number of users specified on the USGLMT parameter). If the usage limit is 1 or *NOMAX, the threshold is equal to the usage limit.

***USGLMT:** The threshold for this product or feature is equal to its usage limit.

threshold: Specify the threshold for this product or feature. Valid values range from 0 through 999999.

MSGQ

Specifies the qualified names of a maximum of five message queues to which messages are sent if (1) the threshold is exceeded, (2) an attempt to exceed the usage limit is made, or (3) the usage limit is changed. These messages are also sent to the system operator's message queue (QSYS/QSYSOPR).

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

***NONE:** Messages are sent only to the system operator's message queue (QSYS/QSYSOPR).

***OPSYS:** Messages are sent to the message queues defined in the license information for the operating system.

The name of the message queue can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

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

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.

LOG Specifies whether to record requests to use the product or feature when the usage count is equal to the usage limit. If requests are recorded, they are recorded in the QLZALOG journal in QUSRSYS.

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

***NO:** The requests made when the usage count is equal to the usage limit are not recorded.

***YES:** The requests made when the usage count is equal to the usage limit are recorded. When a license request is made and the usage count is equal to the usage limit, the user requesting a license and all current license users are recorded in the QLZALOG journal in QUSRSYS.

Examples for CHGLICINF

Example 1: Changing the Usage Limit for a Product with One License Term on the System

```
CHGLICINF PRDID(1MYPROD) LICTRM(*ONLY) USGLMT(35)
          THRESHOLD(30) MSGQ(MYLIB/MYMSGQ) LOG(*NO)
```

This command allows you to change the usage limit for the product with product identifier 1MYPROD which has only one license term installed on this system. After this command is run, 35 users will be authorized to use this product. When the usage count reaches 31, messages will be sent to the system operator's message queue and the message queue MYMSGQ in the library MYLIB stating that the threshold has been exceeded. Requests for a license when the usage count is equal to the usage limit will not be recorded. However, changes to the usage limit will be recorded in the QLZALOG journal in QUSRSYS.

Example 2: Changing the Usage Limit for a Product with More Than One License Term on the System

```
CHGLICINF PRDID(2MYPROD) LICTRM(V2) USGLMT(50)
          THRESHOLD(*USGLMT) MSGQ(*NONE) LOG(*YES)
```

This command allows you to change the usage limit for the product with product identifier 2MYPROD and license term Version 2. After this command is run, 50 users will be authorized to use this product. No threshold messages will be sent. (However, messages will be sent to the system operator whenever the usage limit is changed or the usage count reaches or exceeds the usage limit.) A request for a license when the usage count is equal to the usage limit will be recorded in the QLZALOG journal in QUSRSYS.

Error messages for CHGLICINF

*ESCAPE Messages

CPF9E2C

LICTRM(*ONLY) cannot be specified.

CPF9E2D

Usage limit cannot be less than current usage.

CPF9E27

Usage limit cannot be changed for *KEYED compliance product.

CPF9E28

Message queue *OPSYS not allowed for operating system.

CPF9E30

License information not changed.

CPF9E88

Alternate usage limit cannot be less than current usage.

CHGLINASC (Change Line Description (Async)) Command Description

CHGLINASC Command syntax diagram

Purpose

The Change Line Description (Async) (CHGLINASC) command changes a line description for an asynchronous line.

Required Parameter

LIND Specifies the name of the line description being changed.

Optional Parameters

RSRCNAME

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

Note:

Use the Work with Hardware Resources (WRKHDWRSC) command with *CMN specified for the TYPE parameter to help determine the resource name.

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

resource-name: Specify the resource name of the communications port. The resource name consists of the input/output adapter (IOA) resource name and the port number on the IOA. For example, if the resource name of the IOA is LIN01 and the port on the IOA is 2, then the resource name would be LIN012.

ONLINE

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

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

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

***YES:** The line is automatically varied on at IPL.

ACTSNBU

Specifies, for controllers supporting the switched network backup (SNBU) feature, whether the SNBU feature is activated or deactivated. Both the local and remote modems must support the SNBU feature to perform a valid activation.

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

***NO:** The switched network backup (SNBU) feature is not activated.

***YES:** The switched network backup feature (SNBU) is activated. To start the feature when the nonswitched connection is broken, specify ACTSNBU(*YES) on the line description command.

VRYWAIT

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

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

***NOWAIT:** The system does not wait for the vary on to complete. The line is varied on asynchronously.

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

Notes:

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

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

SWTCTLLST

Specifies, for switched lines, or those with the SNBU feature, the names of up to 64 switched controllers that can establish a connection with this switched asynchronous line. The controller descriptions must already exist.

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

switched-controller-name: Specify the switched controller name. The user can specify up to 64 switched controllers that can establish a connection.

BITSCHAR

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

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

8: A value of eight data bits per character is used.

7: The format of this tape is FMT3570E. The data format is written on the tape volume with a 3570E device.

PARITY

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

Note:

The remote system must use the parity type specified by the PARITY parameter.

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

***NONE:** No parity bit is inserted in the data byte.

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

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

STOPBITS

Specifies the number of stop bits added to the end of each character. These bits are used to keep the local and remote ends of the line synchronized. The local system and the remote system must use the same number of stop bits.

Note:

At line speeds of 300 bps or less, two stop bits are recommended.

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

1: Add one stop bit to each character.

2: The page width is 132 printed characters per line.

DUPLEX

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

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

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

***HALF:** RTS is turned on only when transmission is required (for half-duplex modems).

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

Specify ***ALL** or ***CNTL** only when communicating with a remote system that requires echo. If ***ALL** or ***CNTL** is specified for the echo prompt, ***FULL** must also be specified for the duplex prompt.

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

***NONE:** No characters received are echoed to the remote system.

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

***CNTL:** All characters received before end-of-record characters are echoed to the remote system.

LINESPEED

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

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

line-speed: Specify the line speed. Valid values are: 50, 75, 110, 150, 300, 600, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 28800, 38400, 57600, 76800, 115200 bps.

MODEM

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

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

***NORMAL:** No attempt is made to run diagnostic tests on the modem.

***V54:** This value means that certain types of diagnostics (as defined by the CCITT recommendations) are run to the modem. The iSeries 400 supports CCITT V.54 loop 3 (local loop back) and loop 2 (remote loop back).

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

MODEMRATE

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

Note: The user is responsible for ensuring that the specified line speed corresponds to the actual modem rate.

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

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

***HALF:** The line operates at half the rate, or at the alternate rate of the modem.

SWTCNN

Specifies whether the switched or switched network backup line is used for incoming calls, for outgoing calls, or for both.

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

***BOTH:** The line is used for both incoming and outgoing calls.

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

***DIAL:** The line is used for outgoing calls only.

AUTOANS

Specifies, for switched or switched network backup (SNBU) lines, whether the system automatically answers a call from a remote system to establish the connection or whether the user must manually answer the call and place the modem in data mode.

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

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

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

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

AUTODIAL

Specifies, for switched or switched network backup (SNBU) lines, whether the system automatically calls a remote system to establish a connection or whether the system operator must manually place the call.

Note: *YES is valid only if the system is using an automatic call unit or if the modem being used is capable of calling through a command interface.

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

***YES:** The line connection is made by the system automatically dialing the remote system.

***NO:** The line connection is made by manually dialing the remote system.

DIALCMD

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

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

***NONE:** No dial command type is specified. An automatic call unit establishes the connection.

***V25BIS:** The dial command type V.25 bis is used. V.25 bis allows the use of one physical interface for call establishment and data transmission. It is referred to as a serial automatic call interface because the digits are presented serially on the link from the system (DTE) to the modem (DCE).

***OTHER:** Another dial command type is used. The IBM AT command set is one example of another dial command type that is used by asynchronous protocols.

SETMDMASC

Specifies the V25BIS command that will set the modem to ASYNC mode.

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

***NONE:** No command string is sent to the modem.

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

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

Table 1. Special characters

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

No embedded blanks are allowed.

MDMINZCMD

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

Note: Valid only when INTERFACE(*INTMODEM) was specified on the create.

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

***NONE:** No command string is sent to the modem.

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

Table 2. Special characters

Character	Description
.	Period
<	Less than sign
(Left parenthesis
+	Plus sign
@	Ampersand
*	Asterisk
)	Right parenthesis
;	Semicolon
-	Minus sign
/	Slash
,	Comma
_	Underline
>	Greater than sign
?	Question mark
:	Colon
=	Equal sign
	Spaces
#	Number sign
"	Double quote
!	Exclamation mark
@	At sign
^	Circumflex
%	Percent
[Left square bracket
]	Right square bracket
\	Back slash
\$	Dollar sign

Note: The first two characters of the modem initialization command string must begin with 'AT'. These first two characters must be in uppercase.

ACRSRCNAME

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

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

autocall-resource-name: Specify the resource name of the autocal unit port. The resource name consists of the input/output adapter (IOA) resource name and the port number on the IOA. For example, if the resource name of the IOA is LIN02 and the port is 1, then the resource name is LIN021.

CALLNBR

Specifies the local telephone number of the line used for the V.25 bis call request with identification (CRI) dial command. This parameter is used when the CRI function is needed for V.25 bis. When V.25 bis CRI dialing is used, the system takes the called (connection) number from the CNNNBR parameter of the controller description, adds a separator character (:), and concatenates the calling number at the end. Specify the calling number only if the modem and the network both support the CRI dial command.

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

***NONE:** The CRN (Call Request Normal) dial command is used by the V.25 bis line.

calling-number: Specify up to 32 characters that represent the local telephone number for V.25 bis CRI auto-dialing.

INACTTMR

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

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

***NOMAX**: There is no disconnect limit.

inactivity-timer: Specify an inactivity timer value.

MAXBUFFER

Specifies the maximum size of inbound and outbound data buffers.

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

buffer-size: Specify a value ranging from 128 through 4096 characters for the buffer size.

THRESHOLD

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

Note:

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

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

***OFF**: No monitoring of errors occurs.

***MIN**: The error threshold is set at a minimum monitoring level.

***MED**: Error thresholding is set to a medium monitoring level.

***MAX**: The error threshold is set at a maximum monitoring level.

FLOWCNTL

Specifies whether the hardware controls the data flow.

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

***NO**: Prevents the hardware from generating or recognizing flow control characters, and prevents the use of Request To Send (RTS) and Clear To Send (CTS) flow control signals.

***YES**: The system uses the flow control capabilities of the asynchronous protocol. The system uses the RTS/CTS signals to control the data flow. If *YES is specified, the hardware recognizes flow control characters. This means that upon receipt of an XOFF character, the hardware stops transmission until an XON character is received. It also means that the hardware sends an XOFF character to the remote location when it is incapable of receiving characters. When the hardware is again able to receive characters, it sends an XON character to the remote system.

***HARDWARE**: The hardware determines the correct values. Hardware flow control is performed using Request To Send (RTS) and Clear To Send (CTS) flow control signals. The hardware signals the modem to stop sending data by dropping RTS signals when it is not capable of receiving characters. When the hardware is again able to receive characters, it raises the RTS signal to the modem. Also, the hardware monitors the CTS/RTS signal from the modem and stops sending data when it turns OFF.

Notes:

1. If *YES or *HARDWARE is specified, DUPLEX(*FULL) must be specified.

2. If *HARDWARE is specified, XONCHAR and XOFFCHAR parameters cannot be specified.

XONCHAR

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

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

XON-character: Specify a value ranging from 01 through FF for the hexadecimal value of the flow control character XON. The character should not appear in the normal data stream, such as hexadecimal 20 (ASCII blank).

XOFFCHAR

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

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

XOFF-character: Specify a value ranging from 01 through FF for the hexadecimal value of the flow control character XOFF. The character should not appear in the normal data stream, such as hexadecimal 20 (ASCII blank).

EORTBL

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

The EOR table is specified as a set of pairs, where the first element of a pair is the EOR character and the second element specifies the number of characters that follow the EOR character.

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

Element 1: End of Record Characters

EOR-character: Specify a value ranging from hexadecimal 01 through 7F (if 7 bits per character) or 01 through FF (if 8 bits per character). End-of-record characters are specified as they appear on the line after any translation by the asynchronous communications support. Up to eight EOR character entries can be specified.

Element 2: Additional End of Record Characters

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

IDLTM

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

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

idle-timer: Specify a value ranging from 1 through 254 in 0.5- second intervals, or specify 0 to indicate no timer.

Note: Idle timer is also called inter-character timer.

DSRDRPTMR

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

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

DSR-drop-timer: Specify a value ranging from 3 through 60 seconds.

AUTOANSTYP

Specifies the method the system uses to answer incoming calls.

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

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

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

CTSTMR

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

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

» *CTS-timer:* Specify a value ranging from 10 through 120 seconds. «

RMTANSTMR

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

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

answer-timer: Specify a value ranging from 30 through 120 seconds.

CMNRCYLMT

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

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

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

Element 1: Maximum Recovery Limit

count-limit: Specify the number of second-level recovery attempts to be made. Valid values range from 0 through 99.

Element 2: Recovery Time Interval

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

TEXT Specifies the text that briefly describes the program and its function. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

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

Example for CHGLINASC

```
CHGLINASC LIND(CHICAGO) LINESPEED(4800)
```

This command changes the line speed for line description CHICAGO to 4800 bits per second.

Error messages for CHGLINASC

*ESCAPE Messages

CPF261E

Line description &1 not changed.

CHGLINBSC (Change Line Description (BSC)) Command Description

CHGLINBSC Command syntax diagram

Purpose

The Change Line Description (BSC) (CHGLINBSC) command changes a line description for a binary synchronous communications (BSC) line.

Required Parameter

LIND Specifies the name of the line description being changed.

Optional Parameters

RSRCNAME

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

Note:

Use the Work with Hardware Resources (WRKHDWRSC) command with *CMN specified for the TYPE parameter to help determine the resource name. The resource name is on the port. For example, the resource name may be CMN01 on a "Token-ring port".

The value specified on the RSRCNAME parameter cannot be changed from *NWID to another value for from another value to *NWID.

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

resource-name: Specify the resource name of the communications port. The resource name consists of the input/output adapter (IOA) resource name and the port number on the IOA. For example, if the resource name of the IOA is LIN01 and the port on the IOA is 2, then the resource name would be LIN012.

ONLINE

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

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

***YES:** The line is automatically varied on at IPL.

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

ACTSNBU

Specifies, for controllers supporting the switched network backup (SNBU) feature, whether the SNBU feature is activated or deactivated. Both the local and remote modems must support the SNBU feature to perform a valid activation.

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

***NO:** The switched network backup (SNBU) feature is not activated.

***YES:** The switched network backup feature (SNBU) is activated. To start the feature when the nonswitched connection is broken, specify ACTSNBU(*YES) on the line description command.

VRYWAIT

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

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

***NOWAIT:** The system does not wait for the vary on to complete. The line is varied on asynchronously.

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

Notes:

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

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

SWTCTLLST

Specifies, for switched lines, or those with the SNBU feature, this specifies the names of up to 64 switched controllers that can establish a connection with this switched binary synchronous line. The controller descriptions must already exist.

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

switched-controller-name: Specify the switched controller name. The maximum number of controllers that can establish a connection with the switched BSC line is 64.

STNADR

Specifies, for multipoint tributary lines, the EBCDIC hexadecimal polling address by which the local system is known to the remote system. The hexadecimal address is the polling address assigned to this iSeries 400.

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

station-address: Specify the station address as a 2-digit hexadecimal value ranging from 04 through FE. BSC control characters cannot be specified.

DUPLEX

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

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

***HALF:** RTS is turned on only when transmission is required (for half-duplex modems).

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

LINESPEED

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

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

line-speed: Specify the line speed. Valid values are: 600, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, or 57600 bits per second.

MODEM

Specifies the type of modem supported on the communications line. Refer to the user's modem documentation to determine the appropriate value.

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

***NORMAL:** No attempt is made to run diagnostic tests on the modem.

***V54:** A certain type of diagnostics (as defined by the CCITT recommendations) is run to the user's modem. The iSeries 400 supports CCITT V.54 loop 3, local loop back, and loop 2, which is a remote loop back.

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

MODEMRATE

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

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

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

***HALF:** The line operates at half the full rate, or at the alternate rate of the modem.

SWTCNN

Specifies whether the switched or switched network backup line is used for incoming calls, outgoing calls, or both.

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

***BOTH:** The line is used for both incoming and outgoing calls.

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

***DIAL:** The line is used for outgoing calls only.

AUTOANS

Specifies, for switched or switched network backup (SNBU) lines, whether the system automatically answers a call from a remote system to establish the connection or whether the user must manually answer the call and place the modem in data mode.

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

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

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

Note:

*YES is valid only if the modem has the automatic answer feature.

AUTODIAL

Specifies, for switched or switched network backup (SNBU) lines, whether the system automatically calls a remote system to establish a connection or whether the system operator must manually place the call.

Note:

*YES is only valid if the system is using an automatic call unit and *YES was specified on the AUTOCALL parameter for the CRTLINBSC command.

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

***YES:** The system automatically calls a remote system.

***NO:** The system operator must manually call a remote system.

DIALCMD

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

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

***NONE:** No dial command is used. An autocal unit is used to establish the connection.

***V25BIS:** V.25 bis is a recommended dial command which allows the use of one physical interface for call establishment and data transmission. It is referred to as a serial automatic call interface because the digits are presented serially on the link from the systems to the modem.

ACRSRCNAME

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

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

autocall-resource-name: Specify the resource name of the autocal unit port. The resource name consists of the input/output adapter (IOA) resource name and the port number on the IOA. For example, if the resource name of the IOA is LIN02 and the port is 1, then the resource name is LIN021.

CALLNBR

Specifies the local telephone number of the line used for the V.25 bis call request with identification (CRI) dial command. This parameter is used when the CRI function is needed for V.25 bis. When V.25 bis CRI dialing is used, the system takes the called (connection) number from the CNNNBR parameter of the controller description, adds a separator character (:), and concatenates the calling number at the end. Specify the calling number only if the modem and the network both support the CRI dial command.

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

***NONE:** CRN dialing is used.

calling-number: Specify the local phone number if V.25 bis CRI dialing is required. Up to 32 characters can be specified. More information on the values allowed by the modem is in the modem documentation.

For short hold mode:

- If the short hold node type is *T20, up to 18 characters can be specified.
- If the short hold node type is *T21, up to 14 characters can be specified.

INACTTMR

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

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

***NOMAX:** There is no disconnect limit.

inactivity-timer: Valid values range from 150 through 4200 in 0.1 second intervals.

MAXBUFFER

Specifies the maximum inbound and outbound data buffers in bytes.

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

buffer-size: Specify a buffer size ranging from 8 through 8192 characters.

CODE Specifies the character code used. The code can be either extended binary-coded decimal interchange code (*EBCDIC) or the American National Standard Code for Information Interchange (*ASCII).

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

***EBCDIC:** The extended binary-coded decimal interchange code (EBCDIC) character set code is used.

***ASCII:** The ASCII character set code is used.

SYNCHCHARS

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

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

2: The synchronization pattern consists of two consecutive SYN characters. The 9404 System Unit always uses two characters.

4: The synchronization pattern consists of four consecutive SYN characters.

THRESHOLD

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

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

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

***OFF:** No monitoring of errors occurs.

***MIN:** The error threshold is set at a minimum monitoring level.

***MED:** Error thresholding is set to a medium monitoring level.

***MAX:** The error threshold is set at a maximum monitoring level.

STXLRC

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

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

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

***YES:** The STX control character is included in the LRC calculation. The 9404 System Unit always includes STX.

RCVTMR

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

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

receive-timer: Specify a value ranging from 30 through 254 in 0.1 second intervals.

CONTTMR

When the system is not ready to transmit or receive data, this parameter specifies the amount of time the system waits before sending a control character that prevents the line from being made inoperative.

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

continue-timer: Specify a value ranging from 16 through 24 in 0.1 second intervals.

CTNRTY

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

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

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

contention-state-retry: Specify a value ranging from 0 through 21 for the number of contention state retries.

DTASTRTY

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

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

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

data-state-retry: Specify a value ranging from 0 through 255 for the number of data state retries.

TMTRTY

Specifies the number of retries for transmitting temporary text delay (TTD) or wait before transmitting (WACK) to hold up the line before indicating a session failure. This parameter cannot be specified for an application type of RJE.

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

***NOMAX:** There is no disconnect limit.

transmit-TDD-or-WACK-retry: Specify a value ranging from 0 through 65534 for the number of retries.

RCVRTY

Specifies the number of retries for receiving temporary text delay (TTD) or wait before transmitting (WACK) before indicating a session failure. This parameter applies only if the application type is *PGM.

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

***NOMAX:** There is no disconnect limit.

receive-TTD-or-WACK-retry: Specify a value ranging from 0 through 65534 for the number of retries.

DSRDRPTMR

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

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

DSR-drop-timer: Specify a value ranging from 3 through 60 seconds.

AUTOANSTYP

Specifies the method the system uses to answer incoming calls.

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

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

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

CTSTMR

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

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

CTS-timer: Specify a value ranging from 10 through 60 seconds.

RMTANSTMR

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

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

answer-timer: Specify a value ranging from 30 through 120 seconds.

CMNRCYLMT

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

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

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

Element 1: Maximum Recovery Limit

count-limit: Specify the number of second-level recovery attempts to be made. Valid values range from 0 through 99.

Element 2: Recovery Time Interval

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

TEXT Specifies the text that briefly describes the program and its function. More information is in Commonly used parameters.

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

***BLANK**: Text is not specified.

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

Example for CHGLINBSC

```
CHGLINBSC LIND(BSCLIN1) INACTTMR(300)
```

This command changes the inactivity timer for line description BSCLIN1 to 300 (30.0 seconds).

Error messages for CHGLINBSC

***ESCAPE Messages**

CPF261E

Line description &1 not changed.

CHGLINDDI (Change Line Description (DDI Network)) Command Description

CHGLINDDI Command syntax diagram

Purpose

The Change Line Description (Distributed Data Interface) (CHGLINDDI) command changes a line description for a distributed data interface line such as an FDDI (Fiber Distributed Data Interface).

Required Parameter

LIND Specifies the name of the line description being changed.

Optional Parameters

RSRCNAME

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

Note:

Use the Work with Hardware Resources (WRKHDWRSC) command with *CMN specified on the TYPE parameter to help determine the resource name. Specify the resource name of the communications port. The resource name consists of the input/output adapter (IOA) resource name and the port number on the IOA. For example, if the resource name of the IOA is LIN01 and the port on the IOA is 1, then the resource name is LIN011.

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

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

***NWID:** The resource name is determined by the network interface used.

resource-name: Specify a resource name.

ONLINE

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

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

***YES:** The line is automatically varied on at IPL.

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

VRYWAIT

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

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

***NOWAIT:** The system does not wait for the vary on to complete. The line is varied on asynchronously.

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

Notes:

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

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

MAXCTL

Specifies the maximum number of controllers that the line supports.

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

40: The line supports 40 controllers.

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

MAXFRAME

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

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

4105: The maximum frame size is 4105 bytes.

maximum-frame-size: Specify a maximum frame size. Valid values range from 265 through 4444 bytes.

LOGLVL

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

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

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

***OFF:** Errors are not monitored.

***ERRORS:** Starts logging of errors from the LAN manager.

***ALL:** Starts logging of errors and states changes from the LAN manager.

LCLMGRMODE

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

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

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

***NONE:** The LAN manager function of this station only retrieves information generated by the local adapter.

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

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

ADPTADR

Specifies the 12-character hexadecimal adapter address.

Note: ADPTADR(*ADPT) is not valid when RSRNAME(*NWID) is specified.

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

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

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

EXCHID

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

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

***SYSGEN:** The iSeries 400 generates the exchange identifier.

exchange-identifier: Specify (if the *SYSGEN value is not specified) an exchange identifier composed of eight hexadecimal digits starting with 056.

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

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

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

***SYSGEN:** The system automatically creates three SSAPs, hex 04 for SNA, and hex AA for TCP/IP applications.

Element 1: SSAPs

source-service-access-point: Specify up to 24 SSAPs using valid SSAP values.

Element 2: Frame Size for SSAPs

***MAXFRAME:** The frame size specified on the MAXFRAME parameter is used.

SSAP-maximum-frame: Specify the maximum SSAP frame size (the maximum size of the data field that may be transmitted or received). Valid values for this parameter range from 265 through 4438 bytes.

Element 3: SSAP Type

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

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

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

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

GRPADR

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

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

***NONE:** No group addresses are specified.

group-address: Specify a hexadecimal group address.

TKNRTTIME

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

Note:

TKNRTTIME(*CALC) must be specified when RSRNAME(*NWID) is specified.

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

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

token-rotation-time: Specify a value ranging from 4 through 167 milliseconds.

LINKSPEED

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

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

***MIN:** The minimum link speed is used.

***MAX:** The maximum link speed is used.

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

COSTCNN

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

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

cost-per-connect-time: Specify a value ranging from 0 through 255.

COSTBYTE

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

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

cost-per-byte: Specify a value ranging from 0 through 255.

SECURITY

Specifies the security level of the physical line.

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

***NONSECURE:** Normal priority is used.

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

***UNDGRDCBL:** An underground cable is used.

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

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

***ENCRYPTED:** Data flowing on the line is encrypted.

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

PRPDLY

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

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

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

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

***TELEPHONE:** The telephone propagation delay is used.

***PKTSWTNET:** The packet switched network propagation delay is used.

***SATELLITE:** The satellite propagation delay is used.

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

USRDFN1

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

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

user-defined-1: Specify a value ranging from 0 through 255.

USRDFN2

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

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

user-defined-2: Specify a value ranging from 0 through 255.

USRDFN3

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

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

user-defined-3: Specify a value ranging from 0 through 255.

AUTOCRTCTL

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

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

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

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

AUTODLTCTL

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


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

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

***NONE:** The system does not automatically delete or vary off the automatically configured, idle controller descriptions.

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

MSGQ

Specifies the qualified name of the message queue to which messages are sent. More information about using this parameter is in the Communications Management  book.

Single Values

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

***SYSVAL:** Messages are sent to the message queue defined in the system value QCFGMSGQ.

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

library-name/message-queue-name: Specify the library-qualified name of the message queue to which operational messages are sent.

CMNRCYLMT

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

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

Element 1: Maximum Recovery Limit

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

Element 2: Recovery Time Interval

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

Other Single Value

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

TEXT Specifies the text that briefly describes the line description. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

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

Example for CHGLINDDI

```
CHGLINDDI LIND(DDI1) AUTODLTCTL(600)
          TEXT('NEW TEXT HERE')
```

This command changes DDI line DDI1 to automatically delete controllers after 600 seconds (10 minutes) and changes the text to 'NEW TEXT HERE'.

Error messages for CHGLINDDI

*ESCAPE Messages

CPF261E

Line description &1 not changed.

CHGLINETH (Change Line Description (Ethernet)) Command Description

CHGLINETH Command syntax diagram

Purpose

The Change Line Description (Ethernet) (CHGLINETH) command changes a line description for an Ethernet Local Area Network (LAN) line. More information about using this command is in the

Communications Configuration  book.

Required Parameter

LIND Specifies the name of the line description being changed.

Optional Parameters

RSRCNAME

Specifies the resource name of the communications port. The resource name consists of the input/output adapter (IOA) resource name and the port number on the IOA. For example, if the resource name of the IOA is LIN01 and the port on the IOA is 1, the resource name is LIN011.

Note:

The value specified on the RSRCNAME parameter cannot be changed from *NWID to another value or from another value to *NWID. The value specified on the RSRCNAME parameter cannot be changed from *NWSD to another value or from another value to *NWSD.

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

***NWID:** The resource name is determined by the network interface used.

***NWSD:** The resource name is determined by the network server description used.

resource-name: Specify the resource name of the communications port.

ONLINE

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

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

***YES:** The line is automatically varied on at IPL.

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

VRYWAIT

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

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

***NOWAIT:** The system does not wait for the vary on to complete. The line is varied on asynchronously.

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

Notes:

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

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

ADPTADR

Specifies the 12-character hexadecimal adapter address.

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

***ADPT:** The preset Ethernet adapter address is used as the local adapter address. The adapter address can be displayed by using the DSPLIND command after the line description has been successfully varied on.

» Notes:

1. This value is not valid when RSRCTYPE(*NWID) and NWITYPE(*FR) is specified, or when RSRCTYPE(*NWSD) is specified with a Network server port of 1 or 2.
2. When RSRCTYPE(*NWSD) is specified and the Network server port is *VRTETHn where 'n' has a value of 0 through 9, the value must be *ADPT.
3. When RSRCTYPE(*NWSD) is specified and the Network server port is *VRTETHPTP, the value must be *ADPT. «

local-adapter-address: Specify the local Ethernet adapter address to override the preset local address. The local adapter address must be an individual address (it cannot be a group address). Valid values range from 020000000000 through FFFFFFFF in hexadecimal. The second digit (from the left) of the address must be 2, 6, A, or E.

GRPADR

Specifies whether an Ethernet group address is used.

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

***NONE:** A group address is not used.

group-address: Specify the address to which a subset of units on the Ethernet line respond in addition to their local adapter address. Valid values range from 010000000000 through FFFFFFFF in hexadecimal form. All group addresses must be unique.

MAXCTL

Specifies the maximum number of controllers that the line supports.

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

maximum-controllers: Specify the maximum number of controllers supported by the line, a number large enough to account for all of the controllers that are currently attached to this line, and for those controllers that will be attached in the near future. Valid values range from 1 through 256.

SSAP Specifies source service access points (SSAPs). This is the hexadecimal logical address used to route incoming data from the ethernet bus to the proper user. A maximum frame size can be specified for each SSAP.

Note: Ethernet Version 2 (specified as *ETHV2 on the ETHSTD parameter) does not allow the SSAP values of 06 and AA.

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

Note: It is recommended that SSAPs F0, F8 and FC are not used for lines attached to network server descriptions.

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

***SYSGEN:** The system determines the source service access points.

- If ETHSTD(*ALL) or ETHSTD(*IEEE8023) is specified, the system generates the SSAPs 04, 12, AA, and C8.
- If ETHSTD(*ETHV2) is specified, the system generates the SSAPs 04 and C8.

Element 1: SSAPs

source-service-access-point: Specify a source service access point for receiving and transmitting data. A maximum of 24 SSAP values can be specified.

- For Transmission Control Protocol/Internet Protocol (TCP/IP) applications, the SSAP must be AA.

Note: If ETHSTD(*ETHV2) is specified, AA cannot be specified. However, TCP/IP can be run.

- For Systems Network Architecture (SNA) applications, the SSAP must be a hex value ranging from 04 through 9C in multiples of four (04, 08, 0C, and so on).
- For high-performance routing (HPR) applications, the SSAP must be hex C8.
- For non-SNA applications, the SSAP must be a hex value ranging from 02 through FE in multiples of two (02, 04, 06, and so on).
- For LAN printing applications, specify an SSAP value of 12 and an SSAP type of *NONSNA.

Element 2: Frame Size for SSAPs

***MAXFRAME:** The system determines the maximum frame size (data field size) that can be transmitted or received. If ETHSTD(*ALL or *IEEE8023) was specified, *CALC produces a frame size of 1496 for TCP/IP and SNA SSAPs. If ETHSTD(*ETHV2) was specified, *CALC produces a frame size of 1493 for SNA SSAPs.

SSAP-maximum-frame: Specify the maximum frame size for each SSAP. Valid values for the maximum frame size range from 265 through 8996.

Note:

When RSRCTYPE(*NWID) and ETHSTD(*ETHV2) are specified, the valid values for this parameter range from 265 through 1486 bytes. When RSRCTYPE(*NWID) and ETHSTD(*ALL) or ETHSTD(*IEEE8023) are specified, the valid values for this parameter range from 265 through 1489 bytes. Maximum frame size that is greater than 1486 or greater than 1489 is valid only when AA SSAP for TCP/IP is specified.

Element 3: SSAP Type

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

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

***SNA:** The SSAP is used for SNA communications. Only SSAP values of 04 through 9C that are divisible by 4 are supported.

***NONSNA:** The SSAP is used for non-SNA Communications. Only SSAP values of 02 through FE and must be divisible by 2 are supported.

***HPR:** The SSAP is used for HPR communications. It also can be used for SNA applications. The valid value is hex C8.

THRESHOLD

This parameter, and its values *SAME, *OFF, *MIN, *MED, and *MAX, can be specified but it is not used by the system starting in release V2R3M0. The parameter may be removed in a later release.

PVCID

Specifies the virtual path identifier and virtual circuit identifier pairs associated with this permanent virtual circuit.

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

Element 1: Virtual Path Identifier

virtual-path-id: Specify a number that represents the virtual path identifier. This number must be in the range of 0 to 7.

Element 2: Virtual Circuit Identifier

virtual-circuit-id: Specify a number that represents the virtual circuit identifier. This number must be in the range of 32 to 4095.

USELECSADR

Specifies whether the LAN emulation configuration server (LECS) should be connected to request the remote LAN emulation server (LES) address.

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

***YES:** The LECS address is used.

***NO:** The LECS address is not used.

LESATMADR

Specifies the ATM network address of the remote LAN emulation server.

Note:

This parameter must be other than *NONE if USELECSADR(*NO) is specified.

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

Single Value

***NONE:** ATM network address is not used.

Element 1: Network prefix

network-prefix: Specify the network prefix of the ATM address of the remote server. This is a 26 digit hexadecimal value.

Element 2: End system identifier

end-system-identifier: Specify the end system identifier of the remote server. This is a 12 digit hexadecimal value.

Element 3: Selector byte

selector byte: Specify the selector byte of the remote server. This is a two digit hexadecimal value.

EMLLANNAME

Specifies the emulated LAN name.

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

***NONE:** Emulated LAN name not used.

emulated-LAN-name: Specify the emulated LAN name. A maximum of 32 characters may be specified.

LECDSTIMO

Specifies the amount of time in minutes a LAN emulation (LE) client will wait before disconnecting an idle virtual circuit connection to another client.

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

***NOMAX:** The LE client will wait indefinitely.

LEC-disconnect-timeout: Specify the number of minutes the LE client will wait before disconnecting an idle virtual circuit connection to another client. The value must be in the range of 1 to 30 minutes.

GENTSTFRM

Specifies whether the system will automatically generate test frames to determine network availability.

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

***YES:** The system will generate test frames.

***NO:** The system will not generate test frames.

DUPLEX

Specifies whether the hardware can send and receive data simultaneously. In half duplex mode, the hardware must alternate between sending data and receiving data. In full duplex mode, one cable is dedicated to send data and another cable is dedicated to receive data. Therefore, data can be sent and received simultaneously. A hub is required for full duplex.

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

***HALF:** The line communicates using half duplex mode.

***FULL:** The line communicates using full duplex mode.



Note: DUPLEX must be *FULL for NWS *VRTETHxxx ports.



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

MAXFRAME

Specifies the maximum frame size that can be transmitted and received on this line.

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

maximum-frame-size: Specify the maximum frame size value to be used. The valid frame sizes (in bytes) range from 1496 through 8996 bytes.

Note: When RSRCTYPE(*NWID) or RSRCTYPE(*NWSD) is specified, the only valid value for this parameter is 1496 bytes. When ETHSTD(*ALL) or ETHSTD(*IEEE8023) is specified, the valid values can range from 1496 bytes to 8996 bytes. However, if the maximum frame size is greater than 1496 bytes, LINESPEED(1G), DUPLEX(*FULL) or DUPLEX(*AUTO) must be specified.

LINESPEED

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

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

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

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

1G: The line speed is 1 gigabit per second (1000 million bits per second). Gigabit ethernet will only run on the TCP/IP protocol.



Note: Line speed must be 1G for NWS *VRTETHxxx ports.



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

LINKSPEED

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

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

4M: The link speed is 4M bits per second.

10M: The link speed is 10M bits per second.

100M: The link speed is 100M bits per second.

***MIN:** The minimum link speed is used.

***MAX:** The maximum link speed is used.

link-speed: Specify the link speed. Valid values range from 1200 to 603979776000.

COSTCNN

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

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

cost-per-connect-time: Specify a value ranging from 0 through 255.

COSTBYTE

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

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

cost-per-byte: Specify a value ranging from 0 through 255.

SECURITY

Specifies the security level of the physical line. This parameter is used only if APPN support is used on the system.

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

***NONSECURE:** Normal priority is used.

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

***UNDGRDCBL:** An underground cable is used.

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

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

***ENCRYPTED:** Data flowing on the line is encrypted.

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

PRPDLY

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

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

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

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

***TELEPHONE:** The telephone propagation delay is used.

***PKTSWTNET:** The packet switched network propagation delay is used.

***SATELLITE:** The satellite propagation delay is used.

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

USRDFN1

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

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

user-defined-1: Specify a value ranging from 0 through 255.

USRDFN2

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

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

user-defined-2: Specify a value ranging from 0 through 255.

USRDFN3

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

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

user-defined-3: Specify a value ranging from 0 through 255.

AUTOCTRL

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

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

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

***YES:** The system will automatically create a controller description when incoming calls are received.

AUTODLTCTL


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

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

***NONE:** The system will not automatically delete or vary off the automatically configured, idle controller descriptions.

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

MSGQ

Specifies the qualified name of the message queue to which messages are sent. More information about using this parameter is in the Communications Management  book.

Single Values

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

***SYSVAL:** Messages are sent to the message queue defined in the system value QCFGMSGQ.

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

library-name/message-queue-name: Specify the library-qualified name of the message queue to which operational messages are sent.

CMNRCYLMT

Specifies the number of recovery attempts made by the system before an inquiry message is sent

to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

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

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

Element 1: Maximum Recovery Limit

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

Element 2: Recovery Time Interval

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

TEXT Specifies the text that briefly describes the program and its function. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

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

Examples for CHGLINETH

Example 1: Changing an Ethernet Line Description

```
CHGLINETH LIND(BOSTON) RSRNAME(LIN041)
```

This command changes the resource name of an Ethernet line description named BOSTON to LIN041.

Example 2: Changing an Ethernet Line Description

```
CHGLINETH LIND(LINETH) MAXFRAME(1496)
```

This command changes the maximum frame size of the Ethernet line description to 1496 bytes.

Error messages for CHGLINETH

***ESCAPE Messages**

CPF261E

Line description &1 not changed.

CHGLINFAX (Change Line Description (Fax)) Command Description

CHGLINFAX Command syntax diagram

Purpose

The Change Line Description (Fax) (CHGLINFAX) command changes a line description for a facsimile (fax) line.

Required Parameter

LIND Specifies the name of the line description being changed.

Optional Parameters

RSRCNAME

Specifies the resource names that describe the fax ports.

Note:

Use the Work with Hardware Resources (WRKHDWRSC) command with *CMN specified for the TYPE parameter to help determine the resource name.

The resource name consists of the input/output adapter (IOA) resource name and the port number on the IOA. For example, if the resource name of the IOA is LIN01, the resource names for ports 1 and 2 are LIN011 and LIN012.

The resource name for both ports of the fax IOA must be specified. All lines specified must be attached to the same input/output processor.

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

rsrcname-1: Specify the first resource name to be used to describe the fax ports.

rsrcname-2: Specify the second resource name to be used to describe the fax ports.

ONLINE

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

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

***YES:** The line is automatically varied on at IPL.

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

VRYWAIT

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

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

***NOWAIT:** The system does not wait for the vary on to complete. The line is varied on asynchronously.

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

Notes:

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

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

TEXT Specifies the text that briefly describes the line description. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

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

Example for CHGLINFAX

```
CHGLINFAX LIND(FAXLINE) RSRNAME(LIN031 LIN032)
```

This command changes the resource names for fax line description FAXLINE to LIN041 and LIN042.

Error messages for CHGLINFAX

*ESCAPE Messages

CPF261E

Line description &1 not changed.

CHGLINFR (Change Line Description (Frame Relay Network)) Command Description

CHGLINFR Command syntax diagram

Purpose

The Change Line Description (Frame-Relay Network) (CHGLINFR) command changes a line description for a frame-relay network (FR) line. More information about using this command is in the Communications

Configuration  book.

Required Parameter

LIND Specifies the name of the line description being changed.

line-description-name: Specify the name of a line description.

Optional Parameters

ONLINE

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

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

***YES:** The line is automatically varied on at IPL.

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

VRYWAIT

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

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

***NOWAIT:** The system does not wait for the vary on to complete. The line is varied on asynchronously.

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

Notes:

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

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

MAXCTL

Specifies the maximum number of controllers that the line supports.

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

40: The line supports 40 controllers.

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

MAXFRAME

Specifies the maximum frame (path information unit (PIU)) size that the controller can send or receive. This value is used to calculate request unit (RU) sizes. Since the maximum PIU size that the controller can send or receive is negotiated at exchange identifier time, the maximum PIU size used at run time may be different. This value matches the corresponding value on the host system. The recommended MAXFRAME values are: 502, 1014, 1590, 2038, 4086, and 8182 bytes.

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

1590: The maximum frame size is 1590.

maximum-frame-size: Specify the maximum frame size value to be used. Valid values range from 265 through 8182.

LINKSPEED

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

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

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

EXCHID

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

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

***SYSGEN:** The iSeries 400 generates the exchange identifier.

exchange-identifier: Specify (if the *SYSGEN value is not specified) an exchange identifier composed of eight hexadecimal digits starting with 056.

SSAP Specifies the source service access point (SSAP). The most commonly used SNA SSAP is hex 04. All SSAP values must be unique.

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

***SYSGEN:** The system automatically creates three SSAPs: hex 04 for Systems Network Architecture (SNA) applications, hex C8 for high-performance rating (HPR) applications, and hex AA for Transmission Control Protocol/Internet Protocol (TCP/IP) applications.

Element 1: SSAPs

source-service-access-point: Specify a source service access point for receiving and transmitting data. A maximum of 24 SSAP values can be specified.

- For TCP/IP applications, the SSAP must be AA.
- For SNA applications, the SSAP must be a hex value ranging from 04 through 9C in multiples of four (04, 08, 0C, and so on).
- For HPR applications, the SSAP must be hex C8.
- For non-SNA applications, the SSAP must be a hex value ranging from 02 through FE in multiples of two (02, 04, 06, and so on).

Element 2: Frame Size for SSAPs

***MAXFRAME:** The frame size specified on the MAXFRAME parameter is used.

SSAP-maximum-frame: Specify the maximum SSAP frame size (the maximum size of the data field that can be transmitted or received). Valid values for this parameter range from 265 through 8182 bytes.

Note: This value cannot be larger than the value specified on the MAXFRAME parameter.

Element 3: SSAP Type

***CALC:** The system determines the SSAP type based on the following hex values:

- 04 through 9C, divisible by 4 (for SNA)
- C8 (for HPR)
- 02 through FE, divisible by 2 (for non-SNA)

***SNA:** The SSAP is used for SNA communications. Valid values range from hex 04 through hex 9C in multiples of four (04, 08, 0C, and so on).

***NONSNA:** The SSAP is used for non-SNA communications. Valid values range from hex 02 through hex FE in multiples of two (02, 04, 06, and so on).

***HPR:** The SSAP is used for HPR communications. It also can be used for SNA applications. The valid value is hex C8.

COSTCNN

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

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

0: The cost per connect time is 0.

cost-per-connect-time: Specify a value ranging from 0 through 255.

COSTBYTE

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

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

0: The cost per byte is 0.

cost-per-byte: Specify a value ranging from 0 through 255.

SECURITY

Specifies the security level of the physical line. This parameter is valid only if APPN* support is used on the system.

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

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

***NONSECURE:** Normal priority is used.

***UNDGRDCBL:** An underground cable is used.

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

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

***ENCRYPTED:** Data flowing on the line is encrypted.

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

PRPDLY

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

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

***PKTSWTNET:** The packet switched network propagation delay is used.

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

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

***TELEPHONE:** The telephone propagation delay is used.

***SATELLITE:** The satellite propagation delay is used.

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

USRDFN1

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

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

128: The value 128 is used.

user-defined-1: Specify a value ranging from 0 through 255.

USRDFN2

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

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

128: The value 128 is used.

user-defined-2: Specify a value ranging from 0 through 255.

USRDFN3


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

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

128: The value 128 is used.

user-defined-3: Specify a value ranging from 0 through 255.

MSGQ

Specifies the qualified name of the message queue to which messages are sent. More information about using this parameter is in the Communications Management  book.

Single Values

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

***SYSVAL:** Messages are sent to the message queue defined in the system value QCFGMSGQ.

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

library-name/message-queue-name: Specify the library-qualified name of the message queue to which operational messages are sent.

CMNRCYLMT

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

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

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

Element 1: Maximum Recovery Limit

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

Element 2: Recovery Time Interval

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

TEXT Specifies the text that briefly describes the line description. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

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

Example for CHGLINFR

```
CHGLINFR LIND(FR2) ONLINE(*NO)
          MAXFRAME(4444) LINKSPEED(1536000)
```

This command changes frame relay line FR2 so it does not vary on automatically at initial program load (IPL). The maximum frame size is set to 4444 bytes and the link speed is set to 1536000 bits per second (bps).

Error messages for CHGLINFR

***ESCAPE Messages**

CPF261E

Line description &1 not changed.

CHGLINIDLC (Change Line Description (IDLC)) Command Description

CHGLINIDLC Command syntax diagram

Purpose

The Change Line Description (IDLC) (CHGLINIDLC) command changes a line description for an Integrated Services Digital Network (ISDN) Data Link Controller (IDLC) line.

Required Parameter

LIND Specifies the name of the line description being changed.

Optional Parameters

ONLINE

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

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

***YES:** The line is automatically varied on at IPL.

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

VRYWAIT

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

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

***NOWAIT:** The system does not wait for the vary on to complete. The line is varied on asynchronously.

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

Notes:

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

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

SWTNWILST

Specifies, for ISDN switched connections, a list of network interface descriptions to which this line can be attached. The first available network description is chosen from the list when an incoming or outgoing call is processed.

***SAME:** The list does not change.

***NONE:** A network interface description is not specified for this line.

Element 1: Network Interface Description Name

nwi-description-name: Specify, for switched connections, the name of the network interface description to which this line attaches.

Element 2: Network Interface Channel Type

***B:** The B channel is used.

Element 3: Network Interface Channel-Number

***CALC:** The system selects the channel number (based on availability) defined for the network interface description when an incoming or outgoing call is processed.

nwi-channel-number: Specify the channel number. Valid values are 1 and 2.

SWTCNN

Specifies whether the switched line is used for incoming calls, outgoing calls, or both.

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

***BOTH:** The line is used for both incoming and outgoing calls.

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

***DIAL:** The line is used for outgoing calls only.

CNNLSTIN

Specifies the name of the connection list that is used to retrieve call or connection information for identifying authorized incoming calls.

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

***NETATR:** The connection list used by this line description is taken from the list of system default network attributes that were identified at IPL (Initial Program Load). Use the Display Network Attributes (DSPNETA) command to see the name of the default ISDN connection list (DFTCNNLST) parameter that is used.

connection-list-name: Specify the name of the connection list used for this line description.

LINESPEED

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

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

line-speed: Specify the line speed. Valid values are: 56000 and 64000 bps.

THRESHOLD

Specifies the threshold for the number of errors beyond which a message is sent informing the user that errors have occurred. All error threshold parameters are set to the value specified, unless ***SELECT** is specified, in which case each error threshold parameter is set individually. The next five parameters are the threshold parameters. They are: CRCRCV, OVERRUN, UNDERRUN, ABORTS, and SHORTFRAME.

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

***OFF:** No monitoring of errors occurs.

***MIN:** The error threshold is set at a minimum monitoring level.

***MED:** The system performs a medium amount of error threshold monitoring for all types of errors.

***MAX:** The error threshold is set at a maximum monitoring level.

***SELECT:** The threshold for the number of errors beyond which a message is sent informing the user that errors have occurred is set individually for each parameter.

CRCRCV

Specifies the level of error threshold monitoring done by the system for Cyclic Redundancy Check (CRC) errors.

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

***OFF:** No monitoring of errors occurs.

***MIN:** The system performs a minimum amount of error threshold monitoring for CRC errors: 6 errors in the first 30 seconds or 180 errors in any 15 minutes. The system is more tolerant of errors than if *MED or *MAX is specified.

***MED:** The system performs a medium amount of error threshold monitoring for CRC errors: 2 errors in the first 30 seconds or 60 errors in any 15 minutes.

***MAX:** The system performs the maximum amount of error threshold monitoring for CRC errors received.

threshold-value: Specify a value ranging from 1 through 10000. The number represents the number of errors received in a 15-minute interval.

SHORTFRAME

Specifies the threshold for the level of errors for short frame errors received.

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

***OFF:** No monitoring of errors occurs.

***MIN:** A minimum of monitoring is done: 6 X.25 or SDLC frames received in the first 30 seconds or 1 received every second for 14 minutes. The system is more tolerant of errors than if *MED or *MAX is specified.

***MED:** A medium amount of monitoring is done: 3 X.25 or SDLC frames received in the first 30 seconds or 1 received every 3 seconds for 10-14 minutes.

***MAX:** A maximum amount of monitoring is done.

threshold-level: Specify a threshold level. Valid values range from 1 through 10000. The number represents the number of errors received in a 15-minute interval.

OVERRUN

Specifies the level of error threshold monitoring done by the system for overrun errors.

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

***OFF:** No monitoring of errors occurs.

***MIN:** The system performs a minimum amount of error threshold monitoring for buffer overrun errors: 2 errors in the first 90 seconds or 20 errors in any 15 minutes. The system is more tolerant of errors than if *MED or *MAX is specified.

***MED:** The system performs a medium amount of error threshold monitoring for buffer overrun errors: 2 errors in the first 300 seconds or 6 errors in any 15 minutes.

***MAX:** The system performs the maximum amount of error threshold monitoring for buffer overrun errors.

threshold-value: Specify a value ranging from 1 through 3000. The number represents the number of errors received in a 15-minute interval.

UNDERRUN

Specifies the level of error threshold monitoring done by the system for buffer underrun errors.

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

***OFF:** No monitoring of errors occurs.

***MIN:** The system performs a minimum amount of error threshold monitoring for buffer overrun errors: 2 errors in the first 90 seconds or 20 errors in any 15 minutes. The system is more tolerant of errors than if *MED or *MAX is specified.

***MED:** The system performs a medium amount of error threshold monitoring for buffer overrun errors: 2 errors in the first 300 seconds or 6 errors in any 15 minutes.

***MAX:** The system performs the maximum amount of error threshold monitoring for buffer underrun errors.

threshold-value: Specify a value ranging from 1 through 3000. The number represents the number of errors received in a 15-minute interval.

ABORTS

Specifies the level of error threshold monitoring done by the system for aborted frames.

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

***OFF:** No monitoring of errors occurs.

***MIN:** The system performs a minimum amount of error threshold monitoring for aborted frames received: 6 errors in the first 30 seconds or 180 errors in any 15 minutes. The system is more tolerant of errors than if *MED or *MAX is specified.

***MED:** The system performs a medium amount of error threshold monitoring for aborted frames received: 2 errors in the first 30 seconds or 60 errors in any 15 minutes.

***MAX:** The system performs the maximum amount of error threshold monitoring for aborted frames received.

threshold-value: Specify a value ranging from 1 through 5000. The number represents the number of errors received in a 15-minute interval.

RETRANSMIT

Specifies the threshold for the number of frame retransmissions beyond which a message is sent informing the user that errors have occurred.

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

***OFF:** Error threshold monitoring is turned off for retransmitted frames.

***MIN:** The system performs the minimum amount of error threshold monitoring for retransmitted frames: 5 errors in the first 30 seconds or 150 errors in any 15 minutes. The system is more tolerant of errors than if *MED or *MAX is specified.

***MED:** The system performs a medium amount of error threshold monitoring for retransmitted frames: 2 errors in the first 60 seconds or 30 errors in any 15 minutes.

***MAX:** The error threshold is set at a maximum monitoring level.

threshold-value: Specify a number, ranging from 1 through 10000, that corresponds to the number of errors allowed in a 15-minute interval.

FRMSEQERR

Specifies the threshold for the number of frame sequence errors beyond which a message is sent informing the user that errors have occurred.

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

***OFF:** Error threshold monitoring is turned off for frame sequence errors.

***MIN:** The system performs the minimum amount of error threshold monitoring for frame sequence errors: 2 errors in the first 90 seconds or 20 errors in any 15 minutes. The system is more tolerant of errors than if *MED or *MAX is specified.

***MED:** The system performs a medium amount of error threshold monitoring for frame sequence errors: 2 errors in the first 300 seconds or 6 errors in any 15 minutes.

***MAX:** The system performs the maximum amount of error threshold monitoring for frame sequence errors.

threshold-value: Specify a number, ranging from 1 through 3000, that corresponds to the number of errors allowed in a 15-minute interval.

IDLCWDWSIZ

Specifies the default window size.

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

***CNN:** The value is determined according to the value specified on the CNN parameter.

default-window-size: Specify a value ranging from 1 through 31.

IDLCFRMRTY

Specifies the maximum number of retransmissions before reporting an error.

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

***CNN:** The value is determined according to the value specified on the CNN parameter.

frame-retry: Specify a value ranging from 0 through 100.

IDLCRSPTMR

Specifies the amount of time to wait before retransmitting a frame when an acknowledgement has not been received.

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

***CNN:** The value is determined according to the value specified on the CNN parameter.

response-timer: Specify a value ranging from 10 through 100 tenths of seconds. For example, 100 tenths of seconds equals 10 seconds.

IDLCCNNRTY

Specifies the number of times a transmission can be retried at connection time. Specifying

***NOMAX** indicates to try until successful.

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

***CNN:** The value is determined according to the value specified on the CNN parameter.

***NOMAX:** There is no disconnect limit.

connect-retry-count: Specify a value ranging from 1 through 100.

MAXFRAME

Specifies the maximum frame size that can be transmitted and received on this line description.

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

max-frame: Specify a value ranging from 265 through 8196.

INFTRFTYPE

Specifies the information transfer type. The information transfer type determines the layer-1 protocol.

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

***UNRESTRICTED:** The data-channel traffic appears as digital information; no physical transformation is required and each B-channel operates at capacity (64k bits per second (bps)).

***V110:** The transfer type is V-series Recommendation 110. Each B-channel operates at 56k bps.

***DOV** Allows Data Over Voice (DOV) digital data to be transferred over an ISDN voice call. Also, this is referred to as Data Over Voice Bearer Service (DOVBS), Data Over Speech Bearer Service (DOSBS), TollSaver, or TollMizer. This option should only be used if an ISDN voice call is less

expensive than an ISDN data call or if a bearer service for data is not available. The remote location must also support this feature. Data is transferred at 56Kbps in each direction.

LINKSPEED

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

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

***MIN:** The minimum link speed is used.

***MAX:** The maximum link speed is used.

link-speed: Specify the link speed. Valid values are: 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 2048000, 4M, 10M, 16M and 100M.

SWTNWISLCT

Specifies the method used to select network interfaces from the switched network interface list.

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

***FIRST:** Selection begins with the first network interface specified in the switched network interface list.

***CALC:** The system calculates which network interface is selected.

COSTCNN

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

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

cost-per-connect-time: Specify a value ranging from 0 through 255.

COSTBYTE

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

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

cost-per-byte: Specify a value ranging from 0 through 255.

SECURITY

Specifies the security level of the physical line. This parameter is used only if APPN support is used on the system.

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

***NONSECURE:** Normal priority is used.

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

***UNDGRDCBL:** An underground cable is used.

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

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

***ENCRYPTED:** Data flowing on the line is encrypted.

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

PRPDLY

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

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

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

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

***TELEPHONE:** The telephone propagation delay is used.

***PKTSWTNET:** The packet switched network propagation delay is used.

***SATELLITE:** The satellite propagation delay is used.

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

USRDFN1

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

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

user-defined-1: Specify a value ranging from 0 through 255.

USRDFN2

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

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

user-defined-2: Specify a value ranging from 0 through 255.

USRDFN3

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

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

user-defined-3: Specify a value ranging from 0 through 255.

CMNRCYLMT

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

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

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

Element 1: Maximum Recovery Limit

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

Element 2: Recovery Time Interval

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

TEXT Specifies the text that briefly describes the program and its function. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

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

Example for CHGLINIDLC

```
CHGLINIDLC LIND(IDLCLINE) ONLINE(*NO)
```

This command changes the online parameter to *NO. description named IDLCLINE to LIN011

Error messages for CHGLINIDLC

*ESCAPE Messages


CPF261E

Line description &1 not changed.

CHGLINNET (Change Line Description (Network)) Command Description

CHGLINNET Command syntax diagram

Purpose

The Change Line Description (Network) (CHGLINNET) command changes a line description for a network line. More information about using this command is in the Communications Configuration  book.

Required Parameter

LIND Specifies the name of the line description being changed.

Optional Parameters

ONLINE

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

***SAME:** This value does not change.

***YES:** The line is automatically varied on at IPL.

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

TEXT Specifies the text that briefly describes the program and its function. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

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

Example for CHGLINNET

```
CHGLINNET LIND(LIN0A) ONLINE(*NO)
```

This command changes the ONLINE parameter value to *NO for a network line named LIN0A.

Error messages for CHGLINNET

***ESCAPE Messages**

CPF261E

Line description &1 not changed.

CHGLINPPP (Change Line Description (PPP)) Command Description

CHGLINPPP Command syntax diagram

Purpose

The Change Line Description (Point-to-Point Protocol (PPP)) (CHGLINPPP) command changes a line description for a PPP line.

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

Required Parameter

LIND Specifies the name of the line description being changed.

Optional Parameters

RSRCNAME

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

Note:

Use the Work with Hardware Resources (WRKHDWRSC) command with *CMN specified for the TYPE parameter to help determine the resource name.

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

***NWID:** The resource name specified on the attached network interface description is used.

resource-name: Specify the resource name of the communications port.

SWTNWILST

Specifies, for ISDN/T1 switched connections, a list of network interface descriptions to which this line can be attached. A network interface description is chosen from the list based on the value specified on the switched NWI selection parameter (SWTNWISLCT) at the time an incoming or outgoing call is processed.

Note: Valid only when RSRCNAME(*NWID) and CNN(*SWTPP).

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

***NONE:** No network interface description is specified.

Element 1: Network Interface Description Name

nwi-description-name: Specify, for switched connections, the name of the network interface description to which this line attaches.

Element 2: Network Interface Channel Type

***B:** The B channel is used.

Element 3: Network Interface Channel-Number

***CALC:** The system selects one of the channel numbers (based on availability) defined for the network interface description when an incoming or outgoing call is processed.

nwi-channel-number: Specify a channel number (1 to 23) to which the line description is restricted.

ONLINE

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

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

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

***YES:** The line is automatically varied on at IPL.

VRYWAIT

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

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

Note: Valid only when CNN(*SWTPP).

***NOWAIT:** The system does not wait for the vary on to complete. The line is varied on asynchronously.

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

Notes:

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

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

LINESPEED

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

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

line-speed: Specify the line speed (bps). Valid line speeds range from 9600 to 2048000 bits per second for FRAMING(*SYNC). For FRAMING(*ASYNC), the valid values are 9600, 19200, 38400, 57600, and 115200. For FRAMING(*ASYNC) and an interface of *V35 or *RS449V36, line speeds of 157600 and 230400 may be specified.

INFTRFTYPE

Specifies the information transfer type. The information transfer type determines the layer 1 protocol.

Note:

Valid only when RSRCTYPE(*NWID) and CNN is not *SWTPP.

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

***UNRESTRICTED:** The data-channel traffic appears as digital information; no physical transformation is required and each B-channel operates at capacity (64k bps).

***V110:** The transfer type is V-series Recommendation 110. Each B-channel operates at 56k bps.

***DOV:** Allows Data Over Voice (DOV) digital data to be transferred over an ISDN voice call. Also, this is referred to as Data Over Voice Bearer Service (DOVBS), Data Over Speech Bearer Service (DOSBS), TollSaver, or TollMizer. This option should only be used if an ISDN voice call is less expensive than an ISDN data call or if a bearer service for data is not available. The remote location must also support this feature. Data is transferred at 56Kbps in each direction.

***FAXMODEM:** Allows Facsimile (FAX) data from the integrated fax modem to be transferred over an ISDN voice call. This option should be used to connect to a remote location that is using a fax device on an analog telephone line or to another ISDN device that has Group 3 FAX modem capabilities. Data is transferred at fax speeds up to 14.4Kbps.

***ASYNCMODEM:** Allows data from the integrated asynchronous modem to be transferred over an ISDN voice call. This option should be used to connect to a remote location that is using an asynchronous modem on an analog telephone line. Data is transferred at modem speeds up to 33.6Kbps from the remote analog device to this digital connection and up to 56Kbps from this digital connection to the remote analog device.

***SYNCMODEM:** Allows data from the integrated synchronous modem to be transferred over an ISDN voice call. This option should be used to connect to a remote location that is using a synchronous modem on an analog telephone line. Data is transferred at modem speeds up to 33.6Kbps from the remote analog device to this digital connection and up to 56Kbps from this digital connection to the remote analog device.

MDMINZCMD

Specifies the command string to send to set the modem.

Note:

Valid only when INTERFACE(*INTMODEM), or INFTRFTYPE *FAXMODEM, *ASYNCMODEM and *SYNCMODEM.

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

***NONE:** No command string is sent to the modem.

command-string: Specifies up to 60 characters that represent the command string sent to the modem. Valid characters are upper case A thru Z, lower case a thru z, numbers 0 thru 9, and special characters (144).

Note: The first two characters of the modem initialization command string must begin with 'AT'. These first two characters must be in uppercase.

MAXFRAME

Specifies the maximum length for the information field in a PPP frame, including padding, but not

including the protocol field. It is also known as the Maximum Receive Unit (MRU). By negotiation, consenting PPP implementations may use other values for the MRU.

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

maximum-frame-size: Specify the maximum frame size (in bytes). Valid maximum frame sizes range from 1500 to 4096 bytes.

SWTCNN

Specifies whether the switched line is used for incoming calls, for outgoing calls, or for both.

Note: Valid only when CNN(*SWTPP).

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

***BOTH:** The line is used for both incoming and outgoing calls.

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

***DIAL:** The line is used for outgoing calls only.

SWTNWISLCT

Specifies the method used to select network interfaces from the switched network interface list.

Note: Valid only when RSRCTYPE(*NWID) and CNN(*SWTPP).

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

***FIRST:** Selection begins with the first network interface specified in the switched network interface list.

***CALC:** The system calculates which network interface is selected.

CNNLSTOUT

Specifies, for ISDN/T1 switched connections, the name of a connection list object that contains the ISDN/T1 assigned numbers for a dial-out operation to the ISDN/T1.

Note: Valid only when RSRCTYPE(*NWID) and CNN(*SWTPP).

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

connection-list-name: Specify the connection list object name.

CNNLSTOUTE

Specifies, for ISDN/T1 switched connections, the entry name from the connection list used to make a call to the ISDN/T1. The connection list must be specified on the CNNLSTOUT parameter.

Note: Valid only when RSRCTYPE(*NWID) and CNN(*SWTPP).

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

connection-list-entry-name: Specify the entry name from the connection list.

CNNLSTIN

Specifies for ISDN/T1 switched connections the name of the connection list that is used to retrieve call information (or connection) for identifying authorized incoming calls.


Note: Valid only when RSRCTYPE(*NWID) and CNN(*SWTPP).

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

***NETATR:** The connection list used by this line description is taken from the list of system default network attributes that were identified at IPL (Initial Program Load). The Display Network Attributes (DSPNETA) command can be used to see the name of the connection list.

connection-list-name: Specify the name of the connection list used for this line description.

MSGQ

Specifies the qualified name of the message queue to which messages are sent. More information about using this parameter is in the Communications Management  book.

Single Values

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

***SYSVAL:** Messages are sent to the message queue defined in the system value QCFGMSGQ.

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

library-name/message-queue-name: Specify the library-qualified name of the message queue to which operational messages are sent.

CLOCK

Specifies how the clocking function for the line is provided.

Note: Not valid when RSRCTYPE(*NWID) or INTERFACE(*INTMODEM).

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

***MODEM:** The modem supplies the clocking function.

***LOOP:** The receiving clock provided by the modem data circuit-terminating equipment (DCE) is looped back to the modem (DCE) on the system data terminal equipment (DTE) transmitting clock. This option can be used to improve high speed data transmission when the modem (DCE) supports such an option. The valid interfaces for *LOOP are *V35, *X21BISV35, and *RS449V36.

***INVERT:** The transmit clock provided by the modem data circuit-terminating equipment (DCE) is inverted before use. This option can be used when having problems with high speed data transmission and the modem (DCE) does not support looped clocking. The valid interfaces for *INVERT are *V35, *X21, *X21BISV35, and *RS449V36.

DIALCMD

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

Note: Not valid when RSRCTYPE(*NWID).

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

***ATCMD:** The Attention (AT) command set (sometimes referred to as the Hayes command set) is a group of modem commands that allow an application program to control the modem while it is operating asynchronously. The application program must place all AT commands directly into the data stream. The AT commands supported are dependent on the specific modem being used.

***V25BIS:** Uses the International Telecommunication Union - Telecommunication (ITU-T) (formerly known as CCITT) V.25 bis standard for serial automatic calling.

SETMDMASC

Specifies the ASCII V.25 bis command that will set the modem to ASYNC mode.

Note: Not valid when RSRCTYPE(*NWID) or INTERFACE(*INTMODEM).

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

***NONE:** No command string is sent to the modem.

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

command-string: Specify up to 40 characters that represent the command issued. Valid characters are upper case A through Z, lower case a through z, numbers 0 thru 9, and special characters (143).

No embedded blanks are allowed.

CALLNBR

Specifies the local telephone number of the line used for the V.25 bis call request with identification (CRI) dial command. This parameter is used when the CRI function is needed for V.25 bis. When V.25 bis CRI dialing is used, the system takes the called (connection) number from the CNNNBR parameter of the controller description, adds a separator character (;), and concatenates the calling number at the end. Specify the calling number only if the modem and the network both support the CRI dial command.

Note: Not valid when RSRCTYPE(*NWID) and CNN(*NONSWTPP), CNN(*NONSWTCAL) or CNN(*NONSWTANS).

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

***NONE:** The CRN (Call Request Normal) dial command is used by the V.25 bis line.

calling-number: Specify up to 32 characters that represent the local telephone number for V.25 bis CRI auto-dialing.

FLOWCNTL

Specifies whether the system controls the data flow.

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

***NO:** Prevents the hardware from generating or recognizing flow control characters, and prevents the use of Request To Send (RTS) and Clear To Send (CTS) flow control signals.

***HARDWARE:** Hardware flow control is performed using the Request To Send (RTS) and Clear To Send (CTS) flow control signals.

CTSTMR

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

Note: Not valid when RSRNAME(*NWID).

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

timer-value: Specify a value ranging from 10 through 60 seconds.

INACTTMR

Specifies the time (in seconds) that the system waits for user data activity on a switched line before disconnecting. This timer is started once LCP (Link Control Protocol) and NCP (Network Control Protocol) negotiations have completed successfully and restarted when user data are sent or received. LCP and NCP packets do not cause this timer to be restarted.

***NOMAX:** The inactivity timer is disabled.

timer-value: Specify a value ranging from 15 through 65535 seconds.

RMTANSTMR

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

Note: Not valid when RSRNAME(*NWID).

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

timer-value: Specify a value ranging from 30 through 120 seconds.

NRZI Specifies whether non-return-to-zero-inverted (NRZI) data encoding is used for modems that are sensitive to certain bit patterns in the data stream. This ensures that the signal does not remain the same for an extended period of time. For digital phone lines, *NO is suggested.

Notes:

1. All data communications equipment on the line must use the same data transmission coding method.
2. Framing (FRAMING parameter) must be *SYNC to use NRZI data encoding.

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

***YES:** NRZI data encoding is used.

***NO:** NRZI data encoding is not used.

TEXT Specifies the text that briefly describes the program and its function. More information is in Commonly used parameters.

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

***BLANK:** Text is not specified.

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

ACCM Specifies a mapping for control characters in the transmitted data that may be either removed or introduced by data communications equipment on the line.

Note: ACCM(00000000) must be specified unless FRAMING(*ASYNC) is specified.

The iSeries 400 sends all characters specified by this map to the remote peer as a 2-byte escape sequence. Additionally, all characters specified by this map must be sent by the remote peer to iSeries 400 as a 2-byte escape sequence. Any characters specified in this map that are not escaped are discarded by iSeries 400.

ATTENTION:

The default value for this parameter does not normally need to be changed. Do not specify a different value for this parameter unless you are fully aware of the effect of the change.

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

control-character-map: Specifies a 32-bit value as a 8-digit hexadecimal number. Each bit in this 32-bit value indicates whether a character is escaped or not. If the bit value is set to 1, the corresponding character is escaped. If the bit is set to 0, the control character is not escaped.

The ordinal number of a bit in the 32-bit value determines the character affected. The leftmost bit (number 0) corresponds to the character '00'X. The rightmost bit (number 31) corresponds to the character '1F'X. For example,

- Specifying ACCM(80000000) requires character '00'X be sent and received as the 2-byte escape sequence '7D20'X. Characters '01'X to '1F'X are not mapped.
- Specifying ACCM(00000001) requires character '1F'X be sent and received as the 2-byte escape sequence '7D3F'X. Characters '00'X to '1E'X are not mapped.
- Specifying ACCM(0000A000) requires characters '11'X and '13'X be sent and received as the 2-byte escape sequence '7D31'X and '7D33'X, respectively.

LCPAUT

Specifies values controlling how the Link Control Protocol layer of iSeries PPP authenticates a remote peer.

Element 1: Remote peer challenge timer

Specifies the interval, in minutes, to periodically issue an authentication challenge to the remote peer.

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

challenge-interval: Specify the interval, in minutes, to re-validate the remote peer's authentication.

Element 2: Maximum authentication attempts

Specifies the maximum number of unacknowledged authentication challenges sent to a remote peer before assuming that the peer is unable to respond.

Notes:

1. A challenge is considered unacknowledged when iSeries 400 does not receive a response within the interval specified by the configuration retry timer (element 1 of parameter LCPCFG).
2. This value does not affect how iSeries 400 responds when a peer fails authentication. iSeries 400 always terminates communication without any retry if a response from the remote peer fails authentication.

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

maximum-number-of-attempts: Specifies the maximum number of unacknowledged challenges sent to a remote peer before communication is terminated.

LCPCFG

Specifies values controlling how the Link Control Protocol layer of iSeries PPP negotiates mutually acceptable link configuration values with a remote peer.

Warning:

The default values for this parameter do not normally need to be changed. Do not specify different values for this parameter unless you are fully aware of the effect of the change.

Element 1: Configuration retry timer

Specifies the interval, in seconds, that iSeries 400 waits before resending an unacknowledged configuration, termination, or authentication challenge request to a remote peer.

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

retry-interval: Specify the time interval after which unacknowledged requests are resent.

Element 2: Maximum configuration failures

Specifies the maximum number of attempts that are made to negotiate a mutually acceptable configuration with a remote peer before assuming that configuration is not converging.

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

maximum-number-of-attempts: Specifies the maximum number of attempts made to negotiate a mutually acceptable configuration.

Element 3: Maximum configuration requests

Specifies the maximum number of unacknowledged configuration requests sent to a remote peer before assuming that the peer is unable to respond.

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

maximum-number-of-attempts: Specifies the maximum number configuration attempts made before iSeries 400 terminates communication.

Element 4: Maximum termination requests

Specifies the maximum number of unacknowledged termination request packets sent to a remote peer before assuming that the peer is unable to respond.

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

maximum-number-of-attempts: Specifies the maximum number of attempts made to notify the remote peer that communication will be terminated.

COMPRESS

Specifies the compression function is provided.

Note:

This parameter allows you to enable a compression protocol, but does not guarantee that compression will be used. Data compression will not be activated unless both iSeries 400 and the remote peer iSeries 400 connects to agree to use the specified compression protocol.

This parameter is ignored if RSRNAME(*NWID) is not specified or when a INTERFACE is *INTMODEM, or INFTRFTYE is *FAXMODEM or *ASYNCMODEM or *SYNCMODEM.

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

***STACLZS:** The iSeries 400 is allowed to negotiate the use of STAC LZS data compression.

***NONE:** The iSeries 400 is not allowed to negotiate or use any Point-to-Point Compression protocol.

CMNRCYLMT

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

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

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

Element 1: Maximum Recovery Limit

count-limit: Specify the number of second-level recovery attempts to be made. Valid values range from 0 through 99.

Element 2: Recovery Time Interval

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

Example for CHGLINPPP

```
CHGLINPPP LIND(CHICAGO) LINESPEED(115200)
```

This command changes the line speed for line description CHICAGO to 115200 bits per second.

Error messages for CHGLINPPP

None

CHGLINSDLC (Change Line Description (SDLC)) Command Description

CHGLINSDLC Command syntax diagram

Purpose

The Change Line Description (SDLC) (CHGLINSDLC) command changes a line description for a synchronous data link control (SDLC) line.

Required Parameter

LIND Specifies the name of the line description being changed.

Optional Parameters

RSRCNAME

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

Note:

Use the Work with Hardware Resources (WRKHDWRSC) command with *CMN specified for the TYPE parameter to help determine the resource name.

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

resource-name: Specify the resource name of the communications port. The resource name consists of the input/output adapter (IOA) resource name and the port number on the IOA. For example, if the resource name of the IOA is LIN01 and the port on the IOA is 2, then the resource name would be LIN012.

Up to six resource names can be specified if CNN(*SHM) is specified (X.21 short hold mode). However, if CNN(*SHM) is not specified, or if CNN(*SHM), ROLE(*SEC), and NODETYPE(*T20) are specified, only one resource name can be used.

ONLINE

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

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

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

***YES:** The line is automatically varied on at IPL.

ACTSNBU

Specifies, for controllers supporting the switched network backup (SNBU) feature, whether the SNBU feature is activated or deactivated. Both the local and remote modems must support the SNBU feature to perform a valid activation.

***SAME:** The value does not change from the value previously specified either on this parameter or on the SNBU parameter of the Create Line Description (SDLC) (CRTLINS DLC) command.

***NO:** The switched network backup (SNBU) feature is not activated.

***YES:** The switched network backup feature (SNBU) is activated. To start the feature when the nonswitched connection is broken, specify ACTSNBU(*YES) on the line description command.

VRYWAIT

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

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

***NOWAIT:** The system does not wait for the vary on to complete. The line is varied on asynchronously.

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

Notes:

1. When ONLINE(*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.

2. The time required to vary on a line is the time it takes to:
 - Put tasks in place to manage the line
 - Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
 - Establish the communications tasks and processes

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

NRZI Specifies whether non-return-to-zero-inverted (NRZI) data encoding is used for modems that are sensitive to certain bit patterns in the data stream. This ensures that the signal does not stay the same for an extended period of time. For digital phone lines, *NO is suggested

Note: All data communications equipment on the line must use the same transmission method.

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

***YES:** NRZI data encoding is used.

***NO:** NRZI data encoding is not used.

MAXCTL

Specifies the maximum number of controllers that the line supports.

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

maximum-controllers: Specify the maximum number of controllers that the line supports. Valid values range from 1 through 254. Specify a number large enough to account for all of the controllers that are currently active to this line, and for any controllers to be attached in the near future.

CLOCK

Specifies how the clocking function for the line is provided.

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

***MODEM:** The modem supplies the clocking function.

***LOOP:** The receiving clock provided by the modem data circuit-terminating equipment (DCE) is looped back to the modem DCE on the system data terminal equipment (DTE) transmitting clock. This option can be used to improve high speed data transmission when the modem (DCE) supports such an option. The valid interfaces for *LOOP are *V35, *X21BISV35, and *RS449V36.

***INVERT:** The transmit clock provided by the modem data circuit-terminating equipment (DCE) is inverted before use. This option can be used when having problems with high speed data transmission and the (DCE) does not support looped clocking. The valid interfaces for *INVERT are *V35, *X21, *X21BISV35, and *RS449V36.

LINESPEED

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

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

line-speed: Specify one of the following line speeds: 600, 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 57600, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 392000, 448000, 504000, 512000, 560000, 576000, 616000, 640000, 672000, 704000, 728000, 768000, 784000, 832000, 840000, 896000, 952000, 960000, 1008000, 1024000, 1064000, 1088000, 1120000, 1152000, 1176000, 1216000, 1232000, 1280000,

1288000, 1344000, 1400000, 1408000, 1456000, 1472000, 1512000, 1536000, 1568000, 1600000, 1624000, 1664000, 1680000, 1728000, 1736000, 1792000, 1856000, 1920000, 1984000, or 2048000 bits per second.

MODEM

Specifies the type of modem supported on the communications line. Refer to the user's modem documentation to select the appropriate value.

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

***NORMAL:** No attempt is made to run diagnostic tests on the modem.

***V54:** A certain type of diagnostics (as defined by the CCITT recommendations) are run to the modem. The iSeries 400 supports CCITT V.54 loop 3, local loop back, and loop 2, which is a remote loop back.

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

***IBMLPDA1:** An IBM modem with Link Problem Determination Aid-1 (LPDA-1) is used on this line.

***IBMLPDA2:** An IBM modem with Link Problem Determination Aid-2 (LPDA-2) is used on this line.

MODEMRATE

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

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

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

***HALF:** The line operates at half the full rate, or at the alternate rate of the modem.

SWTCNN

Specifies whether the switched or switched network backup line is used for incoming calls, outgoing calls, or both.

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

***BOTH:** The line is used for both incoming and outgoing calls.

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

***DIAL:** The line is used for outgoing calls only.

AUTOANS

Specifies, for switched or switched network backup (SNBU) lines, whether the system automatically answers a call from a remote system to establish the connection or whether the user must manually answer the call and place the modem in data mode.

Note: Interface automatic answering must be specified for X.21 circuit switched lines

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

***YES:** The iSeries 400 automatically answers a call.

***NO:** The system operator must manually answer a call.

Note: *YES is valid only if the modem has the automatic answer feature or if an X.21 circuit switched interface is used.

AUTODIAL

Specifies, for switched or switched network backup (SNBU) lines, whether the system automatically calls a remote system to establish a connection or whether the system operator must manually place the call.

Note: For X.21 circuit switched lines, automatic dialing must be specified.

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

***YES:** The iSeries 400 automatically calls a remote system.

***NO:** The system operator must manually call a remote system.

Note: *YES is valid only if the system is using an autocal unit, X.21 circuit switched interface, or if the modem is capable of calling through a command interface such as V.25 bis.

MDMINZCMD

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

Note: Valid only when INTERFACE(*INTMODEM) was specified when the description was created.

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

***NONE:** No command string is sent to the modem.

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

Table 1. Special characters

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

Character	Description
#	Number sign
"	Double quote
!	Exclamation mark
@	At sign
^	Circumflex
%	Percent
[Left square bracket
]	Right square bracket
\	Back slash
\$	Dollar sign

Note: The first two characters of the modem initialization command string must begin with 'AT'. These first two characters must be in uppercase.

DIALCMD

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

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

***NONE:** No dial command type is specified. (Autocall unit or X.21 circuit switched interface.)

***V25BIS:** V.25 bis is a recommendation that uses one physical interface for call establishment and data transmission. It is referred to as a serial automatic call interface because the digits are presented serially on the link from the system (DTE) to the modem (DCE).

ACRSRCNAME

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

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

autocall-resource-name: Specify the resource name of the autocall unit port. The resource name consists of the input/output adapter (IOA) resource name and the port number on the IOA. For example, if the resource name of the IOA is LIN02 and the port is 1, then the resource name would be LIN021.

SHMALLTMR

Specifies the interval at which a connection is reestablished on an X.21 short hold mode line to verify the state of the remote system even if no normal data traffic has occurred in the specified interval.

Note: This parameter is valid only if CNN(*SHM) is specified.

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

***NONE:** No call is made to verify the connection.

call-timer: Specify an interval, ranging from 1 through 60 minutes, at which a call is made to verify the connection.

SHMMAXCNN

Specifies the amount of time the system allows a connection to continue if there are more controllers than there are available ports. The system clears the connection after the specified amount of time, delay further calls for the amount of time specified on the SHMANSPLY parameter, and then make any calls that have been waiting before re-calling the controller that was interrupted.

Note:

This parameter is valid only if *PRI or *NEG is specified on the ROLE parameter and *SHM is specified on the CNN parameter.

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

***NOMAX:** The timer is disabled.

mxcnct-timeout: Specify a value ranging from 1 through 254 seconds.

SHMANSDLY

Specifies the amount of time the system waits for controllers to call in before making outgoing calls.

Note:

This parameter is valid only if *PRI or *NEG is specified on the ROLE parameter and *SHM is specified on the CNN parameter.

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

***NOMAX:** The timer is disabled.

ans-delay-timeout: Specify a value ranging from 1 through 254 tenths of a second. For example, 10 seconds equals 100 tenths of a second.

SHMCALLFMT

Specifies the format for the X.21 short hold mode line access code.

This parameter is valid only if CNN(*SHM) is specified.

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

***DNIC:** A four-digit Data Network Identification Code is used for the short hold mode access code (SHMACCCODE parameter). This code is attached in front of the calling number specified by the CALLNBR parameter.

***DCC:** A three-digit Data Country Code is used for the short hold mode access code (SHMACCCODE parameter). This code is attached in front of the calling number specified by the CALLNBR parameter.

call-format: Specify the length of the area code or country or region code portion of the SHM calling number. Valid values range from 0 to 15.

SHMACC

Specifies the access code used by an X.21 short hold mode line when calling a system on another network. The access code can be three or four digits, depending on the value specified for the SHMCALLFMT parameter.

Note:

This parameter is valid only if CNN(*SHM) is specified.

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

access-code: Specify the access code.

STNADR

For a switched secondary or negotiable line, this specifies the hexadecimal station address which the local system responds to when polled by the remote system if it answers a call.

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

station-address: Specify the local station address using hexadecimal characters ranging from 01 through FE.

CALLNBR

Specifies the local telephone number of the line used for the V.25 bis call request with identification (CRI) dial command. This parameter is used when the CRI function is needed for V.25 bis. When V.25 bis CRI dialing is used, the system takes the called (connection) number from the CNNNBR parameter of the controller description, adds a separator character (;), and concatenates the calling number at the end. Specify the calling number only if the modem and the network both support the CRI dial command.

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

***NONE:** The CRN (Call Request Normal) dial command is used by the V.25 bis line.

calling-number: Specify up to 22 characters that represent the local telephone number for V.25 bis CRI (Call Request with Identification) automatic dialing.

This parameter is required for all X.21 short hold mode lines. The calling number is passed to the remote system at the initial connection. This number is dialed by the remote system to reestablish the short hold mode connection.

CNNPOLLRTY

Specifies, for a switched primary or negotiable line, the number of connect poll retries before indicating the error and making the station inoperative.

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

connect-poll-retry: Specify a value ranging from 0 through 64 for the number of retries.

CNNTMR

Specifies, for X.21 circuit switched connections, the amount of time an automatic answer connect request waits for an incoming call to be accepted.

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

***NOMAX:** There is no disconnect limit.

connect-timer: Specify a value ranging from 1 through 32767 in 0.1 second intervals.

SHORTTMR

Specifies, for X.21 circuit switched connections, the time the system waits between connection attempts. This timer is used during bursts of retry operations.

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

short-timer: Specify a value ranging from 10 through 600 in 0.1 second intervals.

LONGTMR

Specifies, for X.21 circuit switched connections, the timer used between bursts of retry operations. After a burst of retry attempts, the system waits for this timeout period before the next attempt.

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

long-timer: Specify a value ranging from 100 through 6000 in 0.1 second intervals.

SHORTRTY

Specifies, for X.21 circuit switched connections, the number of retry attempts that are made during a burst of retries.

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

short-retry: Specify a value ranging from 0 through 254 for the number of retries.

LONGRTY

Specifies, for X.21 circuit switched connections, the number of burst retry attempts that are made when processing a connect request.

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

long-retry: Specify a value ranging from 0 through 254 for the number of retries.

CPSRTY

Specifies whether call progress signals are retried for X.21 circuit switched or X.21 short hold mode lines. Up to 11 values can be specified; duplicate values are ignored.

***SAME** This value does not change.

Valid values are:

- *CPS41
- *CPS42
- *CPS43
- *CPS44
- *CPS45
- *CPS46
- *CPS47
- *CPS48
- *CPS49
- *CPS71
- *CPS72

This parameter can be specified only if CNN(*SHM) and INTERFACE(*X21) are specified. The

Communications Configuration  book has descriptions of each of the call progress signals.

MAXFRAME

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

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

maximum-frame-size: Specify the maximum frame size. Valid values are:

- 265
- 521
- 1033
- 2057

THRESHOLD

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

Note:

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

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

***OFF:** No monitoring of errors occurs.

***MIN:** The error threshold is set at a minimum monitoring level.

***MED:** Error thresholding is set to a medium monitoring level.

***MAX:** The error threshold is set at a maximum monitoring level.

DUPLEX

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

Note:

For X.21 circuit-switched interface lines, full duplex permanent RTS must be specified.

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

***HALF:** RTS turned on only when transmission is required (for half-duplex modems).

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

MODULUS

Specifies whether extended sequence numbers are used.

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

8: Extended sequence numbers are not used (modulus 8).

128: Extended sequence numbers are used (modulus 128).

MAXOUT

Specifies the maximum number of frames that are transmitted sequentially to a remote system before the remote system must respond.

For modulus 8, the maximum number of frames ranges from 1 through 7. For modulus 128, the maximum number of frames ranges from 8 through 28.

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

maximum-outstanding-frames: Specify a value ranging from 1 through 28 for the number of frames.

INACTTMR

Specifies, for a secondary or negotiable line, the time (in tenths of a second) that the system waits for a valid frame to flow before reporting the error and disconnecting the line. This timer is started at connection time, restarted upon transmission of any frame, and reset upon receipt of a frame with a valid frame check sequence.

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

***NOMAX:** There is no disconnect limit.

inactivity-timer: Specify a value ranging from 150 through 4200 in 0.1 second intervals.

POLLRSPDLY

Specifies, for a secondary or negotiable line, the minimum time that the system waits before it responds to a data poll if there is no frame to transmit.

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

poll-response-delay: Specify a value ranging from 1 through 2048 in 0.0001 second intervals, or specify 0 to indicate no delay.

NPRDRCVTMR

Specifies, for a primary or negotiable line, the time that the system waits for either a final frame or an idle signal while the secondary station is continuously transmitting. If this timer expires, then the nonproductive receive condition is reported.

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

nonproductive-receive-timer: Specify a value ranging from 160 through 4200 in 0.1 second intervals.

IDLTMTR

Specifies, for a primary or negotiable line, the time (in 0.1 second intervals) that the system waits before sampling the line for an idle signal. If an idle signal is found, error recovery procedures are started.

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

idle-timer: Specify a value ranging from 5 through 300 in 0.1 second intervals.

CNNPOLLTMR

Specifies, for a primary or negotiable line, the time that the system waits for the response to a connect poll before retransmitting the poll.

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

connect-poll-timer: Specify a value ranging from 2 through 300 in 0.1 second intervals.

POLLPAUSE

Specifies, for a primary or negotiable line, the time that the system pauses after the last remote system in the poll list is polled.

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

poll-cycle-pause: Specify a value ranging from 1 through 2048 in 0.0001 second intervals, or specify 0 to indicate no pause.

FRAMERTY

Specifies the number of retries for an unanswered command frame or unacknowledged information frame before indicating the error and disconnecting the station.

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

frame-retry: Specify a value ranging from 0 to 64 for the number of retries.

FAIRPLLTMTR

Specifies the maximum amount of time for which the system sends data to one or more work stations before requesting input from the work stations.

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

fair-poll-time: Specify the amount of time (in seconds) the system waits (during output transfers) before polling for input. Valid values for this parameter range from 5 through 60 seconds.

LINKSPEED

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

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

***INTERFACE:** The following link speeds, based on the physical interface type, are used: 9600 bps for RS-232/V.24 and X.21bis/V.24, 48000 bps for V.35 and X.21bis/V.35, and 64000 bps for X.21 and RS-449/V.36.

***MIN:** The minimum link speed is used.

***MAX:** The maximum link speed is used.

link-speed: Specify the link speed. Valid values are: 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 2048000, 4M, 10M, 16M and 100M.

COSTCNN

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

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

cost-per-connect-time: Specify a value ranging from 0 through 255.

COSTBYTE

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

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

cost-per-byte: Specify a value ranging from 0 through 255.

SECURITY

Specifies the security level of the physical line. This parameter is used only if APPN is used on the system.

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

***NONSECURE:** Normal priority is used.

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

***UNDGRDCBL:** An underground cable is used.

***SECURECND:** A secure, unguarded conduit (for example, a pressurized pipe) is used.

***GUARDCN:** A guarded conduit, which is protected against physical tapping, is used.

***ENCRYPTED:** Data flowing on the line is encrypted.

***MAX:** A guarded conduit, protected against physical and radiation tapping, is used.

PRPDLY

Specifies the level of propagation delay on the line. This parameter is valid only if APPN* support is used on the system. The order of the values from shortest to longest delay is *MIN, *LAN, *TELEPHONE, *PKTSWTNET, and *SATELLITE.

***SAME:** The value does not change.

***MIN:** The minimum propagation delay is used.

***LAN:** The local area network propagation delay is used.

***TELEPHONE:** The telephone propagation delay is used.

***PKTSWTNET:** The packet switched network propagation delay is used.

***SATELLITE:** The satellite propagation delay is used.

***MAX:** The maximum propagation delay is used.

USRDFN1

Specifies the first of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN* support is used on the system.

***SAME:** The value does not change.

user-defined-1: Specify a value ranging from 0 through 255.

USRDFN2

Specifies the second of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN* support is used on the system.

***SAME:** The value does not change.

user-defined-2: Specify a value ranging from 0 through 255.

USRDFN3

Specifies the third of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.

***SAME:** The value does not change.

user-defined-3: Specify a value ranging from 0 through 255.

DSRDRPTMR

Specifies the amount of time the system waits for the modem to exit the Data Set Ready (DSR) state before signaling an error.

***SAME:** The value does not change.

DSR-drop-timer: Specify a value ranging from 3 through 60 seconds.

AUTOANSTYP

Specifies the method the system uses to answer incoming calls.

***SAME:** The value does not change.

***DTR:** The system enters the Data Terminal Ready state, signals the modem to answer calls, and waits for the modem to enter the Data Set Ready (DSR) state.

***CDSTL:** The system enters the Connect Data Set to Line (CDSTL) state after monitoring the Ring Indicator to signal the modem to answer the call.

CTSTMR

Specifies the amount of time the system waits for the modem to enter or exit the Clear to Send (CTS) state before signaling an error.

***SAME:** The value does not change.

CTS-timer: Specify a value ranging from 10 through 60 seconds.

RMTANSTMR

Specifies the amount of time the system waits for the modem to enter the Data Set Ready (DSR) state after dialing before signaling an error.

***SAME:** The value does not change.

answer-timer: Specify a value ranging from 30 through 120 seconds.

CMNRCYLMT

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

***SAME:** The value does not change.

***SYSVAL:** The recovery limits specified in the QCMNRCYLMT system value are used.

Element 1: Maximum Recovery Limit

count-limit: Specify the number of recovery attempts to be made. Valid values range from 0 through 99.

Element 2: Recovery Time Interval

time-interval: Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

TEXT Specifies the text that briefly describes the program and its function. More information is in Commonly used parameters.

***SAME:** The value does not change.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CHGLNSDLC

```
CHGLNSDLC LIND(TUESDAY) RSRNAME(LIN031)
```

This command changes the resource name for line description TUESDAY to LIN031.

Error messages for CHGLNSDLC

*ESCAPE Messages

CPF261E

Line description &1 not changed.

CHGLINTDLC (Change Line Description (TDLC)) Command Description

CHGLINTDLC Command syntax diagram

Purpose

The Change Line Description (TDLC) (CHGLINTDLC) command changes a line description for a Twinaxial Data Link Control (TDLC) line.

Required Parameter

LIND Specifies the name of the line description being changed.

Optional Parameters

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***SAME:** The value does not change.

***NO:** This line is not automatically varied on at IPL.

***YES:** The line is automatically varied on at IPL.

TEXT Specifies the text that briefly describes the program and its function. More information is in Commonly used parameters.

***SAME:** The value does not change.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CHGLINTDLC

```
CHGLINTDLC LIND(W$FLIN1) TEXT('Virtual line for WSF')
```

This command changes the text for line description WSFLIN1.

Error messages for CHGLINTDLC

*ESCAPE Messages

CPF261E

Line description &1 not changed.

CHGLINTRN (Change Line Description (Token-Ring Network)) Command Description

CHGLINTRN Command syntax diagram

Purpose

The Change Line Description (Token-Ring Network) (CHGLINTRN) command changes a line description for a Token-Ring Network line.

Required Parameter

LIND Specifies the name of the line description being changed.

Optional Parameters

RSRCNAME

Specifies the resource name that describes the automatic call unit port.

Note:

Use the Work with Hardware Resources (WRKHDWRSC) command with *CMN specified for the TYPE parameter to help determine the resource name.

The value specified on the RSRCNAME parameter cannot be changed from *NWID to another value or from another value to *NWID. The value specified on the RSRCNAME parameter cannot be changed from *NWSD to another value or from another value to *NWSD.

***SAME:** The value does not change.

***NWID:** The resource name is determined by the network interface used.

***NWSD:** The resource name is determined by the network server description used.

resource-name: Specify the resource name of the communications port. The resource name consists of the input/output adapter (IOA) resource name and the port number on the IOA. For example, if the resource name of the IOA is LIN01 and the port on the IOA is 1, then the resource name would be LIN011.

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***SAME:** The value does not change.

***YES:** The line is automatically varied on at IPL.

***NO:** This line is not automatically varied on at IPL.

VRYWAIT

Specifies whether the line is varied on asynchronously or synchronously. For a synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

***SAME:** The value does not change.

***NOWAIT:** The system does not wait for the vary on to complete. The line is varied on asynchronously.

vary-on-wait: Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

Notes:

1. When ONLINE(*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
 - Put tasks in place to manage the line
 - Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
 - Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

MAXCTL

Specifies the maximum number of controllers that the line supports.

***SAME:** The value does not change.

maximum-controllers: Specify the maximum number of controllers the line will support. Valid values range from 1 through 256. Specify a number large enough to account for all of the controllers currently active to this network, and allow for controllers that may be attached in the near future.

LINESPEED

Specifies the line speed in bits per second (bps).

Notes:

1. When RSRCTYPE(*NWID) is specified, *NWI must be specified on this parameter.
2. Duplex (DUPLEX) parameter set to *AUTO, if it has a default value and line speed (LINESPEED) parameter has 100M or *AUTO.

***SAME:** The value does not change.

4M: The line speed is 4 million bits per second (Mbps).

16M: The line speed is 16 million bits per second (Mbps).

100M: The line speed is 100 million bits per second (Mbps).

***AUTO:** The line speed value will be determined by the hardware using auto-negotiation.

***NWI:** The line speed is used from the network interface. This value is valid only when RSRCTYPE(*NWI) is specified.

MAXFRAME

Specifies the maximum frame size that can be transmitted and received on this line description.

***SAME:** The value does not change.

maximum-frame-size: Specify the maximum frame size. When RSRCTYPE(*NWI) is specified, valid values range from 265 through 8148 bytes. Otherwise, valid values range from 265 through 16393 bytes. Suggested values for this parameter include, but are not limited to, the following:

265	1033	1600	4060	16393
521	1466	1994	8156	

ACTLANMGR

Specifies whether Local Area Network (LAN) Manager is activated for this line.

Notes:

1. ACTLANMGR(*YES) must be specified when RSRCTYPE(*NWI) is specified.
2. ACTLANMGR(*NO) will ignore the values in TRNLOGLVL, TRNMGRMODE, LOGCFGCHG and TRNINFCN.

***SAME:** The value does not change.

***YES:** LAN manager support is activated for this line.

***NO:** LAN manager support is not activated for this line.

TRNLOGLVL

Specifies the error logging level used by the IBM Token-Ring Network (TRLAN) Manager.

Notes:

1. TRNLOGLVL(*OFF) must be specified when RSRCTYPE(*NWI) is specified.
2. TRNLOGLVL is ignored when ACTLANMGR(*NO) is specified.

***SAME:** The value does not change.

***OFF:** No monitoring of errors occurs.

***MIN:** The minimum error logging level, which reports only conditions that indicate degraded performance, is used.

***MED:** The medium error logging level, which reports conditions that indicate potential degraded performance, is used.

***MAX:** The maximum error logging level, which reports all error conditions, including those reported for the *MIN and *MED reporting levels, is used.

TRNMGRMODE

Specifies whether the token-ring network manager is controlling or observing.

Notes:

1. TRNMGRMODE(*OBSERVING) must be specified when RSRCTYPE(*NWID) is specified.
2. TRNMGRMODE is ignored when ACTLANMGR(*NO) is specified.

***SAME:** The value does not change.

***OBSERVING:** The token-ring manager is observing.

***CONTROLLING:** The token-ring manager is controlling.

LOGCFGCHG

Specifies whether the nearest active upstream neighbor (NAUN) changes are logged.

Notes:

1. LOGCFGCHG(*LOG) must be specified when RSRCTYPE(*NWID) is specified.
2. LOGCFGCHG is ignored when ACTLANMGR(*NO) is specified.

***SAME:** The value does not change.

***LOG:** NAUN changes are logged.

***NOLOG:** NAUN changes are not logged.

TRNINFBCN

Specifies whether an inform message is sent to QSYSOPR when beaconing occurs.

Notes:

1. TRNINFBCN(*YES) must be specified when RSRCTYPE(*NWID) is specified.
2. TRNINFBCN is ignored when ACTLANMGR(*NO) is specified.

***SAME:** The value does not change.

***YES:** A message is sent to QSYSOPR when beaconing occurs.

***NO:** A message is not sent to QSYSOPR when beaconing occurs.

ADPTADR

Specifies the 12-character hexadecimal adapter address.

***SAME:** The value does not change.

***ADPT:** This value gives the user the preset token-ring default address for this token-ring adapter card. This address can be shown by using the Display Line Description (DSPLIND) command for this line description after it has successfully varied on.

Note:

This value is not valid when RSRCTYPE(*NWID) and NWITYPE(*FR) is specified, or RSRCTYPE(*NWSD) is specified.

local-adapter-address: Specify an address to this system in this token-ring network. Valid values range from hexadecimal 400000000000 through 7FFFFFFFFFFFFF.

FCNADR

Specifies whether token ring functional addresses are used.

***SAME:** The value does not change.

***NONE:** A functional address is not used.

functional-address: Specify a group of hexadecimal functional addresses that are encoded in bit-significant format. Valid values range from hex C00000000001 through hex C00040000000. The first digit must be C. Functional addresses must be unique.

SSAP Specifies the source service access point (SSAP). The most commonly used SNA SSAP is hex 04. All SSAP values must be unique.

Note: It is recommended that SSAPs F0, F8 and FC are not used for lines attached to network server descriptions.

***SAME:** The value does not change.

***SYSGEN:** The system generates one of the source service access points: 04, 12, AA, or C8.

Element 1: User-defined SSAPs for TCP/IP

source-service-access-point: Specify a source service access point for receiving and transmitting data. A maximum of 24 SSAP values can be specified.

- For Transmission Control Protocol/Internet Protocol (TCP/IP) applications, the SSAP must be AA.
- For Systems Network Architecture (SNA) applications, the SSAP must be a hex value ranging from 04 through 9C in multiples of four (04, 08, 0C, and so on).
- For high-performance routing (HPR) applications, the SSAP must be hex C8.
- For non-SNA applications, the SSAP must be a hex value ranging from 02 through FE in multiples of two (02, 04, 06, and so on).
- For local area network (LAN) printer applications, specify an SSAP value of 12 and an SSAP type of *NONSNA.

Element 2: Frame Size for SSAPs

***MAXFRAME:** The frame size specified on the MAXFRAME parameter is used.

SSAP-maximum-frame-size: Specify the maximum SSAP frame size (the maximum size of the data field which can be transmitted or received). When RSRcname(*NWID) is specified, valid values for this parameter range from 265 through 8148 bytes. Otherwise, valid values for this parameter range in bytes from 265 through 16393. The commonly used values for this parameter are 256, 1033, 1466, 1994, 4060, and 8156.

Note: The values specified on this parameter cannot be larger than the values specified on the MAXFRAME parameter.

Element 3: SSAP Type

***CALC:** The system determines the SSAP type based on the following hex values:

- 04 through 9C, divisible by 4 (for SNA)
- C8 (for HPR)
- 02 through FE, divisible by 2 (for non-SNA)

***SNA:** The SSAP is used for SNA communications. Valid values range from hex 04 through hex 9C in multiples of four (04, 08, 0C, and so on).

***NONSNA:** The SSAP is used for non-SNA Communications. Valid values range from hex 02 through hex FE in multiples of two (02, 04, 06, and so on).

***HPR:** The SSAP is used for HPR communications. It also can be used for SNA applications. The valid value is hex C8.

ELYTKNRLS

Specifies whether the early token release option is used.

Note: ELYTKNRLS(*LINESPEED) must be specified when RSRCTYPE(*NWID) is specified.

***SAME:** The value does not change.

***LINESPEED:** The value specified on the LINESPEED parameter is used to determine whether the early token release option is used.

***YES:** The early token release option is used. *YES can be specified only if the LINESPEED parameter contains the value 16M.

***NO:** The early token release option is not used.

THRESHOLD

This parameter, and its values *SAME, *OFF, *MIN, *MED, and *MAX, can be specified but it is not used by the system starting in release V2R3M0. The parameter may be removed in a later release.

PVCID

Specifies the virtual path identifier and virtual circuit identifier pairs associated with this permanent virtual circuit.

***SAME:** The value does not change.

Element 1: Virtual Path Identifier

virtual-path-id: Specify a number that represents the virtual path identifier. This number must be in the range of 0 to 7.

Element 2: Virtual Circuit Identifier

virtual-circuit-id: Specify a number that represents the virtual circuit identifier. This number must be in the range of 32 to 4095.

USELECSADR

Specifies whether the LAN emulation configuration server (LECS) should be connected to request the remote LAN emulation server (LES) address.

***SAME:** The value does not change.

***YES:** The LECS address is used.

***NO:** The LECS address is not used.

LESATMADR

Specifies the ATM network address of the remote LAN emulation server.

Note: This parameter must be other than *NONE if USELECSADR(*NO) is specified.

***SAME:** The value does not change.

Single Value

***NONE:** ATM network address is not used.

Element 1: Network prefix

network-prefix: Specify the network prefix of the ATM address of the remote server. This is a 26 digit hexadecimal value.

Element 2: End system identifier

end-system-identifier: Specify the end system identifier of the remote server. This is a 12 digit hexadecimal value.

Element 3: Selector byte

selector byte: Specify the selector byte of the remote server. This is a two digit hexadecimal value.

EMLLANNAME

Specifies the emulated LAN name.

***SAME:** The value does not change.

***NONE:** Emulated LAN name not used.

emulated-LAN-name: Specify the emulated LAN name. A maximum of 32 characters may be specified.

LECDSTIMO

Specifies the amount of time in minutes a LAN emulation (LE) client will wait before disconnecting an idle virtual circuit connection to another client.

***SAME:** The value does not change.

***NOMAX:** The LE client will wait indefinitely.

LEC-disconnect-timeout: Specify the number of minutes the LE client will wait before disconnecting an idle virtual circuit connection to another client. The value must be in the range of 1 to 30 minutes.

DUPLEX

Specifies whether the hardware can send and receive data simultaneously. In half duplex mode, the hardware must alternate between sending data and receiving data. In full duplex mode, one cable is dedicated to send data and another cable is dedicated to receive data. Therefore, data can be sent and received simultaneously. A hub is required for full duplex.

Note:

Duplex (DUPLEX) parameter set to *AUTO, if it has a default value and line speed (LINESPEED) parameter has 100M or *AUTO.

***SAME:** The value does not change.

***HALF:** The line communicates using half duplex mode.

***FULL:** The line communicates using full duplex mode.

***AUTO:** The duplex value will be determined by the hardware using auto-negotiation.

LINKSPEED

Specifies the link speed in bits per second (bps). This parameter is valid only if APPN* support is used on the system.

***SAME:** The value does not change.

4M: A link speed of 4 million bits per second is used (Mbps).

10M: A link speed of 10 million bits per second (Mbps) is used.

16M: A link speed of 16 million bits per second (Mbps) is used.

100M: A link speed of 100 million bits per second (Mbps) is used.

***MIN:** The minimum link speed is used.

***MAX:** The maximum link speed is used.

link-speed: Specify the link speed. Valid values range from 1200 to 603979776000.

COSTCNN

Specifies the relative cost of being connected on the line. This parameter is required only if APPN* support is used on the system.

***SAME:** The value does not change.

cost-per-connect-time: Specify a value ranging from 0 through 255.

COSTBYTE

Specifies the relative cost per byte for sending and receiving data on the line. This parameter is required only if APPN* support is used on the system.

***SAME:** The value does not change.

cost-per-byte: Specify a value ranging from 0 through 255.

SECURITY

Specifies the security level of the physical line. This parameter is used only if APPN is used on the system.

***SAME:** The value does not change.

***NONSECURE:** Normal priority is used.

***PKTSWTNET:** A packet switched network is used. Data does not always follow the same path through the network.

***UNDGRDCBL:** An underground cable is used.

***SECURECND:** A secure, unguarded conduit (for example, a pressurized pipe) is used.

***GUARDCND:** A guarded conduit, which is protected against physical tapping, is used.

***ENCRYPTED:** Data flowing on the line is encrypted.

***MAX:** A guarded conduit, protected against physical and radiation tapping, is used.

PRPDLY

Specifies the level of propagation delay on the line. This parameter is valid only if APPN* support is used on the system. The order of the values from shortest to longest delay is *MIN, *LAN, *TELEPHONE, *PKTSWTNET, and *SATELLITE.

***SAME:** The value does not change.

***MIN:** The minimum propagation delay is used.

***LAN:** The local area network propagation delay is used.

***TELEPHONE:** The telephone propagation delay is used.

***PKTSWTNET:** The packet switched network propagation delay is used.

***SATELLITE:** The satellite propagation delay is used.

***MAX:** The maximum propagation delay is used.

USRDFN1

Specifies the first of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN* support is used on the system.

***SAME:** The value does not change.

user-defined-1: Specify a value ranging from 0 through 255.

USRDFN2

Specifies the second of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN* support is used on the system.

***SAME:** The value does not change.

user-defined-2: Specify a value ranging from 0 through 255.

USRDFN3

Specifies the third of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.

***SAME:** The value does not change.

user-defined-3: Specify a value ranging from 0 through 255.

AUTOCTRL

Specifies whether the system will automatically create controller descriptions when calls are received from adjacent systems on the local area network (LAN).

***SAME:** The value does not change.

***NO:** The system will not automatically create a controller description when incoming calls are received.

***YES:** The system will automatically create a controller description when incoming calls are received.

AUTODLTCTL


Specifies the number of minutes an automatically created controller can remain in an idle state (switched from varied on to varied on pending) before the controller description and attached device descriptions are varied off and deleted.

***SAME:** The value does not change.

***NONE:** The system will not automatically delete or vary off the automatically configured, idle controller descriptions.

wait-time: Specify the number of minutes to wait before deleting the automatically configured, idle controller descriptions for this line. Valid values range from 1 to 10,000 minutes.

MSGQ

Specifies the qualified name of the message queue to which messages are sent. More information about using this parameter is in the Communications Management  book.

Single Values

***SAME:** The value does not change.

***SYSVAL:** Messages are sent to the message queue defined in the system value QCFGMSGQ.

***SYSOPR:** Messages are sent to the system operator message queue (QSYS/QSYSOPR).

library-name/message-queue-name: Specify the library-qualified name of the message queue to which operational messages are sent.

CMNRCYLMT

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

***SAME:** The value does not change.

***SYSVAL:** The recovery limits specified in the QCMNRCYLMT system value are used.

Element 1: Maximum Recovery Limit

count-limit: Specify the number of recovery attempts to be made. Valid values range from 0 through 99.

Element 2: Recovery Time Interval

time-interval: Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

TEXT Specifies the text that briefly describes the program and its function. More information is in Commonly used parameters.

***SAME:** The value does not change.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CHGLINTRN

```
CHGLINTRN LIND(TRLAN1) MAXCTL(50)
```

This command changes the maximum number of controllers for line description TRLAN1 to 50.

Error messages for CHGLINTRN

***ESCAPE Messages**

CPF261E

Line description &1 not changed.

CHGLINWLS (Change Line Description (Wireless)) Command Description


CHGLINWLS Command syntax diagram

Purpose

The Change Line Description (Wireless) (CHGLINWLS) command changes a line description for a wireless local area network (LAN) line.

Note:

Extended wireless line configuration data is contained in the source file and member specified on the INZFILE and INZMBR parameters, respectively. When the line is varied on, this configuration data is downloaded to the wireless adapter. It is recommended that INZPGM(QZXCINZ) and INZFILE(QEWLSRC) be used, and that a source member containing configuration initialization data be specified on the INZMBR parameter. For more information about downloading extended wireless line configuration data,

see the LAN, Frame-Relay and ATM Support  book.

More information about using this command is in the Communications Configuration  book.

Required Parameter

LIND Specifies the name of the line description being changed.

Optional Parameters**RSRCNAME**

Specifies the resource name of the communications port.

Note:

Use the Work with Hardware Resources (WRKHDWRSC) command with *CMN specified for the TYPE parameter to help determine the resource name. The resource name is on the port. For example, the resource name may be CMN01 on a "Token-ring port".

The value specified on the RSRCNAME parameter cannot be changed from *NWID to another value or from another value to *NWID.

***SAME:** The value does not change.

resource-name: Specify the resource name of the communications port.

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***SAME:** The value does not change.

***YES:** The line is automatically varied on at IPL.

***NO:** This line is not automatically varied on at IPL.

VRYWAIT

Specifies whether the line is varied on asynchronously or synchronously. For a synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

***SAME:** The value does not change.

***NOWAIT:** The system does not wait for the vary on to complete. The line is varied on asynchronously.

vary-on-wait: Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

Notes:

1. When ONLINE(*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
 - Put tasks in place to manage the line
 - Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
 - Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

ADPTADR

Specifies the 12-character hexadecimal adapter address.

***SAME:** The value does not change.

***ADPT:** The preset wireless adapter address is used as the local adapter address. The adapter address can be displayed by using the DSPLIND command after the line description has been successfully varied on.

local-adapter-address: Specify the local wireless adapter address to override the preset local address. The local adapter address must be an individual address (it cannot be a group address). Valid values range from 020000000000 through FFFFFFFF in hexadecimal format. The second digit (from the left) of the address must be 2, 6, A, or E.

GRPADR

Specifies whether to include the adapter as part of a wireless group address. This address is used to identify all adapters on the wireless network that have the same group address.

***SAME:** The value does not change.

***NONE:** A group address is not used.

group-address: Specify the address of the group of adapters to which the local adapter is added. Valid values range from 010000000000 through FDFDFDFDFDFDF in hexadecimal form. All group addresses must be unique.

MAXCTL

Specifies the maximum number of controllers that the line supports.

***SAME:** The value does not change.

maximum-controllers: Specify the maximum number of controllers supported by the line. This should be a number large enough to account for all of the controllers that are currently attached to this line, and for those controllers that are to be attached in the near future. Valid values range from 1 through 256.

SSAP Specifies source service access points (SSAPs). This is the hexadecimal logical address used to route incoming data from the ethernet bus to the proper user. A maximum frame size can be specified for each SSAP.

Note: Ethernet Version 2 (specified as *ETHV2 on the ETHSTD parameter) does not allow the SSAP values of 06 and AA.

The destination service access point (DSAP), specified by the remote controller, must match one of the SSAPs specified in order for communication to occur. All SSAP values must be unique.

***SAME:** The value does not change.

***SYSGEN:** For ETHSTD(*ALL or *IEEE8023), the iSeries 400 creates three SSAPs: hex 04 for SNA applications, and hex AA and 06 for TCP/IP applications. For ETHSTD(*ETHV2), the system creates hex 04 for SNA.

Element 1: SSAPs

source-service-access-point: Specify up to 20 SSAPs. Valid values are hex AA and hex 06 for TCP/IP applications, and any hexadecimal number ranging from 04 through 9C that is divisible by 4 for SNA applications.

Element 2: Frame Size for SSAPs

***MAXFRAME:** The system determines the maximum frame size (data field size) that can be transmitted or received. If ETHSTD(*ALL or *IEEE8023) is specified, *CALC produces a frame size of 1496 for TCP/IP and SNA SSAPs. If ETHSTD(*ETHV2) is specified, *CALC produces a frame size of 1493 for SNA SSAPs.

SSAP-maximum-frame: Specify the maximum frame size for each SSAP.

Element 3: SSAP Type

***CALC:** The system determines the SSAP type based on the following values:

- 04 through 9C, divisible by 4 (for SNA)
- 02 through FE, divisible by 2 (for communications other than SNA)

***SNA:** The SSAP is used for SNA communications. Only SSAP values of 04 through 9C that are divisible by 4 are supported.

***NONSNA:** The SSAP is used for communications other than SNA communications. Valid SSAP values range from 02 through FE and must be divisible by 2.

LINKSPEED

Specifies the link speed in bits per second (bps). This parameter is valid only if APPN* support is used on the system.

***SAME:** The value does not change.

4M: A link speed of 4 million bps is used.

***MIN:** The minimum link speed is used.

***MAX:** The maximum link speed is used.

link-speed: Specify the link speed. Valid values are: 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 112000, 128000, 168000, 192000, 224000, 256000, 280000, 320000, 336000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000.

COSTCNN

Specifies the relative cost of being connected on the line. This parameter is required only if APPN* support is used on the system.

***SAME:** The value does not change.

cost-per-connect-time: Specify a value ranging from 0 through 255.

COSTBYTE

Specifies the relative cost per byte for sending and receiving data on the line. This parameter is required only if APPN* support is used on the system.

***SAME:** The value does not change.

cost-per-byte: Specify a value ranging from 0 through 255.

SECURITY

Specifies the security level of the physical line. This parameter is used only if APPN support is used on the system.

***SAME:** The value does not change.

***NONSECURE:** Normal priority is used.

***ENCRYPTED:** Data flowing on the line is encrypted.

PRPDLY

Specifies the level of propagation delay on the line. This parameter is valid only if APPN support is used on the system.

***SAME:** The value does not change.

***LAN:** The local area network propagation delay is used.

***MIN:** The minimum propagation delay is used.

***MAX:** The maximum propagation delay is used.

USRDFN1

Specifies the first of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN* support is used on the system.

Note:

Information about the values that are specified for this parameter is provided in the Communications

Configuration  book.

***SAME:** The value does not change.

user-defined-1: Specify a value ranging from 0 through 255.

USRDFN2

Specifies the second of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN* support is used on the system.

Note:

Information about the values that are specified for this parameter is provided in the Communications

Configuration  book.

***SAME:** The value does not change.

user-defined-2: Specify a value ranging from 0 through 255.

USRDFN3

Specifies the third of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.

Note:

Information about the values that are specified for this parameter is provided in the Communications

Configuration  book.

***SAME:** The value does not change.

user-defined-3: Specify a value ranging from 0 through 255.

AUTOCRTCTL

Specifies whether the system automatically creates controller descriptions when calls are received from adjacent systems on the local area network (LAN).

***SAME:** The value does not change.

***NO:** The system does not automatically create a controller description when incoming calls are received.

***YES:** The system automatically creates a controller description when incoming calls are received.

AUTODLTCTL

Specifies the number of minutes an automatically created controller can remain in an idle state (switched from varied on to varied on pending) before the controller description and attached device descriptions are varied off and deleted.

***SAME:** The value does not change.

***NONE:** The system does not automatically delete or vary off the automatically configured, idle controller descriptions.

wait-time: Specify the number of minutes to wait before deleting the automatically configured, idle controller descriptions for this line. Valid values range from 1 through 10000 (in minutes).

CMNRCYLMT

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

***SAME:** The value does not change.

***SYSVAL:** The recovery limits specified in the QCMNRCYLMT system value are used.

Element 1: Maximum Recovery Limit

count-limit: Specify the number of recovery attempts to be made. Valid values range from 0 through 99.

Element 2: Recovery Time Interval

time-interval: Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

INZFILE

Specifies the name of a source file containing configuration initialization data.

Note:

The INZFILE and INZMBR parameters are required when downloading extended wireless line configuration data to the wireless adapter as discussed at the beginning of this command description.

***SAME:** The value does not change.

***NONE:** No line is specified.

The name of the initialization file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

initialization-file-name: Specify the name of a source file containing the initialization data. A value of *NONE is accepted for this parameter. If a source file name has not been added prior to varying on this line description, then the current IOP defaults are used for initialization.

INZMBR

Specifies the name of a source file member containing configuration initialization data.

Note:

The INZFILE and INZMBR parameters are required when downloading extended wireless line configuration data to the wireless adapter as discussed at the beginning of this command description.

***SAME:** The value does not change.

***NONE:** No source file member is specified.

initialization-member-name: Specify the name of a source file member containing the initialization data. A value of *NONE is accepted for this parameter. If a source member name has not been added prior to varying on this line description, then the current IOP defaults are used for initialization.

INZPGM

Specifies the name of a program to manage configuration initialization data.

Note:

For 2663 wireless adapters, it is recommended that INZPGM(QZXCINZ) be specified. This results in the values of INZFILE and INZMBR being passed to the Change Extended Wireless Line Member (CHGEWLM) command when the line is varied on.

***SAME:** The value does not change.

***NONE:** No initialization file is specified.

The name of the initialization program can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

initialization-program-name: Specify the name of a program to manage configuration initialization data. If a program name is specified, it is called whenever this line description is changed. The names of the source file and member containing configuration initialization data are passed to this program as parameters.

TEXT Specifies the text that briefly describes the line description. More information is in Commonly used parameters.

***SAME:** The value does not change.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CHGLINWLS

```
CHGLINWLS LIND(MYLINE) INZFILE(*LIBL/MYFILE)
          INZMBR(MBR1)
```

This command adds a source file and source member, containing configuration initialization data to a wireless line description named MYLINE.

Error messages for CHGLINWLS

None

CHGLINX25 (Change Line Description (X.25)) Command Description

CHGLINX25 Command syntax diagram

Purpose

The Change Line Description (X.25) (CHGLINX25) command changes a line description for an X.25 line.

Required Parameter

LIND Specifies the name of the line description being changed.

Optional Parameters

RSRCNAME

Specifies the resource name that describes the automatic call unit port.

Note:

Use the Work with Hardware Resources (WRKHDWRSC) command with *CMN specified for the TYPE parameter to help determine the resource name. The resource name is on the port. For example, the resource name may be CMN01 on a "Token-ring port".

The value specified on the RSRNAME parameter cannot be changed from *NWID to another value or from another value to *NWID.

***SAME:** The value does not change.

***NWID:** The resource name specified on the attached network interface description is used.

resource-name: Specify the resource name of the communications port. The resource name consists of the input/output adapter (IOA) resource name and the port number on the IOA. For example, if the resource name of the IOA is LIN01 and the port on the IOA is 2, the resource name would be LIN012.

LGLCHLE

Specifies, when using the Create Line Description (X.25) CRTLINX25 or CHGLINX25 command, a list of entries to be added, removed, or changed in the logical channel table. A channel entry consists of a channel identifier, a logical channel type, and a PVC controller.

Note:

Logical channel entries with attached permanent virtual circuit (PVC) controllers cannot be added, removed, or changed.

***SAME:** The value does not change.

***PROMPT:** By using the *PROMPT option, any entry can be added, removed, or altered. Specifying *PROMPT shows the current logical channel entries.

Element 1: Logical Channel Identifier

logical-channel-identifier: Specify a three-character hexadecimal number ranging from 001 through FFF for the logical channel identifier. The first digit (from left to right) is the logical channel group number; the second and third digits make up the logical channel number.

Element 2: Logical Channel Type

***PVC:** The logical channel is a permanent virtual circuit.

***SVCIN:** The logical channel is a switched virtual circuit for incoming calls.

***SVCOUT:** The logical channel is a switched virtual circuit for calls going out.

***SVCBOTH:** The logical channel is a switched virtual circuit for both calls coming in and calls going out.

NETADR

Specifies the local network address for this system.

***SAME:** The value does not change.

network-address: Specify up to 15 decimal digits for the network address.

CNNINIT

Specifies the method used to establish the X.25 data link connection.

***SAME:** The value does not change.

***LOCAL:** The local system initiates the connection by issuing the set asynchronous balanced mode (SABM) communications command to establish the connection.

***REMOTE:** The remote system initiates the connection by issuing the SABM communications command. The local system waits for the connection to be established.

***WAIT:** The local system waits for the data circuit-terminating equipment (DCE) to send a disconnect (DISC) transmission control character or a disconnected mode (DM) response and then issues the SABM communications command.

***CALLER:** The connection is initiated from either the local system or the remote system based on call direction.

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***SAME:** The value does not change.

***YES:** The line is automatically varied on at IPL.

***NO:** This line is not automatically varied on at IPL.

SWTNWILST

Specifies, for ISDN switched connections, a list of network interface descriptions to which this line can be attached. A network interface description is chosen from the list based on the value specified on the switched NWI selection parameter (SWTNWISLCT) at the time an incoming or outgoing call is processed.

***SAME:** The value does not change.

***NONE:** No network interface description is specified.

Element 1: Network Interface Description Name

nwi-description-name: Specify, for switched connections, the name of the network interface description to which this line attaches.

Element 2: Network Interface Channel Type

***B:** The B channel is used.

Element 3: Network Interface Channel-Number

***CALC:** The system selects one of the 30 channel numbers (based on availability) defined for the network interface description when an incoming or outgoing call is processed.

nwi-channel-number: Specify a channel number (1 or 30) to which the line description is restricted.

VRYWAIT

Specifies whether the line is varied on asynchronously or synchronously. For a synchronous vary on, this parameter specifies how long the system waits for the vary on to complete.

***SAME:** The value does not change.

***NOWAIT:** The system does not wait for the vary on to complete. The line is varied on asynchronously.

vary-on-wait: Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the line is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

Notes:

1. When ONLINE(*YES) is used, specifying a wait time in the line description affects system IPL time. In such cases, system IPL time is influenced by the amount of time required to synchronously vary on the line or reach the wait-time value.
2. The time required to vary on a line is the time it takes to:
 - Put tasks in place to manage the line
 - Activate the communications I/O processor (IOP), including downloading the IOP model-unique Licensed Internal Code
 - Establish the communications tasks and processes

Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, line protocol, and other factors.

LINESPEED

Specifies the line speed in bits per second (bps).

***SAME:** The value does not change.

***CALC:** The line speed is calculated by the system.

line-speed: Specify one of the following values (in bps) for the line speed:

600	56000	512000	1088000	1664000
1200	57600	576000	1152000	1728000
2400	64000	640000	1216000	1792000
4800	128000	704000	1280000	1856000
7200	192000	768000	1344000	1920000
9600	256000	832000	1408000	1984000
14400	320000	896000	1472000	2048000
19200	384000	960000	1536000	
48000	448000	1024000	1600000	

PKTMODE

Specifies whether to access the ISDN virtual circuit service.

***SAME:** The value does not change.

***NO:** The ISDN network is used to provide transparent access to an X.25 packet switched network external to the ISDN (Case A).

***YES:** The ISDN virtual circuit service is accessed (Case B).

INFTRFTYPE

Specifies the information transfer type. The information transfer type determines the layer 1 protocol.

***SAME:** The value does not change.

***UNRESTRICTED:** The data-channel traffic appears as digital information; no physical transformation is required and each B-channel operates at capacity (64k bps).

***V110:** The transfer type is V-series Recommendation 110. Each B-channel operates at 56k bps.

***DOV** Allows Data Over Voice (DOV) digital data to be transferred over an ISDN voice call. Also, this is referred to as Data Over Voice Bearer Service (DOVBS), Data Over Speech Bearer Service (DOSBS), TollSaver, or TollMizer. This option should only be used if an ISDN voice call is less expensive than an ISDN data call or if a bearer service for data is not available. The remote location must also support this feature. Data is transferred at 56Kbps in each direction.

***SYNCMODEM:** Allows data from the integrated synchronous modem to be transferred over an ISDN voice call. This option should be used to connect to a remote location that is using a synchronous modem on an analog telephone line. Data is transferred at modem speeds up to 33.6Kbps from the remote analog device to this digital connection and up to 56Kbps from this digital connection to the remote analog device.

Note:

INFTRFTYPE(*SYNCMODEM) can be specified only if the description was created with CNN(*NONSWTCALL) or CNN(*NONSWTANS).

EXNNETADR

Specifies whether network addressing is extended to permit the use of 17 characters in an address name.

***SAME:** The value does not change.

***NO:** Network addresses can be up to 15 characters.

***YES:** Network addresses can be up to 17 characters.

MAXFRAME

Specifies the maximum frame size that can be transmitted and received on this line description.

***SAME:** The value does not change.

max-frame: Specify one of the following values: 1024, 2048, or 4096.

DFTPKTSIZE

Specifies the default packet size used by the X.25 network.

Element 1: Transmit Packet Size

***SAME:** The value does not change.

transmit-packet-size: Specify a default packet size for transmission to all controllers that will attach to this line. The controllers can override this default with the DFTPKTSIZE parameter on the controller commands. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

Element 2: Receive Packet Size

***SAME:** The value does not change.

***TRANSMIT:** The value specified as the default packet size for transmission is used as the default for reception.

receive-packet-size: Specify a default packet size for reception from all controllers that will attach to this line. The controllers can override this default with the DFTPKTSIZE parameter on the controller commands. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

MAXPKTSIZE

Specifies the maximum packet size for transmission and reception on an X.25 network. The value specified must not be less than the default packet size specified.

Element 1: Maximum Transmit Packet Size

***SAME:** The value does not change.

***DFTPKTSIZE:** The maximum packet size for transmission is the same as that specified as the default packet size for transmission in the DFTPKTSIZE parameter in this command.

transmit-packet-size: Specify a packet size. The valid values for the packet size are 64, 128, 256, 512, 1024, 2048, and 4096.

Element 2: Maximum Receive Packet Size

***SAME:** The value does not change.

***DFTPKTSIZE:** The maximum packet size for reception is the same as that specified as the default package size for reception in the DFTPKTSIZE parameter in this command.

***TRANSMIT:** The value specified as the default packet size for transmission is used as the default for reception.

receive-packet-size: Specify a default packet size for reception from all controllers that will attach to this line. The controllers can override this default with the DFTPFSIZE parameter on the controller commands.

MODULUS

Specifies the packet numbering used. The valid numbers are listed below.

***SAME:** The value does not change.

8: Character density is 18 characters per inch. This value is valid only on double-byte character set (DBCS) printers.

128: Modulus 128 packet numbering is used.

DFTWDWSIZE

Specifies the default window size used by the X.25 network.

Element 1: Transmit Window Size

***SAME:** The value does not change.

transmit-window-size: Specify the appropriate default window size. Valid values range from 1 through 7 for networks that use modulus 8 packet numbering. Valid values range from 1 through 15 for networks that use modulus 128 packet numbering.

Element 2: Receive Window Size

***SAME:** The value does not change.

***TRANSMIT:** The value specified as the default window size for transmission is used as the default for reception.

receive-window-size: Specify the appropriate default window size. Valid values range from 1 through 7 for networks that use modulus 8 packet numbering. Valid values range from 1 through 15 for networks that use modulus 128 packet numbering.

NETCTL

Specifies the name of an existing network controller.

SWTCTLLST

Specifies the names of up to 64 switched asynchronous X.25 controllers or specify *ALL for unlimited number of switched asynchronous X.25 controllers that can establish a connection with an X.25 switched virtual circuit (SVC). The controller descriptions must already exist, and must have been created by using the Create Controller Description (Async) (CRTCTLASC) command. Asynchronous X.25 controllers that are specified as dial-in can be connected to SVCIN or SVCBOTH logical channels. Attaching controllers that specify C>NNBR(*ANY) or ANSNBR(*ANY) may result in a reordering of this list.

Note:

If *ALL is specified and no switched asynchronous X.25 controllers exist on the system that specifies this line description on the switched line list (SWTLINLST) parameter then all incoming calls will be rejected.

***SAME:** The value does not change.

***NONE:** No switched controllers are specified.

***ALL:** All X.25 switched controllers that are created using the Create Controller Description (Async) (CRTCTLASC) command and list this line description on the Switched Line List (SWTLINLST) parameter can be used to establish a connection with an X.25 switched virtual circuit (SVC).

switched-controller-name: Specify the switched controller name.

NETUSRID

Specifies, for switched lines, whether network user identification (NUI) information should be included in the facility field of call request packets sent on this line. The NUI facility identifies calling data terminal equipment (DTE) to the network.

***SAME:** The value does not change.

***NONE:** No NUI information is sent over this line.

network-user-identification: Specify the hexadecimal NUI that will sent. The system will insert the NUI facility code (X'C6') and the NUI length in the facility field of a call request packet.

IDLTMR

Specifies the maximum amount of time (in 0.1 second intervals) that the system waits for acknowledgment from the network for each frame sent before re-transmission.

Note:

The IDLTMR value should be greater than or equal to the value of the following equation:

$$(2 * P + (MAXPKTSIZE*8)/LINESPEED + D) * 10$$

where "P" is the propagation delay (in seconds) of the medium that connects the user to the network, MAXPKTSIZE is the maximum transmit packet size, and "D" is the DCE (Data Circuit-terminating Equipment) processing overhead (in seconds). Contact the network provider for information about variables P and D.

***SAME:** The value does not change.

idle-timer: Specify a value ranging from 4 through 600. Each unit represents 0.1 seconds, which provides a timeout value ranging from 0.4 through 60 seconds.

FRAMERTY

Specifies the maximum number of retries attempted for various error conditions on the interface, such as link level time-outs, logical link level re-transmissions, and others.

***SAME:** The value does not change.

frame-retry: Specify a ranging value from 0 through 64.

ADRINSERT

Specifies whether the system inserts the local network address in CALL REQUEST or CALL ACCEPTED packets.

***SAME:** The value does not change.

***YES:** The local network address is inserted in packets.

***NO:** The local network address is not inserted in packets.

X25DCE

Specifies whether the system communicates by using the X.25 (DCE) support. It allows a system to communicate with another system without going through an X.25 network.

***SAME:** The value does not change.

***YES:** The iSeries 400 does communicate by using the X.25 (DCE) support.

***NO:** The iSeries 400 does not communicate by using the X.25 (DCE) support.

***NEG:** The iSeries 400 negotiates with another system about whether to communicate by using the X.25 (DCE) support. This value can only be specified for switched lines.

THRESHOLD

Specifies the temporary error threshold level being monitored by the system. A permanent error is reported only if the errors occurred consecutively and exceeded the retry limit.

Note: Specifying the THRESHOLD parameter affects all threshold errors. They cannot be specified individually.

***SAME:** The value does not change.

***OFF:** No monitoring of errors occurs.

***MIN:** The error threshold is set at a minimum monitoring level.

***MED:** Error thresholding is set to a medium monitoring level.

***MAX:** The error threshold is set at a maximum monitoring level.

CNNNBR

Specifies, for switched lines, the telephone number used to establish a switched connection on this line description. The value specified on this parameter is sent to the autocall unit if automatic calling is used to establish a switched connection, or it is sent to the V.25 bis modem if V.25 bis automatic dialing is used to establish the connection. When manual dialing is used to establish a switched connection on the line, this number is displayed to the system operator. For X.25, this number is the remote data terminal equipment (DTE) address for the switched virtual circuit (SVC) provided by the X.25 network.

***SAME:** The value does not change.

connection-number: Specify the telephone number dialed to establish a switched connection on this line description.

CALLNBR

Specifies the local telephone number of the line used for the V.25 bis call request with identification (CRI) dial command. This parameter is used when the CRI function is needed for V.25 bis. When V.25 bis CRI dialing is used, the system takes the called (connection) number from the CNNNBR parameter of the controller description, adds a separator character (:), and concatenates the calling number at the end. Specify the calling number only if the modem and the network both support the CRI dial command.

***SAME:** The value does not change.

***NONE:** Specifies that the CRN (Call Request Normal) dial command is used by the V.25 bis line.

calling-number: Specify up to 32 characters that represent the local telephone number for V.25 bis CRI (Call Request with Identification) auto-dialing.

MODEM

Specifies the type of modem supported on the communications line. Refer to the modem information to select the appropriate value.

***SAME:** The value does not change.

***NORMAL:** No attempt is made to run diagnostic tests on the modem.

***V54:** Certain types of diagnostic tests (as defined by the CCITT recommendations) are run to the modem. The iSeries 400 supports CCITT V.54 loop 3 (local loop back) and loop 2 (a remote loop back).

***IBMWRAP:** An IBM modem with wrap test capabilities is used on the communications line.

MODEMRATE

Specifies the speed at which the line operates if the modem has the data rate select feature.

Note: The user is responsible for ensuring that the line speed corresponds to the actual modem rate.

***SAME:** The value does not change.

***FULL:** The line operates at the full rate of the modem.

***HALF:** The line operates at half the full rate, or at the alternate rate, of the modem.

SWTCNN

Specifies whether the switched or switched network backup (SNBU) line is used for incoming calls, outgoing calls, or both incoming and outgoing calls.

***SAME:** The value does not change.

***BOTH:** The line is used for both incoming and outgoing calls.

***ANS:** The line is used for incoming calls only.

***DIAL:** The line is used for outgoing calls only.

CNNLSTOUT

Specifies, for ISDN switched connections, the name of a connection list object that contains the ISDN assigned numbers for a dial-out operation to the ISDN.

***SAME:** The value does not change.

***NONE:** A user specified connection list for dial-out operations is not used. The connection list is automatically configured if OSI Communications Subsystems/400 is installed.

connection-list-name: Specify the connection list object name.

CNNLSTOUTE

Specifies, for ISDN switched connections, the entry name from the connection list used to make a call to the ISDN. The connection list must be specified on the CNNLSTOUT parameter.

***SAME:** The value does not change.

connection-list-entry-name: Specify the entry name from the connection list.

CNNLSTIN

Specifies for ISDN switched connections the name of the connection list that is used to retrieve call information (or connection) for identifying authorized incoming calls.

***SAME:** The value does not change.

***NETATR:** The connection list used by this line description is taken from the list of system default network attributes that were identified at IPL (Initial Program Load). The Display Network Attributes (DSPNETA) command can be used to see the name of the connection list.

connection-list-name: Specify the name of the connection list used for this line description.

AUTOANS

Specifies, for switched or switched network backup (SNBU) lines, whether the system

automatically answers a call from a remote system to establish the connection or whether the user must manually answer the call and place the modem in data mode.

***SAME:** The value does not change.

***YES:** The system automatically answers incoming calls.

***NO:** The system operator must manually answer incoming calls.

Note: *YES is valid only if the modem has the automatic answer feature.

AUTODIAL

Specifies, for switched or switched network backup (SNBU) lines, whether the system automatically calls a remote system to establish a connection or whether the system operator must manually place the call.

***SAME:** The value does not change.

***NO:** The iSeries 400 does not automatically call a remote system.

***YES:** The iSeries 400 automatically calls a remote system.

Note: *YES is only valid if the system is using an autocal unit or if the modem used is capable of calling through a command interface.

DIALCMD

Specifies the type of dial command used to establish a switched connection with a remote system.

***SAME:** The value does not change.

***NONE:** No dial command type is specified. An automatic call unit establishes the connection.

***V25BIS:** V.25 bis is a recommendation which allows the use of one physical interface for call establishment and data transmission. It is sometimes referred to as a serial automatic call interface because the digits are presented serially on the link from the system (DTE) to the modem (DCE).

MDMINZCMD

Specifies the modem initialization command string sent to set the modem.

Note: Valid only when INTERFACE(*INTMODEM) or INFTRFTYPE(*SYNCMODEM) was specified on the create.

***SAME:** The value does not change.

***NONE:** No command string is sent to the modem.

command-string: Specifies up to 60 characters that represent the command string sent to the modem. Valid characters are upper case A thru Z, lower case a thru z, numbers 0 thru 9, and special characters:

Table 1. Special characters

Character	Description
.	Period
<	Less than sign

Character	Description
(Left parenthesis
+	Plus sign
&	Ampersand
*	Asterisk
)	Right parenthesis
;	Semicolon
-	Minus sign
/	Slash
,	Comma
_	Underline
>	Greater than sign
?	Question mark
:	Colon
=	Equal sign
	Spaces
#	Number sign
"	Double quote
!	Exclamation mark
@	At sign
^	Circumflex
%	Percent
[Left square bracket
]	Right square bracket
\	Back slash
\$	Dollar sign

Note: The first two characters of the modem initialization command string must begin with 'AT'. These first two characters must be in uppercase.

CALLIMMED

Specifies, for switched (CNN(*SWTPP)) lines, whether a call (using the number specified by the CNNNBR parameter) should be made immediately after varying on the line description.

***SAME:** The value does not change.

***NO:** The call is not made immediately after varying on. It must be initiated by an application program.

***YES:** The call is made immediately after varying on.

AUTOCALL

Specifies, for switched lines, whether the line has an associated autocal unit which performs automatic calling to the remote system.

***SAME:** The value does not change.

***NO:** The switched line does not have an autocal unit.

***YES:** The switched line has an autocal unit.

ACRSRCNAME

Specifies the resource name that describes the automatic call unit port. The resource name consists of the input/output adapter (IOA) resource name and the port number on the IOA. For example, if the resource name of the IOA is LIN02 and the port is 1, the resource name is LIN021.

***SAME:** The value does not change.

autocal-resource-name: Specify the resource name that describes the automatic call unit port.

PREDIALDLY

Specifies how long to wait (in 0.5 second intervals) before dialing.

Note:

This parameter is valid only for switched lines (CNN(*SWTPP)).

***SAME:** The length of time does not change.

predial-delay: Specify a value ranging from 1 through 254 in 0.5 second intervals, or specify 0 to indicate no delay.

REDIALDLY

Specifies the length of time (in 0.5-second intervals) to wait before re-dialing when the call attempt is unsuccessful. This parameter can be specified only if CNN(*SWTPP) is also specified.

***SAME:** The value does not change.

redial-delay: Specify a number ranging from 1 through 254 (measured in 0.5 second intervals), or specify 0 to indicate no delay.

DIALRTY

Specifies the number of re-dial attempts made by the system before considering the dialing unsuccessful.

Note:

Dial retries can only be specified for switched lines (CNN(*SWTPP)).

***SAME:** The value does not change.

dial-retry: Specify a value ranging from 0 to 254 for the number of dial attempts.

SWTDSC

Specifies whether the switched connection on this line is disconnected when the last switched virtual circuit (SVC) is cleared.

***SAME:** The value does not change.

***YES:** The switched connection is disconnected when the last device is varied off.

***NO:** The switched connection is not disconnected when the last switched virtual circuit is cleared.

SWTDSCTMR

Specifies the settings for the timers that run when switched X.25 lines are disconnected from the network or remote system.

Element 1: Settings for the Minimum Connect Timer

***SAME:** The value does not change.

minimum-connect-timer: Specify the minimum length of time (in seconds) the system keeps the connection active. This timer is started when the connection is established. Valid values for the minimum length timer range from 0 to 65535 seconds.

Element 2: Settings for the Disconnect Delay Timer

disconnect-delay-timer: Specify the length of time (ranging from 0 through 65535 seconds) the system waits before disconnecting the switched line connection. The system disconnects the switched connection only when the following conditions occur:

- The line is idle

- The minimum connect timer has expired
- The disconnect delay timer has expired

DSRDRPTMR

Specifies the amount of time the system waits for the modem to exit the Data Set Ready (DSR) state before signaling an error.

***SAME:** The value does not change.

DSR-drop-timer: Specify a value ranging from 3 through 60 seconds.

AUTOANSTYP

Specifies the method the system uses to answer incoming calls.

***SAME:** The value does not change.

***DTR:** The system enters the Data Terminal Ready state, signals the modem to answer calls, and waits for the modem to enter the Data Set Ready (DSR) state.

***CDSTL:** The system enters the Connect Data Set to Line (CDSTL) state after monitoring the Ring Indicator to signal the modem to answer the call.

CTSTMR

Specifies the amount of time the system waits for the modem to enter or exit the Clear to Send (CTS) state before signaling an error.

***SAME:** The value does not change.

CTS-timer: Specify a value ranging from 10 through 60 seconds.

RMTANSTMR

Specifies the amount of time the system waits for the modem to enter the Data Set Ready (DSR) state after dialing before signaling an error.

***SAME:** The value does not change.

answer-timer: Specify a value ranging from 30 through 120 seconds.

CLOCK

Specifies how the clocking function for the line is provided.

***SAME:** The value does not change.

***MODEM:** The modem supplies the clocking function.

***LOOP:** The receiving clock provided by the modem data circuit-terminating equipment (DCE) is looped back to the modem (DCE) on the system data terminal equipment (DTE) transmitting clock. This option can be used to improve high speed data transmission when the modem (DCE) supports such an option.

***INVERT:** The transmit clock provided by the modem data circuit-terminating equipment (DCE) is inverted before use. This option can be used when having problems with high speed data transmission and the modem (DCE) does not support looped clocking. The valid interfaces for

*INVERT are *X21, *X21BISV35, and *RS449V36.

LINKSPEED

Specifies the link speed in bits per second (bps). This parameter is valid only if APPN* support is used on the system.

***SAME:** The value does not change.

***INTERFACE:** The following link speeds, based on the physical interface type, are used: 9600 bps for RS-232/V.24 and X.21bis/V.24, 48000 bps for V.35 and X.21bis/V.35, and 64000 bps for X.21 and RS-449/V.36.

***MIN:** The minimum link speed is used.

***MAX:** The maximum link speed is used.

link-speed: Specify the link speed. Valid values are: 1200, 2400, 4800, 7200, 9600, 14400, 19200, 48000, 56000, 64000, 128000, 192000, 256000, 320000, 384000, 448000, 499000, 576000, 614000, 691000, 768000, 845000, 922000, 998000, 1075000, 1152000, 1229000, 1382000, 1536000, 1690000, 1843000, 1997000, 4M, 10M, and 16M.

SWTNWISLCT

Specifies the method used to select network interfaces from the switched network interface list.

***SAME:** The value does not change.

***FIRST:** Selection begins with the first network interface specified in the switched network interface list.

***CALC:** The system calculates which network interface is selected.

COSTCNN

Specifies the relative cost of being connected on the line. This parameter is required only if APPN* support is used on the system.

***SAME:** The value does not change.

cost-per-connect-time: Specify a value ranging from 0 through 255.

COSTBYTE

Specifies the relative cost per byte for sending and receiving data on the line. This parameter is required only if APPN* support is used on the system.

***SAME:** The value does not change.

cost-per-byte: Specify a value ranging from 0 through 255.

SECURITY

Specifies the security level of the physical line. This parameter is used only if APPN is used on the system.

***SAME:** The value does not change.

***NONSECURE:** Normal priority is used.

***PKTSWTNET:** A packet switched network is used. Data does not always follow the same path through the network.

***UNDGRDCBL:** An underground cable is used.

***SECURECND:** A secure, unguarded conduit (for example, a pressurized pipe) is used.

***GUARDCND:** A guarded conduit, which is protected against physical tapping, is used.

***ENCRYPTED:** Data flowing on the line is encrypted.

***MAX:** A guarded conduit, protected against physical and radiation tapping, is used.

PRPDLY

Specifies the level of propagation delay on the line. This parameter is valid only if APPN* support is used on the system. The order of the values from shortest to longest delay is *MIN, *LAN, *TELEPHONE, *PKTSWTNET, and *SATELLITE.

***SAME:** The value does not change.

***MIN:** The minimum propagation delay is used.

***LAN:** The local area network propagation delay is used.

***TELEPHONE:** The telephone propagation delay is used.

***PKTSWTNET:** The packet switched network propagation delay is used.

***SATELLITE:** The satellite propagation delay is used.

***MAX:** The maximum propagation delay is used.

USRDFN1

Specifies the first of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN* support is used on the system.

***SAME:** The value does not change.

user-defined-1: Specify a value ranging from 0 through 255.

USRDFN2

Specifies the second of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN* support is used on the system.

***SAME:** The value does not change.

user-defined-2: Specify a value ranging from 0 through 255.

USRDFN3

Specifies the third of the three user-defined fields. This field is used to describe unique characteristics of the line that is controlled. This parameter is valid only if APPN is used on the system.

***SAME:** The value does not change.

user-defined-3: Specify a value ranging from 0 through 255.

CMNRCYLMT

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

***SAME:** The value does not change.

***SYSVAL:** The recovery limits specified in the QCMNRCYLMT system value are used.


Element 1: Maximum Recovery Limit

count-limit: Specify the number of recovery attempts to be made. Valid values range from 0 through 99.

Element 2: Recovery Time Interval

time-interval: Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

MSGQ

Specifies the qualified name of the message queue to which messages are sent. More information about using this parameter is in the Communications Management  book.

Single Values

***SAME:** The value does not change.

***SYSVAL:** Messages are sent to the message queue defined in the system value QCFGMSGQ.

***SYSOPR:** Messages are sent to the system operator message queue (QSYS/QSYSOPR).

library-name/message-queue-name: Specify the library-qualified name of the message queue to which operational messages are sent.

TEXT Specifies the text that briefly describes the program and its function. More information is in Commonly used parameters.

***SAME:** The value does not change.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CHGLINX25

```
CHGLINX25 LIND(X251) LGLCHLE(*PROMPT)
MAXPKTSIZE(512)
```

This command shows an interactive display listing all current logical channel entries and allows changes to be made to these entries. Maximum packet size will be changed to 512 bytes.

Error messages for CHGLINX25

*ESCAPE Messages

CPF261E

Line description &1 not changed.

CHGLF (Change Logical File) Command Description

CHGLF Command syntax diagram

Purpose

The Change Logical File (CHGLF) command changes the attributes of a logical file and its members. The changed attributes are used for all members subsequently added to the file. To change the attributes of a specific member, use the Change Logical File Member (CHGLFM) command.

Restrictions:

1. To change a logical file, the user must have object management authority or object alter authority for the file and execute authority to the library.
2. To change the file, an exclusive no read lock is necessary; no one may be using the file for any purpose.

Required Parameter

FILE Specifies the qualified name of the logical file that is changed.

Note:

If a DDM file is specified, then the logical file (specified on the RMTFILE parameter of the Create Distributed Data Management File (CRTDDMF) command) is changed on the remote system specified on the RMTLOCNAME parameter on the CRTDDMF command. More information is outlined in the SYSTEM parameter of this command.

The name of the logical file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

logical-file-name: Specify the name of the logical file that is changed.

Optional Parameters

SYSTEM

Specifies whether the logical file is changed on the local system or on a remote system.

***LCL:** The logical file is changed on the local system.

***RMT:** The logical file is changed on a remote system using distributed data management (DDM). The logical file name specified on the FILE parameter must be the name of the DDM file (created using the Create Distributed Data Management File (CRTDDMF) command). The DDM file contains the name of the logical file to be changed (RMTFILE parameter on the CRTDDMF command) and the name of the remote system (RMTLOCNAME parameter on the CRTDDMF command).

***FILETYPE:** If the name specified on the FILE parameter is a DDM file, the logical file is changed on the remote system specified by the RMTLOCNAME parameter of that DDM file. Otherwise, the name specified on the FILE parameter to be changed must be the name of a local logical file.

FRCRBDAP

Specifies whether to force the rebuild of access paths that are associated with join logical files or with files that have keyed sequence access paths.

Note:

For a join logical file, this parameter applies to all join secondary access paths even if the join logical file is not a keyed file.

***NO:** The access paths will not explicitly be marked as having to be rebuilt.

***YES:** The access paths will be marked invalid and will be rebuilt asynchronously by the database server job.

MAXMBRS

Specifies the maximum number of members that the logical file can contain 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 value does not change.

***NOMAX:** The system maximum is used.

maximum-members: Specify the maximum number of members that the logical file can contain. Valid values range from 1 through 32767.

ACCPHSIZ

Specifies the maximum size of auxiliary storage that can be occupied by access paths that are associated with join logical files or with files that have keyed sequence access paths.

Note:

For a join logical file, this parameter applies to all join secondary access paths even if the join logical file is not a keyed file.

Performance Tip

For optimum performance, consider whether there is high contention for keys within the access path when selecting this value:

- 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.

Note:

This value is not supported on releases of the system earlier than Version 3 Release 6 Modification 0 (V3R6M0). Therefore, if a logical file that has this attribute is saved, and the save operation specifies a target release earlier than V3R6M0, the access paths are not saved. If this saved version of the file is then used to restore the logical file, the system rebuilds all of the access paths.

MAINT

Specifies the type of access path maintenance used for all members of the logical file. This parameter is valid only for keyed files or join files.

Note:

For a join logical file, this parameter applies to all join secondary access paths, even if the join file is not a keyed file.

***SAME:** The value does not change.

***IMMED:** The access path is maintained for each physical file member whether the source physical file is opened or closed. The access path is changed whenever a record is updated, added to, or deleted from a member of this file or a logical file member based on a member of this file.

***REBLD:** The access path is rebuilt when a file member is opened. The access path is continuously maintained until the member is closed; then access path maintenance is ended. *REBLD is not valid for keyed access path that contain unique key values.

***DLY:** The maintenance of the access path is delayed until the member is opened for use. The access path is then changed only for records that are 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 keyed access path of the members of the opened files, no matter what is specified

for the MAINT parameter.) To prevent a lengthy rebuild time when the file is opened, *DLY is 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 keyed access paths that require unique key values.

If the number of changes saved 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.

RECOVER

Specifies, for files having immediate or delayed maintenance on their keyed access path, when recovery processing of the file is done if a system failure occurs while the keyed access path is being changed.

A keyed access path having immediate or delayed maintenance is rebuilt during IPL (before any user can run a job), after the IPL, or when the file is next opened. While the access path is being rebuilt, the file cannot be used by any job.

An access path having rebuild maintenance is rebuilt the next time its file is opened, the time that it is normally rebuilt. This parameter is not valid if the file does not have a keyed access path.

***SAME:** The value does not change.

***NO:** The access path of the file is not rebuilt. The file's access path, if not valid, is rebuilt the next time 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 start processing immediately after the IPL has been completed. If a job tries to open the file while its access path is being rebuilt, a file open exception occurs.

***IPL:** The file has its access path rebuilt during the IPL operation. This ensures that the access path of the file is rebuilt before the first user program tries to use it; however, no jobs start running until after all files that specify RECOVER(*IPL) have their keyed access paths rebuilt.

FRCACPTH

Specifies, for files with keyed access paths only, whether access path changes are forced to auxiliary storage along with the associated records in the file. FRCACPTH(*YES) minimizes (but does not remove) the possibility that an abnormal job end can cause damage to the access path, which then requires it to be rebuilt.

Note:

For a join logical file, this parameter value applies to all join secondary files even if the join file is not a keyed file.

***SAME:** The value does not change.

***NO:** The access path and changed records are not forced to auxiliary storage whenever the access path is changed.

***YES:** The access path and changed records are forced to auxiliary storage whenever the access path is changed. If this value is specified, MAINT(*REBLD) is not valid.

FRCACPTH(*YES) slows the response time of the system if the access path is changed in an interactive job. If the access path is changed frequently, the general performance of the system is affected.

UNIT

This parameter is no longer supported. It exists solely for compatibility with releases earlier than Version 3 Release 6 Modification 0 of the AS/400 system. For information on using auxiliary storage pools (ASPs), refer to the Backup and Recovery topic in the Information Center.

You can specify the value *SAME, the value *ANY, or a value ranging from 1 through 255 on this parameter.

FMTSLR

Specifies the qualified name of a record format selector program that is called when the logical file member contains more than one logical record format. The user-written selector program is called when a record is inserted into the database file and a record format name is not included in the high-level-language program. The selector program receives the record as input, determines the record format used, and returns the record format name to the database. This program must do this function for every member in the logical file that has more than one record format, unless the high-level-language program itself specifies the record format name. More information on the use of format selector programs is in the Database Programming topic in the Information Center.

This parameter is not valid if the logical file has only one record format.

***SAME:** The value does not change.

***NONE:** There is no selector program for this logical file. The file cannot have more than one logical record format, or the high-level-language program itself must specify the record format name.

The name of the program can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

program-name: Specify the name of the format selector program that is called when a record is inserted into a member having more than one format. The selector program name can be optionally qualified by the name of the library where the program is stored.

If USRPRF(*OWNER) is specified in the create program command, the program that is created cannot be used as a format selector program.

FRCRATIO

Specifies the number of inserted, changed, or deleted records that are processed before they are forced to auxiliary (permanent) storage. More information on this parameter is in Commonly used parameters.

The force write ratio specified for a logical file is less than or equal to the smallest force write ratio of its based-on files. If a larger force write ratio is specified, it is ignored and a message is sent informing the user of the action.

If a physical file associated with this logical file is being journaled, a larger force write ratio or *NONE may be specified. More information on the Journal Management Facility is in the Journal management.

***SAME:** The value does not change.

***NONE:** There is no force write ratio; the system determines when the records are written in auxiliary storage.

number-of-records-before-force: Specify the number of new or changed records that are processed before they are explicitly forced into auxiliary storage.

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 those resources are not allocated within the specified wait time, an error message is sent to the program. More information is in Commonly used parameters.

Note:

An immediate allocation of the device by the device resource is required when an acquire operation is performed to the file.

***SAME:** The value does not change.

***IMMED:** The program does not wait; when the file is opened, an immediate allocation of the file resources is required.

***CLS:** The job default wait time is used as the wait time for the file resources being allocated.

number-of-seconds: Specify the number of seconds that the program waits for the file resources to be allocated to the job. Valid values range from 1 through 32767 seconds.

WAITRCD

Specifies the number of seconds that a program waits for a record to be updated or deleted, or for a record read in the commitment control environment with LCKLVL(*ALL) specified. More information on record locking is in the Database Programming topic in the Information Center. If the record is not allocated in the specified wait time, an error message is sent to the program.

***SAME:** The value does not change.

***IMMED:** The program does not wait; when a record is locked, an immediate allocation of the record is required.

***NOMAX:** The system maximum is used.

number-of-seconds: Specify the number of seconds that the program waits for the record to be allocated to the job. Valid values range from 1 through 32767 seconds.

SHARE

Specifies whether the open data path (ODP) for the logical file is shared with other programs in the routing step. When an ODP is shared, the programs accessing the file share facilities such as the file status and the buffer.

More information on shared database files is in the Database Programming topic in the Information Center.

***SAME:** The value does not change.

***NO:** The ODP created by the program with this attribute is not shared with other programs in the routing step. Every time a program opens the file with this attribute, a new ODP to the file is created and activated.

***YES:** The ODP created with this attribute is shared with each program in the routing step that also specifies SHARE(*YES) when it opens the file, provided the scope specified on the OPNSCOPE keyword for the subsequent open of the file is compatible with the scope of the original open.

Note:

When SHARE(*YES) is specified and control is passed to a program, a read operation in that program retrieves the next input record. A write operation produces the next output record.

LVLCHK

Specifies whether the record format level identifiers in the program are checked against those in the logical file when the file is opened. If so, the record format identifiers in the program must match those in the logical file. This value can be overridden by the Override with Database File (OVRDBF) command at run time.

***SAME:** The value does not change.

***YES:** The level identifiers of the record formats are checked when the file is opened. If the level identifiers do not match, an error message is sent to the program requesting the open operation, and the file is not opened.

***NO:** The level identifiers are not checked when the file is opened.

TEXT Specifies the text that briefly describes the logical file. More information is in Commonly used parameters.

***SAME:** The value does not change.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Examples for CHGLF**Example 1: Changing the Format Selector Program**

```
CHGLF FILE(QGPL/INV) FMTSLR(INVFMTS)
```

This command changes the logical file INV that is stored in the QGPL library, resulting in the new format selector program, INVFMTS, which is being used with the logical file. *LIBL is used to find the format selector program.

Example 2: Changing a File Located on the Remote System

```
CHGLF FILE(QGPL/DDMF) FMTSLR(INVFMTS)
SYSTEM(*RMT)
```

This command changes the format selector program for file INV located in the QGPL library on the remote system. Prior to specifying this command, this user had created a DDMF file by specifying the command CRTDDMF FILE(QGPL/DDMF) RMTFILE(QGPL/INV) RMTLOCNAME(AS400).

Error messages for CHGLF***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.

CHGLFM (Change Logical File Member) Command Description

CHGLFM Command syntax diagram

Purpose

The Change Logical File Member (CHGLFM) command changes the attributes of a logical file member.

Restrictions:

1. To change a logical member, the user must have object management or object alter authority for the logical file that contains the member, and execute authority for the file library, is required.
2. If a user is holding the file for exclusive use, the member cannot be changed. Users working at the same time may have the member open, but changes made to the member are not reflected in any open members. To make the changes effective, the changes in any open members, the user must first close the member (this must be a full close operation if the member is open SHARE(*YES)) and then open it again.

Required Parameter

FILE Specifies the qualified name of the logical file that contains the member that is changed.

The name of the logical file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

logical-file-name: Specify the name of the logical file.

Optional Parameters

MBR Specifies the name of the member, or the first member (*FIRST), that is changed.

***FIRST:** The first member in the database file is used.

logical-file-member-name: Specify the name of the logical file member that is changed.

SHARE

Specifies whether the open data path (ODP) for the logical file member is shared with other programs in the routing step. When an ODP is shared, the programs accessing the file share facilities such as the file status and the buffer.

More information on shared database files is in the Database Programming topic in the Information Center.

***SAME:** The value does not change.

***NO:** The ODP created by the program with this attribute is not shared with other programs in the routing step. Every time a program opens the file with this attribute, a new ODP to the file is created and activated.

***YES:** The ODP created with this attribute is shared with each program in the routing step that also specifies SHARE(*YES) when it opens the file.

Note:

When SHARE(*YES) is specified and control is passed to a program, a read operation in that program retrieves the next input record. A write operation produces the next output record.

TEXT Specifies the text that briefly describes the logical file member. More information is in Commonly used parameters.

***SAME:** The value does not change.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CHGLFM

```
CHGLFM FILE(*CURLIB/INV) MBR(FEB)
      TEXT('Logical file member for FEB')
```

The command changes the text for the member named FEB in the logical file INV that is found in the specified current library.

Error messages for CHGLFM***ESCAPE Messages****CPF3288**

Member &3 file &1 in &2 not changed.



CHGMGDSYSA (Change Managed System Attributes) Command Description

Note: To use this command, you must have the 5722-MG1 (Managed System Services for iSeries) licensed program installed.

CHGMGDSYSA Command syntax diagram

Purpose

The Change Managed System Attributes (CHGMGDSYSA) command updates the system-wide configuration attributes that are unique to the Managed System Services licensed program.

These attributes enable the user to control which activities are accepted by the managed system and under which user profile the activity is run.

Note: If you change the change control server attributes while the managed system functions are active, you must end the program (ENDMGDSYS command) and then start the program again (STRMGDSYS command) before the changes take effect.

Restrictions:

1. The distribution security program, the default user profile, and the remote command security program must exist when the command is processed.
2. You must have *ALLOBJ special authority to change the security program, the default user profile, and the remote command security program.

Optional Parameters

ACCRCVCRQA

Specifies whether change request activities are to be accepted for processing.

***SAME:** The value does not change.

***YES:** Change request activities received from remote systems are accepted.

***NO:** Change request activities are not accepted.

SECPGM

Specifies the distribution security program to be used. The specified program is run when a request is received to determine which requests are accepted.

***SAME:** The value does not change.

***DFT:** The default distribution security program is used. This distribution security program allows PTFs and products to be received but not applied or installed on the system. The program does not allow other objects to be manipulated.

***NONE:** No distribution security program is specified. All activities are accepted when ACCRCVACT(*YES) is specified. The default user profile is used to process the activity.

The name of the object can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

program-name: Specify the name of the distribution security program.

DFTUSRPRF

Specify the default user profile used for the change request activity if no distribution security program has been specified. The user profiles QSECOFR, QSPL, QDOC, QDBSHR, QRJE, QSYS, QLPAUTO, QLPINSTALL, QTSTRQS, and QDFTOWN are not valid entries for this parameter.

***SAME:** The value does not change.

***NONE:** No default user profile is specified for processing activities. A distribution security program must be specified and must indicate the name of the user profile to use if activities are to be processed.

***REQUESTER** Activities will be processed using the same user profile that initiated the request at the central site system. If the originating user profile does not exist in this managed system, the activities are not accepted.

user-profile-name: Specify the name of the user profile object to be used.

INACTIV

Specifies the number of minutes jobs should wait to receive a remote command request or a change request activity. If no activity is received during the specified time period, the job processing the activity is ended. A new job is started when a new activity is received.

***SAME:** The value does not change.

***NONE:** No time-out value is specified.

time-out interval Specify the number of minutes for an inactive job to wait for additional requests. Valid values range from 0 through 999.

SN DINTRSP

Specifies whether intermediate responses are sent to the central site system. Intermediate responses may require activation of a switched communication link.

***SAME:** The value does not change.

***YES:** Intermediate responses are sent.

***NO:** Intermediate responses are not sent.

PFXTOKEN

Specifies the set of tokens which, when found at the beginning of a global name, indicate a standard OS/400 object name can be found in the global name. To use standard OS/400 object names for distribution, a consistent set of tokens must be used on all systems in the network. Token names must be unique to ensure they are not used in global names being added to the distribution catalog. You can enter multiple values for this parameter.

***SAME:** The value does not change.

***NONE:** No prefix tokens are used. All objects to be changed are identified in the catalog.

prefix-token-value: Specifies a set of tokens which indicate a standard OS/400 name can be found in the global name. The distribution catalog is not used for objects with global names starting with these prefix tokens. One to four tokens may be specified with a total length not to exceed 20 characters. The first token is recommended to be an enterprise ID or network ID.

RMTSECPGM

Specifies the remote command security program to be used. The specified program is run when a request to run a command is received from a central site system. This program determines if the request is accepted and under which user profile it should be run.

***SAME:** The value does not change.

***DFT:** The default remote command security program is used. This security program allows all commands to be received and run on the system.

The name of the object can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

program-name: Specify the name of the security program.

MAXDTA

Specifies the limitation in Kbytes for the maximum amount of data that can be returned to the central site system when a remote command request is processed.

***SAME:** The value does not change.

***NOMAX:** No limitation for the amount of returned data.

number-of-Kbytes Specify the number of Kbytes for the amount of data that can be returned to the central site system when a remote command request is processed. Valid values range from 1 through 99999.

DLTSPLF

Specifies whether the spooled file is deleted after a remote command request is completed.

***SAME:** The value does not change.

***YES:** The spooled file is deleted.

***NO:** The spooled file is not deleted.

***SUCCESS:** The spooled file is deleted only when the request completes successfully. The request is successful if no escape messages are received while running the command.

KEY Specifies the key that is used for encoding or decoding the remote command request. The values must be the same for the system that sends the remote command and for the system that receives the remote command.

***SAME:** The value does not change.

***NONE:** No encoding or decoding key is used.

key: Specify a 64-byte character string as a character string or hexadecimal string.

Examples for CHGMGDSYSA

Example 1: Configuring the Central Site System

```
CHGMGDSYSA  ACCRCVACT(*YES)  SECPGM(*NONE)
             DFTUSRPRF(QUSER)  INACTITV(30)
             SNDINTRSP(*YES)  PFXTOKEN(ABCCO AUTOMAP)
```

This command configures the central site system to support change request activities and run them under the QUSER user profile. Intermediate responses are sent. Global names beginning with ABCCO AUTOMAP are reserved for sending objects using standard OS/400 object names. If a request is not received for 30 minutes, any jobs waiting to process requests are ended.

Example 2: Configuring the Remote Command Function

```
CHGMGDSYSA  RMTSECPGM(*DFT)  DLTSPLF(*SUCCESS)
             MAXDTA(*NOMAX)  KEY(*NONE)
```

This command configures the remote command function to use the default remote command security program, deletes spooled files when the request is run successfully, and specifies no limitation for the amount of returned data.

Error messages for CHGMGDSYSA

*ESCAPE Messages

MSS0413

Default user profile &1 not found.

MSS0414

Program &1 in library &2 not found.

MSS0415

Managed system attributes not found or damaged.

MSS0417

Global name prefix token length &1 too long.

MSS0418

*NONE not valid for both DFTUSRPRF and SECPGM.

MSS0419

Global name prefix token &1 not valid.

MSS041A

*ALLOBJ special authority required.



CHGMGRSRVA (Change Manager Services Attributes) Command Description

Note: To use this command, you must have the 5722-MG1 (Managed System Services for iSeries) licensed program installed.

CHGMGRSRVA Command syntax diagram

Purpose

The Change Manager Services Attributes (CHGMGRSRVA) command enables you to control the cleanup time interval, the maximum time that command requests remain active, and the maximum time that command requests are kept in the remote command history file.

Optional Parameter

CLNUP

Specifies how often active remote commands are cleaned up, how long remote commands are allowed to remain active, and how long completed commands are kept in the history database file. Cleanup will always take place whenever the remote command manager service is started. Cleanup is done to remove the following from the system:

- Outstanding active command request correlation information.
- Command request information in the history log.

Outstanding active command requests that are cleaned up will be placed in the history log.

Element 1: Cleanup Interval

***SAME:** The current value is not changed.

***STARTUP:** Cleanup is done only when the remote command manager service is started.

cleanup-interval: Specifies the interval of time in hours that cleanup should take place. For example, if 24 is specified, cleanup will be started every 24 hours. Valid values range from 0 to 999.

Element 2: Maximum Active Time

***SAME:** The current value is not changed.

max-active-time: Specifies the number of hours that an active remote command request is allowed to remain active on the remote system before it is cleaned up. When cleanup is started, all active requests that have been active longer than the specified time are cleaned up. Valid values range from 1 to 999.

Element 3: Maximum History Days

***SAME:** The current value is not changed.

***NOMAX:** Specifies the history log is not cleaned up by the remote command manager. The user is responsible for deleting the entries within the history log.

max-history-days: Specify the number of days that a completed remote command request is allowed to remain in the history log database file before it is cleaned up. When cleanup is started, all completed requests stored in the history database file for longer than the specified time are cleaned up. Valid values range from 0 to 999. **Note:** If the database file runs out of space, completed requests will no longer be logged.

Example for CHGMGRSRVA

```
CHGMGRSRVA  CLNUP(*STARTUP 48 7)
```

This command configures the remote command service to do cleanup processing when the service is started. Commands should remain active for 48 hours and logged in the history file for 7 days.

Error messages for CHGMGRSRVA

*ESCAPE Messages

MSS0415

Managed system attributes not found or damaged.

MSS041A

*ALLOBJ special authority required.



CHGMEDBRM (Change Media using BRM) Command Description

Note: To use this command, you must have the 5722-BR1 (Backup Recovery and Media Services for iSeries) licensed program installed. For detailed information on the parameters of this command, see the online help.

CHGMEDBRM Command syntax diagram

Purpose

The Change Media using BRM (CHGMEDBRM) command changes an attribute or several attributes of a volume in the BRMS media inventory.

Note: Consideration should be given to changing the authority to the CHGMEDBRM command from PUBLIC(*CHANGE) to a more restrictive authority to assure that changes are not made to media without proper authorization.

Example for CHGMEDBRM

Example 1: Changing a Volume in BRMS

```
CHGMEDBRM VOL(T00001) MEDCLS(QIC1000)  
  EXPDATE(*PERM) MOVDATE('2/12/99')
```

In this example media information has been changed for volume T00001. The media class has been changed to QIC1000, the expiration date has been changed to *PERM and the last moved date has been changed to February 12, 1999.

Error messages for CHGMEDBRM

None

CHGMNU (Change Menu) Command Description

CHGMNU Command syntax diagram

Purpose

The Change Menu (CHGMNU) command can be used to change the following:

- Command Line
- Display function keys
- Current library and product library of a menu
- Display file name and library of a free format menu
- Message file name and library of a free format menu
- Program name and library of a program menu
- Text description of a menu

Restriction: The user must have *OBJOPR and *OBJMGT authority for the menu object and *USE authority for the library.

Required Parameter

MENU Specifies the qualified name of the menu being changed.

The name of the menu can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

menu-name: Specify the name of the menu being changed.

Optional Parameters

DSPF Specifies the qualified name of the display file used for the menu. The display file must include one record format with the same name as the display file itself, called the menu format. Help formats may also be included in the file.

Help formats follow the naming convention **#Hxyy**, where xx is the first menu option and yy is the last menu option to which the help format applies. (For example, #H0306 would apply to menu options 3 through 6.) **#H0000** designates the general help for the menu.

The display file must have a separate indicator area (INDARA keyword) and must not contain subfile descriptions.

This parameter can be specified only if the menu was created with TYPE(*DSPF) specified on the Create Menu (CRTMNU) command.

***SAME:** The display file name and library do not change.

The name of the display file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

display-file-name: Specify the name of the display file to use in the change.

MSGF Specifies the qualified name of the message file that contains the commands to run when a menu option is selected. The MSGID's of the messages in this file are of the form USRxxxx, where xxxx is the number of the menu option that is typed on the command line.

This parameter can be specified only if the menu was created with TYPE(*DSPF) specified on the CRTMNU command.

***SAME:** The message file name and library do not change.

The name of the message file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

message-file-name: Specify the name of the message file to use.

CMDLIN

Specifies that the user can select a long command line, a short command line, or no command (an option line).

This parameter can be specified only if the menu was created with TYPE(*DSPF) specified on the CRTMNU command.

***SAME:** The value does not change.

***LONG:** A 153 byte long command line is used.

***SHORT:** A 73 byte long command line is used.

***NONE:** No command line is used. A 4-byte option line is used.

DSPKEY

Specifies whether the function key legend should appear at the bottom of the menu when it is shown.

This parameter can be specified only if the menu was created with TYPE(*DSPF) specified on the CRTMNU command.

***SAME:** The value does not change.

***NO:** The function key legend is not shown at the bottom of the display.

***YES:** The function key legend is shown at the bottom of the display.

PGM Specifies the qualified name of the program to call when the menu is run.

This parameter can be specified only if the menu was created with TYPE(*PGM) specified on the CRTMENU command.

***SAME:** The program and library do not change.

The name of the program can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

program-name: Specify the name of the program to call.

CURLIB

Specifies the name of the library being used as the current library for jobs initiated by this user profile.

***SAME:** The value does not change.

***NOCHG:** The current library does not change for the processing of this command.

***MNULIB:** The current library is changed to the library containing the menu while the menu is shown.

***CRTDFT:** There is no current library while the menu is shown. The current library that was active before the menu was shown (if any) is restored after exiting the menu.

library-name: Specify the name of the library used as the current library when the menu is shown.

PRDLIB

Specifies the name of the library to use as the product library while the menu is shown.

Note:

The product library for a command or menu remains in the library list while a command or menu is active, unless another command or menu changes the product library. When a command or menu that changed the product library ends, the product library is restored to what it was when the command or library started.

***SAME:** The value does not change.

***NOCHG:** The product library is not changed when the menu is shown.

***NONE:** The product library entry in the library list is not used while the menu is shown.

library-name: Specify the name of the library to use as the product library while the menu is shown.

Note:

After exiting the menu, the product library is restored to the value it had before the menu was shown.

TEXT Specifies the text that briefly describes the menu. More information is in Commonly used parameters.

***SAME:** The value does not change.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CHGMNU

```
CHGMNU  MENU(ARLIB/ARPER)  PGM(ARLIB/PERSLIST)
```

This command changes the program that is called when a menu named ARPERS, located in library ARLIB, is run. The menu now calls a program called PERSLIST, also located in library ARLIB.

Note that the menu (ARPERS) must have been created with TYPE(*PGM) specified on the Create Menu (CRTMNU) command for the PGM parameter to be specified here.

Error messages for CHGMNU

***ESCAPE Messages**

CPF6ACD

Menu &1 in &2 is wrong version for system.

CPF6AC2

Menu &1 in library &2 not changed.

CHGMSGD (Change Message Description) Command Description

CHGMSGD Command syntax diagram

Purpose

The Change Message Description (CHGMSGD) command changes an existing message description stored in a message file and stores those changes in that message file for later use. The message description remains in the message file until the file is deleted, until the Remove Message Description (RMVMSGD) command is used to remove the message from the file, or until the message is changed again by using the CHGMSGD command.

Note:

If the message and its second-level text exceeds 512 characters, it will not fit in the prompt field. In this case, enter the command on the Command Entry panel or in a CL program.

Caution: Specifying the alert option in the range CPx7B00 to CPx7BFF (messages sent from the alert process) may cause unpredictable results.

Required Parameters

MSGID

Specifies the message identifier of the message being changed. The message identifier must be seven characters long and in the format, pppnnnn.

The first three characters (ppp) must be a code consisting of one alphabetic character followed by two alphanumeric (alphabetic or decimal) characters; the last four characters (nnnn) may consist of the decimal numbers 0 through 9 and the characters A through F.

MSGF Specifies the qualified name of the message file where the message being changed is stored. This command ignores any message file overrides in effect for the job.

The name of the message file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

message-file-name: Specify the name of the message file to use.

Optional Parameters

MSG Specifies the first-level message text of the message being changed.

***SAME:** The value does not change.

'message-text': Specify the message text that is initially displayed, printed, or sent to a program or log. Up to maximum of 132 characters (enclosed in apostrophes) can be specified, but the work station display size may cause additional limitations.

Note: If the message text is changed, the entire original message text is replaced with the specified change.

One or more substitution variables can be embedded in the message text string to indicate positional replacement fields. These replacement fields allow variable data to be substituted in the message by the program before the message is sent. The rules below must be followed when variables are used.

- Variables must be specified in the form &n, where n is a 1- or 2-digit (1-99) number identifying the data field that is substituted.
- Variables can be preceded by any alphanumeric character (including blanks). For example, the variables shown in the message below are valid.

Command&34&72 &2 &99help

- Variables can be followed by any non-numeric character (the character following the variable cannot be digits 0-9). For example, the variables shown below are not valid.

Command&345 &244 &999help

- The variables can be enclosed in apostrophes if only the variables themselves make up the message. For example, to show a two-part decimal value, the message '&1.&2' can be specified.)
- Variables do not have to be in ascending or descending sequence.

Note: The data fields are described positionally in the FMT parameter and are specified positionally in the MSGDTA parameter of the Send Program Message (SNDPGMMMSG) command and the Send User Message (SNDUSRMSG) command. More details on substituting data fields in

message text are in the CL Programming  book.

Double-Byte Character Set Considerations

When entering double-byte characters on this parameter, several combinations of characters may cause errors to occur on this command. If the double-byte characters contain the string, X'50Fn' (where n is a 1-digit number, 0-9), error messages CPF2424 or CPF2431 may result. Examples are: X'50F0', X'50F4', X'50F9'.

Coded Character Set Identifier (CCSID) Considerations

The text supplied on the MSG parameter is assumed to be in the CCSID of the job calling this command unless the CCSID parameter is coded. If the CCSID parameter is coded, the text is assumed to be in the CCSID specified. For more information about the message handler and its use of CCSIDs, see the Globalization topic in the Information Center.

SECLVL

Specifies second-level message text being changed. Second-level message text can also be written to the job log, if *SECLVL is specified on the LOG parameter of the job commands.

***SAME:** The value does not change.

***NONE:** There is to be no second-level message text for this message description. Second-level message text in the original message description is removed.

'second-level-message': Specify the second-level message text. Up to 3000 characters (enclosed in apostrophes) can be specified, but display limitations must be considered. One or more substitution variables can be embedded in the second-level message text, as described in the MSG parameter. If second-level message text is changed, the entire second-level message text is replaced with the specified change.

Second-level message text can be formatted for the work station using three format control characters:

- **&N:** Forces the text to a new line (column 2). If the text is longer than one line, the next lines are indented to column 4 until the end of the text or until another format control character is found.
- **&P:** Forces the text to a new line, indented to column 6. If the text is longer than one line, the next lines start in column 4 until the end of the text or until another format control character is found.
- **&B:** Forces the text to a new line, starting in column 4. If the text is longer than one line, the next lines are indented to column 6 until the end of the text or until another format control character is found.

Double-Byte Character Set Considerations

When entering double-byte characters on this parameter, several combinations of characters may cause errors to occur on this command. If the double-byte characters contain the string, X'50Fn' (where n is a 1-digit number, 0-9), error messages CPF2424 or CPF2431 may result. Examples are: X'50F0', X'50F4', X'50F9'.

Coded Character Set Identifier (CCSID) Considerations

The text supplied on the SECLVL parameter is assumed to be in the CCSID of the job calling this command unless the CCSID parameter is coded. If the CCSID parameter is coded, the text is assumed to be in the CCSID specified. For more information about the message handler and its use of CCSIDs, see the Globalization topic in the Information Center.

SEV

Specifies the severity code of the message. The severity code indicates the severity level of the condition that causes the message to be sent. More information on message severity is in Commonly used parameters.

***SAME:** The value does not change.

severity-code: Specify a value, 00 through 99, for the severity level of this message. The assigned code for the message should correspond to the predefined IBM severity codes. Any 2-digit value can be specified, even if no severity code (predefined or user-defined) has been defined for it.

FMT Specifies the formats of from 1 through 99 message data fields being changed. Each field is described in this parameter by a list of attributes. All 99 of the message data fields can be used as substitution values in the first-level and second-level messages defined in this message description. They can also be specified in the DMPLST parameter of this command. When specified in the MSGDTA parameter of the Send Program Message (SNDPGMMSG) or Send User Message (SNDUSRMSG) commands, the data fields must be concatenated to form one character string of no more than 512 characters and must match the format and sequence specified here.

Note: If any of the previously defined formats are being changed, all existing formats must be included in the FMT parameter. For example, if seven formats had been previously defined and now the third of the seven formats is to be changed from *CHAR 24 to *HEX 8, all seven of the formats (including their types and lengths) must be included in the FMT parameter.

***SAME:** The value does not change.

***NONE:** Either no format is being described for the message fields, or the original formats are removed. If *NONE is specified, no references can be made to message data fields in the MSG, SECLVL, or DMPLST parameters.

Note: If FMT was originally specified, but now FMT(*NONE) is specified, all references to those formats must be removed from the first-level and second-level messages and from the dump list.

type (length[decimal-positions]): Specify a list of attributes that define each message data field (up to 99 fields) in this message description. These attributes specify the type of data in the field, the total length of the field, and, optionally, the number of decimal digits to the right of the decimal point. Certain data types do not require a length field. Boundary alignment requirements must be considered (for example, pointers are always aligned on 16-byte boundaries). Fields &1 through &99 can be defined in and can appear in, the message text. Fields beyond that number can appear only in the dump list.

Type of Message Data:

The first value specifies the type of data the substitution field contains and how the data is formatted in the message text. The contents of the second and third values vary depending on the message type specified. One of the following types can be specified for each field described by this parameter:

***QTDCHAR:** A character string formatted (by the Operating System/400) with enclosing apostrophes (for example, 'Monday, the 1st') is specified.

***CHAR:** A character string formatted without enclosing apostrophes is used. An alphanumeric string is used, for example, to specify a name (BOB). Trailing blanks are truncated.

***HEX:** A string of bytes formatted as a hexadecimal value (for example, X'C0F4') is specified.

***SPP:** A 16-byte space pointer to data in a space object is specified. When referred to in the DMPLST parameter, the data in the space object (from the offset indicated by the pointer) for the length specified is dumped. *SPP is not valid as a replacement field in message text.

***DEC:** A packed decimal number (for example, X'058C') that is formatted in the message as a signed decimal value with a decimal point (for example, 58.) is specified. Values for length (required) and decimal positions (optional) specified *DEC indicate the number of decimal digits and the number of digits to the right of the decimal point. If the number of decimal positions is not specified, zero is assumed.

***BIN:** A binary value that is 2, 4, or 8 bytes long (for example, B'0000 0000 0011 1010'), which is formatted in the message as a signed decimal value (for example, 58), can be specified.

***UBIN:** A binary value that is 2, 4, or 8 bytes long (for example, B'0000 0000 0011 1010'), which is formatted in the message as an unsigned decimal value (for example, 58), can be specified.

***CCHAR:** A character string that can be converted. If data of this type is sent to a message queue that has a CCSID tag other than 65535 or 65534, the data is converted from the CCSID specified on the send function to the CCSID of the message queue. Conversions can also occur on data of this type when the data is obtained from the message queue using a receive or display function. See the Message Handler section of the Globalization topic in the Information Center for more details on CCSID conversions.

The following formats are valid only in IBM-provided message descriptions and should not be used for other messages.

***DTS:** An 8-byte field that contains a system-date time-stamp is specified. The date in the output message is in the format specified by the system values QDATFMT and QDATSEP. The time is formatted as hh:mm:ss.

***SYP:** A 16-byte system pointer to a system object is specified. When referred to in message text, the simple name of the system object is formatted as described in the name type, *CHAR. When referred to by the DMPLST parameter, the object itself is dumped.

***ITV:** An 8-byte field that contains a time interval is specified. The time is formatted in the output message in the form of seconds.

Length of Message Data:

After the type specification, a second value (length) can be specified to indicate the number of characters or digits that are passed in the message data. How the second value is used depends on the type specified in the first value.

- If a length is not specified for *QTDCHAR, *CHAR, *HEX, or *SPP, then *VARY is assumed for the length. If *VARY is assumed, the message data field passed by the SNDPGMMSG or SNDUSRMSG commands must be preceded by a 2-byte or 4-byte binary field that indicates the actual number of bytes of data being passed. However, when *SPP is specified, the first bytes pointed to by the space pointer contain the field length. Therefore, the 2- or 4-byte field must precede the data pointed to by the space pointer, and must not precede the space pointer that is passed as part of the message data.
- If the type *DEC is specified, the total number of decimal digits (including the fraction) must be specified as the second value; the number of digits in the fraction can be specified optionally as the third value.
- If the type *BIN or *UBIN is specified, the message data field can be only 2, 4 or 8 bytes long. The default is 2 bytes.

- If the type *CCHAR is specified, the message data length field can be only *VARY. A variable length field is required because as the data in this field gets converted to different coded character set identifiers (CCSIDs), its length may change.

Length Field Size/Decimal Positions:

The third value is used in one of two ways, depending on the type specified in the first value: (1) if *QTDCHAR, *CHAR, *CCHAR, *HEX, or *SPP is specified, and if *VARY is specified or assumed for the second value, the third value is used with *VARY to indicate the size of the length field actually passed. The third value can be either 2 or 4, which is the number of bytes specifying the length (in binary) of the passed value; (2) if *DEC is specified, the third value indicates the number of decimal positions in the decimal value. If not specified for a decimal substitution value, the default is 0 decimal positions.

Note: If an object has been damaged or deleted, the substitution variable, when displayed, is not replaced by the name of the object. Instead, the object appears as &n (where n = number).

Reply Validity Specification Parameters

If the message is sent as an inquiry message or as a notify message (specified by MSGTYPE(*INQ) or MSGTYPE(NOTIFY) on the SNDPGMMSG command) and a reply is expected, seven parameters can be used to specify some requirements that validate the reply received. The seven validity-checking parameters are: TYPE, LEN, VALUES, SPCVAL, RANGE, REL, and DFT.

These parameters are not necessary for a message to allow a reply, but they can be used to define valid replies made to the message. The VALUES, RANGE, and REL are mutually exclusive; only one of them can be specified in this command.

Note: If the reply type or length is changed, and if VALUES, RANGE, or REL had been previously specified, the existing VALUES, RANGE, REL, SPCVAL and DFT must also be changed to be compatible with the new reply type and/or length. If the reply type is changed, LEN must be changed also. If the reply type is changed to *NONE, then LEN and (if they were coded previously) VALUES, SPCVAL, RANGE, REL, and DFT must be coded as *NONE.

TYPE Specifies, only if the message is sent as an inquiry or notify message, the type of valid reply to this message.

***SAME:** The value does not change.

***NONE:** Reply message validity is not checked. Existing reply message type specifications are removed. LEN(*NONE) also must be specified.

***CHAR:** Any character string is a valid reply message type specification. If it is a quoted character string, the apostrophes are passed as part of the character string.

***DEC:** Only a decimal number is a valid reply message type.

***ALPHA:** Only an alphabetic (A through Z, \$, #, and @) character string is a valid reply message type specification. Blanks are not allowed.

***NAME:** Only a simple name is a valid reply message type specification. The name does not have to be a OS/400 system object name, but must start with an alphabetic character; the remaining characters must be alphanumeric. If all reply characters are alphabetic (A-Z), the reply is converted to uppercase characters.

LEN Specifies, only if the message is sent as an inquiry or notify message, the maximum reply length.

***SAME:** The value does not change.

***NONE:** The validity of the reply message is not checked. The existing LEN specification, if any, is removed and TYPE(*NONE) must also be specified.

***TYPE:** The maximum length is determined by the type of reply specified on the TYPE parameter. The maximum length for each type of reply is as follows:

- Up to 132 characters can be specified for types *CHAR and *ALPHA. If additional validity checking is being performed (for example, if VALUES, RANGE, REL, or SPCVAL are specified), the maximum length allowed for *CHAR and *ALPHA is 32 characters.
- Up to 15 digits can be specified for *DEC, of which up to 9 digits can be to the right of the decimal point.
- Up to 10 alphanumeric characters can be specified for *NAME.

length (decimal-positions): Specify the maximum reply length. The length specified here cannot exceed the maximums shown above. If the reply type is a decimal value, the number of decimal positions can be optionally specified; if a decimal is not specified, zero decimal positions are assumed.

VALUES

Specifies, only if the message is sent as an inquiry or notify message, a list of values, one of which is received as a valid reply. No more than 20 values can be specified in the list. Each value in the list must meet the requirements specified for message replies by the TYPE and LEN parameters. If the VALUES parameter is specified, the RANGE and REL parameters cannot be specified.

***SAME:** The value does not change.

***NONE:** No list of reply values is specified. The reply can have any value that is consistent with the other validity-checking parameters. Any existing VALUES are removed.

value: Specify up to 20 values. To be valid, these must match a reply value sent in response to the message defined in this message description. The maximum length of each value is 32 characters.

SPCVAL

Specifies, only if the message is sent as an inquiry or notify message, a list of up to 20 sets of special values of which one set (the from-value matched by the sent reply) is used as the reply. These values are special in that they may not meet all of the validity checking specifications given in the other reply-oriented parameters. The reply message sent is compared to the from-value in each set, if a match is found, and a to-value was specified in that set, the to-value is sent as the reply. If no to-value was specified, the from-value is sent as the reply. If the reply sent does not match any from-value, then the reply is validity-checked by the specifications in the other reply-oriented parameters.

***SAME:** The value does not change.

***NONE:** No special values are specified for the replies to this message. Any existing special values are removed from the message description.

from-value (to-value): Specify up to 20 sets of values to determine the reply sent to the sender of the message. Each set must have a from-value with which the reply is compared, and an optional to-value to be sent as the reply (if its from-value matches the reply).

RANGE

Specifies, only if the message is sent as an inquiry or notify message, the lower and upper value limits for valid replies to this message. These values must meet the requirements specified for replies by the TYPE and LEN parameters, and both values must be of the same type. If both values are not of the same length, the shorter value is padded on the right with blanks. For type *CHAR and *ALPHA replies, the reply is padded on the right with blanks or truncated on the right (to the length of the specified values) before the value range is validity-checked. If RANGE is specified, the VALUES and REL parameters cannot be specified.

***SAME:** The value does not change.

***NONE:** No range values are specified for the replies to this message. Any existing range values are removed from the message description.

lower-value upper-value: Specify the lower and upper limit values for valid replies to this message.

REL

Specifies, only if the message is sent as an inquiry or notify message, the relationship that must exist for a reply to be valid. The value specified must meet the requirements specified for replies by the TYPE and LEN parameters. For replies of the types *CHAR and *ALPHA, the reply is padded on the right with blanks or truncated on the right to match the length of the value specified, before the system performs the test on the reply value that is sent.

***SAME:** The value does not change.

***NONE:** No relationship is specified for replies to this message. Existing relationship specifications are removed from the message description.

operator-value: Specify one of the relational operators and the value against which the reply message is checked. If the reply is valid in the relational test, it is sent to the sender of the message. The relational operators that can be entered are:

- *LT Less than
- *LE Less than or equal to
- *GT Greater than
- *GE Greater than or equal to
- *EQ Equal to
- *NL Not less than
- *NG Not greater than
- *NE Not equal to

Note:

If VALUES, RANGE, or REL had been specified on the existing message, and they are being changed to another type of reply validity-checking, then the existing check must be removed by specifying *NONE. For example, if VALUES had been specified originally, but now the user wants to specify a RANGE, then VALUES(*NONE) and RANGE(*lower-value upper-value*) must be specified in the CHGMSGD command.

DFT

Specifies, only if the message is sent as an inquiry or notify message, the default reply (enclosed in apostrophes, if it contains special characters) used when the receiver of the message has indicated that all messages to him or her are to use default replies, or when a message is deleted from a message queue and no reply was specified. The default reply can also be used to answer unmonitored notify messages. The default reply must meet the requirements specified for replies by the validity-checking parameters.

***SAME:** The value does not change.

***NONE:** No default reply is specified. Existing default replies are removed.

'default-reply': Specify the reply, enclosed in apostrophes if it contains special characters, to use as the default reply.

DFTPGM

Specifies the qualified name of the default program (if any) that takes default action when this message is sent as an escape message to a program that is not monitoring for it. This parameter is ignored if the message is not sent as an escape message. If it is sent as an escape message, the following parameters are passed to the default program:

- Program message queue name (10 characters). The name of the program message queue to which the message was sent. This is the same name as that of the program that did not monitor for the message.
- Message reference key (4 characters). The message reference key of the escape message on the program message queue.

***SAME:** The value does not change.

***NONE:** No default program is specified for this message. Any existing default program is removed from the message description.

The name of the program can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.


default-program-name: Specify the name of the default program that is called when an escape message is sent.

DMPLST

Specifies the data that is dumped when this message is sent as an escape message to a program that is not monitoring for it. This parameter can specify that data related to the job be dumped, that data from message data fields be dumped, or that a combination of these be dumped. When data from message data fields is dumped, this parameter specifies one or more numbers that positionally identify the data fields being dumped.

The system objects indicated by system pointers are dumped. The data in a space object, indicated by a space pointer, is dumped starting from the offset indicated by the space pointer for the length indicated in the field description. The standard job dump can also be requested.

Notes:

1. If any of these values are specified for DMPLST, *JOB is assumed to be part of the values. For example, DMPLST (1 2 *JOBDMPL) gives the same result as DMPLST(*JOB 1 2 *JOBDMPL).
2. Any value specified for the DMPLST parameter may be overridden by the QSRVDMP system value. More information is in the chapter on system values in the Work Management  book.

3. The program receiving the unmonitored message must have a name starting with 'Q' or the message severity must be 50 or higher.
4. The user of the job in which the dump is specified must be authorized to the dump command requested on this parameter.

***SAME:** The value does not change.

***JOB:** This value has the same effect as specifying JOB(*) and OUTPUT(*PRINT) on the Display Job (DSPJOB) command. See the DSPJOB command description for more information.

***JOBDMPI:** The data areas of the job are dumped as specified by the Dump Job (DMPJOB) command. *JOBDMPI can be specified either by itself, with *JOB, with *JOBINT, or with a list of message data field numbers.


***JOBINT:** The internal machine data structures related to the job processing are dumped to the machine error log as specified by the DMPJOBINT command. *JOBINT can be specified either by itself, with *JOBDMPI, with *JOB, or with a list of message data field numbers.

message-data-field-number: Specify the numbers of the message data fields that identify the data dumped when this escape message is sent but not monitored. As many as 99 data field numbers can be specified in the list. In addition, the list can contain the values *JOB and *JOBINT.

Single Value

***NONE:** There is no dump list for this message. Any existing dump list is removed from the message description.

ALROPT

Specifies the alert option associated with messages sent to the QHST log and the system operator message queue. More information is in the Alerts Support  book.

***SAME:** The value does not change.

***NO:** No alert is sent.

Element 1: When an Alert is Sent

***IMMED:** An alert is sent immediately, simultaneously sending the message to QHST.

***UNATTEND:** An alert is sent immediately only when the system is running in the unattended mode.

The system is considered to be unattended when the Alert Status (ALRSTS) network attribute is set to *UNATTEND.

***DEFER:** The alert is sent after local problem analysis.

*DEFER should be specified only for messages against which problem analysis can be run. An alert is sent at the first exit from problem analysis for the problem referred to by the message.

All alerts set to *DEFER are treated as *IMMED if:

- The system is running in the unattended mode
- The problem cannot be resolved through problem analysis
- An error log ID is not available for a problem that might be resolved by using problem analysis
- The LOGPRB parameter for the message is set to *NO

Element 2: Message Data Field Format Number

***NONE:** No message data field format number is passed with the alert identifier.

format-number: Specify the message data field format number that is passed with the alert identifier.

LOGPRB

Specifies, for IBM-supplied messages, whether an entry is put into the problem log. If there is an error log ID for the message and *YES is specified for this parameter, the user can press the F14 key from the system operator message queue display (Display Messages) to call for problem analysis.

***SAME:** The value does not change.

***NO:** The entry is not put in the problem log.

***YES:** The entry is put in the problem log if there is an error log ID associated with the message.

CCSID

Specifies the coded character set identifier (CCSID) that the text supplied on the MSG and SECLVL parameters is in.

If both the MSG and SECLVL parameters are not coded, the value supplied on the CCSID parameter is used to change the CCSID tag associated with the message description. No text conversion will occur in this case. Use the CCSID parameter in this way to correct a message description that has an incorrect CCSID tag.

If either the MSG and/or the SECLVL parameters are coded along with the CCSID parameter, the text supplied on the MSG or SECLVL parameters is assumed to be in the CCSID specified. If only one of the MSG or SECLVL parameters is coded, but not both, any existing text associated with the parameter that is not coded will be converted to the specified CCSID to ensure that all text is coded using the same CCSID.

If the message file is anything other than 65535 or 65534, the text is converted from the CCSID specified to the CCSID of the message file. Otherwise, the CCSID specified is saved with the MSG description in the event a conversion is needed during a retrieve or display type function.

If the CCSID specified does not match the character encoding of the message description, unpredictable results may occur.

To use the CCSID associated with the message description, the CCSID associated with the message file must be 65534. See the CHGMSGF command for details on how to change the CCSID associated with the message file.

The CCSID only applies to the first level message text and the second level message text of the message description.

***JOB:** If the MSG and SECLVL parameters are specified, the text supplied in these parameters is assumed to be in the CCSID specified. If the MSG and SECLVL parameters are not coded, the CCSID of the message description is not changed.

***SAME:** The CCSID tag of the message description is not changed. If the MSG or SECLVL parameter is specified, the text is considered to be in the same CCSID as the text it is replacing.

***HEX:** The CCSID tag of the message description is changed to the special CCSID value of 65535 which means this message description is not to be converted when used.

coded-character-set-identifier: Specify the CCSID you want the text to be considered in. Valid values range from 1 through 65535. For a list of valid CCSID values, see the Globalization topic in the Information Center. Only CCSIDs that a job can be changed to are accepted.

If the MSG and SECLVL parameters are coded, the text supplied in these parameters is considered to be in the CCSID specified. For more information about the message handler and its use of CCSIDs, see the Globalization topic in the Information Center.

Examples for CHGMSGD

Example 1: Changing the First-Level Message and Severity

```
CHGMSGD  MSGID(UIN0115)  MSGF(INV)
MSG('Enter your name') SEV(55)
```

This command changes the first-level message and the severity of message UIN0115 stored in the message file INV. The rest of the message description remains as originally specified in the ADDMSGD command.

Example 2: Changing to a Range of Valid Replies

Assume the user created message UPY0047 as follows:

```
ADDMSGD  MSGID(UPY0047)  MSGF(PAYLIB/TIMECARD)
MSG('Enter department number:')
TYPE(*DEC)  LEN(4)  VALUES(0816 0727 0319 8774)
```

To change to a range of valid replies (RANGE parameter), instead of specific reply values (as specified with the VALUE parameter), the following command can be used:

```
CHGMSGD  MSGID(UPY0047)  MSGF(PAYLIB/TIMECARD)
VALUES(*NONE)  RANGE(0300 8900)
```

The VALUES as originally defined are removed and the RANGE parameters are added to the message description. The type and length of the reply values do not change.

Note:

All changes made to an existing message description must be compatible with the existing message description. For example, the following change would be diagnosed as invalid because the RANGE values are not compatible with the reply length as defined on the original ADDMSGD command.

Example 3: Changing the Length Parameter

```
ADDMSGD  MSGID(XYZ0202)  MSGF(XYZMSGF)
MSG('Enter routing code:')
TYPE(*CHAR)  LEN(2)
VALUES(AA BB CC DD EE)
CHGMSGD  MSGID(XYZ0202)  MSGF(XYZMSGF)
VALUES(*NONE)  RANGE(AAA ZZZ)
```

To make the change to the range of reply values valid, the user must also change the length (LEN parameter). The correct command coding would be as follows:

```
CHGMSGD  MSGID(XYZ0202)  MSGF(XYZMSGF)
LEN(3)  VALUES(*NONE)  RANGE(AAA ZZZ)
```

Error messages for CHGMSGD

*ESCAPE Messages

CPF2401

Not authorized to library &1.

CPF2407

Message file &1 in &2 not found.

CPF2411

Not authorized to message file &1 in &2.

CPF2419

Message identifier &1 not found in message file &2 in &3.

CPF2461

Message file &1 could not be extended.

CPF2483

Message file currently in use.

CPF2499

Message identifier &1 not allowed.

CPF2510

Message file &1 in &2 logically damaged.

CPF2542

Message description not changed for &1.

CPF9830

Cannot assign library &1.

CPF9838

User profile storage limit exceeded.

CHGMSGF (Change Message File) Command Description

CHGMSGF Command syntax diagram

Purpose

The Change Message File (CHGMSGF) command changes the attributes of a specified message file or a list of message files.

Restrictions:

1. Only libraries to which you have *USE authority are searched.
2. You must have *USE and *DLT authorities to the message file.

Required Parameter

MSGF Specifies the name of the message file or files whose attributes are being changed.

The name of the message file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

***USRLIBL:** Only the libraries in the user portion of the job's library list are searched.

***ALL:** All libraries in the system, including QSYS, are searched.

>> *ALLUSR: User libraries are all libraries with names that do not begin with the letter Q except for the following: <<<

#CGULIB
#COBLIB

#DSULIB
#RPGLIB

#SEULIB

#DFULIB

#SDALIB

» Although the following libraries with names that begin with the letter Q are provided by IBM, they typically contain user data that changes frequently. Therefore, these libraries are also considered user libraries:«

QDSNX	» QSYS2xxxx«	QUSROND
QGPL	QS36F	QUSRPOSGS
QGPL38	QUSER38	QUSRPOSSA
QMPGDATA	QUSRADSM	QUSRPYMSVR
QMQMDATA	QUSRBRM	QUSRRDARS
QMQMPROC	QUSRDIRCL	QUSRSYS
QPFRDATA	QUSRDIRDB	QUSRVI
QRCL	QUSRIJS	QUSRVxRxMx
» QRCLxxxx«	QUSRINFSKR	
» QSYS2«	QUSRNOTES	

Notes:

1. » 'xxxxx' is the number of a primary auxiliary storage pool.«
2. A different library name, of the form QUSRVxRxMx, can be created by the user for each release that IBM supports. VxRxMx is the version, release, and modification level of the library.

library-name: Specify the name of the library to be searched.

***ALL:** All message files in the libraries identified in the library qualifier are changed.

generic-message-file-name:* Specify the generic name of the message file whose attributes are being changed. 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. See generic names for additional information.

If the complete object name is specified and the library qualifier is *USRLIBL, *ALL, or *ALLUSR, all message files of the specified name are changed.

message-file-name: Specify the name of the message file whose attributes are being changed.

Optional Parameters

CCSID

Specifies the coded character set identifier (CCSID) that is to be associated with the message file. This will not result in any text conversions on the message descriptions that already exist in the message file. Any message descriptions subsequently added to this message file will be converted from the CCSID specified on the ADDMSGD command to the CCSID of the message file. The CCSID associated with the message file overrides the CCSID associated with the message description. To use the CCSID associated with the message description, change the CCSID associated with the message file to *MSGD.

***SAME:** The value does not change.

***HEX:** The CCSID associated with the message file is changed to 65535. 65535 means that no conversions are to occur when adding or changing message descriptions to the message file and no conversions are to occur when retrieving message descriptions from the file. The CCSID specified on the ADDMSGD or CHGMSGD commands is saved in case this message file is ever changed to *MSGD.

***MSGD:** The CCSID associated with the message file is changed to 65534. 65534 means to use the CCSID associated with the message description when retrieving message text from the file. When adding or changing message descriptions to the message file, no conversions are to occur and the message description is tagged with the CCSID specified on the ADDMSGD or CHGMSGD commands.

***JOB:** The CCSID associated with the message file is changed to the CCSID of the job that is running this command.

coded-character-set-identifier: Specify the coded character set identifier (CCSID) that is to be associated with the message file. The valid values range from 1 through 65535. Only those CCSID values that a job can be changed to are accepted. See the Globalization topic in the Information Center for a list of valid CCSID values.

Note:

Changing the CCSID associated with the message file does not change the CCSID associated with the message descriptions. If the message file CCSID is ever changed back to *MSGD the original CCSIDs associated with the message descriptions are remembered.

Changing the CCSID associated with a message file that contains message descriptions may cause unpredictable results. This can occur when the character encoding of those message descriptions do not match the CCSID specified. Only change the CCSID of a message file that contains message descriptions to correct a message file CCSID. The change can be made when a message file CCSID does not match the encoding of its message descriptions.

For more information on the message handler and its use of CCSIDs, see the Globalization topic in the Information Center.

TEXT Specifies the text that briefly describes the message file. More information is in Commonly used parameters. The text specified replaces any previous text.

***SAME:** The value does not change.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CHGMSGF

```
CHGMSGF MSGF(*ALL/*ALL) CCSID(65534)
```

This command changes the CCSID to 65534 for all of the message files on the system.

Error messages for CHGMSGF

***ESCAPE Messages**

CPF2401

Not authorized to library &1.

CPF2407

Message file &1 in &2 not found.

CPF2411

Not authorized to message file &1 in &2.

CPF247E

CCSID &1 is not valid.

CPF2483

Message file currently in use.

CPF9830

Cannot assign library &1.

CHGMSGQ (Change Message Queue) Command Description

CHGMSGQ Command syntax diagram

Purpose

The Change Message Queue (CHGMSGQ) command changes the attributes of the specified message queues. If the delivery mode is being changed to *BREAK or *NOTIFY and if the message queue is not already in *BREAK or *NOTIFY mode or specifically allocated to another job, it is implicitly allocated by this command. The DLVRY, PGM, and SEV parameters are not contained in the Create Message Queue (CRTMSGQ) command, but default values are assigned to them by the system when the message queue is created. This command can also be used to reset the status of old messages to that of new messages so they can be received again without the use of message reference keys.

Restrictions:

1. The user must have *USE and *DLT authorities for the queue.
2. The message queues being changed cannot be allocated with either a *SHRRD or *EXCL lock by another job. If the queue is allocated by another job when the CHGMSGQ command is attempted, an error message will be sent. One exception to this is that no lock is required when changing the CCSID of a workstation message queue.
3. If you are changing multiple message queues with the generic support you are not allowed to change the value on the DLVRY parameter to *BREAK or to *NOTIFY.
4. The QHST message queue has a message queue full action of *SNDMSG and this value cannot be changed. The CPF2433 message (Function not allowed for system log message queue QHST.) is issued if the message queue full action is changed for QHST.
5. Message queue QSYSOPR is shipped with a message queue full action of *WRAP. If the value is changed to *SNDMSG and the queue needs to be recreated because it was damaged, the value is reset to the shipped value of *WRAP.

Required Parameter

MSGQ

Specifies the name of the message queue whose attributes are being changed.

***WRKSTN:** The attributes of the work station's message queue are being changed. This parameter is not valid for a batch job.

***USRPRF:** The attributes of the message queue associated with the signed-on user profile are being changed.

The name of the message queue can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

***USRLIBL:** Only the libraries in the user portion of the job's library list are searched.

***ALL:** All libraries in the system, including QSYS, are searched.

» ***ALLUSR:** User libraries are all libraries with names that do not begin with the letter Q except for the following:«

#CGULIB	#DSULIB	#SEULIB
#COBLIB	#RPGLIB	
#DFULIB	#SDALIB	

» Although the following libraries with names that begin with the letter Q are provided by IBM, they typically contain user data that changes frequently. Therefore, these libraries are also considered user libraries:«

QDSNX	» QSYS2xxxx«	QUSROND
QGPL	QS36F	QUSRPOSGS
QGPL38	QUSER38	QUSRPOSSA
QMPGDATA	QUSRADSM	QUSRPYMSVR
QMQMDATA	QUSRBRM	QUSR RDARS
QMQMPROC	QUSRDIRCL	QUSRSYS
QPFRDATA	QUSRDIRDB	QUSRVI
QRCL	QUSRIJS	QUSRVxRxMx
» QRCLxxxx«	QUSRINFSKR	
» QSYS2«	QUSRNOTES	

Notes:

1. » 'xxxx' is the number of a primary auxiliary storage pool.«
2. A different library name, of the form QUSRVxRxMx, can be created by the user for each release that IBM supports. VxRxMx is the version, release, and modification level of the library.

library-name: Specify the name of the library to be searched.

***ALL:** All message queues in the libraries identified in the library qualifier are changed.

generic-message-queue-name:* Specify the generic name of the message queue whose attributes are being changed. A generic name is a character string of one or more characters followed by an asterisk (*); for example, ABC*. The asterisk (*) is a substitute for any valid character. 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 the library qualifier is *USRLIBL, *ALL, or *ALLUSR, all message queues of the specified name are changed.

message-queue-name: Specify the name of the message queue whose attributes are being changed.

Optional Parameters

DLVRY

Specifies how the messages sent to this message queue are delivered. The method of delivery is in effect only as long as the message queue is allocated to the job. When the queue is deallocated, the delivery mode is changed to *HOLD for work station, system operator, and user message queues. However, if *DFT is specified for a system operator or user message queue, the delivery mode remains *DFT.

Note:

When the delivery mode of a message queue is changed to *BREAK or *NOTIFY, the message queue is allocated with an *EXCL lock. The *EXCL lock will remain on the queue until the delivery mode is changed to *HOLD or *DFT, or the job that contains the lock on the queue ends.

***SAME:** The value does not change.

***HOLD:** The messages are held in the message queue until they are requested by the user or program. The display station user uses the Display Messages (DSPMSG) command to show the messages; a program must issue a Receive Message (RCVMSG) command to receive a message and handle it.

***BREAK:** The job to which the message queue is allocated is interrupted when a message arrives at the message queue, and the program specified in the PGM parameter is called. If the job is an interactive job, the audible alarm is sounded (if installed). The delivery mode cannot be changed to *BREAK if the message queue is also being used by another job.

When changing to *BREAK mode, the PGM parameter defaults to *DSPMSG for the break program and *ALWRPY for allow other jobs to reply if a program name is not specified or if PGM(*SAME) is specified.

***NOTIFY:** The job to which the message queue is allocated is notified when a message arrives at the message queue. For interactive jobs at a display station, the audible alarm is sounded and the Message Waiting light is turned on. For batch jobs, no notification occurs; the message is simply held in the queue (the same as for *HOLD). The delivery mode cannot be changed to *NOTIFY 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. The message is not put on the message queue unless the message queue is QSYSOPR.

PGM Specifies the qualified name of the program called when a message arrives at the message queue and break delivery has been specified. It also indicates whether or not to allow other jobs to reply to messages on the message queue when it is placed in *BREAK delivery mode with a break handling program other than *DSPMSG specified. Because the QSYSOPR message queue receives messages that require manual operator action, only *DSPMSG should be specified or assumed if the message queue being changed is QSYSOPR. The following parameters are passed to the break delivery program:

- Message queue name (10 characters). The name of the message queue to which the message was sent.

- Library name (10 characters). The name of the library containing the message queue.
- Message reference key (4 characters). The reference key of the message sent to the message queue.

One of the following can be used to specify the name of the break handling program.

Single Values

***SAME:** The value does not change, unless the message queue is being changed to break delivery. Then the value is changed to *DSPMSG and the allow other jobs to reply value is set to *ALWRPY.

***DSPMSG:** The DSPMSG command is processed when a message arrives for break delivery and the allow other jobs to reply value is set to *ALWRPY. For interactive jobs, the messages are shown on the display. Also, at the display station, the audible alarm is sounded (if these are installed) and the Message Waiting light is turned on. For batch jobs, the message is sent to a spooled printer file.

Element 1: Break Handling Program

The name of the program can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

program-name: Specify the name of the program that is called when a message arrives for break delivery.

Element 2: Allow Other Jobs to Reply

Indicates whether other jobs can reply to inquiry messages on the message queue when it is placed in *BREAK delivery mode with a break handling program other than *DSPMSG specified. If *DSPMSG is specified for the break handling program then *ALWRPY is assumed for this attribute. If QMHDSMSS is specified for the break handling program in a library other than QSYS, then *ALWRPY will also be assumed for this attribute unless *NOALWRPY is explicitly specified.

***NOALWRPY:** When the message queue is in *BREAK mode with a break handling program other than *DSPMSG specified, other jobs can display the message queue, but cannot reply to inquiry messages on the message queue.

***ALWRPY:** When the message queue is in *BREAK mode with a break handling program other than *DSPMSG specified, other jobs can reply to inquiry messages on the message queue.

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 on 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 on the 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 to or greater than the value specified here. Otherwise, the message is held in the queue until it is requested.

***SAME:** The value does not change.

severity-code: Specify severity code, ranging from 00 through 99.

RESET

Specifies whether old messages (messages that have been received once and were not removed from the message queue) held in the message queue are reset to the new message status. The messages can then be received in first-in, first-out (FIFO) order as they were originally. This parameter applies only to messages received by a program; it does not affect message displays. If all messages are being cleared, refer to the RMVMSG (Remove Message) command description.

***NO:** Old messages in the message queue are not reset to new message status. To receive an old message, to reply to it, or to remove it, enter the message reference key.

***YES:** All messages in the message queue, except inquiry messages that have been sent a reply, are reset to the new message status. These messages can then be received as new messages in the same order that they were sent to the message queue.

FORCE

Specifies whether changes made to the message queue description or messages added to or removed from the queue are immediately forced into auxiliary storage. This ensures that changes to the queue, or messages sent or received, are not lost if a system failure occurs.

***SAME:** The value does not change.

***NO:** Changes made to the message queue, including its messages, are not immediately forced to auxiliary storage.

***YES:** All changes to the message queue description and to the messages in the queue are immediately forced to auxiliary storage. This can result in program performance problems.

ALWALR

Specifies whether the queue being changed allows alerts to be generated from alert messages that are sent to it.

***SAME:** The value does not change.

***NO:** Does not allow alerts to be generated from this message queue.

***YES:** Allows alerts to be generated from this message queue.

CCSID

Specifies the coded character set identifier (CCSID) associated with this message queue. This applies only to immediate messages and message data that is defined as a character field that can be converted (*CCHAR).

***SAME:** The value does not change.

***HEX:** Messages sent, received, or displayed from this message queue are not converted. The message queue CCSID is 65535.

***MSG:** Messages sent to this message queue are not converted. The CCSID specified by the sending job is saved in case a conversion is needed for a display or receive function. The message queue CCSID is 65534.

***JOB:** The CCSID of the message queue is changed to the CCSID of the job running this command.

coded-character-set-identifier: Specify the CCSID to be associated with this message queue. Messages sent to this message queue are converted to this CCSID. Valid values range from 1 through 65535. See the Globalization topic in the Information Center for a list of valid CCSID values.

Note:

When changing the CCSID of a message queue, the messages on the queue are not converted and the CCSID associated with each individual message is not changed. If the message queue is changed back to *MSG the original CCSID of each message are then used.

Changing the CCSID of a message queue that already has messages on it can cause unpredictable results. This can occur when the encoding of the messages does not match the CCSID you specify. Only change the CCSID of the message queue when the CCSID of a message queue does not match the encoding of the messages on it.

For more information on the message handler and its use of CCSIDs, see the Globalization topic in the Information Center.

MSGQFULL

Specifies the action to take when the message queue is full.

***SAME:** The value does not change.

***SNDMSG:** When the message queue is full, CPF2460 (Message queue could not be extended.) is sent to the program or user that is sending a message to the full message queue.

***WRAP:** When the message queue is full, the oldest informational and answered messages are removed from the message queue to allow space for new messages to be added. If the removing of the informational and answered messages does not provide space to add the requested message, then unanswered inquiry messages are removed until there is space to add the requested message. The default reply is sent before an unanswered inquiry message is removed. When the message queue is wrapped, CPI2420 or CPI2421 is sent to the queue that was full to indicate it was wrapped. If there is no space on the queue to send these messages they are sent to the joblog of the user that was sending the message to the queue and they are sent to QHST if the full queue was QSYSOPR.

Note:

When a queue uses *WRAP and a job sends a message to the queue that causes a wrap, messages are removed for the following conditions in order to perform the wrap:

- the queue is in break or notify mode for a job
- a job is in a message wait state because it did a receive function on the queue with a wait time specified
- the queue is allocated by a job via the ALCOBJ command

Only the system wrap function can remove messages from queues in these conditions. Other jobs still are not allowed to remove messages from the queues during these conditions. With *SNDMSG, these conditions do not allow another job to remove messages from the queue.

Also when a queue specifies *WRAP and it is in break mode, the wrap function only removes messages that have been received by the break-handling program. For example, if the break-handling program did not receive all messages from the queue and it was becoming full, CPF2460 could be issued because messages could not be removed to perform the wrap.

TEXT Specifies the text that briefly describes the message queue. More information is in Commonly used parameters.

***SAME:** The value does not change.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Examples for CHGMSGQ

Example 1: Changing Method of Delivery to Notify Mode

```
CHGMSGQ MSGQ(JONES) DLVRY(*NOTIFY)
```

This command changes the method of delivery of the message queue named JONES to notify mode. The user is immediately notified by the attention light and audible alarm (if installed) when a message has been sent to his queue.

Example 2: Changing Method of Delivery to Break Mode

```
CHGMSGQ MSGQ(INV) DLVRY(*BREAK) PGM(INVUPDT)
```

This command changes the delivery mode of the message queue named INV to *BREAK and calls a program named INVUPDT when a message arrives at INV. Other jobs will not be allowed to reply to inquiry messages on message queue INV.

Error messages for CHGMSGQ

*ESCAPE Messages

CPF2401

Not authorized to library &1.

CPF2403

Message queue &1 in &2 not found.

CPF2406

Authority error occurred on call to break program &1 in &2 for message queue &3 in &4.

CPF2408

Not authorized to message queue &1.

CPF2437

MSGQ(*WRKSTN) not allowed unless done interactively.

CPF244E

The delivery specified is not valid with a generic message queue

CPF2446

Delivery mode specified not valid for system log message queue.

CPF2450

Work station message queue &1 not allocated to job.

CPF2451

Message queue &1 is allocated to another job.

CPF247E

CCSID &1 is not valid.

CPF2477

Message queue &1 currently in use.

CPF2485

Number of parameters for break program &1 in &2 message queue &3 in &4 not valid.

CPF2507

MODE(*NOTIFY) not allowed in batch mode.

CPF2522

Break program &1 in &2 for message queue &3 in &4 cannot be called.

CPF2534

MSGQ(*USRPRF) specified and no msg queue with user profile.

CPF8127

&8 damage on message queue &4 in &9. VLIC log-&7.

CPF8176

Message queue for device description &4 damaged.

CHGMODD (Change Mode Description) Command Description

CHGMODD Command syntax diagram

Purpose

The Change Mode Description (CHGMODD) command changes a mode description for advanced-program-to-program communications (APPC) devices. APPC support uses Systems Network Architecture (SNA).

Required Parameter

MODD

Specifies the name of the mode description being changed.

Optional Parameters

COS Specifies the class-of-service associated with the mode.

***SAME:** The value does not change.

class-of-service-name: Specify the class-of-service name in the mode description. Valid class-of-service names are shown below:

- #CONNECT
- #BATCH
- #INTER
- #BATCHSC
- #INTERSC

MAXSSN

Specifies the maximum number of active sessions that are established for this mode. This number must be greater than or equal to the number of locally controlled sessions on the local system (as specified in the LCLCTLSSN parameter) plus the number of locally controlled sessions specified at the remote location.

***SAME:** The value does not change.

maximum-number-of-sessions: Specify a value ranging from 1 through 512 for the maximum number of active sessions.

MAXCNV

Specifies the maximum number of active conversations allowed by this mode. The maximum number of active conversations is the sum of synchronous and asynchronous conversations; this

value must be greater than or equal to the value specified by the MAXSSN parameter. A synchronous conversation is a conversation in which both the source and target programs are communicating. An asynchronous conversation is a conversation in which the source program has detached from the conversation, but there is still data to be read by the target program.

***SAME:** The value does not change.

maximum-number-of-conversations: Specify a value ranging from 1 through 512 for the maximum number of conversations.

LCLCTLSSN

Specifies the minimum number of active locally controlled sessions that can be established for this mode. This value must be less than or equal to the value specified in the MAXSSN parameter.

***SAME:** The value does not change.

locally-controlled-sessions: Specify a value ranging from 0 through 512 for the minimum number of locally controlled sessions.

PREESTSSN

Specifies the maximum number of locally controlled pre-established sessions (established when the mode is started). Additional sessions are established when required up to the value specified in the MAXSSN parameter; this value must be less than or equal to the value specified in the LCLCTLSSN parameter.

***SAME:** The value does not change.

number-of-pre-established-sessions: Specify a value ranging from 0 through 512 for the maximum number of locally controlled sessions established when the mode is started.

MAXINPAC

Specifies the maximum SNA pacing value used to schedule incoming request units (RUs). **Pacing** is established by the receiving system to control the rate of transmission of the sending system to prevent the loss of data.

Note:

To ensure an optimum rate, the value *CALC is recommended.

***CALC:** The system determines the value to use. The value is calculated to be 2*INPACING, which is two times the value specified on the INPACING parameter.

maximum-inbound-pacing: Specify a value, ranging from 1 through 32767 in RUs, for the maximum inbound pacing value.

INPACING

Specifies the SNA pacing value used to schedule the incoming request units (RUs).

***SAME:** The value does not change.

inbound-pacing-value: Specify a value ranging from 0 through 63 for the limiting value.

OUTPACING

Specifies the SNA pacing value used for outgoing request units (RUs).

***SAME:** The value does not change.

outbound-pacing-value: Specify a value ranging from 0 through 63 as the limiting value.

MAXLENRU

Specifies the maximum request unit (RU) length (in bytes) allowed.

Note:

To ensure an optimum length, the value *CALC is recommended.

***SAME:** The value does not change.

***CALC:** The system determines the value to use.

maximum-request-unit-length: Specify a value ranging from 241 through 32768 as the maximum length for incoming request units.

Some other common values are:

SDLC lines:

256, 512, 1024, 2048

Token-ring network lines:

256, 512, 1024, 1985

X.25 (QLLC) lines:

247, 503, 1015

X.25 (ELLC) lines:

241, 497, 1009

DTACPR

Specifies whether data compression is used.

***SAME:** The value does not change.

***NETATR:** The value from the DTACPR network attributes is used.

***NONE:** Compression is not allowed on the session.

***ALLOW:** Data compression is allowed on the session by the local system if requested by a remote system. The local system does not request compression.

If data compression is requested by the remote system, the data compression levels used by the session are the lower of the requested levels and the levels specified on the INDTACPR and OUTDTACPR parameters.

***REQUEST:** Data compression is requested on the session by the local system. However, the request can be refused or changed to lower compression levels by the remote system. Data compression is allowed on the session if requested by the remote system. The requested compression levels for inbound and outbound data are the levels specified for the INDTACPR and OUTDTACPR parameters.

If data compression is requested by the remote system, the data compression levels used by the session are the lower of the requested levels and the levels specified on the INDTACPR and OUTDTACPR parameters.

***REQUIRE:** Data compression is required on the session. If the remote system does not accept the local system's exact required levels of compression, the session is not established.

The data compression levels that the local system require are the levels specified on the INDTACPR and OUTDTACPR parameters.

line-speed: Specify the maximum line speed at which data is compressed. If the line speed of the link used by the session is less than or equal to this specified line speed, data compression is

used for the session as if *REQUEST is specified. Otherwise, compression is used for the session as if *ALLOW is specified. Valid values range from 1 through 2147483647 in bits per second (bps).

INDTACPR

Specifies the desired level of compression for inbound data. No data compression occurs if DTACPR(*NONE) is specified.

Note:

Adaptive dictionary-based compression is a dynamic compression algorithm, similar to Lempel-Ziv, that compresses previously seen strings to 9-, 10-, and 12-bit codes. This algorithm is referred to as LZ in the following parameters.

***SAME:** The value does not change.

***RLE:** The Run Length Encoding (RLE) algorithm is used. RLE substitutes a 1- or 2-byte sequence in the data stream for each repeated occurrence of the same character. This algorithm requires no storage and less processing time than the other options.

***LZ9:** The LZ algorithm with the 9-bit code for repeated substrings in the data stream is used. These codes refer to entries in a common dictionary, created as the data flows between the sender and receiver. The LZ algorithms require storage and extra processing time. The LZ9 requires the least storage and processing time of the LZ algorithms; however, it compresses the data stream the least.

***LZ10:** The LZ algorithm with the 10-bit code for repeated substrings in the data stream is used. These codes refer to entries in a common dictionary, created as the data flows between the sender and receiver. The LZ algorithms require storage and extra processing time. The LZ10 table algorithm requires more storage and processing time than the LZ9, but less than the LZ12. The LZ10 compresses the data stream more than the LZ9, but less than the LZ12.

***LZ12:** The LZ algorithm with the 12-bit code for repeated substrings in the data stream is used. These codes refer to entries in a common dictionary, created as the data flows between the sender and receiver. The LZ algorithms require storage and extra processing time. The LZ12 requires the most storage and processing time of the LZ algorithms; however, it compresses the data stream the most.

***NONE:** No compression occurs.

OUTDTACPR

Specifies the desired level of compression for outbound data. No data compression occurs if DTACPR(*NONE) is specified.

***SAME:** The value does not change.

***RLE:** The Run Length Encoding (RLE) algorithm is used. RLE substitutes a 1- or 2-byte sequence in the data stream for each repeated occurrence of the same character. This algorithm requires no storage and less processing time than the other options.

***LZ9:** The LZ algorithm with the 9-bit code for repeated substrings in the data stream is used. These codes refer to entries in a common dictionary, created as the data flows between the sender and receiver. The LZ algorithms require storage and extra processing time. The LZ9 requires the least storage and processing time of the LZ algorithms; however, it compresses the data stream the least.

***LZ10:** The LZ algorithm with the 10-bit code for repeated substrings in the data stream is used. These codes refer to entries in a common dictionary, created as the data flows between the

sender and receiver. The LZ algorithms require storage and extra processing time. The LZ10 table algorithm requires more storage and processing time than the LZ9, but less than the LZ12. The LZ10 compresses the data stream more than the LZ9, but less than the LZ12.

***LZ12:** The LZ algorithm with the 12-bit code for repeated substrings in the data stream is used. These codes refer to entries in a common dictionary, created as the data flows between the sender and receiver. The LZ algorithms require storage and extra processing time. The LZ12 requires the most storage and processing time of the LZ algorithms; however, it compresses the data stream the most.

***NONE:** No compression occurs.

SLE Specifies the desired level of session encryption.

***SAME:** The value does not change.

***NONE:** No data is encrypted or decrypted.

***ALL:** All data is encrypted before it is sent out to the network and is decrypted as it is received from the network.

Note:

The use of session level encryption requires that IBM Common Cryptographic Architecture Services for OS/400 is installed along with the Cryptographic Processor feature or the Cryptographic Processor-Commercial feature.

TEXT Specifies the text that briefly describes the mode description. More information is in Commonly used parameters.

***SAME:** The value does not change.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CHGMODD

```
CHGMODD MODD(MODE1) PREESTSSN(3)
```

This command changes the number of pre-established sessions for MODE1 to three.

Error messages for CHGMODD

***ESCAPE Messages**

CPF262D

Mode description &1 not changed.

CHGMOD (Change Module) Command Description

CHGMOD Command syntax diagram

Purpose

The Change Module (CHGMOD) command changes the attributes of a module object without requiring the module to be recompiled.

Restrictions:

1. You must have *USE authority to the library where the module is located.
2. You must have *USE and object management authority for the module being changed.

3. You must have *USE, *ADD and *DLT authority for the library in order to change the optimization attribute, the performance collection attribute, the profiling data attribute or to force module re-creation.
4. Modules in library QSYS cannot be changed.

Required Parameter

MODULE

Specifies the qualified name of the module for which attributes are changed.

The possible library values are:

***USRLIBL:** Only the libraries in the user portion of the job's library list are searched.

***LIBL:** All libraries in the user and system portions of the job's library list are searched.

library-name: Specify the name of the library where the module is located.

***ALL:** All modules in the specified library to which the user has some authority are selected for change.

module-name: Specify the name of the module for which information is displayed.

generic-module-name:* Specify the generic name of the module being changed. 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. See generic names for additional information.

Optional Parameters

OPTIMIZE

Specifies the level at which the generated code in the module is used. Changing the optimization level of the module causes the system to re-create the module with the new optimization level.

***SAME:** The module optimization attributes are not changed.

***NONE or 10:** No additional optimization will be performed on the generated code. Variables can be displayed and modified while debugging.

***BASIC or 20:** Some optimization is performed on the code. Variables can be displayed but not modified while debugging.

***FULL or 30:** More optimization is performed on the generated code, in addition to the amount performed at optimization level 20. Variables can be displayed but not modified while debugging.

Note: The value of the variable displayed during debugging may not be the current value of the variable.

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 done.

RMVOBS

Specifies whether the observable information associated with modules is removed.

***SAME:** The value does not change.

***ALL:** Remove the debug data (*DBGDTA), information necessary to re-create the module (*CRTDTA), and the intermediate language data (*ILDTA).

Note:

*ALL cannot be specified if the module is enabled to collect profiling data.

***DBGDTA:** The information necessary to allow module debugging is removed. The module cannot be debugged when it is included in a program or service program object.

***CRTDTA:** The information necessary to allow module re-creation, to change the optimization level, to change the performance collection attribute, or to change the profiling data attribute, is removed.

Notes:

1. *CRTDTA cannot be specified if the module is enabled to collect profiling data.
2. *CRTDTA observability is required to convert modules to a different hardware technology. For example, between CISC (Complex Instruction Set Computer) and RISC (Reduced Instruction Set Computer) technology.
3. If the module was created for a release earlier than V3R6M0, and is currently in RISC format or FRCCRT(*YES) is specified, removing *CRTDTA will cause the module to no longer be able to be saved for a release earlier than V3R6M0.

***ILDTA:** The intermediate language data is removed.

***NONE:** Observable information associated with the module is not removed.

ENBPFCOL

Specifies whether collection of performance data is enabled.

***SAME:** The value does not change.

***NONE** or ***PEP:** 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.

PRFDTA

Specifies the profiling data attribute for the module.

***SAME:** The value does not change.

***NOCOL:** The collection of profiling data is not enabled. The module will not collect profiling data when it is included in a program or service program object.

***COL:** The collection of profiling data is enabled. The module will collect profiling data when it is included in a program or service program object.


Note: *COL can be specified only when the optimization level of the module is *FULL (30) or greater.

LICOPT

This parameter allows 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 type of compiler option. Changing the Licensed Internal Code options of an Integrated Language Environment (ILE) module to any value other than *SAME causes the system to re-create the ILE module with the specified Licensed Internal Code options.

***SAME:** If the module 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.

Licensed-Internal-Code-options: Specifies one or more Licensed Internal Code compile-time options. Changing the Licensed Internal Code options of an Integrated Language Environment (ILE) module causes the system to re-create the ILE module with the specified Licensed Internal Code options.

Note: Additional information about the LICOPT options can be found in the ILE Concepts  book.

***NONE:** Module re-creation is forced and no Licensed Internal Code options are used.

FRC CRT

Specifies whether module re-creation is forced.

***NO:** Module re-creation is not forced unless the optimization level (OPTIMIZE), enable performance collection (ENBPFCOL), profiling data (PRFDTA), or Licensed Internal Code options (LICOPT) parameters are changed. This option allows the system to determine whether a change is required.

***YES:** Module re-creation is forced. If the data necessary to re-create the module object has been removed, then re-creation (forced or not) is not allowed.

TEXT Specifies the text that briefly describes the program and its function. More information is in Commonly used parameters.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Examples for CHGMOD

Example 1: Optimizing for Maximum Performance

```
CHGMOD MODULE(XYZ/PERFMOD) OPTIMIZE(40)
```

This command optimizes module PERFMOD in library XYZ to ensure optimum performance.

Example 2: Removing all observability

```
CHGMOD MODULE(XYZ/NOOBSERV) RMVOBS(*ALL)
```

This command removes all observability from module NOOBSERV in library XYZ. It can not be re-created, and can not be debugged when it is included in a program or service program object.

Example 3: Enabling collection of profiling data

```
CHGMOD MODULE(XYZ/PROFMOD) OPTIMIZE(30) PRFDTA(*COL)
```

This command enables module PROFMOD in library XYZ to collect profiling data when it is included in a program or service program object. The optimization level must be 30 or greater to enable a module to collect profiling data.

Error messages for CHGMOD

*ESCAPE Messages

CPF5CFA

Modules in library QSYS cannot be changed.

CPF5CFB

No modules changed.

CPF5CFC

&1 changed. &2 did not require change. &3 not changed.

CPF5CFE

Module &1 in library &2 not changed.

CPF5CFF

Module &1 in library &2 not changed.

CPF5CF7

*USRLIBL or *LIBL not allowed with a generic module name or *ALL.

CPF5CF8

Module &1 in library &2 not changed.

CPF5CF9

Module &1 in library &2 not changed.

CPF9801

Object &2 in library &3 not found.

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.

CPF9828

Not authorized to module &1 in library &2.

CPF9830

Cannot assign library &1.


CPF9899

Error occurred during processing of command.

CHGNTBD (Change NetBIOS Description) Command Description

CHGNTBD Command syntax diagram

Purpose

The Change NetBIOS Description (CHGNTBD) command changes a NetBIOS description object. More information about using this command is in the Communications Configuration  book.

Note: Changes to this object while using a configuration object, such as a network server description that is varied on, do not affect that object until it is varied off and back on.

Required Parameter

NTBD Specifies the name of the NetBIOS description being changed.

Optional Parameters

FULLBUFDTG

Specifies whether to request the full transmit buffer size for datagrams.

***SAME:** The value does not change.

***YES:** The full transmit buffer size is requested.

***NO:** The full transmit buffer size is not requested. The length of a datagram is equal to the transmit buffer size minus the size of the overhead, for a maximum of 512 bytes. Large messages are truncated.

Note: The size of the overhead is the sum of the sizes of the NetBIOS header (44 bytes), the LAN header (a maximum of 36 bytes), and the buffer hold overhead (a maximum of 6 bytes).

ADPWDWITV

Specifies the time, in milliseconds, between runs of the adaptive window algorithm. For each link, this algorithm is used to change the values on the MAXIN and MAXOUT parameters to match the values set on the remote workstation using NetBIOS protocol. The algorithm considers the conditions of the link, including adapter receive buffers and transmission load, when changing the values.

***SAME:** The value does not change.

adaptive-window-interval: Specify the time between algorithm runs, in milliseconds. Valid values range from 0 through 65535.

Note: The value 0 disables the algorithm.

MAXWDWERR

Specifies the number of dropped packets the adaptive window algorithm allows before decreasing the value on the MAXOUT parameter.

***SAME:** The value does not change.

window-errors: Specify the number of errors allowed. Valid values range from 0 through 10.

MAXRCVDATA

Specifies the maximum data size in any frame that can be received in a session. The partner in the transmission limits the size to the smaller of this specified size, or the size available in the partner's transmit buffer. NetBIOS takes into account the maximum size that is forwarded by bridges in the path.

***SAME:** The value does not change.

maximum-receive-data-size: Specify the maximum data size that can be received, in bytes. Valid values range from 512 through 16384.

INACTTMR

Specifies the amount of time that a link can be inactive before the NetBIOS protocol driver checks to verify that the link is operational.

***SAME:** The value does not change.

inactivity-timer: Specify the amount of time to wait for activity, in milliseconds. Valid values range from 1000 through 65535.

RSPTMR

Specifies the amount of time to wait before again transmitting a link-level frame when no acknowledgement is received from the previous transmission.

***SAME:** The value does not change.

response-timer: Specify the amount of time to wait, in milliseconds. Valid values range from 50 through 65535.

ACKTMR

Specifies the amount of time the NetBIOS protocol driver delays acknowledging a received frame, when the number of frames sent is less than the maximum specified on the MAXIN parameter.

***SAME:** The value does not change.

acknowledgement-timer: Specify the amount of time to delay, in milliseconds. Valid values range from 50 through 65535.

MAXIN

Specifies the maximum number of NetBIOS messages packets that can be received before sending an acknowledgement.

***SAME:** The value does not change.

maximum-receives: Specify the number of packets to receive. Valid values range from 1 through 127.

MAXOUT

Specifies the maximum number of NetBIOS messages packets that can be sent before expecting an acknowledgement.

Note:

This parameter is used only when ADPWDWITV(0) is specified.

***SAME:** The value does not change.

maximum-transmits: Specify the number of packets to send. Valid values range from 1 through 127.

QRYTMR

Specifies the time, in milliseconds, to wait between transmission retry attempts.

***SAME:** The value does not change.

query-time out: Specify a value in the range of 500 through 10000 milliseconds.

NTBRTY

Specifies the number of transmission retries that are attempted at the NetBIOS level before assuming that the receiving party is not present.

***SAME:** The value does not change.

NetBIOS-retry: Specify a value in the range of 1 through 50 attempts.

ALWMULTACK

Specifies whether acknowledgements for received data can be combined with requests for data.

Note:

When the NetBIOS protocol driver sends and receives acknowledgements with incoming data, LAN performance is improved.

***SAME:** The value does not change.

***YES:** The acknowledgements can be combined with data requests.

Note:

Both parties to the transmission must support combining acknowledgements with data requests or this value is ignored.

***NO:** The acknowledgements cannot be combined with data requests.

PREBLTPKT

Specifies the number of NetBIOS message packets that are prebuilt for each session.

***SAME:** The value does not change.

prebuilt-packets: Specify a value in the range of 1 through 200 message packets.

PKTRESTART

Specifies the number of transmission confirmations that must be received before sending additional packets when an out-of-resource condition occurs. The NetBIOS protocol driver stops sending packets when an out-of-resource condition is received from a port.

***SAME:** The value does not change.

packet-restart: Specify a value in the range of 0 through 9999 confirmations.

DLCRTY

Specifies the number of additional transmission attempts that are made before assuming that the receiving data link control (DLC) layer is not responding.

***SAME:** The value does not change.

DLC-retries: Specify a value in the range of 1 through 65535 attempts.

ETHSTD

Specifies the Ethernet standard frame type that is used for NetBIOS communication.

***SAME:** The value does not change.

***IEEE8023:** IEEE 802.3 frames are used.

***ETHV2:** Ethernet Version 2 frames are used.

TEXT Specifies the text that briefly describes the NetBIOS description. More information is in Commonly used parameters.

***SAME:** The value does not change.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CHGNTBD

```
CHGNTBD NTBD(MYNETBIOS) ACKTMR(3000)
```

This command changes a NetBIOS description named MYNETBIOS to delay acknowledging a received frame for 3000 milliseconds (3 seconds) when the number of received packets is less than the value specified on the MAXIN parameter.

Error messages for CHGNTBD

*ESCAPE Messages

CPF27A2

NetBIOS description &1 not changed.

CHGNTWAUTE (Change NetWare Authentication Entry) Command Description

CHGNTWAUTE Command syntax diagram

Purpose

The Change NetWare Authentication Entry (CHGNTWAUTE) command changes the authentication entry for a server in the specified user profile. The authentication entry is used to start an authenticated connection to a server.

Required Parameter

SVRTYPE

Specifies the server type for the authentication entry.

***NETWARE3:** The entry is for a NetWare 3.x server.

***NDS:** The entry is for a NetWare Directory Services tree.

Optional Parameters

NDSTREE

For server type *NDS, specifies the name of the NetWare Directory Services tree for the entry to be changed.

SERVER

For NetWare 3.x servers, specifies the name of the NetWare 3.x server for the entry to be changed.

USRPRF

Specifies the user profile for which the authentication entry is to be changed.

***CURRENT:** Use the current user profile.

user-profile-name: Use the specified user profile. The user profile must be the current user profile, or the user must have *USE and *OBJMGT authority to the user profile, and *SECADM special authority.

NDSCTX

For NDS trees, specifies the directory context in which the user name is defined. The NDS context and the NetWare user name are combined to form the distinguished name of the user in the NDS tree.

***SAME:** The value does not change.

'NDS-context': The user name is defined in the specified directory context.

NTWUSER

Specifies the NetWare user name used to authenticate the user to the server.

***SAME:** The value does not change.

***USRPRF:** The NetWare user name is the same as the name of the user profile (USRPRF parameter) containing this entry.

'NetWare-user-name': Use the specified user name.

PASSWORD

Specifies the password used to authenticate the user to the server.

***SAME:** The value does not change.

***NONE:** No password is used to authenticate the user.

***STRNTWCNN:** No password is to be stored in the authentication entry for this server. The Start NetWare Connection (STRNTWCNN) command must be used, with the correct password specified on the PASSWORD parameter, to start a connection to the server.

'password': Use the specified password.

Example for CHGNTWAUTE

```
CHGNTWAUTE SVRTYPE(*NDS) NDSTREE(IBM TREE) PASSWORD(XXXX)
```

This command changes the authentication entry for the NDS tree named IBM TREE so that a new password is used.

Error messages for CHGNTWAUTE

*ESCAPE Messages

FPE0218

Authentication entry not changed for &1.

CHGNTWVOL (Change NetWare Volume) Command Description

CHGNTWVOL Command syntax diagram

Purpose

The Change NetWare Volume (CHGNTWVOL) command changes a volume on the specified network server. This command can be used to increase the size of the volume (by adding a new volume segment), enable compression, mount or dismount the volume, or change the text description. The network server must be active at the time this command is run.

Restriction: You must have *IOSYSCFG special authority to use this command.

Required Parameters

VOL The name of the volume to be changed.

SERVER

The name of the network server where the volume resides. This network server must be active when this command is executed.

Optional Parameters

DEVNBR

The device number from which the storage for the new volume segment is allocated. The DEVNBR or NWSSTG parameter is required if SIZE is specified and is otherwise ignored. Both DEVNBR and NWSSTG parameter cannot be specified at the same time. Use the DSPNTWVOL command to see the device (drive) on which this volume currently resides.

***SAME:** The value does not change.

device-number: The number of the device from which the storage for the new volume segment is allocated.

NWSSTG

The name of the network server storage space from which the storage for the new volume segment is allocated for a local server. The NWSSTG or DEVNBR parameter is required if SIZE is specified and is otherwise ignored. Both DEVNBR and NWSSTG parameter cannot be specified at the same time. Use the DSPNTWVOL command to see the storage spaces on which this volume currently resides. This storage space must be linked to the specified network server at the time this command is run.

***SAME:** The value does not change.

network-server-storage-space: The name of the network server storage space from which the storage for the new volume segment is allocated.

SEGNBR

The segment number that the volume will be created on, or extended to.

***ANY:** The first available segment is used.

segment-number: The number of the segment to be used.

SIZE The new size of the volume, specified in megabytes. A new volume segment will be created to increase the volume size by the desired amount. If SIZE is specified, NWSSTG or DEVNBR must also be specified. Use the DSPNTWVOL command to see the device (drive) on which this volume currently resides.

If the size specified requires more space than is currently available on the storage space as one contiguous area of free space, the request will fail. For a server on the local system, use the Display Network Server Storage Space (DSPNWSSTG) command to determine the largest area of contiguous free space on a storage space.

***SAME:** The value does not change.

***MAXAVAIL:** The new size of the volume will be the current size plus the size of the largest area of contiguous free space on the specified network server storage space (NWSSTG parameter) or device (DEVNBR parameter). For a server on the local system, use the Display Network Server Storage Space (DSPNWSSTG) command to determine the largest area of contiguous free space on a storage space.

volume-size-in-megabytes: This is the new size of the volume, in megabytes. The value specified must be larger than the current size of the volume; the size of a volume can not be decreased.

DTACPR

Specifies whether or not to enable data compression for this volume. Note that once compression is turned on for a volume, it can not be turned off.

***SAME:** The value does not change.

***YES:** Compression is enabled for this volume.

MOUNT

Specifies whether or not to mount this volume. Don't mount volumes that are rarely used because each mounted volume uses some server memory. Volumes can be mounted and dismounted while the server is active.

***SAME:** The value does not change.

***YES:** Mount the volume.

***NO:** Dismount the volume.

TEXT Specifies the text that briefly describes the volume. More information is in Commonly used parameters.

***SAME:** The value does not change.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Examples for CHGNTWVOL

Example 1: Enabling Compression on a Network Server

```
CHGNTWVOL VOL(APPS) SERVER(MKTING) DTACPR(*YES)
```

This command enables compression for volume APPS which resides on network server MKTING.

Example 2: Increasing Volume Size on a Local Server

```
CHGNTWVOL VOL(APPS) SERVER(MKTING)  
SIZE(500) NWSSTG(STGSPACE1)
```

This command increases the size of the APPS volume to 500 megabytes. This volume is on server MKTING which needs to be local server because NWSSTG is specified. Storage for the new volume segment is allocated from storage space STGSPACE1.

Error messages for CHGNTWVOL

***ESCAPE Messages**

FPE010D

Volume &1 not changed.

CHGNETA (Change Network Attributes) Command Description

CHGNETA Command syntax diagram

Purpose

The Change Network Attributes (CHGNETA) command changes the network attributes of a system.

Network attributes are saved by the Save System (SAVSYS) command. Network attributes are optionally restored to the system when the operating system is installed. The following network attributes are not restored if they are saved from another system: system name, local network ID, local control point name, default local location name, default mode, node type, maximum number of intermediate sessions, route addition resistance, network node servers, alert primary focal point, and alert default focal point, allow virtual controllers, allow HPR transport tower support, APPC device limit, and the four HPR path switch timers.

When a new default local location name, control point name, or network ID is specified, a check is made against the remote location list to determine whether the new qualified local location name or control point name already exists on the list. If it does, an error occurs and no network attributes change.

If there are synchronous datalink control (SDLC), Frame Relay Direct, or IDLC line descriptions that are varied on and the (SDLC) line descriptions that are varied on and the short hold mode node type (SHMNODE) parameter has a value of *T21, the physical interface (INTERFACE) parameter has a value of *X21, and the connection type (CNN) parameter has a value of *SHM, an attempt to change the network ID and the control point name causes an error, and no network attributes change.

An attempt to change the network attributes for

- the local control point name,
- the network ID,
- HPR transport tower support or
- the node type

will fail if there are any APPC or HOST controllers active which have the APPN option set to *YES and a link type of anything other than *DLUR. If this failure occurs, no network attributes will change.



If a new default local location name or network ID is entered, devices are checked to ensure that descriptions are still valid. When a new default local location name is entered, the entry is checked against existing device descriptions with LCLLOCNAME(*NETATR) to ensure that the LCLLOCNAME/RMTLOCNAME pair has different values. If either the default local location or network ID is changed, all devices attached to the same controller with LCLLOCNAME(*NETATR) or RMTNETID(*NETATR) are checked to ensure that each device description remains unique. If an error occurs, no network attributes change.

When the option is selected to allow APPN traffic to use virtual controllers, APPC devices with APPN(*YES) attached to real controllers will no longer be allowed to be varied on. An equivalent device attached to a virtual controller will instead be created and/or used.

Restrictions: This command is shipped with public *EXCLUDE authority. When this command is shipped, authority is issued only to the security officer. The security officer can grant the use of this command to other users.

A user is required to have both *ALLOBJ and *IOSYSCFG authority to change the network attributes JOBACN, DDMACC, and PCSACC.

A user is required to have *IOSYSCFG authority to change the network attribute ALWADDCLU.

More information on this command is in the Work Management  book or the Communications Management  book.

Optional Parameters

SYSNAME

Specifies the name assigned to the system. The name can contain up to 8 alphanumeric characters. The characters that are allowed are uppercase letters A through Z, 0 through 9, or special characters @, #, \$, and embedded blanks. Embedded blanks must be enclosed in single quotation marks (') in the same manner as other character strings. Leading blanks are not allowed.

If the system name is not set, it is defaulted at initial program load (IPL) to the machine serial number with the first character changed, if necessary, to an alphabetic character.

Note:

The use of the @, #, and \$ characters is not recommended because they are not part of an invariant character set and are not available on all keyboards.

***SAME:** The value does not change.

system-name: Specify the name that identifies the system. The pending system name is changed when a request to change the system name is issued. The pending system name becomes the current system name at the next IPL of the system. If the system name is changed during the IPL, the name specified becomes the current system name.

LCLNETID

Specifies the local network identifier (ID) assigned to the system. The name can contain up to 8 alphanumeric characters. The first character must be an uppercase letter A through Z, or special character \$, #, or @ and cannot contain blanks, plus signs (+), periods (.), or underscores (_). More information on these requirements is in APPC, APPN, and HPR topic in the Information Center.

***SAME:** The value does not change.

local-network-ID: Specify the ID of the local network. The network ID is changed if all APPC controllers with the APPN parameter set to *YES are varied off.

LCLCPNAME

Specifies the name of the local control point for the system. The name can contain up to 8 alphanumeric characters. The first character must be an uppercase letter A through Z, or special character \$, #, or @ and cannot contain blanks, plus signs (+), periods (.), or underscores (_). More information on these requirements is in APPC, APPN, and HPR topic in the Information Center. If the local control point name is not set, it is defaulted at IPL to the machine serial number with the first character changed (if necessary) to an alphabetic character.

***SAME:** The value does not change.

local-control-point-name: Specify the local control point name for the system. The control point name is changed if all APPC controllers with the APPN parameter set to *YES are varied off.

LCLLOCNAME

Specifies the local location name.

Note:

The name may contain up to 8 alphanumeric characters. The first character must be an uppercase letter A through Z, or special character \$, periods (.), or underscores (_). If the default local location name is not set, it is defaulted at IPL to the machine serial number (with the first character changed, if necessary, to an alphabetic character). More information is in APPC, APPN, and HPR topic in the Information Center.

***SAME:** The value does not change.

default-local-location-name: Specify the default local location name for the system.

DFTMODE

Specifies the default mode name for the system. The name can contain up to 8 alphanumeric characters in length. The first character must be an uppercase letter A through Z, or special character \$, #, or @ and cannot contain blanks, plus signs (+), periods (.), or underscores (_). More information is in APPC, APPN, and HPR topic in the Information Center.

***SAME:** The value does not change.

default-mode-name: Specify the default mode name. Mode names SNASVCMG and CPSVCMG are not allowed. Specifying BLANK for the default mode name is the same as specifying a mode name of all blanks.

NODETYPE

Specifies the APPN node type. More information is in APPC, APPN, and HPR topic in the Information Center.

***SAME:** The value does not change.

***ENDNODE:** The node does not provide network services to other nodes, but it can participate in the APPN network by using the services of an attached network server or it can operate in a peer-to-peer environment similar to migration end nodes. NODETYPE(*ENDNODE) cannot be specified if either ALRPRIFP(*YES) or ALRDFTFP(*YES) is specified.

***NETNODE:** The node provides intermediate routing and route selection services and distributed directory services for local users to end nodes and migration end nodes that it is serving.

***BEXNODE:** The node performs as a branch extender node. The node performs as an end node in the backbone APPN network, and performs as a network node server to end nodes within its local domain.

DTACPR

Specifies the level of data compression used when the iSeries 400 is an SNA end node.

***SAME:** The value does not change.

***NONE:** Data compression is not allowed on the session.

***ALLOW:** Data compression is allowed on the session by the local system if requested by a remote system. The local system does not request compression.

If data compression is requested by the remote system, the data compression levels used by the session are the lower of the requested levels and the configured levels.

***REQUEST:** Data compression is requested on the session by the local system. However, the request can be refused or changed to a lower compression level by the remote system. Data compression is allowed on the session if requested by the remote system.

The data compression levels that the local system requests are the configured levels. If data compression levels are changed by the remote system, they cannot exceed the configured values.

If data compression is requested by the remote system, the data compression levels used by the session are the lower of the requested levels and the configured levels.

***REQUIRE:** Data compression is required on the session. If the remote system does not accept the local system's exact required levels of compression, the session is not established.

The data compression levels that the local system requires are the configured levels.

line-speed: Specify the maximum line speed at which data is compressed. If the line speed of the link used by the session is less than or equal to this specified line speed, data compression is used for the session as if *REQUEST is specified. Otherwise, compression is used for the session as if *ALLOW is specified. Valid values range from 1 through 2147483647 in bits per second (bps).

DTACPRINM

Specifies the level of data compression to request when the iSeries 400 is an SNA intermediate node.

***SAME:** The value does not change.

***NONE:** The remote systems are not notified of a need to compress data when the iSeries 400 is an SNA intermediate node.

***REQUEST:** The remote systems are requested to compress data when the iSeries 400 is an SNA intermediate node.

line-speed: Specify a line speed. If either the receiving or sending link has a line speed equal to or less than this specified line speed, data compression is requested from the remote systems. Otherwise, remote systems are not requested to compress the data. Valid values range from 1 through 2147483647 bits per second (bps).

MAXINTSSN

Specifies the maximum number of APPN intermediate sessions. This parameter is used only if NODETYPE(*NETNODE) or NODETYPE(*BEXNODE) is specified. More information is in APPC, APPN, and HPR topic in the Information Center.

***SAME:** The value does not change.

maximum-number-of-intermediate-sessions: Specify the maximum number of intermediate sessions. Valid values range from 0 through 9999.

RAR Specifies the APPN route addition resistance (RAR). This parameter is used only if NODETYPE(*NETNODE) or NODETYPE(*BEXNODE) is specified. More information is in APPC, APPN, and HPR topic in the Information Center.

***SAME:** The value does not change.

route-addition-resistance: Specify the RAR. Valid values range from 0 through 255.

NETSERVER

Specifies the APPN network node servers. This parameter is used only if *ENDNODE or *BEXNODE is specified on the NODETYPE parameter. More information is in APPC, APPN, and HPR topic in the Information Center.

A network node server is a network identifier (ID) qualified by a control point name. Up to five network node servers can be specified. A network node server must be specified by using two values (one value for each element): the network ID and the control point name. Name restrictions are the same as those for LCLNETID and LCLCPNAME.

***SAME:** The value does not change.

***NONE:** The list of network node servers is cleared. This value can be specified as the only value for NETSERVER.

Element 1: Server Network ID

***LCLNETID:** The value used depends on the value of the network ID network attribute (LCLNETID) at the time the server is referenced.

network-ID: Specify the local network ID that becomes the network node server.

Element 2: Control Point Name

***ANY:** The first network node that offers services becomes the network node server. Any network node with the same network ID as that specified on the LCLNETID parameter can be a network node server.

control-point-name: Specify the control point name of the network node server.

ALRSTS

Specifies whether local alerts are generated. When alert processing is active, alerts are generated when a permanent error is encountered with local devices or control units, network lines, devices, and control units, and when programming and operator errors occur. More information is in the

Alerts Support  book and APPC, APPN, and HPR topic in the Information Center.

***SAME:** The value does not change.

***ON:** Alert processing is started. The system generates alerts for all alert conditions except unattended conditions.

***UNATTEND:** The system generates alerts for all alert conditions including those that have the alert indicator in the message description set ***UNATTEND**.

***OFF:** No monitoring of errors occurs.

ALRLOGSTS

Specifies how alerts are logged by the iSeries 400. More information on the logging of system alerts is in the Alerts Support  book.

***SAME:** The value does not change.

***NONE:** No alerts are logged.

***LOCAL:** Only locally generated alerts are logged.

***RCV:** Only alerts received from other systems are logged.


***ALL:** Both locally generated alerts and alerts received from other systems are logged.

ALRPRIFP

Specifies whether the system is an alert primary focal point. If the system is defined as a primary focal point, alerts are received from all network nodes explicitly defined in the sphere of control.

More information is in the Alerts Support  book and APPC, APPN, and HPR topic in the Information Center.

***SAME:** The value does not change.

***NO:** The system is not an alert primary focal point. Information about when this parameter can be changed from ***YES** to ***NO** is in the Alerts Support  book. Use the Display Sphere of Control Status (DSPSOCSTS) command to see the status for all systems in the sphere of control.


***YES:** The system is defined as an alert primary focal point and it provides focal point services to all systems in the network that are explicitly defined in the sphere of control. If a system is defined as a focal point, ALRLOGSTS(*ALL) or ALRLOGSTS(*RCV) must be specified to ensure that alerts coming in from nodes in the sphere of control are logged.

ALRDFTFP

Specifies whether the system is a default alert focal point. If the system is defined as a default alert focal point, alerts are received from all network systems not explicitly defined in the sphere of control of some other focal point system within the network. More information is in the Alerts

Support  book.

***SAME:** The value does not change.

***NO:** The system is not a default alert focal point. Information about when this parameter can be changed from ***YES** to ***NO** is in the Alerts Support  book. Use the Display Sphere of Control Status (DSPSOCSTS) command to show the status for all systems in the sphere of control.

***YES:** The system is a default alert focal point and it provides focal point services to all network systems not being serviced by either a primary focal point or another default focal point. If a system is defined as a focal point, NODETYPE(*NETNODE) must be specified.

ALRBCKFP

Specifies the name of the system that provides alert focal point services if the primary focal point is unavailable.

***SAME:** The value does not change.

***NONE:** The backup focal point is not defined.

Element 1: Network ID

***LCLNETID:** The network ID of the backup focal point is same as that of the local system.

network-ID: Specify the network ID of the system that provides backup focal point services for alerts.

Element 2: Control Point Name

control-point-name: Specify the control point name of the system that provides backup focal point services for alerts.

ALRRQSF

Specifies the name of the system that is requested to provide alert focal point services.

***SAME:** The value does not change.

***NONE:** A focal point is not requested. The current focal point is revoked.

Element 1: Network ID

***LCLNETID:** The network ID of the requested focal point is same as that of the local system.

network-ID: Specify the network ID of the system that is requested to provide focal point services for alerts.

Element 2: Control Point Name

control-point-name: Specify the control point name of the system that is requested to provide focal point services for alerts.

ALRCTL

Specifies the name of the controller through which alerts are sent on the alert controller session. Only a host or APPC controller can be specified. The controller must be varied on for alert processing to be operational on the alert controller session, although it does not need to be varied on when this command is used. More information about the alert controller session is in the Alerts

Support  book.

***SAME:** The value does not change.

***NONE:** No alert controller is described.

controller-name: Specify the name of the controller being used for alerts in an alert controller session. This controller is ignored if the system has a primary or default alert focal point (if, for example, the node is in another system's sphere of control).

ALRHLCNT

Specifies the maximum number of alerts that are created before the alerts are sent over the alert controller session (ALRCTL network attribute). The alerts are held (queued) by the system until the specified number of alerts have been created. This parameter can be used to manage alerts that are sent over a limited resource by reducing the number of times alerts are sent.

Note:

The ALRHLCNT is valid only when the ALRCTL parameter is specified. When management services sessions, APPN, and sphere of control support are used, the ALRHLCNT parameter is ignored.

***SAME:** The value does not change.

***NOMAX:** The alerts are held indefinitely. The current alert hold count is the maximum value. The alerts can be sent at a later time by changing the ALRHLDCNT value to a lower value.

alert-hold-count: Specify the maximum number of alerts that can be created before being sent. Alerts have a “held” status until the maximum is reached. If the value 0 is specified, alerts are sent as soon as they are created. Valid values range from 0 through 32767.

ALRFTR

Specifies the qualified name of the alert filter used by the alert manager when processing alerts.

» The alert filter must exist in the system Auxiliary Storage Pool (ASP) or in a basic user ASP. «

***SAME:** The value does not change.

***NONE:** An alert filter is not used.

The name of the alert filter can be qualified by one of the following library values:

***LIBL:** All libraries in the job’s library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

filter-name: Specify the name of the alert filter.

MSGQ

Specifies the qualified name of the message queue where messages received through the SNADS network are sent for users with no message queue specified in their user profile, or whose message queue is not available. » The message queue must exist in the system ASP or in a basic user ASP. «

***SAME:** The value does not change.

The possible library values are:

***LIBL:** The library list is used to locate the message queue.

When *LIBL is used as the library name, the library list of the job calling this command is searched to find a message queue with the specified object name. If the message queue is found, the name of the library in which it is found is used in the fully qualified name and it is stored. If the message queue is not found, an exception is signaled and no network attributes are changed.

***CURLIB:** The current library for the job is used to locate the message queue. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library where the message queue is located.

When the library name or *CURLIB is specified, this command attempts to find the message queue. If the message queue cannot be found in the specified library, a diagnostic message is sent. If all other parameters on the command are specified

correctly, and whether or not this command is able to find the message queue in the library specified, the MSGQ network attribute is changed to the qualified message queue name.

message-queue-name: Specify the name of the message queue.

OUTQ Specifies the qualified name of the output queue.

***SAME**: The value does not change.

The possible library values are:

***LIBL**: The library list is used to locate the output queue.

When *LIBL is used as the library name, the library list of the job calling this command is searched to find an output queue with the specified object name. If the output queue is found, the name of the library in which it is found is used in the qualified name and it is stored. If the output queue is not found, an exception is signaled, and no network attributes are changed.

***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, the QGPL library is used.

library-name: Specify the name of the library where the output queue is located.

When the library name or *CURLIB is specified, this command attempts to find the output queue. If the output queue cannot be found in the specified library, a diagnostic message is sent. If all other parameters on the command were specified correctly, and whether or not this command finds the output queue in the specified library, the OUTQ network attribute is changed to the output queue name.

output-queue-name: Specify the name of the output queue.

JOBACN

Specifies the action taken for job input streams received through the SNADS network by the system.

***SAME**: The value does not change.

***REJECT**: The input stream is rejected by the system. This action allows the user to secure the system from input streams received through the network.

***FILE**: The input stream is filed in the queue of network files received for the user to which it was sent. That user can then look at, end, or receive the input stream, or submit it to a job queue.

***SEARCH**: The table of network job entries is searched to determine the action taken for the input stream.

MAXHOP

Specifies the maximum number of times in a SNADS network that a distribution queue entry originating at this node can be received and routed on the path to its final destination. If this number is exceeded, the distribution queue entry is canceled, and a feedback status is sent to the sender.

***SAME**: The value does not change.

maximum-hop-count: Specify the maximum number of times that a distribution queue entry can be received and routed before it is canceled. Valid values range from 1 through 255.

DDMACC

Specifies how the system processes distributed data management (DDM) and Distributed Relational Database Architecture (DRDA) requests from remote systems for access to the data resources of the system. The DDM and DRDA connections refer to APPC conversations or active TCP/IP or OptiConnect connections. Changes to this parameter are immediate and apply to DRDA, DDM, or DB2 Multisystem applications. However, jobs that are currently running on the system do not use the new value. The DDMACC value is accessed only when a job is first started. You must specify a special value or program name which dictates how the requests are to be handled.

» If a program name is specified, the program must exist in the system ASP or in a basic user ASP. «

***SAME:** The value does not change.

***REJECT:** This system does not allow DDM and DRDA requests from remote systems. However, this system can still use DDM or DRDA to access files or SQL tables on remote systems. Source(client) systems cannot access files or SQL tables on an iSeries 400 that specifies *REJECT.

***OBJAUT:** If the user profile associated with the DDM or DRDA job is authorized to the files, all file or remote SQL requests are accepted. Object authorities such as read, write, or update must also exist for the files.

The possible library values are:

***LIBL:** The library list is used to locate the validation program.

If *LIBL is used as the library name, the library list of the job calling this command is searched to find the program name with the specified object name. If the program name is found, the name of the library in which it is found is used in the fully qualified name and it is stored. If the program name is not found, an error message is sent and no network attributes are changed.

***CURLIB:** The current library for the job is used to locate the validation program. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library where the validation program is located.

When the library name or *CURLIB is specified, this command attempts to find the program name. If the program name cannot be found in the specified library, a diagnostic message is sent to the user. If this command is able to find the program name in the specified library, the DDMACC network attribute is changed to the qualified program name, if all other parameters on the command are specified correctly.

program-name: Specify the name of the validation program.

The program name is the name of the customer validation program that can supplement system object level security. This user-exit program can restrict user access to *PUBLIC and privately authorized files. The target DDM support calls the user program each time a file is read. The user exit program indicates to DDM whether the request must proceed or end. The iSeries 400 object level security still applies. More information about this program is in the File Management topic in the Information Center.

PCSACC

Specifies how Client Access/400 requests are handled. You must specify a special value or program name which dictates how the requests are to be handled. This permits greater control

over Client Access/400 applications. Changes to this parameter are immediate. However, jobs currently running on the system do not use the new value. The PCSACC value is used only when a job is first started.

» If a program name is specified, the program must exist in the system ASP or in a basic user ASP. «

***SAME:** The value does not change.

***REJECT:** The system rejects all requests from the client.

***OBJAUT:** Normal object authorizations are checked for this client request (for example, authorization to retrieve data from a database file for a transfer facility request).

***REGFAC:** The system uses the system's registration facility to determine which exit program (if any) to run. If no exit program is defined for an exit point and this value is specified, *OBJAUT is used.

The possible library values are:

***LIBL:** The library list is used to locate the program.

When *LIBL is used as the library name, the library list of the job calling this command is searched to find the program name with the specified object name. If the program name is found, the name of the library in which it is found is used in the fully qualified name and it is stored. If the program name is not found, an error message is sent and no network attributes are changed.

***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, the QGPL library is used.

library-name: Specify the name of the library where the program is located.

When the library name or *CURLIB is specified, this command attempts to find the program name. If the program name cannot be found in the specified library, a diagnostic message is sent to the user. If all other parameters on the command were specified correctly, and whether or not this command is able to find the program name in the specified library, the PCSACC network attribute is changed to the qualified program name.

program-name: Specify the name of the program.

The program name is the name of the customer-supplied Client Access/400 host system application exit program that can supplement system object level security. This user-exit program can restrict requests handled from the client. Each personal computer support application calls the exit program for requests from the client. Two parameters are passed to the user-exit program: the first describes the client request (which application and what kind of request). The second is used by the exit program to indicate to the client support application whether this client request must be handled.

DFTNETTYPE

Specifies the system default value for the integrated services digital network (ISDN) network type.

This parameter affects the creation of network interface and connection list objects on the system. The value specified here becomes the default network type (*NETTYPE) for connection lists and network interface descriptions created using the Create Connection List (CRTCNL) command and the Create Network Interface description for ISDN (CRTNWIISDN) command.

***SAME:** The value does not change.

- ***ATT:** This value is used when attaching to an ISDN that uses an AT&T interface.
- ***DBP1TR6:** This value is used when attaching to an ISDN controlled by Germany's Post Telephone and Telegraph Administration (PPT). (Deutsche Bundespost 1TR6).
- ***ETSI:** This value is used when attaching to the ISDN that uses a European interface (ETSI, also known as EuroISDN standard).
- ***JAPAN:** This value is used when attaching to an ISDN that uses a Japanese interface.
- ***NISDN:** This value is used when attaching to an ISDN that uses a North American interface.
- ***NORTEL:** This value is used when attaching to an ISDN that uses the Northern Telecom interface.
- ***NORTHAMT1:** This value is used when attaching to a channelized North American T1 interface.

DFTCNNLST

Specifies the system default value for the ISDN connection list. The connection list contains information for identifying authorized incoming calls.

This parameter affects the creation of ISDN Data Link Control (IDLC) line description objects on the system. The value specified here becomes the default connection list for line descriptions created using the Create Line Description for IDLC (CRTLINIDLC) command.

***SAME:** The value does not change.

connection-list-name: Specify the name of the default connection list.

ALWANYNET

Specifies the network attribute that allows iSeries 400 Communications APIs to use other communication transports that are not native for that API. Examples include ICF over TCP/IP or Sockets over SNA.

***SAME:** The value does not change.

***NO:** SNA transport is not used.

***YES:** SNA transport is used.

NWSDOMAIN

Specifies the LAN Server domain to which all Integrated PC Servers, also known as File Server Input/Output Processors (FSIOP) on the system belong.

***SAME:** The value does not change.

***SYSNAME:** The current system name is used.

system-name: Specify a 1 to 8-character system name.

ALWVRTAPPN

Specifies the network attribute that allows APPN sessions and devices to use virtual controllers.

Note: The setting of this parameter has nothing to do with sessions using HPR transport tower support—only APPN (non-HPR) session traffic is affected by this parameter setting; if sessions are using HPR transport tower support they will use virtual controllers, regardless of the setting of this network attribute.

***SAME:** The value does not change. Allowing APPN sessions and devices to use virtual controllers is shipped with a value of *NO.

***NO:** Virtual APPN controllers are not used.

***YES:** Virtual APPN controllers are used.

ALWHPRTWR

Specifies the network attribute that allows the use of HPR transport tower support for APPN session traffic.

***SAME:** The value does not change. The use of HPR transport tower support for APPN session traffic is shipped with a value of *NO.

***NO:** HPR transport tower is not used.

***YES:** HPR transport tower is used.

VRTAUTODEV

Specifies the upper limit for number of automatically created APPC devices on virtual controllers.

***SAME:** The value does not change. The limit for the number of automatically created APPC devices on virtual controllers is shipped with a value of 100.

autocreated-device-limit: Specify the limit for the number of automatically created APPC devices on virtual controllers. If the number of devices attached to a virtual controller is equal or greater than the specified value, no additional APPC devices will be automatically created for that virtual controller. Additional devices beyond this limit may still be created manually. Valid values range from 1 through 254.

HPRPTHMR

Specifies the amount of time in minutes to allow for a path switch attempt of an RTP connection. Four positional values can be specified to control the time allowed based on the type of session traffic:

- Network Priority Traffic
- High Priority Traffic
- Medium Priority Traffic
- Low Priority Traffic

Element 1: Network Priority

***SAME:** The value does not change. The amount of time to allow for a path switch attempt of an RTP connection that has network transmission priority is shipped with a value of 1 minute.

***NONE:** No path switch is allowed.

network-priority: Specify the amount of time in minutes to allow for a path switch attempt of an RTP connection that has network transmission priority. Valid values range from 1 through 10000.

Element 2: High Priority

***SAME:** The value does not change. The amount of time to allow for a path switch attempt of an RTP connection that has high transmission priority is shipped with a value of 2 minutes.

***NONE:** No path switch is allowed.

high-priority: Specify the amount of time in minutes to allow for a path switch attempt of an RTP connection that has high transmission priority. Valid values range from 1 through 10000.

Element 3: Medium Priority

***SAME:** The value does not change. The amount of time to allow for a path switch attempt of an RTP connection that has medium transmission priority is shipped with a value of 4 minutes.

***NONE:** No path switch is allowed.

medium-priority: Specify the amount of time in minutes to allow for a path switch attempt of an RTP connection that has medium transmission priority. Valid values range from 1 through 10000.

Element 4: Low Priority

***SAME:** The value does not change. The amount of time to allow for a path switch attempt of an RTP connection that has low transmission priority is shipped with a value of 8 minutes.

***NONE:** No path switch is allowed.

low-priority: Specify the amount of time in minutes to allow for a path switch attempt of an RTP connection that has low transmission priority. Valid values range from 1 through 10000.

ALWADDCLU

Specifies whether this system will allow another system to add it as a node in a cluster.

***SAME:** The value does not change. The system is shipped with a value of *NONE.

***NONE:** No other system can add this system as a node in a cluster.

***ANY:** Any other system can add this system as a node in a cluster.

***RQSAUT:** Any other system can add this system as a node in a cluster only after the cluster add request has been authenticated.

MDMCNTRYID

Specifies the country or region identifier associated with a modem. The list of valid modem country or region identifiers will be displayed when F4 is pressed while prompting for this parameter.

MDMCNTRYID defines the country-specific or region-specific default characteristics for modems which are internal to iSeries 400 I/O adapters. This value must be configured correctly to insure proper operation and, in some countries or regions, meet legal requirements. The adapter will fail the vary on of the line if modem country or region ID is not set.

***SAME:** The value does not change. The system is shipped with blanks.

modem-country-or-region-ID: Specify the country or region identifier to be used by a modem.

Examples for CHGNETA

Example 1: Changing the Pending System Name

```
CHGNETA SYSNAME(SYSTEST) ALRSTS(*ON) ALRPRIFP(*YES)
ALRLOGSTS(*LOCAL)
```

This command changes the pending system name. The current system name is changed at the next IPL. Local alerts are generated and logged and the system is a primary focal point.

Example 2: Changing the Node Servers

```
CHGNETA LCLCPNAME(CPNAME) LCLNETID(NETNAME)
NETSERVER>(*LCLNETID BOSTON)
(MINN ROCHEST) (MAINE BANGOR))
```

This command changes the name of the local control point, the network ID, and the list of network node servers. The servers are used only if the node type is *ENDNODE or *BEXNODE.

Example 3: Clearing the List of Node Servers

```
CHGNETA NETSERVER(*NONE) DDMACC(DDMLIB/DDMPGM)
```

This command clears the list of network node servers and sets the name of the DDM access program.

Example 4: Changing the Pending System Name

```
CHGNETA SYSNAME(SYSTEST) ALRSTS(*ON) ALRPRIFP(*YES)
ALRLOGSTS(*LOCAL)
```

This command changes the pending system name. The current system name is changed at the next IPL. Local alerts are generated and logged and the system is a primary focal point.

Example 5: Clearing the List of Node Servers

```
CHGNETA NETSERVER(*NONE) DDMACC(DDMLIB/DDMPGM)
```

This command clears the list of network node servers and sets the name of the DDM access program.

Example 6: Implementing the APPN Virtual Object Model

```
CHGNETA ALWVRTAPPN(*YES)
```

This command causes any future APPN devices and sessions to use virtual controllers.

Example 7: Allowing HPR Transport Tower for APPN Sessions

```
CHGNETA ALWHPRTWR(*YES) HPRPTHMR(1 2 4 8)
```

This command enables APPN session traffic to use HPR transport tower support when possible. It also resets the HPR path switch timers to the default values.

Error messages for CHGNETA

***ESCAPE Messages**

CPFE018

Subsystem QSYSWRK not active or being ended.

CPFE033

IP over IPX not activated.

CPFE034

IP over IPX activated; however errors occurred.

CPFE035

IP over IPX deactivated; however errors occurred.

CPF1001

Wait time expired for system response.

CPF1007

Character is not valid for value &1.

CPF1066

Network attributes not changed.

CPF1097

No authority to change certain network attributes.

CPF1844

Cannot access network attribute &1.

CPF9801

Object &2 in library &3 not found.

CPF9807

One or more libraries in library list deleted.

CPF9808

Cannot allocate one or more libraries on library list.

CPF9899

Error occurred during processing of command.

CHGNFSEXP (Change Network File System Export) Command

Description

CHGNFSEXP Command syntax diagram

Purpose

The Change Network File System Export (CHGNFSEXP) command adds directory names to (exports) or removes directory names from (unexports) the list of directory trees that are currently exported to Network File System (NFS) clients. The flags in the OPTIONS list indicate what actions you want the CHGNFSEXP command to perform.

A list of directories and options for exporting the directory and its contents is stored in the */etc/exports* file. The CHGNFSEXP command allows you to export all of the directory trees specified in the file using the **-A** flag, or to export a single directory tree by specifying the directory name. When the directory tree being exported exists in the */etc/exports* file, you can export it with the options specified there, or you can use the **-I** flag to override the options, specifying the new options on the CHGNFSEXP command.

You can also export a directory tree not previously defined in the */etc/exports* file by providing the options for it on the CHGNFSEXP command. You can unexport directory trees by using the **-U** flag on the CHGNFSEXP command.

You can also add, change, or remove export entries in the */etc/exports* file by using the **-F** flag.

This command can also be issued using the following alternative command name:

- EXPORTFS

For more information about Network File System commands, see the OS/400 Network File System

Support  book.

Restrictions:

The following restrictions apply when changing export entries:

1. The user must have *IOSYSCFG special authority to use this command.
2. The user must have read (*R) and write (*W) data authority to the */etc* directory.
3. The user must have read and write access (*RW) to the */etc/exports* file when using the **-F** flag.

Optional Parameters

Note:

A value (other than *NONE) must be specified for either the OPTIONS or DIR parameter. Both OPTIONS and DIR can be specified so long as '-A' is not part of the options list specified for the OPTIONS parameter.

OPTIONS

The export options list contains some flags followed optionally by a list containing a character string of characteristics for the directory tree being exported.

Each flag consists of a minus "-" followed by a character. The flags are separated by spaces. Only certain combinations of flags are allowed. If an invalid combination is detected, an error is returned.

***DFT:** The default value for the options string is:

'-A'

The following are the available flags:

- A** This is the “all” flag and it indicates that all entries in the */etc/exports* file are to be processed. The following flag combinations have special significance:
 - A and not -U**
This will export every entry in the */etc/exports* file (making them available to NFS clients).
 - A and -U**
This will unexport every entry that is currently exported (making them unavailable to NFS clients). This makes no reference to the contents of the */etc/exports* file.
 - A and the DIR parameter**
This combination is not allowed.
 - A and (-I or -F or -O)**
These combinations are not allowed.

- I** This is the “ignore” flag and it indicates, for the directory tree specified in the DIR parameter, how the export characteristics are determined. The following flag combinations have special significance:
 - I and -O**
The export characteristics specified on the -O flag are used, and the definitions listed in the */etc/exports*, if they exist, are ignored.
 - not -I and not -O**
Either the export characteristics listed for the entry in the */etc/exports* file are used, or, if there are no options in that file, the default options are assumed. See the -O flag description for the list of default options.
 - I and (-A or -U)**
These combinations are not allowed.

- U** This is the “unexport” flag and it indicates that the specified directory tree entered in the DIR parameter is to be unexported (made unavailable to NFS clients). The following flag combinations have special significance:
 - U and -A**
This will unexport every entry that is currently exported (making them unavailable to NFS clients). This makes no reference to the contents of the */etc/exports* file.
 - U and -F**
The entry referenced in the DIR parameter is removed from the */etc/exports* file (if it exists) in addition to being unexported (making it unavailable to NFS clients).
 - U and (-I or -O)**
These combinations are not allowed.

- F** This is the “file” flag and it requires the DIR parameter. The following flag combinations have special significance:
 - F and -U**
The entry referenced in the DIR parameter is removed from the */etc/exports* file (if it exists) in addition to being unexported (making it unavailable to NFS clients).
 - F and not -U and not -O**
The specified directory tree entered in the DIR parameter is to be exported (made

available to NFS clients). In addition, an entry for this directory tree entered in the DIR parameter will be added to the */etc/exports* file. If the entry already exists in the file, it will be replaced with this new export entry. If the file does not exist, it will be created and the export entry will be added to it. Note that the “ignore” flag -I is implied when the “file” flag -F is specified without the “unexport” flag -U. Since the “options” flag -O is not specified, the default options are assumed. See the -O flag description for the list of default options.

-F and not -U and -O

The specified directory tree entered in the DIR parameter is to be exported (made available to NFS clients). In addition, an entry for this directory tree entered in the DIR parameter will be added to the */etc/exports* file. If the entry already exists in the file, it will be replaced with this new export entry. If the file does not exist, it will be created and the export entry will be added to it. Note that the “ignore” flag -I is implied when the “file” flag -F is specified without the “unexport” flag -U. All export characteristic options provided with the “options” flag -O are stored in the */etc/exports* file as given on the command.

-F and -A

This combination is not allowed.

Note:

Successful use of the -F flag will cause the contents of the */etc/exports* file to be replaced completely such that it reflects the changes, additions, or deletions caused by the -F flag. Any unrelated existing entries are copied, however ALL comments in the */etc/exports* file will be lost as a result of using the -F flag.

-E This is the “escape message” flag and it indicates that an escape message should be issued if the command fails for any of the exports attempted.

-O This flag specifies the export characteristics for the directory tree that is to be exported (made available to NFS clients). The options list following the -O flag list consists of keywords separated by commas. Some keywords are followed by an equal ‘=’ and a value (or list of values separated by colons ‘:’). The options list may contain spaces. If a keyword is not specified, the default value for that option will be used. The -O flag is only valid when either the “ignore” flag -I or the “file” flag -F is specified.

If options are required and the -O flag is not specified, the following are the default options.

- ‘RW=’ All host names have read-write access to the directory tree.
- ANON=UID associated with the profile *QNFSANON*.
- Requests to bits in the mode other than the permission bits are allowed.
- ‘ROOT=’ Root access is not allowed for any hosts.
- ‘ACCESS=’ All clients are allowed to mount the directory.

The following are the available options keywords and their descriptions.

RO Specifies the protection for the exported directory tree. If RO is specified, the directory tree is exported allowing only read-only access to the directory and its contents. If it is not specified, read-write access is allowed to the directory and its contents.

RW=[HOSTNAME[:HOSTNAME:]](...)

Specifies the host name or host names which will be allowed read-write access to the exported directory and its contents. For host names not specified, the directory and its contents will be exported allowing only read-only access.

If neither RO or RW is specified, then 'RW=' is assumed, and all host names have read-write access to the exported directory.

ANON=UID

If a request comes in from an unknown user, use this UID as the effective userid. Note that root users are considered unknown, unless specified on the ROOT parameter below. The default value for this option is the UID associated with the user profile *QNFSANON*.

If you do not want to allow any requests from unknown users, use 'ANON=-1'.

NOSUID

Specifies that any attempt by the client to enable bits other than the permission bits will be ignored. If this option is not specified, attempt to set bits other than the permission bits will be carried out.

ROOT=[HOSTNAME[:HOSTNAME]](...)

Specifies the host name or host names for which root access is allowed to the exported directory tree. If root access is allowed for a host, an incoming UID of 0 is mapped to the user profile QSECOFR, and incoming requests from users with *ALLOBJ authority are allowed. If root access is not allowed for a host, an incoming UID of 0 and incoming requests from users with *ALLOBJ authority are mapped to the UID provided in the ANON option. If the ROOT option is not specified, no hosts will be granted root access.

ACCESS=[CLIENT[:CLIENT]](...)

Specifies the client or clients that are allowed to mount the exported directory tree. A client can be a host name or a netgroup. If no clients are specified, all clients will be allowed to mount the directory tree.

DIR Specifies the absolute path name of the existing directory to be exported (made available to NFS clients) or unexported (made unavailable to NFS clients). This directory can not be a subdirectory or a parent of an already exported directory (unless it is in a different file system). This parameter is not allowed when the -A flag is specified on the OPTIONS parameter. This parameter is required when the -F flag is specified on the OPTIONS parameter.

HOSTOPT

The HOSTOPT parameter has four elements that specify additional information about the NFS clients that a directory tree is being exported to. If you do not specify a HOSTOPT parameter for a host name you are exporting the directory tree to, the defaults for each of the elements of the HOSTOPT parameter are assumed for that host.

***DFT:** The default values for the elements of the HOSTOPT parameter are used for all clients to which the directory tree or directory trees are being exported. The network data file CCSID is *BINARY, the network path name CCSID is *ASCII, and Force synchronous write is *SYNC.

Element 1: Host name

The name of the host for which you are specifying additional options. This host should be specified above in the OPTIONS -O list as a host that has access to the exported directory tree. Specify either a single host name that is an alias for an address of a single host or a netgroup name to be associated with these options.

You can assign names to an internet address with the Work with TCP/IP host table entries option on the Configure TCP/IP menu (CFGTCP command) or via the iSeries Navigator graphical user interface. Also, a remote name server can be used to map remote system names to internet addresses.

Element 2: Network Data File CCSID

The network data file coded character set identifier (CCSID) is used for data of the files sent and received from the specified HOST NAME (or netgroup name). For any hosts not specified on a HOSTOPT parameter, the default network data file CCSID (binary, no conversion) is used. The CCSID may be one of the following:

***BINARY:** The default network data file CCSID (binary, no conversion) is used.

***ASCII:** The ASCII equivalent of the coded character set identifier (CCSID) obtained from the job CCSID is used.

***JOBCCSID:** The CCSID from the default job CCSID is used.

network-data-file-CCSID: Specify a coded character set identifier (CCSID) for data files. Valid values are 1 through 65533.

Element 3: Network Path Name CCSID

The network path name coded character set identifier (CCSID) is used for the path name components of the files sent to and received from the specified HOST NAME (or netgroup name). For any hosts not specified on a HOSTOPT parameter, the default network path name CCSID (ASCII) is used. The CCSID may be one of the following:

***ASCII:** The ASCII equivalent of the coded character set identifier (CCSID) obtained from the default job CCSID is used.

***JOBCCSID:** The CCSID from the default job CCSID is used.

network-path-name-CCSID: Specify a coded character set identifier (CCSID) for path name components of files. Valid values are 1 through 65533.

Element 4: Write mode

Specifies whether write requests are handled synchronously or asynchronously for this HOST NAME (or netgroup name). The default value of *SYNC means that data may will be written to disk immediately. *ASYNC does not guarantee that data is written to disk immediately, and can be used to improve server performance.

Note: The Network File System (NFS) protocol has traditionally used synchronous writes.

***SYNC:** Write requests are performed synchronously.

***ASYNC:** Write requests are performed asynchronously.

Examples for CHGNFSEXP

Example 1: Exporting all entries from */etc/exports*

```
CHGNFSEXP OPTIONS('-A')
CHGNFSEXP '-A'
```

Both of these commands export all entries that exist in the */etc/exports* file.

Example 2: Exporting one directory with options

```
CHGNFSEXP '-I -O RO,ANON=guest1,ACCESS=Roch1:9.7.431.2'
          '/programs/public'
          HOSTOPT((MIAMI1 850 850))
```

This command exports the directory tree under the path name */programs/public* as read-only. It allows only two clients to mount this directory tree. It takes advantage of the positional parameters, which do not require keywords. It uses the HOSTOPT parameter to specify code pages for the host MIAMI1.

Example 3: Exporting one directory with options and updating the */etc/exports* file.

```
CHGNFSEXP '-I -F -O RO,ANON=guest1,ACCESS=Roch1:9.7.431.2'  
          '/programs/public'  
          HOSTOPT((MIAMI1 850 850))
```

This command exports the directory tree under the path name */programs/public* as read-only. It allows only two clients to mount this directory tree. The **OPTIONS** parameter value is specified positionally. It uses the **HOSTOPT** parameter to specify data and path name coded character set identifiers (CCSIDs) of 850 for host name MIAMI1.

In addition, it also adds an export entry for */programs/public*, along with the **OPTIONS** and **HOSTOPT** parameter values, to the */etc/exports* file.

Error messages for CHGNFSEXP

None

EXPORTFS (Change Network File System Export) Command Description

EXPORTFS Command syntax diagram

EXPORTFS Command	For the description of the EXPORTFS command, see the CHGNFSEXP (Change Network File System Export) command description.
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CHGNWIATM (Change Network Interface (ATM Network)) Command Description

CHGNWIATM Command syntax diagram

Purpose

The Change Network Interface (ATM) (CHGNWIATM) command changes a network interface description for an Asynchronous Transfer Mode (ATM) network. More information about using this command is in the

Communications Configuration  book.

Required Parameters

NWID Specifies the name of the network interface description.

network-interface-description-name: Specify the name of a network interface description.

RSRCNAME

Specifies the resource name that identifies the hardware that the description represents.

Note: Use the Work with Hardware Resources (WRKHDWRSC) command with *CMN specified for the **TYPE** parameter to help determine the resource name. Specify the resource name of the communications port. The resource name consists of the input/output adapter (IOA) resource name and the port number on the IOA. For example, if the resource name of the IOA is LIN01 and the port on the IOA is 1, then the resource name is LIN011.

***SAME:** The value does not change.

resource-name: Specify a resource name.

Optional Parameters

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***SAME:** The value does not change.

***YES:** The network interface is automatically varied on at IPL.

***NO:** This network interface is not automatically varied on at IPL.

VRYWAIT

Specifies whether the network interface is varied on asynchronously or synchronously. For a synchronous vary on, specifies how long the system waits for the vary on to complete.

***SAME:** The value does not change.

***NOWAIT:** The system does not wait for the vary on to complete. The network interface is varied on asynchronously.

vary-on-wait: Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the network interface is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

Notes:

1. Specifying a wait time in the network interface description affects system IPL time, if ONLINE(*YES) is used, by the amount of time it takes to synchronously vary on the network interface or reach the wait-time value.
2. The time required to vary on a network interface is the time it takes to put tasks in place to manage the network interface, to activate the communications I/O processor (IOP) (including downloading the IOP model-unique Licensed Internal Code), and to establish communications with the data circuit-terminating equipment (DCE). Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, network interface protocol, and other factors.

NETTYPE

Specifies the type of network.

***SAME:** The value does not change.

***AUTO:** The system automatically detects the network type, the first time the network interface is varied on. The reported network type will be set to *UNI30 or *UNI31.

***UNI30:** The network uses the UNI3.0 standard. Switched virtual circuit (SVC) connections are used.

***UNI31:** The network uses the UNI3.1 standard. Switched virtual circuit (SVC) connections are used.

➤ ***UNI40:** The network uses the UNI4.0 standard. Switched virtual circuit (SVC) connections are used. ⏪

***PVCONLY:** The network uses only permanent virtual circuit (PVC) connections. No switched virtual circuit (SVC) connections are used.

MAXPMP SYS

Specifies the maximum number of end systems for all point to multipoint connections.

***SAME:** The value does not change.

maximum-PMP-systems: Specify the maximum number of end systems for all point to multipoint connections. The value must be in the range of 0 to 2048.

SVCCNN

Specifies maximum number of switched virtual circuit connections that can be established by this network interface.

***SAME:** The value does not change.

switched-virtual-connections: Specify the maximum number of switched virtual connections. This is a numeric value in the range of 16 to 2064.

NETSWTTIMO

Specifies the amount of time the ATM adapter card waits to make a connection to the network switch before ending a vary-on sequence with failing status.

***SAME:** The value does not change.

***NOMAX:** There is no time limit to make a connection.

network-switch-time-out: Specify the amount of time the ATM adapter card waits to make a connection to the network switch. This is a numeric value in the range of 1 to 30 minutes.

PHYLYROPT

Specifies the control options for the physical interface.

***SAME:** The value does not change.

***NONE:** No control options are specified.

physical-layer-options: Specify the control options for the physical interface. This is a hexadecimal value in the range of 0000 to FFFF.

CMNRCYLMT

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

***SAME:** The value does not change.

Element 1: Maximum Recovery Limit

count-limit: Specify the number of recovery attempts to be made. Valid values range from 0 through 99.

Element 2: Recovery Time Interval

time-interval: Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

Other Single Value

***SYSVAL:** The recovery limits specified in the QCMNRCYLMT system value are used.

TEXT Specifies the text that briefly describes the network interface. More information is in Commonly used parameters.

***SAME:** The value does not change.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CHGNWIATM

```
CHGNWIATM  NWID(NWIATM1)  RSRNAME(LINE031)
           ONLINE(*YES)  VRYWAIT(15)
```

This command changes the ATM network interface NWI1TM1. NWIATM1 represents the resource named LINE031. NWIATM1 is varied on at initial program load (IPL) with a vary on wait time of 15 seconds.

Error messages for CHGNWIATM

None

CHGNWIFR (Change Network Interface (Frame Relay Network)) Command Description

CHGNWIFR Command syntax diagram

Purpose

The Change Network Interface (Frame-Relay Network) (CHGNWIFR) command changes a network interface for a frame-relay network (FR) interface. More information about using this command is in the

Communications Configuration  book.

Required Parameter

NWID Specifies the name of the network interface description.

network-interface-description-name: Specify the name of a network interface description.

Optional Parameters

RSRCNAME

Specifies the resource name that identifies the hardware that the description represents.

Note:

Use the Work with Hardware Resources (WRKHDWRSC) command with *CMN specified for the TYPE parameter to help determine the resource name. Specify the resource name of the communications port. The resource name consists of the input/output adapter (IOA) resource name and the port number on the IOA. For example, if the resource name of the IOA is LIN01 and the port on the IOA is 1, then the resource name is LIN011.

***SAME:** The value does not change.

resource-name: Specify a resource name.

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***SAME:** The value does not change.

***YES:** The network interface is automatically varied on at IPL.

***NO:** This network interface is not automatically varied on at IPL.

VRYWAIT

Specifies whether the network interface is varied on asynchronously or synchronously. For a synchronous vary on, specifies how long the system waits for the vary on to complete.

***SAME:** The value does not change.

***NOWAIT:** The system does not wait for the vary on to complete. The network interface is varied on asynchronously.

vary-on-wait: Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the network interface is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

Notes:

1. Specifying a wait time in the network interface description affects system IPL time, if ONLINE(*YES) is used, by the amount of time it takes to synchronously vary on the network interface or reach the wait-time value.
2. The time required to vary on a network interface is the time it takes to put tasks in place to manage the network interface, to activate the communications I/O processor (IOP) (including downloading the IOP model-unique Licensed Internal Code), and to establish communications with the data circuit-terminating equipment (DCE). Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, network interface protocol, and other factors.

NRZI Specifies whether non-return-to-zero-inverted (NRZI) data encoding is used for modems that are sensitive to certain bit patterns in the data stream. This ensures that the signal does not stay the same for an extended period of time.

Note: All data communications equipment on the line must use the same transmission method.

***SAME:** The value does not change.

***YES:** NRZI data encoding is used.

***NO:** NRZI data encoding is not used.

CLOCK

Specifies the method in which the clocking function is provided for the network interface.

***MODEM:** The modem provides the clocking.

***LOOP:** The system inverts the clock from the modem and uses it as the transmit clock on the line.

Note: CLOCK(*LOOP) is not valid when INTERFACE(*RS449V36) or INTERFACE(*V35) is specified.

***INVERT:** The transmit clock provided by the modem data circuit-terminating equipment (DCE) is inverted before use. This option can be used when having problems with high speed data transmission and the modem (DCE) does not support looped clocking.

LINESPEED

Specifies the line speed in bits per second (bps)

***SAME:** The value does not change.

56000: The line speed is 56000 bps.

64000: The line speed is 64000 bps.

128000: The line speed is 128000 bps.

192000: The line speed is 192000 bps.

256000: The line speed is 256000 bps.

320000: The line speed is 320000 bps.

384000: The line speed is 384000 bps.

448000: The line speed is 448000 bps.

512000: The line speed is 512000 bps.

1024000: The line speed is 1024000 bps.

1536000: The line speed is 1536000 bps.

2048000: The line speed is 2048000 bps.

line-speed: Specify the line speed. Valid values range from 56000 bps through 2048000 bps.

LMIMODE

Specifies whether the local management interface (LMI) for this adapter is configured as terminal equipment or a frame handler.

***SAME:** The value does not change.

***TE:** The local system is configured to interface with a frame relay network as terminal equipment. The frame relay network must be set to operate at ANSI T1.617 Annex D, to be compatible with iSeries 400 link management frames.

***FH:** The local system is configured to interface with another system as a frame handler. In this configuration, the local system is performing as the frame relay network.

***ANNEXA:** The local system is configured to interface with a frame relay network as terminal equipment. The frame relay network must operate as an ITU (previously CCITT) Q.933 Annex A to be compatible with iSeries 400 link management frames.

***NONE:** The local system is configured to interface with the frame relay network or another system without performing any LMI function.

POLLITV

Specifies the rate of the polling cycle. The polling cycle consists of a status enquiry message and a status message exchange. The status message includes the status of the DLCI.

***SAME:** The value does not change.

10: A polling interval of 10 seconds is used.

polling-interval: Specify the polling interval to be used within a 5 to 30 second range.

FULLINQTV

Specifies the number of polling cycles that occur before a full status inquiry is requested.

***SAME:** The value does not change.

6: A full inquiry interval of 6 polling cycles is used.

full-inquiry-interval: Specify the number of polling cycles for a full status cycle to be requested. Valid values range from 1 through 255.

CMNRCYLMT

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

***SAME:** The value does not change.

***SYSVAL:** The recovery limits specified in the QCMNRCYLMT system value are used.

Element 1: Maximum Recovery Limit

count-limit: Specify the number of recovery attempts to be made. Valid values range from 0 through 99.

Element 2: Recovery Time Interval

time-interval: Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

TEXT Specifies the text that briefly describes the network interface. More information is in Commonly used parameters.

***SAME:** The value does not change.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CHGNWIFR

```
CHGNWIFR  NWID(THISONE)  ONLINE(*YES)
          VRYWAIT(*NOWAIT)  CLOCK(*MODEM)
          POLLINTV(*SAME)
```

This command changes the network interface THISONE so it varies on automatically at initial program load (IPL) with no wait time. The clocking function for the network interface is changed so the modem provides the clocking. The polling interval remains the same as it was prior to this CHGNWIFR command.

Error messages for CHGNWIFR

*ESCAPE Messages

CPF27A7

Network interface description &1 not changed due to errors.

CHGNWIISDN (Change Network Interface Description for ISDN) Command Description

CHGNWIISDN Command syntax diagram

Purpose

The Change Network Interface Description for ISDN (CHGNWIISDN) command changes a network interface description for an integrated services digital network (ISDN) attachment.

Required Parameter

NWID Specifies the name of the network interface description.

Optional Parameters

RSRCNAME

Specifies the resource name that identifies the hardware that the description represents.

***SAME:** The value does not change.

resource-name: Specify the resource name.

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

***SAME:** The value does not change.

***YES:** The network interface is automatically varied on at IPL.

***NO:** This network interface is not automatically varied on at IPL.

VRYWAIT

Specifies whether the network interface is varied on asynchronously or synchronously. For a synchronous vary on, specifies how long the system waits for the vary on to complete.

***SAME:** The value does not change.

***NOWAIT:** The system does not wait for the vary on to complete. The network interface is varied on asynchronously.

vary-on-wait: Specify the time (in seconds) to wait. Valid values range from 15 through 180. The system waits until the network interface is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

Notes:

1. Specifying a wait time in the network interface description affects system IPL time, if ONLINE(*YES) is used, by the amount of time it takes to synchronously vary on the network interface or reach the wait-time value.
2. The time required to vary on a network interface is the time it takes to put tasks in place to manage the network interface, to activate the communications I/O processor (IOP) (including downloading the IOP model-unique Licensed Internal Code), and to establish communications with the data circuit-terminating equipment (DCE). Normal vary-on time ranges from 5 through 45 seconds, but can be longer, depending on the system, network interface protocol, and other factors.

CHLENTY

Specifies a channel entry corresponding to a B channel associated with the network interface. The user can specify up to two B channel entries for a basic rate interface.

Element 1: Channel Number

***SAME:** The value does not change.

***SWTALL:** This value is used for all switched B channels.

***D:** This value is used for one nonswitched D channel.

channel-number: Specify the B-channel number. Valid values are based on the NETTYPE. If the NETTYPE specified is for basic rate service, only 2 channels can be selected. For a NETTYPE of *ETSI, up to 30 channels can be selected. All other primary rate services will allow up to 23 channels to be selected.

Element 2: Channel Connection

***SWT:** This value is used for switched connections.

***NONSWT:** This value is used for nonswitched permanent connections.

PCLENTRY

Specifies a list of protocols used and protocol-specific information.

***SAME:** The value does not change.

***PPPMAX:** Specifies the PPP protocol. The associated microcode is preloaded, and the maximum number of channels based on NETTYPE are available for use.

***IDLCMAX:** Specifies the IDLC protocol. The associated microcode is preloaded, and the maximum number of channels based on NETTYPE are available for use.

***X25MAX:** Specifies the X.25 protocol. The associated microcode is preloaded, and the maximum number of channels based on NETTYPE are available for use.

Element 1: Protocol Used

***PPP:** The PPP protocol is used.

***IDLC:** The IDLC protocol is used.

***X25:** The X.25 protocol is used.

Element 2: Preload Microcode

***LOAD:** Microcode is preloaded. Preloading allows the system to report faster to incoming calls at vary-on time, since the necessary tasks are already in place.

***NOLOAD:** Microcode is not preloaded.

Element 3: Maximum Channels

***MAX:** The maximum number of channels for this network interface description (NWID) are available for use by the specified protocol based on the RATE and NETTYPE parameters.

***NONE:** The maximum number of channels is not specified.

maximum-channels: Specify the maximum number of channels to be used based on the specified Rate and NETTYPE parameters.

LCLNBR

Specifies the local number for this system in the ISDN network. The local number can be up to 40 characters long. Special characters are used to delimit the number; see the RMVCHR parameter.

***SAME:** The value does not change.

***CNNL:** The system determines the local number by using the connection list object specified for the call.

'local-number': Specify the local number. A maximum of two numbers can be specified when NETTYPE is *ATT or *NISDN or *NORTEL. A second local number can be specified only when a second SPID number is used.

LCLNBRTYPE

Specifies the type of local number specified on the LCLNBR parameter.

***SAME:** The value does not change.

***NETTYPE:** The system determines the local number type by using the value specified on the NETTYPE parameter.

***UNKNOWN:** The local number type is not known.

***INTERNATL:** The local number is an international number type.

***SUBSCRIPTION:** The local number is a subscription number type.

***NATIONAL:** The local number is a national address type.

***NETSPECIFIC:** The local number type is specific to the network.

***ABR:** The local number type is abbreviated.

LCLNBRPLAN

Specifies the numbering plan used for the local number.

***SAME:** The value does not change.

***NETTYPE:** The numbering plan is determined by the value specified on the NETTYPE parameter.

***UNKNOWN:** The numbering plan is not known.

***ISDN:** The ISDN E.164 numbering plan is used.

***DATA:** The data numbering plan is used.

***NATIONAL:** The national numbering plan is used.

***PRIVATE:** A private numbering plan is used.

LCLNBRPSN

Specifies whether the calling user presents the local number to the called user. This parameter applies only to outgoing calls.

***SAME:** The value does not change.

***NONE:** The local number presentation is not encoded. The network determines whether the local number is presented to the called user.

***ALLOW:** The local number is presented to the called user.

***RESTRICT:** The presentation of the local number to the called user is restricted by the network.

RMVCHR

Specifies up to 10 characters to be removed from local number before the number is used by the system. Extra characters are removed from numbers before sending or comparing the numbers. The ability to shorten numbers prior to their use by the system means the user can insert extra characters in numbers to help make them more organized and readable.

***SAME:** The value does not change.

***NETTYPE:** The system determines the characters to be removed using the value specified on the NETTYPE parameter.

***NONE:** No characters are removed.

'character': Specify up to 10 characters to be removed.

AUTOSPID

Specifies whether Automatic service profile identifier detection (SPID) Selection procedures are to be used. When AUTOSPID is *YES is specified, procedures are used to allow the network to download the SPID parameters to the adapter. In this case all other SPID values will be ignored. This parameter is only valid when RATE is *BASIC and the NETTYPE is *ATT or *NISDN or *NORTEL. Consult your network service provider to determine if they provide Auto-SPID capability.

***SAME:** The value does not change.

***NO:** Auto service profile identifier detection will not be used.

***YES:** Auto service profile identifier detection will be used.

SPID Specifies the service profile identifier (SPID) to be used in an exchange of information between the system and the network when communications are initialized. The SPID value is assigned by and can be obtained from the network provider when the user subscribes to the network.

***SAME:** The value does not change.

Element 1: SPID Number

SPID-number: Specify the SPID number. Valid values are 1 and 2.

Element 2: SPID Value

***NONE:** No SPID is used for the exchange.

SPID-value: Specify the service profile identifier. A minimum of 9 characters are required, and no more than 20 characters can be specified.

Note: A second SPID number must be specified for the second LCLNBR to be used.

X31NFYCLS

Specifies the method for the packet handler in the ISDN to notify the system of an incoming packet mode call.

***SAME:** The value does not change.

***NETTYPE:** The method of notifying the system is determined by the value specified on the NETTYPE parameter.

***NONE**: The packet handler provides no notification.

***CONDITIONAL**: The packet handler provides notification only if a packet mode call cannot be delivered on an existing connection.

***UNCONDITIONAL**: The packet handler provides notification for every packet mode call.

SETUPDIF

Specifies the defaults used to send **SETUP** messages to the network.

***SAME**: The value does not change.

***NONE**: The defaults for sending **SETUP** messages are used: High-Layer Compatibility IE is not sent; Low-Layer Compatibility IE is sent; Bearer Capability IE is sent; and Terminal Capability IE is not sent.

***NOLLCIE**: The Low-Layer Compatibility IE is not sent with the **SETUP** message.

X31DIF

Specifies network-specific differences in X.31 Case B operations.

***SAME**: The value does not change.

***NETTYPE**: The system determines whether X.31 call data is checked depending on the value specified on the NETTYPE parameter.

***NONE**: There are no differences in packet mapping.

***NOCALLINGNETADR**: The call data does not contain a calling network address.

***NOCALLEDNETADR**: The call data does not contain a called network address.

***NOCALLUSERDATA**: The call data does not contain user data.

ACTTMR

Specifies the amount of time allowed in tenths of a second, for the interface activation process to complete.

***SAME**: The value does not change.

***NETTYPE**: The system determines the amount of time allowed by using the value specified on the NETTYPE parameter.

activation-timer: Specify a value ranging from 10 through 300 in 0.1-second intervals.

REACTTMR

Specifies the amount of time allowed in tenths of a second, for interface reactivation to occur following a temporary loss of synchronization.

***SAME**: The value does not change.

***NETTYPE**: The system determines the amount of time allowed by using the value specified on the NETTYPE parameter.

***NONE**: The system does not wait for reactivation to occur.

***WAIT**: The system waits indefinitely for reactivation to occur.

reactivation-timer: Specify a value ranging from 10 through 1800 in 0.1-second intervals.

SHORTHAUL

Specifies that short haul distance in feet for an ISDN primary rate line which is connected to a network via a Channel Service Unit (CSU) or NT-1 which is external to the adapter. This choice is only available when primary rate service is selected and LONGHAUL has not been specified.

***SAME**: The value does not change.

***MAX133**: The system will use a distance of 0 to 133 feet or 0 to 41 meters.

- ***MAX266**: The system will use a distance of 133 to 266 feet or 41 to 81 meters.
- ***MAX399**: The system will use a distance of 266 to 399 feet or 81 to 122 meters.
- ***MAX533**: The system will use a distance of 399 to 533 feet or 122 to 162 meters.
- ***MAX655**: The system will use a distance of 533 to 655 feet or 162 to 200 meters.
- ***NONE**: The system will use the value defined by the LONGHAUL parameter.

LONGHAUL

Specifies that long haul line build out (LBO) for an ISDN primary rate line which is directly attached to the network service provider. The LBO parameter is in units of decibels and is used to match the signal characteristics of the adapter and the transmission line to the network. Contact your network service provider to obtain the proper value for this parameter. This choice is only available when primary rate service is selected and SHORTHHAUL has not been specified.

***SAME**: The value does not change.

0.0: The system will use 0.0 decibels (dB).

7.5: The system will use 7.5 dB.

15.0: The system will use 15.0 dB.

22.5: The system will use 22.5 dB.

CLOCK

Specifies that clock source used for primary rate service.

***SAME**: The value does not change.

***LOOP**: The system will use a loop timing.

***LOCAL**: The system will use a local timing.

CMNRCYLMT

Specifies the number of recovery attempts made by the system before an inquiry message is sent to the system operator. Also specifies the time (in minutes) that must elapse before the system sends an inquiry message to the system operator indicating that the recovery attempt count limit is reached.

***SAME**: The value does not change.

***SYSVAL**: The recovery limits specified in the QCMNRCYLMT system value are used.

Element 1: Count Limit

count-limit: Specify the number of recovery attempts to be made. Valid values range from 0 through 99.

Element 2: Time Interval

time-interval: Specify the time interval (in minutes) at which the specified number of second-level recoveries are attempted. Valid values range from 0 through 120. If the value specified for *count-limit* is not 0, the value 0 specifies infinite recovery.

TEXT Specifies the text that briefly describes the network interface description. More information is in Commonly used parameters.

***SAME**: The value does not change.

***BLANK**: Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Example for CHGNWIISDN

```
CHGNWIISDN  NWID(ISDNNET)  RSRNAME(LIN021)
```

This command changes the resource name for the network interface described name ISDNNET to LIN021.

Error messages for CHGNWIISDN

*ESCAPE Messages

CPF27A7

Network interface description &1 not changed due to errors.

CHGNETJOB (Change Network Job Entry) Command Description

CHGNETJOB Command syntax diagram

Purpose

The Change Network Job Entry (CHGNETJOB) command changes an existing network job entry in the system. The network job entry is used to determine the action taken when an input stream is sent to a user by using the Submit Network Job (SBMNETJOB) command. This entry determines whether the input stream is automatically submitted, placed on the queue of network files for a user, or rejected. The entry also specifies the user profile that is used for checking the authority to the job description referenced in the input stream. There should be one entry for each user or distribution group who submits jobs to the system.

Note:

There is a network attribute, Job Action (JOBACN), that provides overall control of network job submission; its value must be *SEARCH before the network job table is searched for an action. If the network attribute is *REJECT, all incoming jobs are rejected. If the network attribute is *FILE, all incoming network jobs are saved in the user's queue of network files regardless of the network job entry.

Each network job entry is identified by the two-part user ID of the sender. When an input stream arrives, the user ID of the sending user is used to find a network job entry. If no entry is found, the second part of the user ID is used to find an entry, using *ANY for the first part. If this search fails, a search is made using *ANY for both parts of the user ID. If no entry is found, the job is rejected.

Restrictions:

1. This command is shipped with public *EXCLUDE authority.
2. The internal value for a node identifier may differ from the characters shown by the CHGNETJOB command depending on the type of work station (language) you are using. If the byte-string value specified for the FROMUSRID parameter does not match the rules for an internal node identifier value, or if it does not match the internal value for any defined node (ignoring case differences), an error may be reported.

Required Parameter

FROMUSRID

Specifies the two-part user ID of the user who submits an input stream to this system. Any input streams received from the user are handled as specified in this network job entry. Both parts of the user ID are required. A special value of *ANY can be entered for the first part or for both parts of the user ID.

Note:

Depending on the type of work station you are using, the internal value for a user identifier may differ from the characters shown by the Work with Network Job Entry (WRKNETJOB) command. If the byte-string value specified for the FROMUSRID parameter does not match the rules for an internal user identifier value, or if it does not match the internal value for any enrolled user, an error may be reported.

Optional Parameters**ACTION**

Specifies the action that is taken for a job controlled by this entry.

***SAME:** The value does not change.

***REJECT:** The input stream is rejected.

***FILE:** The input stream is placed on the queue of network files received for the user to whom the input stream is sent.

***SUBMIT:** The input stream is submitted to a batch job queue. The user profile specified in the network job entry is used to check for the required authority to the job queues that are used and to the job descriptions specified in the input stream.

SBMUSER

Specifies the user profile name under which the jobs are submitted. This user profile is used to check the authority to the job queues and job descriptions specified in the input stream. The value specified for this parameter is effective if ACTION(*SUBMIT) is specified either on this command or on the Add Network Job Entry (ADDNETJOB) command.

***SAME:** The value does not change.

user-profile: Specify the name of the user profile that is used to submit the jobs.

MSGQ

Specifies the qualified name of the message queue to which messages are sent.

Note:

The message sent to the message queue specified here notifies the recipient that the input stream arrived, and whether it was submitted, placed on the user's queue of network files, or rejected. A message is also sent to the history log (QHST) when an input stream is received.

***SAME:** The value does not change.

***USRPRF:** The message queue of the user profile to whom the job was sent is used. This user is specified as SBMNETJOB(TOUSRID); this may or may not be the same user as is specified on the SBMUSER parameter of this command.

***NONE:** No message is sent to a user; however, a message is sent to the history log.

The name of the message queue can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

message-queue-name: Specify the name of the message queue that is used to receive messages. If no library qualifier is specified, the library list (*LIBL) is used to locate the named message queue; if one is found, the name of the library where the message queue was found is placed in the job entry.

JOBQ Specifies the job queue on which the job entries are placed. A job entry is placed on this queue for each job in the input stream that has JOBQ(*RDR) specified on the Batch Job (BCHJOB) command. If *RDR is not specified on the BCHJOB command, the job queue specified on the BCHJOB command or in the job description is used. (The job queue for each job in the input stream can be different.) This parameter is valid only if ACTION(*SUBMIT) is specified on this command, in the existing network job entry, or in a subsequent Change Network Job Entry (CHGNETJOBE) command.

***SAME:** The job queue in the job entry does not change.

The name of the job queue can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

If no library qualifier is specified, the library list (*LIBL) is used to locate the named job queue; if one is found, the name of the library where it was found is placed in the job entry.

job-queue-name: Specify the name of the job queue.

Example for CHGNETJOBE

```
CHGNETJOBE FROMUSRID(JOHN SMITH) SBMUSER(ANDERSON)
```

This command changes the network job entry that is used to determine the action taken for any input stream received from user JOHN SMITH. The option and the message queue in the existing entry are not changed. The user profile that is used to check the authority to the job queues and job descriptions specified in the input stream is changed to ANDERSON.

Error messages for CHGNETJOBE

*ESCAPE Messages

CPF8050

Network job table could not be accessed.

CPF8051

*ANY not correct for second part of user ID.

CPF8053

Network job entry &1 &2 not changed.

CPF9040

Wrong characters used in User ID or address, or List identifier &1 &2.

CHGNWSA (Change Network Server Attributes) Command Description

CHGNWSA Command syntax diagram

Purpose

The Change Network Server Attributes (CHGNWSA) command changes the network server attributes of the system. Many of these attributes can be set on an individual user profile basis using the CHGNWSUSRA command. Many network server commands such as SBMNWSCMD and WRKNWSSTS can specify that information from the network server attributes should be used by specifying *NWSA for a given parameter.

Network server attributes are saved by the Save System (SAVSYS) command. Network server attributes are restored to the system when the operating system is installed.

Restrictions:

1. This command is shipped with public *EXCLUDE authority. When this command is shipped, authority is issued only to the security officer. The security officer can grant the use of this command to other users.
2. To make changes to the NDSTREELST, NTW3SVRLST, WNTDMNLST, WNTLCLSVRL or NTWTCPSVRL parameters, you must have *SECADM special authority.
3. The Windows NT domain and server names specified in the WNTDMNLST and WNTLCLSVRL parameters must follow the naming conventions of Windows NT.

Optional Parameters

PMTCTL

Specifies which network server attributes should be prompted for on the command.

***ALL:** All parameters are prompted.

***NETWARE:** Only those parameters that apply to *NETWARE servers are prompted.

***WINDOWSNT:** Only those parameters that apply to *WINDOWSNT servers are prompted.

***GUEST:** Only those parameters that apply to *GUEST servers are prompted.

DFTSVRTYPE

Specifies the default server type for the system. This attribute is used primarily as a default for those OS/400 commands that support multiple network server types.

If the default server type has never been set, it is defaulted to *WINDOWSNT.

***SAME:** The default server type does not change.

***NETWARE:** The default server type for the system is set to *NETWARE.

***WINDOWSNT:** The default server type for the system is set to *WINDOWSNT.

***GUEST:** The default server type for the system is set to *GUEST.

NDSTREE

Specifies the name of the default NetWare Directory Services (NDS) tree for the system. The tree specified should be the one most often used by iSeries 400 users.

If the NDSTREE parameter has never been set, it is defaulted to *NONE.

***SAME:** The NetWare Directory Services tree name does not change.

***NONE:** No default NetWare Directory Services tree is specified.

'NDS-tree-name': Specify the name of the default NetWare Directory Services tree.

NDSTCTX

Specifies the distinguished name of a default NetWare Directory Services (NDS) context, associated with the tree specified by the NDSTREE parameter, to be used when a user issues OS/400 commands that use NDS objects.

If the NDSTCTX parameter has never been set, it is defaulted to *ROOT.

***SAME:** The default NDS context name does not change.

***ROOT:** The default NetWare Directory Services context is set to the root of the NDS tree.

'NDS-context': Specify the distinguished name of the default NDS context to be used.

NTWTCPPORT

Specifies the TCP/IP port number to be used by the system when communicating to NetWare/IP servers in the network.

Valid values range from 50 through 50000. However, some of the ports in the range 1 through 1023 are used by system-supplied TCP/IP applications. If the user specifies one of these ports, it can affect the operation of those applications.

See the assigned numbers RFC for the definition of port numbers currently used by TCP/IP applications.

If the NTWTCPPORT parameter has never been set, it is defaulted to 20199.

***SAME:** The default TCP/IP port number does not change.

TCP/IP-port-number: Specify the TCP/IP port number to be used.

NTWTCPSVRL

Specifies a list of up to 100 NetWare/IP servers running the Enhanced Integration for NetWare NLM (NetWare loadable module).

If the NTWTCPSVRL parameter has never been set, it is defaulted to *NONE.

***SAME:** The list of NetWare/IP servers does not change.

***NONE:** When *NONE is specified, the system will not use TCP/IP as the communication protocol when communicating to NetWare servers in the network.

'NetWare/IP-server-name': Specify the name of a NetWare/IP server running the Enhanced Integration for NetWare NLM.

NDSTREELST

Specify a list of default NetWare Directory Services (NDS) tree information used by the OS/400 user enrollment support to enroll OS/400 user and group profiles into the NDS tree. Each entry in the list will contain an NDS tree name and a list of default attributes associated with that tree.

Up to 10 entries can be specified for this parameter. An entry consists of a value from each of the following elements. A value must be specified for each of the 4 elements for each entry.

If the NDSTREELST parameter has never been set, it is defaulted to *NONE.

***SAME:** The default NDS tree list entries do not change.

***NONE:** When *NONE is specified, the default is to not enroll any OS/400 profiles into NDS trees.

NDS Tree List Entry

Element 1: NDS Tree Name

'NDS-tree-name': Specify the name of the NetWare Directory Services tree where the OS/400 user enrollment support will enroll OS/400 profiles. The remaining elements describe the network server attributes which are associated with this NDS tree.

Element 2: Default NDS User Object Context

Specifies the location in the NDS tree where NDS user and group objects are created when enrolling OS/400 users and groups into the NDS tree. Changing the default user object context will cause the user or group NDS object to be moved from the old context to the new one specified. The NetWare distinguished name must be specified for this element.

'user-object-context': Specify the NDS context where OS/400 users will be enrolled into the NDS tree.

Element 3: Default NDS Server Name

Specifies the default NetWare Directory Services server to be used by the system when enrolling OS/400 users and groups into the NDS tree.

***ANY:** The system selects any active server to use when accessing the NDS tree.

'server-name': Specify the name of the default NDS server to be used by the system when enrolling OS/400 users and groups into the NDS tree. If this server is unavailable at the time the request is handled, the system attempts to find an active server that is available to handle the request.

Element 4: Default NDS Profile Object Name

Specifies a default NetWare Directory Services profile object that contains the profile login script to be used by the user when logging into the network. The NetWare distinguished name must be specified for this element.

***NONE:** No profile login script is used by the NetWare user.

'profile-object-name': Specify the distinguished name of the default NDS profile object containing the profile login script to be used by a user when logging into the network.

NTW3SVRLST

Specifies a default list of up to 100 NetWare 3.12 servers into which the OS/400 user enrollment support will enroll OS/400 users and groups.

If the NTW3SVRLST parameter has never been set, it is defaulted to *NONE.

***SAME:** The list of NetWare 3.12 servers does not change.

***NONE:** When *NONE is specified, the default is to not enroll any OS/400 profiles into NetWare 3.12 servers.

'NetWare 3.12-server-name': Specify the name of a NetWare 3.12 server that OS/400 profiles will be enrolled into.

WNTDMNLST

Specifies a default list of Windows NT domains that will be used by the OS/400 user enrollment support to determine into which Windows NT domains OS/400 profiles are enrolled.

Each entry in the list will contain a domain, a user account template name, and a group type. The user account template name is the name of a Windows NT user identity that is to be used when creating new Windows NT users.

Up to 64 entries can be specified for this parameter. An entry consists of a value from each of the following elements. A domain name must be entered for each entry and must be unique within the list.

If the WNTDMNLST parameter has never been set, it is defaulted to *NONE.

***SAME:** The Windows NT domain list entries do not change.

***NONE:** When *NONE is specified, the default is to not enroll OS/400 profiles into Windows NT domains.

Windows NT Domain List Entry

Element 1: Domain Name

'domain-name': Specify the name of the Windows NT domain where the OS/400 user enrollment support will enroll OS/400 profiles.

Element 2: Windows NT User Account Template Name

Specifies the name of a Windows NT user that can be used as a template when creating new Windows NT users in the Windows NT domain.

Note: Changing this value will not affect Windows NT users that are already enrolled in the domain.

***NONE:** No Windows NT user account template is used when creating a new user identity in the Windows NT domain.

'User-account-template-name': Specifies the name of a Windows NT user account to be used when creating new Windows NT user identities in the domain.

Element 3: Windows NT Group Type

Specifies the type of group to be created in the Windows NT domain. This element is only used when enrolling group profiles.

***GLOBAL:** A global group is created in the Windows NT domain.

***LOCAL:** A local group is created in the Windows NT domain.

WNTLCLSVRL

Specifies a default list of Windows NT servers that will be used by the OS/400 user enrollment support to determine in which local Windows NT servers to enroll OS/400 profiles. Only those server names associated with locally configured integrated PC servers can be specified in this list.

Each entry in the list will contain a server name and associated user account template name. The user account template name is the Windows NT user account to be used when creating new Windows NT user identities on the server.

Up to 64 entries can be specified for this parameter. An entry consists of a value from each of the following elements. A server name must be entered for each entry and must be unique within the list.

If the WNTLCLSVRL parameter has never been set, it is defaulted to *NONE.

***SAME:** The Local Windows NT server list entries do not change.

***NONE:** When *NONE is specified, the default is to not enroll OS/400 profiles into local Windows NT servers.

Windows NT Local Server List Entry

Element 1: Server Name

'server-name': Specify the name of a Windows NT local server where the OS/400 user enrollment support will enroll OS/400 profiles. This server must be a locally configured integrated PC server.

Element 2: Windows NT User Account Template Name

Specifies the name of a Windows NT user that can be used as a template when creating new Windows NT user identities on the local server.

***NONE:** No Windows NT user account template is used when creating a new user identity on the Windows NT server.

'User-account-template-name': Specifies the name of a Windows NT user account to be used when creating new Windows NT user identities on the local server.

Examples for CHGNWSA

Example 1: Setting network server attributes for NetWare

```
CHGNWSA  NDSTREE(NWTREE1)  NDSCTX(.MARKETING.HDQTRS.IBM)
         NDSTREELST(NWTREE1 NDSSVR1 MARKETING.HDQTRS.IBM *NONE)
         NTW3SVRLST(NTW3SVR2 NTW3SVR3)
```

The above command will change the system default NDS tree to be NWTREE1 and the default context to MARKETING.HDQTRS.IBM. The tree list consists of one entry for NDS tree NWTREE1 with a default server of NDSSVR1, default user object context of MARKETING.HDQTRS.IBM and no default profile object name. The NetWare 3.12 default server list is set to include servers NTW3SVR2 and NTW3SVR3.

Example 2: Setting network server attributes for Windows NT

```
CHGNWSA  DFTSVRTYPE(*WINDOWSNT)
         WNTDMNLST((DMN01 USRTMP1) (DMN02))
         WNTLCLSVRL((LCLSVR1 TMPL1) (LCLSRV2 *NONE))
```

The default server type is set to *WINDOWSNT. The default Windows NT domain list will be set to enroll profiles into domain DMN01 using user account USRTMP1 and into domain DMN02. Any Windows NT groups that are created in the domain will be created as global groups.

The Windows NT local server default list will be set to enroll profiles into local server LCLSVR1 using user account template TMPL1 and into local server LCLSRV2.

Example 3: Setting network server attributes for NetWare/IP

```
CHGNWSA  NDSTREE(NWTREE1)  NDSCTX(.MARKETING.HDQTRS.IBM)
         NDSTREELST(NWTREE1 NTWS1 MARKETING.HDQTRS.IBM *NONE)
         NTW3SVRLST(NTWS2 NTWS3) NTWTCPSVRL(NTWS1 NTWS2)
```

The above command will change the system default NDS tree to be NWTREE1 and the default context to MARKETING.HDQTRS.IBM. The tree list consists of one entry for NDS tree NWTREE1 with a default server of NTWS1, default user object context of MARKETING.HDQTRS.IBM and no default profile object name. The NetWare 3.12 default server list is set to include servers NTWS2 and NTWS3. The NetWare/IP default server list is set to include servers NTWS1 and NTWS2. Thus, NTWS1 and NTWS3 will use TCP/IP as the communication protocol.

Error messages for CHGNWSA

*ESCAPE Messages

CPFA44F


Network server attributes not changed. See previous messages.

CHGNWSD (Change Network Server Description) Command Description

CHGNWSD Command syntax diagram

Purpose

The Change Network Server (CHGNWSD) command changes a network server description. Parameters that can be changed include server software parameters and network protocol descriptions.

More information about using this command is in the Communications Configuration  book and the Installation and Configuration of iSeries Integration for Windows Server topic in the Information Center.

Restriction: You must have *IOSYSCFG special authority to use this command.

Required Parameter

NWSD

Specifies the name of the network server description.

Optional Parameters

RSRCNAME

Specifies the resource name that identifies the hardware that the description represents.

Notes:

1. Use the Work with Hardware Resources (WRKHDWRSC) command with *CMN specified for the TYPE parameter to help determine the resource name. Specify the resource name of the input/output processor (IOP) or the input/output adapter (IOA) for the File Server.
2. This parameter can be changed only while the network server is varied off.
3. This parameter is not valid if the network server type is *GUEST.

***SAME:** The value does not change.

resource-name: Specify a resource name.

ONLINE

Specifies whether this object is automatically varied on at initial program load (IPL).

Note: This parameter is ignored when the network server TYPE is *WINDOWSNT.

***SAME:** The value does not change.

***YES:** The network server is automatically varied on at IPL.

***NO:** This network server is not automatically varied on at IPL.

VRYWAIT

Specifies whether the network server description is varied on asynchronously or synchronously. For a synchronous vary on, specifies how long the system waits for the vary on to complete.

Note: Vary on of a network server resets the IOP.

***SAME:** The value does not change.

***NOWAIT:** The system does not wait for the vary on to complete. The network server description is varied on asynchronously.

vary-on-wait: Specify the time (in minutes) to wait. Valid values range from 1 through 15. The system waits until the network server description is varied on, or until the specified time passes, before completing the Vary Configuration (VRYCFG) command.

➤ PRPDMNUSR

Allows users to determine if domain user enrollment should be allowed or not on a particular NWSD.

Note: This parameter is ignored when TYPE is *GUEST.

***SAME:** The value does not change

***YES:** Allow propagation of domain user enrollment for this NWSD.

***NO:** Do not allow propagation of domain user enrollment for this NWSD. <<

PARTITION

Specifies the name of the logical partition to be used by this network server.

***SAME:** The value does not change.

partition-name: Specify the name of the partition to be used for this network server. The name PRIMARY cannot be specified.

Note: This parameter is valid only when the network server type is *GUEST.

CODEPAGE

Specifies the ASCII code page representing the character set to be used by this network server. Only certain code pages can be used for a given country or region code.

Refer to the Globalization topic in the Information Center for more information on language version considerations, the default country or region code for each language version, and the code pages that can be used with each country or region code.

Notes:

1. This parameter can be changed only while the network server is varied off.

***SAME:** The value does not change.

***LNGVER:** Specifies to use the default code page corresponding to the language version (LNGVER) selected. This value is not valid if the network server type is *GUEST.

code-page: Specify the ASCII code page which represents the character set used by the network server.

MSGQ

Specifies the name of a message queue to receive server messages.

Notes:

1. For details on the type of messages that are sent to this messages queue, see the appropriate manual that is associated with the type of network server.

***SAME:** The value does not change.

***JOBLOG:** The messages are placed on the joblog of the monitor job.

***NONE:** The messages are not placed on any message queue.

message-queue-name: Specify the name of a message queue to receive the server messages.

The name of the message queue can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

EVTLOG

Specifies whether or not messages from the event log are received from the server.

Notes:

1. Event log messages are placed in the message queue that is identified by the server message queue (MSGQ) parameter. The MSGQ value cannot be *NONE if a value other than *NONE is specified for the EVTLOG parameter. See the server message queue (MSGQ) parameter for more information.
2. This parameter cannot be changed, nor will it be prompted for, unless the TYPE was *WINDOWSNT when the description was created.

***SAME:** The value does not change.

***ALL:** All event log messages are received.

***NONE:** No event log messages are received.

***SYS:** The system event log messages are received.

***SEC:** The security event log messages are received.

***APP:** The application event log messages are received.

CFGFILE

Specifies the name of a source file containing configuration data, to be used in varying on or further defining the server.

***SAME:** The value does not change.

***NONE:** No message queue is specified.

The name of the configuration file can be qualified by one of the following library values:

***LIBL:** All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

configuration-file-name: Specify the name of a source file containing the configuration data. The file must exist before the network server is varied on.

TCPPOPCFG

➤ Specifies the TCP/IP configuration values that are specific to a port on the network server. This information consists of five parts including the identification of the network server port, the internet

address assigned to the port and the subnet mask of the port, the maximum transmission unit (MTU) size, and the gateway internet address. Enter up to nine values for this parameter, one for each port that can exist on a network server. <<

***SAME:** The value does not change.

***NONE:** Specifies that there is no TCP/IP port configuration. *NONE cannot be specified when TYPE was *WINDOWSNT when the description was created.

Element 1: Port number

Specify the network server port number.

>> Notes:

1. Port number values may only be specified once.
2. Port number 1, 2 and 3 are the only allowed ports when TYPE is *GUEST.
3. *INTERNAL, *VRTETHPTP or one of the virtual ethernet ports *VRTETHn where 'n' has a value of 0 through 9 is required when TYPE is *WINDOWSNT.
4. Up to four different virtual ethernet ports *VRTETHn where 'n' has a value of 0 through 9 can be configured. <<

***INTERNAL:** The network server internal token ring port is configured.

>> ***VRTETHPTP:** The network server point-to-point ethernet port is configured.

***VRTETHn:** The network server virtual ethernet port 'n' is configured, where 'n' has a value of 0 through 9. <<

1: Network server port number 1 is configured.

2: Network server port number 2 is configured.


>> 3: Network server port number 3 is configured.

4: Network server port number 4 is configured. <<

Element 2: Internet Address

Specify the local internet address which the network server responds to when TYPE was *WINDOWSNT when the description was created. The internet address is specified in the form, nnn.nnn.nnn.nnn, where nnn is a decimal number ranging from 0 through 255. An Internet address that has a binary value of all ones or all binary zeros for the network identifier (ID) portion or the host ID portion of the Internet address is not valid. The internet address selected must be unique across all NWSD objects and the iSeries 400 TCP/IP configuration.

Element 3: Subnet Mask

Specify the subnet mask associated with the network server port. See the TCP/IP Configuration and Reference  book for general information about subnets.

Subnetting provides the capability to partition an internet domain. Specify the mask for the network subnet and host address fields of the internet address that defines a subnetwork. The subnetwork 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 example, a subnet mask of 255.255.255.0 defines a Class B subnet consisting of all bits in the network portion of the internet address (this is a given) and consisting of all bits in the third byte of an internet address.

subnetwork-mask: Specify the mask for the network subnet and host address fields of the internet address that defines a subnetwork. The subnetwork 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 example, a subnet mask of 255.255.255.0 defines a Class B subnet consisting of all bits in the network portion of the internet address (this is a given) and consisting of all bits in the third byte of an internet address.

Element 4: Maximum Transmission Unit

Specifies the maximum transmission unit of the interface. Specify one of the following values:

1500: The default MTU value of 1500 bytes is used.

maximum-transmission-unit: Specify the MTU value for the interface. Typical values are:

Adapter	MTU setting
PC Network adapter	1462
Ethernet adapter on an IEEE 802.3 network	1492
Token-Ring 16/4 Adapter/A card on a 16 MB TR	4400

» Element 5: Gateway Internet Address

Specifies the gateway internet address.

***NONE**: Specifies that there is no default gateway address.

gateway-internet-address: Specifies the default gateway address for the internet address in the form nnn.nnn.nnn.nnn, where nnn is a decimal number ranging from 0 through 255. <<

TCPROUTE

The TCPROUTE parameter allows the user to identify routes to remote destination systems or networks to the Transmission Control Protocol/Internet Protocol (TCP/IP) configuration for the network server. A route specification has three elements, the route destination, the subnet mask, and the next hop internet address. Up to 24 route specifications can be entered.

Note: This parameter will be ignored if the network server type is *WINDOWSNT.

Two values uniquely define a route. They are the route destination field and the subnetmask. For *DFTRROUTE values, the next hop element uniquely defines the route.

The route destination field specifies the remote network or host that is being changed. The user must specify all four bytes that make up an internet address though some of the bytes may be equal to 0. For example, a route to all the hosts on the 9.5.11 subnetwork is identified by entering 9.5.11.0 for the route destination. Used in combination with a subnetmask, the route destination will identify a route to a network or system.

Valid values for the TCPROUTE parameter are:

***SAME:** The value does not change.

***NONE:** There is no routing specification needed for the network server. *NONE must be specified when TCPPOPCFG(*NONE) is specified. *NONE can be specified if there is no need for route specifications.

Element 1: Route Destination

The route destination field specifies the remote network or host that is being changed. The user must specify all four bytes that make up an internet address though some of the bytes may be equal to 0. For example, a route to all the hosts on the 9.5.11 subnetwork is identified by entering 9.5.11.0 for the route destination. Used in combination with a subnetmask, the route destination will identify a route to a network or system.

***DFTRROUTE:** A TCP/IP default route is being changed. A default route entry is used by the system to route data that is being sent to an undefined network or system. The *DFTRROUTE entries are used in the order specified. If a particular next hop gateway on a *DFTRROUTE entry is not available, then the subsequent *DFTRROUTE entry's next hop gateway specified will be used. This will continue until a *DFTRROUTE entry's gateway is found that is active or the list of next hop gateway values is exhausted.

route-destination: 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.

Note:

Any combination thereof means that you may specify a route, such as 9.5.0.0 to the hosts on the 9.5 subnet even though all 9.5.x.x address are class A network addresses.

Exceptions:

- The first byte (octet) must be greater than 0 and less than 255.
- The last byte (octet) may not equal 255.
- The last byte (octet) may not equal 0 if *HOST is specified for the SUBNETMASK value.
- Routes to a broadcast address are not allowed.

Element 2: Subnet Mask

The Subnet mask must be specified if *DFTRROUTE or a route destination is entered for the Route Destination element. Subnet mask specifies a bit mask that identifies to TCP/IP which bits of the value specified for the Route Destination compose the network and subnet portions of the internet address. The subnet is identified by combining the route destination internet address and the subnet mask.

***NONE:** There is no subnet mask. If *DFTRROUTE is specified in the route destination element, then *NONE must be specified. *NONE is valid only for the *DFTRROUTE route destination value.

***HOST:** The internet address value specified in the route destination field is a host address. The subnetmask value is calculated to be 255.255.255.255.

subnet-mask: 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, i.e. the subnetmask must appear like 255.255.x.x, where x is determined by the user. The portion of the subnetmask which is associated with the network portion of a particular class of address must equal 255.

Element 3: Next Hop

Next Hop specifies the internet address of the next system (gateway) on the route. A route cannot be added unless the internet address specified by the next hop element is directly reachable through a network associated with one of the network server ports.

next-hop: Specify the internet address of the next system on the route in the form, nnn.nnn.nnn.nnn, where nnn is a decimal number ranging from 0 through 255 except that the host ID portion and the network ID portion of the internet address may not be all 0 bits or all 1 bits. An internet address that has all binary ones or all binary zeros for the network ID portion or the host ID portion of the internet address is not valid.

TCPHOSTNAM

Specifies the short form of the host name to be associated with the network server.

This parameter will be ignored when TYPE is *WINDOWSNT.

The host name can be a text string having 2 through 63 characters. The following characters are allowed in host names:

- Alphabetical characters A through Z
- Digits 0 through 9
- Minus sign (-)

Notes:

1. These characters are all invariant characters.

***SAME:** The value does not change.

***NWSD:** The local host name for the network server is the same as the NWSD object. *NWSD must be specified if TCPPORTCFG(*NONE) is specified.

host-name: Specify a host name to be associated with the network server.

TCPDMNNAME

Note:

This parameter will be ignored when TYPE is *WINDOWSNT.

Specifies the local domain name associated with the network server. A domain name can be a text string having 2 to 255 characters. Domain names consist of one or more labels separated by periods. Each label can contain up to 63 characters. The following characters are allowed in domain names:

- Alphabetical characters A through Z
- Digits 0 through 9
- Minus sign (-)
- Period (.). Periods are only allowed when they separate labels of domain style name (refer to RFC 1034).

Note: These characters are all invariant characters.

Other domain name conventions include the following:

- Uppercase and lowercase characters are allowed, but no significance attached to the case. The case is maintained as entered. The first and last character of the host name must be an alphabetic character or a digit.
- Try to limit your domain name labels to 12 characters because 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 normal 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

In the above example, MFG.ABC.COM is the domain name and SYS1 is the short form of the host name.

The COM designation is one of several domain names used when connecting the Internet. Some of the other domain names are as follows:

COM Commercial organizations

EDU Educational institutions

GOV Government institutions

MIL Military groups

NET Major network support centers

ORG Organizations other than those listed above

Country or region code

Countries other than USA

***SAME:** The value does not change.

***SYS:** The same local domain name for the network server should be the same value as is configured for the iSeries 400. *SYS must be specified if TCPPORTCFG(*NONE) is specified. Also, *SYS must be specified when only an *INTERNAL port is specified on the TCPPORTCFG parameter.

domain name: Specify a host name to be associated with the network server.

TCPNAMSVR

Specifies the internet address of the name server system that is used by the network server. Typically, this is the same value as it is for the iSeries 400.

Note:

This parameter will be ignored when TYPE is *WINDOWSNT.

***SAME:** The value does not change.

***SYS:** The name server system used by the network server should be the same as for the iSeries 400.

***NONE:** There is no name server to be used by the network server.

name-server-address: Specify an internet address for the name server system to be used by the network server. You can specify up to three remote name server systems. The name server systems will be used in the order they are specified.

RSTDDEVRSC

Specifies the iSeries 400 device resource names that are restricted and cannot be used by network servers of TYPE *WINDOWSNT.

The resource is used when the network server is active and request is issued from the client that is running Windows NT application. The device resource cannot be used by the application and the iSeries 400 at the same time. If the device resource is in used by the iSeries 400, Windows NT will not use this resource. If the device resource is intended to be used by Windows NT, it will need to be available when or Windows NT is ready to use it.

Notes:

1. If device resources are specified that are not valid or are not detected, they will not allow the network server to vary on.
2. This field can only be changed when the network server is varied off.

***SAME:** The value does not change.

***NONE:** No device resources are restricted from the network server. Therefore, any tape or optical device resources that exist on the system can be used.

***ALL:** All tape and optical resources are restricted from being used by the network server.

***ALLOPT:** All optical resources are restricted from being used by the network server.

Note:

This value can only be specified once.

***ALLTAPE:** All tape resources are restricted from being used by the network server.

Note:

This value can only be specified once.

restricted-device-resource: Specify 1 to 10 restricted device resource names that cannot be used by the network server.

SYNCTIME

Specifies whether the iSeries 400 should synchronize the network server date and time with the iSeries 400 date and time.

***SAME:** The value does not change.

***TYPE:** The iSeries 400 will perform synchronization based on the network server type. Synchronization will be done as if SYNCTIME(*YES) was specified.

***YES:** The iSeries 400 will synchronize the network server date and time with the iSeries 400 date and time.

The following occurs if the network server type is ***WINDOWSNT**:

- If the network server description is varied on, this reset will occur immediately and at least every 30 minutes thereafter.
- If the network server description is varied off, this reset will occur when the network server description is varied on and at least every 30 minutes thereafter.

The QUTCOFFSET system value must be set to the correct value for time synchronization to work correctly.

***NO:** The iSeries 400 will synchronize the network server date and time with the iSeries 400 date and time when the network server description is varied on, but will not keep the date and time synchronized while the network server description is varied on. If the network server description is varied on when this parameter is set to this value, the date and time will no longer be synchronized while the network server description is varied on.

IPLSRC

Specifies the source of the load image that the partition is started from.

Note: This parameter is valid only when the network server type is ***GUEST**.

***SAME:** The value does not change.

***NWSSTG:** The partition is started using the load image in the first network server storage space attached to this network server description.

***STMF:** The partition is started using the load image in the stream file specified by the IPL stream file (IPLSTMF) parameter.

***PANEL:** The partition is started from the source indicated on the operator's panel.

A: The partition is started from the A-source.

B: The partition is started from the B-source.

D: The partition is started from the D-source.

IPLSTMF

Specifies the path of the stream file containing the image that the partition should be loaded from.

Note: This parameter is valid only when the network server type is ***GUEST** and IPLSRC parameter value is ***STMF**.

***SAME:** The value does not change.

***NONE:** A stream file is not specified.

'IPL-stream-file': Specify the path of the stream file containing the load image. Up to 5000 characters may be specified.

IPLPARM

Specifies a string of characters that will be passed to the load image at IPL time. It consists of commands or configuration information for the kernel.

Note: This parameter is valid only when the network server type is *GUEST.

***SAME:** The value does not change.

***NONE:** IPL parameters are not passed to the load image.

'IPL-parameters': Specify a string of up to 256 characters containing the IPL parameters.

TEXT Specifies the text that briefly describes the network server description.

***SAME:** The value does not change.

***BLANK:** Text is not specified.

'description': Specify no more than 50 characters of text, enclosed in apostrophes.

Examples for CHGNWSD

Example 1: Changing the TCP/IP route configuration

```
CHGNWSD  NWS(REMODEL2)
         TCPROUTES>(*DFTROUTE *NONE '9.5.5.1')
```

This command changes a server description named REMODEL2. The TCP/IP default route next hop address is changed to 9.5.5.1.

Example 2: Changing the restricted device resources

```
CHGNWSD  NWS(WNTSVR4)  RSTDDEVRS(OPT02 *ALLTAPE)
```

This command changes a server description named WNTSVR4. Device resource OPT02 and all tape resources (*ALLTAPE) are changed to have their access restricted from the network server.

Error messages for CHGNWSD

*ESCAPE Messages

CPF26AD

Network server description &1 not changed.

CHGNWSUSRA (Change Network Server User Attributes) Command Description

CHGNWSUSRA Command syntax diagram

Purpose

The Change Network Server User Attributes (CHGNWSUSRA) command is used to change network server attributes for an OS/400 user or group profile that operate in a networking environment. This command can be used to do the following:

1. Set network server attributes for a specific OS/400 user or group profile. For example, the default NetWare Directory Services (NDS) tree name could be set for a specific user profile.

2. For NetWare networks, the network server attributes can be set so that this user or group profile will be enrolled into the NetWare network. Where the profile is enrolled depends on the values specified by the NDSTREELST and NTW3SVRLST parameters.
3. For Windows networks, the network server attributes can be set so that a user or group profile will be enrolled into one or more Windows domains or local servers. When enrolling into a Windows local server, the server must be associated with a locally attached integrated Netfinity server. Where the profile is enrolled depends on the values specified by the WNTDMNLST and WNTLCLSVRL parameters.

When an OS/400 user is enrolled, a matching Windows user identity is created in the Windows domain or on the Windows local server.

When an OS/400 group profile is enrolled into a Windows domain or local server, a matching Windows group is created in the domain or local server. All OS/400 user profiles that are defined in the group are enrolled into the domain or local server and added to the Windows groups that are currently defined by the user account template.

Network server user attributes are saved by the Save System (SAVSYS) and Save Security Data (SAVSECDTA) commands. Network server user attributes are restored to the system when the user profile is restored. The Restore User Profile (RSTUSRPRF) command can be used to restore user profiles and the network server user attributes associated with them.

Restrictions:

1. Only a user with *OBJMGT and *USE authorities to the user profile being changed can specify this command.
2. To make changes to the NDSTREELST, NTW3SVRLST, WNTDMNLST, or WNTLCLSVRL parameters, a user must have *SECADM special authority.
3. The Windows domain and server names specified in the WNTDMNLST and WNTLCLSVRL parameters must follow the naming conventions of Windows.

Optional Parameters

USRPRF

Specifies the name of an OS/400 user or group profile whose network server attributes are to be set.

The following IBM-supplied profile names are not valid on this parameter:

QAUTPRF	QNFSANON
QCOLSRV	QRJE
QDBSHR	QSNADS
QDBSHRDO	QSPL
QDFTOWN	QSPLJOB
QDOC	QSYS
QDSNX	QTCP
QEJB	QTFTP
QFNC	QTSTRQS
QGATE	
QLPAUTO	
QLPINSTALL	
QMSF	
QNETSPLF	
QNETWARE	

Note: QNETWARE is valid when enrolling a profile to a NetWare tree or server. Any other use of QNETWARE is not supported.

The following profile names are not valid on this parameter when enrolling to a Windows domain or server.

GUEST
GUESTS
REPLICATOR
USERS

Note that QAUTPRF and QNFSANON were not disallowed in versions earlier than V4R1. Also, profiles QPRJOWN, QSRV, QSRVBAS, QSVSM, QTMLPD, and QUMB were disallowed in pre-V4R1 versions, but are now legal to enroll. The change was made in order to keep in sync with the list OS/400 security uses for some of their commands.

***CURRENT:** The user profile attributes for the current user profile are changed.

user-name: Specify the name of an OS/400 user or group profile.

PRFTYPE

Specifies whether the user or group attributes for a profile are to be changed.

***USER:** The user profile attributes are changed.

***GROUP:** The group profile attributes are changed.

PMTCTL

Specifies which network server attributes should be prompted for on the command.

***ALL:** All parameters are prompted.

***NETWARE:** Only those parameters that apply to *NETWARE servers are prompted.

***WINDOWSNT:** Only those parameters that apply to *WINDOWSNT domains and servers are prompted.

PRPGRPMBR

Specifies how an OS/400 group and its users are to be enrolled. There are two different ways that an OS/400 group and its users can be enrolled.

1. The OS/400 group is enrolled in the network. All of the members of the group are also enrolled in the network and added to the newly created group.
2. Only the members of OS/400 group are enrolled in the network. The group itself is not enrolled in the network.

The possible values are:

***SAME:** The PRPGRPMBR value does not change. If the PRPGRPMBR parameter has never been set, it is defaulted to *ALL.

***ALL:** The OS/400 group and all members of the group are enrolled. Any user profiles added to this group at a later time are also enrolled into the network.

***MBRONLY:** Only the members of the group are enrolled. The group itself is not enrolled. Any user profiles added to this group at a later time are also enrolled into the network.

DFTSVRTYPE

Specifies the default server type for this user. This attribute is used primarily as a default for those OS/400 commands that support multiple network server types.

***SAME:** The default server type does not change. If the DFTSVRTYPE parameter has never been set, it is defaulted to *NWSA.

***NWSA:** The default server type from the system network server attributes is used.

***NETWARE:** The default server type for the user is set to *NETWARE.

***WINDOWSNT:** The default server type for the user is set to *WINDOWSNT.

NDSTREE

Specifies the name of the default NetWare Directory Services tree used by this user. The tree specified should be the one most often used by this OS/400 user when accessing the network.

***SAME:** The NetWare Directory Services tree name does not change. If the NDSTREE parameter has never been set, it is defaulted to *NWSA.

***NWSA:** The NetWare Directory Services tree specified in the system network server attributes is used.

***NONE:** No default NetWare Directory Services tree is specified.

'NDS-tree-name': Specify the name of the default NetWare Directory Services tree.

NDSCTX

Specifies the distinguished name of a default NetWare Directory Services context to be used when this user issues OS/400 commands that use NDS objects. This becomes the current context when the OS/400 user signs on.

***SAME:** The default NDS context name does not change. If the NDSCTX parameter has never been set, it is defaulted to *NWSA.

***NWSA:** The NetWare Directory Services context specified in the system network server attributes is used.

***ROOT:** The NetWare Directory Services default context is the root of the NDS tree.

'NDS-context': Specify the complete path name of the default NDS context name to be used.

NDSTREELST

Specifies a list of NetWare Directory Services (NDS) trees that will be used by the OS/400 user enrollment support when enrolling this OS/400 user or group. Each entry in the list will contain an NDS tree name and a list of attributes associated with that tree.

Up to 10 entries can be specified for this parameter. An entry consists of a value from each of the following elements. A value must be specified for each of the 4 elements for each entry.

***SAME:** The NDS tree list entries do not change. If the NDSTREELST parameter has never been set, it is defaulted to *NONE.

***NWSA:** When *NWSA is specified, the NDS tree list from the system network server attributes is used.

***NONE:** When *NONE is specified, this profile will not be enrolled to any NDS trees.

NDS Tree List Entry

Element 1: NDS Tree Name

'NDS-tree-name': Specify the name of the NetWare Directory Services tree where the OS/400 user enrollment support will enroll this OS/400 profile. The remaining elements describe the attributes associated with this NDS tree.

Element 2: Default NDS User Object Context

Specifies the location in the NDS tree where NDS user and group objects are created when enrolling this OS/400 user or group profile into the NDS tree. Changing the default user object context will cause the user or group NDS object to be moved from the old context to the new one specified. The NetWare distinguished name must be specified for this element.

'user-object-context': Specify the NDS context where this OS/400 user will be enrolled into the NDS tree.

Element 3: Default NDS Server Name

Specifies the default NetWare server to be used by the system when enrolling this OS/400 user into the NDS tree.

***ANY:** The system selects any active server to use when accessing the NDS tree.

'default-server-name': Specify the name of the default NDS server to be used by the system when enrolling this OS/400 user into the NDS tree. If this server is unavailable at the time the request is handled, the system will attempt to find an active server that is available to handle the request.

Element 4: Default NDS Profile Object Name

Specifies a default NetWare Directory Services profile object that contains the profile login script to be used by the user when logging into the network. The NetWare distinguished name must be specified for this element.

***NONE:** No profile login script is used by the NetWare user.

'profile-object-name': Specify the distinguished name of the default NDS profile object containing the profile login script to be used by this user when logging into the network.

NTW3SVRLST

Specifies a list of up to 100 NetWare 3.12 servers into which this OS/400 user profile is enrolled.

***SAME:** The list of NetWare 3.12 servers does not change. If the NTW3SVRLST parameter has never been set, it is defaulted to *NONE.

***NWSA:** The NetWare 3.12 server list specified in the system network server attributes is used.

***NONE:** When *NONE is specified, the profile will not be enrolled to any NetWare 3.12 servers.

'NetWare 3.12-server-name': Specify the name of a NetWare 3.12 server into which the OS/400 profile will be enrolled.

WNTDMNLST

Specifies a list of Windows domains that will be used by the OS/400 user enrollment support to determine into which Windows domains this OS/400 profile is enrolled.

Each entry in the list will contain a domain, a user account template name, and a group type. The user account template name is the name of a Windows user identity that is to be used when creating new Windows users.

Up to 64 entries can be specified for this parameter. An entry consists of a value from each of the following elements. A domain name must be entered for each entry and must be unique within the list.

***SAME:** The Windows domain list entries do not change. If the WNTDMNLST parameter has never been set, it is defaulted to *NONE.

***NWSA:** When *NWSA is specified, the Windows domain list from the system network server attributes is used.

***NONE:** When *NONE is specified, this profile will not be enrolled into any Windows domains.

Windows Domain List Entry

Element 1: Domain Name

'domain-name': Specify the name of the Windows domain where the OS/400 user enrollment support will enroll this OS/400 profile.

Element 2: Windows User Account Template Name

Specifies the name of a Windows user that can be used as a template when creating new Windows users in the Windows domain.

Note: Changing this value will not affect Windows users that are already enrolled in the domain.

***NONE:** No Windows user account template is used when creating a new user identity in the Windows domain.

'User-account-template-name': Specifies the name of a Windows user account to be used when creating new Windows user identities in the domain.

Element 3: Windows Group Type

Specifies the type of group to be created in the Windows domain. This element is ignored when PRFTYPE(*USER) is specified.

***GLOBAL:** A global group is created in the Windows NT domain.

***LOCAL:** A local group is created in the Windows NT domain.

WNTLCLSVRL

Specifies a list of Windows local servers that will be used by the OS/400 user enrollment support to determine into which Windows local server the OS/400 profile is enrolled. Only those server names associated with locally configured integrated Netfinity servers can be specified in this list.

Each entry in the list will contain a server name and associated user account template name. The user account template name is the Windows user account to be used when creating new Windows user identities on the server.

Up to 64 entries can be specified for this parameter. An entry consists of a value from each of the following elements. A server name must be entered for each entry and must be unique within the list.

***SAME:** The Windows local server list entries do not change. If the WNTLCLSVRL parameter has never been set, it is defaulted to *NONE.

***NWSA:** When *NWSA is specified, the Windows local server list from the system network server attributes is used.

***NONE:** When *NONE is specified, this profile will not be enrolled into any Windows local servers.

Windows Local Server List Entry

Element 1: Server Name

'server-name': Specify the name of a Windows local server where the OS/400 user enrollment support will enroll this OS/400 profile. This server must be a locally configured integrated Netfinity server.

Element 2: Windows User Account Template Name

Specifies the name of a Windows user that can be used as a template when creating new Windows users on the local server.

Note: Changing this value will not affect Windows users that are already enrolled on the server.

***NONE:** No Windows user account template is used when creating a new user identity on the Windows local server.

'User-account-template-name': Specifies the name of a Windows user account to be used when creating new Windows user identities on the local server.

Examples for CHGNWSUSRA

Example 1: Enrolling a user into a NetWare network

```
CHGNWSUSRA  USRPRF(DENNIS)  NDSTREE(NWTREE1)
NDSCCTX(.MARKETING.HDQTRS.IBM)
NDSTREELST(*NWSA)
NTW3SVRLST(NTW3SVR2 NTW3SVR3)
```

The above command will change the network server user attributes for user profile DENNIS. The default NDS tree will be set to NWTREE1 and the default context to MARKETING.HDQTRS.IBM.

The NDS tree list from the system network server attributes is used. The OS/400 user enrollment support will enroll user DENNIS into each tree specified in the tree list. The NetWare 3.12 server list is set to include servers NTW3SVR2 and NTW3SVR3. User DENNIS will also be enrolled into both of these servers.

Example 2: Enrolling a user into a Windows network

```
CHGNWSUSRA  USRPRF(BOB)  DFTSVRTYPE(*WINDOWSNT)
             WNTDMNLST((DMN01 USRTMP1) (DMN02 *NONE))
             WNTLCLSVRL((LCLSVR1 TMPL1) (LCLSRV2 *NONE))
```

The above command will change the network server user attributes for user profile BOB. BOB's default server type is set to *WINDOWSNT.

The OS/400 user enrollment support will enroll user BOB into domain DMN01 using user account template USRTMP1 and also into domain DMN02.

The OS/400 user enrollment support will also enroll user BOB into local server LCLSVR1 using user account template TMPL1 and also into local server LCLSRV2.

Error messages for CHGNWSUSRA

*ESCAPE Messages

CPFA450

Network server user attributes for user profile &1 not changed. See previous messages.

CHGNTPA (Change Network Time Protocol Attributes) Command Description

CHGNTPA Command syntax diagram

Purpose

The Change Network Time Protocol Attributes (CHGNTPA) command is used to change configurable Simple Network Time Protocol (SNTP) client attributes. The changes take effect the next time the SNTP client 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.

Optional Parameters

AUTOSTART

Specifies whether to start the SNTP client automatically when TCP/IP is started by the Start TCP/IP (STRTCP) command or by specifying SERVER(*AUTOSTART) on the Start TCP/IP Server (STRTCPSVR) command.

If the SNTP client is started by specifying SERVER(*NTP) or SERVER(*ALL) on the STRTCPSVR command, the SNTP client is started regardless of the value of this parameter.

***SAME:** The AUTOSTART value does not change if it was previously set. Otherwise, *NO is used.

***NO:** Do not automatically start the SNTP client.

***YES:** Automatically start the SNTP client.

RMTSYS

Specifies the remote system name to which the SNTP client needs to contact for the time service.

The remote system name must be valid, and the system must be able to communicate with the local system. The user can assign names to an internet address with the Work with TCP/IP host table entries option on the Configure TCP/IP menu (CFGTCP command). Also, a remote name server can be used to map remote system names to internet addresses. You can use the Change TCP/IP domain information option on the CFGTCP menu to specify a remote name server.

***SAME:** The remote system name does not change if it was previously set. *SAME is not a valid parameter value if the remote system has never been previously set.

NTP-server-host-name: Specify the host name of the NTP time server system.

NTP-server-internet-address: Specify the internet address of the NTP time server system.

POLLTV

Specifies the time interval, in minutes, after which the SNTP client will connect to the NTP time server in order to determine if the iSeries 400 software clock needs correction.

***SAME:** The polling interval does not change if it was previously set. Otherwise, 60 is used.

polling-interval: Specify the number of minutes to use as the polling interval.

MINADJ

The threshold, in milliseconds, between the NTP server time and the local software clock time. When the difference is below this value, the local software clock will not be adjusted.

***SAME:** The minimum adjustment does not change if it was previously set. Otherwise, 100 is used.

minimum-adjustment-threshold: Specify the number of milliseconds to use as the software clock minimum adjustment threshold.

MAXADJ

The threshold, in minutes, between the NTP server time and the local software clock time. When the difference is above this value, the local software clock will not be adjusted.

***SAME:** The maximum adjustment does not change if it was previously set. Otherwise, 20 is used.

maximum-adjustment-threshold: Specify the number of minutes to use as the software clock maximum adjustment threshold.

ACTLOG

Specifies the activities which cause logging to be done. Log entries are written to a file named QTOTxxxxxx in directory /QIBM/UserData/OS400/TCPIP/NTP, where 'xxxxxx' is a 7-digit date value in 'cyymmdd' format. Logging entries are written to the file whose name matches the date associated with the entry.

***SAME:** The activity logging value does not change if it was previously set. Otherwise, *NONE is used.

***NONE:** No logging will be done.

***CHANGE:** Logging will be done only when an adjustment is made on the software clock.

***POLL:** Logging will occur every time the NTP server sends a valid time value to the SNTP client.

Examples for CHGNTPA

Example 1: Setting the Remote Time Server System

```
CHGNTPA RMTSYS(AAAA.BBBBB.CCC)
```

This command sets the NTP server system to be host name AAAA.BBBBB.CCC.

Example 2: Setting Time Adjustment Thresholds

```
CHGNTPA MINADJ(50) MAXADJ(10)
```

This command sets the minimum adjustment threshold to 50 milliseconds and the maximum adjustment threshold to 10 minutes. If the time value returned from the NTP server system is more than 50 milliseconds and less than 10 minutes different from the local software clock, the local software clock will be adjusted.

Error messages for CHGNTPA

*ESCAPE Messages

CPF0011

Error detected by prompt override program.

TCP15A5

Error accessing member &3

TCP15A6

Attribute file keyword &4 missing

TCP1901

Internet address &1 not valid.

TCP1903

Specified host name not valid.

TCP264D

Error occurred processing file.

TCP8050

*IOSYSCFG authority required to use &1.

TCP9133

NTP attributes not changed.

TCP9503

File &3 in library &2 not available.

TCP9999

Internal system error in program &1.

CHGNCK (Change Nickname) Command Description

CHGNCK Command syntax diagram

Purpose

The Change Nickname (CHGNCK) command is used to change an existing nickname in the system distribution directory.

A **nickname** is a short version of either a directory entry or a distribution list name. You can specify a nickname instead of the full directory entry or distribution list name on many OfficeVision displays. More

information about nicknames is in the SNA Distribution Services  book.

Restrictions:

1. You must have security administrator (*SECADM) authority to change a public nickname that you do not own. No special authority is needed for you to change a public or private nickname that you own.
2. Only the owner can change a private nickname. No special authority is needed. However, to change the ownership of a nickname that you own, you must have at least change (*CHANGE) authority to the user profile of the user to be named as the new owner.

Required Parameter

NCK Specifies the existing nickname that is being changed and the access of the nickname.

Element 1: Nickname

nickname: Specify the nickname you are changing.

Element 2: Nickname Access

***PRIVATE:** The private nickname is to be changed. Private nicknames can be changed only by the owner.

***PUBLIC:** The public nickname is to be changed. Public nicknames can be changed only by a user with security administrator (*SECADM) authority or by the owner.

Optional Parameters**OWNER**

Specifies the user profile name of the user who is to own the nickname. The user profile named must exist on the system.

***SAME:** The value does not change.

user-profile-name: Specify the user profile name of the user to whom the nickname is being assigned.

NEWACCESS

Specifies the new access of the nickname.

***SAME:** The value does not change. The value is the value on the ACCESS parameter.

***PRIVATE:** The nickname cannot be shared with other users. It can be accessed and changed only by the owner.

***PUBLIC:** The nickname can be shared with other users. It can be accessed by any user on the local system, but it can be changed only by the owner or a user with security administrator (*SECADM) authority.

TEXT Specifies the new description of the nickname.


Note:

If a user nickname is specified when sending a note using the OfficeVision program, the text for the TO or COPYLIST fields is filled with the nickname text rather than the directory entry description.

***SAME:** The value does not change.

'nickname-description': Specify the description that further identifies the nickname. A maximum of 50 characters can be specified and must be enclosed in apostrophes.

USRID

Specifies the new identifier of the user for whom the user nickname is being changed. More information about specifying the user ID and address is in the SNA Distribution Services  book.

Both the user ID and address elements must be specified unless *SAME is specified.

Note: This parameter cannot be specified when the LSTID parameter is specified.

***SAME:** The value does not change.

Element 1: User ID

user-ID: Specify the user ID for this nickname. A maximum of 8 characters can be specified.

Element 2: User Address

user-address: Specify the address for this nickname. A maximum of 8 characters can be specified.

LSTID Specifies the new list identifier of the distribution list for the list nickname being changed.

Both the list identifier and qualifier elements must be specified unless *SAME is specified.

Note: This parameter cannot be specified when the USRID parameter is specified.

***SAME:** The value does not change.

Element 1: List Identifier

list-ID: Specify the list identifier (ID) of the distribution list.

Element 2: List Qualifier

list-ID-qualifier: Specify the list ID qualifier of the distribution list.

Note: The distribution list identifier has two parts, the ID and the qualifier, separated by at least one space. If lowercase characters are specified, the system changes them to uppercase.

The naming rules for the two-part list ID are identical to the rules for the user ID and address. A complete description of these rules is in the SNA Distribution

Services  book.

Example for CHGNCK

```
CHGNCK NCK(SEC44A *PRIVATE) NEWACCESS(*PUBLIC)
      TEXT('Secretary for Area 44A')
      USRID(XZWS44A RCHVMP2)
```

This command changes the access, nickname description, and user ID of the nickname SEC44A. If the nickname is a user nickname and the user has proper authority to the nickname, the nickname is changed.

Error messages for CHGNCK

*ESCAPE Messages

CPF8360

Not enough storage for commitment control operation.

CPF8AA1

Library QUSRSYS not completely installed.

CPF9A80

Public nickname &1 in use.

CPF9A89

Nickname function not successful.

CPF9024

System cannot get correct record to finish operation.

CPF905C

Error occurred trying to find a translation table.

CPF9838

User profile storage limit exceeded.

CHGNODGRPA (Change Node Group Attributes) Command Description

CHGNODGRPA Command syntax diagram

Purpose

The Change Node Group Attributes (CHGNODGRPA) command changes the data partitioning attributes for a node group. The node group contains a table with 1024 partitions. Each partition contains a node number. Node numbers were assigned when the node group was created and correspond to the relational databases specified on the RDB parameter of the CRTNODGRP (Create Node Group) command. You can use the DSPNODGRP (Display Node Group) command to see the valid node number values and correspondence between node numbers and relational database names.

This command does not affect existing distributed files that were created using the specified node group. Distributed files created after the node group is changed will use the changed partitioning attributes.

- You can create a database file as a distributed file by specifying values for the NODGRP and PTNKEY parameters on the CRTPF (Create Physical File) command.
- For an existing database physical file that is not a distributed file, you can make the file distributed by specifying values for the NODGRP and PTNKEY parameters on the CHGPF (Change Physical File) command.
- For an existing distributed database file, you can change the data partitioning attributes by specifying values for the NODGRP and PTNKEY parameters on the CHGPF (Change Physical File) command. This will cause the data to be redistributed according to the partitioning table in the node group.

Required Parameters

NODGRP

Specifies the name of the node group whose attributes are to be changed.

The name of the node group can be qualified by one of the following library values:

*LIBL: All libraries in the job's library list are searched until the first match is found.

***CURLIB:** The current library for the job is searched. If no library is specified as the current library for the job, the QGPL library is used.

library-name: Specify the name of the library to be searched.

node-group: Specify the name of the node group being changed.

PTNNBR

Specifies a partition number to change.

partition-number: Specify the partition number to be changed. Valid values range from 0 to 1023.

Note: Either PTNNBR or CMPDTA must be specified. PTNNBR should be used when you know which partition you want to change. You can use the %PARTITION built-in function on the OPNQRYF (Open Query File) command to obtain this information. Other useful built-in OPNQRYF functions for distributed files and data partitioning are %HASH, %NODENUMBER, and %NODENAME.

CMPDTA

Specifies a value that is used to determine the partition number to change. The specified value is used as input to a hashing algorithm that determines which partition to change.

comparison-data-value: Specify the data to be used to determine the partition to be changed. Multiple values can be entered to correspond to a partitioning key with multiple columns (fields). Character data should be entered without leading or trailing blanks. Numeric data should be entered using the character representation, without leading or trailing zeroes, and without decimal points or commas. For example, the number 3.5 should be entered as 35. Up to 300 values can be specified.

Note: Either PTNNBR or CMPDTA must be specified. CMPDTA should be used when you want to direct records (or rows) for a distributed file to a particular node whenever the partitioning key contains the specified value.

NODNBR

Specifies the new node number to be associated with the partition being changed.

node-number: Specify a valid node number for the node group. You can use the Display Node Group (DSPNODGRP) command to view the valid node numbers for a node group.

Examples for CHGNODGRPA

Example 1: Specify a Partition Number

```
CHGNODGRPA NODGRP(LIB1/GROUP1) PTNNBR(1019)
           NODNBR(2)
```

This command changes the partitioning attributes of the node group named GROUP1 in library LIB1. Partition 1019 is changed to refer to node number 2. Node number 2 corresponds to the second relational database specified when the node group was created (RDB parameter on the CRTNODGRP command).

Example 2: Specify a Comparison Value

```
CHGNODGRPA NODGRP(GROUP2) CMPDTA('CHICAGO')
           NODNBR(3)
```

This command changes the partitioning attributes of the node group named GROUP2 (GROUP2 is found by using the library search list *LIBL). The value specified on the CMPDTA parameter is hashed, and the resulting partition number is changed from its existing node number to node number 3.

Error messages for CHGNODGRPA

***ESCAPE Messages**

CPF3166

Node group &1 in library &2 not found.

CPF3167

Node group &1 in library &2 was not changed.

CPF2189

Not authorized to object &1 in &2 type *&3.

CPF9801

Object &2 in library &3 not found.

CPF9810

Library &1 not found.



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