



System i  
Programming  
Performance Tools for i5/OS commands

*Version 6 Release 1*







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**Note**

Before using this information and the product it supports, be sure to read the information in "Notices," on page 231.

This edition applies to version 6, release 1, modification 0 of IBM Performance Tools for i5/OS (product number 5761-PT1) and to all subsequent releases and modifications until otherwise indicated in new editions. This version does not run on all reduced instruction set computer (RISC) models nor does it run on CICS models.

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## Analyze Database Files (ANZDBF)

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

Parameters  
Examples  
Error messages

The Analyze Database Files (ANZDBF) command produces two reports that show the physical and logical files in a set of libraries and the relationships between the files. It saves the information in a database file for further analysis by the Analyze Database File Keys (ANZDBFKEY) command. Both reports (physical to logical file relationships and logical to physical file relationships) are written to the printer file QPPTANZD. Two printer files with the same name are produced. The data is saved in member QAPTAZDR of the database file QPFRDATA/QAPTAZDR.

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### Parameters

Keyword	Description	Choices	Notes
LIBL	Application libraries	Values (up to 10 repetitions): <i>Name</i>	Required, Positional 1
JOB	Job name	<i>Name</i> , <u>ANZDBF</u>	Optional
JOBDD	Job description	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Job description	<i>Name</i> , <u>QPFRJOBDD</u>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	

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### Application libraries (LIBL)

Specifies the libraries that contain the database files on which to report.

This is a required parameter.

**name** Specify up to 10 library names that are to be included in the Analyze Database File report.

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### Job name (JOB)

Specifies the job name to be used if submitting the job for batch processing.

Any value for this parameter is ignored if \*NONE is specified for the **Job description (JOBDD)** parameter.

**Note:** If JOBDD(\*NONE) is specified, job processing is performed interactively.

#### ANZDBF

The command name is used for the job name.

**name** Specify the name to be used for any and all batch jobs.

---

## Job description (JOBDB)

Specifies the job description used to submit the job for batch processing.

### Single values

#### \*NONE

A batch job is not submitted; processing continues interactively while the user waits. The user's workstation is not available for other use during this time, which could be significant for long jobs.

### Qualifier 1: Job description

#### QPFRJOBDB

The IBM-supplied job description, QPFRJOBDB, is used.

*name* Specify the name of the job description to be used.

### Qualifier 2: Library

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

#### \*CURLIB

The current library for the job is used to locate the job description. If no current library entry exists in the library list, QGPL is used.

*name* Specify the library in which the job description is located.

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---

## Examples

```
ANZDBF LIBL(APDTA ARDTA)
```

This command produces reports showing the relationships for all files in the Accounts Payable (APDTA) and Accounts Receivable (ARDTA) data libraries.

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---

## Error messages

### \*ESCAPE Messages

#### CPF9801

Object &2 in library &3 not found.

#### CPF9802

Not authorized to object &2 in &3.

#### PFR9802

Unexpected message monitored.

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---

## Analyze Database File Keys (ANZDBFKEY)

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

Parameters  
Examples  
Error messages

The Analyze Database File Keys (ANZDBFKEY) command produces, from the data generated by the Analyze Database File (ANZDBF) command, two reports showing the key structure of the database files.

One report is written to the printer file QPPTANZK. The other report is written to the printer file QPPTANKM. QPPTANZK contains a listing of the access paths and (logical files only) selection criteria for each key field or selection rule. QPPTANKM contains a matrix of the key fields for all logical files based on the physical file.

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---

### Parameters

Keyword	Description	Choices	Notes
FILE	Physical file	Name, <u>*NUMLF</u>	Optional
NUMLF	Min number of logical files	1.0-99999.0, <u>5</u>	Optional
JOB	Job name	Name, <u>ANZDBFKEY</u>	Optional
JOB	Job description	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Job description	Name, <u>QPRJOB</u>	
	Qualifier 2: Library	Name, <u>*LIBL</u> , *CURLIB	

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### Physical file (FILE)

Specifies which physical files to select from the list processed by the Analyze Database File (ANZDBF) command. The report includes all logical files associated with each selected physical file.

#### \*NUMLF

Specifies all physical files that have at least a minimum number of associated logical files. The specific minimum is defined by the **Min number of logical files (NUMLF)** parameter.

*name* Specify the name of a particular physical file.

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### Min number of logical files (NUMLF)

Specifies the minimum number of logical files associated with a physical file before that physical file is selected. This parameter is valid only when \*NUMLF is specified for the **Physical file (FILE)** parameter.

5 At least 5 logical files must be associated with a physical file.

**1-99999**

Specify the minimum number of logical files required.

---

## Job name (JOB)

Specifies the job name to be used if submitting the job for batch processing.

Any value for this parameter is ignored if \*NONE is specified for the **Job description (JOBDD)** parameter.

**Note:** If JOBDD(\*NONE) is specified, job processing is performed interactively.

### ANZDBFKEY

The command name is used for the job name.

*name* Specify the name to be used for any and all batch jobs.

---

## Job description (JOBDD)

Specifies the job description used to submit the job for batch processing.

### Single values

#### \*NONE

A batch job is not submitted; processing continues interactively while the user waits. The user's workstation is not available for other use during this time, which could be significant for long jobs.

### Qualifier 1: Job description

#### QPFRJOBDD

The IBM-supplied job description, QPFRJOBDD, is used.

*name* Specify the name of the job description to be used.

### Qualifier 2: Library

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

#### \*CURLIB

The current library for the job is used to locate the job description. If no current library entry exists in the library list, QGPL is used.

*name* Specify the library in which the job description is located.

---

## Examples

```
ANZDBFKEY FILE(*NUMLF) NUMLF(2)
```

This command produces reports on the keys for all files that refer to physical files with at least two associated logical files.

---

## Error messages

### \*ESCAPE Messages

#### **PFR5251**

Cannot access data to analyze data base file.

#### **PFR9802**

Unexpected message monitored.

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## Analyze Performance Data (ANZPFRDTA)

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

Parameters  
Examples  
Error messages

The Analyze Performance Data (ANZPFRDTA) command produces recommendations to improve the performance of the user's system. In the interactive mode, you can request that the system make the recommended changes. In the batch mode, the recommended changes are printed, and you must then enter the individual commands to make the recommended changes.

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### Parameters

Keyword	Description	Choices	Notes
MBR	Member	Name, <u>*SELECT</u>	Optional, Positional 1
LIB	Library	Name, <u>QPFRDATA</u>	Optional, Positional 2
OUTPUT	Output	*, <u>*PRINT</u>	Optional, Positional 3
PERIOD	Time period for report	Element list	Optional
	Element 1:	Element list	
	Element 1: Starting time	Time, <u>*FIRST</u> , *SELECT	
	Element 2: Starting date	Date, <u>*FIRST</u>	
	Element 2:	Element list	
	Element 1: Ending time	Time, <u>*LAST</u>	
	Element 2: Ending date	Date, <u>*LAST</u>	
DATATYPE	Data type	<u>*ALL</u> , *SAMPLE	Optional

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### Member (MBR)

Specifies the member that contains the performance data collected by Collections Services from the Operations Navigator interface.

#### \*SELECT

An interval selection display is shown from which you can select one or more intervals for inclusion. This value is valid only in the interactive mode.

*name* Specify the name of the member containing the performance data.

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---

### Library (LIB)

Specifies the library where the performance data is located.

## QPFRDATA

The performance data files are located in the IBM-supplied performance data library, QPFRDATA.

*name* Specify the name of the library where the performance database files are located.

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---

## Output (OUTPUT)

Specifies whether the output is printed or displayed.

\*  
- Output requested by an interactive job is shown on the display. Output requested by a batch job is printed with the job's spooled output.

### \*PRINT

The output is printed with the job's spooled output.

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---

## Time period for report (PERIOD)

Specifies the period of time on which to report. The parameter consists of four elements: a starting time and date, and an ending time and date. Data collected prior to the starting time on the starting date and after the ending time on the ending date is not included in the report.

The symbol \*N can be used to designate the default value for any of the four elements.

### Element 1: Starting time and date

#### Element 1: Starting time

##### \*FIRST

Data records starting from the beginning of the first day (00:00:00) of the collection period are included.

##### \*SELECT

An interval selection screen is displayed from which you can select one or more intervals for inclusion. This value is valid only in the interactive environment. If this value is used, the remaining values of this parameter (starting time and date and ending time and date) are ignored.

*time* Specify the time of the first data record to include in the report, using the format, **hhmm** or **hhmmss**, where **hh** is the hours, **mm** is the minutes, and **ss** is the seconds.

The time is specified in 24-hour format with or without a time separator:

- Without a time separator, specify a string of 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds.
- With a time separator, specify a string of 5 or 8 digits where the time separator specified for your job is used to separate the hours, minutes, and seconds. If you enter this command from the command line, the string must be enclosed in apostrophes. If a time separator other than the separator specified for your job is used, this command will fail.

#### Element 2: Starting date

**\*FIRST**

Data records starting from the first day of the collection period are included in the report.

*date* Specify the date of the first data record to include in the report. The date must be entered in the format specified by the system value QDATFMT, and if separators are used, as specified by the system value QDATSEP.

**Element 2: Ending time and date**

**Element 1: Ending time**

**\*LAST**

Data records through the end of the day (23:59:59) are included in the report.

*time* Specify the time of the last data record to include in the report. Use the same format used for the starting time.

**Element 2: Ending date**

**\*LAST**

Data records through the last day of the collection period are included in the report.

*date* Specify the date of the last record to include in the report. The date must be entered in the format specified by the system value QDATFMT, and if separators are used, as specified by the system value QDATSEP.

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## Report option (DATATYPE)

Specifies the type of data that is analyzed.

**\*ALL** All data (sample data and trace data) is analyzed.

**\*SAMPLE**  
Only sample data is analyzed.

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## Examples

ANZPFRDTA

This command provides recommendations for improving the performance of the system.

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## Error messages

**\*ESCAPE Messages**

**PFR1010**

Cannot process request because of missing data.

**PFR5501**

Performance data file(s) are not upward compatible.

**PFR5502**

Performance data file(s) are not downward compatible.

**PFR7003**

Cannot show performance data.

**PFR7005**

Cannot show performance data.

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## Analyze Programs (ANZPGM)

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

Parameters  
Examples  
Error messages

The Analyze Programs (ANZPGM) command produces a report that shows the programs and files in a set of libraries and the relationships between them. Both reports are written to the printer file QPPTANZP. Two printer files are produced with the same name. One printer file contains Program-to-File cross reference information. The other printer file contains File-to-Program cross reference information.

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### Parameters

Keyword	Description	Choices	Notes
LIBL	Application libraries	Values (up to 10 repetitions): <i>Name</i>	Required, Positional 1
JOB	Job name	<i>Name</i> , <u>ANZPGM</u>	Optional
JOB	Job description	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Job description	<i>Name</i> , <u>QPRJOB</u>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	

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---

### Application libraries (LIBL)

Specifies the libraries that contain the programs on which to report.

This is a required parameter.

*name* Specify up to 10 library names to be included in the Analyze Program report.

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---

### Job name (JOB)

Specifies the job name to be used if submitting the job for batch processing.

Any value for this parameter is ignored if \*NONE is specified for the **Job description (JOB)** parameter.

**Note:** If JOB(\*NONE) is specified, job processing is performed interactively.

#### ANZPGM

The command name is used for the job name.

*name* Specify the name to be used for any and all batch jobs.

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## Job description (JOBDD)

Specifies the job description used to submit the job for batch processing.

### Single values

#### **\*NONE**

A batch job is not submitted; processing continues interactively while the user waits. The user's workstation is not available for other use during this time, which could be significant for long jobs.

### Qualifier 1: Job description

#### **QPFRJOBDD**

The IBM-supplied job description, QPFRJOBDD, is used.

*name* Specify the name of the job description to be used.

### Qualifier 2: Library

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

#### **\*CURLIB**

The current library for the job is used to locate the job description. If no current library entry exists in the library list, QGPL is used.

*name* Specify the library in which the job description is located.

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## Examples

```
ANZPGM LIBL(APPGM ARPGM)
```

This command produces reports showing the program and file relationships for all programs in the Accounts Payable (APPGM) and Accounts Receivable (ARPGM) program libraries.

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## Error messages

### **\*ESCAPE Messages**

#### **CPF9801**

Object &2 in library &3 not found.

#### **CPF9802**

Not authorized to object &2 in &3.

#### **PFR9802**

Unexpected message monitored.

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## Change Functional Area (CHGFCNARA)

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

Parameters  
Examples  
Error messages

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 pre-defined list of job names and/or user names that are to be included in a report or graph.

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### Parameters

Keyword	Description	Choices	Notes
FCNARA	Functional area	<i>Character value</i>	Required, Key, Positional 1
LIB	Library	<i>Name, <u>QPFRDATA</u></i>	Optional, Key, Positional 2
TEXT	Text 'description'	<i>Character value, *BLANK, *<u>SAME</u></i>	Optional
JOB	Job name	Single values: * <u>SAME</u> , *NONE Other values (up to 250 repetitions): <i>Qualified object name</i>	Optional
	Qualifier 1: Job name	<i>Generic name, name</i>	
	Qualifier 2: User	<i>Generic name, name</i>	

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### Functional area (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.

This is a required parameter.

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### Library (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.

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---

## Text 'description' (TEXT)

Specifies text that briefly describes the functional area.

### \*SAME

The text does not change.

### \*BLANK

No text is specified.

### *description*

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

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---

## Job name (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

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 job to include in the functional area. This can be either a specific or generic name.

### *user-name*

Specify the name of user to include in the functional area. This can be either a specific or generic name.

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## Examples

### 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.

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## Error messages

### \*ESCAPE Messages

#### CPF0011

Error detected by prompt override program.

#### PFR9064

Cannot change functional area &2.

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# Change Graph Format (CHGGPHFMT)

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

Parameters  
 Examples  
 Error messages

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

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## Parameters

Keyword	Description	Choices	Notes
GPHFMT	Graph format	<i>Qualified object name</i>	Required, Key, Positional 1
	Qualifier 1: Graph format	<i>Name</i>	
	Qualifier 2: Library	<i>Name, QPFRDATA</i>	
TEXT	Text 'description'	<i>Character value, *SAME, *BLANK</i>	Optional, Positional 2
TITLE	Title	<i>Character value, *SAME, *BLANK, *MBRTEXT</i>	Optional
SUBTITLE	Subtitle	<i>Character value, *SAME, *BLANK, *MBRTEXT</i>	Optional
GPHTYPE	Graph type	<i>*SAME, *SURFACE, *LINE, *CBAR, *FBAR, *SCATTER</i>	Optional
DATATYPE	Data type	<i>*SAME, *FCNARA, *JOBTYPE, *PRIORITY, *IOP, *DISK, *CMNLINE, *ALL</i>	Optional
AREAFILL	Area fill	<i>*SAME, *YES, *NO</i>	Optional
REFLINE	Reference line	<i>1-99999, *SAME, *NONE</i>	Optional
XAXIS	X-axis	<i>Element list</i>	Optional
	Element 1: Variable	<i>*SAME, *TIME, *CPU, *TNS, *NBRTNS, *RSP, *SYNCIO, *NBRSYNC, *ASYNCO, *NBRASYNC, *TOTDSKIO, *NBRDSKIO</i>	
	Element 2: Title	<i>Character value, *SAME, *DFT, *BLANK</i>	
	Element 3: Range	<i>Single values: *SAME, *AUTO Other values: <i>Element list</i></i>	
	Element 1: First	<i>0-99999</i>	
	Element 2: Last	<i>0-99999</i>	
YAXIS	Y-axis	<i>Element list</i>	Optional
	Element 1: Variable	<i>*SAME, *CPU, *TNS, *NBRTNS, *RSP, *SYNCIO, *NBRSYNC, *ASYNCO, *NBRASYNC, *TOTDSKIO, *NBRDSKIO, *CMNIOP, *DSKIOP, *LWSIOP, *MFCIOP, *MFDIOP, *DSKARM, *PCTDSKOCC, *CMNLINE, *LGLDBIO</i>	
	Element 2: Title	<i>Character value, *SAME, *DFT, *BLANK</i>	
	Element 3: Range	<i>Single values: *SAME, *AUTO Other values: <i>Element list</i></i>	
	Element 1: First	<i>0-99999</i>	
	Element 2: Last	<i>0-99999</i>	

Keyword	Description	Choices	Notes
FCNARA	Functional area entry	Single values: <b>*SAME</b> Other values (up to 16 repetitions): <i>Element list</i>	Optional
	Element 1: Functional area	<i>Character value</i> , *OTHER	
	Element 2: Legend 'description'	<i>Character value</i> , * <b>DFT</b> , *BLANK	
	Element 3: Line type	1-8, <u>7</u>	
	Element 4: Non-graphic display symbol	<i>Character value</i> , <u>_</u>	
JOBTYPE	Job type entry	Single values: <b>*SAME</b> Other values (up to 16 repetitions): <i>Element list</i>	Optional
	Element 1: Job type	*ALL, *ALLINTER, *ALLBATCH, *ALLSYSTEM, *ASJ, *BCH, *CA4, *DDM, *EVK, *INT, *MRT, *PCS, *PDJ, *PJ, *PTH, *RDR, *S36, *SBS, *SYS, *WTR, *OTHER	
	Element 2: Legend 'description'	<i>Character value</i> , * <b>DFT</b> , *BLANK	
	Element 3: Line type	1-8, <u>7</u>	
	Element 4: Non-graphic display symbol	<i>Character value</i> , <u>_</u>	
PRIORITY	Job priority entry	Single values: <b>*SAME</b> Other values (up to 16 repetitions): <i>Element list</i>	Optional
	Element 1: Lower priority boundary	0-99, *OTHER, *ALL	
	Element 2: Upper priority boundary	0-99	
	Element 3: Legend 'description'	<i>Character value</i> , * <b>DFT</b> , *BLANK	
	Element 4: Line type	1-8, <u>7</u>	
	Element 5: Non-graphic display symbol	<i>Character value</i> , <u>_</u>	
IOP	IOP data entry	Single values: <b>*SAME</b> Other values (up to 2 repetitions): <i>Element list</i>	Optional
	Element 1: Type of utilization	*AVG, *MAX	
	Element 2: Legend 'description'	<i>Character value</i> , * <b>DFT</b> , *BLANK	
	Element 3: Line type	1-8, <u>7</u>	
	Element 4: Non-graphic display symbol	<i>Character value</i> , <u>_</u>	
DISK	Disk data entry	Single values: <b>*SAME</b> Other values (up to 2 repetitions): <i>Element list</i>	Optional
	Element 1: Type of utilization	*AVG, *MAX	
	Element 2: Legend 'description'	<i>Character value</i> , * <b>DFT</b> , *BLANK	
	Element 3: Line type	1-8, <u>7</u>	
	Element 4: Non-graphic display symbol	<i>Character value</i> , <u>_</u>	

Keyword	Description	Choices	Notes
CMNLINE	Communications line entry	Single values: <b>*SAME</b> Other values (up to 16 repetitions): <i>Element list</i>	Optional
	Element 1: Communications line	<i>Name</i> , *MAX	
	Element 2: Legend 'description'	<i>Character value</i> , <b>*DFT</b> , *BLANK	
	Element 3: Line type	1-8, <u>7</u>	
	Element 4: Non-graphic display symbol	<i>Character value</i> , <u>_</u>	
ALLDATA	All data entry	Single values: <b>*SAME</b> Other values: <i>Element list</i>	Optional
	Element 1: Legend 'description'	<i>Character value</i> , <b>*DFT</b> , *BLANK	
	Element 2: Line type	1-8, <u>7</u>	
	Element 3: Non-graphic display symbol	<i>Character value</i> , <u>_</u>	

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## Graph format (GPHFMT)

Specifies the graph format to be changed.

This is a required parameter.

### QPFRDATA

The IBM-supplied performance data library, QPFRDATA, is where the graph format is located.

### *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.

Top

---

## Text 'description' (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 text no more than 50 characters enclosed in apostrophes.

Top

---

## Title (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 in length. Enclose the user-defined title in apostrophes.

Top

---

## Subtitle (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 not more than 50 characters in length. Enclose the user defined subtitle in apostrophes.

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---

## Graph type (GPHTYPE)

Specifies the type of graph being created using 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.

Top

---

## Data type (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**

This 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. That is, if a job exists in more than one of the functional areas selected for the graph, an error message is issued indicating that the job exists in more than one functional area. Also, 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, System i 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.

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---

## Area fill (AREAFILL)

Specifies whether areas on the graph are filled in.

### \*SAME

The area-fill value does not change.

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

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

---

## Reference line (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.

---

## X-axis (XAXIS)

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

The possible **X-axis variable** values are:

### \*SAME

The X-axis variable does not change.

### \*TIME

Time is mapped along the X-axis.

\*CPU Utilization of the processing unit 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 input/output (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 operations per second is mapped along the X-axis.

### \*NBRDSKIO

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

The possible **X-axis Title** values are:

### \*SAME

The X-axis title does not change.

\*DFT The X-axis variable is used for the X-axis title.

**\*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.

The possible **Starting and Ending Range for the X-axis** values are:

**\*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.

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---

## **Y-axis (YAXIS)**

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

The possible **Y-axis variable** values are:

**\*SAME**

The Y-axis variable does not change.

**\*CPU** Utilization of the processing unit 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 input/output (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 Y-axis.

**\*CMNIOP**

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

**\*DSKIOP**

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

**\*LWSIOP**

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

**\*MFCIOP**

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

**\*MFDIOP**

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

**\*DSKARM**

Utilization of the disk arm is mapped along the Y-axis. If **YAXIS(\*DSKARM)** is specified, then **XAXIS(\*TIME)** must be specified.

**\*PCTDSKOCC**

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

**\*CMNLINE**

Utilization of communications lines is mapped along the Y-axis. If **YAXIS(\*CMNLINE)** is specified, then **XAXIS(\*TIME)** must be specified.

**\*LGLDBIO**

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

The possible **Y-axis Title** values are:

**\*SAME**

The Y-axis title does not change.

**\*DFT**

The Y-axis variable is used for the Y-axis title.

**\*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.

The possible **Starting and Ending Range for the Y-axis** values are:

**\*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.

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---

## Functional area entry (FCNARA)

Specifies the list of characteristics to be used for each functional area on the graph. This 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.

The possible **Functional Area Name** values are:

### \*OTHER

All jobs that do not belong in one of the functional areas specified in this parameter are grouped together.

### *functional-area-name*

Specify the name of the functional area.

The possible **Functional Area Legend Description** values are:

\*DFT The name or special value specified for the functional area name is used as the legend description.

### \*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.

The possible **Graphic Display Line Type** values are:

### 7 (Solid)

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. There are 8 types of lines from which you can choose:

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

The possible **Nongraphic Work Station Symbol used for the Functional Area** values are:

\* The asterisk symbol is used for graphic representation of the functional area on nongraphic terminals.

### *character*

Specify a character to use for graphic representation of the functional area on nongraphic terminals.

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---

## Job type entry (JOBTYPE)

Specifies the list of characteristics to be used for changing job type information on the graph. This 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 for the job types do not change.

The possible **Job Type** values are:

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

### **\*ALLINTER**

All interactive job types include:

- DDM jobs
- Pass-through jobs
- System i 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
- System i 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 includes:

- System jobs
- Subsystem monitor jobs

**\*ASJ** Autostart jobs

**\*BCH** Batch jobs

**\*CA4** System i Access server jobs

### **\*DDM**

Distributed Data Management (DDM) jobs

**\*EVK** Jobs started by a procedure start request

**\*INT** Interactive jobs

**\*MRT** Multiple requester terminal jobs

**\*PCS** System i 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 this parameter are grouped together.

The possible **Job Type Legend Description** values are:

\*DFT The value specified for the job type is used as the legend description.

\*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.

The possible **Graphic Display Line Type for the Job Type** values are:

7 (Solid)

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. There are 8 types of lines from which you can choose:

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

The possible **Nongraphic Work Station Symbol used for the Job Type** values are:

\* The asterisk (\*) is used for graphic representation of the job type on nongraphic terminals.

*character*

Specify a character to use for graphic representation of the job type on nongraphic terminals.

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---

## Job priority entry (PRIORITY)

Specifies the characteristics to be used for changing job priority information on the graph. This 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.

The possible **Job Priority Boundaries** values are:

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

**\*OTHER**

All job priorities that do not fall within the job priority boundaries specified on this parameter are grouped together.

*lower-priority-boundary*

Specify the lower job priority boundary. Valid values range from 0 through 99.

*upper-priority-boundary*

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

The possible **Job Priority Legend Description** values are:

**\*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.

The possible **Graphic Display Line Type for the Job Priority** values are:

**7 (Solid)**

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. There are 8 types of lines from which you can choose:

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

The possible **Nongraphic Work Station Symbol used for the Job Priority** values are:

**\***  
**\_** The asterisk symbol is used for graphic representation of the job priority on nongraphic terminals.

*character*

Specify a character to use for graphic representation of the job priority on nongraphic terminals.

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---

## IOP data entry (IOP)

Specifies the characteristics to be used for changing input/output processor (IOP) information on the graph. This 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.

The possible **Amount of Utilization for IOP type** values are:

**\*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.

The possible **IOP Type Legend Description** values are:

**\*DFT** The value specified for the amount of utilization is used as the legend description.

**\*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.

The possible **Graphic Display Line Type for the IOP type** values are:

**7 (Solid)**

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. There are 8 types of lines from which you can choose:

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

The possible **Nongraphic Work Station Symbol used for the IOP type** values are:

**\*** The asterisk (\*) is used for graphic representation of the IOP type on nongraphic terminals.

***character***

Specify a character to use for graphic representation of the IOP type on nongraphic terminals.

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---

## **Disk data entry (DISK)**

Specifies the characteristics to be used for changing disk data information on the graph. This 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 disk arm utilization and percent of disk occupied.

**\*SAME**

The characteristics for disk data information do not change.

The possible **Amount of Utilization for Disk Data type** values are:

**\*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.

The possible **Disk Data Type Legend Description** values are:

**\*DFT** The value specified for the amount of utilization is used as the legend description.

**\*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.

The possible **Graphic Display Line Type for the Disk Data Type** values are:

7 (Solid)

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 on graphic terminals. There are 8 types of lines from which you can choose:

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

The possible **Nongraphic Work Station Symbol used for the Disk Data type** values are:

**\*** An asterisk (\*) is used for graphic representation of the disk data on nongraphic terminals.

*character*

Specify a character to use for graphic representation of the disk data on nongraphic terminals.

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---

## Communications line entry (CMNLINE)

Specifies the characteristics to be used for changing communications line information on the graph. This parameter is valid only when **DATATYPE(\*CMNLINE)** is specified. When **DATATYPE(\*CMNLINE)** is specified, at least one, but not more than 16 communications line entries must be specified.

**\*SAME**

The characteristics of the communications line information do not change.

The possible **Communications Line Name** values are:

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

*communications-line-name*

Specify the name of the communications line whose utilization is presented on the graph.

The possible **Communications Line Legend Description** values are:

**\*DFT** The name or special value specified for the communications line name is used for the legend description.

**\*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.

The possible **Graphic Display Line Type for the Communications Line** values are:

**7 (Solid)**

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. There are 8 types of lines from which you can choose:

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

The possible **Nongraphic Work Station Symbol used the Communications Line** values are:

**\*** The asterisk (\*) is used for graphic representation of the communications line on nongraphic terminals.

**character**

Specify a character to use for graphic representation of the communications line on nongraphic terminals.

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---

## All data entry (ALLDATA)

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

**\*SAME**

The characteristics for all of the job data do not change.

The possible **Legend Description for All of the Job Data** values are:

**\*DFT** The value \*ALL is used for the legend description.

**\*BLANK**

The legend description for the data is left blank.

**legend-description**

Specify the legend description for the data. Enclose the description in apostrophes.

The possible **Graphic Display Line Type for all of the Job Data** values are:

**7 (Solid)**

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. There are 8 types of lines from which you can choose:

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

The possible **Nongraphic Work Station Symbol used for all of the Job Data** values are:

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

### *character*

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

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---

## Examples

```
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.

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## Error messages

### \*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.



---

## Change Graph Package (CHGGPHPKG)

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

Parameters  
Examples  
Error messages

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

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---

### Parameters

Keyword	Description	Choices	Notes
GPHPKG	Graph package	<i>Qualified object name</i>	Required, Key, Positional 1
	Qualifier 1: Graph package	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <u>QPFRDATA</u> , *CURLIB	
TEXT	Text 'description'	<i>Character value</i> , *BLANK, * <u>SAME</u>	Optional
GPHFMT	Graph format	Single values: * <u>SAME</u> , *SELECT Other values (up to 25 repetitions): <i>Name</i>	Optional

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---

### Graph package (GPHPKG)

Specifies the graph package to create or change.

#### 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, QGPL 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.

This is a required parameter.

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---

## Text 'description' (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 text no more than 50 characters enclosed in apostrophes.

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---

## Format (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 to select to be included in the graph package. This value is valid only in an interactive environment.

### *format-name*

Specify the graph format to be included in the graph package. Up to 25 format names can be specified.

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---

## Examples

### 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.

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---

## Error messages

### \*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.

**PFR9032**

Too many formats selected.

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---

# Change Job Type (CHGJOB TYP)

## Where allowed to run:

- Interactive job (\*INTERACT)
- Interactive program (\*IPGM)
- Using QCMDEXEC, QCAEXEC, or QCAPCMD API (\*EXEC)

Threadsafe: No

Parameters  
Examples  
Error messages

The Change Job Type (CHGJOB TYP) 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.

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---

## Parameters

Keyword	Description	Choices	Notes
MBR	Member	<i>Name</i>	Required, Positional 1
LIB	Library	<i>Name</i> , <u>QPFRDATA</u>	Optional, Positional 2

Top

---

## Member (MBR)

Specifies the performance data member used. This name should correspond to the member name specified on the MBR parameter of the End Performance Trace (ENDPFRTTRC) command.

This is a required parameter.

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---

## Library (LIB)

Specifies the library where the performance data is located.

### QPFRDATA

The performance data files are located in the IBM-supplied performance data library, QPFRDATA.

*name* Specify the name of the library where the performance database files are located.

Top

---

## Examples

### Example 1: Start a New Session

```
CHGJOBTYP 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).

[Top](#)

---

## Error messages

### \*ESCAPE Messages

#### PFR3280

Performance data files for this report do not exist.

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---

## Copy Functional Area (CPYFCNARA)

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

Parameters  
Examples  
Error messages

The Copy Functional Area (CPYFCNARA) command allows the user to copy a functional area to a new functional area. Functional areas are used for performance tools reports and graphics. A functional area is a pre-defined list of job names and user names that are included in a report or graph.

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---

### Parameters

Keyword	Description	Choices	Notes
FROMFCNARA	From functional area	<i>Character value</i>	Required, Positional 1
FROMLIB	From library	<i>Name, <u>QPFRDATA</u></i>	Optional, Positional 2
TOFCNARA	To functional area	<i>Character value, *<u>FROMFCNARA</u></i>	Optional, Positional 3
TOLIB	To library	<i>Name, *<u>FROMLIB</u></i>	Optional, Positional 4
REPLACE	Replace	<i>*<u>NO</u>, *YES</i>	Optional

Top

---

### From functional area (FROMFCNARA)

Specifies the name of the functional area from which to copy. Enclose the name in apostrophes if it contains any spaces between characters.

This is a required parameter.

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---

### From library (FROMLIB)

Specifies the location of the functional area to be copied.

The possible library values are:

#### QPFRDATA

The IBM-supplied performance data library, QPFRDATA, is the location of the functional area.

#### *library-name*

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

Top

---

## To functional area (TOFCNARA)

Specifies the name of the functional area to which the copy is sent.

The possible library values are:

### FROMFCNARA

The name specified on the FROMFCNARA parameter is used.

### *functional-area-name*

Specify the name of the functional area to which the copy is sent. Enclose the name in apostrophes if it contains any spaces between characters.

Top

---

## To library (TOLIB)

Specifies the library to which the copy of the functional area is sent.

The possible library values are:

### \*FROMLIB

The functional area is copied to the library specified on the FROMLIB parameter.

### *library-name*

Specify the name of the library to which functional area is copied.

Top

---

## Replace (REPLACE)

Specifies whether to replace the functional area in the **To functional area** prompt (TOFCNARA parameter) if the functional area already exists.

\*NO The existing functional area is not replaced with the new functional area.

\*YES The existing functional area is replaced with the new functional area.

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---

## Examples

### Example 1: Copying in the Same Library

```
CPYFCNARA FROMFCNARA(PERSONNEL) TOFCNARA(MIKE)
```

This command copies the functional area PERSONNEL to the functional area MIKE. Both functional areas are in the QPFRDATA library.

### Example 2: Copying to a Different Library

```
CPYFCNARA FROMFCNARA('Performance Tools')  
          TOFCNARA(MIKE) TOLIB(USRLIB)
```

This command copies the functional area 'Performance Tools' to the functional area MIKE in library USRLIB.

Top

---

## **Error messages**

### **\*ESCAPE Messages**

#### **PFR9062**

Value for TOFCNARA parameter must be specified.

#### **PFR9065**

Cannot copy functional area &2.

#### **PFR9066**

Cannot copy to functional area &2.

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---

# Copy Graph Format (CPYGPHFMT)

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

Parameters  
Examples  
Error messages

The Copy Graph Format (CPYGPHFMT) command copies an existing graph format into a graph format specified by the user.

Top

---

## Parameters

Keyword	Description	Choices	Notes
FROMFMT	From format	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: From format	<i>Name</i>	
	Qualifier 2: Library	<i>Name, QPFRDATA, *CURLIB</i>	
TOFMT	To format	<i>Qualified object name</i>	Optional, Positional 2
	Qualifier 1: To format	<i>Name, *FROMFMT</i>	
	Qualifier 2: Library	<i>Name, *FROMLIB, *CURLIB</i>	
REPLACE	Replace	<i>*NO, *YES</i>	Optional

Top

---

## From format (FROMFMT)

Specifies the graph format from which the copy is to be created.

This is a required parameter.

The possible library values are:

### QPFRDATA

The IBM-supplied performance library, QPFRDATA, is where the copy of the graph format is located.

### **\*CURLIB**

The current library for the job is used to locate the graph format. 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 graph format is located.

### *format-name*

Specify the name of the graph format.

Top

---

## To format (TOFMT)

Specifies the graph format location where the copy is to be created.

The possible library values are:

### \*FROMLIB

The graph format is located in the library specified on the FROMFMT parameter.

### \*CURLIB

The current library for the job is where the copy of the graph format will be located. 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 copy of the graph format will be located.

### \*FROMFMT

The graph format name specified on the FROMFMT parameter is used.

### *format-name*

Specify the name of the copy of the graph format.

Top

---

## Replace (REPLACE)

Specifies whether to replace the graph format in the **To format** prompt (TOFMT parameter) if the graph format already exists.

\*NO The existing graph format is not replaced with the new graph format.

\*YES The existing graph format is replaced with the new graph format.

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---

## Examples

### Example 1: Sending a Copy to the Default Library

```
CPYGPHEMT FROMFMT(MYFMT) TOFMT(YOURFMT)
```

This command makes a copy of MYFMT and sends it to YOURFMT in the QPFRDATA library.

### Example 2: Sending a Copy to a Specified Library

```
CPYGPHEMT FROMFMT(MYLIB/FMT1) TOFMT(YOURLIB/FMT2)
```

This command makes a copy of FMT1 in the MYLIB library and sends it to FMT2 in the YOURLIB library.

Top

---

## Error messages

### \*ESCAPE Messages

#### PFR9043

&1 does not exist in library &2.

[Top](#)



---

## Copy Graph Package (CPYGPHPKG)

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

Parameters  
Examples  
Error messages

The Copy Graph Package (CPYGPHPKG) command copies an existing graph package into a graph package specified by the user.

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---

### Parameters

Keyword	Description	Choices	Notes
FROMPKG	From package	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: From package	<i>Name</i>	
	Qualifier 2: Library	<i>Name, <u>QPFRDATA</u>, *CURLIB</i>	
TOPKG	To package	<i>Qualified object name</i>	Optional, Positional 2
	Qualifier 1: To package	<i>Name, *FROMPKG</i>	
	Qualifier 2: Library	<i>Name, *FROMLIB, *CURLIB</i>	
REPLACE	Replace	<i>*NO, *YES</i>	Optional

Top

---

### From package (FROMPKG)

Specifies the graph package from which the copy is to be created.

This is a required parameter.

#### QPFRDATA

The IBM-supplied performance data library, QPFRDATA, is where the graph package is located.

#### \*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, QGPL is used.

#### *library-name*

Specify the name of the library where the graph package is located.

#### *package-name*

Specify the name of the graph package.

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---

## To package (TOPKG)

Specifies the location of the graph package into which the copy is to be made.

The possible library values are:

**\*FROMLIB**

The graph package is copied into the library specified on the FROMPKG parameter.

**\*CURLIB**

The current library for the job is where the copy of the graph package will be located. 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 graph package will be located.

**\*FROMPKG**

The graph package name specified on the FROMPKG parameter is used.

***package-name***

Specify the name of the graph package.

Top

---

## Replace (REPLACE)

Specifies whether to replace the graph package in the **To package** prompt (TOPKG parameter), if the graph package already exists.

**\*NO** The existing graph package is not replaced with the new graph package.

**\*YES** The existing graph package is replaced with the new graph package.

Top

---

## Examples

### Example 1: Sending a Copy to the Default Library

```
CPYGPHPKG FROMPKG(MYPKG) TOPKG(YOURPKG)
```

This command makes a copy of MYPKG and sends it to YOURPKG in the QPFRDATA library.

### Example 2: Sending a Copy to a Specified Library

```
CPYGPHPKG FROMPKG(MYLIB/PKG1) TOPKG(YOURLIB/PKG2)
```

This command makes a copy of PKG1 in the MYLIB library and sends it to PKG2 in the YOURLIB library.

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---

## Error messages

### \*ESCAPE Messages

#### PFR9043

&1 does not exist in library &2.

[Top](#)



---

## Create Functional Area (CRTFCNARA)

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

Parameters  
Examples  
Error messages

The Create Functional Area (CRTFCNARA) command allows you to create functional areas on your system. Functional areas are used by performance tools for reports and graphics. A functional area is a pre-defined list of job names and/or user names that are to be included in a report or graph.

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---

### Parameters

Keyword	Description	Choices	Notes
FCNARA	Functional area	<i>Character value</i>	Required, Positional 1
LIB	Library	<i>Name, <u>QPFRDATA</u></i>	Optional, Positional 2
TEXT	Text 'description'	<i>Character value, *<u>BLANK</u></i>	Optional
JOB	Job name	Single values: * <u>NONE</u> Other values (up to 250 repetitions): <i>Qualified object name</i>	Optional
	Qualifier 1: Job name	<i>Generic name, name</i>	
	Qualifier 2: User	<i>Generic name, name</i>	

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---

### Functional area (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.

This is a required parameter.

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---

### Library (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.

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---

## Text 'description' (TEXT)

Specifies text that briefly describes the functional area.

### \*BLANK

No text is specified.

### *description*

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

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## Job name (JOB)

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

\*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.

### \*NONE

An empty functional area is created.

### *job-name*

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

### *user-name*

Specify the name of the user to include in the functional area. This can be either a specific or generic name.

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---

## Examples

### Example 1: Creating a Functional Area in the Default Library

```
CRTFCNARA FCNARA(PERSONNEL) JOB(MIKE/*N ROSS/*N QPFR*)
```

This command creates the functional area PERSONNEL with three entries:

- The user MIKE
- The user ROSS
- Any job beginning with QPFR

The functional area is created in the QPFRDATA library.

### Example 2: Creating a Functional Area in a Specified Library

```
CRTFCNARA FCNARA('Performance Tools') LIB(RPFT)  
JOB(TODD/*N MARTY/*N DEB/QPFRMON)
```

This command creates the functional area 'Performance Tools' with three entries:

- The user TODD
- The user MARTY
- Any QPFRMON job submitted by DEB

The functional area is created in the RPFT library.

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## **Error messages**

### **\*ESCAPE Messages**

#### **PFR9063**

Cannot create functional area &2.

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# Create Graph Format (CRTGPHFMT)

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

Parameters  
 Examples  
 Error messages

The Create Graph Format (CRTGPHFMT) command creates a graph format used to display performance and historical graphs which are created from performance data members.

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## Parameters

Keyword	Description	Choices	Notes
GPHFMT	Graph format	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Graph format	<i>Name</i>	
	Qualifier 2: Library	<i>Name, QPFRDATA</i>	
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional, Positional 2
TITLE	Title	<i>Character value, *BLANK, *MBRTEXT</i>	Optional, Positional 3
SUBTITLE	Subtitle	<i>Character value, *BLANK, *MBRTEXT</i>	Optional
GPHTYPE	Graph type	<i>*SURFACE, *LINE, *CBAR, *FBAR, *SCATTER</i>	Optional
DATATYPE	Data type	<i>*FCNARA, *JOBTYPE, *PRIORITY, *IOP, *DISK, *CMNLINE, *ALL</i>	Optional
AREAFILL	Area fill	<i>*YES, *NO</i>	Optional
REFLINE	Reference line	<i>1-99999, *NONE</i>	Optional
XAXIS	X-axis	<i>Element list</i>	Optional
	Element 1: Variable	<i>*TIME, *CPU, *TNS, *NBRTNS, *RSP, *SYNCIO, *NBRASYNC, *ASYNCO, *NBRASYNC, *TOTDSKIO, *NBRDSKIO</i>	
	Element 2: Title	<i>Character value, *DFT, *BLANK</i>	
	Element 3: Range	<i>Single values: *AUTO Other values: Element list</i>	
	Element 1: First	<i>Decimal number</i>	
	Element 2: Last	<i>Decimal number</i>	
YAXIS	Y-axis	<i>Element list</i>	Optional
	Element 1: Variable	<i>*CPU, *TNS, *NBRTNS, *RSP, *SYNCIO, *NBRASYNC, *ASYNCO, *NBRASYNC, *TOTDSKIO, *NBRDSKIO, *CMNIOP, *DSKIO, *LWSIOP, *MFCIOP, *MFDIOP, *DSKARM, *PCTDSKCOCC, *CMNLINE, *LGLDBIO</i>	
	Element 2: Title	<i>Character value, *DFT, *BLANK</i>	
	Element 3: Range	<i>Single values: *AUTO Other values: Element list</i>	
	Element 1: First	<i>Decimal number</i>	
	Element 2: Last	<i>Decimal number</i>	

Keyword	Description	Choices	Notes
FCNARA	Functional area entry	Values (up to 16 repetitions): <i>Element list</i>	Optional
	Element 1: Functional area	<i>Character value</i> , *OTHER	
	Element 2: Legend 'description'	<i>Character value</i> , * <b>DFT</b> , *BLANK	
	Element 3: Line type	1-8, <u>7</u>	
	Element 4: Non-graphic display symbol	<i>Character value</i> , <u>_</u>	
JOBTYP	Job type entry	Values (up to 16 repetitions): <i>Element list</i>	Optional
	Element 1: Job type	*ALL, *ALLINTER, *ALLBATCH, *ALLSYSTEM, *ASJ, *BCH, *CA4, *DDM, *EVK, *INT, *MRT, *PCS, *PDJ, *PJ, *PTH, *RDR, *S36, *SBS, *SYS, *WTR, *OTHER	
	Element 2: Legend 'description'	<i>Character value</i> , * <b>DFT</b> , *BLANK	
	Element 3: Line type	1-8, <u>7</u>	
	Element 4: Non-graphic display symbol	<i>Character value</i> , <u>_</u>	
PRIORITY	Job priority entry	Values (up to 16 repetitions): <i>Element list</i>	Optional
	Element 1: Lower priority boundary	0-99, *OTHER, *ALL	
	Element 2: Upper priority boundary	0-99	
	Element 3: Legend 'description'	<i>Character value</i> , * <b>DFT</b> , *BLANK	
	Element 4: Line type	1-8, <u>7</u>	
	Element 5: Non-graphic display symbol	<i>Character value</i> , <u>_</u>	
IOP	IOP data entry	Values (up to 2 repetitions): <i>Element list</i>	Optional
	Element 1: Type of utilization	*AVG, *MAX	
	Element 2: Legend 'description'	<i>Character value</i> , * <b>DFT</b> , *BLANK	
	Element 3: Line type	1-8, <u>7</u>	
	Element 4: Non-graphic display symbol	<i>Character value</i> , <u>_</u>	
DISK	Disk data entry	Values (up to 2 repetitions): <i>Element list</i>	Optional
	Element 1: Type of utilization	*AVG, *MAX	
	Element 2: Legend 'description'	<i>Character value</i> , * <b>DFT</b> , *BLANK	
	Element 3: Line type	1-8, <u>7</u>	
	Element 4: Non-graphic display symbol	<i>Character value</i> , <u>_</u>	
CMNLINE	Communications line entry	Values (up to 16 repetitions): <i>Element list</i>	Optional
	Element 1: Communications line	<i>Name</i> , *MAX	
	Element 2: Legend 'description'	<i>Character value</i> , * <b>DFT</b> , *BLANK	
	Element 3: Line type	1-8, <u>7</u>	
	Element 4: Non-graphic display symbol	<i>Character value</i> , <u>_</u>	

Keyword	Description	Choices	Notes
ALLDATA	All data entry	<i>Element list</i>	Optional
	Element 1: Legend 'description'	<i>Character value, *DFT, *BLANK</i>	
	Element 2: Line type	1-8, <u>7</u>	
	Element 3: Non-graphic display symbol	<i>Character value, *</i>	

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---

## Graph format (GPHFMT)

Specifies the graph format to be created.

This is a required parameter.

### QPFRDATA

The IBM-supplied performance data library, QPFRDATA, is where the graph format will be located.

### *library-name*

Specify the name of the library where the graph format will be located.

### *format-name*

Specify the name of the graph format to be created.

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---

## Text 'description' (TEXT)

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

### \*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.

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---

## Title (TITLE)

Specifies the title for the graph.

### \*BLANK

The title 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 title.

### *graph-title*

Specify a title of no more than 50 characters in length for the graph produced using this format. Enclose the user-defined title in apostrophes.

---

## Subtitle (SUBTITLE)

Specifies the subtitle for the graph.

### \*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 subtitle of no more than 50 characters in length for the graph produced using this format. Enclose the user defined subtitle in apostrophes.

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---

## Graph type (GPHTYPE)

Specifies the type of graph to produce.

### \*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.

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---

## Data type (DATATYPE)

Specifies the type of data to include on the graph.

\*ALL This value puts all of the jobs into one group for graphing.

### \*FCNARA

This 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. That is, if a job exists in more than one of the functional areas selected for the graph, an error message is issued indicating that the job exists in more than one functional area. Also, 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, System i 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.

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---

## Area fill (AREAFILL)

Specifies whether areas on the graph are filled in.

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

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

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## Reference line (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.

**\*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.

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---

## X-axis (XAXIS)

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

The possible X-axis **Variable** values are:

**\*TIME**

Time is mapped along the X-axis.

**\*CPU** Utilization of the processing unit 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 input/output (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.

The possible **X-axis Title** values are:

**\*DFT** The X-axis variable is used for the X-axis title.

**\*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.

The possible **Starting and Ending Range for the X-axis** values are:

**\*AUTO**

The X-axis range is automatically calculated. This value must be specified if \*TIME is specified as 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.

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---

## Y-axis (YAXIS)

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

The possible **Y-axis Variable** values are:

**\*CPU** Utilization of the processing unit 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 input/output (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 Y-axis.
- \*CMNIOP  
Utilization of the communications input/output processor (IOP) is mapped along the Y-axis. If YAXIS(\*CMNIOP) is specified, XAXIS(\*TIME) must be specified.
- \*DSKIOP  
Utilization of the disk IOP is mapped along the Y-axis. If YAXIS(\*DSKIOP) is specified, XAXIS(\*TIME) must be specified.
- \*LWSIOP  
Utilization of the local work station IOP is mapped along the Y-axis. If YAXIS(\*LWSIOP) is specified, XAXIS(\*TIME) must be specified.
- \*MFCIOP  
Utilization of the multifunction IOP for communications is mapped along the Y-axis. If YAXIS(\*MFCIOP) is specified, XAXIS(\*TIME) must be specified.
- \*MFDIOP  
Utilization of the multifunction IOP for disks is mapped along the Y-axis. If YAXIS(\*MFDIOP) is specified, XAXIS(\*TIME) must be specified.
- \*DSKARM  
Utilization 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  
Utilization of communications lines is mapped along the Y-axis. If YAXIS(\*CMNLINE) is specified, XAXIS(\*TIME) must be specified.
- \*LGLDBIO  
The total number of logical database I/O operations is mapped along the Y-axis.

The possible **Y-axis Title** values are:

\*DFT The Y-axis variable is used for the Y-axis title.

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

*Y-axis-title*

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

The possible **Starting and Ending Range for the Y-axis** values are:

**\*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.

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---

## Functional area entry (FCNARA)

Specifies the list of characteristics to be used for each functional area on the graph. This 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.

The possible **Functional Area Name** values are:

**\*OTHER**

All jobs that do not belong in one of the functional areas specified in this parameter are grouped together.

*functional-area-name*

Specify the name of the functional area.

The possible **Functional Area Legend Description** values are:

**\*DFT** The name or special value specified for the functional area name is used as the legend description.

**\*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.

The possible **Graphic Display Line Type** values are:

**7 (Solid)**

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. There are 8 types of lines from which you can choose:

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

The possible **Nongraphic Work Station Symbol used for the Functional Area** values are:

\*        The asterisk symbol is used for graphic representation of the functional area on nongraphic terminals.

*character*

Specify a character to use for graphic representation of the functional area on nongraphic terminals.

Top

---

## Job type entry (JOBTYPE)

Specifies the list of characteristics to be used for creating job type information on the graph. This 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.

The possible **Job Type** values are:

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

**\*ALLINTER**

All interactive job types include:

- DDM jobs
- Pass-through jobs
- System i 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
- System i 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 includes:

- System jobs
- Subsystem monitor jobs

**\*ASJ** Autostart jobs

**\*BCH** Batch jobs

**\*CA4** System i Access server jobs

**\*DDM**

Distributed Data Management (DDM) jobs

**\*EVK** Jobs started by a procedure start request

\***INT** Interactive jobs  
\***MRT** Multiple requester terminal jobs  
\***PCS** System i 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 this parameter are grouped together.

The possible **Job Type Legend Description** values are:

\***DFT** The value specified for the job type is used as the legend description.

\***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.

The possible **Graphic Display Line Type for the Job Type** values are:

**7 (Solid)**

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. There are 8 types of lines from which you can choose:

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

The possible **Nongraphic Work Station Symbol used for the Job Type** values are:

\*  
\_ The asterisk (\*) is used for graphic representation of the job type on nongraphic terminals.

*character*

Specify a character to use for graphic representation of the job type on nongraphic terminals.

Top

---

## Job priority entry (PRIORITY)

Specifies the characteristics to be used for creating job priority information on the graph. This 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.

The possible **Job Priority Boundaries** values are:

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

**\*OTHER**

All job priorities that do not fall within the job priority boundaries specified on this parameter are grouped together.

*lower-priority-boundary*

Specify the lower job priority boundary. Valid values range from 0 through 99.

*upper-priority-boundary*

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

The possible **Job Priority Legend Description** values are:

**\*DFT** The boundaries or special value specified for the job priority 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.

The possible **Graphic Display Line Type for the Job Priority** values are:

**7 (Solid)**

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. There are 8 types of lines from which you can choose:

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

The possible **Nongraphic Work Station Symbol used for the Job Priority** values are:

**\***  
**\_** The asterisk symbol is used for graphic representation of the job priority on nongraphic terminals.

*character*

Specify a character to use for graphic representation of the job priority on nongraphic terminals.

---

## IOP data entry (IOP)

Specifies the characteristics to be used for creating input/output processor (IOP) information on the graph. This 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.

The possible **Amount of Utilization for IOP type** values are:

**\*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.

The possible **Legend Description for the IOP type** values are:

**\*DFT** The value specified for the amount of utilization is used as the legend description.

**\*BLANK**

The legend description for the IOP data is left blank.

*legend-description*

Specify the legend description for the IOP data. Enclose the user defined description in apostrophes.

The possible **Graphic Display Line Type for the IOP type** values are:

**7 (Solid)**

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. There are 8 types of lines from which you can choose:

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

The possible **Nongraphic Work Station Symbol used for the IOP type** values are:

**\*** The asterisk (\*) is used for graphic representation of the IOP type on nongraphic terminals.

*character*

Specify a character to use for graphic representation of the IOP type on nongraphic terminals.

---

## Disk data entry (DISK)

Specifies the characteristics to be used for creating disk data information on the graph. This 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 disk arm utilization and percent of disk occupied.

The possible **Amount of Utilization for Disk Data type** values are:

**\*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.

The possible **Disk Data Type Legend Description** values are:

**\*DFT** The value specified for the amount of utilization is used as the legend description.

**\*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.

The possible **Graphic Display Line Type for the Disk Data Type** values are:

**7 (Solid)**

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. There are 8 types of lines from which you can choose:

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

The possible **Nongraphic Work Station Symbol used for the Disk Data type** values are:

**\*** An asterisk (\*) is used for graphic representation of the disk data on nongraphic terminals.

*character*

Specify a character to use for graphic representation of the disk data on nongraphic terminals.

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---

## Communications line entry (CMNLINE)

Specifies the characteristics to be used for creating communications line information on the graph. This parameter is valid only when **DATATYPE(\*CMNLINE)** is specified. When **DATATYPE(\*CMNLINE)** is specified, at least one, but not more than 16 communications line entries must be specified.

The possible **Communications Line Name** values are:

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

*communications-line-name*

Specify the name of the communications line whose utilization is presented on the graph.

The possible **Communications Line Legend Description** values are:

**\*DFT** The name or special value specified for the communications line name is used for the legend description.

**\*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.

The possible **Graphic Display Line Type for the Communications Line** values are:

**7 (Solid)**

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. There are 8 types of lines from which you can choose:

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

The possible **Nongraphic Work Station Symbol used the Communications Line** values are:

**\*** The asterisk (\*) is used for graphic representation of the communications line on nongraphic terminals.

**character**

Specify a character to use for graphic representation of the communications line on nongraphic terminals.

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---

## All data entry (ALLDATA)

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

The possible **Legend Description for All of the Job Data** values are:

**\*DFT** The value \*ALL is used for the legend description.

**\*BLANK**

The legend description for the data is left blank.

**legend description**

Specify the legend description for the data. Enclose the description in apostrophes.

The possible **Graphic Display Line Type for all of the Job Data** values are:

**7 (Solid)**

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. There are 8 types of lines from which you can choose:

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

The possible **Nongraphic Work Station Symbol used for all of the Job Data** values are:

\*     The asterisk symbol is used for graphic representation of all of the job data on nongraphic terminals.

*character*

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

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## Examples

```
CRTGPHFMT  GPHFMT(FORMAT1)  TITLE(*MBRTEXT)  DATATYPE(*FCNARA)
            FCNARA((ACCOUNTING 'ACCOUNTING') (SALES 'SALES' 7 #)
                   (OFFICE 'OFFICE' 7 @))
```

This command creates a graph format named FORMAT1 in the QPFRDATA library. The member that is presented on the graph using this format supplies the title for the graph. The graph is a surface graph with no area fill nor a reference line. The jobs presented on the graph are grouped according to three functional areas:

1. ACCOUNTING
2. SALES
3. OFFICE

The functional area of accounting is represented on the graph with a solid line with the label, ACCOUNTING. If the format is displayed on a non-graphics work station, the asterisk (\*) symbol is used to graphically represent the functional area of accounting. The functional areas, sales and office, are formatted in the same manner as accounting, except SALES is graphically represented with the # symbol on a non-graphics work station, and OFFICE is graphically represented with the at @ symbol on a non-graphics work station.

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## Error messages

### \*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.
- PFR9008**  
Graph format &2 already exists 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.
- 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.
- PFR9093**  
Graph format &3 already exists in library &2.
- PFR9104**  
Record length for GDF file &2 not correct.

**PFR9106**

Too many data lines specified for scatter graph.

**PFR9116**

\*LGLDBIO only valid when \*JOBTYPE specified for DATATYPE parameter

**PFR9117**

\*DDM must be specified for Job type parameter.

**PFR9804**

Library &2 not found.

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---

## Create Graph Package (CRTGPHPKG)

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

Parameters  
Examples  
Error messages

The Create Graph Package (CRTGPHPKG) command creates a graph package containing one or more graph formats.

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---

### Parameters

Keyword	Description	Choices	Notes
GPHPKG	Graph package	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Graph package	<i>Name</i>	
	Qualifier 2: Library	<i>Name, QPFRDATA, *CURLIB</i>	
TEXT	Text 'description'	<i>Character value, *BLANK</i>	Optional
GPHFMT	Graph format	Single values: <i>*SELECT</i> Other values (up to 25 repetitions): <i>Name</i>	Optional

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---

### Graph package (GPHPKG)

Specifies the graph package to create or change.

#### 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, QGPL 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.

This is a required parameter.

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---

## Text 'description' (TEXT)

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

### \*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.

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---

## Format (GPHFMT)

Specifies the graph formats to include in the graph package.

### \*SELECT

Shows a list of graph formats to select to be included in the graph package. This value is valid only in an interactive environment.

### *format-name*

Specify the graph format to be included in the graph package. Up to 25 format names can be specified.

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---

## Examples

### Example 1: Creating a Package that Contains Three Formats

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

This command creates a graph package called EXAMPLE, which contains three formats, GPH1, GPH9, and GPH12. This package is saved in the default library, QPFRDATA.

### Example 2: Creating a Package that Contains Two Formats

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

This command creates a graph package called MYPKG which contains the formats of MYGPH1 and MYGPH2. MYPKG is saved in library MYLIB.

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---

## Error messages

### \*ESCAPE Messages

#### PFR9011

Graph package &2 already exists in library &1.

#### PFR9013

Graph format &2 cannot be added.

**PFR9032**

Too many formats selected.

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---

## Create Historical Data (CRTHSTDTA)

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

Parameters  
Examples  
Error messages

The Create Historical Data (CRTHSTDTA) command creates and adds historical data for a member to the historical data files. Historical data is an ongoing summary of the system reflecting the members that have been summarized using this command.

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---

### Parameters

Keyword	Description	Choices	Notes
MBR	Member	<i>Name</i>	Required, Positional 1
LIB	Library	<i>Name</i> , <u>QPFRDATA</u> , *CURLIB	Optional, Positional 2
REPLACE	Replace	* <u>NO</u> , *YES	Optional
JOB	Job description	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Job description	<i>Name</i> , <u>QFRJOB</u>	
	Qualifier 2: Library	<i>Name</i> , * <u>LIBL</u> , *CURLIB	

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---

### Member (MBR)

Specifies the member to be used to create the historical data. Specify the name of the member.

This is a required parameter.

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---

### Library (LIB)

Specifies the library where the member is located.

The possible library values are:

#### QPFRDATA

The IBM-supplied performance data library, QPFRDATA, is where the member is located.

#### \*CURLIB

The current library for the job is used to locate the member. 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 member is located.

---

## Replace (REPLACE)

Specifies whether to replace the historical data for the member if it already exists.

**\*NO** The historical data is not replaced.

**\*YES** The historical data is replaced.

---

## Job description (JOBDD)

Specifies the job description used to submit jobs for batch processing.

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

**\*CURLIB**

The current library for the job is used to locate the job description. 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 is located.

## QPFJJOBDD

The IBM-supplied performance tools job description is used.

*job-description-name*

Specify the name of an alternate job description.

**\*NONE**

A batch job is not submitted; instead, processing continues interactively while the user waits. The user's work station cannot be used during this time. This is something to consider for especially long jobs.

---

## Examples

### Example 1: Creating Files in Default Library

```
CRTHSTDTA MBR(MONDAY)
```

This command creates files that contain historical data with the member named MONDAY.

### Example 2: Creating Files in Specified Library

```
CRTHSTDTA MBR(TUESPM) LIB(MYLIB)
```

This command creates files that contain historical data with a member named TUESPM located in library MYLIB.

---

## Error messages

### \*ESCAPE Messages

#### **PFR9039**

Historical data cannot be created for member &2.

#### **PFR9056**

Cannot copy graph format or package.

#### **PFR9061**

Cannot create historical data.

#### **PFR9070**

Cannot create historical data.

#### **PFR9803**

Cannot create historical data.



---

## Delete Functional Area (DLTFCNARA)

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

Parameters  
Examples  
Error messages

The Delete Functional Area (DLTFCNARA) command allows you to delete functional areas from your system. Functional areas are used by performance tools for reports and graphics. A functional area is a pre-defined list of job names and/or user names that are to be included in a report or graph.

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---

### Parameters

Keyword	Description	Choices	Notes
FCNARA	Functional area	<i>Character value</i>	Required, Positional 1
LIB	Library	<i>Name, <u>QPFRDATA</u></i>	Optional, Positional 2

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---

### Functional area (FCNARA)

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

This is a required parameter.

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---

### Library (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.

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---

### Examples

#### Example 1: Deleting the Functional Area from the Default Library

```
DLTFCNARA FCNARA(PERSONNEL)
```

This command deletes the functional area named PERSONNEL from library QPFRDATA.

## Example 2: Deleting the Functional Area from a Specified Library

```
DLTFCNARA FCNARA('Performance Tools') LIB(RPFT)
```

This command deletes the functional area named 'Performance Tools' from library RPFT.

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---

## Error messages

### \*ESCAPE Messages

#### PFR9067

Cannot delete functional area &2.

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---

## Delete Graph Format (DLTGPHFMT)

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

Parameters  
Examples  
Error messages

The Delete Graph Format (DLTGPHFMT) command deletes a graph format. This command also deletes a graph format from any packages that contain it.

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---

### Parameters

Keyword	Description	Choices	Notes
GPHFMT	Graph format	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Graph format	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <u>QPFRDATA</u> , *CURLIB	

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---

### Graph format (GPHFMT)

Specifies the graph format to delete.

This is a required parameter.

#### QPFRDATA

The IBM-supplied performance data library, QPFRDATA, is where the graph format is located.

#### \*CURLIB

The current library for the job is used to locate the graph format. 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 graph format is located.

#### *format-name*

Specify the name of the graph format to delete.

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---

## Examples

### Example 1: Deleting a Graph Format in a Specified Library

```
DLTGPHFMT  GPHFMT(MYLIB/MYFMT)
```

This command deletes the graph format named MYFMT located in the MYLIB library.

### Example 2: Deleting a Graph Format in the Default Library

```
DLTGPHFMT  GPHFMT(TESTFMT)
```

This command deletes the graph format named TESTFMT located in the default library QPFRDATA.

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---

## Error messages

### \*ESCAPE Messages

#### PFR9043

&1 does not exist in library &2.

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---

## Delete Graph Package (DLTGPHPKG)

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

Parameters  
Examples  
Error messages

The Delete Graph Package (DLTGPHPKG) command deletes a graph package.

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---

### Parameters

Keyword	Description	Choices	Notes
GPHPKG	Graph package	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Graph package	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <u>QPFRDATA</u> , *CURLIB	

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---

### Graph package (GPHPKG)

Specifies the graph package to delete.

This is a required parameter.

#### QPFRDATA

The IBM-supplied performance data library, QPFRDATA, is where the graph package is located.

#### \*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, QGPL is used.

#### *library-name*

Specify the name of the library where the graph package is located.

#### *package-name*

Specify the name of the graph package to delete.

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---

### Examples

#### Example 1: Deleting a Package in a Specified Library

```
DLTGPHPKG  GPHPKG(MYLIB/MYPKG)
```

This command deletes the graph package MYPKG from library MYLIB.

## Example 2: Deleting a Package in the Default Library

```
DLTGPHPKG  GPHPKG(TESTPKG)
```

This command deletes graph package TESTPKG from default library QPFRDATA.

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---

## Error messages

### \*ESCAPE Messages

#### PFR9043

&1 does not exist in library &2.

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---

## Delete Historical Data (DLTHSTDTA)

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

Parameters  
Examples  
Error messages

The Delete Historical Data (DLTHSTDTA) command deletes historical data for selected members from the historical database files.

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### Parameters

Keyword	Description	Choices	Notes
MBR	Member	Single values: *SELECT Other values (up to 50 repetitions): <i>Name</i>	Optional, Positional 1
LIB	Library	<i>Name</i> , <u>QPFRRDATA</u>	Optional
JOBDD	Job description	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Job description	<i>Name</i> , <u>QPFRRJOBDD</u>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	

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---

### Member (MBR)

Specifies the member whose historical data is to be deleted.

#### \*SELECT

Lists all members available in the specified library so that you can select members that have historical data to be deleted. This value is valid only in an interactive environment.

#### *member-name*

Specify the member whose historical data is to be deleted from the database files. Up to 50 members can be specified.

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### Library (LIB)

Specifies the library where the files are located.

The possible library values are:

#### QPFRRDATA

The IBM-supplied performance data library, QPFRRDATA, is where the files are located.

#### *library-name*

Specify the name of the library where the files are located.

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---

## Job description (JOBDB)

Specifies the job description used to submit jobs for batch processing.

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

**\*CURLIB**

The current library for the job is used to locate the job description. 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 is located.

### QPFRJOBDB

The IBM-supplied performance tools job description is used.

*job-description-name*

Specify the name of an alternate job description.

**\*NONE**

A batch job is not submitted; instead, processing continues interactively while the user waits. The user's work station cannot be used during this time. This is something to consider for especially long jobs.

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## Examples

None

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## Error messages

### \*ESCAPE Messages

**PFR9033**

Too many items selected to be deleted.

**PFR9038**

Cannot delete historical data from member &2.

**PFR9053**

Historical data does not exist for member &2.

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# Display Historical Graph (DSPHSTGPH)

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

Parameters  
 Examples  
 Error messages

The Display Historical Graph (DSPHSTGPH) command produces a graph from the historical data created by the Create Historical Data (CRTHSTDTA) command. The DSPHSTGPH command is intended to give you a historical perspective of your system in a graphic representation.

The CRTHSTDTA command summarizes the performance data collected by Collection Services. The graph format must have been defined by the Create Graph Format (CRTGPHFMT) command. The graph can be directed to a graphics terminal, non-graphics terminal, printer, plotter, and a graphics data format (GDF) file that can be used by other systems. Historical data members can be selectively included in the graph.

It is important that the Create Historical Data (CRTHSTDTA) command has been run for each of the members that you want to include in the graph. If CRTHSTDTA has not been run for a member, it is not included in the graph unless you specify \*YES on the **Create historical data** prompt (CRTHSTDTA parameter) of this command.

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## Parameters

Keyword	Description	Choices	Notes
GRAPH	Graph format or package	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Graph format or package	<i>Name</i>	
	Qualifier 2: Library	<i>Name, QPFRDATA, *CURLIB</i>	
LIB	Library	<i>Name, QPFRDATA</i>	Optional, Positional 2
TITLE	Title	<i>Character value, *SAME, *MBRTEXT, *BLANK</i>	Optional
SUBTITLE	Subtitle	<i>Character value, *SAME, *MBRTEXT, *BLANK</i>	Optional
OUTPUT	Output	<i>*, *PRINT, *PLOT, *OUTFILE</i>	Optional
OUTFILE	Output file	<i>Qualified object name</i>	Optional
	Qualifier 1: Output file	<i>Name</i>	
	Qualifier 2: Output file library	<i>Name, *LIBL, *CURLIB</i>	
OUTMBR	Output file member	<i>Element list</i>	Optional
	Element 1: Member name	<i>Name, *FIRST</i>	
	Element 2: Replace or add records	<i>*REPLACE, *ADD</i>	
PLTSPD	Plotter speed	1-100, <u>100</u>	Optional
PLTPEN	Plotter pen width	1-10, <u>3</u>	Optional
PLTADR	Plotter address	1-31, <u>1</u>	Optional
PRTDEV	Printer device or type	<i>Name, 4214, 4234, 522X, *IPDS, *NONGRAPHIC</i>	Optional

Keyword	Description	Choices	Notes
OUTQ	Output queue	Single values: *PRTDEV Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Output queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL	
PAGELEN	Page length	*PRTDEV, 51, 66	Optional
TYPE	Type	*GPHFMT, *GPHPKG	Optional
PERIOD	Time period for report	<i>Element list</i>	Optional
	Element 1: Starting date	<i>Date</i> , *FIRST, *SELECT	
	Element 2: Ending date	<i>Date</i> , *LAST	
CRTHSTDTA	Create historical data	*NO, *YES	Optional
XAXIS	X-axis	<i>Element list</i>	Optional
	Element 1: Range	Single values: *SAME, *AUTO Other values: <i>Element list</i>	
	Element 1: First	0-99999	
	Element 2: Last	0-99999	
YAXIS	Y-axis	<i>Element list</i>	Optional
	Element 1: Range	Single values: *SAME, *AUTO Other values: <i>Element list</i>	
	Element 1: First	0-99999	
	Element 2: Last	0-99999	
AREAFILL	Area fill	*SAME, *YES, *NO	Optional
JOB	Job name	<i>Name</i> , DSPHSTGPH	Optional
JOBDD	Job description	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Job description	<i>Name</i> , QPFRJOBDD	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	

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---

## Graph format or package (GRAPH)

Specifies the graph format or graph package used to create the graph.

This is a required parameter.

The possible library values are:

### QPFRDATA

The IBM-supplied performance data library, QPFRDATA, is where the graph format or graph package is located.

### \*CURLIB

The current library for the job is used to locate the graph format or graph package. 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 graph format or graph package is located.

Since the following are not elements, they are mutually exclusive. Therefore, specify the name of the graph format or specify the name of the graph package. You cannot specify them at the same time.

*format-name*

Specify the name of the graph format.

*package-name*

Specify the name of the graph package.

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---

## Library (LIB)

Specifies the library in which the historical data created by the Create Historical Data (CRTHSTDTA) command is located.

The possible library values are:

QPFRDATA

The IBM-supplied performance data library, QPFRDATA, is where the historical data is located.

*library-name*

Specify the library where the historical data is located.

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---

## Title (TITLE)

Specifies a title to display at the top of the graph or each graph of a package.

\*SAME

The title defined in the graph format is used.

\*BLANK

A blank title is used.

\*MBRTEXT

The text of the selected member that was last created by the performance monitor is used.

*graph-title*

Specify a title of up to 50 characters enclosed in apostrophes.

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---

## Subtitle (SUBTITLE)

Specifies a subtitle to display at the top of the graph or each graph of a package.

\*SAME

The subtitle defined in the graph format is used.

\*BLANK

A blank subtitle is used.

\*MBRTEXT

The text of the selected member that was last created by the performance monitor is used.

*subtitle*

Specify a subtitle of up to 50 characters enclosed in apostrophes.

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---

## Output (OUTPUT)

Specifies whether the graph is to be displayed, printed, plotted, or saved in a graphics data format (GDF) file.

\*  
- The graph is to be displayed on the output screen. This special value is not valid if **JOB(\*NONE)** is not specified.

Your display station can be either a graphics or nongraphics display station. A graphics display station shows the graph with colors, shading, and so forth. A nongraphics display station shows the graph using characters you choose to represent colors, shading, and so forth.

Once your graph is shown, you can define one overlay. An overlay is a graph that is placed on top of the current graph.

### \*PRINT

The graph is printed to the printer file, QPPGGPH while the spooled output file is named the same as the graph format.

#### Note:

The appearance of graphs printed or displayed by graphical devices can be different from how they appear when printed or displayed by nongraphical devices, especially when \*AUTO is specified for the Y (vertical) axis.

### \*PLOT

The graph is plotted on an attached plotter. This value is not valid if **JOB(\*NONE)** is not specified. The 6180, 6182, 7371, and 7372 plotters are supported.

### \*OUTFILE

The graph is saved to the graphics data format (GDF) file specified in the **Output file** prompt (OUTFILE parameter). This option is not valid if a package is being displayed.

You can use this file to display the graph on any system supporting the graphical data display manager function or the Business Graphics Utility licensed program.

#### Note:

Graph packages cannot be sent to a GDF file.

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## Output file (OUTFILE)

Specifies the library and file in which the graph data format is to be saved. This parameter is only valid when **OUTPUT(\*OUTFILE)** is specified. The graph is saved in a graphics data format (GDF) file.

The possible library values are:

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

### \*CURLIB

Search the current job library to locate the file in which to save the graph. If no current job library entry exists in the library list, QGPL is used.

### *library-name*

Specify the name of the library where the graph is to be saved.

### *file-name*

Specify the name of the file into which the graph is to be saved.

---

## Output file member (OUTMBR)

Specifies the format member in which the graph is to be saved. This parameter is valid only when **OUTPUT(\*OUTFILE)** is specified.

### \*FIRST

The first member in the file receives the output. If **OUTMBR(\*FIRST)** is specified and the member does not exist, the system creates a member with the name of the file specified in the **Output file prompt** (OUTFILE parameter).

### *member-name*

Specify the name of the member into which the graph is to be saved. If **OUTMBR(member-name)** is specified and the member does not exist, the system creates it. If the member already exists, you have the option to add new records to the end of the existing member or clear the member and then add the new records.

The possible optional values are:

### \*REPLACE

If a member exists, the system clears it and adds the new records.

**\*ADD** If a member exists, the system adds the new records to the end of the existing records.

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---

## Plotter speed (PLTSPD)

Specifies the speed at which the plotter creates the graph. A larger value represents a faster plotting rate. The smaller the value the better the plotting quality of the graph. This parameter is valid only when **OUTPUT(\*PLOT)** is specified.

100 A plotter speed of 100 is used.

### *plotter-speed*

Specify the speed of the plotter. The plotter speed ranges from 1 through 100 (velocity).

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## Plotter pen width (PLTPEN)

Specifies the pen width in which to shade the graph. The smaller the value, the closer together the lines will be for shading. If you choose a small value, the graph takes longer to plot. If the value is too large, the shading will have gaps in it. This parameter is valid only when **OUTPUT(\*PLOT)** is specified.

3 A pen width of .3 millimeters is used.

### *pen-width*

Specify the width of the pen. The pen widths range from .1 millimeter through 1 millimeter. Valid values range from 1 through 10.

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---

## Plotter address (PLTADR)

Specifies the plotter address for the terminal on which the graph is to be created.

1 Use the plotter designated by address 1.

*plotter-address*

Specify the address of the plotter. Valid values range from 1 through 31.

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## Printer device or type (PRTDEV)

Specifies the name of the printer or the type of printer on which the graph is to be printed. If a printer name is used, for example, PRT01, PRT02, and so on, the output is spooled to the output queue of the printer. If a printer type is specified, for example, 4214, the output is spooled to the output queue specified on the **Output queue** prompt (OUTQ parameter). This parameter is valid only when **OUTPUT(\*PRINT)** is specified.

4214 The 4214 printer is used.

4234 The 4234 printer is used.

522X One of the 522 series printer are used. They are the 5224 and 5225 printers.

**\*IPDS** One of the Intelligent Printer Data Stream (IPDS) printers are used. They are the 3812 and 4224 printers.

**\*NONGRAPHIC**

The output is not spooled in a graphics format for printing on printers that do not support graphics.

*printer-name*

Specify the system name of the printer to which the output is sent.

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---

## Output queue (OUTQ)

Specifies the name and library of the output queue to which the printer file is to be sent.

**\*PRTDEV**

The output queue associated with the printer is used. If a printer type has been specified, the output is sent to the job's output queue.

*output-queue-name*

Specify the name of the output queue.

The possible library values are:

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

*library-name*

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

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---

## Page length (PAGELEN)

Specifies the page length for graphs. The PAGELEN parameter is valid only when **OUTPUT(\*PRINT)** is specified.

**\*PRTDEV**

The page length for the printer or printer type specified on the PRTDEV parameter is used.

- 51 Specifies 51 lines per page (8.5 inches).
- 66 Specifies 66 lines per page (11 inches).

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## Type (TYPE)

Specifies whether the graph is a graph format or a graph package.

### \*GPHFMT

The graph is a graph format.

### \*GHPKG

The graph is a graph package.

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## Time period for report (PERIOD)

Specifies the members which are to be included in the graph which will specify the time period range of the graph. The members can be selected using the \*SELECT value or by specifying a starting and ending date range.

**Note:** Members which have not had their historical data created are not included on the graph unless CRTHSTDTA(\*YES) is specified.

\*N may be used in place of an element that precedes the value being specified in order to maintain positioning. For example:

PERIOD(\*N 091289)

This example specifies the ending date and uses the default starting date, which is specified by \*N.

Specify one of the following values to signify the starting date. Historical information collected before this date is not included in the graph.

The possible **Starting Date** values are:

### \*FIRST

Historical information is included in the graph beginning on the date of the oldest historical information in the library.

### \*SELECT

Shows a list of performance members and whether or not they have historical data. From this list you can select which members are included in the graph. This value is valid only in the interactive environment. If used, the remaining values on the **Time period for report** prompt (PERIOD parameter) are ignored (end-date).

### *start-date*

Specify the date after which data records are included. The date must be entered in the format specified by the system values, QDATFMT, and, if separators are used, QDATSEP. For example, the system might have a date format of '**mm/dd/yy**'. The month (mm), day (dd), and year (yy) are all required (1- or 2-digit values). The slashes (/) are optional if all 6 digits are specified. If the slashes are omitted, or if the value is entered from the prompt screen, then apostrophes are not required.

Specify one of the following values to signify the ending date. Historical information collected after this date is not included in the graph.

The possible **Ending Date** values are:

**\*LAST**

Historical information is included in the graph ending on the date of the latest historical information in the library.

***end-date***

Specify the date after which records are no longer included. This value is specified in the same format as **start-date**.

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## Create historical data (CRTHSTDTA)

Specifies whether historical data is to be created for any performance data member that has not had historical data created.

**\*NO** Historical data is not created. All performance members that exist during the period of time selected, and do not have historical data representing them, are not included on the graph.

**\*YES** Historical data is created.

**Note:** Creating historical data takes more time than most display jobs.

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## X-axis (XAXIS)

Specifies the range used on the X-axis.

**\*SAME**

The range specified in the graph format is used.

**\*AUTO**

The system determines a range based on the data being used.

The possible **Starting Number** value is:

***starting-number***

Specify the starting number for the range on the X-axis. This user-defined variable is not valid if you have specified **\*TIME** for the X-axis. If you specify a starting number, you must also specify an ending number.

The possible **Ending Number** value is:

***ending-number***

Specify the ending number for the range on the X-axis. This user-defined variable is not valid if you have specified **\*TIME** for the X-axis. If you specify an ending number, you must also specify a starting number.

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## Y-axis (YAXIS)

Specifies the range used on the Y-axis.

**\*SAME**

The range specified in the graph format is used.

**\*AUTO**

The system determines a range based on the data being used.

The possible **Starting Number** value is:

***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.

The possible **Ending Number** value is:

***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.

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## Area fill (AREAFILL)

Specifies whether the graph is to be displayed with surfaces and bars filled in with a shading pattern.

This parameter allows you to display detailed graphs quickly. If you specify **AREAFILL(\*NO)** on this command when you have specified **AREAFILL(\*YES)** on the CRTGPHFMT command, the graph is displayed more quickly. This is caused by the fact that it takes longer to fill in areas with shading patterns than it does to draw lines. Also, the more dense the shading pattern, the more time it takes. These issues are important if time is short and graphic quality is not momentarily important.

**\*SAME**

The graph is shaded according to the graph format definition.

**\*YES** The graph will be filled in with a shading pattern.

**\*NO** The graph will not be filled in with a shading pattern.

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---

## Job name (JOB)

Specifies the job name to be used if submitting a job for batch processing.

If **\*NONE** is specified on the **Job description** prompt (JOBDEF parameter), this parameter is ignored and job processing is performed interactively.

The possible **job-name** values are:

**DSPHSTGPH**

The command name is used for the job name.

***job-name***

Specify the name to be used for batch jobs.

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---

## Job description (JOBDB)

Specifies the job description used to submit jobs for batch processing.

### \*NONE

A batch job is not submitted; instead, processing continues interactively while the user waits. The user's work station cannot be used during this time. This is something to consider for especially long jobs.

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

### **\*CURLIB**

The current library for the job is used to locate the job description. 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 is located.

## QPFRJOBDB

The IBM-supplied performance tools job description is used.

### *job-description-name*

Specify the name of an alternate job description.

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## Examples

### Example 1: Displaying a Data File

```
DSPHSTGPH GRAPH(GRAPHLIB/CPU)
```

This command shows the historical data file in library QPFRDATA on the user's screen. It is shown using the graph format CPU in library GRAPHLIB. All of the historical information in library QPFRDATA is included in the graph.

### Example 2: Saving a Graph

```
DSPHSTGPH GRAPH(GRAPHLIB/CPU) OUTPUT(*OUTFILE)  
          OUTFILE(USERLIB/USERFILE) OUTMBR(TEST)  
          JOBDB(*LIBL/QPFRJOBDB)
```

This command submits a job to save the graph in a GDF file. The graph is saved in the file USERLIB/USERFILE/TEST.

### Example 3: Printing a Graph

```
DSPHSTGPH GRAPH(GRAPHLIB/CPU) OUTPUT(*PRINT)  
          PRTDEV(PRT03) JOBDB(*LIBL/QPFRJOBDB)
```

This command submits a job to print the graph on the system printer named PRT03.

### Example 4: Printing All Graphs in a Package

```
DSPHSTGPH  GRAPH(GRAPHLIB/PACKAGE1) OUTPUT(*PRINT)
           PRTDEV(PRT03) TYPE(*GPHPKG) JOBD(*LIBL/QPFRJOB)
```

This command submits a job to print all of the graphs defined in PACKAGE1 in GRAPHLIB. The print job is sent to the system printer named PRT03. It uses the historical data members in QPFRDATA for its information.

### Example 5: Displaying a Graph

```
DSPHSTGPH  GRAPH(GRAPHLIB/CPU) OUTPUT(*)
           PERIOD(112799 100900)
```

This command displays a graph of historical information from 27 NOV 1999 to 9 OCT 2000.

### Example 6: Selecting Members to be in a Graph

```
DSPHSTGPH  GRAPH(GRAPHLIB/CPU) MBRLIB(MONDAY)
           OUTPUT(*) PERIOD(*SELECT *N)
```

This command shows the historical members selection menu for the members in library MONDAY. The user then selects the members to be shown in the graph.

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---

## Error messages

### \*ESCAPE Messages

#### PFR5501

Performance data file(s) are not upward compatible.

#### PFR5502

Performance data file(s) are not downward compatible.

#### PFR9068

Value for OUTFILE parameter must be specified.

#### PFR9069

\*NONE value must be specified for JOBD parameter.

#### PFR9071

X-axis variable for both graphs must be the same.

#### PFR9072

Cannot use member &3 in historical graph.

#### PFR9073

Cannot use member &2 in historical graph.

#### PFR9074

Too many members selected.

#### PFR9075

Plotter not found.

#### PFR9076

Plotter type not supported.

- PFR9077**  
Graph format has too many legend entries for overlay.
- PFR9078**  
Cannot display graph because of missing data.
- PFR9079**  
Cannot write graph to output file.
- PFR9080**  
Specify \*AUTO for range with \*TIME for X-axis.
- PFR9082**  
Printer &1 not found.
- PFR9083**  
Graph format selected for historical graph not valid.
- PFR9088**  
Cannot display graph because of missing data.
- PFR9096**  
Historical Data File QAPGHSTD not found in Library &1.
- PFR9097**  
Cannot copy graph format &1 onto itself.
- PFR9098**  
Cannot copy graph package &1 onto itself.
- PFR9099**  
Cannot copy functional area &1 onto itself.
- PFR9101**  
Graph has too many data points to display.
- PFR9107**  
Graph format &1 is not valid.
- PFR9114**  
No historical data to graph.

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---

## Display Performance Data (DSPPFRDTA)

### Where allowed to run:

- Interactive job (\*INTERACT)
- Interactive program (\*IPGM)
- Using QCMDEXEC, QCAEXEC, or QCAPCMD API (\*EXEC)

Threadsafe: No

Parameters  
Examples  
Error messages

The Display Performance Data (DSPPFRDTA) command uses a series of displays to show the performance data collected by Collection Services from the Operations Navigator interface.

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---

## Parameters

Keyword	Description	Choices	Notes
MBR	Member	Name, <u>*SELECT</u>	Optional, Positional 1
LIB	Library	Name, <u>QPFRDATA</u>	Optional, Positional 2

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---

## Member (MBR)

Specifies the member that contains the performance data collected by Collection Services from the Operations Navigator interface.

### \*SELECT

All members available in the specified library are listed on the Select Performance Members display.

*name* Specify the name of the member containing the performance data.

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---

## Library (LIB)

Specifies the library where the performance database files are located.

### QPFRDATA

The IBM-supplied performance data library, QPFRDATA, is used to locate the database files.

*name* Specify the name of the library where the database files are located.

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---

## Examples

### Example 1: Displaying List of Members

DSPPFRDTA

This command uses the Select Performance Member display to list the members available in the default library QPFRDATA so the user can select a member to display performance data.

### Example 2: Displaying Performance Data

DSPPFRDTA MBR(JUNE1)

This command displays the performance data stored in member JUNE1 located in library QPFRDATA.

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---

## Error messages

### \*ESCAPE Messages

#### PFR1010

Cannot process request because of missing data.

#### PFR5501

Performance data file(s) are not upward compatible.

#### PFR5502

Performance data file(s) are not downward compatible.

#### PFR7001

Library &1 does not contain performance data.

#### PFR7003

Cannot show performance data.

#### PFR7005

Cannot show performance data.

#### PFR7006

Cannot show performance data.

#### PFR7022

No performance data to display

#### PFR9031

Cannot use member &3 in performance graph.

#### PFR9072

Cannot use member &3 in historical graph.

#### PFR9114

No historical data to graph.

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# Display Performance Graph (DSPPFRGPH)

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

Parameters  
 Examples  
 Error messages

The Display Performance Graph (DSPPFRGPH) command produces a graph from the performance data collected by Collection Services.

The graph format must have been defined on the Create Graph Format (CRTGPHFMT) command. The graph can be sent as output to a graphics terminal, nongraphics terminal, printer, plotter, and a graphics data format (GDF) file that can be used by other systems. Jobs can be selectively included or omitted from the graph.

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## Parameters

Keyword	Description	Choices	Notes
GRAPH	Graph format or package	<i>Qualified object name</i>	Required, Positional 1
	Qualifier 1: Graph format or package	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , <u>QPFRDATA</u> , *CURLIB	
MBR	Member	<i>Name</i>	Required, Positional 2
LIB	Library	<i>Name</i> , <u>QPFRDATA</u>	Optional, Positional 3
TITLE	Title	<i>Character value</i> , *SAME, *MBRTEXT, *BLANK	Optional, Positional 4
SUBTITLE	Subtitle	<i>Character value</i> , *SAME, *MBRTEXT, *BLANK	Optional
OUTPUT	Output	*, *PRINT, *PLOT, *OUTFILE	Optional
OUTFILE	Output file	<i>Qualified object name</i>	Optional
	Qualifier 1: Output file	<i>Name</i>	
	Qualifier 2: Output file library	<i>Name</i> , *LIBL, *CURLIB	
OUTMBR	Output file member	<i>Element list</i>	Optional
	Element 1: Member name	<i>Name</i> , *FIRST	
	Element 2: Replace or add records	*REPLACE, *ADD	
PLTSPD	Plotter speed	1-100, <u>100</u>	Optional
PLTPEN	Plotter pen width	1-10, <u>3</u>	Optional
PLTADR	Plotter address	1-31, <u>1</u>	Optional
PRTDEV	Printer device or type	<i>Name</i> , <u>4214</u> , 4234, 522X, *IPDS, *NONGRAPHIC	Optional
OUTQ	Output queue	Single values: *PRTDEV Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Output queue	<i>Name</i>	
	Qualifier 2: Library	<i>Name</i> , *LIBL	
PAGELN	Page length	*PRTDEV, 51, 66	Optional
TYPE	Type	*GPHFMT, *GPHPKG	Optional

Keyword	Description	Choices	Notes
XAXIS	X-axis	<i>Element list</i>	Optional
	Element 1: Range	Single values: <u>*SAME</u> , *AUTO Other values: <i>Element list</i>	
	Element 1: First	0-99999	
	Element 2: Last	0-99999	
YAXIS	Y-axis	<i>Element list</i>	Optional
	Element 1: Range	Single values: <u>*SAME</u> , *AUTO Other values: <i>Element list</i>	
	Element 1: First	0-99999	
	Element 2: Last	0-99999	
AREAFILL	Area fill	<u>*SAME</u> , *YES, *NO	Optional
PERIOD	Time period for report	<i>Element list</i>	Optional
	Element 1:	<i>Element list</i>	
	Element 1: Starting time	<i>Time</i> , <u>*FIRST</u>	
	Element 2: Starting date	<i>Date</i> , <u>*FIRST</u>	
	Element 2:	<i>Element list</i>	
	Element 1: Ending time	<i>Time</i> , <u>*LAST</u>	
	Element 2: Ending date	<i>Date</i> , <u>*LAST</u>	
SLTJOB	Select jobs	Single values: <u>*ALL</u> Other values (up to 50 repetitions): <i>Qualified job name</i>	Optional
	Qualifier 1: Select jobs	<i>Generic name, name</i>	
	Qualifier 2: User	<i>Generic name, name</i>	
	Qualifier 3: Number	000000-999999	
OMTJOB	Omit jobs	Single values: <u>*NONE</u> Other values (up to 50 repetitions): <i>Qualified job name</i>	Optional
	Qualifier 1: Omit jobs	<i>Generic name, name</i>	
	Qualifier 2: User	<i>Generic name, name</i>	
	Qualifier 3: Number	000000-999999	
SLTUSER	Select users	Single values: <u>*ALL</u> Other values (up to 50 repetitions): <i>Generic name, name</i>	Optional
OMTUSER	Omit users	Single values: <u>*NONE</u> Other values (up to 50 repetitions): <i>Generic name, name</i>	Optional
SLTPOOLS	Select pools	Single values: <u>*ALL</u> Other values (up to 64 repetitions): 1-64	Optional
OMTPOOLS	Omit pools	Single values: <u>*NONE</u> Other values (up to 64 repetitions): 1-64	Optional
SLTSBS	Select subsystems	Single values: <u>*ALL</u> Other values (up to 50 repetitions): <i>Name</i>	Optional
OMTSBS	Omit subsystems	Single values: <u>*NONE</u> Other values (up to 50 repetitions): <i>Name</i>	Optional
SLTLINE	Select communications lines	Single values: <u>*ALL</u> Other values (up to 50 repetitions): <i>Name</i>	Optional
OMTLINE	Omit communications lines	Single values: <u>*NONE</u> Other values (up to 50 repetitions): <i>Name</i>	Optional
SLTCTL	Select control units	Single values: <u>*ALL</u> Other values (up to 50 repetitions): <i>Name</i>	Optional
OMTCTL	Omit control units	Single values: <u>*NONE</u> Other values (up to 50 repetitions): <i>Name</i>	Optional
SLTFCNARA	Select functional areas	Single values: <u>*ALL</u> Other values (up to 50 repetitions): <i>Character value</i>	Optional

Keyword	Description	Choices	Notes
OMTCFNARA	Omit functional areas	Single values: <b>*NONE</b> Other values (up to 50 repetitions): <i>Character value</i>	Optional
JOB	Job name	<i>Name</i> , <b>DSPPFRGPH</b> , *MBR	Optional
JOBDD	Job description	Single values: <b>*NONE</b> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Job description	<i>Name</i> , QPFRJOBDD	
	Qualifier 2: Library	<i>Name</i> , <b>*LIBL</b> , *CURLIB	

Top

---

## Graph format or package (GRAPH)

Specifies the graph format or graph package used to create the graph.

This is a required parameter.

The possible library values are:

### QPFRDATA

The IBM-supplied performance data library, QPFRDATA, is where the graph format or graph package is located.

### \*CURLIB

The current library for the job is used to locate the graph format or graph package. 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 graph format or graph package is located.

Since the following are not elements, they are mutually exclusive. Therefore, specify the name of the graph format or specify the name of the graph package. You cannot specify them at the same time.

### *format-name*

Specify the name of the graph format.

### *package-name*

Specify the name of the graph package.

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---

## Member (MBR)

Specifies the performance data to be used in your performance graph. Specify the name of the member.

This is a required parameter.

Top

---

## Library (LIB)

Specifies the library in which the performance data member to be used in the graph is located.

### QPFRDATA

The IBM-supplied performance data library, QPFRDATA, is where the performance data member is located.

### *library-name*

Specify the library where the performance data member is located.

Top

---

## Title (TITLE)

Specifies a title to display at the top of the graph or each graph of a package.

### \*SAME

The graph title defined in the graph format is used.

### \*BLANK

A blank title is used.

### \*MBRTEXT

The text of the selected member is used.

### *graph-title*

Specify a title of up to 50 characters enclosed in apostrophes.

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---

## Subtitle (SUBTITLE)

Specifies a subtitle to display at the top of the graph or each graph of a package.

### \*SAME

The text of the graph subtitle defined in the graph format is used.

### \*BLANK

A blank subtitle is used.

### \*MBRTEXT

The text of the selected member is used.

### *graph-subtitle*

Specify a subtitle of up to 50 characters enclosed in apostrophes.

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---

## Output (OUTPUT)

Specifies whether the graph is to be displayed, printed, plotted, or saved in a graphics data format (GDF) file.

\*  
- The graph is to be displayed on the output screen. This special value is not valid if **JOB(\*NONE)** is not specified.

Your display station can be either a graphics or nongraphics display station. A graphics display station shows the graph with colors, shading, and so forth. A nongraphics display station shows the graph using characters you choose to represent colors, shading, and so forth.

Once your graph is shown, you can define one overlay. An overlay is a graph that is placed on top of the current graph.

### \*PRINT

The graph is printed to the printer file, QPPGGPH while the spooled output file is named the same as the graph format.

**Note:**

The appearance of graphs printed or displayed by graphical devices can be different from how they appear when printed or displayed by nongraphical devices, especially when \*AUTO is specified for the Y (vertical) axis.

**\*PLOT**

The graph is plotted on an attached plotter. This value is not valid if JOBDB(\*NONE) is not specified. The 6180, 6182, 7371, and 7372 plotters are supported.

**\*OUTFILE**

The graph is saved to the graphics data format (GDF) file specified in the **Output file** prompt (OUTFILE parameter). This option is not valid if a package is being displayed.

You can use this file to display the graph on any system supporting the graphical data display manager function or the Business Graphics Utility licensed program.

**Note:**

Graph packages cannot be sent to a GDF file.

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---

## Output file (OUTFILE)

Specifies the library and file in which the graph data format is to be saved. This parameter is only valid when OUTPUT(\*OUTFILE) is specified. The graph is saved in a graphics data format (GDF) file.

The possible library values are:

QPFRDATA

The IBM-supplied performance data library, QPFRDATA, is where the graph is saved.

**\*LIBL** Search the library list to locate the file in which to save the graph.

**\*CURLIB**

Search the current job library to locate the file in which to save the graph. If no current job library entry exists in the library list, QGPL is used.

*library-name*

Specify the name of the library where the graph is to be saved.

*file-name*

Specify the name of the file into which the graph is to be saved.

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---

## Output file member (OUTMBR)

Specifies the format member in which the graph is to be saved. This parameter is valid only when OUTPUT(\*OUTFILE) is specified.

\*FIRST

The first member in the file receives the output. If OUTMBR(\*FIRST) is specified and the member does not exist, the system creates a member with the name of the file specified in the **Output file** prompt (OUTFILE parameter).

*member-name*

Specify the name of the member into which the graph is to be saved. If OUTMBR(member-

**name**) is specified and the member does not exist, the system creates it. If the member already exists, you have the option to add new records to the end of the existing member or clear the member and then add the new records.

The possible optional values are:

**\*REPLACE**

If a member exists, the system clears it and adds the new records.

**\*ADD** If a member exists, the system adds the new records to the end of the existing records.

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---

## Plotter speed (PLTSPD)

Specifies the speed at which the plotter creates the graph. A larger value represents a faster plotting rate. The smaller the value the better the plotting quality of the graph. This parameter is valid only when **OUTPUT(\*PLOT)** is specified.

**100** A plotter speed of 100 is used.

*plotter-speed*

Specify the speed of the plotter. The plotter speed ranges from 1 through 100 (velocity).

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---

## Plotter pen width (PLTPEN)

Specifies the pen width in which to shade the graph. The smaller the value, the closer together the lines will be for shading. If you choose a small value, the graph takes longer to plot. If the value is too large, the shading will have gaps in it. This parameter is valid only when **OUTPUT(\*PLOT)** is specified.

**3** A pen width of .3 millimeters is used.

*pen-width*

Specify the width of the pen. The pen widths range from .1 millimeter through 1 millimeter. Valid values range from 1 through 10.

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---

## Plotter address (PLTADR)

Specifies the plotter address for the terminal on which the graph is to be created.

**1** Use the plotter designated by address 1.

*plotter-address*

Specify the address of the plotter. Valid values range from 1 through 31.

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---

## Printer device or type (PRTDEV)

Specifies the name of the printer or the type of printer on which the graph is to be printed. If a printer name is used, for example, PRT01, PRT02, and so on, the output is spooled to the output queue of the printer. If a printer type is specified, for example, 4214, the output is spooled to the output queue specified on the **Output queue** prompt (OUTQ parameter). This parameter is valid only when **OUTPUT(\*PRINT)** is specified.

**4214** The 4214 printer is used.

**4234** The 4234 printer is used.

**522X** One of the 522 series printer are used. They are the 5224 and 5225 printers.

**\*IPDS** One of the Intelligent Printer Data Stream (IPDS) printers are used. They are the 3812 and 4224 printers.

**\*NONGRAPHIC**

The output is not spooled in a graphics format for printing on printers that do not support graphics.

*printer-name*

Specify the system name of the printer to which the output is sent.

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---

## Output queue (OUTQ)

Specifies the name and library of the output queue to which the printer file is to be sent.

**\*PRTDEV**

The output queue associated with the printer is used. If a printer type has been specified, the output is sent to the job's output queue.

*output-queue-name*

Specify the name of the output queue.

The possible library values are:

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

*library-name*

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

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---

## Page length (PAGELEN)

Specifies the page length for graphs. The PAGELEN parameter is valid only when OUTPUT(\*PRINT) is specified.

**\*PRTDEV**

The page length for the printer or printer type specified on the PRTDEV parameter is used.

**51** Specifies 51 lines per page (8.5 inches).

**66** Specifies 66 lines per page (11 inches).

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## Type (TYPE)

Specifies whether the graph is a graph format or a graph package.

**\*GPHFMT**

The graph is a graph format.

**\*GHPKG**

The graph is a graph package.

---

## X-axis (XAXIS)

Specifies the range used on the X-axis.

### \*SAME

The range specified in the graph format is used.

### \*AUTO

The system determines a range based on the data being used.

The possible **Starting Number** value is:

### *starting-number*

Specify the starting number for the range on the X-axis. This user-defined variable is not valid if you have specified \*TIME for the X-axis. If you specify a starting number, you must also specify an ending number.

The possible **Ending Number** value is:

### *ending-number*

Specify the ending number for the range on the X-axis. This user-defined variable is not valid if you have specified \*TIME for the X-axis. If you specify an ending number, you must also specify a starting number.

---

## Y-axis (YAXIS)

Specifies the range used on the Y-axis.

### \*SAME

The range specified in the graph format is used.

### \*AUTO

The system determines a range based on the data being used.

The possible **Starting Number** value is:

### *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.

The possible **Ending Number** value is:

### *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.

---

## Area fill (AREAFILL)

Specifies whether the graph is to be displayed with surfaces and bars filled in with a shading pattern.

This parameter allows you to display detailed graphs quickly. If you specify **AREAFILL(\*NO)** on this command when you have specified **AREAFILL(\*YES)** on the CRTGPHFMT command, the graph is displayed more quickly. This is caused by the fact that it takes longer to fill in areas with shading patterns than it does to draw lines. Also, the more dense the shading pattern, the more time it takes. These issues are important if time is short and graphic quality is not momentarily important.

**\*SAME**

The graph is shaded according to the graph format definition.

**\*YES** The graph will be filled in with a shading pattern.

**\*NO** The graph will not be filled in with a shading pattern.

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---

## Time period for report (PERIOD)

Specifies the period of time for which to collect performance information for the performance graph. The starting and ending times and dates consists of four elements:

PERIOD((start-time start-date) (end-time end-date))

\*N can be used in place of an element that precedes the value being specified in order to maintain positioning. For example, PERIOD(\*N(\*N 091289)) specifies the ending date and the default values for start-time, start-date, and end-time.

One of the following values is used to specify the starting time. Information collected before the starting time and starting date is not included on the graph.

The possible **Starting Time** values are:

**\*FIRST**

Records starting at the beginning of the day are collected.

*start-time*

Specify the time after which records are collected.

The time can be specified with or without a time separator:

- Without a time separator, specify a string of 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds. All three must be exactly 2 digits (use leading zeros if necessary).
- With a time separator, specify a string of 5 or 8 digits where the time separator specified for your job is used to separate the hours, minutes, and seconds. If you enter this command from the command line, the string must be enclosed in apostrophes. If a time separator other than the separator specified for your job is used, this command will fail.

The time is in 24-hour format; for example, use 13:00 for 1 p.m.

One of the following values is used to specify the starting date. Information collected before the starting time on the date specified on this parameter is not included on the graph.

The possible **Starting Date** values are:

**\*FIRST**

Records starting on the first day of the collection period are included on the graph.

*start-date*

Specify the date after which records are collected. The date must be entered in the format

specified by the system values QDATFMT and, if separators are used, QDATSEP. For instance, the system might have a date format of *'mm/dd/yy'*. The month (mm), day (dd), and year (yy) are all required 1- or 2-digit values. The slashes (/) are optional if all 6 digits are specified. If the slashes are omitted, or if the value is entered from the prompt display, the apostrophes are not required.

One of the following values is used to specify the ending time. Information collected after the ending time and ending date is not included on the graph.

The possible **Ending Time** values are:

**\*LAST**

Records through the end of the day (23:59:59) are included on the graph.

*end-time*

Specify the time after which records are not collected. See *start-time* in this parameter for details on how the time must be specified.

One of the following values is used to specify the ending date. Information collected after the ending time and ending date is not included on the graph.

The possible **Ending Date** values are:

**\*LAST**

Records through the last day of the collection period are included on the graph.

*end-date*

Specify the date after which records are no longer collected. See *start-date* in this parameter for details on how the date must be specified.

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---

## Select jobs (SLTJOB)

Specifies a list of up to 50 jobs to select. Only specified jobs are included on the graph.

A job identifier is either the special value **\*ALL** or a qualified name with up to three elements, for example:

\*ALL  
job-name  
user-name/job-name  
job-number/user-name/job-name

**\*N** can be used in place of an element that follows the values being specified in order to maintain positioning. For example, 123456/\*N/\*N specifies only the job number 123456, regardless of the job and user names. Without the \*N's, 123456 would have been interpreted as the job name, and not the job number.

**Note:** The **Select jobs** prompt (SLTJOB parameter) and the **Omit jobs** prompt (OMTJOB parameter) are mutually exclusive.

**\*ALL** All jobs in the collected data are included, unless excluded by some other selection criteria.

*job-name*

Specify the name of the jobs to select. Because jobs may have identical job names, this value may not identify a specific job. This can be either a specific or generic name.

*user-name*

Specify the user name of the jobs to select. Because jobs may have identical user names, this value may not identify a specific job. This can be either a specific or generic name.

*job-number*

Specify the 6-digit number of a job to select. All 6 digits must be specified (use leading zeros if necessary).

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---

## Omit jobs (OMTJOB)

Specifies a list of up to 50 jobs to omit. All jobs specified are excluded from the graph.

A job identifier is either the special value \*NONE or a qualified name with up to three elements. \*N can be used in place of an element to maintain the position in the parameter value sequence.

**Note:** The **Select jobs** prompt (SLTJOB parameter) and **Omit jobs** prompt (OMTJOB parameter) are mutually exclusive.

\*NONE

Jobs are not excluded based on job identifier.

*job-name*

Specify the name of the jobs to omit. Because jobs may have identical job names, this value may not identify a specific job. This can be either a specific or generic name.

*user-name*

Specify the user name of the jobs to omit. Because jobs may have identical user names, this value may not identify a specific job. This can be either a specific or generic name.

*job-number*

Specify the 6-digit number of a job to omit. All 6 digits must be specified (use leading zeros if necessary).

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---

## Select users (SLTUSER)

Specifies a list of up to 50 user names to select. Only jobs with one of the specified user names are included on the graph.

**Note:** The **Select users** prompt (SLTUSER parameter) and **Omit users** prompt (OMTUSER parameter) are mutually exclusive.

\*ALL Jobs with all user names are included, unless excluded by other selection criteria.

*user-name*

Specify the user name of the jobs to select. Because jobs may have identical user names, this value may not identify a specific job. This can be either a specific or generic name.

**SLTUSER(user)** is equivalent to **SLTJOB(\*N/user/\*N)**.

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## Omit users (OMTUSER)

Specifies a list of up to 50 user names to omit. Jobs with any of the names specified are excluded from the graph.

**Note:** The **Select users** prompt (SLTUSER parameter) and **Omit users** prompt (OMTUSER parameter) are mutually exclusive.

**\*NONE**

No jobs are excluded based on user name.

*user-name*

Specify the user name of jobs to omit. Because jobs may have identical user names, this value may not identify a specific job. This can be either a specific or generic name. **OMTUSER(user)** is equivalent to **OMTJOB(\*N/user/\*N)**.

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---

## Select pools (SLTPOOLS)

Specifies a list of up to 64 pools to select. Only jobs running in one of the specified pools are included on the graph.

**Note:** The **Select pools** prompt (SLTPOOLS parameter) and **Omit pools** prompt (OMTPOOLS parameter) are mutually exclusive.

**\*ALL** Jobs running in all pools are included, unless excluded by other selection criteria.

*storage-pool-identifier*

Specify the number of a pool to select. Valid values range from 1 to 64.

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---

## Omit pools (OMTPOOLS)

Specifies a list of up to 64 pools to omit. Jobs running in the specified pools are excluded from the graph.

**Note:** The **Select pools** prompt (SLTPOOLS parameter) and **Omit pools** prompt (OMTPOOLS parameter) are mutually exclusive.

**\*NONE**

No jobs are excluded based on their pool.

*storage-pool-identifier*

Specify the number of a pool to omit. Valid values range from 1 to 64.

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---

## Select subsystems (SLTSBS)

Specifies a list of up to 50 subsystems to select. Only jobs running in one of the specified subsystems are included on the graph.

**Note:** The **Select subsystems** prompt (SLTSBS parameter) and **Omit subsystems** prompt (OMTSBS parameter) are mutually exclusive.

**\*ALL** Jobs in all subsystems are included, unless excluded by other selection criteria.

*subsystem-name*

Specify the name of a subsystem to select.

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---

## Omit subsystems (OMTSBS)

Specifies a list of up to 50 subsystems to omit. Jobs running in the specified subsystems are excluded from the graph.

**Note:** The **Select subsystems** prompt (SLTSBS parameter) and **Omit subsystems** prompt (OMTSBS parameter) are mutually exclusive.

### \*NONE

No jobs are excluded based on subsystem.

### *subsystem-name*

Specify the name of a subsystem to omit.

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---

## Select communications lines (SLTLINE)

Specifies a list of up to 50 communications lines to select. Only jobs using a remote device connected through one of the specified communications lines are included on the graph.

**Note:** The **Select communications lines** prompt (SLTLINE parameter) and **Omit communications lines** prompt (OMTLINE parameter) are mutually exclusive.

\*ALL All jobs are included, unless excluded by other selection criteria.

### *communications-line-name*

Specify the name of a communications line to select. This excludes jobs using remote devices connected through other communications lines (or no communications line), even if the controllers to which those devices are attached are specified on the SLCTL parameter.

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---

## Omit communications lines (OMTLINE)

Specifies a list of up to 50 communications lines to omit. Jobs using a remote device connected through any of the specified lines are excluded from the graph.

**Note:** The **Select communications lines** prompt (SLTLINE parameter) and **Omit communications lines** prompt (OMTLINE parameter) are mutually exclusive.

### \*NONE

Jobs are not excluded based on communications line.

### *communications-line-name*

Specify the name of a communications line to omit.

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---

## Select control units (SLCTL)

Specifies a list of up to 50 communications controllers to select. Only jobs using a device connected to one of the specified communications controllers are included on the graph.

**Note:** The **Select control units** prompt (SLCTL parameter) and **Omit control units** prompt (OMCTL parameter) are mutually exclusive.

\*ALL All jobs are included, unless excluded by other selection criteria.

*controller-name*

Specify the name of a communications controller to select.

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---

## Omit control units (OMTCTL)

Specifies a list of up to 50 communications controllers to omit. Jobs using a device connected to any of the specified communications controllers are excluded from the graph.

**Note:** The **Select control units** prompt (SLTCTL parameter) and **Omit control units** prompt (OMTCTL parameter) are mutually exclusive.

\*NONE

Jobs are not excluded based on communications controller.

*controller-name*

Specify the name of a communications controller to omit.

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---

## Select functional areas (SLTFCNARA)

Specifies a list of up to 50 functional areas to select. Only jobs identified in one of the functional areas are included on the graph.

A functional area is a list of jobs and/or user names previously defined by the user. Information on defining functional areas is in the Performance Tools for i5/OS book.

**Note:** The **Select functional areas** prompt (SLTFCNARA parameter) and **Omit functional areas** prompt (OMTFCNARA parameter) are mutually exclusive.

\*ALL All jobs are included, unless excluded by other selection criteria.

*functional-area-name*

Specify the name of a functional area to select.

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---

## Omit functional areas (OMTFCNARA)

Specifies a list of up to 50 functional areas to omit. Jobs and users identified in any of the functional areas are excluded from the graph.

A functional area is a list of job and user names previously defined by the user. Information on defining functional areas is found in the Performance Tools for i5/OS book.

**Note:** The **Select functional areas** prompt (SLTFCNARA parameter) and **Omit functional areas** prompt (OMTFCNARA parameter) are mutually exclusive.

\*NONE

No jobs are excluded based on functional area.

*functional-area-name*

Specify the name of a functional area to omit.

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## Job name (JOB)

Specifies the job name to be used if submitting a job for batch processing.

If \*NONE is specified for the **Job description** prompt (JOBDD parameter), this parameter is ignored and job processing is performed interactively.

The possible **job-name** values are:

### DSPPFRGPH

The command name is used for the job name.

\***MBR** The name of the performance data member specified on the **Member** prompt (MBR parameter) is used.

### *job-name*

Specify the name to be used for batch jobs.

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---

## Job description (JOBDD)

Specifies the job description used to submit jobs for batch processing.

### \*NONE

A batch job is not submitted; instead, processing continues interactively while the user waits. The user's work station cannot be used during this time. This is something to consider for especially long jobs.

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

### \***CURLIB**

The current library for the job is used to locate the job description. 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 is located.

### **QPFRJOBDD**

The IBM-supplied performance tools job description is used.

### *job-description-name*

Specify the name of an alternate job description.

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## Examples

### Example 1: Displaying Performance Data Files

```
DSPPFRGPH GRAPH(GRAPHLIB/CPU) MBR(QPFRDATA/JUN1)
          TITLE(*MBRTEXT)
```

This command displays the performance data files in library QPFRDATA member JUN1. It is displayed as specified by graph format CPU in library GRAPHLIB. The report title is taken from the text of the member.

### Example 2: Saving a Graph

```
DSPPFRGPH  GRAPH(GRAPHLIB/CPU)  MBR(JUN1)  OUTPUT(*OUTFILE)
           OUTFILE(USERLIB/USERFILE)  OUTMBR(TEST)
           JOBD(*LIBL/QPFRJOBDD)
```

This command submits a job to save the graph of performance data from file member JUN1, which is in library QPFRDATA, in a GDF file. The graph is saved in file USERLIB/USERFILE/TEST (file member TEST in file USRFILE, which is in library USRLIB).

### Example 3: Printing a Graph

```
DSPPFRGPH  GRAPH(GRAPHLIB/CPU)  MBR(JUN1)  OUTPUT(*PRINT)
           PRTDEV(PRT03)  JOBD(*LIBL/QPFRJOBDD)
```

This command submits a job to print the graph of performance data from file member JUN1, which is in library QPFRDATA, on the system printer named PRT03.

### Example 4: Printing All Graphs

```
DSPPFRGPH  GRAPH(GRAPHLIB/PACKAGE1)  MBR(JUN1)  OUTPUT(*PRINT)
           PRTDEV(PRT03)  JOBD(*LIBL/QPFRJOBDD)  TYPE(*GPHPKG)
```

This command submits a job to print all of the graphs defined in PACKAGE1 in GRAPHLIB. The print job is sent to system printer PRT03. It's data source is in performance data member JUN1 in library QPFRDATA.

### Example 5: Displaying a Graph

```
DSPPFRGPH  GRAPH(GRAPHLIB/CPU)  MBR(JUN1)  OUTPUT(*)
           PERIOD((2330)(0130))
```

This command displays a graph of the data collected from 11:30 PM on the first day of collection through 1:30 AM on the last day of collection. However, if data collection started and ended on the same day, an error message is printed, because the specified ending date and time precedes the specified starting date and time.

### Example 6: Displaying a Graph for Selected Users

```
DSPPFRGPH  GRAPH(GRAPHLIB/CPU)  MBR(JUN1)  OUTPUT(*)
           PERIOD((2330)(0130))  SLTUSER(D46*)
```

This command displays a graph of the performance data collected for all the jobs whose user ID starts with D46 from 11:30 PM on the first day of collection through 1:30 AM on the last day of collection. However, if data collection started and ended on the same day, an error message is printed, because the specified ending date and time precedes the specified starting date and time.

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---

## Error messages

### \*ESCAPE Messages

**PFR5501**

Performance data file(s) are not upward compatible.

**PFR5502**

Performance data file(s) are not downward compatible.

**PFR9031**

Cannot use member &3 in performance graph.

**PFR9046**

Jobs defined in more than one functional area.

**PFR9049**

Graph format &1 in library &3 does not exist.

**PFR9068**

Value for OUTFILE parameter must be specified.

**PFR9069**

\*NONE value must be specified for JOBD parameter.

**PFR9071**

X-axis variable for both graphs must be the same.

**PFR9075**

Plotter not found.

**PFR9076**

Plotter type not supported.

**PFR9077**

Graph format has too many legend entries for overlay.

**PFR9078**

Cannot display graph because of missing data.

**PFR9079**

Cannot write graph to output file.

**PFR9080**

Specify \*AUTO for range with \*TIME for X-axis.

**PFR9082**

Printer &1 not found.

**PFR9083**

Graph format selected for historical graph not valid.

**PFR9096**

Historical Data File QAPGHSTD not found in Library &1.

**PFR9097**

Cannot copy graph format &1 onto itself.

**PFR9098**

Cannot copy graph package &1 onto itself.

**PFR9099**

Cannot copy functional area &1 onto itself.

**PFR9101**

Graph has too many data points to display.

**PFR9107**

Graph format &1 is not valid.

**PFR9113**

Cannot display graph because of missing data.

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---

## End Job Trace (ENDJOBTRC)

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

Parameters  
Examples  
Error messages

The End Job Trace (ENDJOBTRC) command turns off the job tracing function that was started by the Start Job Trace (STRJOBTRC) command, saves all collected trace records in a database file, and optionally produces reports that are used to analyze the data for information about performance. The Print Job Trace (PRTJOBTRC) command may also be used to produce reports from the same source data.

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---

### Parameters

Keyword	Description	Choices	Notes
MBR	Output file member	Name, <u>QAJOBTRC</u>	Optional, Positional 1
LIB	Output file library	Name, <u>QPFRRDATA</u>	Optional, Positional 2
RPTTYPE	Report type	<u>*NONE</u> , *DETAIL, *SUMMARY, *BOTH	Optional, Positional 3
TITLE	Report title	Character value, <u>*BLANK</u>	Optional, Positional 4
STRSEQ	Starting sequence number	1-999999, <u>*FIRST</u>	Optional
ENDSEQ	Ending sequence number	Decimal number, <u>*LAST</u>	Optional
ENDTNS	Transaction ending program	Name, <u>QT3REQIO</u> , *BATCH	Optional
STRTNS	Transaction starting program	Name, <u>QWSGET</u>	Optional
JOB	Job name	Name, <u>ENDJOBTRC</u> , *MBR	Optional
JOBDD	Job description	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Job description	Name, <u>QPFRRJOBDD</u>	
	Qualifier 2: Library	Name, <u>*LIBL</u> , *CURLIB	

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---

### Output file member (MBR)

Specifies the member in file QAPTTTRCJ in which to save the trace data. If the member does not exist, it is added to the file. If the member exists, the new data replaces the old contents.

#### QAJOBTRC

The standard member name, QAJOBTRC, is used.

*name* Specify the name of an alternate member in which to save the data. This allows several sets of job trace data to be kept.

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---

## Output file library (LIB)

Specifies the library where the trace data is saved. If the library does not contain a file named QAPTRCJ, one is created.

### QPFRRDATA

The trace data is saved in the IBM-supplied performance data library, QPFRRDATA.

*name* Specify the name of an alternate library where the trace data is saved. This is necessary if access to the default library is not allowed.

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---

## Report type (RPTTYPE)

Specifies the type of reports being produced.

### \*NONE

No reports are produced; however, the Print Job Trace (PRTJOBTRC) command may be used later to report on the saved data. None of the remaining parameters are applicable if this value is selected.

### \*DETAIL

A report is produced that shows the individual job trace records in detail. The output is directed to the printer file QPPTTRCD. Each page heading includes the text 'Job Trace Information'.

### \*SUMMARY

Two reports are produced summarizing the job trace data by work station transaction. One report shows primarily physical disk activity; its printer file is QPPTTRC1, and its page heading includes the text 'Trace Analysis Summary'. The other report concentrates on higher level activities such as database I/O and inter-program transfers of control; its printer file is QPPTTRC2, and its page heading includes the text 'Trace Analysis I/O Summary'.

### \*BOTH

Both the detail report and the two summary reports are produced (three reports total).

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---

## Report title (TITLE)

Specifies a title that is printed on the page heading of each report.

### \*BLANK

No title is specified.

### *character-value*

Specify title of up to 50 characters enclosed in apostrophes. This may be used, for example, to distinguish between reports on different sets of trace data or different sections of the same data.

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---

## Starting sequence number (STRSEQ)

Specifies the sequence number of the first job trace record that is included in any reports. No records preceding this one are listed in the detail report or counted in either summary report.

### \*FIRST

Trace records starting from the first trace record (sequence number 1) are included.

### 1-999999

Specify the sequence number of the first trace record that is included. An appropriate value is determined by previewing reports that are produced from the job trace data. This can be used to bracket a particular set of transactions on which to report.

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---

## Ending sequence number (ENDSEQ)

Specifies the sequence number of the last job trace record that is included in any reports. No records following this one are listed in the detail report or counted in either summary report.

### \*LAST

Trace records through the last trace record are included.

### 1-999999

Specify the sequence number of the last trace record that is included. An appropriate value can be chosen through a preview process so as to bracket a particular set of transactions.

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---

## Transaction ending program (ENDTNS)

Specifies the program that signifies the end of a transaction. A program name must also be specified for the **Transaction starting program (STRTNS)** parameter.

### QT3REQIO

The work station I/O program, QT3REQIO, is used. This value is used to break the trace data into display station transactions.

*name* Specify the name of the program that ends a transaction. This allows reporting on non-display station transactions, such as communications lines.

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---

## Transaction starting program (STRTNS)

Specifies the program that signifies the start of a transaction. A program name must also be specified for the **Transaction ending program (ENDTNS)** parameter.

### QWSGET

The work station input program, QWSGET, is used. This value is used to break the trace data into display station transactions.

*name* Specify the name of the program that starts a transaction.

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---

## Job name (JOB)

Specifies the job name to be used if submitting the job for batch processing.

Any value for this parameter is ignored if \*NONE is specified for the **Job description (JOBDD)** parameter.

**Note:** If JOBDD(\*NONE) is specified, job processing is performed interactively.

## ENDJOBTRC

The command name is used for the job name.

**\*MBR** The name selected for the performance data member in the **Member (MBR)** parameter is used.

*name* Specify the name to be used for any and all batch jobs.

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---

## **Job description (JOBDD)**

Specifies the job description used to submit the job for batch processing.

### **Single values**

#### **\*NONE**

A batch job is not submitted; processing continues interactively while the user waits. The user's workstation is not available for other use during this time, which could be significant for long jobs.

### **Qualifier 1: Job description**

#### QPFRJOBDD

The IBM-supplied job description, QPFRJOBDD, is used.

*name* Specify the name of the job description to be used.

### **Qualifier 2: Library**

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

#### **\*CURLIB**

The current library for the job is used to locate the job description. If no current library entry exists in the library list, QGPL is used.

*name* Specify the library in which the job description is located.

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---

## **Examples**

### **Example 1: Stopping Job Tracing**

```
ENDJOBTRC
```

This command stops tracing and saves the created trace records in QPFRDATA/QAPTTRCJ, member QAJOBTRC. No reports are produced.

### **Example 2: Producing a Report of Job Records**

```
ENDJOBTRC LIB(MYLIB) RPTTYPE(*DETAIL)
```

This command stops job tracing, saves the created trace records in member QAJOBTRC of MYLIB/QAPTTRCJ, and produces a detail report. The use of a private library allows several users to trace jobs at the same time.

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---

## Error messages

None

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# Print Activity Report (PRTACTRPT)

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

Parameters  
 Examples  
 Error messages

The Print Activity Report (PRTACTRPT) command generates reports based on the data collected by the Work With System Activity (WRKSYSACT) command.

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## Parameters

Keyword	Description	Choices	Notes
MBR	Member	Name, <u>QAITMON</u>	Optional, Positional 1
LIB	Library	Name, <u>QPFRDATA</u>	Optional, Positional 2
TITLE	Title	Character value, <u>*BLANK</u>	Optional, Positional 3
RPTTYPE	Report type	<u>*SUMMARY</u> , *DETAIL, *ALL	Optional
PERIOD	Time period for report	Element list	Optional
	Element 1:	Element list	
	Element 1: Starting time	Time, <u>*FIRST</u>	
	Element 2: Starting date	Date, <u>*FIRST</u>	
	Element 2:	Element list	
	Element 1: Ending time	Time, <u>*LAST</u>	
	Element 2: Ending date	Date, <u>*LAST</u>	
SEQ	Sequence	*JOBTASK, *USER, *PTY, *CPU, *TOTALIO, *SYNCIO, *ASYNCIO, *FAULT, *SDBREAD, *SDBWRITE, *SNDBREAD, *SNDBWRITE, *ADBREAD, *ADBWRITE, *ANDBREAD, *ANDBWRITE	Optional
NBRJOBS	Number of jobs	1-32767, <u>10</u> , *ALL	Optional
JOB	Job name	Name, <u>PRTACTRPT</u> , *MBR	Optional
JOBID	Job description	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Job description	Name, <u>QPFRJOBID</u>	
	Qualifier 2: Library	Name, <u>*LIBL</u> , *CURLIB	

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## Member (MBR)

Specifies the member where the performance data was saved by the Work with System Activity (WRKSYSACT) command.

### QAITMON

The standard member name, QAITMON, is used.

*name* Specify the name of the member that contains the performance data.

---

## Library (LIB)

Specifies the library where the performance data file, QAITMON, is stored.

### QPFRDATA

The performance data is stored in the IBM-supplied performance data library, QPFRDATA.

*name* Specify the name of the library where the data file is stored.

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---

## Title (TITLE)

Specifies the title for the activity report that is generated.

### \*BLANK

No title is placed on the activity report.

### *character-value*

Specify a title for the activity report. Specify up to 50 characters enclosed in apostrophes.

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---

## Report type (RPTTYPE)

Specifies the type of activity report to be generated.

### \*SUMMARY

Lists the top ten entries, as measured over the entire time frame specified by the PERIOD parameter, according to processing unit utilization and number of I/O operations performed.

### \*DETAIL

For each interval specified by the PERIOD parameter, the number of entries specified by the NBRJOBS parameter are listed in the order specified by the SEQ parameter.

**\*ALL** Generates the summary activity report and the detailed activity report.

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---

## Time period for report (PERIOD)

Specifies the time period for the report. The following values can be coded in this parameter, which contains two lists of two elements each. Data collected before the specified starting time and date and after the specified ending time and date is not shown.

### Element 1: Starting time and date

#### Element 1: Starting time

### \*FIRST

The collected data that is available for the first interval on the specified starting date is included in the report.

*time* Specify the time at which or after which the data must have been collected to be included

in the report. The time is specified as 4 or 6 digits (hhmm or hhmmss), where **hh** is the hour, **mm** is the minute, and **ss** is the second.

The time can be specified with or without a time separator:

- Without a time separator, specify a string of 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds.
- With a time separator, specify a string of 5 or 8 digits where the time separator specified for your job is used to separate the hours, minutes, and seconds. If you enter this command from the command line, the string must be enclosed in apostrophes. If a time separator other than the separator specified for your job is used, this command will fail.

## Element 2: Starting date

### \*FIRST

The collected data that is available on or after the specified starting time on the first day of the performance data collection is included in the report.

*date* Specify the starting date on which or after which the data must have been collected to be included in the report. The date must be entered in the same format as specified for the job.

## Element 2: Ending time and date

### Element 1: Ending time

#### \*LAST

The collected data that is available through the last interval on the specified ending date is included in the report.

*time* Specify the time before which the data must have been collected to be included in the report. The time is specified as 4 or 6 digits (hhmm or hhmmss), where hh is the hour, mm is the minute, and ss is the second.

The time can be specified with or without a time separator:

- Without a time separator, specify a string of 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds.
- With a time separator, specify a string of 5 or 8 digits where the time separator specified for your job is used to separate the hours, minutes, and seconds. If you enter this command from the command line, the string must be enclosed in apostrophes. If a time separator other than the separator specified for your job is used, this command will fail.

### Element 2: Ending date

#### \*LAST

The collected data that is available up to the specified ending time on the last day of the performance data collection is included in the report.

*date* Specify the ending date on which or before which the data must have been collected to be included in the report. The date must be entered in the same format as specified for the job.

---

## Sequence (SEQ)

Specifies the field by which the jobs and tasks are ranked and then listed on the detailed activity report. This parameter is valid only when \*DETAIL or \*ALL is specified for the RPTTYPE parameter.

**\*CPU** List the entries in descending order according to processing unit utilization.

**\*JOBTASK**

List the entries alphabetically according to the job or task name.

**\*USER**

List the entries alphabetically according to the user profile.

**\*PTY** Lists the entries in descending order according to priority.

**\*TOTALIO**

Lists the entries in descending order according to the total number of synchronous and asynchronous I/O operations performed.

**\*SYNCIO**

List the entries in descending order according to the total number of synchronous I/O operations performed.

**\*ASYNCIO**

List the entries in descending order according to the total number of asynchronous I/O operations initiated.

**\*FAULT**

List the entries in descending order according to the number of Process Access Group faults which occurred.

**\*SDBREAD**

List the entries in descending order according to the number of synchronous database read operations performed.

**\*SDBWRITE**

List the entries in descending order according to the number of synchronous database write operations performed.

**\*SNDBREAD**

List the entries in descending order according to the number of synchronous non database read operations performed.

**\*SNDBWRITE**

List the entries in descending order according to the number of synchronous non database write operations performed.

**\*ADBREAD**

List the entries in descending order according to the number of asynchronous database read operations initiated.

**\*ADBWRITE**

List the entries in descending order according to the number of asynchronous database write operations initiated.

**\*ANDBREAD**

List the entries in descending order according to the number of asynchronous non database read operations initiated.

### \*ANDBWRITE

List the entries in descending order according to the number of asynchronous non database write operations initiated.

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---

## Number of jobs (NBRJOBS)

Specifies the number of entries to be listed for each interval in the detailed activity report. This parameter is valid only when \*DETAIL or \*ALL is specified for the RPTTYPE parameter.

10 List ten entries for each interval.

\*ALL List all the entries contained in the collected data.

1-32767

Specify the number of entries to be listed for each interval.

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---

## Job name (JOB)

Specifies the job name to be used if submitting the job for batch processing.

Any value for this parameter is ignored if \*NONE is specified for the **Job description (JOBBD)** parameter.

**Note:** If JOBBD(\*NONE) is specified, job processing is performed interactively.

### PRTACTRPT

The command name is used for the job name.

\*MBR The name selected for the performance data member in the **Member (MBR)** parameter is used.

*name* Specify the name to be used for any and all batch jobs.

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---

## Job description (JOBBD)

Specifies the job description used to submit the job for batch processing.

### Single values

#### \*NONE

A batch job is not submitted; processing continues interactively while the user waits. The user's workstation is not available for other use during this time, which could be significant for long jobs.

### Qualifier 1: Job description

#### QFJRJOBBD

The IBM-supplied job description, QFJRJOBBD, is used.

*name* Specify the name of the job description to be used.

### Qualifier 2: Library

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

### **\*CURLIB**

The current library for the job is used to locate the job description. If no current library entry exists in the library list, QGPL is used.

*name* Specify the library in which the job description is located.

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---

## **Examples**

### **Example 1: Generating a Summary Report**

```
PRTACTRPT
```

This command submits a batch job that generates a summary activity report using the performance data found in the default member QAITMON located in the default library QPFRDATA. The report covers the entire measurement period, and the title of the report is left blank.

### **Example 2: Generating a Summary and Detailed Activity Report**

```
PRTACTRPT  MBR(JUNE01)  TITLE('Activity Report for June 1st')
           RPTTYPE(*ALL) SEQ(*CPU)
```

This command submits a batch job that generates both a summary and a detailed activity report. The performance data comes from member JUNE01 located in the default library QPFRDATA. The report covers the entire measurement period, and the title of the report is 'Activity Report for June 1st'. The detailed activity report lists ten entries in descending order according to CPU utilization for each interval.

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---

## **Error messages**

### **\*ESCAPE Messages**

#### **PFR7010**

No data in member to print.

#### **PFR7017**

Cannot print activity report.

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# Print Component Report (PRTCPTTRPT)

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

Parameters  
 Examples  
 Error messages

The Print Component Report (PRTCPTTRPT) command produces a report that expands on the information given in the System Report. Detailed information regarding the system performance of each component is reported. This detailed report is produced from the performance data collected by Collection Services from the Operations Navigator interface and shows the data by job, user, pool, disk, IOP, local work station, exception, data base journaling, and TCP/IP. The report is written to the printer file QPPTCPTR. Jobs can be selectively included in the report or excluded from the report, based on a variety of job details and interval times.

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## Parameters

Keyword	Description	Choices	Notes
MBR	Member	<i>Name</i>	Required, Positional 1
TITLE	Report title	<i>Character value, *MBR</i>	Optional, Positional 3
PERIOD	Time period for report	<i>Element list</i>	Optional
	Element 1:	<i>Element list</i>	
	Element 1: Starting time	<i>Time, *FIRST, *SELECT</i>	
	Element 2: Starting date	<i>Date, *FIRST</i>	
	Element 2:	<i>Element list</i>	
	Element 1: Ending time	<i>Time, *LAST</i>	
	Element 2: Ending date	<i>Date, *LAST</i>	
LIB	Library	<i>Name, QPFRDATA</i>	Optional, Positional 2
TYPE	Type of information	Single values: <i>*ALL</i> Other values (up to 12 repetitions): <i>*INTERVAL, *WORKLOAD, *POOL, *DISK, *IOP, *LCLWS, *RMTWS, *EXCEPTION, *DBJRN, *TCPIP, *HTTP, *DOMINO</i>	Optional
DETAIL	Report detail	<i>*JOB, *THREAD</i>	Optional
SLTJOB	Select jobs	Single values: <i>*ALL</i> Other values (up to 50 repetitions): <i>Element list</i>	Optional
	Element 1: Job name	<i>Qualified job name</i>	
	Qualifier 1: Job name	<i>Generic name, name</i>	
	Qualifier 2: User	<i>Name</i>	
	Qualifier 3: Number	000000-999999	
	Element 2:	<i>Element list</i>	
	Element 1: Thread	<i>Character value, *ALL</i>	

Keyword	Description	Choices	Notes
OMTJOB	Omit jobs	Single values: <b>*NONE</b> Other values (up to 50 repetitions): <i>Element list</i>	Optional
	Element 1: Job name	<i>Qualified job name</i>	
	Qualifier 1: Job name	<i>Generic name, name</i>	
	Qualifier 2: User	<i>Name</i>	
	Qualifier 3: Number	000000-999999	
	Element 2:	<i>Element list</i>	
	Element 1: Thread	<i>Character value, <b>*ALL</b></i>	
SLTUSRID	Select users	Single values: <b>*ALL</b> Other values (up to 50 repetitions): <i>Generic name, name</i>	Optional
OMTUSRID	Omit users	Single values: <b>*NONE</b> Other values (up to 50 repetitions): <i>Generic name, name</i>	Optional
SLTJOBTYPE	Select job type	Single values: <b>*ALL</b> Other values (up to 15 repetitions): A, B, C, D, E, I, L, M, P, R, S, T, W, X, 3	Optional
OMTJOBTYPE	Omit job type	Single values: <b>*NONE</b> Other values (up to 15 repetitions): A, B, C, D, E, I, L, M, P, R, S, T, W, X, 3	Optional
SLTRUNPTY	Select job run priority	Single values: <b>*ALL</b> Other values: <i>Element list</i>	Optional
	Element 1: Highest priority	0-99	
	Element 2: Lowest priority	0-99	
OMTRUNPTY	Omit job run priority	Single values: <b>*NONE</b> Other values: <i>Element list</i>	Optional
	Element 1: Highest priority	0-99	
	Element 2: Lowest priority	0-99	
SLTPOOLS	Select pools	Single values: <b>*ALL</b> Other values (up to 64 repetitions): 1-64	Optional
OMTPOOLS	Omit pools	Single values: <b>*NONE</b> Other values (up to 64 repetitions): 1-64	Optional
SLTSBS	Select subsystems	Single values: <b>*ALL</b> Other values (up to 50 repetitions): <i>Name</i>	Optional
OMTSBS	Omit subsystems	Single values: <b>*NONE</b> Other values (up to 50 repetitions): <i>Name</i>	Optional
SLTLINE	Select communications lines	Single values: <b>*ALL</b> Other values (up to 50 repetitions): <i>Name</i>	Optional
OMTLINE	Omit communications lines	Single values: <b>*NONE</b> Other values (up to 50 repetitions): <i>Name</i>	Optional
SLTCTL	Select control units	Single values: <b>*ALL</b> Other values (up to 50 repetitions): <i>Name</i>	Optional
OMTCTL	Omit control units	Single values: <b>*NONE</b> Other values (up to 50 repetitions): <i>Name</i>	Optional
SLTFCNARA	Select functional areas	Single values: <b>*ALL</b> Other values (up to 50 repetitions): <i>Character value</i>	Optional
OMTFCNARA	Omit functional areas	Single values: <b>*NONE</b> Other values (up to 50 repetitions): <i>Character value</i>	Optional
JOB	Job name	<i>Name, <b>PRTCPT</b>RPT, *MBR</i>	Optional
JOB	Job description	Single values: <b>*NONE</b> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Job description	<i>Name, <b>QPRJOB</b>D</i>	
	Qualifier 2: Library	<i>Name, <b>*LIBL</b>, *CURLIB</i>	

---

## Member (MBR)

Specifies the performance data member used. This name should correspond to the member name specified on the TOMBR parameter of the Create Performance Data (CRTPFRDTA) command.

This is a required parameter.

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---

## Report title (TITLE)

Specifies the title for the report that is created.

**\*MBR** The text of the database member, which contains the performance data, is the report title.

*character-value*

Specify the title you want on your report with up to 50 characters of text, enclosed in apostrophes.

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## Time period for report (PERIOD)

Specifies the period of time on which to report. The parameter consists of four elements: a starting time and date, and an ending time and date. Data collected prior to the starting time on the starting date and after the ending time on the ending date is not included in the report.

The symbol \*N can be used to designate the default value for any of the four elements.

### Element 1: Starting time and date

#### Element 1: Starting time

**\*FIRST**

Data records starting from the beginning of the first day (00:00:00) of the collection period are included.

**\*SELECT**

An interval selection screen is displayed from which you can select one or more intervals for inclusion. This value is valid only in the interactive environment. If this value is used, the remaining values of this parameter (starting time and date and ending time and date) are ignored.

*time*

Specify the time of the first data record to include in the report, using the format, **hhmm** or **hhmmss**, where **hh** is the hours, **mm** is the minutes, and **ss** is the seconds.

The time is specified in 24-hour format with or without a time separator:

- Without a time separator, specify a string of 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds.
- With a time separator, specify a string of 5 or 8 digits where the time separator specified for your job is used to separate the hours, minutes, and seconds. If you enter

this command from the command line, the string must be enclosed in apostrophes. If a time separator other than the separator specified for your job is used, this command will fail.

#### Element 2: Starting date

##### \*FIRST

Data records starting from the first day of the collection period are included in the report.

*date* Specify the date of the first data record to include in the report. The date must be entered in the format specified by the system value QDATFMT, and if separators are used, as specified by the system value QDATSEP.

#### Element 2: Ending time and date

##### Element 1: Ending time

##### \*LAST

Data records through the end of the day (23:59:59) are included in the report.

*time* Specify the time of the last data record to include in the report. Use the same format used for the starting time.

##### Element 2: Ending date

##### \*LAST

Data records through the last day of the collection period are included in the report.

*date* Specify the date of the last record to include in the report. The date must be entered in the format specified by the system value QDATFMT, and if separators are used, as specified by the system value QDATSEP.

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## Library (LIB)

Specifies the library where the performance data is located.

##### QPFRDATA

The performance data files are located in the IBM-supplied performance data library, QPFRDATA.

*name* Specify the name of the library where the performance database files are located.

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## Type of information (TYPE)

Specifies the sections of the report that you want to print.

\*ALL All sections of the report are printed.

##### \*INTERVAL

Specifies that you want to print the Component Interval Activity section.

**\*WORKLOAD**

Specifies that you want to print the Job Workload Activity section.

**\*POOL**

Specifies that you want to print the Storage Pool Activity section.

**\*DISK**

Specifies that you want to print the Disk Activity section.

**\*IOP** Specifies that you want to print the IOP Utilization section.

**\*LCLWS**

Specifies that you want to print the Local Work Stations section.

**\*RMTWS**

Specifies that you want to print the Remote Work Stations section. You can print this section only if you converted the performance data that was collected by the STRPFRMON command in a previous release. Collection Services does not collect this data.

**\*EXCEPTION**

Specifies that you want to print the Exception Occurrence Summary and Interval Counts section.

**\*DBJRN**

Specifies that you want to print the Database Journaling Summary section.

**\*TCPIP**

Specifies that you want to print the TCP/IP Activity section. This section is new since V5R1. It will not be available if you convert data from a previous release.

**\*HTTP**

Specifies that you want to print the HTTP Server Activity section. This section includes statistics for HTTP Server (powered by Apache).

**\*DOMINO**

Specifies that you want to print the Domino Server Activity section. This section includes statistics for Domino for i5/OS.

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## Report detail (DETAIL)

Specifies whether you want the report to provide detailed job information at the job level or the thread level.

**\*JOB** Specifies that you want detailed information at the job level.

**\*THREAD**

Specifies that you want detailed information at the thread level.

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---

## Select jobs (SLTJOB)

Specifies a list of up to 50 jobs to be included in the report. Only specified jobs are included in the report.

Individual jobs are identified by a "job identifier." A job identifier is either the special value \*ALL or a qualified name that consists of up to three qualifiers: a job number, a user name, and a job name. Job identifiers are written in the form, job-number/user-name/job-name, but all three qualifiers do not have to be specified. The symbol \*N can be used as a placeholder for up to two of the qualifiers of the job identifier.

**Note:** This parameter and the **Omit jobs (OMTJOB)** parameter are mutually exclusive.

### Single values

**\*ALL** All jobs in the collected data are included, unless excluded by another selection value.

### Other values (up to 50 repetitions)

#### Element 1: Job name

##### Qualifier 1: Job name

###### *generic-name*

Specify the generic job name of the jobs to select.

**Note:** A generic name is a character string that contains 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 name, the system assumes it to be the complete object name.

*name* Specify the job name of the job to select. Because jobs may have identical job names, this value may not identify a specific job.

##### Qualifier 2: User

*name* Specify the user name of the jobs to select. Because jobs may have identical user names, this value may not identify a specific job.

##### Qualifier 3: Number

###### *000000-999999*

Specify the 6-digit number of a job to select. All six digits must be specified, including zeros.

#### Element 2: Thread

##### Element 1: Thread

**\*ALL** All threads are included, unless excluded by some other selection criterion.

###### *character-value*

Specify the thread identifier to select. Because some jobs can have identical thread identifiers, this value may not identify a specific job.

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---

## Omit jobs (OMTJOB)

Specifies a list of up to 50 jobs to be omitted from the report.

Individual jobs are identified by a "job identifier." A job identifier is either the special value \*NONE or a qualified name that consists of up to three qualifiers: a job number, a user name, and a job name. Job identifiers are written in the form, job-number/user-name/job-name, but all three qualifiers do not have to be specified. The symbol \*N can be used as a placeholder for up to two of the qualifiers of the job identifier.

**Note:** This parameter and the **Select jobs (SLTJOB)** parameter are mutually exclusive.

### Single values

#### \*NONE

Jobs are not excluded based on job identifier.

### Other values (up to 50 repetitions)

#### Element 1: Job name

##### Qualifier 1: Job name

###### *generic-name*

Specify the generic job name of the jobs to omit.

**Note:** A generic name is a character string that contains 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 name, the system assumes it to be the complete object name.

*name* Specify the job name of the job to omit. Because jobs may have identical job names, this value may not identify a specific job.

##### Qualifier 2: User

*name* Specify the user name of the jobs to omit. Because jobs may have identical user names, this value may not identify a specific job.

##### Qualifier 3: Number

###### *000000-999999*

Specify the 6-digit number of a job to omit. All six digits must be specified, including zeros.

#### Element 2: Thread

##### Element 1: Thread

\*ALL All threads are excluded, unless included by some other selection criterion.

###### *character-value*

Specify the thread identifier to omit. Because some jobs can have identical thread identifiers, this value may not identify a specific job.

---

## Select users (SLTUSRID)

Specifies a list of up to 50 user names to be included in the report. Only jobs with one of the specified user names are included in the report.

**Note:** This parameter and the **Omit users (OMTUSRID)** parameter are mutually exclusive.

### Single values

**\*ALL** All jobs with user names are included, unless excluded by another selection value.

### Other values (up to 50 repetitions)

#### *generic-name*

Specify the generic user name of the jobs to select.

**Note:** A generic name is a character string that contains 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 name, the system assumes it to be the complete object name.

**name** Specify the user name of the jobs to select. Because jobs may have identical user names, this value may not identify a specific job. SLTUSRID(user) is equivalent to SLTJOB(\*N/user/\*N).

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---

## Omit users (OMTUSRID)

Specifies a list of up to 50 user names to be omitted from the report.

**Note:** This parameter and the **Select users (SLTUSRID)** parameter are mutually exclusive.

### Single values

#### **\*NONE**

No jobs are excluded based on the user name.

### Other values (up to 50 repetitions)

#### *generic-name*

Specify the generic user name of the jobs to omit.

**Note:** A generic name is a character string that contains 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 name, the system assumes it to be the complete object name.

**name** Specify the user name of the jobs to omit. Because jobs may have identical user names, this value may not identify a specific job. OMTUSRID(user) is equivalent to OMTJOB(\*N/user/\*N).

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---

## Select job type (SLTJOBTYPE)

Specifies a list of up to 15 job types to be included in the report.

**Note:** This parameter and the **Omit job type (OMTJOBTYPE)** parameter are mutually exclusive.

**\*ALL** Jobs of all types are included, unless excluded by another selection value.

- A Automatic start jobs
- B Batch jobs
- C System i Access jobs
- D DDM server jobs
- E Evoke jobs
- I Interactive jobs
- L Licensed Internal Code jobs
- M Subsystem monitor jobs
- P Pass-through jobs
- R Spool reader jobs
- S System jobs
- T Multiple Requester Terminal (MRT) jobs
- W Spool writer jobs
- X Start system job
- 3 System/36 jobs

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---

## Omit job type (OMTJOBTYPE)

Specifies a list of up to 15 job types to be omitted from the report.

**Note:** This parameter and the **Select job type (SLTJOBTYPE)** parameter are mutually exclusive.

**\*NONE**

No job types are excluded, unless excluded by another selection value.

- A Automatic start jobs
- B Batch jobs
- C System i Access jobs
- D DDM server jobs
- E Evoke jobs
- I Interactive jobs
- L Licensed Internal Code jobs
- M Subsystem monitor jobs
- P Pass-through jobs
- R Spool reader jobs

S	System jobs
T	Multiple Requester Terminal (MRT) jobs
W	Spool writer jobs
X	Start system job
3	System/36 jobs

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---

## Select job run priority (SLTRUNPTY)

Specifies a range of run priorities to select. Only jobs that ran with a priority in the specified range will be included in the report.

**Note:** This parameter and the **Omit job run priority (OMTRUNPTY)** parameter are mutually exclusive.

### Single values

**\*ALL** All jobs are included, unless excluded by another selection value.

### Element 1: Highest priority

**0-99** Specifies the highest run priority to select. Priorities can be 0 through 99, where 0 is the highest job priority and 99 is the lowest job priority.

### Element 2: Lowest priority

**0-99** Specifies the lowest run priority to select. Priorities can be 0 through 99, where 0 is the highest job priority and 99 is the lowest job priority.

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## Omit job run priority (OMTRUNPTY)

Specifies a range of run priorities to omit. Only jobs that ran with a priority in the specified range will be excluded from the report.

**Note:** This parameter and the **Select job run priority (SLTRUNPTY)** parameter are mutually exclusive.

### Single Value

**\*NONE**  
No jobs are excluded based on their priority.

### Element 1: Highest priority

**0-99** Specifies the highest run priority to omit. Priorities can be 0 through 99, where 0 is the highest job priority and 99 is the lowest job priority.

### Element 2: Lowest priority

**0-99** Specifies the lowest run priority to omit. Priorities can be 0 through 99, where 0 is the highest job priority and 99 is the lowest job priority.

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## Select pools (SLTPOOLS)

Specifies a list of up to 64 pools to be included in the report.

**Note:** This parameter and the **Omit pools (OMTPOOLS)** parameter are mutually exclusive.

### Single values

\*ALL Jobs that ran in all pools are included, unless excluded by another selection value.

### Other values (up to 64 repetitions)

*1-64* Specify the number of a pool to select.

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---

## Omit pools (OMTPOOLS)

Specifies a list of up to 64 pools to omit. Jobs that ran in any of the specified pools are excluded from the report.

**Note:** This parameter and the **Select pools (SLTPOOLS)** parameter are mutually exclusive.

### Single values

\*NONE Jobs are not excluded based on their pool.

### Other values (up to 64 repetitions)

*1-64* Specify the number of a pool to omit.

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---

## Select subsystems (SLTSBS)

Specifies a list of up to 50 subsystems to select. Only jobs that ran in one of the specified subsystems are included in the report.

**Note:** This parameter and the **Omit subsystems (OMTSBS)** parameter are mutually exclusive.

### Single values

\*ALL Jobs in all subsystems are included, unless excluded by another selection value.

### Other values (up to 50 repetitions)

*name* Specify the name of a subsystem to select.

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---

## Omit subsystems (OMTSBS)

Specifies a list of up to 50 subsystems to omit. Jobs that ran in any of the specified subsystems are excluded from the report.

**Note:** This parameter and the **Select subsystems (SLTSBS)** parameter are mutually exclusive.

### Single values

#### \*NONE

Jobs are not excluded based on their subsystem.

### Other values (up to 50 repetitions)

*name* Specify the name of a subsystem to omit.

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## Select communications lines (SLTLINE)

Specifies a list of up to 50 communications lines to select. Only jobs that use a remote device connected through one of the specified communications lines are included in the report.

**Note:** This parameter and the **Omit communications lines (OMTLINE)** parameter are mutually exclusive.

### Single values

\*ALL All jobs are included in the report, unless excluded by another selection value.

### Other values (up to 50 repetitions)

*name* Specify the name of a communications line to select. This excludes jobs using remote devices connected through other communications lines, even if the controllers to which those devices are attached are specified on the **Select control units (SLCTL)** parameter.

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## Omit communications lines (OMTLINE)

Specifies a list of up to 50 communications lines to omit. Jobs that use a remote device connected through any of the specified communications lines are excluded from the report.

**Note:** This parameter and the **Select communications lines (SLTLINE)** parameter are mutually exclusive.

### Single values

#### \*NONE

Jobs are not excluded from the report based on communications line.

### Other values (up to 50 repetitions)

*name* Specify the name of a communications line to omit.

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---

## Select control units (SLTCTL)

Specifies a list of up to 50 communications controllers to select. Only jobs that use a device connected to one of the specified controllers are included in the report.

**Note:** This parameter and the **Omit control units (OMTCTL)** parameter are mutually exclusive.

### Single values

**\*ALL** All jobs are included, unless excluded by another selection value.

### Other values (up to 50 repetitions)

*name* Specify the name of a communications controller to select.

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---

## Omit control units (OMTCTL)

Specifies a list of up to 50 communications controllers to omit. Jobs that use a device connected to any of the specified controllers are excluded from in the report.

**Note:** This parameter and the **Select control units (SLTCTL)** parameter are mutually exclusive.

### Single values

**\*NONE**  
Jobs are not excluded based on communications controllers.

### Other values (up to 50 repetitions)

*name* Specify the name of a communications controller to omit.

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## Select functional areas (SLTFCNARA)

Specifies a list of up to 50 functional areas to select. Only jobs and users identified in one of the functional areas are included in the report.

A functional area is a list of job names and/or user names previously defined by the user. More information on functional areas is in the Performance Tools for i5/OS book.

**Note:** This parameter and the **Omit functional areas (OMTFCNARA)** parameter are mutually exclusive.

### Single values

**\*ALL** All jobs are included in the report, unless excluded by another selection value.

### Other values (up to 50 repetitions)

*character-value*  
Specify the name of a functional area to select.

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---

## Omit functional areas (OMTFCNARA)

Specifies a list of up to 50 functional areas to omit. Jobs and users identified in any of the functional areas are excluded from the report.

A functional area is a list of job names and/or user names previously defined by the user. More information on functional areas is in the Performance Tools for i5/OS book.

**Note:** This parameter and the **Select functional areas (SLTFCNARA)** parameter are mutually exclusive.

### Single values

#### \*NONE

Jobs are not excluded from the report based on functional area.

### Other values (up to 50 repetitions)

#### *character-value*

Specify the name of a functional area to omit.

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## Job name (JOB)

Specifies the job name to be used if submitting the job for batch processing.

Any value for this parameter is ignored if \*NONE is specified for the **Job description (JOBBD)** parameter.

**Note:** If JOBBD(\*NONE) is specified, job processing is performed interactively.

#### PRTCPTRPT

The command name is used for the job name.

\*MBR The name selected for the performance data member in the **Member (MBR)** parameter is used.

*name* Specify the name to be used for any and all batch jobs.

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## Job description (JOBBD)

Specifies the job description used to submit the job for batch processing.

### Single values

#### \*NONE

A batch job is not submitted; processing continues interactively while the user waits. The user's workstation is not available for other use during this time, which could be significant for long jobs.

### Qualifier 1: Job description

#### QPFRJOBBD

The IBM-supplied job description, QPFRJOBBD, is used.

*name* Specify the name of the job description to be used.

### Qualifier 2: Library

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

**\*CURLIB**

The current library for the job is used to locate the job description. If no current library entry exists in the library list, QGPL is used.

*name* Specify the library in which the job description is located.

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## Examples

### Example 1: Printing a Component Report

```
PRTCPTPT  MBR(APRIL18)
```

This command prints a complete component report for the performance data member APRIL18 in library QPFRDATA. The report title is the same as the text in the member.

### Example 2: Printing a Report With a Title

```
PRTCPTPT  MBR(NOV1)  PERIOD(*SELECT)
           TITLE('Intervals with Highest Response Times')
```

This command prints a component report for the data member NOV1 in library QPFRDATA. The user is presented with the interval-selection display, which allows sorting of the intervals according to various criteria and selection of only certain intervals to be included in the report. The title of the report is *Intervals with Highest Response Times*.

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## Error messages

### \*ESCAPE Messages

**PFR1010**

Cannot process request because of missing data.

**PFR3002**

Cannot print report because of missing data.

**PFR3004**

Incorrect measurement interval specified.

**PFR3006**

Measurement interval specified is not valid.

**PFR3111**

Functional area &1 does not exist.

**PFR5501**

Performance data file(s) are not upward compatible.

**PFR5502**

Performance data file(s) are not downward compatible.

**PFR9048**

Cannot display graph because of missing data.



# Print Job Interval Report (PRTJOB RPT)

Where allowed to run: All environments (\*ALL)  
 Threadsaf e: No

Parameters  
 Examples  
 Error messages

The Print Job Report (PRTJOB RPT) command produces a job-oriented report from the performance data collected by Collection Services from the Operations Navigator interface. The report, which is written to the printer file QPPTITVJ, shows job information by interval. Jobs may be included or excluded from the report based on a variety of job details and interval times.

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## Parameters

Keyword	Description	Choices	Notes
MBR	Member	Name	Required, Positional 1
TITLE	Report title	Character value, *MBRTXT, *BLANK	Optional, Positional 3
PERIOD	Time period for report	Element list	Optional
	Element 1:	Element list	
	Element 1: Starting time	Time, *FIRST, *SELECT	
	Element 2: Starting date	Date, *FIRST	
	Element 2:	Element list	
	Element 1: Ending time	Time, *LAST	
	Element 2: Ending date	Date, *LAST	
LIB	Library	Name, QPFRDATA	Optional, Positional 2
DETAIL	Report detail	*JOB, *THREAD	Optional
SLTJOB	Select jobs	Single values: *ALL Other values (up to 50 repetitions): Element list	Optional
	Element 1: Job name	Qualified job name	
	Qualifier 1: Job name	Generic name, name	
	Qualifier 2: User	Generic name, name	
	Qualifier 3: Number	000000-999999	
	Element 2:	Element list	
	Element 1: Thread	Character value, *ALL	
OMTJOB	Omit jobs	Single values: *NONE Other values (up to 50 repetitions): Element list	Optional
	Element 1: Job name	Qualified job name	
	Qualifier 1: Job name	Generic name, name	
	Qualifier 2: User	Generic name, name	
	Qualifier 3: Number	000000-999999	
	Element 2:	Element list	
	Element 1: Thread	Character value, *ALL	
SLTUSRID	Select users	Single values: *ALL Other values (up to 50 repetitions): Generic name, name	Optional

Keyword	Description	Choices	Notes
OMTUSRID	Omit users	Single values: *NONE Other values (up to 50 repetitions): <i>Generic name, name</i>	Optional
SLTPOOLS	Select pools	Single values: *ALL Other values (up to 64 repetitions): 1-64	Optional
OMTPOOLS	Omit pools	Single values: *NONE Other values (up to 64 repetitions): 1-64	Optional
SLTSBS	Select subsystems	Single values: *ALL Other values (up to 50 repetitions): <i>Name</i>	Optional
OMTSBS	Omit subsystems	Single values: *NONE Other values (up to 50 repetitions): <i>Name</i>	Optional
SLTLINE	Select communications lines	Single values: *ALL Other values (up to 50 repetitions): <i>Name</i>	Optional
OMTLINE	Omit communications lines	Single values: *NONE Other values (up to 50 repetitions): <i>Name</i>	Optional
SLTCTL	Select control units	Single values: *ALL Other values (up to 50 repetitions): <i>Name</i>	Optional
OMTCTL	Omit control units	Single values: *NONE Other values (up to 50 repetitions): <i>Name</i>	Optional
SLFCNARA	Select functional areas	Single values: *ALL Other values (up to 50 repetitions): <i>Character value</i>	Optional
OMFCNARA	Omit functional areas	Single values: *NONE Other values (up to 50 repetitions): <i>Character value</i>	Optional
OMTSYSTSK	Omit system tasks	*YES, *NO	Optional
JOB	Job name	<i>Name</i> , <u>PRTJOB</u> RPT, *MBR	Optional
JOB	Job description	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Job description	<i>Name</i> , <u>Q</u> FRJOB	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	

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## Member (MBR)

Specifies the performance data member used. This name should correspond to the member name specified on the TOMBR parameter of the Create Performance Data (CRTPFRDTA) command.

This is a required parameter.

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## Report title (TITLE)

Specifies the title for the report that is created.

### \*MBRTXT

The text of the database member, which contains the performance data, is the report title.

### \*BLANK

No title is specified.

### *character-value*

Specify a title of up to 50 characters, enclosed in apostrophes.

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## Time period for report (PERIOD)

Specifies the period of time on which to report. The parameter consists of four elements: a starting time and date, and an ending time and date. Data collected prior to the starting time on the starting date and after the ending time on the ending date is not included in the report.

The symbol \*N can be used to designate the default value for any of the four elements.

### Element 1: Starting time and date

#### Element 1: Starting time

##### \*FIRST

Data records starting from the beginning of the first day (00:00:00) of the collection period are included.

##### \*SELECT

An interval selection screen is displayed from which you can select one or more intervals for inclusion. This value is valid only in the interactive environment. If this value is used, the remaining values of this parameter (starting time and date and ending time and date) are ignored.

*time* Specify the time of the first data record to include in the report, using the format, **hhmm** or **hhmmss**, where **hh** is the hours, **mm** is the minutes, and **ss** is the seconds.

The time is specified in 24-hour format with or without a time separator:

- Without a time separator, specify a string of 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds.
- With a time separator, specify a string of 5 or 8 digits where the time separator specified for your job is used to separate the hours, minutes, and seconds. If you enter this command from the command line, the string must be enclosed in apostrophes. If a time separator other than the separator specified for your job is used, this command will fail.

#### Element 2: Starting date

##### \*FIRST

Data records starting from the first day of the collection period are included in the report.

*date* Specify the date of the first data record to include in the report. The date must be entered in the format specified by the system value QDATFMT, and if separators are used, as specified by the system value QDATSEP.

### Element 2: Ending time and date

#### Element 1: Ending time

##### \*LAST

Data records through the end of the day (23:59:59) are included in the report.

*time* Specify the time of the last data record to include in the report. Use the same format used for the starting time.

## Element 2: Ending date

### \*LAST

Data records through the last day of the collection period are included in the report.

*date* Specify the date of the last record to include in the report. The date must be entered in the format specified by the system value QDATFMT, and if separators are used, as specified by the system value QDATSEP.

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## Library (LIB)

Specifies the library where the performance data is located.

### QPFRDATA

The performance data files are located in the IBM-supplied performance data library, QPFRDATA.

*name* Specify the name of the library where the performance database files are located.

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## Report detail (DETAIL)

Specifies whether you want the report to provide detailed job information at the job level or the thread level.

\*JOB Specifies that you want detailed information at the job level.

### \*THREAD

Specifies that you want detailed information at the thread level.

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## Select jobs (SLTJOB)

Specifies a list of up to 50 jobs to be included in the report. Only specified jobs are included in the report.

Individual jobs are identified by a "job identifier." A job identifier is either the special value \*ALL or a qualified name that consists of up to three qualifiers: a job number, a user name, and a job name. Job identifiers are written in the form, job-number/user-name/job-name, but all three qualifiers do not have to be specified. The symbol \*N can be used as a placeholder for up to two of the qualifiers of the job identifier.

**Note:** This parameter and the **Omit jobs (OMTJOB)** parameter are mutually exclusive.

### Single values

\*ALL All jobs in the collected data are included, unless excluded by another selection value.

### Other values (up to 50 repetitions)

#### Element 1: Job name

##### Qualifier 1: Job name

*generic-name*

Specify the generic job name of the jobs to select.

**Note:** A generic name is a character string that contains 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 name, the system assumes it to be the complete object name.

*name* Specify the job name of the job to select. Because jobs may have identical job names, this value may not identify a specific job.

**Qualifier 2: User**

*name* Specify the user name of the jobs to select. Because jobs may have identical user names, this value may not identify a specific job.

**Qualifier 3: Number**

*000000-999999*

Specify the 6-digit number of a job to select. All six digits must be specified, including zeros.

**Element 2: Thread**

**Element 1: Thread**

**\*ALL** All threads are included, unless excluded by some other selection criterion.

*character-value*

Specify the thread identifier to select. Because some jobs can have identical thread identifiers, this value may not identify a specific job.

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## Omit jobs (OMTJOB)

Specifies a list of up to 50 jobs to be omitted from the report.

Individual jobs are identified by a "job identifier." A job identifier is either the special value \*NONE or a qualified name that consists of up to three qualifiers: a job number, a user name, and a job name. Job identifiers are written in the form, job-number/user-name/job-name, but all three qualifiers do not have to be specified. The symbol \*N can be used as a placeholder for up to two of the qualifiers of the job identifier.

**Note:** This parameter and the **Select jobs (SLTJOB)** parameter are mutually exclusive.

**Single values**

**\*NONE**

Jobs are not excluded based on job identifier.

**Other values (up to 50 repetitions)**

## Element 1: Job name

### Qualifier 1: Job name

#### *generic-name*

Specify the generic job name of the jobs to omit.

**Note:** A generic name is a character string that contains 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 name, the system assumes it to be the complete object name.

*name* Specify the job name of the job to omit. Because jobs may have identical job names, this value may not identify a specific job.

### Qualifier 2: User

*name* Specify the user name of the jobs to omit. Because jobs may have identical user names, this value may not identify a specific job.

### Qualifier 3: Number

#### *000000-999999*

Specify the 6-digit number of a job to omit. All six digits must be specified, including zeros.

## Element 2: Thread

### Element 1: Thread

**\*ALL** All threads are excluded, unless included by some other selection criterion.

#### *character-value*

Specify the thread identifier to omit. Because some jobs can have identical thread identifiers, this value may not identify a specific job.

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---

## Select users (SLTUSRID)

Specifies a list of up to 50 user names to be included in the report. Only jobs with one of the specified user names are included in the report.

**Note:** This parameter and the **Omit users (OMTUSRID)** parameter are mutually exclusive.

### Single values

**\*ALL** All jobs with user names are included, unless excluded by another selection value.

### Other values (up to 50 repetitions)

*generic-name*

Specify the generic user name of the jobs to select.

**Note:** A generic name is a character string that contains 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 name, the system assumes it to be the complete object name.

*name* Specify the user name of the jobs to select. Because jobs may have identical user names, this value may not identify a specific job. SLTUSRID(user) is equivalent to SLTJOB(\*N/user/\*N).

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---

## Omit users (OMTUSRID)

Specifies a list of up to 50 user names to be omitted from the report.

**Note:** This parameter and the **Select users (SLTUSRID)** parameter are mutually exclusive.

### Single values

\*NONE

No jobs are excluded based on the user name.

### Other values (up to 50 repetitions)

*generic-name*

Specify the generic user name of the jobs to omit.

**Note:** A generic name is a character string that contains 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 name, the system assumes it to be the complete object name.

*name* Specify the user name of the jobs to omit. Because jobs may have identical user names, this value may not identify a specific job. OMTUSRID(user) is equivalent to OMTJOB(\*N/user/\*N).

Top

---

## Select pools (SLTPOOLS)

Specifies a list of up to 64 pools to be included in the report.

**Note:** This parameter and the **Omit pools (OMTPOOLS)** parameter are mutually exclusive.

### Single values

\*ALL

Jobs that ran in all pools are included, unless excluded by another selection value.

### Other values (up to 64 repetitions)

*1-64* Specify the number of a pool to select.

Top

---

## Omit pools (OMTPOOLS)

Specifies a list of up to 64 pools to omit. Jobs that ran in any of the specified pools are excluded from the report.

**Note:** This parameter and the **Select pools (SLTPOOLS)** parameter are mutually exclusive.

### Single values

#### \*NONE

Jobs are not excluded based on their pool.

### Other values (up to 64 repetitions)

**1-64** Specify the number of a pool to omit.

Top

---

## Select subsystems (SLTSBS)

Specifies a list of up to 50 subsystems to select. Only jobs that ran in one of the specified subsystems are included in the report.

**Note:** This parameter and the **Omit subsystems (OMTSBS)** parameter are mutually exclusive.

### Single values

\*ALL Jobs in all subsystems are included, unless excluded by another selection value.

### Other values (up to 50 repetitions)

*name* Specify the name of a subsystem to select.

Top

---

## Omit subsystems (OMTSBS)

Specifies a list of up to 50 subsystems to omit. Jobs that ran in any of the specified subsystems are excluded from the report.

**Note:** This parameter and the **Select subsystems (SLTSBS)** parameter are mutually exclusive.

### Single values

#### \*NONE

Jobs are not excluded based on their subsystem.

### Other values (up to 50 repetitions)

*name* Specify the name of a subsystem to omit.

Top

---

## Select communications lines (SLTLINE)

Specifies a list of up to 50 communications lines to select. Only jobs that use a remote device connected through one of the specified communications lines are included in the report.

**Note:** This parameter and the **Omit communications lines (OMTLINE)** parameter are mutually exclusive.

#### Single values

**\*ALL** All jobs are included in the report, unless excluded by another selection value.

#### Other values (up to 50 repetitions)

*name* Specify the name of a communications line to select. This excludes jobs using remote devices connected through other communications lines, even if the controllers to which those devices are attached are specified on the **Select control units (SLTCTL)** parameter.

Top

---

## Omit communications lines (OMTLINE)

Specifies a list of up to 50 communications lines to omit. Jobs that use a remote device connected through any of the specified communications lines are excluded from the report.

**Note:** This parameter and the **Select communications lines (SLTLINE)** parameter are mutually exclusive.

#### Single values

**\*NONE**  
Jobs are not excluded from the report based on communications line.

#### Other values (up to 50 repetitions)

*name* Specify the name of a communications line to omit.

Top

---

## Select control units (SLTCTL)

Specifies a list of up to 50 communications controllers to select. Only jobs that use a device connected to one of the specified controllers are included in the report.

**Note:** This parameter and the **Omit control units (OMTCTL)** parameter are mutually exclusive.

#### Single values

**\*ALL** All jobs are included, unless excluded by another selection value.

#### Other values (up to 50 repetitions)

*name* Specify the name of a communications controller to select.

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---

## Omit control units (OMTCTL)

Specifies a list of up to 50 communications controllers to omit. Jobs that use a device connected to any of the specified controllers are excluded from in the report.

**Note:** This parameter and the **Select control units (SLTCTL)** parameter are mutually exclusive.

### Single values

#### \*NONE

Jobs are not excluded based on communications controllers.

### Other values (up to 50 repetitions)

*name* Specify the name of a communications controller to omit.

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---

## Select functional areas (SLTFCNARA)

Specifies a list of up to 50 functional areas to select. Only jobs and users identified in one of the functional areas are included in the report.

A functional area is a list of job names and/or user names previously defined by the user. More information on functional areas is in the Performance Tools for i5/OS book.

**Note:** This parameter and the **Omit functional areas (OMTFCNARA)** parameter are mutually exclusive.

### Single values

\*ALL All jobs are included in the report, unless excluded by another selection value.

### Other values (up to 50 repetitions)

#### *character-value*

Specify the name of a functional area to select.

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---

## Omit functional areas (OMTFCNARA)

Specifies a list of up to 50 functional areas to omit. Jobs and users identified in any of the functional areas are excluded from the report.

A functional area is a list of job names and/or user names previously defined by the user. More information on functional areas is in the Performance Tools for i5/OS book.

**Note:** This parameter and the **Select functional areas (SLTFCNARA)** parameter are mutually exclusive.

### Single values

#### \*NONE

Jobs are not excluded from the report based on functional area.

### Other values (up to 50 repetitions)

#### *character-value*

Specify the name of a functional area to omit.

---

## Omit system tasks (OMTSYSTSK)

Specifies whether or not you want to omit printing the system tasks.

**\*YES** Print only the user jobs and omit the system tasks.

**\*NO** Print the user jobs and the system tasks.

Top

---

## Job name (JOB)

Specifies the job name to be used if submitting the job for batch processing.

Any value for this parameter is ignored if \*NONE is specified for the **Job description (JOBBD)** parameter.

**Note:** If JOBBD(\*NONE) is specified, job processing is performed interactively.

### PRTJOBRPT

The command name is used for the job name.

**\*MBR** The name selected for the performance data member in the **Member (MBR)** parameter is used.

*name* Specify the name to be used for any and all batch jobs.

Top

---

## Job description (JOBBD)

Specifies the job description used to submit the job for batch processing.

### Single values

#### \*NONE

A batch job is not submitted; processing continues interactively while the user waits. The user's workstation is not available for other use during this time, which could be significant for long jobs.

### Qualifier 1: Job description

#### QPFRJOBBD

The IBM-supplied job description, QPFRJOBBD, is used.

*name* Specify the name of the job description to be used.

### Qualifier 2: Library

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

#### \*CURLIB

The current library for the job is used to locate the job description. If no current library entry exists in the library list, QGPL is used.

*name* Specify the library in which the job description is located.

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---

## Examples

### Example 1: Submitting a Batch Job

```
PRTJOB RPT MBR(DTA071588A)
```

This command submits a batch job to print a report on all jobs in all intervals in the member DTA071588A of the performance data files in library QPFRDATA. The report title is taken from the text of that member.

### Example 2: Selecting Intervals to Include in Report

```
PRTJOB RPT MBR(DTA071588A) PERIOD(*SELECT)
```

This command submits a job to print a report from the same data, but first shows a screen where a user interactively selects which intervals to include.

### Example 3: Reporting on a Specific Time Period

```
PRTJOB RPT MBR(DTA071588A) PERIOD((2330)(0130))
```

This command submits a job to print a report on the data collected from 11:30 PM on the first day of collection through 1:30 AM on the last day of collection. However, if data collection started and ended on the same day, an error message is printed instead, because the specified ending date and time is before the specified starting date and time.

### Example 4: Printing a Report Interactively

```
PRTJOB RPT MBR(DTA071588A) SLTUSRID(D46*) JOBD(*NONE)
```

This command interactively prints a report for all jobs with a user ID starting with D46.

### Example 5: Printing a Report Interactively

```
PRTJOB RPT MBR(DTA071588A) SLTJOB(D46*/*N) JOBD(*NONE)
```

This command performs the same function as the previous example.

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---

## Error messages

### \*ESCAPE Messages

#### PFR1010

Cannot process request because of missing data.

#### PFR3002

Cannot print report because of missing data.

- PFR3004**  
Incorrect measurement interval specified.
- PFR3006**  
Measurement interval specified is not valid.
- PFR3101**  
The SLTJOB and OMTJOB parameters are mutually exclusive.
- PFR3102**  
SLTUSRID and OMTUSRID parameters cannot both be specified.
- PFR3103**  
SLTPOOLS and OMTPOOLS parameters cannot both be specified.
- PFR3104**  
SLTSBS and OMTSBS parameters cannot both be specified.
- PFR3105**  
SLTLINE and OMTLINE parameters cannot both be specified.
- PFR3106**  
SLTCTL and OMTCTL parameters cannot both be specified.
- PFR3107**  
SLTFCNARA and OMTFCNARA parameters cannot both be specified.
- PFR3108**  
SLTLOC and OMTLOC parameters cannot both be specified.
- PFR3111**  
Functional area &1 does not exist.
- PFR5501**  
Performance data file(s) are not upward compatible.
- PFR5502**  
Performance data file(s) are not downward compatible.
- PFR9005**  
YAXIS(\*TIME) must be specified.
- PFR9042**  
SLTUSER and OMTUSER parameters cannot both be specified.
- PFR9048**  
Cannot display graph because of missing data.

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---

## Print Job Trace (PRTJOBTRC)

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

Parameters  
Examples  
Error messages

The Print Job Trace (PRTJOBTRC) command produces performance-oriented reports that are used to analyze job trace data collected earlier with the Start Job Trace (STRJOBTRC) and End Job Trace (ENDJOBTRC) commands.

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---

### Parameters

Keyword	Description	Choices	Notes
MBR	Data base file member	Name, <u>QAJOBTRC</u>	Optional, Positional 1
LIB	Data base file library	Name, <u>QPFRRDATA</u>	Optional, Positional 2
RPTTYPE	Report type	<u>*BOTH</u> , *DETAIL, *SUMMARY	Optional, Positional 3
TITLE	Report title	Character value, <u>*BLANK</u>	Optional, Positional 4
STRSEQ	Starting sequence number	1-999999, <u>*FIRST</u>	Optional
ENDSEQ	Ending sequence number	Decimal number, <u>*LAST</u>	Optional
ENDTNS	Transaction ending program	Name, <u>QT3REQIO</u> , *BATCH	Optional
STRTNS	Transaction starting program	Name, <u>QWSGET</u>	Optional
JOB	Job name	Name, <u>PRTJOBTRC</u> , *MBR	Optional
JOBDD	Job description	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Job description	Name, <u>QFRRJOBDD</u>	
	Qualifier 2: Library	Name, <u>*LIBL</u> , *CURLIB	

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---

### Data base file member (MBR)

Specifies the member in file QAPTTTRCJ in which the trace data is saved by the End Job Trace (ENDJOBTRC) command.

#### QAJOBTRC

The standard member name, QAJOBTRC, is used.

*name* Specify the name of the member in which the data is saved.

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---

### Data base file library (LIB)

Specifies the library in which the job trace data is saved by the End Job Trace (ENDJOBTRC) command.

## QPFRDATA

The trace data is saved in the IBM-supplied performance data library, QPFRDATA.

*name* Specify the name of the library in which the trace data is saved.

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---

## Report type (RPTTYPE)

Specifies the type of report(s) to produce.

**Note:** If summary reports are selected (by specifying \*BOTH or \*SUMMARY for this parameter), the summary reports contain information only when transaction ending program and transaction starting program pairs are found in the collected data.

### \*BOTH

Both the detail and summary reports are produced (three reports total).

### \*DETAIL

A report is produced detailing the individual job trace records. The output is directed to the printer file QPPTTRCD. Each page heading includes the text 'Job Trace Information'.

### \*SUMMARY

Two reports are produced summarizing the job trace data by transaction. One report shows primarily physical disk activity; its printer file is QPPTTRC1, and its page heading includes the text 'Trace Analysis Summary'. The other report concentrates on higher level activities such as database I/O and inter-program transfers of control; its printer file is QPPTTRC2, and its page heading includes the text 'Trace Analysis I/O Summary'.

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---

## Report title (TITLE)

Specifies a title that is printed on the page heading of each report.

### \*BLANK

No title is specified.

### *character-value*

Specify title of up to 50 characters enclosed in apostrophes. This may be used, for example, to distinguish between reports on different sets of trace data or different sections of the same data.

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---

## Starting sequence number (STRSEQ)

Specifies the sequence number of the first job trace record that is included in any reports. No records preceding this one are listed in the detail report or counted in either summary report.

### \*FIRST

Trace records starting from the first job trace record (sequence number 1) are included.

### *1-999999*

Specify the sequence of the first trace record that is included. An appropriate value can be determined by previewing reports produced from all the job trace data. This can be used to bracket a particular set of transactions on which to report.

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---

## Ending sequence number (ENDSEQ)

Specifies the sequence number of the last job trace record that is included in any reports. No records following this one are listed in the detail report or counted in either summary report.

### \*LAST

Trace records through the last trace record are included.

### 1-999999

Specify the sequence number of the last trace record that is included. An appropriate value can be chosen through a preview process so as to bracket a particular set of transactions.

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---

## Transaction ending program (ENDTNS)

Specifies the program that signifies the end of a transaction. A program name must also be specified for the **Transaction starting program (STRTNS)** parameter.

### QT3REQIO

The work station I/O program, QT3REQIO, is used. This value is used to break the trace data into work station transactions.

*name* Specify the name of the program that ends a transaction. This allows reporting on non-work station transactions, such as communications lines.

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---

## Transaction starting program (STRTNS)

Specifies the program that signifies the start of a transaction. A program name must also be specified for the **Transaction ending program (ENDTNS)** parameter.

### QWSGET

The work station input program, QWSGET, is used. This value is used to break the trace data into work station transactions.

*name* Specify the name of the program that starts a transaction.

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---

## Job name (JOB)

Specifies the job name to be used if submitting the job for batch processing.

Any value for this parameter is ignored if \*NONE is specified for the **Job description (JOBDD)** parameter.

**Note:** If JOBDD(\*NONE) is specified, job processing is performed interactively.

### PRTJOBTRC

The command name is used for the job name.

\*MBR The name selected for the performance data member in the **Member (MBR)** parameter is used.

*name* Specify the name to be used for any and all batch jobs.

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---

## Job description (JOBDD)

Specifies the job description used to submit the job for batch processing.

### Single values

#### **\*NONE**

A batch job is not submitted; processing continues interactively while the user waits. The user's workstation is not available for other use during this time, which could be significant for long jobs.

### Qualifier 1: Job description

#### **QPFRJOBDD**

The IBM-supplied job description, QPFRJOBDD, is used.

*name* Specify the name of the job description to be used.

### Qualifier 2: Library

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

#### **\*CURLIB**

The current library for the job is used to locate the job description. If no current library entry exists in the library list, QGPL is used.

*name* Specify the library in which the job description is located.

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---

## Examples

```
PRTJOBTRC LIB(MYLIB) RPTTYPE(*DETAIL)
```

This command produces a detail report using data saved in member QAJOBTRC of file QAPTTRCJ in library MYLIB.

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## Error messages

None

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## Print Lock Report (PRTLCKRPT)

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

Parameters  
Examples  
Error messages

The Print Lock Report (PRTLCKRPT) command produces a report that shows lock and seize conflicts that occur during system operation. The report is produced from the resource management trace data collected by the Start Performance Trace (STRPFTRC) command and formatted by the Print Transaction Report (PRTTNSRPT) command. This information can be used to determine if jobs are delayed during processing because of unsatisfied lock requests or internal machine seizes (these conditions are also known as waits).

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---

### Parameters

Keyword	Description	Choices	Notes
MBR	Data base file member	<i>Name</i>	Required, Positional 1
LIB	Data base file library	<i>Name</i> , <u>QPFRRDATA</u>	Optional, Positional 2
TITLE	Report title	<i>Character value</i> , *MBRTXT, *BLANK	Optional, Positional 3
RPTTYPE	Report type	*SUM, *TOD, *RQS, *HLD, *OBJ, *ALL	Optional
FIRST	First run for current data	*YES, *NO	Optional
PERIOD	Time period for report	<i>Element list</i>	Optional
	Element 1:	<i>Element list</i>	
	Element 1: Starting time	<i>Time</i> , *FIRST	
	Element 2:	<i>Element list</i>	
	Element 1: Ending time	<i>Time</i> , *LAST	
MINWAIT	Minimum wait time	0-30000, <u>500</u>	Optional
JOB	Job name	<i>Name</i> , <u>PRTLCKRPT</u> , *MBR	Optional
JOBID	Job description	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Job description	<i>Name</i> , <u>QPFRRJOBID</u>	
	Qualifier 2: Library	<i>Name</i> , *LIBL, *CURLIB	

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### Data base file member (MBR)

Specifies the member in file QAPMDMPT in which the resource management trace data is collected by the Start Performance Trace (STRPFTRC) command.

This is a required parameter.

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---

## Data base file library (LIB)

Specifies the library where the data is saved.

### QPFRDATA

The IBM-supplied performance data library, QPFRDATA, is used.

*name* Specify the name of the library where the data is collected.

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---

## Report title (TITLE)

Specifies the title for the report that is created.

### \*MBRTXT

The text of the database member, which contains the performance data, is the report title.

### \*BLANK

No title is specified.

### *character-value*

Specify a title of up to 50 characters, enclosed in apostrophes.

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---

## Report type (RPTTYPE)

Specifies the type of reports that are produced.

\*SUM The report includes only a summary of the seize/lock data.

\*TOD The report includes detail sorted by time of day, followed by a summary.

\*HLD The report includes detail sorted by name of the holding job and time of day, followed by a summary.

\*RQS The report includes detail sorted by name of the requesting job and time of day, followed by a summary.

\*OBJ The report includes detail sorted by name of the object and time of day, followed by a summary.

\*ALL Four reports are produced. The reports include \*TOD, \*HLD, \*RQS, and \*OBJ, followed by a summary.

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---

## First run for current data (FIRST)

Specifies whether the Print Lock Report (PRTLCKRPT) command was run since the last set of resource management trace data was collected.

\*YES This is the first time the Print Lock Report (PRTLCKRPT) command was run for the data. The data is reformatted and written to member QAPTLCKD of file QAPTLCKD. The report is created from this preprocessed data.

\*NO The Print Lock Report (PRTLCKRPT) command is run for this set of data. The preprocessing pass is not done.

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## Time period for report (PERIOD)

Specifies the period of time on which to report.

### Element 1: Starting time

#### Element 1: Starting time

##### \*FIRST

The report includes records starting from the first record.

*time* Specify the time of the first data record to include in the report. The time is specified as 4 or 6 digits (hhmm or hhmmss), where **hh** is the hour, **mm** is the minute, and **ss** is the second.

The time can be specified with or without a time separator:

- Without a time separator, specify a string of 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds.
- With a time separator, specify a string of 5 or 8 digits where the time separator specified for your job is used to separate the hours, minutes, and seconds. If you enter this command from the command line, the string must be enclosed in apostrophes. If a time separator other than the separator specified for your job is used, this command will fail.

### Element 2: Ending time

#### Element 1: Ending time

Records created after this time are not included in either the detail or summary listing.

##### \*LAST

The report includes records through the last record.

*time* Specify the time of the last record to include in the report. Use the same time format as used for the starting time.

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---

## Minimum wait time (MINWAIT)

Specifies the minimum wait time for a seize/lock record that is included in the report. Records with shorter wait times are not included in either the detail or summary listing.

500 The default value of 500 milliseconds (half a second) is used. Records with shorter wait times are of little interest when determining the source of performance problems.

*0-30000*

Specify the minimum wait time, in milliseconds. The maximum wait time is 30 seconds.

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---

## Job name (JOB)

Specifies the job name to be used if submitting the job for batch processing.

Any value for this parameter is ignored if \*NONE is specified for the **Job description (JOB D)** parameter.

**Note:** If JOB D(\*NONE) is specified, job processing is performed interactively.

### PRTLCKRPT

The command name is used for the job name.

\***MBR** The name selected for the performance data member in the **Member (MBR)** parameter is used.

*name* Specify the name to be used for any and all batch jobs.

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---

## Job description (JOB D)

Specifies the job description used to submit the job for batch processing.

### Single values

#### \*NONE

A batch job is not submitted; processing continues interactively while the user waits. The user's workstation is not available for other use during this time, which could be significant for long jobs.

### Qualifier 1: Job description

#### QPFRJOB D

The IBM-supplied job description, QPFRJOB D, is used.

*name* Specify the name of the job description to be used.

### Qualifier 2: Library

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

#### \*CURLIB

The current library for the job is used to locate the job description. If no current library entry exists in the library list, QGPL is used.

*name* Specify the library in which the job description is located.

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---

## Examples

### Example 1: Producing a Summary Report

```
PRTLCKRPT MBR(RESTRC)
```

This command produces a summary report from the performance data saved in member RESTRC of QPFRDATA/QAPMDMPT from a prior run of the Start Performance Trace (STRPFRTRC) and Print Transaction Report (PRTTNSRPT) commands.

### Example 2: Including a Detail Listing Sorted By Time

PRTLCKRPT MBR(RESTRC) RPTTYPE(\*TOD)

This command produces the same report as the previous example, except that it includes a detail listing sorted by the time in which the lock/seize conflicts occurred.

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## **Error messages**

### **\*ESCAPE Messages**

#### **PFR5511**

Cannot access resource management trace data.

#### **PFR5512**

Cannot access processed seize or lock conflict data.

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# Print Pool Report (PRTPOLRPT)

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

Parameters  
 Examples  
 Error messages

The Print Pool Report (PRTPOLRPT) command produces a pool-oriented report from the performance data collected by Collection Services from the Operations Navigator interface. The report is written to the printer file QPPTITVP. The two sections that comprise the report are subsystem activity and workload activity of storage pools. The information is presented according to interval order. Jobs may be selectively included in the report or excluded from the report, based on a variety of job details and interval times.

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## Parameters

Keyword	Description	Choices	Notes
MBR	Member	Name	Required, Positional 1
TITLE	Report title	Character value, *MBRTXT, *BLANK	Optional, Positional 3
PERIOD	Time period for report	Element list	Optional
	Element 1:	Element list	
	Element 1: Starting time	Time, *FIRST, *SELECT	
	Element 2: Starting date	Date, *FIRST	
	Element 2:	Element list	
	Element 1: Ending time	Time, *LAST	
	Element 2: Ending date	Date, *LAST	
LIB	Library	Name, QPFRDATA	Optional, Positional 2
SLTJOB	Select jobs	Single values: *ALL Other values (up to 50 repetitions): Qualified job name	Optional
	Qualifier 1: Select jobs	Generic name, name	
	Qualifier 2: User	Generic name, name	
	Qualifier 3: Number	000000-999999	
OMTJOB	Omit jobs	Single values: *NONE Other values (up to 50 repetitions): Qualified job name	Optional
	Qualifier 1: Omit jobs	Generic name, name	
	Qualifier 2: User	Generic name, name	
	Qualifier 3: Number	000000-999999	
SLTUSRID	Select users	Single values: *ALL Other values (up to 50 repetitions): Generic name, name	Optional
OMTUSRID	Omit users	Single values: *NONE Other values (up to 50 repetitions): Generic name, name	Optional
SLTPOOLS	Select pools	Single values: *ALL Other values (up to 64 repetitions): 1-64	Optional
OMTPOOLS	Omit pools	Single values: *NONE Other values (up to 64 repetitions): 1-64	Optional

Keyword	Description	Choices	Notes
SLTSBS	Select subsystems	Single values: * <b>ALL</b> Other values (up to 50 repetitions): <i>Name</i>	Optional
OMTSBS	Omit subsystems	Single values: * <b>NONE</b> Other values (up to 50 repetitions): <i>Name</i>	Optional
SLTLNE	Select communications lines	Single values: * <b>ALL</b> Other values (up to 50 repetitions): <i>Name</i>	Optional
OMTLNE	Omit communications lines	Single values: * <b>NONE</b> Other values (up to 50 repetitions): <i>Name</i>	Optional
SLTCTL	Select control units	Single values: * <b>ALL</b> Other values (up to 50 repetitions): <i>Name</i>	Optional
OMTCTL	Omit control units	Single values: * <b>NONE</b> Other values (up to 50 repetitions): <i>Name</i>	Optional
SLFCNARA	Select functional areas	Single values: * <b>ALL</b> Other values (up to 50 repetitions): <i>Character value</i>	Optional
OMFCNARA	Omit functional areas	Single values: * <b>NONE</b> Other values (up to 50 repetitions): <i>Character value</i>	Optional
JOB	Job name	<i>Name</i> , <b>PRTPOLRPT</b> , * <b>MBR</b>	Optional
JOB	Job description	Single values: * <b>NONE</b> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Job description	<i>Name</i> , <b>QFJRJOB</b>	
	Qualifier 2: Library	<i>Name</i> , * <b>LIBL</b> , * <b>CURLIB</b>	

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## Member (MBR)

Specifies the performance data member used. This name should correspond to the member name specified on the TOMBR parameter of the Create Performance Data (CRTPFRDTA) command.

This is a required parameter.

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---

## Report title (TITLE)

Specifies the title for the report that is created.

### \*MBRTXT

The text of the database member, which contains the performance data, is the report title.

### \*BLANK

No title is specified.

### *character-value*

Specify a title of up to 50 characters, enclosed in apostrophes.

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---

## Time period for report (PERIOD)

Specifies the period of time on which to report. The parameter consists of four elements: a starting time and date, and an ending time and date. Data collected prior to the starting time on the starting date and after the ending time on the ending date is not included in the report.

The symbol \*N can be used to designate the default value for any of the four elements.

### Element 1: Starting time and date

#### Element 1: Starting time

##### \*FIRST

Data records starting from the beginning of the first day (00:00:00) of the collection period are included.

##### \*SELECT

An interval selection screen is displayed from which you can select one or more intervals for inclusion. This value is valid only in the interactive environment. If this value is used, the remaining values of this parameter (starting time and date and ending time and date) are ignored.

*time* Specify the time of the first data record to include in the report, using the format, **hhmm** or **hhmmss**, where **hh** is the hours, **mm** is the minutes, and **ss** is the seconds.

The time is specified in 24-hour format with or without a time separator:

- Without a time separator, specify a string of 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds.
- With a time separator, specify a string of 5 or 8 digits where the time separator specified for your job is used to separate the hours, minutes, and seconds. If you enter this command from the command line, the string must be enclosed in apostrophes. If a time separator other than the separator specified for your job is used, this command will fail.

#### Element 2: Starting date

##### \*FIRST

Data records starting from the first day of the collection period are included in the report.

*date* Specify the date of the first data record to include in the report. The date must be entered in the format specified by the system value QDATFMT, and if separators are used, as specified by the system value QDATSEP.

### Element 2: Ending time and date

#### Element 1: Ending time

##### \*LAST

Data records through the end of the day (23:59:59) are included in the report.

*time* Specify the time of the last data record to include in the report. Use the same format used for the starting time.

#### Element 2: Ending date

### \*LAST

Data records through the last day of the collection period are included in the report.

*date* Specify the date of the last record to include in the report. The date must be entered in the format specified by the system value QDATFMT, and if separators are used, as specified by the system value QDATSEP.

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---

## Library (LIB)

Specifies the library where the performance data is located.

### QPFRDATA

The performance data files are located in the IBM-supplied performance data library, QPFRDATA.

*name* Specify the name of the library where the performance database files are located.

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---

## Select jobs (SLTJOB)

Specifies a list of up to 50 jobs to be included in the report. Only specified jobs are included in the report.

Individual jobs are identified by a "job identifier". A job identifier is either the special value \*ALL or a qualified name that consists of up to three qualifiers: a job number, a user name, and a job name. Job identifiers are written in the form, job-number/user-name/job-name, but all three qualifiers do not have to be specified. The symbol \*N can be used as a placeholder for up to two of the qualifiers of the job identifier.

**Note:** This parameter and the **Omit jobs (OMTJOB)** parameter are mutually exclusive.

### Single values

\*ALL All jobs in the collected data are included, unless excluded by another selection value.

### Other values (up to 50 repetitions)

#### Qualifier 1: Job name

##### *generic-name*

Specify the generic job name of the jobs to select.

**Note:** A generic name is a character string that contains 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 name, the system assumes it to be the complete object name.

*name* Specify the job name of the job to select. Because jobs may have identical job names, this value may not identify a specific job.

#### Qualifier 2: User

*name* Specify the user name of the jobs to select. Because jobs may have identical user names, this value may not identify a specific job.

### Qualifier 3: Number

000000-999999

Specify the 6-digit number of a job to select. All six digits must be specified, including zeros.

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---

## Omit jobs (OMTJOB)

Specifies a list of up to 50 jobs to be omitted from the report.

Individual jobs are identified by a "job identifier." A job identifier is either the special value \*NONE or a qualified name that consists of up to three qualifiers: a job number, a user name, and a job name. Job identifiers are written in the form, job-number/user-name/job-name, but all three qualifiers do not have to be specified. The symbol \*N can be used as a placeholder for up to two of the qualifiers of the job identifier.

**Note:** This parameter and the **Select jobs (SLTJOB)** parameter are mutually exclusive.

### Single values

\*NONE

Jobs are not excluded based on job identifier.

### Other values (up to 50 repetitions)

#### Qualifier 1: Job name

*generic-name*

Specify the generic job name of the jobs to omit.

**Note:** A generic name is a character string that contains 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 name, the system assumes it to be the complete object name.

*name* Specify the job name of the job to omit. Because jobs may have identical job names, this value may not identify a specific job.

#### Qualifier 2: User

*name* Specify the user name of the jobs to omit. Because jobs may have identical user names, this value may not identify a specific job.

#### Qualifier 3: Number

000000-999999

Specify the 6-digit number of a job to omit. All six digits must be specified, including zeros.

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---

## Select users (SLTUSRID)

Specifies a list of up to 50 user names to be included in the report. Only jobs with one of the specified user names are included in the report.

**Note:** This parameter and the **Omit users (OMTUSRID)** parameter are mutually exclusive.

### Single values

**\*ALL** All jobs with user names are included, unless excluded by another selection value.

### Other values (up to 50 repetitions)

#### *generic-name*

Specify the generic user name of the jobs to select.

**Note:** A generic name is a character string that contains 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 name, the system assumes it to be the complete object name.

*name* Specify the user name of the jobs to select. Because jobs may have identical user names, this value may not identify a specific job. SLTUSRID(user) is equivalent to SLTJOB(\*N/user/\*N).

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---

## Omit users (OMTUSRID)

Specifies a list of up to 50 user names to be omitted from the report.

**Note:** This parameter and the **Select users (SLTUSRID)** parameter are mutually exclusive.

### Single values

#### **\*NONE**

No jobs are excluded based on the user name.

### Other values (up to 50 repetitions)

#### *generic-name*

Specify the generic user name of the jobs to omit.

**Note:** A generic name is a character string that contains 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 name, the system assumes it to be the complete object name.

*name* Specify the user name of the jobs to omit. Because jobs may have identical user names, this value may not identify a specific job. OMTUSRID(user) is equivalent to OMTJOB(\*N/user/\*N).

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---

## Select pools (SLTPOOLS)

Specifies a list of up to 64 pools to be included in the report.

**Note:** This parameter and the **Omit pools (OMTPOOLS)** parameter are mutually exclusive.

### Single values

\*ALL Jobs that ran in all pools are included, unless excluded by another selection value.

### Other values (up to 64 repetitions)

*1-64* Specify the number of a pool to select.

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---

## Omit pools (OMTPOOLS)

Specifies a list of up to 64 pools to omit. Jobs that ran in any of the specified pools are excluded from the report.

**Note:** This parameter and the **Select pools (SLTPOOLS)** parameter are mutually exclusive.

### Single values

\*NONE Jobs are not excluded based on their pool.

### Other values (up to 64 repetitions)

*1-64* Specify the number of a pool to omit.

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---

## Select subsystems (SLTSBS)

Specifies a list of up to 50 subsystems to select. Only jobs that ran in one of the specified subsystems are included in the report.

**Note:** This parameter and the **Omit subsystems (OMTSBS)** parameter are mutually exclusive.

### Single values

\*ALL Jobs in all subsystems are included, unless excluded by another selection value.

### Other values (up to 50 repetitions)

*name* Specify the name of a subsystem to select.

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---

## Omit subsystems (OMTSBS)

Specifies a list of up to 50 subsystems to omit. Jobs that ran in any of the specified subsystems are excluded from the report.

**Note:** This parameter and the **Select subsystems (SLTSBS)** parameter are mutually exclusive.

### Single values

#### \*NONE

Jobs are not excluded based on their subsystem.

### Other values (up to 50 repetitions)

*name* Specify the name of a subsystem to omit.

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---

## Select communications lines (SLTLINE)

Specifies a list of up to 50 communications lines to select. Only jobs that use a remote device connected through one of the specified communications lines are included in the report.

**Note:** This parameter and the **Omit communications lines (OMTLINE)** parameter are mutually exclusive.

### Single values

\*ALL All jobs are included in the report, unless excluded by another selection value.

### Other values (up to 50 repetitions)

*name* Specify the name of a communications line to select. This excludes jobs using remote devices connected through other communications lines, even if the controllers to which those devices are attached are specified on the **Select control units (SLCTL)** parameter.

Top

---

## Omit communications lines (OMTLINE)

Specifies a list of up to 50 communications lines to omit. Jobs that use a remote device connected through any of the specified communications lines are excluded from the report.

**Note:** This parameter and the **Select communications lines (SLTLINE)** parameter are mutually exclusive.

### Single values

#### \*NONE

Jobs are not excluded from the report based on communications line.

### Other values (up to 50 repetitions)

*name* Specify the name of a communications line to omit.

Top

---

## Select control units (SLTCTL)

Specifies a list of up to 50 communications controllers to select. Only jobs that use a device connected to one of the specified controllers are included in the report.

**Note:** This parameter and the **Omit control units (OMTCTL)** parameter are mutually exclusive.

### Single values

**\*ALL** All jobs are included, unless excluded by another selection value.

### Other values (up to 50 repetitions)

*name* Specify the name of a communications controller to select.

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---

## Omit control units (OMTCTL)

Specifies a list of up to 50 communications controllers to omit. Jobs that use a device connected to any of the specified controllers are excluded from in the report.

**Note:** This parameter and the **Select control units (SLTCTL)** parameter are mutually exclusive.

### Single values

**\*NONE**  
Jobs are not excluded based on communications controllers.

### Other values (up to 50 repetitions)

*name* Specify the name of a communications controller to omit.

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---

## Select functional areas (SLTFCNARA)

Specifies a list of up to 50 functional areas to select. Only jobs and users identified in one of the functional areas are included in the report.

A functional area is a list of job names and/or user names previously defined by the user. More information on functional areas is in the Performance Tools for i5/OS book.

**Note:** This parameter and the **Omit functional areas (OMTFCNARA)** parameter are mutually exclusive.

### Single values

**\*ALL** All jobs are included in the report, unless excluded by another selection value.

### Other values (up to 50 repetitions)

*character-value*  
Specify the name of a functional area to select.

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---

## Omit functional areas (OMTFCNARA)

Specifies a list of up to 50 functional areas to omit. Jobs and users identified in any of the functional areas are excluded from the report.

A functional area is a list of job names and/or user names previously defined by the user. More information on functional areas is in the Performance Tools for i5/OS book.

**Note:** This parameter and the **Select functional areas (SLTFCNARA)** parameter are mutually exclusive.

### Single values

#### \*NONE

Jobs are not excluded from the report based on functional area.

### Other values (up to 50 repetitions)

#### *character-value*

Specify the name of a functional area to omit.

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---

## Job name (JOB)

Specifies the job name to be used if submitting the job for batch processing.

Any value for this parameter is ignored if \*NONE is specified for the **Job description (JOBBD)** parameter.

**Note:** If JOBBD(\*NONE) is specified, job processing is performed interactively.

#### PRTPOLRPT

The command name is used for the job name.

\*MBR The name selected for the performance data member in the **Member (MBR)** parameter is used.

*name* Specify the name to be used for any and all batch jobs.

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---

## Job description (JOBBD)

Specifies the job description used to submit the job for batch processing.

### Single values

#### \*NONE

A batch job is not submitted; processing continues interactively while the user waits. The user's workstation is not available for other use during this time, which could be significant for long jobs.

### Qualifier 1: Job description

#### QPFRJOBBD

The IBM-supplied job description, QPFRJOBBD, is used.

*name* Specify the name of the job description to be used.

### Qualifier 2: Library

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

**\*CURLIB**

The current library for the job is used to locate the job description. If no current library entry exists in the library list, QGPL is used.

*name* Specify the library in which the job description is located.

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---

## Examples

### Example 1: Printing a Report

```
PRTPOLRPT MBR(DTA071588A)
```

This command submits a batch job to print a report on all jobs in all intervals in the member DTA071588A of the performance data files in library QPFRDATA. The report title is taken from the text of that member.

### Example 2: Selecting Intervals to Include in Report

```
PRTPOLRPT MBR(DTA071588A) PERIOD(*SELECT)
```

This command submits a job to print a report from the same data, but first shows a display from which the user interactively selects the intervals to include.

### Example 3: Specifying Data Collection Time Period

```
PRTPOLRPT MBR(DTA071588A) PERIOD((2330)(0130))
```

This command submits a job to print a report on the data collected from 11:30 PM on the first day of collection through 1:30 AM on the last day of collection. However, if data collection started and ended on the same day, an error message is printed, because the specified ending date and time is before the specified starting date and time.

### Example 4: Specifying a User ID

```
PRTPOLRPT MBR(DTA071588A) SLTUSRID(D46*) JOBD(*NONE)
```

This command interactively prints a report for all jobs with a user ID starting with D46.

### Example 5: Specifying a User ID

```
PRTPOLRPT MBR(DTA071588A) SLTJOB(D46*/*N) JOBD(*NONE)
```

This command performs the same function as the previous example.

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---

## Error messages

### \*ESCAPE Messages

**PFR1010**

Cannot process request because of missing data.

**PFR3002**

Cannot print report because of missing data.

**PFR3004**

Incorrect measurement interval specified.

**PFR3006**

Measurement interval specified is not valid.

**PFR3101**

The SLTJOB and OMTJOB parameters are mutually exclusive.

**PFR3102**

SLTUSRID and OMTUSRID parameters cannot both be specified.

**PFR3103**

SLTPOOLS and OMTPOOLS parameters cannot both be specified.

**PFR3104**

SLTSBS and OMTSBS parameters cannot both be specified.

**PFR3105**

SLTLINE and OMTLINE parameters cannot both be specified.

**PFR3106**

SLTCTL and OMTCTL parameters cannot both be specified.

**PFR3107**

SLTFCNARA and OMTFCNARA parameters cannot both be specified.

**PFR3108**

SLTLOC and OMTLOC parameters cannot both be specified.

**PFR3111**

Functional area &1 does not exist.

**PFR5501**

Performance data file(s) are not upward compatible.

**PFR5502**

Performance data file(s) are not downward compatible.

**PFR9005**

YAXIS(\*TIME) must be specified.

**PFR9042**

SLTUSER and OMTUSER parameters cannot both be specified.

**PFR9048**

Cannot display graph because of missing data.

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# Print Resource Report (PRTRSCRPT)

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

Parameters  
 Examples  
 Error messages

The Print Resource Report (PRTRSCRPT) command produces a device resource usage report from the performance data collected by Collection Services from the Operations Navigator interface. The report, which is written to the printer file QPPTITVR, shows device resource information organized by time interval. Resources may be selected for inclusion in the report or exclusion from the report, based on interval times.

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## Parameters

Keyword	Description	Choices	Notes
MBR	Member	<i>Name</i>	Required, Positional 1
TITLE	Report title	<i>Character value, *MBRTXT, *BLANK</i>	Optional, Positional 3
PERIOD	Time period for report	<i>Element list</i>	Optional
	Element 1:	<i>Element list</i>	
	Element 1: Starting time	<i>Time, *FIRST, *SELECT</i>	
	Element 2: Starting date	<i>Date, *FIRST</i>	
	Element 2:	<i>Element list</i>	
	Element 1: Ending time	<i>Time, *LAST</i>	
	Element 2: Ending date	<i>Date, *LAST</i>	
LIB	Library	<i>Name, QPFRDATA</i>	Optional, Positional 2
TYPE	Type of information	Single values: <i>*ALL</i> Other values (up to 5 repetitions): <i>*DISK, *CMN, *IOP, *LCLWS, *RMTWS</i>	Optional
JOB	Job name	<i>Name, PRTRSCRPT, *MBR</i>	Optional
JOBID	Job description	Single values: <i>*NONE</i> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Job description	<i>Name, QPFRJOBID</i>	
	Qualifier 2: Library	<i>Name, *LIBL, *CURLIB</i>	

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## Member (MBR)

Specifies the performance data member used. This name should correspond to the member name specified on the TOMBR parameter of the Create Performance Data (CRTPFRDTA) command.

This is a required parameter.

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---

## Report title (TITLE)

Specifies the title for the report that is created.

### \*MBRTXT

The text of the database member, which contains the performance data, is the report title.

### \*BLANK

No title is specified.

### *character-value*

Specify a title of up to 50 characters, enclosed in apostrophes.

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---

## Time period for report (PERIOD)

Specifies the period of time on which to report. The parameter consists of four elements: a starting time and date, and an ending time and date. Data collected prior to the starting time on the starting date and after the ending time on the ending date is not included in the report.

The symbol \*N can be used to designate the default value for any of the four elements.

### Element 1: Starting time and date

#### Element 1: Starting time

##### \*FIRST

Data records starting from the beginning of the first day (00:00:00) of the collection period are included.

##### \*SELECT

An interval selection screen is displayed from which you can select one or more intervals for inclusion. This value is valid only in the interactive environment. If this value is used, the remaining values of this parameter (starting time and date and ending time and date) are ignored.

*time* Specify the time of the first data record to include in the report, using the format, **hhmm** or **hhmmss**, where **hh** is the hours, **mm** is the minutes, and **ss** is the seconds.

The time is specified in 24-hour format with or without a time separator:

- Without a time separator, specify a string of 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds.
- With a time separator, specify a string of 5 or 8 digits where the time separator specified for your job is used to separate the hours, minutes, and seconds. If you enter this command from the command line, the string must be enclosed in apostrophes. If a time separator other than the separator specified for your job is used, this command will fail.

#### Element 2: Starting date

##### \*FIRST

Data records starting from the first day of the collection period are included in the report.

*date* Specify the date of the first data record to include in the report. The date must be entered in the format specified by the system value QDATFMT, and if separators are used, as specified by the system value QDATSEP.

## Element 2: Ending time and date

### Element 1: Ending time

#### \*LAST

Data records through the end of the day (23:59:59) are included in the report.

*time* Specify the time of the last data record to include in the report. Use the same format used for the starting time.

### Element 2: Ending date

#### \*LAST

Data records through the last day of the collection period are included in the report.

*date* Specify the date of the last record to include in the report. The date must be entered in the format specified by the system value QDATFMT, and if separators are used, as specified by the system value QDATSEP.

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## Library (LIB)

Specifies the library where the performance data is located.

#### QPFRDATA

The performance data files are located in the IBM-supplied performance data library, QPFRDATA.

*name* Specify the name of the library where the performance database files are located.

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---

## Type of information (TYPE)

Specifies the sections of the report that you want to print.

\*ALL All sections of the report are printed.

#### \*DISK

Specifies that you want to print the Disk Activity section.

\*CMN Specifies that you want to print the Communications section.

\*IOP Specifies that you want to print the IOP Utilization section.

#### \*LCLWS

Specifies that you want to print the Local Work Stations section.

#### \*RMTWS

Specifies that you want to print the Remote Work Stations section.

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## Job name (JOB)

Specifies the job name to be used if submitting the job for batch processing.

Any value for this parameter is ignored if \*NONE is specified for the **Job description (JOB D)** parameter.

**Note:** If JOB D(\*NONE) is specified, job processing is performed interactively.

### PRTRSCRIPT

The command name is used for the job name.

\***MBR** The name selected for the performance data member in the **Member (MBR)** parameter is used.

*name* Specify the name to be used for any and all batch jobs.

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---

## Job description (JOB D)

Specifies the job description used to submit the job for batch processing.

### Single values

#### \*NONE

A batch job is not submitted; processing continues interactively while the user waits. The user's workstation is not available for other use during this time, which could be significant for long jobs.

### Qualifier 1: Job description

#### QPFRJOB D

The IBM-supplied job description, QPFRJOB D, is used.

*name* Specify the name of the job description to be used.

### Qualifier 2: Library

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

#### \***CURLIB**

The current library for the job is used to locate the job description. If no current library entry exists in the library list, QGPL is used.

*name* Specify the library in which the job description is located.

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---

## Examples

### Example 1: Printing a Report

```
PRTRSCRIPT MBR(DTA071588A)
```

This command submits a batch job to print a report on all resources in all intervals in the member DTA071588A of performance data files in library QPFRDATA. The report title is taken from the text of that member.

### Example 2: Selecting Intervals to Include in Report

```
PRTRSCRIPT MBR(DTA071588A) PERIOD(*SELECT)
```

This command submits a job to print a report from the same data, but first shows a screen from which the user interactively select which intervals to include.

### Example 3: Specifying Data Collection Time Period

```
PRTRSCRIPT MBR(DTA071588A) PERIOD((2330)(0130))
```

This command submits a job to print a report on the data collected from 11:30 PM on the first day of collection through 1:30 AM on the last day of collection.

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---

## Error messages

### \*ESCAPE Messages

#### PFR1010

Cannot process request because of missing data.

#### PFR3002

Cannot print report because of missing data.

#### PFR3004

Incorrect measurement interval specified.

#### PFR3006

Measurement interval specified is not valid.

#### PFR3101

The SLTJOB and OMTJOB parameters are mutually exclusive.

#### PFR3102

SLTUSRID and OMTUSRID parameters cannot both be specified.

#### PFR3103

SLTPOOLS and OMTPOOLS parameters cannot both be specified.

#### PFR3104

SLTSBS and OMTSBS parameters cannot both be specified.

#### PFR3105

SLTLINE and OMTLINE parameters cannot both be specified.

#### PFR3106

SLTCTL and OMTCTL parameters cannot both be specified.

#### PFR3107

SLTFCNARA and OMTFCNARA parameters cannot both be specified.

#### PFR3108

SLTLOC and OMTLOC parameters cannot both be specified.

#### PFR3111

Functional area &1 does not exist.

#### PFR5501

Performance data file(s) are not upward compatible.

**PFR5502**

Performance data file(s) are not downward compatible.

**PFR9005**

YAXIS(\*TIME) must be specified.

**PFR9042**

SLTUSER and OMTUSER parameters cannot both be specified.

**PFR9048**

Cannot display graph because of missing data.

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# Print System Report (PRTSYSRPT)

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

Parameters  
 Examples  
 Error messages

The Print System Report (PRTSYSRPT) command generates and prints a system operation overview report from the performance data collected by Collection Services. The report is written to the printer file QPPTSYSR. The system workload, resource utilization, resource utilization expansion, storage pool utilization, disk utilization, communications summary, TCP/IP summary, HTTP server summary, and cross partitions summary are presented in the report.

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## Parameters

Keyword	Description	Choices	Notes
MBR	Member	<i>Name</i>	Required, Positional 1
TITLE	Report title	<i>Character value, *MBR</i>	Optional, Positional 3
PERIOD	Time period for report	<i>Element list</i>	Optional
	Element 1:	<i>Element list</i>	
	Element 1: Starting time	<i>Time, *FIRST, *SELECT</i>	
	Element 2: Starting date	<i>Date, *FIRST</i>	
	Element 2:	<i>Element list</i>	
	Element 1: Ending time	<i>Time, *LAST</i>	
	Element 2: Ending date	<i>Date, *LAST</i>	
LIB	Library	<i>Name, QPFRDATA</i>	Optional, Positional 2
TYPE	Type of information	Single values: <i>*ALL</i> Other values (up to 9 repetitions): <i>*WORKLOAD, *RSC, *RSCEXPN, *POOL, *DISK, *CMN, *TCPIP, *HTTP, *LPAR</i>	Optional
SLTJOB	Select jobs	Single values: <i>*ALL</i> Other values (up to 50 repetitions): <i>Qualified job name</i>	Optional
	Qualifier 1: Select jobs	<i>Generic name, name</i>	
	Qualifier 2: User	<i>Name</i>	
	Qualifier 3: Number	000000-999999	
OMTJOB	Omit jobs	Single values: <i>*NONE</i> Other values (up to 50 repetitions): <i>Qualified job name</i>	Optional
	Qualifier 1: Omit jobs	<i>Generic name, name</i>	
	Qualifier 2: User	<i>Name</i>	
	Qualifier 3: Number	000000-999999	
SLTUSRID	Select users	Single values: <i>*ALL</i> Other values (up to 50 repetitions): <i>Generic name, name</i>	Optional
OMTUSRID	Omit users	Single values: <i>*NONE</i> Other values (up to 50 repetitions): <i>Generic name, name</i>	Optional
SLTPOOLS	Select pools	Single values: <i>*ALL</i> Other values (up to 64 repetitions): 1-64	Optional

Keyword	Description	Choices	Notes
OMTPOOLS	Omit pools	Single values: * <b>NONE</b> Other values (up to 64 repetitions): 1-64	Optional
SLTSBS	Select subsystems	Single values: * <b>ALL</b> Other values (up to 50 repetitions): <i>Name</i>	Optional
OMTSBS	Omit subsystems	Single values: * <b>NONE</b> Other values (up to 50 repetitions): <i>Name</i>	Optional
SLTLINE	Select communications lines	Single values: * <b>ALL</b> Other values (up to 50 repetitions): <i>Name</i>	Optional
OMTLINE	Omit communications lines	Single values: * <b>NONE</b> Other values (up to 50 repetitions): <i>Name</i>	Optional
SLTCTL	Select control units	Single values: * <b>ALL</b> Other values (up to 50 repetitions): <i>Name</i>	Optional
OMTCTL	Omit control units	Single values: * <b>NONE</b> Other values (up to 50 repetitions): <i>Name</i>	Optional
SLFCNARA	Select functional areas	Single values: * <b>ALL</b> Other values (up to 50 repetitions): <i>Character value</i>	Optional
OMFCNARA	Omit functional areas	Single values: * <b>NONE</b> Other values (up to 50 repetitions): <i>Character value</i>	Optional
JOB	Job name	<i>Name</i> , <b>PRTSYSRPT</b> , * <b>MBR</b>	Optional
JOB	Job description	Single values: * <b>NONE</b> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Job description	<i>Name</i> , <b>QPRJOB</b>	
	Qualifier 2: Library	<i>Name</i> , * <b>LIBL</b> , * <b>CURLIB</b>	

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## Member (MBR)

Specifies the performance data member used. This name should correspond to the member name specified on the TOMBR parameter of the Create Performance Data (CRTPFRDTA) command.

This is a required parameter.

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## Report title (TITLE)

Specifies the title for the report that is created.

\***MBR** The text of the database member, which contains the performance data, is the report title.

### *character-value*

Specify the title you want on your report with up to 50 characters of text, enclosed in apostrophes.

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## Time period for report (PERIOD)

Specifies the period of time on which to report. The parameter consists of four elements: a starting time and date, and an ending time and date. Data collected prior to the starting time on the starting date and after the ending time on the ending date is not included in the report.

The symbol \*N can be used to designate the default value for any of the four elements.

### Element 1: Starting time and date

#### Element 1: Starting time

##### \*FIRST

Data records starting from the beginning of the first day (00:00:00) of the collection period are included.

##### \*SELECT

An interval selection screen is displayed from which you can select one or more intervals for inclusion. This value is valid only in the interactive environment. If this value is used, the remaining values of this parameter (starting time and date and ending time and date) are ignored.

*time* Specify the time of the first data record to include in the report, using the format, **hhmm** or **hhmmss**, where **hh** is the hours, **mm** is the minutes, and **ss** is the seconds.

The time is specified in 24-hour format with or without a time separator:

- Without a time separator, specify a string of 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds.
- With a time separator, specify a string of 5 or 8 digits where the time separator specified for your job is used to separate the hours, minutes, and seconds. If you enter this command from the command line, the string must be enclosed in apostrophes. If a time separator other than the separator specified for your job is used, this command will fail.

#### Element 2: Starting date

##### \*FIRST

Data records starting from the first day of the collection period are included in the report.

*date* Specify the date of the first data record to include in the report. The date must be entered in the format specified by the system value QDATFMT, and if separators are used, as specified by the system value QDATSEP.

### Element 2: Ending time and date

#### Element 1: Ending time

##### \*LAST

Data records through the end of the day (23:59:59) are included in the report.

*time* Specify the time of the last data record to include in the report. Use the same format used for the starting time.

#### Element 2: Ending date

**\*LAST**

Data records through the last day of the collection period are included in the report.

*date* Specify the date of the last record to include in the report. The date must be entered in the format specified by the system value QDATFMT, and if separators are used, as specified by the system value QDATSEP.

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## Library (LIB)

Specifies the library where the performance data is located.

**QPFRDATA**

The performance data files are located in the IBM-supplied performance data library, QPFRDATA.

*name* Specify the name of the library where the performance database files are located.

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---

## Type of information (TYPE)

Specifies the sections of the report that you want to print.

### Single values

**\*ALL** All sections of the report are printed.

### Other values (up to 9 repetitions)

**\*WORKLOAD**

Print the Workload section.

**\*RSC** Print the Resource Utilization section.

**\*RSCEXP**

Print the Resource Utilization Expansion section.

**\*POOL**

Print the Storage Pool Utilization section.

**\*DISK**

Print the Disk Utilization section.

**\*CMN** Print the Communication Summary section. This section shows data about IOP, protocol, line utilization, active devices, transactions, response times and bytes received/transmitted.

**\*TCPIP**

Print the TCP/IP Summary section. This section includes additional data for TCP/IP protocols, such as packets received/transmitted, MTU sizes, etc.

**\*HTTP**

Print the HTTP Server Summary section. This section includes statistics for HTTP Server (powered by Apache).

**\*LPAR**

Print the Cross Partitions Summary section. This section includes statistics for the logical partitions recorded in the QAPMLPAR file. If no partition information is available in file QAPMLPAR, only the i5/OS collecting partition (the partition running Collection Services) will be reported in this section.

---

## Select jobs (SLTJOB)

Specifies a list of up to 50 jobs to be included in the report. Only specified jobs are included in the report.

Individual jobs are identified by a "job identifier." A job identifier is either the special value \*ALL or a qualified name that consists of up to three qualifiers: a job number, a user name, and a job name. Job identifiers are written in the form, job-number/user-name/job-name, but all three qualifiers do not have to be specified. The symbol \*N can be used as a placeholder for up to two of the qualifiers of the job identifier.

**Note:** This parameter and the **Omit jobs (OMTJOB)** parameter are mutually exclusive.

### Single values

**\*ALL** All jobs in the collected data are included, unless excluded by another selection value.

### Other values (up to 50 repetitions)

#### Element 1: Job name

##### Qualifier 1: Job name

###### *generic-name*

Specify the generic job name of the jobs to select.

**Note:** A generic name is a character string that contains 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 name, the system assumes it to be the complete object name.

*name* Specify the job name of the job to select. Because jobs may have identical job names, this value may not identify a specific job.

##### Qualifier 2: User

*name* Specify the user name of the jobs to select. Because jobs may have identical user names, this value may not identify a specific job.

##### Qualifier 3: Number

###### *000000-999999*

Specify the 6-digit number of a job to select. All six digits must be specified, including zeros.

#### Element 2: Thread

##### Element 1: Thread

**\*ALL** All threads are included, unless excluded by some other selection criterion.

### *character-value*

Specify the thread identifier to select. Because some jobs can have identical thread identifiers, this value may not identify a specific job.

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---

## Omit jobs (OMTJOB)

Specifies a list of up to 50 jobs to be omitted from the report.

Individual jobs are identified by a "job identifier." A job identifier is either the special value \*NONE or a qualified name that consists of up to three qualifiers: a job number, a user name, and a job name. Job identifiers are written in the form, job-number/user-name/job-name, but all three qualifiers do not have to be specified. The symbol \*N can be used as a placeholder for up to two of the qualifiers of the job identifier.

**Note:** This parameter and the **Select jobs (SLTJOB)** parameter are mutually exclusive.

### Single values

#### \*NONE

Jobs are not excluded based on job identifier.

### Other values (up to 50 repetitions)

#### Element 1: Job name

##### Qualifier 1: Job name

###### *generic-name*

Specify the generic job name of the jobs to omit.

**Note:** A generic name is a character string that contains 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 name, the system assumes it to be the complete object name.

*name* Specify the job name of the job to omit. Because jobs may have identical job names, this value may not identify a specific job.

##### Qualifier 2: User

*name* Specify the user name of the jobs to omit. Because jobs may have identical user names, this value may not identify a specific job.

##### Qualifier 3: Number

###### *000000-999999*

Specify the 6-digit number of a job to omit. All six digits must be specified, including zeros.

## Element 2: Thread

### Element 1: Thread

**\*ALL** All threads are excluded, unless included by some other selection criterion.

#### *character-value*

Specify the thread identifier to omit. Because some jobs can have identical thread identifiers, this value may not identify a specific job.

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---

## Select users (SLTUSRID)

Specifies a list of up to 50 user names to be included in the report. Only jobs with one of the specified user names are included in the report.

**Note:** This parameter and the **Omit users (OMTUSRID)** parameter are mutually exclusive.

### Single values

**\*ALL** All jobs with user names are included, unless excluded by another selection value.

### Other values (up to 50 repetitions)

#### *generic-name*

Specify the generic user name of the jobs to select.

**Note:** A generic name is a character string that contains 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 name, the system assumes it to be the complete object name.

**name** Specify the user name of the jobs to select. Because jobs may have identical user names, this value may not identify a specific job. SLTUSRID(user) is equivalent to SLTJOB(\*N/user/\*N).

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---

## Omit users (OMTUSRID)

Specifies a list of up to 50 user names to be omitted from the report.

**Note:** This parameter and the **Select users (SLTUSRID)** parameter are mutually exclusive.

### Single values

#### **\*NONE**

No jobs are excluded based on the user name.

### Other values (up to 50 repetitions)

#### *generic-name*

Specify the generic user name of the jobs to omit.

**Note:** A generic name is a character string that contains 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 name, the system assumes it to be the complete object name.

*name* Specify the user name of the jobs to omit. Because jobs may have identical user names, this value may not identify a specific job. OMTUSRID(user) is equivalent to OMTJOB(\*N/user/\*N).

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---

## Select pools (SLTPOOLS)

Specifies a list of up to 64 pools to be included in the report.

**Note:** This parameter and the **Omit pools (OMTPOOLS)** parameter are mutually exclusive.

### Single values

**\*ALL** Jobs that ran in all pools are included, unless excluded by another selection value.

### Other values (up to 64 repetitions)

**1-64** Specify the number of a pool to select.

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---

## Omit pools (OMTPOOLS)

Specifies a list of up to 64 pools to omit. Jobs that ran in any of the specified pools are excluded from the report.

**Note:** This parameter and the **Select pools (SLTPOOLS)** parameter are mutually exclusive.

### Single values

**\*NONE**  
Jobs are not excluded based on their pool.

### Other values (up to 64 repetitions)

**1-64** Specify the number of a pool to omit.

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---

## Select subsystems (SLTSBS)

Specifies a list of up to 50 subsystems to select. Only jobs that ran in one of the specified subsystems are included in the report.

**Note:** This parameter and the **Omit subsystems (OMTSBS)** parameter are mutually exclusive.

### Single values

**\*ALL** Jobs in all subsystems are included, unless excluded by another selection value.

### Other values (up to 50 repetitions)

*name* Specify the name of a subsystem to select.

---

## Omit subsystems (OMTSBS)

Specifies a list of up to 50 subsystems to omit. Jobs that ran in any of the specified subsystems are excluded from the report.

**Note:** This parameter and the **Select subsystems (SLTSBS)** parameter are mutually exclusive.

### Single values

#### \*NONE

Jobs are not excluded based on their subsystem.

### Other values (up to 50 repetitions)

*name* Specify the name of a subsystem to omit.

---

## Select communications lines (SLTLINE)

Specifies a list of up to 50 communications lines to select. Only jobs that use a remote device connected through one of the specified communications lines are included in the report.

**Note:** This parameter and the **Omit communications lines (OMTLINE)** parameter are mutually exclusive.

### Single values

\*ALL All jobs are included in the report, unless excluded by another selection value.

### Other values (up to 50 repetitions)

*name* Specify the name of a communications line to select. This excludes jobs using remote devices connected through other communications lines, even if the controllers to which those devices are attached are specified on the **Select control units (SLCTL)** parameter.

---

## Omit communications lines (OMTLINE)

Specifies a list of up to 50 communications lines to omit. Jobs that use a remote device connected through any of the specified communications lines are excluded from the report.

**Note:** This parameter and the **Select communications lines (SLTLINE)** parameter are mutually exclusive.

### Single values

#### \*NONE

Jobs are not excluded from the report based on communications line.

### Other values (up to 50 repetitions)

*name* Specify the name of a communications line to omit.

---

## Select control units (SLTCTL)

Specifies a list of up to 50 communications controllers to select. Only jobs that use a device connected to one of the specified controllers are included in the report.

**Note:** This parameter and the **Omit control units (OMTCTL)** parameter are mutually exclusive.

### Single values

**\*ALL** All jobs are included, unless excluded by another selection value.

### Other values (up to 50 repetitions)

*name* Specify the name of a communications controller to select.

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---

## Omit control units (OMTCTL)

Specifies a list of up to 50 communications controllers to omit. Jobs that use a device connected to any of the specified controllers are excluded from in the report.

**Note:** This parameter and the **Select control units (SLTCTL)** parameter are mutually exclusive.

### Single values

**\*NONE**  
Jobs are not excluded based on communications controllers.

### Other values (up to 50 repetitions)

*name* Specify the name of a communications controller to omit.

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## Select functional areas (SLTFCNARA)

Specifies a list of up to 50 functional areas to select. Only jobs and users identified in one of the functional areas are included in the report.

A functional area is a list of job names and/or user names previously defined by the user. More information on functional areas is in the Performance Tools for i5/OS book.

**Note:** This parameter and the **Omit functional areas (OMTFCNARA)** parameter are mutually exclusive.

### Single values

**\*ALL** All jobs are included in the report, unless excluded by another selection value.

### Other values (up to 50 repetitions)

*character-value*  
Specify the name of a functional area to select.

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---

## Omit functional areas (OMTFCNARA)

Specifies a list of up to 50 functional areas to omit. Jobs and users identified in any of the functional areas are excluded from the report.

A functional area is a list of job names and/or user names previously defined by the user. More information on functional areas is in the Performance Tools for i5/OS book.

**Note:** This parameter and the **Select functional areas (SLTFCNARA)** parameter are mutually exclusive.

### Single values

#### \*NONE

Jobs are not excluded from the report based on functional area.

### Other values (up to 50 repetitions)

#### *character-value*

Specify the name of a functional area to omit.

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---

## Job name (JOB)

Specifies the job name to be used if submitting the job for batch processing.

Any value for this parameter is ignored if \*NONE is specified for the **Job description (JOBDD)** parameter.

**Note:** If JOBDD(\*NONE) is specified, job processing is performed interactively.

#### PRTSYSRPT

The command name is used for the job name.

\***MBR** The name selected for the performance data member in the **Member (MBR)** parameter is used.

*name* Specify the name to be used for any and all batch jobs.

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---

## Job description (JOBDD)

Specifies the job description used to submit the job for batch processing.

### Single values

#### \*NONE

A batch job is not submitted; processing continues interactively while the user waits. The user's workstation is not available for other use during this time, which could be significant for long jobs.

### Qualifier 1: Job description

#### QPFRJOBDD

The IBM-supplied job description, QPFRJOBDD, is used.

*name* Specify the name of the job description to be used.

### Qualifier 2: Library

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

**\*CURLIB**

The current library for the job is used to locate the job description. If no current library entry exists in the library list, QGPL is used.

*name* Specify the library in which the job description is located.

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## Examples

### Example 1: Printing a Report

```
PRTSYSRPT MBR(APRIL18) TYPE(*ALL)
```

These commands print a complete system report for the performance data member APRIL18 in library QPFRDATA. The report title is the same as the text in the member.

### Example 2: Selecting Intervals to Include in Report

```
PRTSYSRPT MBR(NOV1) PERIOD(*SELECT)
          TITLE('Intervals with Highest Response Times')
```

This command prints a system report for the data member NOV1 in library QPFRDATA. The user is presented with the interval-selection screen, which allows sorting of the intervals according to various criteria and the selection of certain intervals to be included in the report. The title of the report is *Intervals with Highest Response Times*.

### Example 3: Selecting Sections to Include in Report

```
PRTSYSRPT MBR(NOV1) TYPE(*DSKUTL)
```

This command prints only the Disk Utilization section of the system report for the data member NOV1.

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## Error messages

None

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# Print Transaction Report (PRTTNSRPT)

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

Parameters  
 Examples  
 Error messages

The Print Transaction Report (PRTTNSRPT) command creates and prints performance reports that show detailed information about the transactions that occurred during the time that the performance data was collected. These reports require that trace data be collected by using the Start Performance Trace (STRPFTRC) command. Jobs may be selectively included or excluded from the reports, based on a variety of job details and interval times.

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## Parameters

Keyword	Description	Choices	Notes
MBR	Member	<i>Name</i>	Required, Positional 1
TITLE	Report title	<i>Character value</i> , <u>*BLANK</u>	Optional, Positional 3
RPTTYPE	Report type	Values (up to 5 repetitions): <u>*SUMMARY</u> , *TNSACT, *TRSIT, *FILE, *TRCDTA	Optional, Positional 4
PERIOD	Time period for report	<i>Element list</i>	Optional
	Element 1:	<i>Element list</i>	
	Element 1: Starting time	<i>Time</i> , <u>*FIRST</u>	
	Element 2:	<i>Element list</i>	
	Element 1: Ending time	<i>Time</i> , <u>*LAST</u>	
LIB	Library	<i>Name</i> , <u>QPFRDATA</u>	Optional, Positional 2
OPTION	Report option	Values (up to 7 repetitions): <u>*SS</u> , *SI, *OZ, *EV, *HV, *DI, *DQ, ' '	Optional
DETAIL	Report detail	<u>*JOB</u> , *THREAD	Optional
SLTJOB	Select jobs	Single values: <u>*ALL</u> Other values (up to 50 repetitions): <i>Element list</i>	Optional
	Element 1: Job name	<i>Character value</i>	
	Element 2:	<i>Element list</i>	
	Element 1: Thread	<i>Character value</i> , <u>*ALL</u>	
OMTJOB	Omit jobs	Single values: <u>*NONE</u> Other values (up to 50 repetitions): <i>Element list</i>	Optional
	Element 1: Job name	<i>Character value</i>	
	Element 2:	<i>Element list</i>	
	Element 1: Thread	<i>Character value</i> , <u>*ALL</u>	
SLTUSRID	Select users	Single values: <u>*ALL</u> Other values (up to 50 repetitions): <i>Generic name, name</i>	Optional
OMTUSRID	Omit users	Single values: <u>*NONE</u> Other values (up to 50 repetitions): <i>Generic name, name</i>	Optional

Keyword	Description	Choices	Notes
SLTPOOLS	Select pools	Single values: <b>*ALL</b> Other values (up to 64 repetitions): 1-64, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 1, 2, 3, 4, 5, 6, 7, 8, 9	Optional
OMTPOOLS	Omit pools	Single values: <b>*NONE</b> Other values (up to 64 repetitions): 1-64, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 1, 2, 3, 4, 5, 6, 7, 8, 9	Optional
SLTFCNARA	Select functional areas	Single values: <b>*ALL</b> Other values (up to 50 repetitions): <i>Character value</i>	Optional
OMTFCNARA	Omit functional areas	Single values: <b>*NONE</b> Other values (up to 50 repetitions): <i>Character value</i>	Optional
JOB	Job name	Name, <u>PRTTNSRPT</u> , *MBR	Optional
JOB	Job description	Single values: <b>*NONE</b> Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Job description	Name, <u>QFJRJOB</u>	
	Qualifier 2: Library	Name, <u>*LIBL</u> , *CURLIB	

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## Member (MBR)

Specifies the performance data member used. This name should correspond to the member name specified on the MBR parameter of the End Performance Trace (ENDPFRTRC) command.

This is a required parameter.

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## Report title (TITLE)

Specifies the title for the transaction report that is created.

### \*BLANK

No title is placed on the transaction report.

### *character-value*

Specify the title you want on your transaction report. Specify up to 50 characters enclosed in apostrophes.

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## Report type (RPTTYPE)

Specifies the type of transaction analysis report that is printed. A list of report types can be requested, so that both summary level and transaction detail reports can be requested at the same time. The transaction detail and transition detail reports are quite detailed, and should only be combined with a selection of specific jobs, users, and/or time intervals.

**\*SUMMARY**

A summary level report is printed.

**\*TNSACT**

The transaction detail report is printed.

**\*TRSIT**

The transition detail report is printed.

**\*FILE** Transaction summary, job summary, and job trace database file members are created. The summaries exist in the files QTRTSUM, QTRJSUM, and QTRJOB in the library specified for the **Library (LIB)** parameter. The member names are specified on the **Member (MBR)** parameter. The data in an existing member is replaced as a result of running this command. This value is used to build field level database files that are processed by user-defined programs and the Print Job Trace Report (PRTRCRPT) command.

**\*TRCDTA**

A database file version of the trace data file QAPMDMPT is created. The database file is named QTRDMPT and is a field-level database file which can be processed by user-defined programs.

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## Time period for report (PERIOD)

Specifies the times when transactions are reported.

### Element 1: Starting time

#### Element 1: Starting time

**\*FIRST**

Transactions are reported beginning with the first one recorded.

*time* Specify the time of the first transaction to include in the report. The time is specified as 4 or 6 digits (hhmm or hhmmss), where **hh** is the hour, **mm** is the minute, and **ss** is the second.

The time can be specified with or without a time separator:

- Without a time separator, specify a string of 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds.
- With a time separator, specify a string of 5 or 8 digits where the time separator specified for your job is used to separate the hours, minutes, and seconds. If you enter this command from the command line, the string must be enclosed in apostrophes. If a time separator other than the separator specified for your job is used, this command will fail.

### Element 2: Ending time

#### Element 1: Ending time

**\*LAST**

Transactions are reported ending with the last one recorded.

*time* Specify the time of the last transaction to include in the report. The time is specified as 4 or 6 digits (hhmm or hhmmss), where hh is the hour, mm is the minute, and ss is the second.

The time can be specified with or without a time separator:

- Without a time separator, specify a string of 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds.
- With a time separator, specify a string of 5 or 8 digits where the time separator specified for your job is used to separate the hours, minutes, and seconds. If you enter this command from the command line, the string must be enclosed in apostrophes. If a time separator other than the separator specified for your job is used, this command will fail.

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## Library (LIB)

Specifies the library where the performance data is located.

### QPFRDATA

The performance data files are located in the IBM-supplied performance data library, QPFRDATA.

*name* Specify the name of the library where the performance database files are located.

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---

## Report option (OPTION)

Specifies additional options that you apply to the transaction report.

- \*SS** An additional set of system summary reports are included. These reports are included if \*SUMMARY is specified on the **Report type (RPTTYPE)** parameter.
- \*SI** All jobs of type interactive are selected.
- \*OZ** All jobs that have zero transactions are omitted from the \*SUMMARY report.
- \*EV** Event wait is considered as a transaction boundary. This is useful in the analysis of communications jobs.
- \*HV** System Licensed Internal Code (SLIC) tasks are listed on the \*SUMMARY report.
- \*DI** The trace records for the display I/O transaction boundary are counted as transactions, instead of wait-to-active state transitions.
- \*DQ** The trace records for the data queue transaction boundary are counted as transactions, instead of wait-to-active state transitions.

Top

---

## Report detail (DETAIL)

Specifies whether you want the report to provide detailed job information at the job level or the thread level.

**\*JOB** Specifies that you want detailed information at the job level.

### **\*THREAD**

Specifies that you want detailed information at the thread level.

Top

---

## Select jobs (SLTJOB)

Specifies which jobs are included in the report. This allows the user to narrow the scope of the report to certain jobs through job selection.

The **Select jobs (SLTJOB)** parameter and **Omit jobs (OMTJOB)** parameter are mutually exclusive, so the default must be used for at least one of them.

### Single values

**\*ALL** All jobs are included in the report.

### Other values (up to 50 repetitions)

#### Element 1: Job name

##### *character-value*

Specify the jobs that are included in the report. A generic job name may be specified in the form, NAME\*.

**Note:** The job name is not a fully qualified job name. It is the ten-character job name portion of the qualified name. The job number is allowed on this parameter. You cannot mix the use of job name and job number, one or the other must be used on a given request.

#### Element 2: Thread

##### Element 1: Thread

**\*ALL** All threads are included, unless excluded by some other selection criterion.

##### *character-value*

Specify the thread identifier to select. Because multiple jobs can have identical thread identifiers, this value may not identify a specific job.

Top

---

## Omit jobs (OMTJOB)

Specifies which jobs are omitted from the report. This allows the user to narrow the scope of the report to certain jobs through job omission.

The **Select jobs (SLTJOB)** parameter and **Omit jobs (OMTJOB)** parameter are mutually exclusive, so the default must be used for at least one of them.

### Single values

**\*NONE**  
No jobs are excluded from the report.

### Other values (up to 50 repetitions)

#### Element 1: Job name

##### *character-value*

Specify the job names that are excluded from the report. A generic job name may be specified in the form, NAME\*.

**Note:** The job name is not a fully qualified job name. It is the ten-character job name portion of the qualified name. The job number is allowed on this parameter. You cannot mix the use of the job name and job number, one or the other must be used on a given request.

## Element 2: Thread

### Element 1: Thread

**\*ALL** All threads are excluded, unless included by some other selection criterion.

#### *character-value*

Specify the thread identifier to omit. Because multiple jobs can have identical thread identifiers, this value may not identify a specific job.

Top

---

## Select users (SLTUSRID)

Specifies a list of up to 50 user names to be included in the report. Only jobs with one of the specified user names are included in the report.

**Note:** This parameter and the **Omit users (OMTUSRID)** parameter are mutually exclusive.

### Single values

**\*ALL** All jobs with user names are included, unless excluded by another selection value.

### Other values (up to 50 repetitions)

#### *generic-name*

Specify the generic user name of the jobs to select.

**Note:** A generic name is a character string that contains 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 name, the system assumes it to be the complete object name.

**name** Specify the user name of the jobs to select. Because jobs may have identical user names, this value may not identify a specific job. SLTUSRID(user) is equivalent to SLTJOB(\*N/user/\*N).

Top

---

## Omit users (OMTUSRID)

Specifies a list of up to 50 user names to be omitted from the report.

**Note:** This parameter and the **Select users (SLTUSRID)** parameter are mutually exclusive.

### Single values

#### **\*NONE**

No jobs are excluded based on the user name.

### Other values (up to 50 repetitions)

*generic-name*

Specify the generic user name of the jobs to omit.

**Note:** A generic name is a character string that contains 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 name, the system assumes it to be the complete object name.

*name* Specify the user name of the jobs to omit. Because jobs may have identical user names, this value may not identify a specific job. OMTUSRID(user) is equivalent to OMTJOB(\*N/user/\*N).

Top

---

## Select pools (SLTPOOLS)

Specifies a list of up to 64 pools to be included in the report.

**Note:** This parameter and the **Omit pools (OMTPOOLS)** parameter are mutually exclusive.

### Single values

\*ALL Jobs that ran in all pools are included, unless excluded by another selection value.

### Other values (up to 64 repetitions)

*1-64* Specify the number of a pool to select.

Top

---

## Omit pools (OMTPOOLS)

Specifies a list of up to 64 pools to omit. Jobs that ran in any of the specified pools are excluded from the report.

**Note:** This parameter and the **Select pools (SLTPOOLS)** parameter are mutually exclusive.

### Single values

\*NONE  
Jobs are not excluded based on their pool.

### Other values (up to 64 repetitions)

*1-64* Specify the number of a pool to omit.

Top

---

## Select functional areas (SLTFCNARA)

Specifies a list of up to 50 functional areas to select. Only jobs and users identified in one of the functional areas are included in the report.

A functional area is a list of job names and/or user names previously defined by the user. More information on functional areas is in the Performance Tools for i5/OS book.

**Note:** This parameter and the **Omit functional areas (OMTFCNARA)** parameter are mutually exclusive.

### Single values

**\*ALL** All jobs are included in the report, unless excluded by another selection value.

### Other values (up to 50 repetitions)

*character-value*

Specify the name of a functional area to select.

Top

---

## Omit functional areas (OMTFCNARA)

Specifies a list of up to 50 functional areas to omit. Jobs and users identified in any of the functional areas are excluded from the report.

A functional area is a list of job names and/or user names previously defined by the user. More information on functional areas is in the Performance Tools for i5/OS book.

**Note:** This parameter and the **Select functional areas (SLTFCNARA)** parameter are mutually exclusive.

### Single values

**\*NONE**

Jobs are not excluded from the report based on functional area.

### Other values (up to 50 repetitions)

*character-value*

Specify the name of a functional area to omit.

Top

---

## Job name (JOB)

Specifies the job name to be used if submitting the job for batch processing.

Any value for this parameter is ignored if \*NONE is specified for the **Job description (JOBBD)** parameter.

**Note:** If JOBBD(\*NONE) is specified, job processing is performed interactively.

**PRTTNSRPT**

The command name is used for the job name.

**\*MBR** The name selected for the performance data member in the **Member (MBR)** parameter is used.

*name* Specify the name to be used for any and all batch jobs.

Top

---

## Job description (JOBBD)

Specifies the job description used to submit the job for batch processing.

### Single values

**\*NONE**

A batch job is not submitted; processing continues interactively while the user waits. The user's workstation is not available for other use during this time, which could be significant for long jobs.

**Qualifier 1: Job description**

**QPFRJOB**

The IBM-supplied job description, QPFRJOB, is used.

*name* Specify the name of the job description to be used.

**Qualifier 2: Library**

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

**\*CURLIB**

The current library for the job is used to locate the job description. If no current library entry exists in the library list, QGPL is used.

*name* Specify the library in which the job description is located.

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---

## Examples

**Example 1: Printing a Summary Transaction Report**

```
PRTTNSRPT MBR(TUESAM)
```

This command produces a summary transaction report. The data input to the report is all the data that exists in member TUESAM in library QPFRDATA. The request is sent to batch. The report output is directed to the output queue specified in the job description, QPFRJOB.

**Example 2: Printing a Transaction Detail Report**

```
PRTTNSRPT MBR(TUESAM) RPTTYPE(*TNSACT) SLTJOB(WS01)
```

This command produces a transaction detail report for the selected job, WS01. The request is sent to batch. The report output is directed to the output queue specified in the job description, QPFRJOB.

Top

---

## Error messages

None

Top



# Print Job Trace Report (PRTTTCRPT)

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

Parameters  
 Examples  
 Error messages

The Print Job Trace Report (PRTTTCRPT) command generates a report showing resources utilized, exceptions, and state transitions for batch jobs traced through time.

The report is based on the trace data collected by the Start Performance Trace (STRPFRTTC) command. This report runs against the specified member that was created when the Print Transaction Report (PRTTNSRPT) command was run with the \*FILE option. The member resides in the QTRJOB file of the QPFRDATA library.

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## Parameters

Keyword	Description	Choices	Notes
MBR	Member	Name	Required, Positional 1
LIB	Library	Name, <u>QPFRDATA</u>	Optional, Positional 2
TITLE	Title	Character value, * <u>MBR</u>	Optional, Positional 3
PERIOD	Time period for report	Element list	Optional
	Element 1:	Element list	
	Element 1: Starting time	Time, * <u>FIRST</u>	
	Element 2: Starting date	Date, * <u>FIRST</u>	
	Element 2:	Element list	
	Element 1: Ending time	Time, * <u>LAST</u>	
	Element 2: Ending date	Date, * <u>LAST</u>	
JOB	Job name	Name, <u>PRTTTCRPT</u> , *MBR	Optional
JOBID	Job description	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Job description	Name, <u>QPFRJOBID</u>	
	Qualifier 2: Library	Name, * <u>LIBL</u> , *CURLIB	

Top

## Member (MBR)

Specifies the performance data member used. This name should correspond to the member name specified when the Print Transaction Report (PRTTNSRPT) command was run with \*FILE option.

This is a required parameter.

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---

## Library (LIB)

Specifies the library where the performance data is located.

### QPFRDATA

The performance data files are located in the IBM-supplied performance data library, QPFRDATA.

*name* Specify the name of the library where the performance database files are located.

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---

## Report title (TITLE)

Specifies the title for the report that is created.

**\*MBR** The text of the database member, which contains the performance data, is the report title.

### *character-value*

Specify the title you want on your report with up to 50 characters of text, enclosed in apostrophes.

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---

## Time period for report (PERIOD)

Specifies the period of time on which to report. The parameter consists of two lists of two elements each.

The symbol \*N can be used to maintain the position in the parameter value sequence in place of an element that precedes the values that are specified. For example, PERIOD(\*N (\*N 091290)) specifies the ending date and uses the defaults for the other values.

### Element 1: Starting time and date

#### Element 1: Starting time

##### \*FIRST

Data records starting from the beginning of the day (00:00:00) are included.

*time* Specify the time of the first data record to include in the report, using the format, **hhmm** or **hhmmss**, where **hh** is the hours, **mm** is the minutes, and **ss** is the seconds. Data collected prior to this time is not included in the report.

The time can be specified with or without a time separator:

- Without a time separator, specify a string of 4 or 6 digits (hhmm or hhmmss) where hh = hours, mm = minutes, and ss = seconds.
- With a time separator, specify a string of 5 or 8 digits where the time separator specified for your job is used to separate the hours, minutes, and seconds. If you enter this command from the command line, the string must be enclosed in apostrophes. If a time separator other than the separator specified for your job is used, this command will fail.

The time is in 24-hour format (13:00 is one p.m.); hours, minutes, and seconds values must be 2-digits in length, meaning zeros must be included.

#### Element 2: Starting date

**\*FIRST**

Data records starting from the first day of the collection period are included in the report.

*date* Specify the date of the first data record to include in the report. Data collected prior to the starting time on this date is not included in the report. The date must be entered in the same format as specified for the job.

**Element 2: Ending time and date**

**Element 1: Ending time**

**\*LAST**

Data records through the end of the day (23:59:59) are included in the report.

*time* Specify the time of the last data record to include in the report. Use the same format used for the starting time. Data collected after this time on the ending date is not included in the report.

**Element 2: Ending date**

**\*LAST**

Data records through the last day of the collection period are included in the report.

*date* Specify the date of the last record to include in the report. The date must be entered in the same format as specified for the job.

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---

## **Job name (JOB)**

Specifies the job name to be used if submitting the job for batch processing.

Any value for this parameter is ignored if \*NONE is specified for the **Job description (JOBDD)** parameter.

**Note:** If JOBDD(\*NONE) is specified, job processing is performed interactively.

**PRTRCRPT**

The command name is used for the job name.

**\*MBR** The name selected for the performance data member in the **Member (MBR)** parameter is used.

*name* Specify the name to be used for any and all batch jobs.

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---

## **Job description (JOBDD)**

Specifies the job description used to submit the job for batch processing.

**Single values**

### \*NONE

A batch job is not submitted; processing continues interactively while the user waits. The user's workstation is not available for other use during this time, which could be significant for long jobs.

### Qualifier 1: Job description

#### QPFRJOB

The IBM-supplied job description, QPFRJOB, is used.

*name* Specify the name of the job description to be used.

### Qualifier 2: Library

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

#### \*CURLIB

The current library for the job is used to locate the job description. If no current library entry exists in the library list, QGPL is used.

*name* Specify the library in which the job description is located.

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---

## Examples

### Example 1: Printing a Job Trace Summary Report

```
PRTTTCRPT  MBR(JUNE01)
```

This command submits a batch job that generates a Job Trace Summary report using the performance data found in the member JUNE01 of file QTRJOB located in the default library QPFRDATA. The report covers the entire collection period, and the title of the report is set to the name of the database file member.

### Example 2: Specifying a Report Time Period

```
PRTTTCRPT  MBR(NOV15)
           PERIOD(('0800:00' '11/15/99')
                 ('2359:59' '11/15/99'))
           TITLE('Job Trace Reports for November 15')
```

This command submits a batch job that generates a Job Trace Summary report. The performance data comes from member NOV15 of file QTRJOB of the default library QPFRDATA. The report covers the time period 8:00 in the morning to midnight of one day.

**Note:** The format for the date and time is determined by the system values QDATFMT and, because separators are used in this example, QDATSEP.

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## Error messages

### \*ESCAPE Messages

**PFR5515**

Cannot access trace data.

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---

## Start Job Trace (STRJOBTRC)

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

Parameters  
Examples  
Error messages

The Start Job Trace (STRJOBTRC) command starts the job tracing function to collect performance statistics for the specified job. It issues the following command:

```
STRTRC MAXSTG(maxstg) TRCFULL(*STOPTRC)
```

The MAXSTG value used is either the STRJOBTRC default or a specified value.

Once job tracing is started, a trace record is generated for every external (program) call and return, exception, message, and work station wait in the job. At least two, and usually more, trace records are generated for every I/O statement (open, close, read, write) in a high-level language program.

After the target programs have been run, the End Job Trace (ENDJOBTRC) command is used to turn tracing off, record the collected information in a database file, and optionally produce reports used to analyze the data. The Print Job Trace (PRTJOBTRC) command may also be used to print the same report at any time thereafter. Alternatively, specifying \*DLT for the **Data option (DTAOPT)** parameter of the End Trace (ENDTRC) command may be used to stop the job trace (turn it off without recording any collected data).

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---

### Parameters

Keyword	Description	Choices	Notes
MAXSTG	Maximum storage	1-4000000, <u>10000</u>	Optional, Positional 1
JOB	Job name	Single values: * Other values: <i>Qualified job name</i>	Optional
	Qualifier 1: Job name	<i>Name</i>	
	Qualifier 2: User	<i>Name</i>	
	Qualifier 3: Number	000000-999999	
THDID	Thread ID to include	Values (up to 20 repetitions): <i>Hexadecimal value</i> , <u>*ALL</u>	Optional

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---

### Maximum storage (MAXSTG)

Specifies the maximum amount of storage to allocate to the internal buffer in which every trace record generated is stored. If enough trace records are collected to fill the buffer, tracing is automatically turned off.

10000 A 10,000 kilobyte trace buffer is used.

*1-16000*

Specify the size of the trace buffer, in kilobytes.

---

## Job name (JOB)

Specifies the job to be traced.

### Single values

\* The current job is traced.

\_

### Qualifier 1: Job name

*name* Specify the name of the job to be traced.

### Qualifier 2: User

*name* Specify the user name of the job to be traced.

### Qualifier 3: Number

*000000-999999*

Specify the 6-digit number of the job to be traced. All 6 digits must be specified, including zeros.

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---

## Thread ID to include (THDID)

Specifies a list of up to twenty threads whose calls and returns are included in the trace. Only trace records for the specified thread identifiers are included.

### Single values

\*ALL The calls and returns for all threads are included in the trace.

### Other values (up to 20 repetitions)

*hexadecimal-value*

Specify the identifiers of up to twenty threads whose trace records are to be included.

Top

---

## Examples

```
STRJOBTRC MAXSTG(512)
```

This command starts collecting trace data for the current job. It uses a 512 kilobyte (KB) trace buffer.

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---

## Error messages

None

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---

## Start Performance Graphics (STRPFRG)

### Where allowed to run:

- Interactive job (\*INTERACT)
- Interactive program (\*IPGM)
- Using QCMDEXEC, QCAEXEC, or QCAPCMD API (\*EXEC)

Threadsafe: No

Parameters  
Examples  
Error messages

The Start Performance Graphics (STRPFRG) command calls up the performance graphics menu giving you access to all available performance graphics. This command is only valid in an interactive environment.

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---

## Parameters

Keyword	Description	Choices	Notes
FMTLIB	Graph formats library	Name, <u>QPFADATA</u>	Optional, Positional 1
PFRLIB	Performance data library	Name, <u>QPFADATA</u>	Optional, Positional 2
JOB	Job name	Name, *CMD, *MBR	Optional
JOB	Job description	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Job description	Name, <u>QPFJOB</u>	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	

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---

## Graph formats library (FMTLIB)

Specifies the library in which the graph formats and graph packages are kept. The graph formats and graph packages are used to create performance and historical data graphs.

### QPFADATA

The IBM-supplied performance data library, QPFADATA, is where the graph formats and graph packages are located.

### *library-name*

Specify the name of the library where the graph formats and graph packages are located.

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---

## Performance data library (PFRLIB)

Specifies the library in which the database files are kept. The database files contain the performance and historical information used on the graphs.

### QPFADATA

The IBM-supplied performance data library, QPFADATA, is where the database files are located.

*library-name*

Specify the name of the library where the database files are located.

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---

## Job name (JOB)

Specifies the job name to be used for any display graph options selected that result in the submission of jobs for batch processing.

If \*NONE is specified on the **Job description** prompt (JOBDD parameter), this parameter is ignored and job processing is performed interactively.

The possible **job-name** values are:

**\*CMD** The command name that corresponds to the menu option selected is used to name the job. All jobs created by the same option will have the same name.

**\*MBR** The name of the performance data member specified on the **Member** prompt (MBR parameter) of the corresponding command is used.

*job-name*

Specify the name to be used for display graph batch jobs.

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---

## Job description (JOBDD)

Specifies the job description used to submit jobs for batch processing.

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

**\*CURLIB**

The current library for the job is used to locate the job description. 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 is located.

**QPFJRJOBDD**

The IBM-supplied performance tools job description is used.

*job-description-name*

Specify the name of an alternate job description.

**\*NONE**

A batch job is not submitted; instead, processing continues interactively while the user waits. The user's work station cannot be used during this time. This is something to consider for especially long jobs.

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---

## Examples

STRPFRG

This command displays the menu interface for Performance Tools graphics. Library QPFRDATA is used for storing and retrieving graph formats, graph packages, and performance data for this session. Any requests that are submitted to run in batch use job description QPFRJOB found in the library list.

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---

## Error messages

### \*ESCAPE Messages

#### **PFR7023**

Interval data cannot be displayed for IDLC lines.

#### **PFR9026**

&1 cannot be changed or deleted.

#### **PFR9027**

Option chosen for graph format &1 not valid.

#### **PFR9028**

Option chosen for graph package &1 not valid.

#### **PFR9032**

Too many formats selected.

#### **PFR9033**

Too many items selected to be deleted.

#### **PFR9039**

Historical data cannot be created for member &2.

#### **PFR9040**

Specify \*AUTO for range with \*TIME for variable.

#### **PFR9044**

Graph format selected for historical graph not valid.

#### **PFR9045**

\*OUTFILE not valid for graph package.

#### **PFR9095**

&2 cannot be changed or deleted.

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## Start Performance Tools (STRPFRT)

### Where allowed to run:

- Interactive job (\*INTERACT)
- Interactive program (\*IPGM)
- Using QCMDEXEC, QCAEXEC, or QCAPCMD API (\*EXEC)

Threadsafe: No

Parameters  
Examples  
Error messages

The Start Performance Tools (STRPFRT) command calls the performance tools menu interface. This displays the performance tools main menu (PERFORM), which provides access to all of the performance tools.

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---

## Parameters

Keyword	Description	Choices	Notes
LIB	Library	Name, <u>QPFRDATA</u>	Optional, Positional 1
JOB	Job name	Name, *CMD, *MBR	Optional
JOBDD	Job description	Single values: *NONE Other values: <i>Qualified object name</i>	Optional
	Qualifier 1: Job description	Name, <u>QPFRJOBDD</u>	
	Qualifier 2: Library	Name, *LIBL, *CURLIB	

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---

## Library (LIB)

Specifies the library where the performance data is located.

### QPFRDATA

The performance data files are located in the IBM-supplied performance data library, QPFRDATA.

*name* Specify the name of the library where the performance database files are located.

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---

## Job name (JOB)

Specifies the job name to be used for submitting report and utility jobs for batch processing.

**Note:** If \*NONE is specified for the **Job description (JOBDD)** parameter, this parameter is ignored, and job processing is performed interactively.

**\*CMD** The command name that corresponds to the menu option selected is used to name the job. All jobs created by the same option will have the same name.

**\*MBR** The name selected for the performance data member in the **Member (MBR)** parameter of the corresponding command is used. If the command does not have a MBR parameter and \*MBR is specified for this parameter, the command name is used.

*name* Specify the name to be used for batch jobs.

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---

## Job description (JOBDB)

Specifies the job description used to submit the job for batch processing.

### Single values

#### **\*NONE**

A batch job is not submitted; processing continues interactively while the user waits. The user's workstation is not available for other use during this time, which could be significant for long jobs.

### Qualifier 1: Job description

#### **QPFRJOBDB**

The IBM-supplied job description, QPFRJOBDB, is used.

*name* Specify the name of the job description to be used.

### Qualifier 2: Library

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

#### **\*CURLIB**

The current library for the job is used to locate the job description. If no current library entry exists in the library list, QGPL is used.

*name* Specify the library in which the job description is located.

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---

## Examples

STRPFRT

This command calls the menu interface to Performance Tools. The library, QPFRDATA, is used in storing and getting the performance data for this session. Requests that are submitted to run in batch use the job description QPFRJOBDB in the library list.

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## Error messages

None

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---

## Work with Functional Areas (WRKFCNARA)

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

Parameters  
Examples  
Error messages

The Work with Functional Areas (WRKFCNARA) command allows the user to create, change, copy, and delete functional areas at the menu level. Functional areas are used by performance tools for reports and graphics. A functional area is a predefined list of job names and/or user names that are to be included in a report or graph.

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### Parameters

Keyword	Description	Choices	Notes
LIB	Library	Name, <u>QPFRRDATA</u>	Optional, Positional 1

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---

### Library (LIB)

Specifies the library where the functional areas are located.

The possible library values are:

#### QPFRRDATA

The IBM-supplied performance data library, QPFRRDATA, is where the functional areas are located.

#### *library-name*

Specify the name of the library where the functional areas are located.

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---

### Examples

WRKFCNARA

This command allows you to create, change, and delete functional areas at the menu level. The library, QPFRRDATA, is used for storing and retrieving functional areas for this session.

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### Error messages

None



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## Appendix. Notices

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