MAINVIEW® for CICS Monitors Guide

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  - — system hardware configuration
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- sequence of events leading to the problem
- commands and options that you used
- messages received (and the time and date that you received them)
  - — product error messages
  - — messages from the operating system, such as `file system full`
  - — messages from related software

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About This Book

This book contains detailed information about the MAINVIEW® for CICS data collection monitors and is intended for CICS help desk personnel and system programmers.

To use this book, you should be familiar with the following items:

- Customer Information Control System (CICS) concepts and operations
- Multiple Virtual Storage (MVS) concepts and the Interactive System Productivity Facility (ISPF)
- MAINVIEW windows and full-screen modes

How This Book Is Organized

This book, which describes the MAINVIEW for CICS data collection monitors, is organized as follows. In addition, an index appears at the end of the book.

Chapter/Appendix	Description
Chapter 1, “Overview of Monitors”	Provides an overview of the data collection monitors and the functions they provide. Also describes how to start and stop them.
Chapter 2, “Using Monitors”	Describes the ISPF panels used to start and configure monitors. In addition, describes how to review the data collected by the monitors.
Chapter 3, “BBI Subsystem Information”	Describes the BBI subsystem.
Chapter 4, “Monitor Reference”	Describes the parameters and messages for each monitor.
Appendix A, “Monitor Messages”	Provides the list of messages cross-referenced by issuing monitors.
Appendix B, “Keyword Parameters”	Describes the parameters used to configure and start monitors.

Related Documentation

BMC Software products are supported by several types of documentation:

- online and printed books
- online Help
- release notes and other notices

In addition to this book and the online Help, you can find useful information in the publications listed in the following table. As “Online and Printed Books” on page xv explains, these publications are available on request from BMC Software.

Category	Document	Description
Installation documents	*OS/390 and z/OS Installer Guide*	Provides instructions for installing and maintaining BMC Software products.
	MAINVIEW Installation Requirements Guide	Describes the software and storage environment required to install MAINVIEW products.
	MAINVIEW Common Customization Guide	Describes how to set up the operating environment for MAINVIEW products to your site's requirements.
	MAINVIEW Administration Guide	Describes how to manage and maintain the operating environment for MAINVIEW products at your site.
	Implementing Security for MAINVIEW	Provides procedures to create SAF resource definitions for the services and commands in MAINVIEW for CICS.
	MAINVIEW for CICS Customization Guide	Describes how to customize MAINVIEW for CICS for use at your site.
User documents	*Using MAINVIEW*	Describes how to use the common MAINVIEW interface.
	MAINVIEW for CICS Online Services Reference Manual	Describes the MAINVIEW for CICS online services, including full-screen displays and windows-based views.
	Getting Started With MAINVIEW for CICS	Provides an introduction to the product and offers exercises to help you get started with the online services.
	MAINVIEW for CICS PERFORMANCE REPORTER User Guide	Describes how to produce a variety of batch reports, including • standard CICS performance and resource reports • custom reports written with the Performance Reporting Language (PRL)
	MAINVIEW Products General Information	Provides an overview of the MAINVIEW environment and the products it supports
	MAINVIEW for CICS Interactive Guide	Multimedia application that provides interactive tutorials.
Release documents	*MAINVIEW for CICS Release Notes*	Describes the product enhancements and fixes that are included in the current version of MAINVIEW for CICS.

Online and Printed Books

The books that accompany BMC Software products are available in online format and printed format. You can view online books with Acrobat Reader from Adobe Systems. The reader is provided at no cost, as explained in "To Access Online Books." You can also obtain additional printed books from BMC Software, as explained in "To Request Additional Printed Books."

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The MAINVIEW for CICS product includes online Help in the MAINVIEW for CICS ISPF interface. You can access Help from any ISPF panel or MAINVIEW window by

- pressing **F1**
- issuing the HELP command

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- updates to the installation instructions
- last-minute product information

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Conventions

This section provides examples of the conventions used in this book and explains how to read ISPF panel-flow diagrams and syntax statements.

General Conventions

This book uses the following general conventions:

Item	Example
information that you are instructed to type	Type **SEARCH DB** in the designated field.
specific (standard) keyboard key names	Press **Enter**.
field names, text on a panel	Type the appropriate entry in the **Command** field.
directories, file names, Web addresses	The BMC Software home page is at **www.bmc.com**.
nonspecific key names, option names	Use the HELP function key.
MVS calls, commands, control statements, keywords, parameters, reserved words	Use the SEARCH command to find a particular object.
code examples, syntax statements, system messages, screen text	`The table table_name is not available.`
emphasized words, new terms, variables	The instructions that you give to the software are called *commands*. In this message, the variable *file_name* represents the file that caused the error.

This book uses the following types of special text:

Note: Notes contain important information that you should consider.

Tip: Tips contain useful information that may improve product performance or that may make procedures easier to follow.

Chapter 1 Overview of Monitors

Data collection monitors, sometimes referred to as *active timers*, measure key system resources. The data collected at each sampling interval is compared to predefined thresholds. When a threshold is exceeded, a warning message (with prefix FT) is issued. Messages can be displayed by several MAINVIEW for CICS display services.

The collected data are also stored in the BBILOG and are available for recall. You can view a plot of the recent history of any monitored variable at any time. You can take appropriate action either manually or with an automated script from MAINVIEW® AutoOPERATOR™ (AutoOPERATOR).

In addition, you can:

- access monitors easily through ISPF-like menus and scrollable lists
- move quickly from the LTRAC or STRAC trace display service to a set of related workload monitors
- view plot or graphic summary displays that can be refreshed in a user-defined cycle
- start or stop a monitor with an AutoOPERATOR EXEC
- start a series of monitors automatically when the system starts or at your request
- print a screen image to the online BBI-SS PAS Image log automatically, to the BBI-TS Image log, or to your BBISPRNT data set.

Types of Monitors

There are four types of monitors: general, workload, task, and storage. Each collects data about a particular area in a specified CICS target region.

- General monitors track broad areas of CICS performance. Included amongst these monitors are the general-purpose problem monitors.
- Workload monitors collect information about workloads including transactions, transient data queues, and transaction classes.
- Task monitors track CICS transactions including CPU usage by task, number of database calls by task, and number of files used by task.
- Storage monitors collect information about storage including temporary size, DSA pages available, total DSA size, and EDSA available.

Starting Monitors

Monitors can be started automatically when the system starts, or manually once the system starts. You can manually start a monitor at any time. A typical method is described in “Typical Steps for Manually Starting a Monitor” on page 1-3.

Other methods are summarized here:

- Use the SM command to access the list of data collection monitors. See “Start Monitor (SM Command)” on page 2-20.
- Replicate an active monitor request from the Active Timer list application.
- Start a monitor service from an AutoOPERATOR EXEC.
- Write an EXEC that starts a monitor service. A BMC Software AutoOPERATOR product must be installed.
- Use the IMFEXEC IMFC command followed by the service name, optional parameters, and an identifier for the target CICS region:

  ```
  IMFEXEC IMFC SET REQ=DSUT CDSA I=00:06:00 TARGET=cicsid
  ```

Monitors can also be configured to start automatically when the PAS starts (for static targets), or when the target CICS region starts (for dynamic targets).

To automatically start a monitor:

Define a series of requests as a member of your BBI-SS PAS BBPARM data set that can be started automatically when the system starts or at your request (see “Automatically Starting Monitors” on page 1-5).

Typical Steps for Manually Starting a Monitor

1. On the Service Menu panel use the **1 Monitors** option (**S.1** option from the Primary Option Menu panel) to display the Active Timer Requests panel.

   This panel displays summary information about the currently active monitors, and provides commands for using them.

2. On the Active Timer Requests panel select the **SM** command to display the Data Collection Monitors panel.

   This panel lists the available monitors.

3. On the Data Collection Monitors panel select the **S (Set Up)** command.

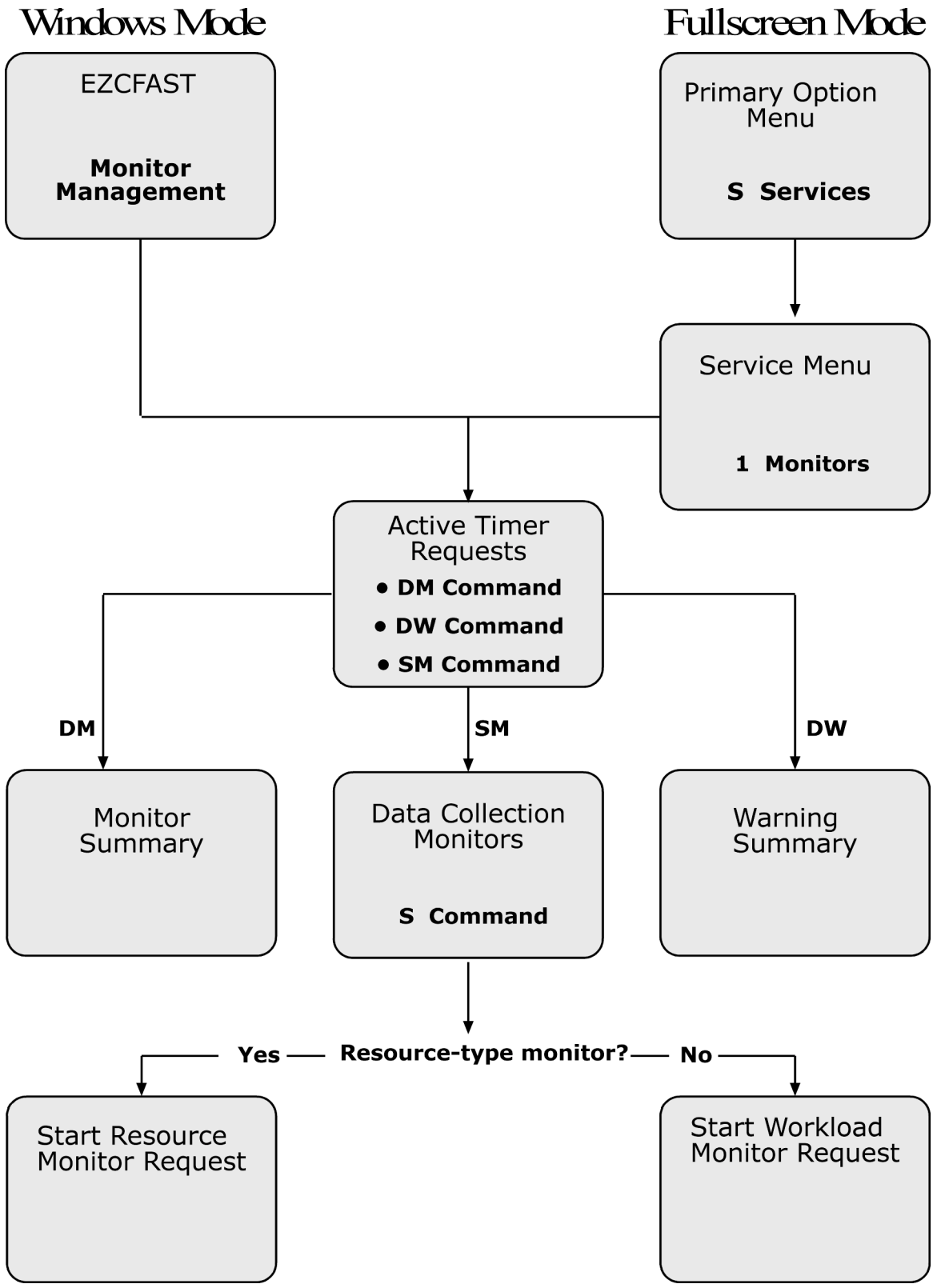
   If the selected monitor is a workload-type monitor, the Start Workload Monitor Request panel is displayed. Otherwise, the Start Resource Monitor Request panel is displayed. Both panels enable you to define the monitors parameters and start the monitor.

4. Start the monitor by completing either the Start Workload Monitor Request panel or the Start Resource Monitor Request panel.

Note: Thresholds are set for the PROBLEM service by using the CMRPRBT table; they are set for the MONITOR service by using the CMRSOPT table. These macros are described in the *MAINVIEW for CICS Customization Guide*. The thresholds you set are related only to the BBILOG messages currently active for each PROBLEM or MONITOR service.

The panels and commands used to start a monitor are illustrated in Figure 1-1 on page 1-4.

Figure 1-1 Panels and Commands Used to Start a Monitor



Automatically Starting Monitors

To define a group of monitors that are started automatically when the BBI-SS PAS starts:

1. Define a group of requests in a member of your BBPARM data set.

2. Specify the member containing the block of requests in BBPARM member BBIISP00.

Defining Multiple Requests

A series of valid requests can be predefined in a member of the BBI-SS PAS BBPARM. There are several sample block request members in the BBPARM data set named CMRBLK*n*. You can modify these sample members or create new ones.

CMRBLK1	Use as a model when the MAINVIEW for CICS extractor is not active.
CMRBLK2	Use as a model when the MAINVIEW for CICS extractor is active and basic monitoring is required.
CMRBLK3	Use as a model when the MAINVIEW for CICS extractor is active and detailed monitoring is required.
CMRBLK4	Use as a model to collect data with the monitors introduced in MAINVIEW for CICS version 4.1 or later.

There can be one group of requests for each CICS region. Requests for display logging and starting monitors can be specified; for example, member CMRBLKx in BBPARM could contain:

```
REQ=@RESP,I=00:00:30,PROG=ABC1 DE+
TEST+++A,USERID=FRED,QIS=YES
REQ=#PROC,I=00:01:00,TERM=NODE0101,QIS=NO
REQ=@INPQ,I=00:02:00,CLASS=1,RST=COLD
```

This example indicates:

- Response time data should be collected and processed every 30 seconds for program ABC1, any program beginning DE, and any program beginning with TEST and ending with A when executed by user ID FRED. The service is to be quiesced when the CICS region is not active (default).

- The number of transactions executed should be collected and processed every minute for terminal NODE0101. The monitor is not quiesced.
- Input queue time should be collected and processed every 2 minutes for transactions that execute in Class 1. The monitor data is reset to zero when the monitor is restarted following a quiesce.

Request Initiation

Each request can start anywhere in a line from columns 1 to 79 and begins with the REQ keyword.

A service is uniquely defined in a request by its request ID. The request ID is the service select code (ssc) and, if necessary, a parameter. The request ID is followed by a series of optional keywords (see Appendix B, “Keyword Parameters”). It is specified as:

```
REQ=ssc,parameter [keywords]
```

Duplicate requests are not allowed; however, multiple requests for the same service can be active concurrently if the reqid for each request has a unique parameter. For example, the transaction rate for workload A (REQ=#PROC,WKLDA) or for workload B (REQ=#PROC,WKLDB) can be measured.

Request Termination

The original reqid must be specified to purge an active service request. For example, to purge the #PROC service monitoring the transaction rate for workload A, the command would be

```
PRG=#PROC,WKLDA [keywords]
```

If the parameter, WKLDA, is not specified, the service monitoring all workloads is purged.

Request Comments

Comments can be specified in a block request member of BBPARM. A comment is delimited by an asterisk (*). The commented text begins and ends with an *. A warning indicator is issued when invalid characters, which are treated as blanks, are encountered.

Note: If line numbers are used in a block request member, each number should be preceded by an *.

Automatic Startup of Multiple Requests

Multiple requests can be started when the BBI-SS PAS starts. The name of the BBPARM member containing the block of requests is specified in the BBIISP00 member of BBPARM. The parameters are

TARGET	Defines the CICS region to be monitored.
BLK	Specifies the BBPARM member name to be started.
USRID or AUTOID	Specifies the identifier of the user.

TARGET, BLK, and USRID must be written on the same line and can be repeated for different targets. TARGET and BLK are required; USRID is optional. AUTOID is required and is written on a separate line from TARGET and BLK; for example:

```
AUTOID=ADMIN
TARGET=CICS1,BLK=CMRBLK1
TARGET=CICS2,BLK=CMRBLK2
TARGET=CICS3,BLK=CMRBLK3
```

or

```
TARGET=CICS1,BLK=CMRBLK1,USRID=$TCMRAR
TARGET=CICS2,BLK=CMRBLK2,USRID=$TDCMRX
TARGET=CICS3,BLK=CMRBLK3,USRID=$TCMRC
```

If the USRID parameter is not specified, the default is AUTOID.

This example assumes there are three active CICS regions. The monitors defined in CMRBLK1 extract data from region CICS1 and are associated with the user ID $TCMRAR. The monitors defined in CMRBLK2 extract data from region CICS2 and are associated with the user ID $TDCMRX. The monitors defined in CMRBLK3 extract data from region CICS3 and are associated with the user ID $TCMRC.

Note: If the target CICS region is not active, the QIS option defines the action to be taken for each request. The default is to quiesce until the target CICS starts.

Displaying Monitor Data

A display of the data collected by monitors can be requested by any of the following methods:

- Selecting a scrollable list of active monitors and their current values as described in “Typical Steps for Manually Starting a Monitor” on page 1-3.

  — Access the Active Timer Request list application directly from the Primary Option Menu (Option S.1) to view all active monitors.
  — Move the cursor to the EXPAND line for the **MON(xxxx)** field in an application trace display and press **Enter** to view related monitors in the Active Timer list application.
  — Use the D line command from the Data Collection Monitors service list application to access the Active Timer list for only the selected service.

- Selecting an active monitor summary display (DMON). Use the DM application transfer command.

- Selecting an active monitor warning display (DWARN).

  — Use the DW application transfer command.
  — Invoke the DWARN service from the Service Display panel.

- Selecting a graphic plot of the historical data collected by one monitor.

  — Use the S line command in the Active Timer list (Option S.1) to select a plot of the data collected by that active monitor.

— Move the cursor to one of the monitor requests in a DMON or DWARN display and press **Enter** to view a plot of data collected by that monitor as described in "Monitor Summary Panel (DMON Command)" on page 2-16, and "Active Monitor Warning Panel (DWARN Command)" on page 2-18.

- Setting up monitor graphic displays for timed, cyclic refresh. Select Option C, **CYCLE SETUP**, from the Primary Option Menu to set up a continuous timed cycle of refreshable monitor plot (PLOT, with a service name parameter) or graphic summary displays (DMON or DWARN).

Note: The CYCLE SETUP option is described in the *MAINVIEW for CICS Online Services Reference Manual*.

Logging Monitor Data

An image of a monitor plot or graphic summary display (DMON or DWARN) can be recorded in the BBI-SS PAS Image log automatically or to your BBI-TS Image log or BBISPRNT data set at your request by any of the following methods:

- Logging an image to the BBI-SS PAS Image log.

  — Specify the LOG option when starting the monitor or modifying it.
  — Write an EXEC to define a log request for a monitor plot or graphic summary display (DMON or DWARN). A BMC Software AutoOPERATOR product must be installed.

    Use the IMFEXEC IMFC command followed by the service name, an optional parameter, and an identifier for the target CICS region as

    ```
    IMFEXEC IMFC SET REQ=DSUT CDSA
    WMAX=80,LOG=ATWARN TARGET=cicsid
    ```

    or

    ```
    IMFEXEC IMFC DMON DSUT I=00:05:00
    TARGET=cicsid
    ```

  — Define a log request for a graphic summary display (DMON or DWARN) as a member of your BBI-SS PAS BBPARM data set that can be started automatically when the system starts or at your request (see "Automatic Startup of Multiple Requests" on page 1-7).

- Logging a display image record to the BBI-TS Image log. Specify **Y** in the **LOG** field of the plot or graphic summary display (DMON or DWARN) to record the image in your BBI-TS Image log.

- Logging a screen image to your BBISPRNT data set. Press the PF4/16 key to record a plot or graphic summary display image in your BBISPRNT data set.

BBSAMP member ILOGJCL can be used to create a hardcopy of your Image log data sets. BBSAMP member SLOGJCL can be used to create a hardcopy of your BBISPRNT data set.

Stopping Monitors

You can stop a monitor service or image log request can by one of the following actions:

- Stop the monitor request with a Z line command. Use the Z line command from the Active Timer list application as described in “Active Timer Requests Panel Commands Overview” on page 2-5.

- Set a stop time for automatic completion of data collection. Specify the STOP value (as a time stamp or interval count) on the Start or Modify panel for the monitor. The collected data remains available for viewing until the monitor is purged.

- Purge a request from the Active Timer list with a P line command. Use the P line command from the Active Timer list application as described in “Active Timer Requests Panel Commands Overview” on page 2-5.

- Purge a service request with a PRG request. Issue a PRG request from BBPARM (see “Automatic Startup of Multiple Requests” on page 1-7) or an AutoOPERATOR EXEC (an AutoOPERATOR product must be installed) as follows:

  PRG=*reqid*|ALL

- Stop a service with a timer request. Use the STOP or STOPCNT parameter; for example:

```
REQ=#PROC,START=00:11:00,STOP=00:12:00,LOG=ATSTOP,I=00:01:00
```

The request starts at 11 minutes after midnight and stops 12 minutes after midnight; the PLOT display is logged to the BBI-SS PAS Image log when the request stops.

These parameters are described in Appendix B, “Keyword Parameters”.

Chapter 2 Using Monitors

This chapter describes how to use monitors—how to start, stop, modify, and manage monitors.

Active Timer Requests Panel

The Active Timer Requests panel is where much of your work with monitors is performed. With it you can

- start monitors
- view currently requested monitors
- access panels that enable you to start monitors
- access other panels to replicate or change current options
- purge monitors
- view plot or graphic monitor summary displays
- print a screen image to the BBI-SS PAS Image log, the BBI-TS Image log, or your BBISPRNT data set

This panel enables you to select monitors for modification and review. In addition, it lists active monitors, the parameters specified for each, the latest measured value, the specified warning threshold, a plot for the current sampling, the user logon identification, the target CICS of the request, the service security classification, the area of CICS being monitored, and the service status.

Accessing the Active Timer Requests Panel

To access the Active Timer Requests panel, do one of the following actions:

- From the Primary Option Menu select Option S.1, **MONITORS**. This method displays all the active timer requests you are authorized to view, including workload and resource monitor requests, application trace requests, and Image log requests.

- From the Data Collection Monitors panel issue the D line command. This method displays the active timer requests for the selected service only. See “Data Collection Monitors Panel Line Commands” on page 2-23.

- From the EZCFAST view in windows mode select **Monitor Management**. This method displays all the active timer requests you are authorized to view.

Figure 2-1 Active Timer Requests Panel (Before Scrolling Right)

```
BMC SOFTWARE --------------- ACTIVE TIMER REQUESTS ----------  PERFORMANCE MGMT
COMMAND ===>                                                  TGT ===> CICSPROD
                                  INPUT    INTVL ==> 3      TIME --  12:39:04
COMMANDS: SM (START MONITORS), SORT, AREA, X ON|OFF, DM (DMON), DW (DWARN)
LC CMDS:  S (SELECT), W (SHOW),      M (MODIFY),
          P (PURGE),  R (REPLICATE), H (HELP),   Z (STOP),                 >>>
LC   SERV  PARM     TITLE                  CURRENT  WVAL  -8-6-4-2-0+2+4+6+8+
     #PROC          TRANS PROCESSED             25    15| *********W*******   |
     @INPQ          AVG INPUT Q TIME          0.00  0.25|          W          |
     @MONI          # CICS MONITOR EXCEPTION     0       |                     |
     @PRB1          # CICS SYSTEM PROBLEMS       1       |                     |
     @PRB2          # CICS TASK PROBLEMS         0       |                     |
     @PRB3          # CICS RESOURCE PROBLEMS     0       |                     |
     @PRB4          # CICS GLOBAL PROBLEMS       0       |                     |
     AMXT           CICS MAX ACTIVE TASK %      20    80| **       W          |
     MXTC           CICS MAXIMUM TASK PCT       37    75| ****     W          |
     @ELAP ACCTG    AVG ELAPSED TIME          0.03  0.80|          W          |
     @RESP ACCTG    AVG RESPONSE TIME         0.03  2.00|          W          |
     DSUT  DSA      CICS DSA UTILIZATION        28    85| **       W          |
     DSUT  EDSA     CICS DSA UTILIZATION        10    90|          W          |
     @ELAP PAYROLL  AVG ELAPSED TIME          0.02  0.90|          W          |
     @RESP PAYROLL  AVG RESPONSE TIME         0.03  1.00|          W          |
     #PROC SYSTEM   TRANS PROCESSED             26    50| ****     W          |
     @ELAP SYSTEM   AVG ELAPSED TIME          0.02  0.80|          W          |
     @INPQ SYSTEM   AVG INPUT Q TIME          0.00  0.25|          W          |
```

Figure 2-2 Active Timer Requests Panel (After Scrolling Right)

```
BMC SOFTWARE --------------- ACTIVE TIMER REQUESTS ----------  PERFORMANCE MGMT
COMMAND ===>                                                  TGT ===> CICSPROD
                                    INPUT    INTVL ==> 3      TIME --  12:39:47
COMMANDS: SM (START MONITORS), SORT, AREA, X ON|OFF, DM (DMON), DW (DWARN)
LC CMDS:  S (SELECT), W (SHOW),      M (MODIFY),
          P (PURGE),  R (REPLICATE), H (HELP),   Z (STOP),                  <<<
LC   SERV  PARM     TITLE                        USER ID  TARGET  SEC AREA  STAT
     #PROC          TRANS PROCESSED              CMR1     CICSPROD A  WKLD  ACTV
     @INPQ          AVG INPUT Q TIME             CMR1     CICSPROD A  WKLD  ACTV
     @MONI          # CICS MONITOR EXCEPTION     CMR1     CICSPROD A  GENL  ACTV
     @PRB1          # CICS SYSTEM PROBLEMS       CMR1     CICSPROD A  GENL  ACTV
     @PRB2          # CICS TASK PROBLEMS         CMR1     CICSPROD A  GENL  ACTV
     @PRB3          # CICS RESOURCE PROBLEMS     CMR1     CICSPROD A  GENL  ACTV
     @PRB4          # CICS GLOBAL PROBLEMS       CMR1     CICSPROD A  GENL  ACTV
     AMXT           CICS MAX ACTIVE TASK %       CMR1     CICSPROD A  TASK  ACTV
     MXTC           CICS MAXIMUM TASK PCT        CMR1     CICSPROD A  TASK  ACTV
     @ELAP ACCTG    AVG ELAPSED TIME             CMR1     CICSPROD A  WKLD  ACTV
     @RESP ACCTG    AVG RESPONSE TIME            CMR1     CICSPROD A  WKLD  ACTV
     DSUT  DSA      CICS DSA UTILIZATION         CMR1     CICSPROD A  STOR  ACTV
     DSUT  EDSA     CICS DSA UTILIZATION         CMR1     CICSPROD A  STOR  ACTV
     @ELAP PAYROLL  AVG ELAPSED TIME             CMR1     CICSPROD A  WKLD  ACTV
     @RESP PAYROLL  AVG RESPONSE TIME            CMR1     CICSPROD A  WKLD  ACTV
     #PROC SYSTEM   TRANS PROCESSED              CMR1     CICSPROD A  WKLD  ACTV
     @ELAP SYSTEM   AVG ELAPSED TIME             CMR1     CICSPROD A  WKLD  ACTV
     @INPQ SYSTEM   AVG INPUT Q TIME             CMR1     CICSPROD A  WKLD  ACTV
```

Selecting a monitor with a line command provides direct access to a plot display of its collected data. Other line commands can be used to view monitor options, access data entry panels to replicate or change the current options, or purge the selected monitor.

Active Timer Requests Panel Fields

The following section describes the fields on the Active Timer Requests panel.

Field Name	Description
LC	Line command input field. One-character line commands are used to view, modify, or replicate the options for a selected monitor; to purge a monitor; or to display HELP information about the service. The remaining commands—the line commands—are entered in the LC column for the selected monitor. Multiple selections can be made at one time by typing a series of line commands and pressing the **Enter** key. Each is described in a separate topic later in this section.
SERV	A scrollable list of requested monitors by service select code. Only previously started monitors are displayed.

PARM — The parameters defined for the monitor.

TITLE — The service title.

Note: The next three fields are blank for application trace and image log requests.

CURRENT — The latest measured value.

Note: If the request is not active, its status (as defined in the **STAT** field) is displayed in this column.

WVAL — The warning threshold.

8-6-4-2-0+2+4+6+8+0 — A plot for the current sampling and a warning threshold (W marker) if the WVAL keyword was specified. Plot characters indicate a trend as follows:

<	Shows a downward trend from the preceding sampled values.
>	Shows an upward trend from the preceding sampled values.
*	Shows no change from the preceding sampled values.

If you have a color monitor, the graph is displayed in the following colors:

Red	Warning status.
Turquoise	Normal values for the current interval.
Yellow	Maximum Threshold: Values for the current period are greater than the values for the previous period.

USER ID — The logon identification of the user who made the request.

TARGET — The CICS region defined as the target of the requested service either by default or user-specified.

SEC — The security code for user access to the service.

AREA — The CICS resource area being analyzed. This field could contain

GENL	General CICS system
STOR	Storage
TASK	CICS task
WKLD	CICS workload

STAT — The service request status, which could be

ACTV	The monitor is active.
COMP	The monitor executed and completed processing normally.
HELD	The monitor is being held and is pending release.

INIT	The monitor is being invoked for the first time (a start time was specified, but it has not been reached).
INV	The monitor terminated because of an invalid parameter or measurement. The BBI-SS PAS Journal log contains a descriptive message of the error.
LOCK	A LOCK command was issued for the service or the service abended.
QIS	The service is quiesced because the target CICS region is not active.
RST	The target CICS region restarted. The monitor is waiting until the current interval expires before restarting as specified by the RST keyword in the original request.

Note: An active status does not necessarily mean the monitor is collecting data. A monitor may be started before its target CICS region is active.

Active Timer Requests Panel Commands Overview

The Active Timer Requests panel has four types of commands: line, primary, system, and application transfer.

The application transfer commands—SM, DM, and DW—display additional panels used to complete the command. Each is described in a separate section.

System commands—L, U, and T—are for system programmer use and are restricted by a security access code.

The primary commands—SORT, Area, X On|Off—affect how information is displayed in the panel. They are described in the following topic.

The remaining commands—the line commands—are entered in the LC column for the selected monitor. Multiple selections can be made at one time by typing a series of line commands and pressing the **Enter** key. Each is described in a separate topic later in this section.

Active Timer Requests Panel Primary Commands

These commands are typed on the **COMMAND** line of the Active Timer Requests panel:

SORT

When the list of active timer requests is initially displayed, it is sorted in the order the requests were made. The SORT command is used to sort the list by any of the column headings. The first two characters of the column heading are used with SORT as follows:

SORT *cc*

where ***cc*** can be any of the following two characters:

SE	Sorts the list alphabetically by service name (SERV column).
TI	Sorts the list alphabetically by service title (TITLE column).
CU	Sorts the numerical values in descending order (CURRENT column).
WV	Sorts the numerical values in descending order (WVAL column).
US	Sorts the list alphabetically by user ID (USER ID column).
TA	Sorts the list alphabetically by target ID (TARGET ID column).
SC	Sorts the list alphabetically by the security code.
AR	Sorts the list by the resource area (AREA column).
ST	Sorts the list alphabetically by the service status displayed (STAT column).

AREA

You can use the AREA command to list only the services related to a specified area. The possible areas that can be specified are listed in the AREA column. For example, to list only the CICS workload services, type

AREA WKLD

Type **AREA** to return to the list of all the services.

X ON|OFF

To display only the requests that are in warning status, type **X ON** on the **COMMAND** line and press **Enter**.

To display all requests, type **X OFF** on the **COMMAND** line and press **Enter**.

The default is to display all requests.

Line Commands

This section describes the line commands for the Active Timer Requests panel:

- **S** Monitor History Panel, described on page 2-7
- **W** Show Monitor, described on page 2-11
- **M** Modify Monitor, described on page 2-12
- **R** Replicate Monitor, described on page 2-14
- **P** Purge Monitor, described on page 2-15
- **Z** Stop Monitor, described on page 2-16

Monitor History Panel (S Line Command)

The S line command displays the Monitor History panel which contains a plot of the data collected or the selected monitor. If you have a color monitor, the graph will be displayed in the following colors:

Red	Warning status (reported value exceeds minimum- or maximum-defined threshold).
Turquoise	Normal values for the current interval.

Figure 2-3 PLOT Sample Display

```
BMC SOFTWARE --------------    MONITOR HISTORY      ---------- PERFORMANCE MGMT
SERV ==> PLOT            INPUT    12:26:34  INTVL=> 3  LOG=> N  TGT==> CICSPROD
PARM ==> #PROC                                                   SCROLL=> CSR
TOTAL      96,120            TRANS PROCESSED                    START  11:58:00
  28 SAMPLES      PERIOD  00:10:00   INTERVAL  00:01:00      ELAPSED  00:28:00
AVG/INTVL--.----+----I----+----I----+----I----+----I----+----I  --- AVG/SEC ---
 TOTAL    .************************          W            .      57.21
 CURR PD  .******************                W            .      42.62
INTERVALS--.----+----I----+----I----+----I----+----I----+----I
12:17:00  .*********                         W            .      19.17
12:18:00->.*******                          W            .      15.78
12:19:00  .*********************************W****        .      91.15
12:20:00  .*********************************W************     109.57
12:21:00  .**********                       W            .      22.97
12:22:00  .*************                    W            .      29.08
12:23:00  .**********                       W            .      21.55
12:24:00  .**************                   W            .      30.32
12:25:00  .*********************           W            .      45.33
12:26:00  .********************************* W           .      75.97
          .----+----I----+----I----+----I----+----I----+----I
          0      1320      2640      3960      5280      6600 MAX AT 12:01:00
RANGE:      0->1220  1221->2440  2441->3660  3661->4880  4881->6758 ---TOTAL---
DISTR:       2    7%     8   29%     7   25%     4   14%     7   25%    28  100%
```

Note: The monitor plot views, which are described in the *MAINVIEW for CICS Online Services Reference Manual*, provide similar graphs of monitor data in windows mode.

Select Code: PLOT

Parameter: reqid

Description: Displays data collected by a monitor service request.

An area-by-area description of the display contents follows.

Figure 2-4 Area 1 - Monitor Statistics

```
TOTAL      96,120           TRANS PROCESSED                    START  11:58:00
28 SAMPLES      PERIOD  00:10:00   INTERVAL  00:01:00      ELAPSED  00:28:00
```

TOTAL — This field is displayed for count-type services only. It shows the sum of all values collected by this request.

SAMPLES — The number of data samples collected by this request.

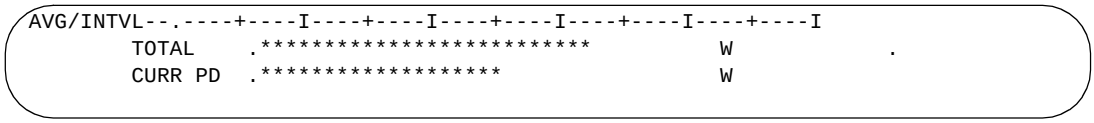
PERIOD — The elapsed time for one period. It is equal to 10 times the INTERVAL value.

INTERVAL — The monitor sampling interval.

START — The monitor start time. The request may go inactive at start time if the DB2 subsystem is not active and QIS=YES (the default) was specified when the service was defined.

ELAPSED — The cumulative active time for the monitor. If the monitor is not currently active, this field contains the elapsed time at the point when the request became inactive.

Figure 2-5 Area 2 - Averages Per Interval



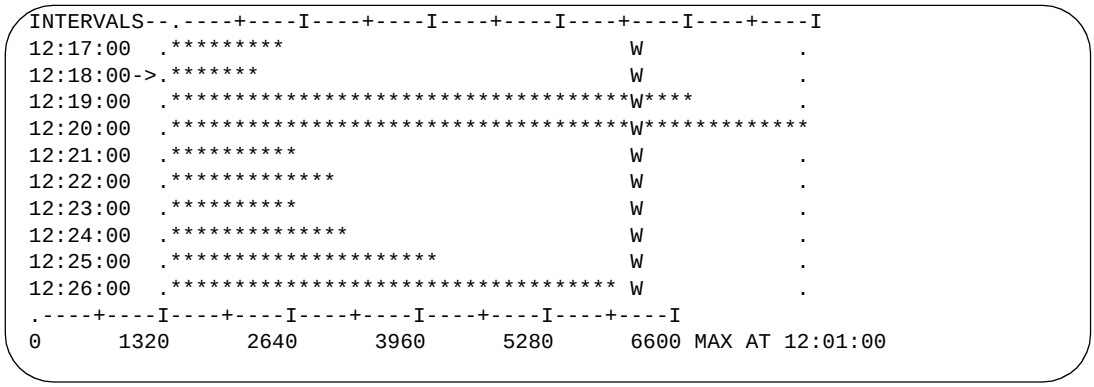
TOTAL — The average sample value over the life of the service.

PREV PD — The average sample value for the preceding period of 10 samples.

CURR PD — The average sample value over the most recently completed period of 10 interval samples. At the end of the period, the PREV PD value is replaced with this average.

W — The warning threshold marker (a WVAL warning threshold must be defined with the request for the service). If the PLOTMAX value is less than the WVAL value, the W marker is not displayed.

Figure 2-6 Area 3 - Interval Sample Values



Each line shows the time the sample was taken. The X-axis scale value to be plotted is automatically adjusted to the next highest multiple of 50. If PLOTMAX is specified, values exceeding this limit are expressed with an asterisk extending beyond the right side of the graph.

- > Designates that this interval sample value and all interval sample values above this line are included in the CURR PD, shown in the Area 2 diagram in Figure 2-5 on page 2-9.

MAX AT or MIN AT Is the time the maximum or minimum sample value was measured.

Figure 2-7 Area 4 - Monitor Measurements

```
For count services:      |   For average services:
                         |
--- AVG/SEC ---          |   --- EVENTS ---
     57.21               |       13,817
     74.99               |        1,706
     42.62               |        1,520
                         |
     19.17               |          163
     15.78               |          181
     91.15               |          140
    109.57               |          132
     22.97               |          158
     29.08               |          119
     21.55               |          129
     30.32               |          132
     45.33               |          196
     75.97               |          165
```

This area is displayed for count-type or average-type services only. For services that measure a count, the rates per second are shown for the displayed time intervals. These values are calculated by dividing the number of event occurrences by the elapsed time. For services that measure an average, the event counts used to calculate the averages, such as the number of transactions for which response time was measured, are shown.

Figure 2-8 Area 5 - Range Limits and Distribution

```
RANGE:      0->1220  1221->2440  2441->3660  3661->4880  4881->6758 ---TOTAL---
DISTR:      2    7%     8   29%     7   25%     4   14%     7   25%    28  100%
```

This area is displayed only if the RANGES keyword is specified with the timer request for the service. Otherwise, only the maximum or minimum recorded values are shown as MAX or MIN value.

RANGE The user-defined range limits. Four upper-range limits can be defined with the RANGES keyword of the request. The first lower-range is set to zero. Each successive lower-range limit is equal to the preceding upper-range limit +1.

The fifth upper-range limit is the sample value that exceeded the maximum range limit specified by the RANGES keyword of the request. It is always the maximum observed sample value. If no sample value exceeds the maximum specified range limit, the maximum value encountered is displayed.

DISTR — The number and relative percentage of sample values falling into each range.

Show Monitor (W Line Command)

The W line command can be used for any request shown in the Active Timer Requests list. The request types in the list are either for time-driven data collection monitor services or Image logging requests of monitor summary (DMON or DWARN) displays. Selecting a request with the W line command generates a display panel of the previously defined options for that timer request, as shown by the example in Figure 2-9:

Figure 2-9 Show Resource Monitor Request Panel

```
BMC SOFTWARE ------------ SHOW RESOURCE MONITOR REQUEST ------ PERFORMANCE MGMT
COMMAND ===>                                                  TGT ===> CICSPROD

                      SDCT - CICS STORAGE DUMPS

PARM:                                    (Resource Selection Parameter)

INTERVAL:   00:01:00  START:   09:18:00   STOP:                   QIS:   YES

WVAL:       3         WMSG:               WLIM:   10   WIF:   1    WIN:   1

RST:        HOT                           (Restart Option: HOT,COLD,PUR,QIS)

TITLE:      CICS STORAGE DUMPS            (Title)

PLOTMAX:                                 (Maximum PLOT X-Axis Value)

RANGES:                                  (1-4 Range Distr. Upper Limits)

LOG:        NO                           (NO,ATSTOP,ATPD,ATINTVL,ATWARN)
```

Each option is suffixed by a colon (:), which means the option value cannot be changed. The options are defined in “Keyword Parameters” on page B-1.

Pressing the **END** key redisplays the Active Timer Requests list.

Monitor or Trace Request Selecting a request for a monitor or trace service with the W line command shows the options that were requested to activate data collection by this monitor service (see Figure 2-9). It is used only to view the options, not to change them. Figure 2-9 is an example of a resource monitor request. The panels for workload monitor requests show the different options available for these services (see “Start Workload or Resource Monitor (S Line Command)” on page 2-23).

Image Log Request The W line command for a logging request or a monitor summary (DMON or DWARN) panel shows the previously defined options for BBI-SS PAS Image logging with a colon (:) suffix. It is used only to view the options, not to change them.

Modify Monitor (M Line Command)

Selecting a request with the M line command displays a data entry panel with options that were defined to activate either data collection for a monitor service or Image logging for a display service. Previously defined option values that are prefixed with an ==> can be changed, as shown by the example in Figure 2-10 on page 2-12.

Figure 2-10 Modify Resource Monitor Request Panel

```
BMC SOFTWARE ---------- MODIFY RESOURCE MONITOR REQUEST ---- REQUEST ACCEPTED
COMMAND ===>                                                 TGT ===> CICSPROD

                     DSUT - CICS DSA UTILIZATION

PARM:       CDSA                          (Resource Selection Parameter)

INTERVAL:   00:00:20  START:   09:18:00   STOP ==>                QIS ==> YES

WVAL    ==> 90       WMSG  ==>            WLIM ==> 10  WIF ==> 1   WIN ==> 1

RST     ==> HOT                           (Restart Option: HOT,COLD,PUR,QIS)

TITLE:      CICS DSA UTILIZATION          (Title)

PLOTMAX ==>                               (Maximum PLOT X-Axis Value)

RANGES:                                   (1-4 Range Distr. Upper Limits)

LOG     ==> ATWARN                        (NO,ATSTOP,ATPD,ATINTVL,ATWARN)
```

For options with a colon (:) suffix, the values cannot be changed. The options are defined in “Keyword Parameters” on page B-1.

The request is submitted when the **Enter** key is pressed. A short message in the upper right corner of the panel shows the result of the request. If an ERROR IN REQUEST message is displayed, a short explanatory message is also displayed.

Pressing the END key (PF3/15) redisplays the Active Timer Requests list.

Resource Monitor Request: The M line command for a resource monitor service displays the timer request options used to start data collection (see "Start Workload or Resource Monitor (S Line Command)" on page 2-23). As shown in Figure 2-10, the following options have fields prefixed with an ==> (their displayed values can be changed):

Option	Description
STOP	service stop time
QIS	service quiesce state
WVAL	warning threshold
WMSG	warning message routing
WLIM	maximum warning messages
WIF	number of intervals before first warning
WIN	number of intervals between warnings
RST	service restart
PLOTMAX	maximum X-axis value for plot display
LOG	automatic BBI-SS PAS Image logging of PLOT display (default is NO)

Workload Monitor Request: The options that can be modified for workload monitor requests are the same as those listed above for resource monitor requests.

Note: Workload monitor selection criteria cannot be modified.

Image Log Request: The M line command for a monitor summary service displays the request options used to log the service display to the BBI-SS PAS Image log. The following options have fields prefixed with an ==> (their displayed values can be changed):

Option	Description
STOP	service stop time
QIS	service quiesce state
RST	service restart

Replicate Monitor (R Line Command)

The R line command displays a data entry panel for the selected service, as shown in Figure 2-11.

Figure 2-11 Replicate Resource Monitor Request Panel

```
BMC SOFTWARE --------- REPLICATE RESOURCE MONITOR REQUEST ---- PERFORMANCE MGMT
COMMAND ===>                                                  TGT ===> CICSPROD

                      DSUT - CICS DSA UTILIZATION

PARM     ==> CDSA                          (Resource Selection Parameter)

INTERVAL ==> 00:01:00 START ==> 12:51:00  STOP ==>                QIS ==> YES

WVAL     ==> 90       WMSG  ==> WTO       WLIM ==> 5   WIF ==> 1   WIN ==> 1

RST      ==> HOT                           (Restart Option: HOT,COLD,PUR,QIS)

TITLE    ==> CICS DSA UTILIZATION          (Title)

PLOTMAX  ==>                               (Maximum PLOT X-Axis Value)

RANGES   ==>                               (1-4 Range Distr. Upper Limits)

LOG      ==> ATWARN                        (NO,ATSTOP,ATPD,ATINTVL,ATWARN)
```

This panel displays the options defined to start the monitor (see “Start Workload or Resource Monitor (S Line Command)” on page 2-23). All values prefixed with an ==> can be modified.

This application can be used to start a new request for the selected service. “Keyword Parameters” on page B-1 describes each option and the value that can be specified. Each request must be defined by a unique parameter in the **PARM** field.

Pressing the **Enter** key submits the request. A short message in the upper right corner of the panel shows the result of the request. If an ERROR IN REQUEST message is displayed, a short explanatory message is also displayed.

Pressing the END key (PF3/15) redisplays the Active Timer Requests list.

Monitor or Trace Request: Using the R line command for a monitor or trace service displays all of the options previously defined to start data collection for the selected request (see “Start Workload or Resource Monitor (S Line Command)” on page 2-23). All the option values can be replicated or changed and submitted by using the **Enter** key, as long as the request is unique.

Image Log Request Using the R line command for a display service shows all of the options previously defined to log the display to the BBI-SS PAS Image log. All the option values can be replicated or changed and submitted by using the **Enter** key, as long as the request is unique.

Purge Monitor (P Line Command)

Selecting a monitor with the P line command displays a purge confirmation panel, shown in Figure 2-12.

Figure 2-12 Confirm Purge Request Panel

```
BMC SOFTWARE ---------------- CONFIRM PURGE REQUEST -------- REQUEST ACCEPTED
COMMAND ===>                                                TGT ===> CICSPROD

                    #PROC  - TRANS PROCESSED


PARM:                                    Parameter / Identifier

STATUS:        ACTV
START:         12:01:00 (0  days)
STOP:


INSTRUCTIONS:

  Press Enter key to confirm purge request.

  Enter END command to cancel purge request.
```

Pressing the **Enter** key confirms a purge of the selected service request. A short message in the upper right corner of the panel shows the result of the request. If an ERROR IN REQUEST message is displayed, a short explanatory message is also displayed.

Pressing the END key (PF3/15) redisplays the Active Timer Requests list.

To stop a request and retain online plot or trace, use the M line command and specify a stop time. This allows information to remain after collection stops. If a request is purged, all data is lost.

Stop Monitor (Z Line Command)

The Z line command sets the stop time of the selected monitor to the current time. Data collection stops, but previously collected data is retained.

System Commands

The following commands are for system programmer use and are restricted by a security access code:

L	LOCK. Locks this service. The service cannot be used again until it is unlocked.
U	UNLOCK. Unlocks this service. A service can be locked by the use of the LOCK command or a service abend.
T	TEST. Customer Support use only.

Application Transfer Commands

This section describes the application transfer commands: SM, DM, and DW.

Monitor Summary Panel (DMON Command)

The DMON service shows the current status of all active monitors. If you have a color monitor, the graph is displayed in the following colors:

Red	Warning status.
Turquoise	Normal values for the current interval.
Yellow	Maximum threshold: Values for the current period are greater than the values for the previous period. Minimum threshold: Values for the current period are less than the values for the previous period.

Figure 2-13 Monitor Summary Panel

```
BMC SOFTWARE -----------------    MONITOR SUMMARY -------------PERFORMANCE MGMT
SERV ==> DMON            INPUT    12:44:05  INTVL=> 3  LOG=> N  TGT==> CICSPROD
PARM ==> 15             IM1714I CURRENT DISPLAY POSITION =   1.  SCROLL=> N/A
EXPAND:  LINESEL(PLOT)
--------------------------------- STATISTICS---------------------------------
STATUS  - ACTIVE        12:01:49 IMF-SS STARTED
MONITOR STATUS:  19 ACTIVE     0 COMPLETE     0 QUIESCED    1 CURRENT WARNINGS
-----------------------------MONITOR STATISTICS-----------------------------
REQUEST                  --PARM-- CURRENT WVAL| -8-6-4-2-0+2+4+6+8+ |INTVL WARN
CICS DSA UTILIZATION     DSA          28    85| **       W          |   1M
CICS DSA UTILIZATION     EDSA         10    90|          W          |   1M
CICS MAXIMUM TASK PCT                 37    75| ****     W          |   1M
CICS MAX ACTIVE TASK %                20    80| **       W          |   1M
AVG RESPONSE TIME        PAYROLL    0.01  1.00|          W          |   1M
AVG RESPONSE TIME        ACCTG      0.01  2.00|          W          |   1M
AVG ELAPSED TIME         PAYROLL    0.00  0.90|          W          |   1M
AVG ELAPSED TIME         ACCTG      0.01  0.80|          W          |   1M
AVG ELAPSED TIME         SYSTEM     0.01  0.80|          W          |   1M
AVG INPUT Q TIME         SYSTEM     0.00  0.25|          W          |   1M
TRANS PROCESSED          SYSTEM       16    50| **       W          |   1M
TRANS PROCESSED                       16    15| *********W*         |   1M   1M
AVG INPUT Q TIME                     0.00  0.25|          W          |   1M
# CICS SYSTEM PROBLEMS                 1      |                     |   1M
```

Select Code — DMON

Parameter — Specifies the monitor requests to be displayed. The status of 15 monitors is displayed. They can be selected as follows:

- Specifying the relative request number (1 to 3 digits); the default is 1. DMON displays 15 monitor requests beginning with the selected request. Press **Enter** to see the remaining currently-defined monitor requests in groups of 15.
- Specifying a valid request ID. DMON displays 15 monitor requests beginning with the specified request. Press **Enter** to see the remaining currently-defined monitor requests in groups of 15.
- Specifying 0. DMON displays only the first 15 monitor requests. The parameter remains at 0 until either a relative number or a reqid is entered.

Monitor Statistics — Displays status data for all the active monitor requests. It shows each request, the current sampling, the defined threshold, and a graphic summary of all the current measured values compared to defined thresholds.

There is a one-line display for each request. Each line shows the

- full request title (REQUEST)
- request parameter (PARM)
- latest measured value (CURRENT)
- warning threshold (WVAL)

- plot for the current sampling and a warning threshold (W marker) if the WVAL keyword was specified with the request
- sampling interval (INTVL)
- duration of the current warning condition (WARN)

A -100 to +100 warning threshold percentage can be plotted. The plot characters indicate a trend as follows:

< Shows a downward trend from the preceding sampled values.
> Shows an upward trend from the preceding sampled values.
* Shows no change from the preceding sampled values.

Previous period to current period comparison determines the trend direction.

EXPAND — The DMON display can be expanded to the following display:

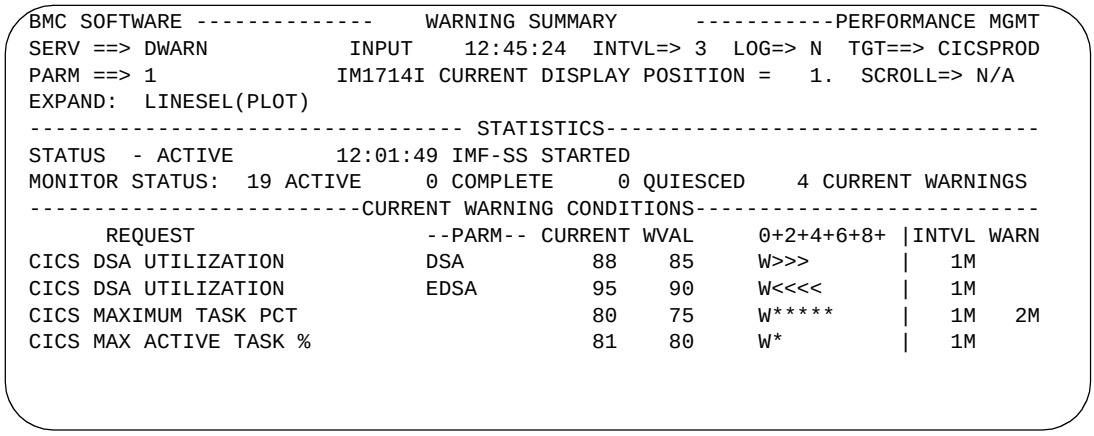
LINESEL(PLOT) Plot for a specific monitor can be selected by positioning the cursor in one of the scrollable lines and pressing **Enter**.

Active Monitor Warning Panel (DWARN Command)

The DWARN service shows only those active monitors currently in a warning condition. If you have a color monitor, the graph is displayed in the following colors:

Red	Warning status.
Turquoise	Normal values for the current interval.
Yellow	Maximum threshold: Values for the current period are greater than the values for the previous period. Minimum threshold: Values for the current period are less than the values for the previous period.

Figure 2-14 Warning Summary Panel



```
BMC SOFTWARE --------------    WARNING SUMMARY      -----------PERFORMANCE MGMT
SERV ==> DWARN           INPUT    12:45:24  INTVL=> 3  LOG=> N  TGT==> CICSPROD
PARM ==> 1              IM1714I CURRENT DISPLAY POSITION =   1.  SCROLL=> N/A
EXPAND:  LINESEL(PLOT)
--------------------------------- STATISTICS---------------------------------
STATUS  - ACTIVE        12:01:49 IMF-SS STARTED
MONITOR STATUS:  19 ACTIVE     0 COMPLETE     0 QUIESCED    4 CURRENT WARNINGS
-------------------------CURRENT WARNING CONDITIONS--------------------------
      REQUEST                   --PARM-- CURRENT WVAL     0+2+4+6+8+ |INTVL WARN
CICS DSA UTILIZATION            DSA          88    85     W>>>       |   1M
CICS DSA UTILIZATION            EDSA         95    90     W<<<<      |   1M
CICS MAXIMUM TASK PCT                        80    75     W*****     |   1M   2M
CICS MAX ACTIVE TASK %                       81    80     W*         |   1M
```

Select Code DWARN

Parameter Specifies the warning monitor requests to be displayed. The status of 15 requests in a warning condition is displayed. They can be selected as follows:

- Specifying the relative request number (1 to 3 digits); the default is 1. DWARN displays 15 warning monitor requests beginning with the selected request. Press **Enter** to see the remaining currently-defined warning monitor requests in groups of 15.
- Specifying a valid reqid (see “Request Initiation” on page 1-6). DWARN displays 15 warning monitor requests beginning with the specified request. Press **Enter** to see the remaining currently-defined warning monitor requests in groups of 15.
- Specifying 0. DWARN displays only the first 15 warning monitor requests. The parameter remains at 0 until either a relative number or reqid is entered.

Current Warning Conditions

DWARN shows each active warning request, the current sampling, the defined threshold, and a graphic summary of the measured values that exceeded defined thresholds.

The one-line listing for each request displays

- full request title (REQUEST)
- request parameter (PARM)
- latest measured value (CURRENT)
- warning threshold (WVAL)
- plot for the current sampling and a warning threshold (W marker)

- sampling interval (INTVL)
- duration of the current warning condition (WARN)

A -100 to +100 warning threshold percentage can be plotted. The plot characters indicate a trend as follows:

< Shows a downward trend from the preceding sampled values.
> Shows an upward trend from the preceding sampled values.
* Shows no change from the preceding sampled values.

Previous period to current period (see “PLOT Sample Display” on page 2-8) comparison determines the trend direction.

EXPAND — The DWARN display can be expanded to the following displays:

LINESEL(PLOT) Plot for a specific monitor can be selected by positioning the cursor in one of the scrollable lines and pressing **Enter**.

Start Monitor (SM Command)

The **SM** command on the Active Timer Requests panel displays the Data Collection Monitors panel. This panel lists the monitors you are able to use. Starting a monitor consists of entering information into this panel and associated ones.

Data Collection Monitors Panel

This panel displays all the monitors you are able to use.

Figure 2-15 Data Collection Monitors Panel

```
BMC SOFTWARE --------------- DATA COLLECTION MONITORS -------- PERFORMANCE MGMT
COMMAND ===>                                                 TGT ===> CICSPROD

COMMANDS: SORT,AREA
LC CMDS: S(SET UP), D(DISPLAY ACTIVE), H(HELP)
LC   SERV    # ACTIVE  TITLE                     PARM TYPE    SEC  AREA   STAT
     DSUT         2    CICS DSA UTILIZATION      (DSA)         A   STOR
     @SVCT             CICS STORAGE VIOLATIONS                 A   STOR
     MXTC         1    CICS MAXIMUM TASK PCT                   A   TASK
     AMXT         1    CICS MAX ACTIVE TASK %                  A   TASK
     SDCT              CICS STORAGE DUMPS                      A   TASK
     @RESP        2    AVG RESPONSE TIME         (IDENTIFIER)  A   WKLD
     @ELAP        3    AVG ELAPSED TIME          (IDENTIFIER)  A   WKLD
     @INPQ        2    AVG INPUT Q TIME          (IDENTIFIER)  A   WKLD
     #PROC        2    TRANS PROCESSED           (IDENTIFIER)  A   WKLD
     @PRB1        1    # CICS SYSTEM PROBLEMS                  A   GENL
     @PRB2        1    # CICS TASK PROBLEMS                    A   GENL
     @PRB3        1    # CICS RESOURCE PROBLEMS                A   GENL
     @PRB4        1    # CICS GLOBAL PROBLEMS                  A   GENL
     @MONI        1    # CICS MONITOR EXCEPTION                A   GENL
     ATRAC        1    CICS APPLICATION TRACE    (IDENTIFIER)  A   WKLD
```

Field Name	Description
LC	A line command input field. One-character line commands are typed in this field. The line commands can be used to access a data entry panel to define the options to activate a new timer request, display HELP information, or show a list of active timer requests for the selected monitor (see “Data Collection Monitors Panel Line Commands” on page 2-23). The Active Timer Requests panel can be used with line commands to view, modify, or replicate the data collection options for a selected request, as described in “Active Timer Requests Panel Commands Overview” on page 2-5.
SERV	A scrollable list of available monitors by service select code.
# ACTIVE	The number of monitors already requested for the service.
TITLE	The service title.
PARM TYPE	A short description of the parameters that can be used, if the service allows parameters.
SEC	The security code for user access to the service.

AREA — The CICS resource area being analyzed. This field could contain

GENL	General CICS system
STOR	Storage
TASK	CICS task
WKLD	CICS workload

STAT — The service status (LOCK, TEST, or blank).

Data Collection Monitors Panel Primary Commands

SORT — When the list of data collection monitor services is displayed initially, the list is sorted by resource area. SORT can be used to sort the list by any of the following column headings. The first two characters of the column heading are used with SORT as follows:

SORT *cc*

where ***cc*** can be any of the following values:

SE	Sorts the list alphabetically by service name (SERV column).
AC|#A	Sorts the list in a numerically descending order (# ACTIVE column).
TI	Sorts the list alphabetically by service title (TITLE column).
SC	Sorts the list alphabetically by the security code.
AR	Sorts the list alphabetically by the resource area (AREA column) and by the service name within the area.
ST	Sorts the list alphabetically by the service status displayed (STATUS column).

SORT without parameters sorts the list by resource area.

AREA — You can use the AREA command to list only the services related to a specified area. The possible areas that can be specified are listed in the AREA column. For example, to list only the CICS workload services, type

AREA WKLD

Type **AREA** to return to the list of all the services.

Data Collection Monitors Panel Line Commands

Typing one of the following one-character line commands in the **LC** field for a service executes the line command function. Multiple selections can be made at one time by typing a series of line commands and pressing the Enter key. Each data-collection timer request in a series is submitted by pressing the **Enter** key and then pressing the END key to process the next request.

Line Command	Description
S	SETUP. Displays a panel enabling you to define and start a monitor. Each request must be unique and is defined by the service select code and an optional parameter. This command is described fully in the following topic.
D	DISPLAY. Displays the Active Timer Requests panel with only those monitors for the selected service shown.
H	HELP. Displays the HELP information for the service. This shows the service title, describes the measured value, defines any parameters, and shows the format of the monitor warning message.

Start Workload or Resource Monitor (S Line Command)

The S command on the Data Collection Monitors panel displays another panel enabling you to define the monitor's parameters and start the monitor. The actual panel displayed depends on the type of monitor selected. If it is a workload-type monitor, the Start Workload Monitor Request panel is displayed. Otherwise the Start Resource Monitor Request panel is displayed. Except for the workload-specific fields on the Start Workload Monitor Request panel, these panels are identical. Therefore, only the Start Workload Monitor Request panel is described in this topic.

Each monitor definition must be unique, and is defined by the service select code and an optional parameter (reqid). The parameter is required if the same service is requested more than once. The service field is preset with the code of the selected service. The input fields are prefixed with a highlighted ==> symbol. Any default values for a field are displayed.

The request is submitted when the **Enter** key is pressed. A short message in the upper right corner of the display shows the result of the request. If an ERROR IN REQUEST message is displayed, a short explanatory message is also displayed.

Pressing the END key (PF3/15) redisplays the Data Collection Monitors list.

Figure 2-16 Start Workload Monitor Request Panel

```
BMC Software ----------- START WORKLOAD MONITOR REQUEST -----  PERFORMANC
COMMAND ===>                                                 TGT ===> PUB

                     @RESP - AVG RESPONSE TIME
PARM     ==>                               (Workload Monitor Identifier)
INTERVAL ==> 00:01:00 START ==>            STOP ==>                 QIS =
WVAL     ==>          WMSG  ==>            WLIM ==> 10  WIF ==> 1   WIN =
TITLE    ==>                               (Title)
RST      ==> HOT                           (Restart Option: HOT,COLD,PUR,
PLOTMAX  ==>                               (Maximum PLOT X-Axis Value)
RANGES   ==>                               (1-4 Range Distr. Upper Limits
LOG      ==>                               (NO,ATSTOP,ATPD,ATINTVL,ATWARN
Specify Workload Selections:
   TRAN     ==>
   PROG     ==>
   TERM     ==>
   USERID   ==>
   CLASS    ==>
   PGMTYPE  ==>
Specify Workload Exclusions (Excluded even if match selections above)
   TRAN     ==>
   PROG     ==>
   TERM     ==>
   USERID   ==>
```

INTERVAL ***hh:mm:ss***

Indicates time interval between successive invocations of the requested service. The default is one minute (00:01:00) or as specified in the BBIISP00 member of the BBPARM data set.

START ***hh:mm:ss***

Requests processing start time. If the time specified is more than 10 minutes prior to the current time, 24 hours are added to the specified time and the request is started the next day. To start a request at midnight, specify 24:00:00.

The default is the next full minute.

STOP ***hh:mm:ss|nnn***

Requests processing stop limit, either as a time stamp or as the number of intervals to process. If the time specified is the same as the start time, 24 hours are added to the stop time.

Processing ends at the end of the last interval before the specified stop time. This time is displayed in the **STOP** field when the request is viewed with the R, P, M, and W line commands from the Active Timer Requests application.

QIS **YES|NO**

Defines the action to be taken for the service when CICS is not active.

YES specifies that the service is to be quiesced and is the default for all monitor services.

NO specifies that the service is to start or continue running.

Note: When QIS=NO is specified, monitors that require CICS continue to be scheduled at each interval; however, they return zero values.

WVAL ***n*|<*n*|NZ**

Specifies a warning threshold. The warning condition exists if the current data measurement exceeds ***n***, the defined threshold.

If **<*n*** is specified, a warning is issued when the measured value is less than or equal to the threshold.

If **NZ** is specified, a warning is issued when the measured value is greater than zero.

The default is 0 or no warnings.

WMSG **WTO|LOG**

Directs warning messages to the system console in addition to the active BBI-SS PAS Journal log. The default is to write only to the log.

An existing warning message to the WTO can be reset to the Journal log only by using the LOG operand.

Routing and descriptor codes can be specified for WTO messages in the BBIISP00 member of the BBPARM data set.

WLIM ***n***

Defines the maximum number of warning messages to be sent for one continuous occurrence of the warning condition. Resets automatically when condition no longer exists.

The default is 10.

WIF ***n***

Defines the number of times the exception is to be detected before the first warning message is issued.

The default is 1.

WIN ***n***

Defines the number of times the exception is to be detected between warning messages.

The default is 1.

TITLE ***text***

Defines a service display title and the contents of a warning message (1 to 24 characters). This user-defined title replaces the default service title.

RST **HOT|COLD|PUR|QIS**

Defines the restart option to be used when a service is quiesced because of an inactive CICS region or BLK=RRR request. The default is **HOT**.

HOT Restarts the service automatically without the loss of history data. The intervals during which CICS was terminated show values of zero.
COLD Restarts the service automatically; all previously collected data is deleted.
PUR Purges the service automatically when the target CICS region starts.
QIS Keeps the service in a quiesced state until it is purged by an authorized user.

PLOTMAX ***n***

Specifies the maximum value for the X-axis of a PLOT graph. The minimum is 50. The specified value is adjusted to the nearest multiple of 50. Percentages displayed by some services are always set at 100.

RANGES ***n* [*,n,n,n*]**

Up to four upper-limit values can be specified for the distribution range of any data collection monitor service. An implied limit of the maximum data measurement value is always defined internally. This information is used to produce a frequency distribution of the data measurement value at the bottom of the PLOT display (see “PLOT Sample Display” on page 2-8).

If RANGES is defined, the distribution is updated at each interval with the current measurement value. A plot of the history displays this distribution.

The default is no ranges.

LOG **NO|ATSTOP|ATPD|ATINTVL|ATWARN**

Specifies if and when automatic logging of the PLOT display to the BBI-SS PAS Image log occurs.

NO	No logging. The default for monitor services.
ATSTOP	Display is updated when processing of this request is stopped. If QIS=Y has been specified in the request, LOG=ATSTOP is invoked at CICS termination and at BBI-SS PAS termination.
ATPD	Display is updated at each period of 10 intervals.
ATINTVL	Display is updated at each interval.
ATWARN	Updates a plot whenever a warning message is generated by the associated monitor.

TRAN ***id***

Qualifies workload monitor data collection by the transaction ID used to process the task.

PROG ***program name***

Qualifies workload monitor data collection by the program used to process the task.

TERM ***id***

Qualifies workload monitor data collection by the terminal ID used to process the task. A one- to eight-character CICS terminal ID or a one- to eight-character VTAM ID can be specified.

USERID ***id***

Qualifies workload monitor data collection by the user ID used to process the task. A one- to three-character CICS OPID or a one- to eight-character user ID can be specified.

CLASS ***nn***

Qualifies workload monitor data collection by the class (0-10) in which the transaction executed. Blank collects data for all classes.

PGMTYPE **NOATI|NOPRT|*id***

Excludes transactions started by ATI (**NOATI**) or from terminals defined as printers (**NOPRT**). It is limited to 16 bytes.

The **PGMTYPE** field also can specify a character from the **T6EPTYPE** field of a Type 6E transaction detail record. By specifying the single-character designator found in the **PGMTYPE** field, you can select work from a supported fourth-generation language or database product. For example, typing **N** selects work from the Natural product. For more information on Type 6E records, see the *MAINVIEW® for CICS PERFORMANCE REPORTER User Guide*.

The fields listed beneath the area of the panel titled Specify Workload Exclusions allow you exclude selected work from response time monitoring. Applicable work entered in the TRAN, PROG, and USERID fields can be excluded. Up to 60 bytes can be specified.

Selected work entered in the CLASS and PGMTYPE fields cannot be excluded. Both fields do not support generic entries. Therefore, to exclude Class 5 work, you should type **1,2,3,4,6,7,8,9,10** in the **CLASS** field of the panel.

Chapter 3 BBI Subsystem Information

Overview

The timer facility controls all requests for timer-driven services, which include

- data collection by the monitor and application trace services
- image logging of the analyzer or monitor service displays

Display Statistics and Defaults Panel

When you select Option S.2, **BBI INFO**, from the Primary Option Menu, MAINVIEW for CICS displays general information about the timer facility in the Display Statistics and Defualts panel, shown in Figure 3-1 on page 3-2.

Figure 3-1 Sample Timer Facility Display

```
BMC Software      ------ DISPLAY STATISTICS AND DEFAULTS ----- PERFORMANCE MGMT
COMMAND ===>                                                 TGT ===> CICSPROD
                                                             TIME --  12:47:47

BBI-SSID: RN34   BBI Release level -- 2.6.0      SS Started: 12:01:49 08SEP1997
                                                 SS Elapsed: 00:45:57

   Requests:          100 Total request blocks        51 Unused blocks
   Activity:         3292 Service calls              132 Warnings written

   Parameters:  ---- General ----                          - TRACE BUFFERS -
                INTERVAL=00:01:00                         STORAGE=100K
                ROUT=NONE                                 TRBUFF=5
                DESC=NONE                                 TRSIZE=40K
                                                          TRLIM=200K

----------------------- DEFINED REQUESTS BY TARGET --------------------------
LC  TARGET   TYPE     ACTIVE  INIT  COMPLETE  HELD  INVALID  LOCKED   QIS   RST
    -TOTAL-  --ALL--      49
    CICSPROD MONITOR      19
    CICSACCT MONITOR      20
    CICSTEST MONITOR       5
    DB2L     MONITOR       5
    DB2L     BK-GRND       7
     *************************** END OF REQUESTS ****************************
```

This panel shows the BBI-SS PAS status, timer facility activity statistics, and timer request default parameters in effect, and summarizes the status of all the timer requests. The information shown is for the BBI-SS PAS connected to the target specified in the **TGT** field of the display. It incorporates information from each of the following MAINVIEW products, if installed:

- MAINVIEW for IMS
- MAINVIEW for CICS
- MAINVIEW for DB2
- MAINVIEW for DBCTL

The panel components are

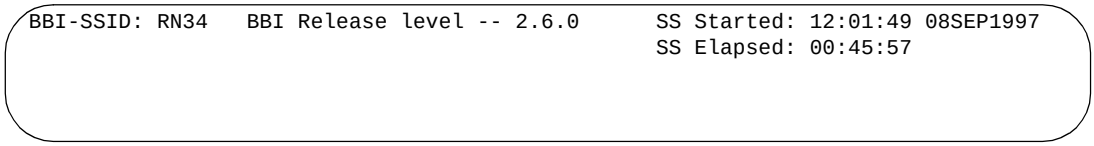
- BBI-SS PAS Status Information
- Timer Facility Activity Statistics
- Timer Request Default Parameters
- Defined Timer Requests by Target

The panel fields are shown and described by panel component in the following sections.

BBI-SS PAS Status Information

This area displays BBI-SS PAS status information.

Figure 3-2 BBI-SS PAS Status

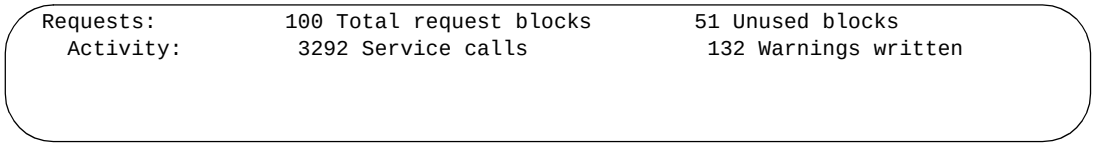


Field	Description
BBI-SSID	A two- to four-character code that identifies the active subsystem.
BBI Release Level	The installed release level of the BBI components.
SS Started	The date and time the BBI-SS PAS was started.
SS Elapsed	The number of hours the BBI-SS PAS has been active.

Timer Facility Activity Statistics

This area displays timer facility activity statistics.

Figure 3-3 Timer Facility Activity



Field	Description
Requests	Total request blocks. The maximum number of timer requests that can be defined concurrently. Unused blocks.

The number of blocks that are still available for new timer requests.

Activity — Service calls.

The number of times the timer facility has invoked a service. This includes requests for data collection monitors and automatic Image logging of analyzer or monitor displays.

Warnings written.

The number of initial warning condition messages issued by the requested data collection monitors.

Active Default Parameters

This area displays active default parameters.

Figure 3-4 Active Default Parameters

These fields show the timer facility default parameters in effect (the defaults are defined in the BBIISP00 member of the BBPARM data set).

Field	Description
INTERVAL	The default timer request interval. This value is used if the INTERVAL keyword is not specified when a timer request is defined. The IBM manual, *MVS/ESA Application Development Macro Reference Codes*, explains the following codes.
ROUT	The MVS console route code or codes for monitor warning WTO messages. NONE is the default.
DESC	The descriptor code or codes for monitor warning WTO messages. NONE is the default.
STORAGE	The amount of extended BBI-SS PAS private area storage allocated for the trace entry buffer.

TRBUFF	The number of trace buffers allocated for each active detail trace.
TRSIZE	The size of each trace buffer.
TRLIM	The upper limit on the total storage that can be allocated for any one trace.

Defined Requests by Target

This area displays defined requests by target.

Figure 3-5 Defined Requests by Target

```
----------------------- DEFINED REQUESTS BY TARGET --------------------------
LC  TARGET   TYPE     ACTIVE  INIT  COMPLETE  HELD  INVALID  LOCKED   QIS   RST
    -TOTAL-  --ALL--      49
    CICSPROD MONITOR      19
    CICSACCT MONITOR      20
    CICSTEST MONITOR       5
    DB2L     MONITOR       5
    DB2L     BK-GRND       7
     ************************** END OF REQUESTS ****************************
```

This portion of the Timer Statistics panel is a scrollable list of all the requests per target for the BBI-SS PAS shown in the BBI-SS PASID field (see “BBI-SS PAS Status Information” on page 3-3). It shows the request type for each target and the amount of activity for each request state.

Field	**Description**
LC	A line command input field. A one-character line command can be typed in this field displays a list of the active timer requests, as described in “Line Commands” on page 3-6.
TARGET	An identification code of a DB2 or IMS subsystem or CICS region.
TYPE	The types of timer requests are as follows: MONITOR Monitor service requests. IMG-LOG Automatic Image logging requests of analyzer or monitor displays.

The total number of requests per target is shown for each of the following request states:

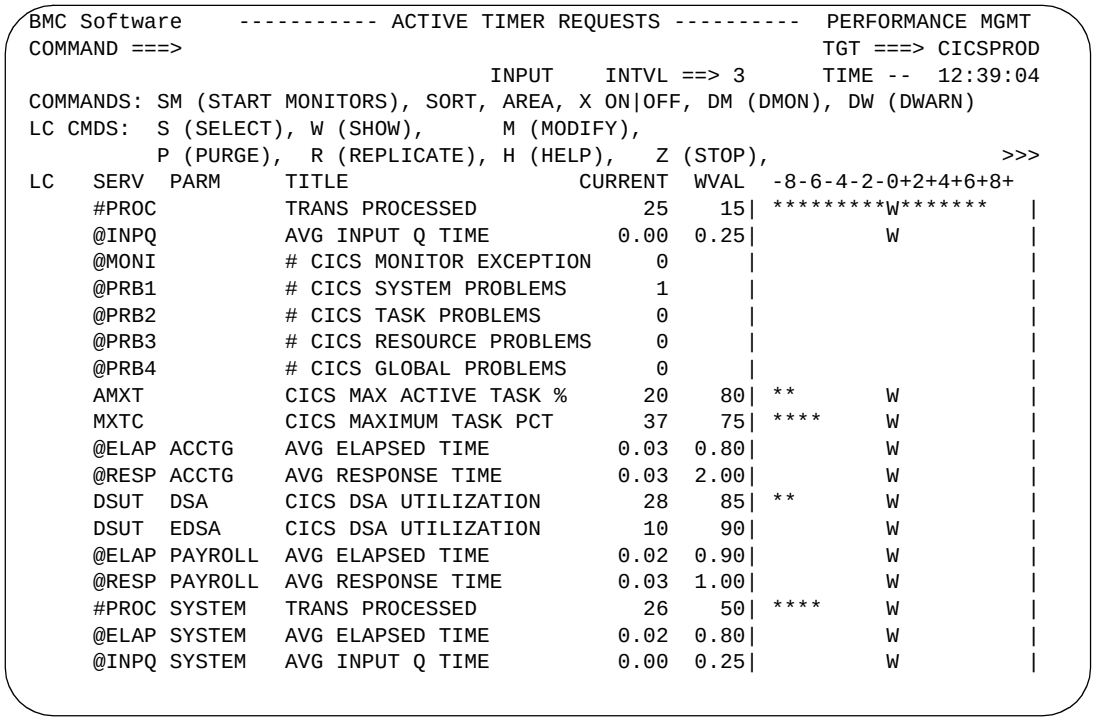
ACTIVE	Active requests.
INIT	Requests waiting to be invoked (a start time was specified, but it has not been reached).
COMPLETE	Requests that completed normal execution.
HELD	Requests being held and pending release.
INVALID	Requests that terminated because of an invalid parameter or measurement. The BBI-SS PAS Journal log contains descriptive messages of the request errors.
LOCKED	Requests that terminated because of a LOCK command or a service routine abend.
QIS	Requests that quiesced because the target was not active.
RST	The target DB2 subsystem restarted, and these are the number of requests waiting until the current interval expires before performing restart processing as specified by the RST keyword in the original request.

Line Commands

Typing the following line command in the LC field of the Timer Facility panel executes the line command function.

Line Command	Description
S	SELECT. Selects the Active Timer Requests panel showing • All the BBI-SS PAS requests (see Figure 3-6 on page 3-7). S is typed in the **LC** field for the TOTAL targets (see Figure 3-5 on page 3-5). • Only those requests for a specific target. S is typed in the LC field for the target identifier. The S line command displays the Active Timer Requests list, described in "Monitor History Panel (S Line Command)" on page 2-7. The list shown in Figure 3-6 on page 3-7 is displayed when the S line command is typed in the LC input field for TOTAL. It displays all the timer requests active for the target shown in the **TGT** field.

Figure 3-6 Active Timer Requests List



```
BMC Software    ----------- ACTIVE TIMER REQUESTS ----------  PERFORMANCE MGMT
COMMAND ===>                                                 TGT ===> CICSPROD
                                  INPUT    INTVL ==> 3      TIME --  12:39:04
COMMANDS: SM (START MONITORS), SORT, AREA, X ON|OFF, DM (DMON), DW (DWARN)
LC CMDS:  S (SELECT), W (SHOW),      M (MODIFY),
          P (PURGE),  R (REPLICATE), H (HELP),   Z (STOP),                >>>
LC   SERV  PARM     TITLE                  CURRENT  WVAL  -8-6-4-2-0+2+4+6+8+
     #PROC          TRANS PROCESSED             25    15| *********W*******   |
     @INPQ          AVG INPUT Q TIME          0.00  0.25|          W          |
     @MONI          # CICS MONITOR EXCEPTION     0      |                     |
     @PRB1          # CICS SYSTEM PROBLEMS       1      |                     |
     @PRB2          # CICS TASK PROBLEMS         0      |                     |
     @PRB3          # CICS RESOURCE PROBLEMS     0      |                     |
     @PRB4          # CICS GLOBAL PROBLEMS       0      |                     |
     AMXT           CICS MAX ACTIVE TASK %      20    80| **       W          |
     MXTC           CICS MAXIMUM TASK PCT       37    75| ****     W          |
     @ELAP ACCTG    AVG ELAPSED TIME          0.03  0.80|          W          |
     @RESP ACCTG    AVG RESPONSE TIME         0.03  2.00|          W          |
     DSUT  DSA      CICS DSA UTILIZATION        28    85| **       W          |
     DSUT  EDSA     CICS DSA UTILIZATION        10    90|          W          |
     @ELAP PAYROLL  AVG ELAPSED TIME          0.02  0.90|          W          |
     @RESP PAYROLL  AVG RESPONSE TIME         0.03  1.00|          W          |
     #PROC SYSTEM   TRANS PROCESSED             26    50| ****     W          |
     @ELAP SYSTEM   AVG ELAPSED TIME          0.02  0.80|          W          |
     @INPQ SYSTEM   AVG INPUT Q TIME          0.00  0.25|          W          |
```

Chapter 4 Monitor Reference

This chapter describes each data collection monitor, including information about:

- select codes
- parameters
- data types
- messages issued

Monitor Messages

Monitors issue messages as problems occur and get resolved. A monitor issues a warning message when a user-defined threshold is exceeded. When the monitored situation returns to a level below the threshold, a resolution message is issued. The effective use of monitors requires understanding the messages they issue.

In the following sections, both warning and resolution messages are given for each monitor. If a monitor does not have a unique resolution message listed for it, its resolution message is the same as its warning message with the addition of a Z severity indicator.

The @TSKC monitor, for example, has the following warning message

```
FT042W TRAN XXXXXXXX TASK 00000 HAS USED NNNNNN.N CPU SEC )
```

but no unique resolution message. Its resolution message is

```
FT042Z TRAN XXXXXXXX TASK 00000 HAS USED NNNNNN.N CPU SEC )
```

The problem monitors use thresholds in the problem threshold table. Additionally, some of the task and general monitors use the problem threshold table if a threshold is not specified. The complete list of messages cross-referenced with their issuing monitors can be found in Appendix A “Monitor Messages.” The list also specifies whether a threshold can be defined in the problem threshold table.

See the *MAINVIEW for CICS Customization Guide* for information about modifying the problem threshold table.

Workload Monitors

Workload monitors collect information about workloads—everything that can be defined as part of a workload: transactions, transient data queues, and transaction classes. These monitors are useful for allocating resources by resource groups or collections, such as transactions and transaction classes.

Note: The @RSTM CICS workload monitor is a CICS monitor (not a MAINVIEW for CICS monitor), and automatically starts whenever a workload is defined. Although it appears among the monitors listed on the Active Timer Request panel, it cannot be manually started.

@ELAP — Average Execution Time

Measures the time from when a task is initially dispatched until it is detached.

Select Code @ELAP

Parameter Workload name identifier

Measurement Average execution time.

Data Type Average

Default Title AVG ELAPSED TIME

Warning Message FT1020W (nn) hh:mm:ss title(p) = v (>thrshld)

Resolution Message FT1021I 9nn0 AVG ELAPSED TIME(p) NO LONGER > value

@INPQ — Average Dispatch Queue Time

This monitor measures the time a task is executing or on the dispatch queue.

Select Code @INPQ

Parameter Workload name identifier

Measurement Average dispatch queue time

Data Type Average

Default Title AVG INPUT Q TIME

Warning Message FT1030W (nn) hh:mm:ss title(p) = v (>thrshld)

Resolution Message FT1031I (nn) hh:mm:ss title(p) NO LONGER > value

@RESP — Average Response Time

This monitor tracks the time taken by transactions within the workload to complete. It measures the time from when a task is attached by CICS until it is detached. The reported time is real time.

Select Code @RESP

Parameter Workload name identifier

Measurement Average response time

Data Type Average

Default Title AVG RESPONSE TIME

Warning Message FT1010W (nn) hh:mm:ss title(p) = v (>thrshld)

Resolution Message FT1011I (nn) hh:mm:ss title(p) NO LONGER > value

#PROC — Number of Transactions Processed

This monitor counts the number of transactions processed.

Select Code #PROC

Parameter Workload name identifier

Measurement The number of transactions processed during the sampling interval

Data Type Count

Default Title TRANS PROCESSED

Warning Message FT1040W (nn) hh:mm:ss title(TOTAL) = v IN x intrvl <thrshld>

Resolution Message FT1041I (nn) hh:mm:ss title(TOTAL) NO LONGER > value

ATRAC

ATRAC is used to start an application trace. See the *MAINVIEW for CICS Online Services Guide*.

Task Monitors

Task monitors track CICS transactions: CPU usage by task, number of database calls by task, and number of files used by task.

@TSKA — Storage above 16MB Line Used by Current Tasks

This monitor tracks the amount of storage above the line allocated to a task. If it exceeds the user-defined threshold, the warning message is issued.

Select Code @TSKA

Parameter Transaction ID

Measurement The storage used by current tasks above the 16MB line

Data Type Kilobytes

Default Title TASK STORAGE USAGE ABOVE

Warning Message FT541 TRAN XXXXXXXX TASK 00000 USING NNNNNN K OF 31BITSTG

Resolution Message Same as warning message with a Z severity indicator

@TSKB — Storage below 16MB Line Used by Current Tasks

This monitor tracks the amount of storage below the line allocated to a task. If it exceeds the user-defined threshold, the warning message is issued.

Select Code @TSKB

Parameter Transaction ID

Measurement The storage used by current tasks below the 16MB line

Data Type Kilobytes

Default Title TASK STORAGE USAGE BELOW

Warning Message FT540 TRAN XXXXXXXX TASK 00000 USING NNNNNN K OF 24BITSTG

Resolution Message Same as warning message with a Z severity indicator

@TSKC — Total Amount of CPU Usage by Current Tasks

This monitor tracks the amount of CPU processing used by a task since it started. If it exceeds the user-defined threshold, the warning message is issued.

Select Code @TSKC

Parameter Transaction ID

Measurement The CPU time used by current tasks

Data Type Times

Default Title TASK CPU USAGE

Warning Message FT042 TRAN XXXXXXXX TASK 00000 HAS USED NNNNNN.N CPU SEC

Resolution Message Same as warning message with a Z severity indicator

@TSKD — Number of Database Calls by Current Tasks

This monitor tracks the number of database calls made by a task. If the user-defined threshold is exceeded, the warning message is issued.

Select Code @TSKD

Parameter Transaction ID

Measurement The number of database calls by current tasks

Data Type Count

Default Title TASK DB USAGE

Warning Message FT539 TRAN XXXXXXXX TASK 00000 ISSUED NNNNNN DB CALLS

Resolution Message Same as warning message with a Z severity indicator

@TSKF — Number of Files Used by Current Tasks

This monitor tracks the number of file calls made by the current task.

Select Code @TSKF

Parameter Transaction ID

Measurement The number of files used by current tasks

Data Type Count

Default Title TASK FILE USAGE

Warning Message FT045 TRAN XXXXXXXX TASK 00000 ISSUED NNNNNN FILE CALLS

Resolution Message Same as warning message with a Z severity indicator

@TSKS — Current Total Storage Used by Active Tasks

This monitor tracks the amount of storage allocated to a task. If it exceeds the user-defined threshold, the warning message is issued. It measures the total amount of storage, both above and below the line.

Select Code @TSKS

Parameter Transaction ID

Measurement The total storage used by current tasks

Data Type Kilobytes

Default Title TASK STORAGE USAGE

Warning Message FT041 TRAN XXXXXXXX TASK 00000 USING NNNNNN K OF STORAGE

Resolution Message Same as warning message with a Z severity indicator

ENQC — Enqueue Conflicts

The ENQC monitor measures the number of deadlocked tasks. For each active task, this monitor scans its enqueued resources in order to determine if another task is waiting for any of them. If a waiting task is identified, it scans that task's resources to determine if any of them are in turn requested by the first monitor. A deadlock results if any of the second task's resources are requested by the first.

Select Code ENQC

Parameter None

Measurement The number of deadlocked tasks

Data Type Count

Default Title DEADLOCKED TASKS

Warning Message FT1200W (nn) hh:mm:ss TASKS ENQUEUE = v (>thrshld)

nn	The number of times the warning message was issued for this monitor request.
hh:mm:ss	The time that the condition was detected.
title	Tasks waiting on enqueues (default) or user-specified
value	The current measured value that exceeded the threshold
<*thrshld*	The threshold specified by WMAX in the SET request

Resolution Message FT1201I (NN) HH:MM:SS TASKS ENQUEUED NO LONGER > VALUE

ENQW — Tasks Waiting on Enqueue

This monitor reports the number of tasks enqueued.

Select Code ENQW

Parameter None

Measurement The number of tasks that are waiting on enqueues

Data Type Count

Default Title TASKS WAITING ON ENQ

Warning Message FT1210W (nn) hh:mm:ss TASKS ENQUEUE = v (>thrshld)

Resolution Message SFT1211I (nn) hh:mm:ss TASKS ENQUEUED NO LONGER > value

SDCT — Total CICS Storage Dumps

This monitor maintains the total number of CICS storage dumps since CICS was started.

Select Code SDCT

Parameter None

Measurement The number of CICS storage dumps that occurred

Data Type Count

Default Title CICS STORAGE DUMPS

Warning Message FT1100W (nn) hh:mm:ss CICS STORAGE DUMPS(p) = v (>thrshld)

Resolution Message FT1101I (nn) hh:mm:ss CICS STORAGE DUMPS(p) NO LONGER > value

MXTC — Current Percentage of Maximum Tasks

This monitor reports the number of current tasks as a percentage of maximum tasks.

Select Code MXTC

Parameter None

Measurement The percentage of maximum tasks (current tasks / maximum tasks)

Data Type Percent

Default Title CICS MAXIMUM TASK PCT

Warning Message FT1070W (nn) hh:mm:ss *title*(p) = v (>thrshld)

Resolution Message FT1071I (nn) hh:mm:ss *title*(p) NO LONGER > value

@CMXT — Percentage of Class Maximum Tasks

This monitor tracks the percentage of active tasks of a given class compared to its class maximum. Often used to ensure that resource intensive tasks grouped into a class do not over burden the system.

Select Code @CMXT

Parameter Name of transaction class. Wildcards may be used.

Measurement The percentage of current class maximum tasks

Data Type Percent

Default Title CLASS MAX TASK %

Warning Message FT614 CLASS XXXXXXXX IS AT NNNN.N PERCENT OF MAX TASK

Resolution Message Same as warning message with a Z severity indicator

IAID — Number of Automatic Initiate Descriptors

This monitor reports the number of outstanding automatic initiate descriptors for the current user-defined interval. The count is reset to zero when the interval expires.

Select Code IAID

Parameter None

Measurement The number of outstanding AIDs in the current interval

Data Type Count

Default Title AUTOMATIC INITIATE DESC

Warning Message FT1170W (nn) hh:mm:ss title(p) = v (>thrshld)

Resolution Message FT1171I (nn) hh:mm:ss title(p) NO LONGER > value

IDCT — Number of CICS Storage Dumps per Interval

This monitor reports the number of storage dumps for the user-defined interval. The count is reset to zero.

Select Code IDCT

Parameter None

Measurement The number of CICS storage dumps that occurred during each sampling interval

Data Type Count

Default Title CICS STORAGE DUMPS/INTV

Warning Message FT1100W (nn) hh:mm:ss title(p) = v (>thrshld)

Resolution Message FT1101I (nn) hh:mm:ss title(p) NO LONGER > value

IICE — Number of Interval Control Elements

This monitor reports the number of outstanding interval control elements for the current user-defined interval. The count is reset to zero when the interval expires.

Select Code IICE

Parameter None

Measurement The number of outstanding ICEs in the current interval

Data Type Count

Default Title INTERVAL CONTROL

Warning Message FT1160W (nn) hh:mm:ss title(p) = v (>thrshld)

Resolution Message FT1161I (nn) hh:mm:ss title(p) NO LONGER > value

Note: The monitor is reset to zero at the end of the monitor interval.

General Monitors

The general monitors track broad areas of CICS performance.

@ACBN—Determine if VTAM ACB is Open

Select Code @ACBN

Parameter None

Measurement Determines whether the VTAM ACB is OPEN or CLOSED.

Data Type Indicator

Default Title VTAM ACB CLOSED

Warning Message FT519W VTAM ACB IS CLOSED

Resolution Message FT519I VTAM ACB IS OPEN

Note: Message are generated only once per state change.

@MONI — Number of Current Service Level Exceptions

Select Code @MONI

Parameter None

Measurement The number of current service level exceptions. These can be seen in the log or in the MONITOR service.

Data Type Count

Default Title # CICS MONITOR EXCEPTION

Warning Message FT1150W (nn) hh:mm:ss title(p) = v (>thrshld)

Resolution Message FT1151I (nn) hh:mm:ss title(p) NO LONGER > value

@GLBD — Percentage Used of CICS TD DFHINTRA

Select Code @GLBD

Parameter None

Measurement The current percentage used of CICS TD DFHINTRA

Data Type Percent

Default Title CICS TD DFHINTRA USED

Warning Message FT547 CICS TD DFHINTRA IN USE AT NNNN.N PERCENT

Resolution Message Same as warning message with a Z severity indicator

@GLBE — Percentage Used of CICS Extended Private Storage

Select Code @GLBE

Parameter None

Measurement The current percent usage of CICS extended private storage

Data Type Percent

Default Title CICS EXT-PRIVATE USED

Warning Message FT543 CICS EXT-PRIVATE STORAGE IN USE AT NNNN.N PERCENT

Resolution Message Same as warning message with a Z severity indicator

@GLBM — Usage of CICS Main Temporary Storage

Select Code @GLBM

Parameter None

Measurement The current usage of CICS main temporary storage in kilobytes

Data Type Count

Default Title CICS TS MAIN IN USE

Warning Message FT545 CICS TS MAIN USING NNNNNN K OF STORAGE

Resolution Message Same as warning message with a Z severity indicator

@GLBP — Percentage Used of CICS Private Storage

Select Code @GLBP

Parameter None

Measurement The current percent usage of CICS private storage

Data Type Percent

Default Title CICS PRIVATE STG USED

Warning Message FT542 CICS PRIVATE STORAGE IN USE AT NNNN.N PERCENT

Resolution Message Same as warning message with a Z severity indicator

@GLBT — Percentage of CPU Usage Attributable to CICS Tasks

Select Code @GLBT

Parameter None

Measurement The total CPU usage percentage attributable to CICS tasks

Data Type	Percent
Default Title	CICS TOTAL CPU
Warning Message	FT046 CICS CURRENTLY USING NNNN.N PERCENT OF CPU
Resolution Message	Same as warning message with a Z severity indicator

@GLBU — Percentage of CPU Usage Attributable to CICS User Tasks

Select Code	@GLBU
Parameter	None
Measurement	The CPU usage percentage attributable to CICS user tasks
Data Type	Percent
Default Title	CICS USER CPU
Warning Message	FT544 USER CPU IS CURRENTLY IN USE AT NNNN.N PERCENT
Resolution Message	Same as warning message with a Z severity indicator

@GLBX — Current CICS Auxiliary Temporary Buffer Storage

Select Code	@GLBX
Parameter	None
Measurement	The current usage of CICS auxiliary temporary buffer storage in kilobytes
Data Type	Count
Default Title	CICS TS AUX IN USE
Warning Message	FT546 CICS TS AUX USING NNNNNN K OF STORAGE
Resolution Message	Same as warning message with a Z severity indicator

@TDBU — Percentage of TD Buffers in Use

Select Code @TDBU

Parameter None

Measurement The percentage of transient data buffers in use

Data Type Percent

Default Title TD BUFFERS IN USE %

Warning Message FT610 CICS TD BUFFERS IN USE AT NNNN.N PERCENT

Resolution Message Same as warning message with a Z severity indicator

@TDBW — Current TD Buffer Waits

Select Code @TDBW

Parameter None

Measurement The current transient data buffer waits

Data Type Count

Default Title TD CURRENT BUFFER WAITS

Warning Message FT611 CICS TD CURRENT BUFFER WAITS ARE NNNNNN

Resolution Message Same as warning message with a Z severity indicator

@TDSU — Percentage of TD Strings in Use

Select Code @TDSU

Parameter None

Measurement The percentage of transient data strings in use

Data Type Percent

Default Title TD STRINGS IN USE %

Warning Message FT612 CICS TD STRINGS IN USE AT NNNN.N PERCENT

Resolution Message Same as warning message with a Z severity indicator

@TDSW — Current TD String Waits

Select Code @TDSW

Parameter None

Measurement The current transient data string waits

Data Type Count

Default Title TD CURRENT STRING WAITS

Warning Message FT613 CICS TD CURRENT STRING WAITS ARE NNNNNN

Resolution Message Same as warning message with a Z severity indicator

@TDQL — Records in Queue for Destination ID

This monitor reports the number of unprocessed elements enqueued.

Select Code @TDQL

Parameter One or more transient data queues; destination ID

Measurement The number of records in queue for this destination ID

Data Type Count

Default Title TD QUEUE COUNT

Warning Message FT605 DESTID XXXX HAS 000000 RECORDS IN QUEUE

Resolution Message Same as warning message with a Z severity indicator

Note: Although listed as a general monitor, this monitor is started with the Start Workload Monitor Request panel, not the Start Resource Monitor Request panel as are most of the other general monitors.

@TDQT — Records in Queue Exceeds Trigger

This monitor watches transient data queues that have defined trigger levels. When the number of records enqueued exceeds the threshold, the warning message is issued.

Select Code @TDQT

Parameter One or more transient data queues; destination ID

Measurement The number of records in queue for this destination ID

Data Type Count

Default Title TD QUEUE EXCEEDS TRIGGER

Warning Message FT604 DESTID XXXX EXCEEDS TRIGGER. 000000 RECS IN QUEUE

Resolution Message Same as warning message with a Z severity indicator

Note: Although listed as a general monitor, this monitor is started with the Start Workload Monitor Request panel, not the Start Resource Monitor Request panel as are most of the other general monitors.

@TSBU — Percentage of TS Buffers in Use

Select Code @TSBU

Parameter None

Measurement The percentage of temporary storage buffers in use

Data Type Percent

Default Title TS BUFFERS IN USE %

Warning Message FT606 CICS TS BUFFERS IN USE AT NNNN.N PERCENT

Resolution Message Same as warning message with a Z severity indicator

@TSBW — Current TS Buffer Waits

Select Code	@TSBW
Parameter	None
Measurement	The current temporary storage buffer waits
Data Type	Count
Default Title	TS CURRENT BUFFER WAITS
Warning Message	FT607 CICS TS CURRENT BUFFER WAITS ARE NNNNNN
Resolution Message	Same as warning message with a Z severity indicator

@TSSU — Percentage of TS Strings in Use

Select Code	@TSSU
Parameter	None
Measurement	The percentage of temporary storage strings in use
Data Type	Percent
Default Title	TS STRINGS IN USE %
Warning Message	FT608 CICS TS STRINGS IN USE AT NNNN.N PERCENT
Resolution Message	Same as warning message with a Z severity indicator

@TSSW — Current TS String Waits

Select Code	@TSSW
Parameter	None
Measurement	The current temporary storage string waits
Data Type	Count
Default Title	TS CURRENT STRING WAITS

Warning Message FT609 CICS TS CURRENT STRING WAITS ARE NNNNNN

Resolution Message Same as warning message with a Z severity indicator

GLBO — Largest OSCOR below 16MB Line

Select Code GLBO

Parameter None

Measurement The largest free segment of MVS storage below the 16MB line per interval

Data Type Bytes

Default Title Largest free segment of MVS storage below 16MB line

Warning Message FT1180W (nn) hh:mm:ss title(p) = v (<thrshld)

Resolution Message FT1181I (nn) hh:mm:ss title(p) NO LONGER < value

GLBQ — Largest LSQA Below 16MB Line

Select Code GLBQ

Parameter None

Measurement The largest free segment of LSQA below the 16MB line per interval.

Data Type Bytes

Default Title Largest free segment of LSQA below the 16M line

Warning Message FT1190W (nn) hh:mm:ss title(p) = v (<thrshld)

Resolution Message FT1191I (nn) hh:mm:ss title(p) NO LONGER < value

@IMSN — IMS Not Attached

Select Code @IMSN

Parameter None

Measurement Determines whether the interface between CICS and an IMS subsystem is available.

Data Type Indicator

Default Title IMS NOT ATTACHED

Warning Message FT518W IMS INTERFACE UNAVAILABLE FOR IMS ID (nnnn)

Resolution Message FT518I IMS INTERFACE AVAILABLE FOR IMS ID (nnnn)

JRNR — Journals Waiting Reply

Select Code JRNR

Parameter None

Measurement The number of journals that are waiting on outstanding WTOR replies

Data Type Count

Default Title JOURNALS WAITING REPLY

Warning Message FT1220W (nn) hh:mm:ss JOURNALS WAITING REPLY = v (>thrshld)

Resolution Message FT1221I (nn) hh:mm:ss JOURNALS WAITING REPLY NO LONGER > value

@DB2N — DB2 Not Attached

Select Code @DB2N

Parameter None

Measurement Determines whether the interface between CICS and a DB2 subsystem is available

Data Type Indicator

Default Title DB2 NOT ATTACHED

Warning Message FT517W DB2 INTERFACE UNAVAILABLE FOR DB2 ID (nnnn)

Resolution Message FT517I DB2 INTERFACE AVAILABLE FOR DB2 ID (nnnn)

Problem Monitors

The problem monitors track broad areas of CICS performance. The PRB2 monitor, for instance, tracks resource problems associated with the active tasks. Each problem monitor actually consists of several other monitors. PRB2, for example, runs functions similar to the DSUT monitor, among others.

The problem monitors report the number of problems for their associated areas. When a problem monitor is started, the threshold defined for it is for the total number of problems in its area. Because problem monitors use the problem threshold table, three threshold levels can be defined. When a message is issued, a severity indicator suffix is appended to the message. Problem monitor messages can be found in the log, problem service, and CREGPRB view.

Note: Not all resources tracked by the problem monitors have thresholds. For example, the short on storage resource (message FT050) monitored by @PRB1does not have a threshold.

@PRB1 — Number of Current Problems in CICS

This monitor reports the number of general CICS problems.

Select Code @PRB1

Parameter None

Measurement The number of current problems in CICS itself, such as short-on-storage or maximum tasks

Note: The actual problems can be seen in the log, problem service, or CREGPRB view.

Data Type Count

Default Title # CICS SYSTEM PROBLEMS

Warning Message

FT050 CICS CURRENTLY RUNNING SHORT ON STORAGE

FT051 CICS DYNAMIC STORAGE AREA IN USE AT NNNN.N PERCENT

FT052 CICS HAS GONE SHORT ON STORAGE NNNNNN TIMES

FT053 CURRENTLY AT CICS MAXIMUM TASK CONDITION

FT054 CICS CURRENTLY AT NNNN.N PERCENT OF MAXIMUM TASK

FT055 CICS HAS REACHED MAXIMUM TASK NNNNNN TIMES

FT056 CURRENTLY AT ACTIVE MAXIMUM TASK CONDITION

FT057 CICS CURRENTLY AT NNNN.N PERCENT OF ACTIVE MAX TASK

FT058 HIGHEST NUMBER OF ACTIVE TASKS WAS NNNNNN

FT059 CURRENTLY AT DL/I MAXIMUM TASK CONDITION

FT060 CICS CURRENTLY AT NNNN.N PERCENT OF DL/I MAX TASK

FT061 CICS HAS REACHED DL/I MAX TASK NNNNNN TIMES

FT062 DL/I BUFFER SUBPOOL I/O PERCENTAGE IS NNNN.N

FT063 CICS RUNAWAY TASK CONTROL IS SHUT OFF

FT064 RUNAWAY TASKS HAVE OCCURRED NNNNNN TIMES

FT065 NNNNNN TASKS HAVE BEEN STALL PURGED

FT066 NNNNNN STORAGE VIOLATIONS HAVE OCCURRED

FT067 NNNNNN TEMPORARY STORAGE EXTENSIONS CREATED

FT068 NNNNNN TEMPORARY STORAGE SUSPENSIONS HAVE OCCURRED

FT070 NNNNNN TOTAL REQUESTS QUEUED DUE TO S.O.S

FT082 NNNNNN PERCENT OF DTB LOG REQUESTS HAVE SPILLED

FT083 NNNNNN DTB SPILLS MMMMMM DTB LOGS

FT085 NNNNNN PROGRAM INTERRUPTS HAVE OCCURRED

FT086 NNNNNN STORAGE DUMPS HAVE BEEN TAKEN

FT088 TRAN XXXXXXXX HAS HAD NNNNNN STORAGE VIOLATIONS

FT089 TRAN XXXXXXXX HAS HAD NNNNNN STALL PURGE DUE TO SOS

FT425 CICS INITIALIZING

FT426 CICS TERMINATING

FT1110W (nn) hh:mm:ss title(p) = v (>thrshld)

Resolution Message FT1111I (nn) hh:mm:ss title(p) NO LONGER > value

@PRB2 — Number of Current Problems in CICS Tasks

The PRB2 monitor tracks problems associated with the active tasks.

Select Code @PRB2

Parameter None

Measurement The number of current problems in CICS tasks, such as excessive storage or execution time

Note: The actual problems can be seen in the log or in the problem service.

Data Type Count

Default Title # CICS TASK PROBLEMS

Warning Message FT041 TRAN XXXXXXXX TASK 00000 USING NNNNNNK OF STORAGE

FT042 TRAN XXXXXXXX TASK 00000 HAS USED NNNNNN.N CPU SEC

FT043 TRAN XXXXXXXX TASK 00000 EXECUTING NNNNNN.N SECONDS

FT044 TRAN XXXXXXXX TASK 00000 CONVERSE WAIT NNNNNN.N SEC

FT045 TRAN XXXXXXXX TASK 00000 ISSUED NNNNNN FILE CALLS

FT536 TRAN ____ TASK _____ DB2 THREAD WAIT nnn.n SECS > ttt.t

FT538 TRAN ____ TASK ___ SQL (XXXXXX) WAIT nnn.n > ttt.t

FT539 TRAN aaaa TASK nnnnn ISSUED xxxxxx DB CALLS

FT540 TRAN XXXXXXXX TASK 00000 USING NNNNNNK OF 24bit STG

FT541 TRAN XXXXXXXX TASK 00000 USING NNNNNNK OF 31bit STG

FT1120W (nn) hh:mm:ss title(p) = v (>thrshld)

Resolution Message FT1121I (nn) hh:mm:ss title(p) NO LONGER > value

@PRB3 — Number of Current Problems in CICS Resources

This monitor tracks problems associated with CICS itself.

Select Code @PRB3

Parameter None

Measurement The number of current problems in CICS resources, such as CI and CA splits or excessive program loads

Note: The actual problems can be seen in the log or in the problem service.

Data Type Count

Default Title # CICS RESOURCE PROBLEMS

Warning Message FT091 XXXXXXXX INDEX EXCEEDS DATA I/O BY NNNN.N PERCENT

FT092 XXXXXXXX HAS HAD NNNNNN CONTROL AREA SPLITS

FT093 XXXXXXXX HAS HAD NNNNNN CONTROL INTERVAL SPLITS

FT096 XXXXXXXX HAS HAD NNNNNN TASKS WAITING FOR BUFFER

FT097 XXXXXXXX HAS HAD NNNNNN TASKS WAITING FOR STRING

FT099 XXXXXXXX FETCHED FROM LIBRARY NNNNNN TIMES

FT537 PLAN _____ HAD ____ TASKS WAITING FOR THREAD > tt

FT1130W (nn) hh:mm:ss title(p) = v (>thrshld)

Resolution Message FT1131I (nn) hh:mm:ss title(p) NO LONGER > value

@PRB4 — Number of Current Problems in CICS Monitor Data

This monitor reports the number of problems with the monitors themselves.

Select Code @PRB4

Parameter None

Measurement The number of current problems in CICS monitor data for the CICS region, such as CPU percent or transactions per second

Note: The actual problems can be seen in the log or in the problem service.

Data Type Count

Default Title # CICS GLOBAL PROBLEMS

Warning Message FT046 CICS CURRENTLY USING NNNN.N PERCENT OF CPU

FT047 CICS CURRENT PAGEIN RATE NNNNN.N / SECOND

FT048 CICS EXECUTING NNNNNN.N TRANSACTIONS / SECOND

FT049 CICS EXECUTING NNNNNN.N TERMINAL TRANSACTIONS / SEC

FT1140W (nn) hh:mm:ss title(p) = v (>thrshld)

Resolution Message FT1141I (nn) hh:mm:ss title(p) NO LONGER > value

Storage Monitors

Storage monitors collect information about storage, including temporary size, DSA pages available, total DSA size, and EDSA available.

LSRL — Percentage of LSR LOOKASIDE

Select Code LSRL

Parameter None

Measurement The current percentage of local shared resource (LSR) LOOKASIDE

Data Type Percent

Default Title LSR LOOKASIDE RATE

Warning Message FT1110W (nn) hh:mm:ss LSR LOOKASIDE RATE (p) = v (>thrshld)

Resolution Message FT1111I (nn) hh:mm:ss LSR LOOKASIDE RATE (p) NO LONGER > value

LSRS — Percentage of LSR Strings Used

Select Code LSRS

Parameter None

Measurement The current percentage of local shared resource (LSR) pool strings in use

Data Type Percent

Default Title LSR STRINGS IN USE

Warning Message FT1110W (nn) hh:mm:ss LSR STRINGS IN USE(p) = v (>thrshld)

Resolution Message FT1111I (nn) hh:mm:ss LSR STRINGS IN USE(p) NO LONGER > value

LSRW — Current LSR String Waits

Select Code LSRW

Parameter None

Measurement	The current number of local shared resource (LSR) pool string waits
Data Type	Count
Default Title	LSR STRING WAITS
Warning Message	FT1110W (nn) hh:mm:ss LSR STRING WAITS (p) = v (>thrshld)
Resolution Message	FT1111I (nn) hh:mm:ss LSR STRING WAITS (p) NO LONGER > value

PGMS — Program Storage Size

Select Code	PGMS
Parameter	Pgm Name
Measurement	The current program storage size in kilobytes
Data Type	Kilobytes
Default Title	PROGRAM STORAGE SIZE
Warning Message	FT1110W (nn) hh:mm:ss PROGRAM STORAGE SIZE(p) = v (>thrshld)
Resolution Message	FT1111I (nn) hh:mm:ss PROGRAM STORAGE SIZE(p) NO LONGER > value

TSTE — Temporary Storage Size

Select Code	TSTE
Parameter	TS Name
Measurement	The current temporary storage (TSUTE) size in kilobytes
Data Type	Kilobytes
Default Title	TSUTE STORAGE SIZE
Warning Message	FT1110W (nn) hh:mm:ss TSUTE STORAGE SIZE(p) = v (>thrshld)
Resolution Message	FT1111I (nn) hh:mm:ss TSUTE STORAGE SIZE(p) NO LONGER > value

#DSAV — Current DSA Pages Available

Select Code	#DSAV
Parameter	None
Measurement	The current dynamic storage area (DSA) pages available
Data Type	Count
Default Title	DSA PAGES AVAILABLE
Warning Message	FT1050W (nn) hh:mm:ss DSA PAGES AVAILABLE (p) = v (>thrshld)
Resolution Message	FT1051I (nn) hh:mm:ss DSA PAGES AVAILABLE (p) NO LONGER > value

#DSIZ — Total DSA Size

Select Code	#DSIZ
Parameter	None
Measurement	The total dynamic storage area (DSA) size
Data Type	Pages
Default Title	TOTAL DSA SIZE
Warning Message	FT1050W (nn) hh:mm:ss title(p) = v (>thrshld)
Resolution Message	FT1051I (nn) hh:mm:ss title(p) NO LONGER > value

#DSTO — Current DSA Available

Select Code	#DSTO
Parameter	None
Measurement	The current amount of dynamic storage area (DSA) available
Data Type	Kilobytes
Default Title	DSA AVAILABLE STORAGE

Warning Message FT1050W (nn) hh:mm:ss title(p) = v (>thrshld)

Resolution Message FT1051I (nn) hh:mm:ss title(p) NO LONGER > value

#ESAV — Current EDSA Pages Available

Select Code #ESAV

Parameter None

Measurement The current extended dynamic storage area (EDSA) pages available

Data Type Count

Default Title EDSA PAGES AVAILABLE

Warning Message FT1050W (nn) hh:mm:ss EDSA PAGES AVAILABLE(p) = v (>thrshld)

Resolution Message FT1051I (nn) hh:mm:ss EDSA PAGES AVAILABLE(p) NO LONGER > value

#ESIZ — Total EDSA Size

Select Code #ESIZ

Parameter None

Measurement The total extended dynamic storage area (EDSA) size

Data Type Kilobytes

Default Title TOTAL EDSA SIZE

Warning Message FT1050W (nn) hh:mm:ssTOTAL EDSA SIZE(p) = v (>thrshld)

Resolution Message FT1051I (nn) hh:mm:ss TOTAL EDSA SIZE(p) NO LONGER > value

#ESTO — Current EDSA Available

Select Code	#ESTO
Parameter	None
Measurement	The current amount of extended dynamic storage area (EDSA) available
Data Type	Kilobytes
Default Title	EDSA AVAILABLE STORAGE
Warning Message	FT1050W (nn) hh:mm:ss EDSA AVAILABLE STORAGE(p) = v (>thrshld)
Resolution Message	FT1051I (nn) hh:mm:ss EDSA AVAILABLE STORAGE(p) NO LONGER > value

CSUT — Percentage of CSA Storage in Use

Select Code	CSUT
Parameter	None
Measurement	The current percentage of common system area (CSA) storage in use
Data Type	Percent
Default Title	CSA UTILIZATION
Warning Message	FT1110W (nn) hh:mm:ss CSA UTILIZATION(p) = v (>thrshld)
Resolution Message	FT1111I (nn) hh:mm:ss CSA UTILIZATION(p) NO LONGER > value

DSUT — Percentage of DSA Storage in Use

Select Code DSUT

Parameter Dynamic Storage Area identifier

CICS version 4.1 and later (including CTS)

DSA	Total Dynamic Storage Area
EDSA	Total Extended Dynamic Storage Area
CDSA	CICS Dynamic Storage Area (default)
ECDSA	Extended CICS Dynamic Storage Area
UDSA	User Dynamic Storage Area
EUDSA	Extended User Dynamic Storage Area
RDSA	Read-only Dynamic Storage Area
ERDSA	Extended Read-only Dynamic Storage Area
SDSA	Shared Dynamic Storage Area
ESDSA	Extended Shared Dynamic Storage Area

Measurement Percentage of DSA in use

Data Type Percentage

Default Title CICS DSA UTILIZATION

Warning Message FT1050W (nn) hh:mm:ss CICS DSA UTILIZATION(p) = v (>thrshld)

Resolution Message FT1051I (nn) hh:mm:ss CICS DSA UTILIZATION(p) NO LONGER > value

ECSUT — Percentage of ECSA Storage in Use

Select Code ECSUT

Parameter None

Measurement The current percentage of extended common system area (ECSA) storage in use

Data Type	Percent
Default Title	ECSA UTILIZATION
Warning Message	FT1110W (nn) hh:mm:ss ECSA UTILIZATION(p) = v (>thrshld)
Resolution Message	FT1111I (nn) hh:mm:ss ECSA UTILIZATION(p) NO LONGER > value

@SVCT — Number of Storage Violations

Select Code	@SVCT
Parameter	None
Measurement	The number of storage violations that occurred
Data Type	Count
Default Title	CICS STORAGE VIOLATIONS
Warning Message	FT1060W (nn) hh:mm:ss title(p) = v (>thrshld)
Resolution Message	FT1061I (nn) hh:mm:ss title(p) NO LONGER > value

Appendix A Monitor Messages

Monitors issue messages as problems occur and get resolved. A monitor issues a warning message when a user-defined threshold is exceeded. When the monitored situation returns to a level below the threshold, a resolution message is issued.

In the following sections both warning and resolution messages are given for each monitor. If a monitor does not have a unique resolution message listed for it, its resolution message is the same as its warning message with the addition of a Z severity indicator.

The @TSKC monitor, for example, has the following warning message

```
FT042W TRAN XXXXXXXX TASK 00000 HAS USED NNNNNN.N CPU SEC )
```

but no unique resolution message. Its resolution message is

```
FT042Z TRAN XXXXXXXX TASK 00000 HAS USED NNNNNN.N CPU SEC )
```

Parts of a Message

Messages consist of three parts: message ID, title, and monitored data. While message IDs can be used in messages issued by more than one monitor, the title portion is always unique to the issuing monitor. This means that a message's issuing monitor can always be identified.

The message FT1110W, for instance, can be issued by eight monitors. The following message was issued by the PGMS monitor, identified by the title portion of the message:

FT1110W (01) 07:37:00 **PROGRAM STORAGE SIZE**(ECHOBIG) = 46032 (>40)

If the message had been issued by the TSTE monitor instead, it would be

FT1110W (01) 07:37:00 **Temporary Storage Size**(ECHOBIG) = 46032 (>40)

The four problem monitors—PRB1, PRB2, PRB3, PRB4—are exceptions to this rule. Because these general-purpose monitors actually consist of several other monitors, the messages they issue are identical to other monitors.

For example, the TSKS and PRB2 monitors can both issue this message

FT041 TRAN XXXXXXXX TASK 00000 USING NNNNNNK OF STORAGE

which is identical both in terms of message ID *and* title. To determine which monitor actually issued a message, review the BBI-SS PAS image log.

Message Table

Monitor messages are identified by a unique ID consisting of the prefix FT followed by three or more numbers. In addition, some messages have a severity indicator suffix (I, W, Z). The messages in Table A-1 are sorted by message ID in ascending order. If a message ID is issued by more than one monitor (except for problem monitors), second and subsequent messages are right-justified beneath the initial message. If a problem monitor is the second issuing monitor, the Message column is left blank.

The **PT Table** column indicates whether the message has an entry in the Problem Threshold table. A value of "Y" indicates an entry in the table. See the *MAINVIEW for CICS Customization Guide* for information about modifying that table.

Table A-1 Monitor Messages (Part 1 of 6)

Message	Monitor	PT Table
FT041 TRAN XXXXXXXX TASK 00000 USING NNNNNNK OF STORAGE	@TSKS	Y
	@PRB2	
FT042 TRAN XXXXXXXX TASK 00000 HAS USED NNNNNN.N CPU SEC	@TSKC	Y
	@PRB2	Y
FT043 TRAN XXXXXXXX TASK 00000 EXECUTING NNNNNN.N SECONDS	@PRB2	Y
FT044 TRAN XXXXXXXX TASK 00000 CONVERSE WAIT NNNNNN.N SEC	@PRB2	Y
FT045 TRAN XXXXXXXX TASK 00000 ISSUED NNNNNN FILE CALLS	@TSKF	Y
	@PRB2	Y
FT046 CICS CURRENTLY USING NNNN.N PERCENT OF CPU	@GLBT	Y
	@PRB4	

Table A-1 Monitor Messages (Part 2 of 6)

Message	Monitor	PT Table
FT047 CICS CURRENT PAGEIN RATE NNNNN.N / SECOND	@PRB4	Y
FT048 CICS EXECUTING NNNNNN.N TRANSACTIONS / SECOND	@PRB4	Y
FT049 CICS EXECUTING NNNNNN.N TERMINAL TRANSACTIONS / SEC	@PRB4	Y
FT050 CICS CURRENTLY RUNNING SHORT ON STORAGE	@PRB1	
FT051 CICS DYNAMIC STORAGE AREA IN USE AT NNNN.N PERCENT	@PRB1	Y
FT052 CICS HAS GONE SHORT ON STORAGE NNNNNN TIMES	@PRB1	Y
FT053 CURRENTLY AT CICS MAXIMUM TASK CONDITION	@PRB1	
FT054 CICS CURRENTLY AT NNNN.N PERCENT OF MAXIMUM TASK	@PRB1	Y
FT055 CICS HAS REACHED MAXIMUM TASK NNNNNN TIMES	@PRB1	Y
FT056 CURRENTLY AT ACTIVE MAXIMUM TASK CONDITION	@PRB1	
FT057 CICS CURRENTLY AT NNNN.N PERCENT OF ACTIVE MAX TASK	@PRB1	Y
FT058 HIGHEST NUMBER OF ACTIVE TASKS WAS NNNNNN	@PRB1	Y
FT059 CURRENTLY AT DL/I MAXIMUM TASK CONDITION	@PRB1	
FT060 CICS CURRENTLY AT NNNN.N PERCENT OF DL/I MAX TASK	@PRB1	Y
FT061 CICS HAS REACHED DL/I MAX TASK NNNNNN TIMES	@PRB1	Y
FT062 DL/I BUFFER SUBPOOL I/O PERCENTAGE IS NNNN.N	@PRB1	Y
FT063 CICS RUNAWAY TASK CONTROL IS SHUT OFF	@PRB1	
FT064 RUNAWAY TASKS HAVE OCCURRED NNNNNN TIMES	@PRB1	Y
FT065 NNNNNN TASKS HAVE BEEN STALL PURGED	@PRB1	Y
FT066 NNNNNN STORAGE VIOLATIONS HAVE OCCURRED	@PRB1	Y
FT067 NNNNNN TEMPORARY STORAGE EXTENSIONS CREATED	@PRB1	Y
FT068 NNNNNN TEMPORARY STORAGE SUSPENSIONS HAVE OCCURRED	@PRB1	Y
FT070 NNNNNN TOTAL REQUESTS QUEUED DUE TO S.O.S	@PRB1	Y
FT082 NNNNNN PERCENT OF DTB LOG REQUESTS HAVE SPILLED	@PRB1	Y
FT083 NNNNNN DTB SPILLS MMMMMM DTB LOGS	@PRB1	Y
FT085 NNNNNN PROGRAM INTERRUPTS HAVE OCCURRED	@PRB1	Y
FT086 NNNNNN STORAGE DUMPS HAVE BEEN TAKEN	@PRB1	Y
FT088 TRAN XXXXXXXX HAS HAD NNNNNN STORAGE VIOLATIONS	@PRB1	
FT089 TRAN XXXXXXXX HAS HAD NNNNNN STALL PURGE DUE TO SOS	@PRB1	
FT091 XXXXXXXX INDEX EXCEEDS DATA I/O BY NNNN.N PERCENT	@PRB3	Y
FT092 XXXXXXXX HAS HAD NNNNNN CONTROL AREA SPLITS	@PRB3	Y
FT093 XXXXXXXX HAS HAD NNNNNN CONTROL INTERVAL SPLITS	@PRB3	Y
FT096 XXXXXXXX HAS HAD NNNNNN TASKS WAITING FOR BUFFER	@PRB3	Y
FT097 XXXXXXXX HAS HAD NNNNNN TASKS WAITING FOR STRING	@PRB3	Y

Table A-1 Monitor Messages (Part 3 of 6)

Message	Monitor	PT Table
FT099 XXXXXXXX FETCHED FROM LIBRARY NNNNNN TIMES	@PRB3	Y
FT425 CICS INITIALIZING	@PRB1	
FT426 CICS TERMINATING	@PRB1	
FT517W DB2 INTERFACE xxxxxxxxxxx FOR DB2 ID (nnnn)	@DB2N	
FT517I DB2 INTERFACE AVAILABLE FOR DB2 ID (nnnn)	@DB2N	
FT518W IMS INTERFACE UNAVAILABLE FOR IMS ID (nnnn)	@IMSN	
FT518I IMS INTERFACE AVAILABLE FOR IMS ID (nnnn)	@IMSN	
FT536 TRAN ____ TASK _____ DB2 THREAD WAIT nnn.n SECS > ttt.t	@PRB2	Y
FT537 PLAN _____ HAD ____ TASKS WAITING FOR THREAD > tt	@PRB3	Y
FT538 TRAN ____ TASK ___ SQL (XXXXXX) WAIT nnn.n > ttt.t	@PRB2	Y
FT539 TRAN aaaa TASK nnnnn ISSUED xxxxxx DB CALLS	@TSKD	Y
	@PRB2	Y
FT540 TRAN XXXXXXXX TASK 00000 USING NNNNNNK OF 24bit STG	@TSKB	Y
	@PRB2	Y
FT541 TRAN XXXXXXXX TASK 00000 USING NNNNNNK OF 31bit STG	@TSKA	Y
	@PRB2	Y
FT542 CICS PRIVATE STORAGE IN USE AT NNNN.N PERCENT	@GLBP	Y
FT543 CICS EXT-PRIVATE STORAGE IN USE AT NNNN.N PERCENT	@GLBE	Y
FT544 USER CPU IS CURRENTLY IN USE AT NNNN.N PERCENT	@GLBU	Y
FT545 CICS TS MAIN USING NNNNNNK OF STORAGE	@GLBM	Y
FT546 CICS TS AUX USING NNNNNNK OF STORAGE	@GLBX	Y
FT547 CICS TD DFHINTRA IN USE AT NNNN.N PERCENT	@GLBD	Y
FT604 DESTID XXXX EXCEEDS TRIGGER. NNNNNN RECS IN QUEUE	@TDQT	
FT605 DESTID XXXX HAS NNNNNN RECORDS IN QUEUE	@TDQL	Y
FT606 CICS TS BUFFERS IN USE AT NNNN.N PERCENT	@TSBU	Y
FT607 CICS TS CURRENT BUFFER WAITS ARE NNNNNN	@TSBW	Y
FT608 CICS TS STRINGS IN USE AT NNNN.N PERCENT	@TSSU	Y
FT609 CICS TS CURRENT STRING WAITS ARE NNNNNN	@TSSW	Y
FT610 CICS TD BUFFERS IN USE AT NNNN.N PERCENT	@TDBU	Y
FT611 CICS TD CURRENT BUFFER WAITS ARE NNNNNN	@TDBW	Y
FT612 CICS TD STRINGS IN USE AT NNNN.N PERCENT	@TDSU	Y
FT613 CICS TD CURRENT STRING WAITS ARE NNNNNN	@TDSW	Y
FT614 CLASS XXXXXXXX IS AT NNNN.N PERCENT OF MAX TASK	@CMXT	Y
FT1010W (nn) hh:mm:ss AVG RESPONSE TIME(param) = value (>thrshld)	@RESP	

Table A-1 Monitor Messages (Part 4 of 6)

Message	Monitor	PT Table
FT1011I hh:mm:ss AVG RESPONSE TIME(param) NO LONGER > value	@RESP	
FT1020W (nn) hh:mm:ss AVG ELAPSED TIME(param) = value (>thrshld)	@ELAP	
FT1021I hh:mm:ss AVG ELAPSED TIME(param) NO LONGER > value	@ELAP	
FT1030W (nn) hh:mm:ss AVG INPUT Q TIME(param) = value (>thrshld)	@INPQ	
FT1031I (nn) hh:mm:ss title(p) NO LONGER > value	@INPQ	
FT1040W (nn) hh:mm:ss TRANS PROCESSED(param) = value IN intrvl (>thrshld)	#PROC	
FT1041I hh:mm:ss TRANS PROCESSED(param) NO LONGER > value	#PROC	
FT1050W (nn) hh:mm:ss CICS DSA UTILIZATION(param) = value (>thrshld)	#DSIZ	
FT1050W (nn) hh:mm:ss DSA AVAILABLE STORAGE(p) = v (>thrshld)	#DSTO	
FT1050W (nn) hh:mm:ss TOTAL EDSA SIZE(p) = v (>thrshld)	#ESIZ	
FT1050W (nn) hh:mm:ss EDSA AVAILABLE STORAGE(p) = v (>thrshld)	#ESTO	
FT1050W (nn) hh:mm:ss CICS DSA UTILIZATION(p) = v (>thrshld)	DSUT	
FT1050W (nn) hh:mm:ss DSA PAGES AVAILABLE (p) = v (>thrshld)	#DSAV	
FT1050W (nn) hh:mm:ss EDSA PAGES AVAILABLE(p) = v (>thrshld)	#ESAV	
FT1051I hh:mm:ss CICS DSA UTILIZATION(param) NO LONGER > value	#DSIZ	
FT1051I (nn) hh:mm:ss DSA AVAILABLE STORAGE(p) NO LONGER > value	#DSTO	
FT1051I (nn) hh:mm:ss EDSA PAGES AVAILABLE(p) NO LONGER > value	#ESAV	
FT1051I (nn) hh:mm:ss TOTAL EDSA SIZE(p) NO LONGER > value	#ESIZ	
FT1051I (nn) hh:mm:ss EDSA AVAILABLE STORAGE(p) NO LONGER > value	#ESTO	
FT1051I (nn) hh:mm:ss CICS DSA UTILIZATION(p) NO LONGER > value	DSUT	
FT1051I (nn) hh:mm:ss DSA PAGES AVAILABLE (p) NO LONGER > value	#DSAV	
FT1060W (nn) hh:mm:ss CICS STORAGE VIOLATIONS(param) = value (>thrshld)	@SVCT	
FT1061I hh:mm:ss CICS STORAGE VIOLATIONS(param) NO LONGER > value	@SVCT	
FT1070W (nn) hh:mm:ss CICS MAXIMUM TASK PCT(param) = value (>thrshld)	MXTC	
FT1071I hh:mm:ss CICS MAXIMUM TASK PCT(param) NO LONGER > value	MXTC	
FT1080W (nn) hh:mm:ss CICS MAX ACTIVE TASK %(param) = value (>thrshld)	AMXT	
FT1100W (nn) hh:mm:ss CICS STORAGE DUMPS(param) = value (>thrshld)	IDCT	
FT1100W (nn) hh:mm:ss CICS STORAGE DUMPS(p) = v (>thrshld)	SDCT	
FT1101I (nn) hh:mm:ss CICS STORAGE DUMPS(param) NO LONGER > value	IDCT	
FT1101I (nn) hh:mm:ss CICS STORAGE DUMPS(p) NO LONGER > value	SDCT	
FT1110W (nn) hh:mm:ss # OF CICS SYSTEM PROBLEMS(param) = value (>thrsld)	PRB1	
FT1110W (nn) hh:mm:ss CSA UTILIZATION(p) = v (>thrshld)	CSUT	
FT1110W (nn) hh:mm:ss ECSA UTILIZATION(p) = v (>thrshld)	ECSUT	
FT1110W (nn) hh:mm:ss LSR LOOKASIDE RATE (p) = v (>thrshld)	LSRL	

Table A-1 Monitor Messages (Part 5 of 6)

Message	Monitor	PT Table
FT1110W (nn) hh:mm:ss LSR STRINGS IN USE(p) = v (>thrshld)	LSRS	
FT1110W (nn) hh:mm:ss LSR STRING WAITS (p) = v (>thrshld)	LSRW	
FT1110W (nn) hh:mm:ss PROGRAM STORAGE SIZE(p) = v (>thrshld)	PGMS	
FT1110W (nn) hh:mm:ss TSUTE STORAGE SIZE(p) = v (>thrshld)	TSTE	
FT1111I hh:mm:ss # OF CICS SYSTEM PROBLEMS(param) NO LONGER > value	PRB1	
FT1111I (nn) hh:mm:ss CSA UTILIZATION(p) NO LONGER > value	CSUT	
FT1111I (nn) hh:mm:ss LSR STRING WAITS (p) NO LONGER > value	LSRW	
FT1111I (nn) hh:mm:ss TSUTE STORAGE SIZE(p) NO LONGER > value	TSTE	
FT1111I (nn) hh:mm:ss LSR LOOKASIDE RATE (p) NO LONGER > value	LSRL	
FT1111I (nn) hh:mm:ss ECSA UTILIZATION(p) NO LONGER > value	ECSUT	
FT1111I (nn) hh:mm:ss LSR STRINGS IN USE(p) NO LONGER > value	LSRS	
FT1111I (nn) hh:mm:ss PROGRAM STORAGE SIZE(p) NO LONGER > value	PGMS	
FT1120W (nn) hh:mm:ss # OF CICS TASK PROBLEMS(param) = value (>thrshld)	@PRB2	
FT1121I hh:mm:ss AVG ELAPSED TIME(param) NO LONGER > value	@PRB2	
FT1130W (nn) hh:mm:ss # OF CICS RESOURCE PROBLEMS(param) = value (>thrshld)	@PRB3	
FT1131I hh:mm:ss AVG INPUT Q TIME(param) NO LONGER > value	@PRB3	
FT1140W (nn) hh:mm:ss # OF CICS GLOBAL PROBLEMS(param) = value (>thrshld)	@PRB4	
FT1141I hh:mm:ss TRANS PROCESSED(param) NO LONGER > value	@PRB4	
FT1150W (nn) hh:mm:ss # OF CICS MONITOR EXCEPTIONS(param) = value (>thrshld)	@MONI	
FT1151I hh:mm:ss # OF CICS MONITOR EXCEPTIONS(param) NO LONGER > value	@MONI	
FT1160W (nn) hh:mm:ss CICS INTERVAL CONTROL(param) = value (>thrshld)	IICE	
FT1161I (nn) hh:mm:ss CICS INTERVAL CONTROL(param) NO LONGER > value	IICE	
FT1170W (nn) hh:mm:ss AUTOMATIC INITIATE DESC(param) = value (>thrshld)	IAID	
FT1171I (nn) hh:mm:ss AUTOMATIC INITIATE DESC(param) NO LONGER > value	IAID	
FT1180W (nn) hh:mm:ss OSCORE BELOW = value (<thrshld)	GLBO	
FT1181I (nn) hh:mm:ss OSCORE BELOW NO LONGER < value	GLBO	
FT1190W (nn) hh:mm:ss LSQA BELOW = value (<thrshld)	GLBQ	
FT1191I (nn) hh:mm:ss LSQA BELOW NO LONGER < value	GLBQ	
FT1200W (nn) hh:mm:ss TASKS ENQUEUE = value (>thrshld)	ENQC	
FT1201I (nn) hh:mm:ss TASKS ENQEUEUD NO LONGER > value	ENQC	
FT1210W (nn) hh:mm:ss TASKS ENQUEUE = value (>thrshld)	ENQW	
FT1211I (nn) hh:mm:ss TASKS ENQEUEUD NO LONGER > value	ENQW	

Table A-1 Monitor Messages (Part 6 of 6)

Message	Monitor	PT Table
FT1220W nn) hh:mm:ss JOURNALS WAITING REPLY = value (>thrshld)	JRNR	
FT1221I (nn) hh:mm:ss JOURNALS WAITING REPLY NO LONGER > value	JRNR	

Appendix B Keyword Parameters

The tables in this appendix describe the keyword parameters that can be specified with a data collection monitor.

Nonmodifiable Keyword Options

Certain keyword options cannot be modified (MOD=reqid) because previously collected history would be distorted. These options are

INTERVAL
RANGES
START
TITLE

Selection Criteria

Trace and workload monitor requests can be qualified with selection criteria keywords as described in the tables in “Keywords” on page B-2. Once a trace request is activated, only certain keywords can be changed. To change the others, the trace request must be stopped and reactivated.

A “+” character can be used as a generic name qualifier for a workload monitor or summary trace request. It is not valid for a detail trace request.

Keywords

The syntax for specifying keyword options is free format and keyword-oriented. Any number of blanks, commas, slashes, or parentheses can be interspersed in the text between keywords to improve readability; they are ignored during request processing. The equal sign between keyword and operand is optional, but is recommended to improve readability.

The keywords define a timer request function. Table B-1, “Keyword Summary” describes each function and the keywords that are used. It is an index to the tables that follow. Each table groups the keywords by function, lists the keywords alphabetically, defines applicable operands, and describes what the keyword does.

Table B-1 Keyword Summary (Part 1 of 2)

Table title	Keywords
Keywords to Define Requests	BLK MOD PRG REQ
Keywords to Define Request Activation	INTERVAL I RST START STOP STOPCNT TARGET|TGT
Keywords to Define Warnings (monitors only)	WIF WIN WLIM WMAX|WVAL WMSG
Keywords to Define Special Options	LOG PLOTMAX QIS RANGES TITLE|T
Keywords to Define Application Trace Parameters	GROUPEIP LOGTRAC STORAGE ST TRBUFF TRSIZE TYPE WRAP
Keywords to Define Workload Selection Criteria for Application Trace and Workload Monitors CLASS is valid for Workload Monitors only. AND logic is used for keywords. OR logic is used for keyword operands.	CLASS PROG TRAN TERM USERID XPROG XTRAN XTERM XUSERID

Table B-1 Keyword Summary (Part 2 of 2)

Table title	Keywords
Keywords to Define Trace Logging for Application Trace	TRARCSTC TRCYL TRDISP TRDSN TRNUMDS TRREUSE TRSMSDCL TRSMSMCL TRSMSSCL TRSWTIME TRSUFFIX TRVOLS
Keywords to Define Exception Filters for Application Trace	ABORT CICSFILE CICS4GL CPU DBRQ DBRQC ELAP FCCAL FCWT FCWTC IRWT IRWTC PLAN PSB SHWM SHWME STGOE SUST USTGO XCWT XCWTC

Table B-2 Keywords to Define Requests (Part 1 of 2)

Keyword	Operand	Description	Service
BLK		Identifies a member in BBPARM that contains predefined service requests.	All
	mname	Is a member name in BBPARM.	
	RRR	Resets all requests according to their RST options. This is the same as starting CICS after the requests were quiesced. This operand could be used at midnight to reset statistics for daily monitors.	
	SSS	Is used internally to start services at CICS startup.	
	ZZZ	Is used internally to quiesce services at CICS shutdown.	
MOD	reqid	Modifies an existing request.	All

Table B-2 Keywords to Define Requests (Part 2 of 2)

Keyword	Operand	Description	Service
PRG		Purges existing request or requests (frees the request block).	All
	reqid	Purges a single request.	
	ALL	Purges all existing requests if the user is authorized.	
REQ	reqid	Defines a new request.	All

Table B-3 Keywords to Define Request Activation

Keyword	Operand	Description	Service
INTERVAL|I	hh:mm:ss	Specifies the time interval between successive invocations of the requested service. The default is one minute (00:01:00) or as specified by the user in the BBIISP00 member of the BBPARM data set. It can be used with the LOG keyword to request automatic logging of a display to the BBI-SS PAS Image log.	All
RST		Defines the restart option to be used when a service is quiesced because of an inactive CICS region or BLK=RRR request. The default is HOT.	All
	HOT	Restarts the service automatically without the loss of history data. The intervals during which CICS was terminated show values of zero.	
	COLD	Restarts the service automatically; all previously collected data is deleted.	
	PUR	Purges the service automatically when the target CICS starts.	
	QIS	Keeps the service in a quiesced state until it is purged by an authorized user.	
START	hh:mm:ss	Requests processing start time. If the time specified is more than 10 minutes prior to the current time, 24 hours are added to the specified time and the request is started the next day. To start a request at midnight, specify 24:00:00. The default is the next full minute.	All

Table B-3 Keywords to Define Request Activation (continued)

Keyword	Operand	Description	Service
STOP	nnn	Requests processing duration in minutes.	All
	hh:mm:ss	Requests processing stop time. If the time specified is the same as the START time, 24 hours are added to the STOP time. Processing ends at the end of the last interval before the specified stop time. This time is displayed in the STOP field when the request is viewed with the R, P, M, and W line commands.	
STOPCNT	n	Specifies the number of intervals to be processed. Requests that have completed without collecting history data are purged. The default is no limit. Requests are processed until stopped or purged or until the BBI-SS PAS is terminated.	
TARGET| TGT	id	Specifies a 1- to 8-character CICS region identifier. TARGET is used to override the default target CICS region identified in the TGT field. (AutoOPERATOR must be installed.) TARGET is required if the IMFC command is used in an AutoOPERATOR EXEC to request monitor services. A message is issued to the BBI-SS PAS Journal log if this keyword is not coded in the request.	All

Table B-4 Keywords to Define Warnings (Monitor services only) (Part 1 of 2)

Keyword	Operand	Description	Service
WIF	n	Defines the number of times the exception is to be detected before the first message is sent. The default is 1.	Monitors
WIN	n	Defines the number of times the exception is to be detected between messages. The default is 1.	Monitors
WLIM	n	Defines the maximum number of warning messages to be sent for one continuous occurrence of the warning condition. Resets automatically when condition no longer exists. The default is 10.	Monitors

Table B-4 Keywords to Define Warnings (Monitor services only) (Part 2 of 2)

Keyword	Operand	Description	Service
WMAX|WVAL	n|<n	Specifies a warning threshold. The warning condition exists if the current data measurement exceeds the defined threshold. If <n is specified, a warning is issued when the sampled value is less than or equal to the threshold.	Monitors
	NZ (not zero)	Not zero issues a warning when the measured value is greater than zero. The default is 0 or no warnings. If the service measures time, the measurement units are specified in seconds and tenths of seconds (optional).	
WMSG	WTO|LOG	Directs warning messages to the system console (WTO) in addition to the active BBI-SS PAS Journal log. The default is to write only to the log. An existing warning message to the WTO can be reset to the Journal log only by using the LOG operand. Routing and descriptor codes can be specified for WTO messages in the BBIISP00 member of the BBPARM data set.	Monitors

Table B-5 Keywords to Define Special Options (Part 1 of 2)

Keyword	Operand	Description	Service
LOG		Specifies if and when automatic logging occurs. Analyzer, DMON or DWARN, or PLOT displays can be logged to the BBI-SS PAS Image log. For the monitors, a PLOT of the latest data is written to the BBI-SS PAS Image log.	All
	NO	Indicates no logging. This is the default for monitor services.	
	ATSTOP	Indicates logs are displayed when processing of this request is stopped. If QIS=Y has been specified in the request, LOG=ATSTOP is invoked at CICS termination and at BBI-SS PAS termination.	
	ATPD	Indicates logs are displayed at each period of 10 intervals.	
	ATINTVL	Logs display at each interval as specified by the user with the INTERVAL parameter or in the BBIISP00 member of the BBPARM data set. This is the default for analyzers.	
	ATWARN	Logs a plot whenever a warning message is generated by the associated monitor. NO is the default for the monitor services. ATINTVL is the default for the analyzer services.	

Table B-5 Keywords to Define Special Options (continued) (Part 2 of 2)

Keyword	Operand	Description	Service
PLOTMAX	n	Specifies the maximum value for the X-axis of a PLOT graph. Minimum is 50. The specified value is adjusted to the nearest multiple of 50. Percentages displayed by some services are always set at 100.	Monitors
QIS		Defines the action to be taken for the service when CICS is not active.	All
	YES	Specifies that the service is to be quiesced. This is the default for all monitor services.	
	NO	Specifies that the service is to start or continue running. When QIS=NO is specified, monitors that require CICS continue to be scheduled at each interval; however, they return zero values. The BBI-SS PAS Image log contains screen images of these services.	
RANGES	n [,n,n,n]	Up to four upper-limit values can be specified for the distribution range of any data collection monitor service. An implied limit of the maximum data measurement value is always defined internally. This information is used to produce a frequency distribution of the data measurement value at the bottom of the plot display. If RANGES is defined, the distribution is updated at each interval with the current measurement value. A plot of the history displays this distribution. The default is no ranges.	Monitors
TITLE|T	text	Defines a service display title and the contents of a warning message (1 to 24 characters). This user-defined title replaces the default service title. If the title is specified in a BBPARM member as a series of requests, it must be enclosed in single quotes.	Application Trace

Table B-6 Keywords to Define Application Trace Parameters (Part 1 of 2)

Keyword	Operand	Description	Service
GROUPEIP	Y|N	Identical EIP calls are grouped into one call for detail traces to reduce buffer storage usage.	Application Trace
LOGTRAC	N|Y	Y writes all trace records for this request to a unique trace log data set (TLDS) for this trace. The default is N. If Y is specified with no additional summary or detail trace logging options, a single data set is dynamically allocated using the defaults specified in CMRBEX00 for this CICS.	Application Trace

Table B-6 Keywords to Define Application Trace Parameters (Part 2 of 2)

Keyword	Operand	Description	Service
STORAGE| ST	nnnK	Specifies the size of the BBI-SS PAS display buffer to be used by the Application Trace service. The default is obtained from member IMFISP00/BBIISP00 of the BBPARM data set.	Application Trace
TRBUFF	nnn	Indicates the number of trace buffers to allocate. The default is obtained from member CMRBEX00 of the BBPARM data set.	Application Trace
TRSIZE	nnnK	Indicates the size of trace buffer to use. The default is obtained from member CMRBEX00 of the BBPARM data set.	Application Trace
TYPE	S|D	S requests a summary application trace of completed transactions. D requests a detail application trace that collects major events in the life of the transaction, including all exception events. The default is a summary trace.	Application Trace
WRAP	YES|NO	Determines trace data wrap in the BBI-SS PAS buffer. The default is YES; new data overlays oldest data. NO stops the trace when the buffer is full. MOD=ATRAC, WRAP=YES resumes the trace.	Application Trace

Table B-7 Keywords to Define Workload Selection Criteria (Part 1 of 2)

Keyword	Operand	Description	Service
CLASS	nn	Qualifies workload monitor data collection by the class (0-10) in which the transaction executed (not valid for a workload trace request). Blank collects data for all classes.	Workload Monitors
PROG	program name	Qualifies a workload trace or monitor data collection by the program used to process the task.	Application Trace Workload Monitors
TRAN	id	Qualifies a workload trace or monitor data collection by the transaction ID used to process the task.	Application Trace Workload Monitors
TERM	id	Qualifies a workload trace or monitor data collection by the terminal ID used to process the task. A 1- to 4-character CICS terminal ID or a 1- to 8-character VTAM ID can be specified.	Application Trace Workload Monitors
USERID	id	Qualifies a workload trace or monitor data collection by the user ID used to process the task. A 1- to 3-character CICS OPID or a 1- to 8-character user ID can be specified.	Application Trace Workload Monitors
XPROG	program name	Excludes a workload trace or monitoring by the program name used to process the task.	Application Trace Workload Monitors
XTRAN	id	Excludes a workload trace or monitoring by the transaction ID used to process the task.	Application Trace Workload Monitors

Table B-7 Keywords to Define Workload Selection Criteria (Part 2 of 2)

Keyword	Operand	Description	Service
XTERM	id	Excludes a workload trace or monitoring by the terminal ID used to process the task. A 1- to 4-character CICS terminal ID or a 1- to 8-character VTAM ID can be specified.	Application Trace Workload Monitors
XUSERID	id	Excludes a workload trace or monitoring by the user ID used to process the task. A 1- to 3-character CICS OPID or a 1- to 8-character user ID can be specified.	Application Trace Workload Monitors

Table B-8 Keywords to Define Trace Logging (Part 1 of 2)

Keyword	Operand	Description	Service
TRARCSTC	name	Name of the started task (STC) to be initiated to archive data sets for this trace. The default is no archive STC.	Application Trace
TRCYL	n	Primary allocation in cylinders for trace log data sets. The default value specified in CMRBEX00 with the TRCYL keyword is 3.	Application Trace
TRDISP	NEW|OLD	NEW (default) indicates none of the data sets exist. All the data sets are allocated when the trace request is processed. If any of the data sets cannot be allocated, the trace request will fail and the data sets successfully allocated will be deleted. OLD indicates all the data sets exist and are valid trace data sets. Existing data will be overlaid. If your user authorization specifies TRALLOC=NO, only OLD will be accepted.	Application Trace
TRDSN	name.V01	Name of the first log data set. It must end in .V01. The default name is generated if this keyword is omitted and TRDISP=NEW. If the keyword value has quotation marks, the name is used as specified. If quotes are not used, the TRPREFIX value specified in CMRBEX00 for this CICS region is added in front of the value supplied. If TRPREFIX was not specified, the ID of the user requesting the trace is used. If TRDSN= is specified without LOGTRAC=, LOGTRAC=Y is assumed.	Application Trace
TRNUMDS	n	Number of trace log data sets to be used for this trace. The default is 1. If TRNUMDS= is specified without LOGTRAC=, LOGTRAC=Y is assumed.	Application Trace
TRREUSE	Y|N	Indicates whether to overwrite a log data set that has not been reset. The default is Y.	Application Trace
TRSMSDCL	name	Name of the SMS Data Class to be used when allocating this trace data set. The default is specified in CMRBEX00 with the TRSMSDCL keyword.	Application Trace

Table B-8 Keywords to Define Trace Logging (Part 2 of 2)

Keyword	Operand	Description	Service
TRSMSMCL	name	Name of the SMS Management Class to be used when allocating this trace data set. The default is specified in CMRBEX00 with the TRSMSMCL keyword.	Application Trace
TRSMSSCL	name	Name of the SMS Storage Class to be used when allocating this trace data set. The default is specified in CMRBEX00 with the TRSMSSCL keyword.	Application Trace
TRSWTIME	hh:mm	Specifies the time an automatic log switch from the current log to the next log will occur.	Application Trace
TRSUFFIX	c...	Suffix to be appended to the cluster data set name to make the name of the data component. The default value specified in CMRBEX00 with the TRSUFFIX keyword is D.	Application Trace
TRVOLS	(x,y...)	Volumes to use when allocating a trace log data set. You can specify up to seven volumes. The default value specified in CMRBEX00 with the TRVOLS keyword is SYSDA. Parentheses are required to specify multiple volumes.	Application Trace

Table B-9 Keywords to Define Exception Filters for Application Trace (Part 1 of 2)

Keyword	Operand	Description	Service
ABORT	Y|N	Selects only the transactions that have abended.	Application Trace
CICSFILE	name	Qualifies a trace by a 1- to 8-character file name.	Application Trace
CICS4GL	name	Qualifies a trace by a 1- to 8-character 4GL name.	Application Trace
CPU	hh:mm:ss|ss| <hh:mm:ss|<ss	Qualifies a trace by transaction CPU time.	Application Trace
DBRQ	hh:mm:ss|ss| <hh:mm:ss|<ss	Qualifies a trace by database I/O time.	Application Trace
DBRQC	nnn[K] |<nnn[K]	Qualifies a trace by the number of database I/O waits.	Application Trace
ELAP	hh:mm:ss|ss| <hh:mm:ss|<ss	Qualifies a trace by transaction response time.	Application Trace
FCCAL	nnn[K] |<nnn[K]	Qualifies a trace by the number of File Control calls.	Application Trace
FCWT	hh:mm:ss|ss| <hh:mm:ss|<ss	Qualifies a trace by File Control I/O time.	Application Trace
FCWTC	nnn[K] |<nnn[K]	Qualifies a trace by the number of File Control I/O waits.	Application Trace
IRWT	hh:mm:ss|ss| <hh:mm:ss|<ss	Qualifies a trace by interregion wait time.	Application Trace

Table B-9 Keywords to Define Exception Filters for Application Trace (Part 2 of 2)

Keyword	Operand	Description	Service
IRWTC	nnn[K] |<nnn[K]	Qualifies a trace by the number of interregion waits.	Application Trace
PLAN	name	Qualifies a trace by a 1- to 8-character DB2 plan name.	Application Trace
PSB traces	name	Qualifies a trace by a 1- to 8-character PSB name.	Application Trace
SHWM	nnn[K] |<nnn[K]	Qualifies a trace by the DSA storage high-water mark.	Application Trace
SHWME	nnn[K] |<nnn[K]	Qualifies a trace by the EDSA storage high-water mark.	Application Trace
STGOE	nnn[K] |<nnn[K]	Qualifies a trace by EDSA storage occupancy.	Application Trace
SUST	hh:mm:ss|ss| <hh:mm:ss|<ss	Qualifies a trace by transaction suspend time.	Application Trace
USTGO	nnn[K] |<nnn[K]	Qualifies a trace by DSA storage occupancy.	Application Trace
XCWT	hh:mm:ss|ss| <hh:mm:ss|<ss	Qualifies a trace by File Control exception wait time.	Application Trace
XCWTC	nnn[K] |<nnn[K]	Qualifies a trace by the number of File Control exceptions.	Application Trace

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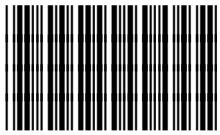

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