CICS Transaction Server for z/OS



CICS Statistics Reference

Version 5 Release 4

CICS Transaction Server for z/OS



CICS Statistics Reference

Version 5 Release 4

Note
Before using this information and the product it supports, read the information in "Notices" on page 509.

This edition applies to the IBM CICS Transaction Server for z/OS Version 5 Release 4 (product number 5655-Y04) and to all subsequent releases and modifications until otherwise indicated in new editions.

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About this PDF

This PDF is a reference of the statistics that can be used to monitor CICS. Before CICS TS V5.4, the information in this PDF was in the *Performance Guide*.

For details of the terms and notation used in this book, see Conventions and terminology used in the CICS documentation in IBM Knowledge Center.

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Chapter 1. DFHSTUP reports

This section lists the CICS® statistics and associated DFHSTUP reports, grouped by the type of statistics, and provides more information about interpreting the statistics.

Asynchronous services statistics

The asynchronous services domain collects global statistics on the use and activity of the CICS asynchronous API.

Asynchronous services domain: Global statistics

Table 1. Asynchronous services domain: Global statistics

DFHSTUP name	Field name	Description
RUN command	ASG_RUN_COUNT	is the total number of RUN TRANSID API commands that have been issued. Reset characteristic: reset to zero
FETCH command	ASG_FETCH_COUNT	is the total number of FETCH CHILD and FETCH ANY API commands that have been issued. Reset characteristic: reset to zero
FREE command	ASG_FREE_COUNT	is the total number of FREE CHILD API commands that have been issued. Reset characteristic: reset to zero
Times RUN command being delayed	ASG_RUN_DELAY_COUNT	is the total number of times that RUN TRANSID API commands have been delayed by flow control. Reset characteristic: reset to zero
Current parents being delayed	ASG_PARENTS_DELAYED_CUR	is the current number of tasks that are being delayed by flow control when issuing a RUN TRANSID API command. Reset characteristic: not reset
Peak parents being delayed	ASG_PARENTS_DELAYED_PEAK	is the peak number of tasks that were delayed by flow control when issuing a RUN TRANSID API command. Reset characteristic: reset to current

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Table 1. Asynchronous services domain: Global statistics (continued)

DFHSTUP name	Field name	Description
Current number of child tasks	ASG_CHILDREN_CUR	is the current number of active tasks that were started by RUN TRANSID API commands. Reset characteristic: not reset
Peak number of child tasks	ASG_CHILDREN_PEAK	is the peak number of active tasks that were started by RUN TRANSID API commands. Reset characteristic: reset to current

Atom feed statistics

The W2 domain collects statistics for ATOMSERVICE resource definitions, which define Atom feeds.

Related reference:

"ATOMSERVICEs report" on page 371
The ATOMSERVICEs report shows information and statistics about ATOMSERVICE resource definitions, which define Atom feeds. This report is produced using a combination of **EXEC CICS INQUIRE ATOMSERVICE** and **EXEC CICS EXTRACT STATISTICS ATOMSERVICE** commands.

Atom feeds: Resource statistics

You can retrieve Atom feed statistics by using the **EXEC CICS EXTRACT STATISTICS ATOMSERVICE()** system command. They are mapped by the DFHW2RDS DSECT.

Table 2. Atom feeds: resource statistics

DFHSTUP name	Field name	Description
ATOMSERVICE Name	W2R_ATOMSERV_NAME	The name of the ATOMSERVICE resource definition. Reset characteristic: not reset

Table 2. Atom feeds: resource statistics (continued)

DFHSTUP name	Field name	Description
Atom document type	W2R_ATOMSERV_TYPE	The type of Atom document that is returned for this ATOMSERVICE resource definition. **Category** An Atom category document, which lists the categories for entries in a collection. **Collection** An Atom collection document, which contains a group of entry documents that can be edited. **Feed** An Atom feed document, which describes the metadata for a feed, and contains entry documents that provide data for the feed. **Service** An Atom service document, which provides information about the collections that are available on the server. Reset characteristic: not reset
Atom binding file	W2R_ATOMSERV_BINDING_FILE	The name of the Atom binding file for the resource used for the Atom feed. Reset characteristic: not reset
Atom configuration file	W2R_ATOMSERV_CONFIG_FILE	The name of the Atom configuration file containing the XML for the Atom document. Reset characteristic: not reset
Resource type for Atom feed	W2R_ATOMSERV_RESTYPE	The type of resource that provides the data for this Atom feed. **File** A CICS file. **Program** A service routine, which is a CICS application program written to supply content for Atom entries. **Tsqueue** A temporary storage queue. Reset characteristic: not reset
Resource name for Atom feed	W2R_ATOMSERV_RESNAME	The name of the CICS resource that provides the data for this Atom feed or collection. Reset characteristic: not reset

Table 2. Atom feeds: resource statistics (continued)

DFHSTUP name	Field name	Description
ATOMSERVICE reference count	W2R_ATOMSERV_REF_COUNT	The number of times this ATOMSERVICE resource definition was referenced. Reset characteristic: reset to zero
ATOMSERVICE referenced - disabled	W2R_ATOMSERV_REF_DISABLED	The number of times this ATOMSERVICE resource definition was referenced, but the resource definition was disabled. Reset characteristic: reset to zero
POST requests to the feed URL	W2R_ATOMSERV_POST_FEED_CNT	The number of HTTP POST requests to add a new Atom entry to this Atom feed or collection. Reset characteristic: reset to zero
GET requests to the feed URL	W2R_ATOMSERV_GET_FEED_CNT	The number of HTTP GET requests to obtain a group of entries from this Atom feed or collection. Reset characteristic: reset to zero
GET requests to the entry URL	W2R_ATOMSERV_GET_ENTRY_CNT	The number of HTTP GET requests to obtain an individual Atom entry from this Atom feed or collection. Reset characteristic: reset to zero
PUT requests to the entry URL	W2R_ATOMSERV_PUT_ENTRY_CNT	The number of HTTP PUT requests to edit an Atom entry in this Atom feed or collection. Reset characteristic: reset to zero
DELETE requests to the entry URL	W2R_ATOMSERV_DEL_ENTRY_CNT	The number of HTTP DELETE requests to delete an individual Atom entry from this Atom feed or collection. Reset characteristic: reset to zero
Not in DFHSTUP report	W2R_ATOMSERV_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	W2R_ATOMSERV_CHANGE_TIME	The time stamp (STCK) in local time of the CSD record change. Reset characteristic: not reset
Not in DFHSTUP report	W2R_ATOMSERV_CHANGE_USERID	The user ID that ran the CHANGE_AGENT. Reset characteristic: not reset

Table 2. Atom feeds: resource statistics (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	W2R_ATOMSERV_CHANGE_AGENT	The agent that was used to make the last change. Reset characteristic: not reset
Not in DFHSTUP report	W2R_ATOMSERV_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	W2R_ATOMSERV_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	W2R_ATOMSERV_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	W2R_ATOMSERV_ URIMAP	The name of the URIMAP resource that indicates the URI that is associated with this ATOMSERVICE resource. Reset characteristic: not reset
Not in DFHSTUP report	W2R_ATOMSERV_ XMLTRANSFORM	The name of the XMLTRANSFORM resource that is associated with this ATOMSERVICE resource. Reset characteristic: not reset

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Related information:

EXTRACT STATISTICS

Atom feeds: Summary resource statistics

Summary statistics are not available online.

Table 3. Atom feeds: Summary resource statistics

DFHSTUP name	Description
ATOMSERVICE Name	The name of the ATOMSERVICE resource definition.

Table 3. Atom feeds: Summary resource statistics (continued)

DFHSTUP name	Description
Atom document type	The type of Atom document that is returned for this ATOMSERVICE resource definition. **Category** An Atom category document, which lists the categories for entries in a collection. **Collection** An Atom collection document, which contains a group of entry documents that can be edited. **Feed** An Atom feed document, which describes the metadata for a feed, and contains entry documents that provide data for the feed. **Service** An Atom service document, which provides information about the collections that are available on the server.
Atom binding file	The name of the Atom binding file for the resource used for the Atom feed.
Atom configuration file	The name of the Atom configuration file containing the XML for the Atom document.
Resource type for Atom feed	The type of resource that provides the data for this Atom feed. **File** A CICS file. **Program** A service routine, which is a CICS application program written to supply content for Atom entries. **Tsqueue** A temporary storage queue.
Resource name for Atom feed	The name of the CICS resource that provides the data for this Atom feed or collection.
ATOMSERVICE reference count	The number of times this ATOMSERVICE resource definition was referenced.
ATOMSERVICE referenced - disabled	The number of times this ATOMSERVICE resource definition was referenced, but the resource definition was disabled.

Autoinstall statistics

This is the DFHSTUP listing for terminals that are connected, while the system is running, by means of the autoinstall facility.

These statistics are obtained as **interval**, **end-of-day**, or **requested** statistics. CICS also records **unsolicited** autoinstall statistics, which DFHSTUP prints in a separate report.

Related reference:

"Program Autoinstall report" on page 435
The Program Autoinstall report shows information and statistics about the status of program autoinstall, catalog program definitions, and the number of autoinstalls that were attempted, rejected, and failed.

Autoinstall: Global statistics - Local definition

You can retrieve autoinstall global statistics by using the **EXEC CICS COLLECT STATISTICS AUTOINSTALL** system command. They are mapped by the DFHA04DS DSECT.

Table 4. Autoinstall: Global statistics - Local definition

DFHSTUP name	Field name	Description
Autoinstall attempts	A04VADAT	is the number of eligible autoinstall attempts made during the current session of CICS to create terminal entries as users logged on. For an attempt to be considered eligible, CICS and z/OS® Communications Server must not be terminating, autoinstall must be enabled, and the terminal type must be valid for autoinstall (not pipeline, LU6.1, or LU6.2 parallel sessions). Reset characteristic: reset to zero
Rejected attempts	A04VADRJ	is the number of eligible autoinstall attempts that were subsequently rejected during the current session of CICS. Reasons for rejection can be maximum concurrency value exceeded, invalid bind, the user program has rejected the logon, and so on. If this number is unduly high, check the reasons for rejection. Reset characteristic: reset to zero
Deleted attempts	A04VADLO	is the number of deletions of terminal entries as users logged off during the current session. Reset characteristic: reset to zero
Peak concurrent attempts	A04VADPK	is the highest number of attempts made during the current session to create terminal entries as users logged on at the same time. Reset characteristic: reset to current value
Times the peak was reached	A04VADPX	is the number of times when the highest number of attempts were made during the current session to create terminal entries as users logged on at the same time. Reset characteristic: reset to 1

Table 4. Autoinstall: Global statistics - Local definition (continued)

DFHSTUP name	Field name	Description
Times SETLOGON HOLD issued	A04VADSH	is the number of times that the SETLOGON HOLD command was issued during this run of CICS. CICS issues the z/OS Communications Server SETLOGON HOLD command when the maximum number of concurrent autoinstall requests allowed (the AIQMAX= system initialization parameter) is exceeded. Reset characteristic: reset to zero
Queued logons	A04VADQT	is the number of attempts that were queued for logon due to delete in progress of the TCTTE for the previous session with the same LU. Reset characteristic: reset to zero
Peak of queued logons	A04VADQK	is the highest number of logons that were queued waiting for TCTTE deletion at any one time. If this is unduly high, consider increasing the delete delay interval parameter of the AILDELAY system initialization parameter. Reset characteristic: reset to current value
Times queued peak reached	A04VADQX	is the number of times this peak was reached. Reset characteristic: reset to 1

Related reference:

COLLECT STATISTICS

Autoinstall: Global statistics - Remote definitions - shipped terminal statistics

Statistics related to remote and shipped terminal definitions.

Table 5. Autoinstall: Global statistics - Remote definitions - shipped terminal statistics

DFHSTUP name	Field name	Description
Delete shipped interval	A04RDINT	is the currently-specified time delay, in the form **hhmmss**, between invocations of the timeout delete transaction that removes redundant shipped terminal definitions. The value is set either by the DSHIPINT system initialization parameter, or by a subsequent SET DELETSHIPPED command. Reset characteristic: not reset

Table 5. Autoinstall: Global statistics - Remote definitions - shipped terminal statistics (continued)

DFHSTUP name	Field name	Description
Delete shipped idle time	A04RDIDL	is the currently-specified minimum time, in the form **hhmmss**, that an inactive shipped terminal definition must remain installed in this region, before it becomes eligible for removal by the CICS timeout delete transaction. The value is set either by the DSHIPIDL system initialization parameter, or by a subsequent SET DELETSHIPPED command. Reset characteristic: not reset
Shipped terminals built	A04SKBLT	is the number of shipped remote terminal definitions installed at the start of the recording period, plus the number built during the recording period. (which equates to the sum of "Shipped terminals installed" and "Shipped terminals timed out"). Reset characteristic: reset to number of skeletons installed
Shipped terminals installed	A04SKINS	is the number of shipped remote terminal definitions currently installed in this region. Reset characteristic: not reset
Shipped terminals timed out	A04SKDEL	is the number of shipped remote terminal definitions deleted during the recording period by the TIMEOUT transaction. Reset characteristic: reset to zero
Times interval expired	A04TIEXP	is the number of times the delete shipped interval (A04RDINT) expired since the start of the recording period. Reset characteristic: reset to zero
Remote deletes received	A04RDREC	is the number of old-style (pre-CICS/ESA 4.1) remote delete instructions received by this region since the start of the recording period. Reset characteristic: reset to zero
Remote deletes issued	A04RDISS	is the number of old-style (pre-CICS/ESA 4.1) remote delete instructions issued by this region since the start of the recording period. Reset characteristic: reset to zero
Successful remote deletes	A04RDDEL	is the number of shipped terminal definitions deleted from this region because of old-style remote delete instructions, since the start of the recording period. Reset characteristic: reset to zero

Table 5. Autoinstall: Global statistics - Remote definitions - shipped terminal statistics (continued)

DFHSTUP name	Field name	Description
Total idle count	A04TIDCT	is the total number of times that all previously used remote terminal definitions (whether deleted from the system or currently in the system) had been idle awaiting reuse. This number does not include the remote terminal definitions currently idle awaiting reuse (see A04CIDCT). Reset characteristic: reset to zero
NOT IN THE DFHSTUP REPORT	A04TIDLE	is the total time (expressed in STCK units) that all previously used remote terminal definitions (whether deleted from the system or currently in the system) had been idle awaiting reuse. This number does not include the remote terminal definitions currently idle awaiting reuse (see A04CIDLE). Reset characteristic: reset to zero
Average idle time		is the average idle time (expressed in STCK units) that all previously used remote terminal definitions (whether deleted from the system or currently in the system) had been idle awaiting reuse. This number does not include the remote terminal definitions currently idle awaiting reuse. This value is calculated offline by DFHSTUP and is, therefore, not accessible through the EXEC CICS COLLECT STATISTICS command. Reset characteristic: not reset
Maximum idle time	A04TMAXI	is the maximum time (expressed in STCK units) for which a previously idle shipped terminal definition had been idle during the recording period. This number does not include the remote terminal definitions currently idle awaiting reuse (A04CMAXI). Reset characteristic: reset to current value
NOT IN THE DFHSTUP REPORT	A04CIDCT	is the current number of remote terminal definitions that are idle and are awaiting reuse. Reset characteristic: Not reset
NOT IN THE DFHSTUP REPORT	A04CIDLE	is the total time that the current number of remote terminal definitions that are awaiting reuse have been idle. Reset characteristic: Not reset

Table 5. Autoinstall: Global statistics - Remote definitions - shipped terminal statistics (continued)

DFHSTUP name	Field name	Description
NOT IN THE DFHSTUP REPORT	A04CMAXI	is the current maximum time that a remote terminal definition that is awaiting reuse has been idle. Reset characteristic: Not reset

Autoinstall: Summary global statistics

Autoinstall summary global statistics are not available online.

Table 6. Autoinstall: Summary global statistics

DFHSTUP name	Description
Autoinstall attempts	is the total number of eligible autoinstall attempts made during the entire CICS session to create terminal entries as users logged on. For an attempt to be considered eligible, CICS and z/OS Communications Server must not be terminating, autoinstall must be enabled, and the terminal type must be valid for autoinstall (not pipeline, LU6.1, or LU6.2 parallel sessions).
Rejected attempts	is the total number of eligible autoinstall attempts that were subsequently rejected during the entire CICS session. Reasons for rejection can be maximum concurrency value exceeded, invalid bind, the user program has rejected the logon, and so on. If this number is unduly high, check the reasons for rejection.
Deleted attempts	is the total number of deletions of terminal entries as users logged off during the entire session.
Peak concurrent attempts	is the highest number of attempts made during the entire CICS session to create terminal entries as users logged on at the same time.
Times the peak was reached	is the number of times that the “peak concurrent attempts” value was reached during the entire CICS session.
Times SETLOGON HOLD issued	is the number of times that the SETLOGON HOLD command was issued during the entire run of CICS. CICS issues the z/OS Communications Server SETLOGON HOLD command when the maximum number of concurrent autoinstall requests allowed (the AIQMAX= system initialization parameter) is exceeded.
Queued logons	is the total number of attempts that were queued for logon due to delete in progress of the TCTTE for the previous session with the same LU.
Peak of queued logons	is the highest number of logons that were queued waiting for TCTTE deletion at any one time. If this is unduly high, consider increasing the delete delay interval parameter of the AILDELAY system initialization parameter.
Times queued peak reached	is the number of times that the “peak of queued logons” value was reached.
Delete shipped interval	is the currently-specified time delay, in the form **hhmmss**, between invocations of the timeout delete transaction that removes redundant shipped terminal definitions. The value is set either by the DSHIPINT system initialization parameter, or by a subsequent SET DELETSHIPPED command.
Delete shipped idle time	is the currently-specified minimum time, in the form **hhmmss**, that an inactive shipped terminal definition must remain installed in this region, before it becomes eligible for removal by the CICS timeout delete transaction. The value is set either by the DSHIPIDL system initialization parameter, or by a subsequent SET DELETSHIPPED command.
Shipped terminals built	is the number of shipped remote terminal definitions installed at the start of the recording period, plus the number built during the recording period (which equates to the sum of “Shipped terminals installed”, a statistic not shown in the summary report, and “Shipped terminals timed out”).
Shipped terminals timed out	is the number of shipped remote terminal definitions deleted during the recording period by the TIMEOUT transaction.

Table 6. Autoinstall: Summary global statistics (continued)

DFHSTUP name	Description
Times interval expired	is the number of times the delete shipped interval expired during the recording period.
Remote deletes received	is the number of old-style (pre-CICS/ESA 4.1) remote delete instructions received by this region during the recording period.
Remote deletes issued	is the number of old-style (pre-CICS/ESA 4.1) remote delete instructions issued by this region during the recording period.
Successful remote deletes	is the number of shipped terminal definitions deleted from this region because of old-style remote delete instructions, during the recording period.
Total idle count	is the total number of times that all previously used remote terminal definitions (whether deleted from the system or currently in the system) had been idle awaiting reuse. This number does not include the remote terminal definitions currently idle awaiting reuse (see A04CIDCT).
Average idle time	is the average idle time (expressed in STCK units) that all previously used remote terminal definitions (whether deleted from the system or currently in the system) had been idle awaiting reuse. This number does not include the remote terminal definitions currently idle awaiting reuse.
Maximum idle time	is the maximum time (expressed in STCK units) for which a previously idle shipped terminal definition had been idle during the recording period. This number does not include the remote terminal definitions currently idle awaiting reuse (A04CMAXI).

BUNDLE statistics

The resource life-cycle (RL) domain collects statistics for BUNDLE resource definitions, which define application bundles in a CICS region.

Related reference:

"Bundles Report" on page 372
The Bundles Report shows information and statistics about BUNDLE resources. The BUNDLE resource defines where a CICS bundle is deployed on z/OS UNIX and its status.

Bundles: resource statistics

You can retrieve bundle statistics by using the **EXEC CICS EXTRACT STATISTICS BUNDLE** system command. They are mapped by the DFHRLRDS DSECT.

Table 7. Bundles: resource statistics

DFHSTUP name	Field name	Description
Bundle name	RLR_BUNDLE_NAME	The name of the BUNDLE resource definition. Reset characteristic: not reset
Bundle directory	RLR_BUNDLE_DIRECTORY	The location of the bundle on z/OS UNIX. Reset characteristic: not reset

Table 7. Bundles: resource statistics (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	RLR_BUNDLE_BASESCOPE	The scope that is associated with the BUNDLE resource. Reset characteristic: not reset
Not in DFHSTUP report	RLR_BUNDLE_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. Reset characteristic: not reset
Not in DFHSTUP report	RLR_BUNDLE_CHANGE_TIME	The time stamp (STCK) in local time of the CSD record change. Reset characteristic: not reset
Not in DFHSTUP report	RLR_BUNDLE_CHANGE_USERID	The user ID that ran the CHANGE_AGENT. Reset characteristic: not reset
Not in DFHSTUP report	RLR_BUNDLE_CHANGE_AGENT	The agent that was used to make the last change. Reset characteristic: not reset
Not in DFHSTUP report	RLR_BUNDLE_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	RLR_BUNDLE_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	RLR_BUNDLE_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Related information:

EXTRACT STATISTICS

BUNDLE: Summary resource statistics

Summary statistics are not available online.

Table 8. Bundles: Summary resource statistics

DFHSTUP name	Description
BUNDLE name	The name of the BUNDLE resource definition.
BUNDLE directory	The location of the bundle in z/OS UNIX.

CICS DB2 statistics

Related concepts:

"Interpreting CICS DB2 statistics"

Related reference:

"DB2 Connection report" on page 380
The DB2® Connection report shows information and statistics about DB2 Connection resource definitions, which define the connection between CICS and DB2 for a CICS region. The report also includes statistics about pool threads, DSNC commands, and tasks that wait for a TCB or pool thread.

"DB2 Entries report" on page 385
The DB2 Entries Report is produced using a combination of the **EXEC CICS INQUIRE DB2ENTRY** and **EXEC CICS EXTRACT STATISTICS DB2ENTRY** commands. The statistics data is mapped by the **DFHD2RDS DSECT**.

Interpreting CICS DB2 statistics

In addition to the limited statistics output by the **DSNC DISP STAT** command and those output to the STATSQUEUE destination of the DB2CONN during attachment facility shutdown, a more comprehensive set of CICS DB2 statistics can be collected using standard CICS statistics interfaces:

- The **EXEC CICS EXTRACT STATISTICS** command accepts the DB2CONN keyword to allow CICS DB2 global statistics to be collected. CICS DB2 global statistics are mapped by the DFHD2GDS DSECT.
- The **EXEC CICS EXTRACT STATISTICS** command accepts the DB2ENTRY() keyword to allow CICS DB2 resource statistics to be collected for a particular DB2ENTRY. CICS DB2 resource statistics are mapped by the DFHD2RDS DSECT.
- The **EXEC CICS PERFORM STATISTICS** command accepts the DB2 keyword to allow the user to request that CICS DB2 global and resource statistics are written out to SMF.

The CICS DB2 global and resource statistics are described in the CICS statistics tables, "CICS DB2 statistics." For more information about CICS and DB2, see Overview of the CICS DB2 interface. Database management for performance deals with CICS DB2 performance.

CICS DB2: Global statistics

You can retrieve CICS DB2 global statistics by using the **EXEC CICS EXTRACT STATISTICS DB2CONN** system command. They are mapped by the DFHD2GDS DSECT.

Table 9. CICS DB2: Global statistics

DFHSTUP name	Field name	Description
DB2 Connection Name	D2G_DB2CONN_NAME	The name of the installed DB2CONN. Reset characteristic: not reset
DB2 Groupid	D2G_DB2_GROUP_ID	The name of a data-sharing group of DB2 subsystems, specified in the installed DB2CONN definition. CICS connects to any active member of this group. If CICS is connected to DB2, or is waiting to reconnect to a specific DB2 subsystem to resynchronize outstanding units of work, D2G_DB2_ID shows the member of the data-sharing group that has been chosen. Reset characteristic: not reset
Resync Group Member	D2G_RESYNCMEMBER	The action CICS takes if you are using group attach, with a DB2 group ID (D2G_DB2_GROUP_ID) set, and outstanding units of work are being held for the last DB2 data sharing group member to which CICS was connected. `Yes` means that CICS reconnects to the last connected DB2 data sharing group member. `No` means that CICS makes one attempt to reconnect to the last connected DB2 data sharing group member, and if that attempt fails, it connects to any member of the DB2 data sharing group. If you are not using group attach, this DSECT field contains nulls (which are shown as N/A in the reports). Reset characteristic: not reset
DB2 Sysid	D2G_DB2_ID	The name of the DB2 subsystem that CICS is connected to, or if a DB2 subsystem ID is specified in the installed DB2CONN definition, the DB2 subsystem that CICS connects to. If a DB2 group ID (D2G_DB2_GROUP_ID) is specified in the installed DB2CONN definition instead of a DB2 subsystem ID, and CICS is not currently connected to DB2, D2G_DB2_ID is normally blank. However, if a DB2 group ID is specified, but CICS is waiting to reconnect to a specific DB2 subsystem to resynchronize outstanding units of work, D2G_DB2_ID shows the ID of the DB2 subsystem to which CICS is waiting to reconnect. Reset characteristic: not reset

Table 9. CICS DB2: Global statistics (continued)

DFHSTUP name	Field name	Description
DB2 Connect Date / Time	D2G_CONNECT_TIME_LOCAL	The local time when CICS connected to DB2. The DFHSTUP report expresses this time as hh:mm:ss; however the DSECT field contains the time as a local store clock (STCK) value. Reset characteristic: not reset
DB2 Disconnect Date / Time	D2G_DISCONNECT_TIME_ LOCAL	The local time when CICS disconnected from DB2. The DFHSTUP report expresses this time as hh:mm:ss; however the DSECT field contains the time as a local store clock (STCK) value. The disconnect time will only be present in DB2CONN unsolicited statistics records produced when the CICS DB2 interface is shut down, after which the time field is cleared to nulls (which are shown as N/A in the reports). Reset characteristic: not reset
DB2 Release	D2G_DB2_RELEASE	The version and release level of the DB2 subsystem that CICS is connected to. If CICS is not currently connected to DB2 the DSECT field contain nulls (which are shown as N/A in the reports). Reset characteristic: not reset
TCB Limit	D2G_TCB_LIMIT	The maximum number of TCBs that can be used by the CICS-DB2 attachment facility. Reset characteristic: not reset
Current number of Connections	D2G_TCB_CURRENT	The current number of connections associated with OPEN TCBs used by the CICS-DB2 attachment facility. Reset characteristic: not reset
Peak number of Connections	D2G_TCB_HWM	The peak number of connections associated with OPEN TCBs used by the CICS-DB2 attachment facility. Reset characteristic: reset to current value (D2G_TCB_CURRENT)

Table 9. CICS DB2: Global statistics (continued)

DFHSTUP name	Field name	Description
Current number of free Connections	D2G_TCB_FREE	The number of free connections available for use with CICS open TCBs. Reset characteristic: not reset
Current number of tasks on the TCB Readyq	D2G_TCB_READYQ_CURRENT	The number of CICS tasks queued waiting because the TCBLIMIT specified in the DB2CONN has been reached. Reset characteristic: not reset
Peak number of tasks on the TCB Readyq	D2G_TCB_READYQ_HWM	The peak number of CICS tasks queued waiting because the TCBLIMIT specified in the DB2CONN has been reached. Reset characteristic: reset to current value (D2G_TCB_READYQ_CURRENT)
Thread reuselimit	D2G_REUSELIMIT	The maximum number of times a thread can be reused before being terminated. Reset characteristic: not reset
Total times reuselimit hit by a pool thread	D2G_POOL_REUSELIMIT_COUNT	The number of times the reuselimit has been reached by a pool thread. Reset characteristic: reset to zero
Pool Thread Plan name	D2G_POOL_PLAN_NAME	The name of the plan used for the pool. If a dynamic plan exit is being used for the pool this DSECT field will be nulls (which are shown as N/A in the reports). Reset characteristic: not reset
Pool Thread Dynamic Planexit name	D2G_POOL_PLANEXIT_NAME	The name of the dynamic plan exit to be used for the pool. If a static plan is being used for the pool this DSECT field will be nulls (which are shown as N/A in the reports). Reset characteristic: not reset

Table 9. CICS DB2: Global statistics (continued)

DFHSTUP name	Field name	Description
Pool Thread Authtype	D2G_POOL_AUTHTYPE	The type of id to be used for DB2 security checking for pool threads. If an Authid is being used for pool threads this DSECT field contains nulls (which are shown as N/A in the reports). Reset characteristic: not reset
Pool Thread Authid	D2G_POOL_AUTHID	The static id to be used for DB2 security checking for pool threads. If an Authtype is being used for pool threads this DSECT field contains nulls (which are shown as N/A in the reports). Reset characteristic: not reset
Pool Thread Accountrec setting	D2G_POOL_ACCOUNTREC	Specifies the frequency of DB2 accounting records to be produced for transactions using pool threads. Reset characteristic: not reset
Pool Thread Threadwait setting	D2G_POOL_THREADWAIT	Specifies whether transactions should wait for a pool thread or be abended if the number of active pool threads exceed the pool thread limit. Reset characteristic: not reset
Pool Thread Priority	D2G_POOL_PRIORITY	The priority of the pool thread subtasks relative to the CICS main task (QR TCB). If CICS is connected to DB2 Version 6 or later, this field contains zero, representing not applicable (which is shown as N/A in the reports). Reset characteristic: not reset
Number of calls using Pool Threads	D2G_POOL_CALLS	The number of SQL calls made using pool threads. If you are using PACKAGESET support for cloud applications, this number includes the number of **EXEC SQL SET CURRENT PACKAGESET** commands issued by DFHD2SPS on behalf of the application. Reset characteristic: reset to zero
Number of Pool Thread Signons	D2G_POOL_SIGNONS	The number of DB2 signons performed for pool threads. Reset characteristic: reset to zero

Table 9. CICS DB2: Global statistics (continued)

DFHSTUP name	Field name	Description
Number of Pool Thread Partial Signons	D2G_POOL_PARTIAL_SIGNONS	The number of DB2 partial signons performed for pool threads. Reset characteristic: reset to zero
Number of Pool Thread Commits	D2G_POOL_COMMITS	The number of 2 phase commits performed for units of work using pool threads. Reset characteristic: reset to zero
Number of Pool Thread Aborts	D2G_POOL_ABORTS	The number of units of work using pool threads that were rolled back. Reset characteristic: reset to zero
Number of Pool Thread Single Phases	D2G_POOL_SINGLE_PHASE	The number of units of work using pool threads that used single phase commit, either because they were read-only UOWs, or because DB2 was the only recoverable resource updated in the UOW. Reset characteristic: reset to zero
Number of Pool Thread Creates	D2G_POOL_THREAD_CREATE	The number of times that CICS transactions using the pool create a DB2 thread. This count includes transactions that overflow to the pool to acquire a thread. Reset characteristic: reset to zero
Number of Pool Thread Reuses	D2G_POOL_THREAD_REUSE	The number of times CICS transactions using the pool were able to reuse an already created DB2 thread. This count includes transactions that overflow to the pool to acquire a thread and reuse an existing thread. Reset characteristic: reset to zero
Number of Pool Thread Terminates	D2G_POOL_THREAD_TERM	The number of terminate thread requests made to DB2 for pool threads. This includes pool threads used by transactions that overflow to the pool. Reset characteristic: reset to zero

Table 9. CICS DB2: Global statistics (continued)

DFHSTUP name	Field name	Description
Number of Pool Thread Waits	D2G_POOL_THREAD_WAITS	The number of times all available threads in the pool were busy and a transaction had to wait for a thread to become available. This count includes transactions that overflow to the pool to acquire a thread and must wait for a pool thread. Reset characteristic: reset to zero
Current Pool Thread Limit	D2G_POOL_THREAD_LIMIT	The current maximum number of pool threads allowed. Reset characteristic: not reset
Current number of Pool Threads in use	D2G_POOL_THREAD_CURRENT	The current number of active pool threads. Reset characteristic: not reset
Peak number of Pool Threads in use	D2G_POOL_THREAD_HWM	The peak number of active pool threads. Reset characteristic: reset to current value (D2G_POOL_THREAD_CURRENT)
Current number of Pool tasks	D2G_POOL_TASK_CURRENT	The current number of CICS tasks that are using a pool thread. Reset characteristic: not reset
Peak number of Pool tasks	D2G_POOL_TASK_HWM	The peak number of CICS tasks that have used a pool thread. Reset characteristic: reset to current value (D2G_POOL_TASK_CURRENT)
Total number of Pool tasks	D2G_POOL_TASK_TOTAL	The total number of completed tasks that have used a pool thread. Reset characteristic: reset to zero.
Current number of tasks on the Pool Readyq	D2G_POOL_READYQ_CURRENT	The current number of CICS tasks waiting for a pool thread to become available. Reset characteristic: not reset

Table 9. CICS DB2: Global statistics (continued)

DFHSTUP name	Field name	Description
Peak number of tasks on the Pool Readyq	D2G_POOL_READYQ_HWM	The peak number of CICS tasks that waited for a pool thread to become available. Reset characteristic: reset to current value (D2G_POOL_READYQ_CURRENT)
Command Thread Authtype	D2G_COMD_AUTHTYPE	The type of id to be used for DB2 security checking for command threads. If an Authid is being used for command threads this DSECT field contains nulls (which are shown as N/A in the reports). Reset characteristic: not reset
Command Thread Authid	D2G_COMD_AUTHID	The static id to be used for DB2 security checking for command threads. If an Authtype is being used for command threads this DSECT field contains nulls (which are shown as N/A in the reports). Reset characteristic: not reset
Number of calls using Command Threads	D2G_COMD_CALLS	The number of DB2 commands issued using the DSNC transaction. Reset characteristic: reset to zero
Number of Command Thread Signons	D2G_COMD_SIGNONS	The number of DB2 signons performed for command threads. Reset characteristic: reset to zero
Number of Command Thread Creates	D2G_COMD_THREAD_CREATE	The number of create thread requests made to DB2 for command threads. Reset characteristic: reset to zero
Number of Command Thread Terminates	D2G_COMD_THREAD_TERM	The number of terminate thread requests made to DB2 for command threads. Reset characteristic: reset to zero
Number of Command Thread Overflows to Pool	D2G_COMD_THREAD_OVERF	The number of times a DSNC DB2 command resulted in a pool thread being used because the number of active command threads exceed the command thread limit. Reset characteristic: reset to zero

Table 9. CICS DB2: Global statistics (continued)

DFHSTUP name	Field name	Description
Command Thread Limit	D2G_COMD_THREAD_LIMIT	The current maximum number of command threads allowed. Reset characteristic: not reset
Current number of Command Threads	D2G_COMD_THREAD_CURRENT	The current number of active command threads. Reset characteristic: not reset
Peak number of Command Threads	D2G_COMD_THREAD_HWM	The peak number of active command threads. Reset characteristic: reset to current value (D2G_COMD_THREAD_CURRENT)
NOT IN THE DFHSTUP REPORT	D2G_CONNECT_TIME_GMT	The Greenwich mean time (GMT) when CICS connected to DB2. The DFHSTUP report expresses this time as hh:mm:ss; however the DSECT field contains the time as a GMT store clock (STCK) value. Reset characteristic: not reset
NOT IN THE DFHSTUP REPORT	D2G_DISCONNECT_TIME_GMT	The Greenwich mean time (GMT) when CICS disconnected from DB2. The DFHSTUP report expresses this time as hh:mm:ss; however the DSECT field contains the time as a GMT store clock (STCK) value. The disconnect time will only be present in DB2CONN unsolicited statistics records produced when the CICS DB2 interface is shut down, after which the time field is cleared to nulls (which are shown as N/A in the reports). Reset characteristic: not reset

Related information:

EXTRACT STATISTICS

CICS DB2: Resource statistics

You can retrieve CICS DB2 resource statistics by using the **EXEC CICS EXTRACT STATISTICS DB2ENTRY** system command. They are mapped by the DFHD2RDS DSECT.

Related information:

EXTRACT STATISTICS

CICS DB2: Resource statistics - resource information

The resource information gives details of various attribute settings of each DB2ENTRY resource.

Table 10. CICS DB2 : Resource statistics - resource information

DFHSTUP name	Field name	Description
DB2Entry Name	D2R_DB2ENTRY_NAME	The name of the installed DB2ENTRY Reset characteristic: not reset
Plan Name	D2R_PLAN_NAME	The name of the plan used for this DB2ENTRY. If a dynamic plan exit is used for the DB2Entry, this DSECT field will be nulls (which are shown as N/A in the reports). Reset characteristic: not reset
PlanExit name	D2R_PLANEXIT_NAME	The name of the dynamic plan exit to be used for this DB2ENTRY. If a static plan is used for the DB2ENTRY this DSECT field is nulls, which are shown as N/A in the reports. Reset characteristic: not reset
Auth Id	D2R_AUTHID	The static ID to be used for DB2 security checking for this DB2ENTRY. If an Authtype is used for the DB2ENTRY this DSECT field is nulls, which are shown as N/A in the reports. Reset characteristic: not reset
Auth Type	D2R_AUTHTYPE	The type of ID to be used for DB2 security checking for this DB2ENTRY. If an Authid is used for the DB2ENTRY this DSECT field contains nulls, which are shown as N/A in the reports. Reset characteristic: not reset
Account Records	D2R_ACCOUNTREC	Specifies the frequency of DB2 accounting records to be produced for transactions using this DB2ENTRY. Reset characteristic: not reset
Thread Wait	D2R_THREADWAIT	Specifies whether transactions wait for a thread, stop or overflow to the pool, if the number of active threads for this DB2ENTRY exceeds its thread limit. Reset characteristic: not reset
Thread Prty	D2R_PRIORITY	The priority of the DB2ENTRY thread subtasks relative to the CICS main task (QR TCB). If CICS is connected to DB2 Version 6 or later, this field contains zero, representing not applicable, which is shown as N/A in the reports. Reset characteristic: not reset

Table 10. CICS DB2 : Resource statistics - resource information (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	D2R_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	D2R_CHANGE_TIME	The time stamp (STCK) in local time of CSD record change. Reset characteristic: not reset
Not in DFHSTUP report	D2R_CHANGE_USERID	The user ID that ran the change agent. Reset characteristic: not reset
Not in DFHSTUP report	D2R_CHANGE_AGENT	The agent that made the last change. Reset characteristic: not reset
Not in DFHSTUP report	D2R_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	D2R_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	D2R_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

CICS DB2: Resource statistics - request information

The request information gives details of how many requests of various types have been performed against each DB2ENTRY.

Table 11. CICS DB2: Resource statistics - request information

DFHSTUP name	Field name	Description
DB2Entry Name	D2R_DB2ENTRY_NAME	is the name of the installed DB2ENTRY Reset characteristic: not reset
Call Count	D2R_CALLS	is the number of SQL calls made using this DB2ENTRY. If you are using PACKAGESET support for cloud applications, this number includes the number of **EXEC SQL SET CURRENT PACKAGESET** commands issued by DFHD2SPS on behalf of the application. Reset characteristic: reset to zero
Signon Count	D2R_SIGNONS	is the number of DB2 signons performed for this DB2ENTRY. Reset characteristic: reset to zero
Partial Signon	D2R_PARTIAL_SIGNONS	is the number of DB2 partial signons performed for this DB2ENTRY. Reset characteristic: reset to zero
Commit Count	D2R_COMMITS	is the number of two phase commits performed for units of work using this DB2ENTRY. Reset characteristic: reset to zero
Abort Count	D2R_ABORTS	is the number of units of work using this DB2ENTRY that were rolled back. Reset characteristic: reset to zero
Single Phase	D2R_SINGLE_PHASE	is the number of units of work using the DB2ENTRY that used single-phase commit, either because they were read-only UOWs, or because DB2 was the only recoverable resource updated in the UOW. Reset characteristic: reset to zero
Thread Create	D2R_THREAD_CREATE	is the number of create thread requests made to DB2 for threads of this DB2ENTRY. Reset characteristic: reset to zero

Table 11. CICS DB2: Resource statistics - request information (continued)

DFHSTUP name	Field name	Description
Thread Reuse	D2R_THREAD_REUSE	is the number of times CICS transactions using the DB2ENTRY were able to reuse an already created DB2 thread. Reset characteristic: reset to zero
Thread Terms	D2R_THREAD_TERM	is the number of terminate thread requests made to DB2 for threads of this DB2ENTRY. Reset characteristic: reset to zero
Thread Waits/Overflows	D2R_THREAD_WAIT_ OR_OVERF	is the number of times all available threads in the DB2ENTRY were busy and a transaction had to wait for a thread to become available, or overflow to the pool and use a pool thread instead. Reset characteristic: reset to zero

CICS DB2: Resource statistics - performance information

The performance information gives details of Thread information for each DB2ENTRY.

Table 12. CICS DB2: Resource statistics - performance information

DFHSTUP name	Field name	Description
DB2Entry Name	D2R_DB2ENTRY_NAME	The name of the installed DB2ENTRY Reset characteristic: not reset
Thread Limit	D2R_THREAD_LIMIT	The current maximum number of threads allowed for the DB2ENTRY. Reset characteristic: not reset
Thread Current	D2R_THREAD_CURRENT	The current number of active threads for this DB2ENTRY. Reset characteristic: not reset
Thread HWM	D2R_THREAD_HWM	The peak number of active threads for this DB2ENTRY. Reset characteristic: reset to current value (D2R_THREAD_CURRENT)

Table 12. CICS DB2: Resource statistics - performance information (continued)

DFHSTUP name	Field name	Description
Pthread Limit	D2R_PTHREAD_LIMIT	The current maximum number of protected threads allowed for this DB2ENTRY. Reset characteristic: not reset
Pthread Current	D2R_PTHREAD_CURRENT	The current number of protected threads for this DB2ENTRY. Reset characteristic: not reset
Pthread HWM	D2R_PTHREAD_HWM	The peak number of protected threads for this DB2ENTRY. Reset characteristic: reset to current value (D2R_PTHREAD_CURRENT)
Task Current	D2R_TASK_CURRENT	The current number of CICS tasks that are using this DB2ENTRY. Reset characteristic: not reset
Task HWM	D2R_TASK_HWM	The peak number of CICS tasks that have used this DB2ENTRY. Reset characteristic: reset to current value (D2R_TASK_CURRENT)
Task Total	D2R_TASK_TOTAL	The total number of completed tasks that have used this DB2ENTRY. Reset characteristic: reset to zero.
Readyq Current	D2R_READYQ_CURRENT	The current number of CICS tasks waiting for a thread to become available on this DB2ENTRY. Reset characteristic: not reset
Readyq HWM	D2R_READYQ_HWM	The peak number of CICS tasks that waited for a thread to become available on this DB2ENTRY. Reset characteristic: reset to current value (D2R_READYQ_CURRENT)
Reuselm hits	D2R_REUSELIMIT_COUNT	The number of times the reuselimit has been reached by a thread for this DB2ENTRY. Reset characteristic: reset to zero.

CICS DB2: Summary global statistics

Shows summary information and statistics about CICS DB2. Summary statistics are unavailable online.

Table 13. CICS DB2: Summary global statistics

DFHSTUP name	Description
DB2 Connection Name	The name of the installed DB2CONN.
Total DB2 Connection time	The total amount of time CICS was connected to the DB2 subsystem specified in this DB2CONN. The time is displayed as days:hh:mm:ss.
DB2 Groupid	The name of a data sharing group of DB2 subsystems, specified in the installed DB2CONN definition. CICS connects to any active member of this group.
Resync Group Member	Specifies the action CICS takes if you are using group attach, with a DB2 group ID set, and outstanding units of work are being held for the last DB2 data sharing group member to which CICS was connected. 'Yes' means that CICS reconnects to the last connected DB2 data sharing group member. 'No' means that CICS makes one attempt to reconnect to the last connected DB2 data sharing group member, and if that attempt fails, it connects to any member of the DB2 data sharing group. If you are not using group attach, N/A is shown in the report.
DB2 Sysid	The name of the DB2 subsystem to which CICS connects, as specified in the installed DB2CONN definition. If the sysid has changed, it is the last setting of sysid.
DB2 Release	The DB2 version and release for this DB2CONN. If the version and release have changed, it is the last setting of version and release.
TCB Limit	The TCBLIMIT value that was set in the DB2CONN. If the TCBLIMIT has changed, it is the last setting of TCBLIMIT. The TCB limit is the maximum number of TCBs that can be used by the CICS-DB2 attachment facility.
Current number of Connections	The current number of connections used by the CICS-DB2 attachment facility.
Peak number of Connections	The peak number of connections used by the CICS-DB2 attachment facility.
Peak number of tasks on the TCB Readyq	The peak number of CICS tasks queued waiting because the TCBLIMIT specified in the DB2CONN has been reached.
Pool Thread Plan name	The name of the plan used for the pool. If the plan name has changed, it is the last setting of plan name. If a dynamic plan exit is being used for the pool, the summary report shows 'N/A'.
Pool Thread Dynamic Planexit name	The name of the dynamic plan exit to be used for the pool. If the dynamic plan exit name has changed, it is the last setting of dynamic planexit name. If static plan is being used for the pool, the summary report shows 'N/A'.
Pool Thread Authtype	The type of id to be used for DB2 security checking for pool threads. If the pool thread authtype has changed, it is the last setting of pool thread authtype. If an Authid is being used for pool threads, the summary report shows 'N/A'.

Table 13. CICS DB2: Summary global statistics (continued)

DFHSTUP name	Description
Pool Thread Authid	The static id to be used for DB2 security checking for pool threads. If the pool thread authid has changed, it is the last setting of pool thread authid. If an Authtype is being used for pool threads, the summary report shows 'N/A'.
Pool Thread Accountrec setting	The frequency of DB2 accounting records to be produced for transactions using pool threads. If the pool thread accountrec setting has changed, it is the last setting of pool thread accountrec.
Pool Thread Threadwait setting	The setting for whether transactions should wait for a pool thread or be abended if the number of active pool threads reaches the pool thread limit. If the pool thread threadwait setting has changed, it is the last setting of pool thread threadwait.
Pool Thread Priority	The priority of the pool thread subtasks relative to the CICS main task (QR TCB). If the pool thread priority has changed, it is the last setting of pool thread priority. If CICS is connected to DB2 Version 6 or later, this field contains zero (representing not applicable), and the summary report shows 'N/A'.
Total number of calls using Pool Threads	The total number of SQL calls made using pool threads.
Total number of Pool Thread Signons	The total number of DB2 signons performed for pool threads.
Total number of Pool Thread Partial Signons	The total number of DB2 partial signons performed for pool threads.
Total number of Pool Thread Commits	The total number of two phase commits performed for units of work using pool threads.
Total number of Pool Thread Aborts	The total number of units of work using pool threads that were rolled back.
Total number of Pool Thread Single Phases	The total number of units of work using pool threads that used single phase commit, either because they were read-only UOWs, or because DB2 was the only recoverable resource updated in the UOW.
Total number of Pool Thread Reuses	The total number of times CICS transactions using the pool were able to reuse an already created DB2 thread. This count includes transactions that overflow to the pool to acquire a thread and reuse an existing thread.
Total number of Pool Thread Terminates	The total number of terminate thread requests made to DB2 for pool threads. This includes pool threads used by transactions that overflow to the pool.
Total number of Pool Thread Waits	The total number of times all available threads in the pool were busy and a transaction had to wait for a thread to become available. This count includes transactions that overflow to the pool to acquire a thread and have to wait for a pool thread.

Table 13. CICS DB2: Summary global statistics (continued)

DFHSTUP name	Description
Pool Thread Limit	The thread limit value for the pool. If the pool thread limit has changed, it is the last setting of pool thread limit.
Peak number of Pool Threads in use	The peak number of active pool threads.
Peak number of Pool tasks	The peak number of CICS tasks that have used a pool thread.
Total number of Pool tasks	The total number of completed tasks that have used a pool thread.
Peak number of tasks on the Pool Readyq	The peak number of CICS tasks that waited for a pool thread to become available.
Command Thread Authtype	The type of id to be used for DB2 security checking for command threads. If the command thread authtype has changed, it is the last setting of command thread authtype. If an Authid is being used for command threads, the summary report shows 'N/A'.
Command Thread Authid	The static id to be used for DB2 security checking for command threads. If the command thread authid has changed, it is the last setting of command thread authid. If an Authtype is being used for command threads, the summary report shows 'N/A'.
Total number of Command Thread Calls	The total number of DB2 commands issued through the DSNC transaction.
Total number of Command Thread Signons	The total number of DB2 signons performed for command threads.
Total number of Command Thread Terminates	The total number of terminate thread requests made to DB2 for command threads.
Total number of Command Thread Overflows	The total number of times a DSNC DB2 command resulted in a pool thread being used because the number of active command threads exceed the command thread limit.
Command Thread Limit	The maximum number of command threads allowed. If the command thread limit has changed, it is the last setting of command thread limit.
Peak number of Command Threads	The peak number of active command threads.

CICS DB2: Summary resource statistics

The CICS DB2 resource statistics summary report DFHSTUP contains three sections: resource information, request information, and performance information.

Summary statistics are unavailable online.

CICS DB2: Summary resource statistics - resource information

The resource information gives details of various attribute settings of each DB2ENTRY.

Table 14. CICS DB2: Summary resource statistics - resource information

DFHSTUP name	Description
DB2Entry Name	is the name of the installed DB2ENTRY.
Plan Name	is the name of the plan used for this DB2ENTRY. If the plan name changed, it is the last setting of plan name. If a dynamic plan exit is being used for the DB2Entry, the summary report shows 'N/A'.
PlanExit Name	is the name of the dynamic plan exit to be used for this DB2ENTRY. If the plan exit name has changed, it is the last setting of PlanExit name. If a static plan is being used for the DB2ENTRY, the summary report shows 'N/A'.
Auth Id	is the static id to be used for DB2 security checking for this DB2ENTRY. If the Auth id changed, it is the last setting of Auth id. If an Authtype is being used for the DB2ENTRY, the summary report shows 'N/A'.
Auth Type	is the type of id to be used for DB2 security checking for this DB2ENTRY. If the Auth type changed, it is the last setting of Auth type. If an Authid is being used for the DB2ENTRY, the summary report shows 'N/A'.
Account Records	specifies the frequency of DB2 accounting records to be produced for transactions using this DB2ENTRY. If the frequency changed, it is the last frequency setting.
Thread Wait	specifies whether transactions should wait for a thread, abend, or overflow to the pool, if the number of active threads for this DB2ENTRY exceeds its thread limit. If the threadwait changed, it is the last setting of threadwait.
Thread Prty	is the priority of the DB2ENTRY thread subtasks relative to the CICS main task (QR TCB). If the priority changed, it is the last setting of priority. If CICS is connected to DB2 Version 6 or later, this field contains zero (representing not applicable), and the summary report shows 'N/A'.

CICS DB2: Summary resource statistics - request information

The request information gives details of how many requests of various types have been performed against each DB2ENTRY.

Table 15. CICS DB2: Summary resource statistics - request information

DFHSTUP name	Description
DB2Entry Name	is the name of the installed DB2ENTRY.
Call Count	is the total number of SQL calls made using this DB2ENTRY.
Signon Count	is the total number of DB2 signons performed for this DB2ENTRY.
Partial Signon	is the total number of DB2 partial signons performed for this DB2ENTRY.
Commit Count	is the total number of two phase commits performed for units of work using this DB2ENTRY.
Abort Count	is the total number of units of work using this DB2ENTRY that were rolled back.
Single Phase	is the total number of units of work using the DB2ENTRY that used single phase commit, either because they were read-only UOWs, or because DB2 was the only recoverable resource updated in the UOW.

Table 15. CICS DB2: Summary resource statistics - request information (continued)

DFHSTUP name	Description
Thread Reuse	is the total number of times CICS transactions using the DB2ENTRY were able to reuse an already created DB2 thread.
Thread Terms	is the total number of terminate thread requests made to DB2 for threads of this DB2ENTRY.
Thread Waits/Overflows	is the total number of times all available threads in the DB2ENTRY were busy and a transaction had to wait for a thread to become available, or overflow to the pool and use a pool thread instead.

CICS DB2: Summary resource statistics - performance information

The performance information gives details of thread information for each DB2ENTRY.

Table 16. CICS DB2: Summary resource statistics - performance information

DFHSTUP name	Description
DB2ENTRY Name	is the name of the installed DB2ENTRY
Thread Limit	is the maximum number of threads allowed for the DB2ENTRY. If the value changed, it is the last setting of Thread limit.
Thread HWM	is the peak number of active threads for this DB2ENTRY.
Pthread Limit	is the maximum number of protected threads allowed for this DB2ENTRY. If the value changed, it is the last setting of Pthread limit.
Pthread HWM	is the peak number of protected threads for this DB2ENTRY.
Task HWM	is the peak number of CICS tasks that have used this DB2ENTRY.
Task Total	is the total number of completed tasks that have used this DB2ENTRY.
Readyq HWM	is the peak number of CICS tasks that waited for a thread to become available on this DB2ENTRY.

Coupling facility data tables server statistics

Coupling facility data tables server statistics are provided by the AXM page pool management routines for the pools AXMPGANY and AXMPGLOW.

The CFDT statistics are calculated from information that is returned by recent coupling facility requests. If the relevant information was not accessed recently by

the current server, the statistics are not necessarily accurate. The number of tables and the number of lists are updated each time the server opens or closes a table, but at other times they might not be updated. The element and entry counts are updated on successful completion of most types of coupling facility access request.

Related reference:

"Coupling Facility Data Table Pools report" on page 377
The Coupling Facility Data Table Pools report shows information and statistics about Coupling Facility Data Table Pools, which contain one or more coupling facility data tables.

Coupling facility data tables: list structure statistics

The statistics are described in detail in the DFHCFS6D data area.

Reset characteristics: these statistics are produced by a separate server address space, not by CICS. Following a reset, these fields are reset by the server, not CICS. As a general rule, high and low watermarks (max, min and highest, lowest) are reset to current, counts are reset to zero.

The individual fields have the following meanings.

Table 17. Coupling facility data tables: list structure statistics

Statistic name	Field	Description
Structure		
	S6NAME	Full name of list structure
	S6PREF	First part of structure name
	S6POOL	Pool name part of structure name
	S6CNNAME	Name of connection to structure
	S6CNPREF	Prefix for connection name
	S6CNSYSN	Own MVS™ system name from CVTSNAME
Size	S6SIZE	Current allocated size of the list structure.
Max size	S6SIZEMX	Maximum size to which this structure could be altered.
Lists		
Total	S6HDRS	Maximum number of list headers in the structure.
Control	S6HDRSCT	Number of lists in use for control information.
Data	S6HDRSTD	Number of lists in use for table data.
Structure		
Elem size	S6ELEMLN	Data element size used for the structure.
	S6ELEMPW	Data element size as a power of 2
	S6ELEMRT	Element side of entry:element ratio
	S6ENTRRT	Entry side of entry:element ratio
Entries		
In use	S6ENTRCT	Number of entries currently in use.
Max used	S6ENTRHI	Maximum number in use (since last reset).
Min free	S6ENTRLO	Minumum number of free entries (since last reset).
Total	S6ENTRMX	Total entries in the currently allocated structure (initially set at structure connection time and updated on completion of any structure alter request).
Elements		
In Use	S6ELEMCT	Number of elements currently in use.
Max Used	S6ELEMHI	Maximum number in use (since last reset).

Table 17. Coupling facility data tables: list structure statistics (continued)

Statistic name	Field	Description
Min Free	S6ELEMLO	Minimum number of free elements (since last reset)
Total	S6ELEMMX	Total data elements in the currently allocated structure (initially set at structure connection time and updated on completion of any structure alter request).
List entry counts		
	S6USEVEC	Usage vector, five pairs of words
	S6USEDCT	Number of entries on used list
	S6USEDHI	Highest number of entries on used list
	S6FREECT	Number of entries on free list
	S6FREEHI	Highest number of entries on free list
	S6INDXCT	Number of entries in table index
	S6INDXHI	Highest entries in table index
	S6APPLCT	Number of entries in APPLID list
	S6APPLHI	Highest entries in APPLID list
	S6UOWLCT	Number of entries in UOW list
	S6UOWLHI	Highest entries in UOW list
Main type of CF request		
Table index lists		
Reads	S6RDICT	Number of table index reads.
Write	S6WRICT	Number of table index writes to create new tables.
Rewrite	S6RWICT	Number of table index writes to update table status.
Delete	S6DLICT	Number of table index deletes.
Data list controls		
Writes	S6CRLCT	Number of times a new data list was allocated.
Rewrites	S6MDLCT	Number of times data list controls were modified.
Deletes	S6DLLCT	Number of times a data list was deleted for reuse.
Table data record		
Reads	S6RDDCT	Number of data entry reads.
Writes	S6WRDCT	Number of data entry writes.
Rewrites	S6RWDCT	Number of data entry rewrites.
Deletes	S6DLDCT	Number of data entry deletes.
Data list controls		
Reads	S6INLCT	Inquire on data list
Lock release messages		
Reads	S6RDMCT	Number of lock release messages read by this server.
Writes	S6WRMCT	Number of lock release messages sent by this server.
UOW index list		
Reads	S6RDUCT	Number of UOW list reads.
Writes	S6WRUCT	Number of UOW list writes (usually at PREPARE)
Rewrites	S6RWUCT	Number of UOW list rewites (usually at COMMIT).
Deletes	S6DLUCT	Number of UOW list deletes (usually after COMMIT).
APPLID index lists		

Table 17. Coupling facility data tables: list structure statistics (continued)

Statistic name	Field	Description
Read	S6RDACT	Read APPLID entry
Write	S6WRACT	Write APPLID entry
Rewrite	S6RWACT	Rewrite APPLID entry
Delete	S6DLACT	Delete APPLID entry
Internal CF requests		
	S6RRLCT	Reread entry for full data length
Asynch	S6ASYCT	Number of requests for which completion was asynchronous.
IXLLIST completion		
Normal	S6RSP1CT	Number of normal responses.
Len err	S6RSP2CT	Entry data was larger than the inputbuffer length, which normally results in a retry with a larger buffer.
Not fnd	S6RSP3CT	The specified entry (table or item) was not found.
Vers chk	S6RSP4CT	A version check failed for an entry being updated, indicating that another task had updated it first.
List chk	S6RSP5CT	A list authority comparison failed, mismatch caused by table status update
List full	S6RSP6CT	A table reached the maximum number of items causing the relevant list to be marked as full.
Str full	S6RSP7CT	The list structure became full.
I/O err	S6RSP8CT	Some other error code was returned by IXLLIST.

Coupling facility data tables: table accesses statistics

These statistics are described in detail in the DFHCFS7D data area.

Reset characteristics: these statistics are produced by a separate server address space, not by CICS. Following a reset, these fields are reset by the server, not CICS. As a general rule, high and low watermarks (max, min and highest, lowest) are reset to current, counts are reset to zero.

The individual fields have the following meanings:

Table 18. Coupling facility data tables:queue pool statistics

Statistic name	Field	Description
Access		
	S7TABLE	Table name padded with spaces
Vector		
	S7STATS	Statistics vector
Table requests		
Open	S7OCOPEN	Number of successful OPEN requests for the table.
Close	S7OCCLOS	Number of successful CLOSE requests for the table.
Set Attr	S7OCSET	Number of times new table status was set.
Delete	S7OCDELE	Number of times the table of that name was deleted.
Stats	S7OCSTAT	Extract table statistics.
Record requests		

Table 18. Coupling facility data tables:queue pool statistics (continued)

Statistic name	Field	Description
Point	S7RQPOIN	Number of POINT requests.
Highest	S7RQHIGH	Number of requests for current highest key.
Read	S7RQREAD	Number of READ requests (including those for UPDATE)
Read del	S7RQRDDL	Number of combined READ and DELETE requests.
Unlock	S7RQUNLK	Number of UNLOCK requests.
Loads	S7RQLOAD	Number of records written by initial load requests.
Write	S7RQWRIT	Number of WRITE requests for new records.
Rewrite	S7RQREWR	Number of REWRITE requests.
Delete	S7RQDELE	Number of DELETE requests
Del Mult	S7RQDELM	Number of multiple (generic) delete requests.

Coupling facility data tables: request statistics

These statistics are described in detail in the DFHCFS8D data area.

Reset characteristics: these statistics are produced by a separate server address space, not by CICS. Following a reset, these fields are reset by the server, not CICS. As a general rule, high and low watermarks (max, min and highest, lowest) are reset to current, counts are reset to zero.

The individual fields have the following meanings:

Table 19. Coupling facility data tables:request statistics

Statistic name	Field	Description
Vector		
	S8STATS	Statistics vector
Table		
Open	S8OCOPEN	Number of successful OPEN requests for the table
Close	S8OCCLOS	Number of successful CLOSE requests for the table.
Set Attr	S8OCSET	Number of times new table status was set.
Delete	S8OCDELE	Number of times the table of that name was deleted.
Stats	S8OCSTAT	Number of times table access statistics were extracted.
Record		
Point	S8RQPOIN	Number of POINT requests.
Highest	S8RQHIGH	Number of requests for current highest key
Read	S8RQREAD	Number of READ requests (including those for UPDATE)
Read Del	S8RQRDDL	Number of combined READ and DELETE requests
Unlock	S8RQUNLK	Number of UNLOCK requests.
Loads	S8RQLOAD	Number of records written by initial load requests.
Write	S8RQWRIT	Number of WRITE requests for new records
Rewrite	S8RQREWR	Number of REQRITE requests.
Delete	S8RQDELE	Number of DELETE requests.

Table 19. Coupling facility data tables:request statistics (continued)

Statistic name	Field	Description
Del Mult	S8RQDELM	Number of multiple (generic) delete requests
Table		
Inquire	S8IQINQU	Number of INQUIRE table requests.
UOW		
Prepare	S8SPPREP	Number of units of work prepared.
Retain	S8SPRETA	Number of units of work whose locks were retained.
Commit	S8SPCOMM	Number of units of work committed.
Backout	S8SPBACK	Number of units of work backed out.
Inquire	S8SPINQU	Number of units of work INQUIRE requests.
Restart	S8SPREST	Number of times recoverable connections were restarted.

Coupling facility data tables: storage statistics

These statistics are returned by the AXM page pool management routines for the pools AXMPGANY and AXMPGLOW. Storage in these pools is allocated in multiples of 4K pages on a 4K boundary. The most frequent use is for segments of LIFO stack storage.

Storage is initially allocated from the pool using a bit map. For faster allocation, free areas are not normally returned to the pool but are added to a vector of free chains depending on the size of the free area (1 to 32 pages). When storage is being acquired, this vector is checked before going to the pool bit map.

If there are no free areas of the right size and there is not enough storage left in the pool, free areas in the vector are put back into the pool, starting from the smallest end, until a large enough area has been created. This action appears as a compress attempt in the statistics. If there is still insufficient storage to satisfy the request, the request fails.

Reset characteristics: these statistics are produced by a separate server address space, not by CICS. Following a reset, these fields are reset by the server, not CICS. As a general rule, high and low watermarks (max, min and highest, lowest) are reset to current, counts are reset to zero.

The statistics are described in detail in the DFHCFS9D data area.

Table 20. Coupling facility data tables: storage statistics

Statistic name	Field	Description
LOC=ANY storage pool statistics.		
Name	S9ANYNAM	Name of the storage pool AXMPGANY.
Size	S9ANYSIZ	Size of the storage pool area.
	S9ANYPTR	Address of storage pool area.
	S9ANYMX	Total pages in the storage pool.
In Use	S9ANYUS	Number of used pages in the pool.
Free	S9ANYFR	Number of free pages in the pool.
Min Free	S9ANYLO	Lowest free pages (since reset).
Gets	S9ANYRQG	Storage GET requests.
Frees	S9ANYRQF	Storage FREE requests.
Fails	S9ANYRQS	GETs which failed to obtain storage.
Retries	S9ANYRQC	Compress (defragmentation) attempts.
LOC=BELOW storage pool statistics.		

Table 20. Coupling facility data tables: storage statistics (continued)

Statistic name	Field	Description
Name	S9LOWNAM	Pool name AXMPGLOW.
Size	S9LOWSIZ	Size of storage pool area.
	S9LOWPTR	Address of storage pool area.
	S9LOWMX	Total pages in the storage pool.
In Use	S9LOWUS	Number of used pages in the storage pool.
Free	S9LOWFR	Number of free pages in the storage pool.
Min Free	S9LOWLO	Lowest free pages (since reset).
Gets	S9LOWRQG	Storage GET requests.
Frees	S9LOWRQF	Storage FREE requests.
Fails	S9LOWRQS	GETs which failed to obtain storage.
	S9LOWRQC	Compress (defragmentation) attempts.

DBCTL session termination statistics

DBCTL statistics are of the **unsolicited** type only. They appear on a separate report to the other types of CICS statistics.

The DBCTL statistics exit DFHDBSTX is invoked by the CICS adapter (DFHDBAT), and CICS statistics information is collected by the statistics domain whenever DBCTL is disconnected as a result of:

- An orderly or immediate disconnection of the DBCTL using the menu transaction CDBC
- An orderly termination of CICS.

Note: If there is an immediate shutdown or abend of CICS, the latest CICS-DBCTL session statistics are lost. The function of DFHDBSTX is to invoke the statistics domain supplying the data that has been returned from the database resource adapter (DRA) relating to the individual CICS-DBCTL session.

CICS termination statistics that contain the number of DL/I calls by type, issued against each DL/I database, are not produced by CICS in the DBCTL environment. DBCTL produces this type of information.

For more information about CICS-DBCTL statistics, see .

DBCTL session termination: Global statistics

These statistics are mapped by the DFHDBUDS DSECT.

Table 21. DBCTL session termination: Global statistics

DFHSTUP name	Field name	Description
CICS DBCTL session number	STADSENO	The number of the CICS-DBCTL session, which is incremented every time you connect and disconnect. Reset characteristic: not reset
DBCTL identifier	STATDBID	The name of the DBCTL session. Reset characteristic: not reset

Table 21. DBCTL session termination: Global statistics (continued)

DFHSTUP name	Field name	Description
DBCTL RSE name	STARSEN	The name of the DBCTL recoverable service element (RSE). Reset characteristic: not reset
Time CICS connected to DBCTL	STALCTIM	The time when CICS was connected to DBCTL. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals* at local time; however, the DSECT field contains the time as a local store clock (STCK) value. Reset characteristic: not reset
Time CICS disconnected from DBCTL	STALDTIM	The time when CICS was disconnected from DBCTL. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals* at local time; however, the DSECT field contains the time as a local store clock (STCK) value. Reset characteristic: not reset
NOT IN DFHSTUP REPORT	STACTIME	The time when CICS was connected to DBCTL. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals* at GMT; however, the DSECT field contains the time as a GMT store clock (STCK) value. Reset characteristic: not reset
NOT IN DFHSTUP REPORT	STADTIME	The time when CICS was disconnected from DBCTL. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals* at GMT; however, the DSECT field contains the time as a GMT store clock (STCK) value. Reset characteristic: not reset
Minimum number of threads	STAMITHD	The minimum value specified in the DRA startup parameter table. Reset characteristic: not reset
Maximum number of threads	STAMATHD	The maximum value specified in the DRA startup parameter table. Reset characteristic: not reset
Times minimum threads hit	STANOMITHD	The number of times the CICS-DBCTL session "collapsed" threads down to the minimum thread value. Reset characteristic: not reset
Times maximum threads hit	STANOMATHD	The number of times the CICS-DBCTL session has hit the maximum thread value. Reset characteristic: not reset

Table 21. DBCTL session termination: Global statistics (continued)

DFHSTUP name	Field name	Description
Elapsed time at maximum threads	STAELMAX	The elapsed time, expressed as *hours:minutes:seconds.decimals*, for which the CICS-DBCTL session is running at the maximum thread value. Reset characteristic: none
Peak number of thread TCBs	STAHIWAT	The highest number of thread TCBs created throughout the CICS-DBCTL session. Due to the asynchronous nature of TCB creation and deletion, it is possible for the number of TCBs to exceed the maximum number of threads, although the number of TCBs with an active thread will not exceed the maximum thread value. Reset characteristic: not reset
Successful PSB schedules	STAPSBSU	The number of times the CICS-DBCTL session has successfully scheduled a program specification block (PSB). Reset characteristic: not reset

DBCTL session termination: Summary global statistics

DBCTL session termination summary global statistics are not available online.

Table 22. DBCTL session termination: Summary global statistics

DFHSTUP name	Description
DBCTL identifier	is the name of the DBCTL session.
DBCTL RSE name	is the name of the DBCTL recoverable service element (RSE).
Minimum number of threads	is the minimum value specified in the DRA startup parameter table.
Maximum number of threads	is the maximum value specified in the DRA startup parameter table.
Times minimum threads hit	is the total number of times the CICS-DBCTL session "collapsed" threads down to the minimum thread value.
Times maximum threads hit	is the total number of times the CICS-DBCTL session has hit the maximum thread value.
Elapsed time at maximum threads	is the elapsed time, expressed as *days-hours:minutes:seconds.decimals*, for which the CICS-DBCTL session is running at the maximum thread value.
Peak number of thread TCBs	is the highest number of thread TCBs created throughout the CICS-DBCTL session. Due to the asynchronous nature of TCB creation and deletion, it is possible for the number of TCBs to exceed the maximum number of threads, although the number of TCBs with an active thread will not exceed the maximum thread value.

Table 22. DBCTL session termination: Summary global statistics (continued)

DFHSTUP name	Description
Successful PSB schedules	is the total number of times the CICS-DBCTL session has successfully scheduled a program specification block (PSB).

Dispatcher domain statistics

Related reference:

"Dispatcher report" on page 388
The Dispatcher report is produced using a combination of the **EXEC CICS INQUIRE SYSTEM** and **EXEC CICS EXTRACT STATISTICS DISPATCHER** commands. The statistics data is mapped by the **DFHDSGDS DSECT**.

"Dispatcher TCB Modes report" on page 392
The Dispatcher TCB Modes report is produced using the **EXEC CICS EXTRACT STATISTICS DISPATCHER** command. The statistics data is mapped by the **DFHDSGDS DSECT**.

"Dispatcher TCB Pools report" on page 395
The Dispatcher TCB Pools report is produced for each TCB pool. The example shows the OPEN TCB pool. This report is produced using the **EXEC CICS EXTRACT STATISTICS DISPATCHER** command. The statistics data is mapped by the **DFHDSGDS DSECT**.

"Dispatcher MVS TCBs report" on page 389
The Dispatcher MVS TCBs report is produced using the **EXEC CICS EXTRACT STATISTICS MVSTCB**,**EXEC CICS EXTRACT STATISTICS DISPATCHER**, and **EXEC CICS INQUIRE MVSTCB** commands. The statistics data is mapped by the **DFHDSGDS**, **DFHDSTDS**, and **DFHDSRDS DSECT**.

Dispatcher domain: Global statistics

You can retrieve dispatcher domain global statistics by using the **EXEC CICS EXTRACT STATISTICS DISPATCHER** system command. They are mapped by the DFHDSGDS DSECT.

Table 23. Dispatcher domain: Global statistics

DFHSTUP name	Field name	Description
Dispatcher Start Date and Time	DSGLSTRT	is the date and time at which the CICS dispatcher started. This value can be used as an approximate time at which CICS started. The DFHSTUP report expresses this time as *day/month/year hours:minutes:seconds.decimals*; however, the DSECT field contains the time as a store clock (STCK) value in local time. Reset characteristic: not reset
NOT IN DFHSTUP REPORT	DSGSTART	is the time at which the dispatcher started. This value can be used as an approximate time at which CICS started. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*; however, the DSECT field contains the time as a store clock (STCK) value in GMT. Reset characteristic: not reset

Table 23. Dispatcher domain: Global statistics (continued)

DFHSTUP name	Field name	Description
Address Space CPU Time	DSGEJST	is the total CPU time for all TCBs in this address space, accumulated during the interval. The DFHSTUP report expresses this as *days-hours:minutes:seconds.decimals.* Reset characteristic: reset to zero
Address Space SRB Time	DSGSRBT	is the total CPU time for all service request blocks (SRB) executed in this address space, accumulated during the interval. The DFHSTUP report expresses this as *days-hours:minutes:seconds.decimals.* Reset characteristic: reset to zero
Current number of dispatcher tasks	DSGCNT	is the current number of dispatcher tasks in the system. This figure includes all system tasks and all user tasks. Reset characteristic: not reset
Peak number of dispatcher tasks	DSGPNT	is the peak value of the number of dispatcher tasks concurrently in the system. Reset characteristic: reset to current value
Current ICV time (msec)	DSGICVT	is the ICV time value (expressed in *milliseconds*) specified in the SIT, or as an override, or changed dynamically using the **EXEC CICS SET SYSTEM TIME(fullword binary data-value)** command. Reset characteristic: not reset
Current ICVR time (msec)	DSGICVRT	is the ICVR time value (expressed im milliseconds) specified in the SIT, or as an override, or changed dynamically using the **EXEC CICS SET SYSTEM TIME(fullword binary data-value)** command. Reset characteristic: not reset
Current ICVTSD time (msec)	DSGICVSD	is the ICVTSD time value (expressed in *milliseconds*) specified in the SIT, or as an override, or changed dynamically using the **EXEC CICS SET SYSTEM SCANDELAY(fullword binary data-value)** command. Reset characteristic: not reset
Current PRTYAGE time (msec)	DSGPRIAG	is the PRTYAGE time value (expressed in milliseconds) specified in the SIT, or as an override, or changed dynamically using the **EXEC CICS SET SYSTEM AGING(fullword binary data-value)** command. Reset characteristic: not reset

Table 23. Dispatcher domain: Global statistics (continued)

DFHSTUP name	Field name	Description
Current MRO (QR) Batching (MROBTCH) value	DSGMBTCH	is the MROBTCH value specified in the SIT, or as an override, or changed dynamically using the **EXEC CICS SET SYSTEM MROBATCH(fullword binary data-value)** command. Reset characteristic: not reset
Last Excess TCB Scan	DSGLXSCN	The date and time of the last CICS dispatcher excess MVS TCB scan. If the DFHSTUP report shows the date and time as --/--/---- --:--:--:---- then that indicates then an excess TCB scan has not happened yet. Reset characteristic: not reset
Number of Excess TCB Scans	DSGXSCNS	is the number of CICS dispatcher excess MVS TCB scans. Reset characteristic: reset to zero
Last Excess TCB Scan–No TCB Detached	DSGLXSND	The date and time of the last CICS dispatcher excess MVS TCB scan that did not detach any TCBs. If the DFHSTUP report shows the date and time as --/--/---- --:--:--:---- then that indicates then an excess TCB scan has not happened yet. Reset characteristic: not reset
Number of Excess TCB Scans–No TCB Detached	DSGXSCNN	is the number of excess MVS TCB scans that resulted in no MVS TCBs being detached by the CICS dispatcher. Reset characteristic: reset to zero
Number of Excess TCBs Detached	DSGXTCBD	is the total number of MVS TCBs that have been detached by the CICS dispatcher's excess MVS TCB management processing. Reset characteristic: reset to zero
Average Excess TCBs Detached per Scan	Not Applicable	is the average number of MVS TCBs that have been detached by each scan of the CICS dispatcher's excess MVS TCB management processing. Reset characteristic: reset to zero
Number of CICS TCB MODEs	DSGASIZE	is the current number of CICS TCB modes in which the CICS dispatcher is managing MVS task control blocks (TCBs) in the system. Reset characteristic: not reset

Table 23. Dispatcher domain: Global statistics (continued)

DFHSTUP name	Field name	Description
Number of CICS TCB POOLs	DSGPSIZE	is the number of TCB pools in which the CICS dispatcher is managing MVS task control blocks (TCBs) in the system under which the CICS dispatcher runs. Reset characteristic: not reset

Related information:

EXTRACT STATISTICS

Dispatcher domain: TCB Mode statistics

You can retrieve dispatcher domain TCB mode statistics by using the **EXEC CICS EXTRACT STATISTICS DISPATCHER** system command. They are mapped by the DFHDSGDS DSECT.

Two passes are made at the data, producing two TCB Mode statistics tables, because the statistics cannot all be fitted into a single table in the format of the report.

- The first table contains mainly the TCB event information, such as attaches, detaches, and steals, for each mode.
- The second table shows timing information, such as operating system wait time, waits, TCB dispatch, and CPU times. Some fields show accumulated time for all the TCBs in a specific mode. When there can be multiple TCBs, for example L8 open TCBs, be aware that the value of such fields is a total that might exceed the time since the statistics were last reset.

The following fields are mapped by the DSGTCBM DSECT in the DFHDSGDS DSECT. The DSGTCBM DSECT is repeated for each mode of TCB in CICS (DSGASIZE). For a list of modes of TCB, see TCB statistics.

Table 24. Dispatcher domain: TCB Mode statistics - Pass 1

DFHSTUP name	Field name	Description
TCB Mode	DSGTCBNM	The name of the CICS dispatcher TCB mode, either QR, RO, CO, SZ, RP, FO, SL, SO, SP, EP, TP, D2, S8, L8, L9, X8, X9, orT8. Reset characteristic: not reset
Open	DSGTCBMD	Indicates whether the CICS dispatcher TCB mode is open, not open, or unknown. A TCB mode of type 'unknown' indicates that this TCB mode has not been activated. Reset characteristic: not reset
TCB Pool	DSGTCBMP	The name of the TCB pool in which this TCB mode is defined, either N/A, OPEN, SSL, THRD, or XP. Reset characteristic: not reset

Table 24. Dispatcher domain: TCB Mode statistics - Pass 1 (continued)

DFHSTUP name	Field name	Description
TCBs Attached – Current	DSGTCBCA	The current number of MVS TCBs attached in this TCB mode. Reset characteristic: not reset
TCBs Attached – Peak	DSGTCBPA	The peak number of MVS TCBs attached in this TCB mode. Reset characteristic: reset to current value
TCBs In Use – Current	DSGTCBCU	The current number of MVS TCBs in use in this TCB mode. Reset characteristic: not reset
TCBs In Use – Peak	DSGTCBPU	The peak number of MVS TCBs in use in this TCB mode. Reset characteristic: reset to current value
Dispatchable Queue - Current	DSGTMCDQ	The current number of dispatchable tasks queued for the TCB. Reset characteristic: not reset
Dispatchable Queue - Peak	DSGTMPDQ	The peak number of dispatchable tasks that have been queued for the TCB. Reset characteristic: reset to current
Dispatchable Queue - Average	DSGTMADQ	The average number of dispatchable tasks that have been queued for the TCB. Reset characteristic: reset to current
TCB Attaches	DSGNTCBA	The number of MVS TCBs that have been attached in this TCB mode. Reset characteristic: reset to zero
Detached Unclean	DSGTCBDU	The number of MVS TCBs that have been, or are in the process of being, detached from this TCB mode because the CICS transaction that was associated with the TCB has abended. Reset characteristic: reset to zero
Detached Stolen	DSGTCBDS	The number of MVS TCBs that have been, or are in the process of being, stolen from this TCB mode because they are required by another TCB mode. Reset characteristic: reset to zero

Table 24. Dispatcher domain: TCB Mode statistics - Pass 1 (continued)

DFHSTUP name	Field name	Description
Detached Excess	DSGTCBDX	The number of MVS TCBs that have been, or are in the process of being, detached from this CICS dispatcher TCB mode because of the dispatcher excess TCB management processing. Reset characteristic: reset to zero
Detached Other	DSGTCBDO	The number of MVS TCBs that have been, or are in the process of being, detached from this TCB mode. They are detached because, for example, the limit for the number of TCBs allowed in the TCB pool has been lowered, or too many TCBs are attached in relation to the number of TCBs in use. Reset characteristic: reset to zero
TCB Steals	DSGTCBST	The number of MVS TCBs that have been stolen from other TCB modes. Reset characteristic: reset to zero
TCB Mismatches	DSGTCBMM	The number of MVS TCB mismatches that have occurred for this TCB mode. Reset characteristic: reset to zero

Table 25. Dispatcher domain: TCB Mode statistics - Pass 2

DFHSTUP name	Field name	Description
Mode	DSGTGBM	The name of the CICS dispatcher TCB mode, either QR, RO, CO, SZ, RP, FO, SL, SO, SP, EP, TP, D2, S8, L8, L9, X8, X9, orT8. Reset characteristic: not reset
TCBs Attached – Current	DSGTCBCA	The current number of MVS TCBs attached in this TCB mode. Reset characteristic: not reset
TCBs Attached – Peak	DSGTCBPA	The peak number of MVS TCBs attached in this TCB mode. Reset characteristic: not reset
TCB Attaches	DSGNTCBA	The number of MVS TCBs that have been attached in this TCB mode. Reset characteristic: reset to zero

Table 25. Dispatcher domain: TCB Mode statistics - Pass 2 (continued)

DFHSTUP name	Field name	Description
Attach Failures	DSGTCBAF	The number of MVS TCB attach failures that have occurred in this TCB mode. Reset characteristic: reset to zero
MVS Waits	DSGSYSW	The number of MVS waits that occurred on TCBs in this mode. Reset characteristic: reset to zero
Accum Time in MVS wait	DSGTWT	The accumulated real time that the CICS region was in an MVS wait; that is, the total time used between an MVS wait issued by the dispatcher and the return from the MVS wait. The DFHSTUP report expresses this time as *days-hours:minutes:seconds.decimals*; however, the DSECT field contains the time as a store clock (STCK) value. Reset characteristic: reset to zero
Accum Time Dispatched	DSGTDT	The accumulated real time that TCBs in this mode have been dispatched by MVS; that is, the total time used between the end of an MVS wait issued by the dispatcher and the start of the subsequent wait issued by the dispatcher. The DFHSTUP report expresses this time as *days-hours:minutes:seconds.decimals*; however, the DSECT field contains the time as a store clock (STCK) value. Reset characteristic: reset to zero
NOT IN THE DFHSTUP REPORT	DSGTCT	The accumulated CPU time taken for the DS task, that is, the processor time used by TCBs in this mode while running the default dispatcher task (DSTCB). The DSECT field contains the time as a store clock (STCK) value. Reset characteristic: reset to zero
Accum CPU Time / TCB	DSGACT	The accumulated CPU time taken for all the TCBs that are, or have been, attached in this TCB mode; that is, the total time that TCBs in this mode have been running. The DFHSTUP report expresses this time as *days-hours:minutes:seconds.decimals*; however, the DSECT field contains the time as a store clock (STCK) value. Reset characteristic: reset to zero

Related information:

EXTRACT STATISTICS

Dispatcher domain: TCB Pool statistics

You can access dispatcher domain TCB pool statistics by using the **EXEC CICS EXTRACT STATISTICS DISPATCHER** system command. They are mapped by the DFHDSGDS DSECT.

Statistics are produced for each TCB pool: the OPENAPI TCB pool, the SSL TCB pool, the JVM server THRD TCB pool, and the XP TCB pool.

The following fields are mapped by the DSGTCBP DSECT in the DFHDSGDS DSECT. The DSGTCBP DSECT is repeated for each TCB pool in CICS (DSGPSIZE).

Table 26. Dispatcher domain: TCB Pool statistics

DFHSTUP name	Field name	Description
TCB Pool	DSGTCBPN	The name of the CICS TCB pool, either OPEN, SSL, THRD, or XP. Reset characteristic: not reset
Current TCBs attached in this TCB Pool	DSGCNUAT	The current number of TCBs attached in the TCB modes that are in this TCB pool. Reset characteristic: not reset
Peak TCBs attached in this TCB Pool	DSGPNUAT	The peak number of TCBs attached in the TCB modes that are in this TCB pool. Reset characteristic: reset to current
Current TCBs in use in this TCB Pool	DSGCNUUS	The current number of CICS TCBs attached in this TCB pool and being used. Reset characteristic: not reset
Peak TCBs in use in this TCB Pool	DSGPNUUS	The peak number of CICS TCBs used that were attached in this TCB pool. Reset characteristic: reset to current value

Table 26. Dispatcher domain: TCB Pool statistics (continued)

DFHSTUP name	Field name	Description
Max TCB Pool limit	DSGMXTCB	The value for the maximum number of TCBs allowed in this pool: • The **MAXOPENTCBS** system initialization parameter, if specified, sets the value for the open TCB pool. If the MAXOPENTCBS system initialization is not specified, CICS sets the limit for the L8 and L9 mode open TCB pool automatically based on the maximum number of tasks specified for the CICS region (the MXT value), using the following formula: `(2 * MXT Value) + 32`. For information about explicitly setting the MAXOPENTCBS parameter yourself, see MAXOPENTCBS. • The **MAXSSLTCBS** system initialization parameter specifies the value for the SSL TCB pool. • The **MAXTHRDTCBS** system initialization parameter specifies the value for the JVM server THRD TCB pool. The number of threads reserved for each JVM server is the THREADLIMIT value on the JVMSERVER resource, plus 1, up to a limit of 2000. • The **MAXXPTCBS** system initialization parameter, if specified, sets the value for the XP TCB pool. If the **MAXXPTCBS** system initialization is not specified, CICS sets the limit for the X8 and X9 mode XP TCB pool automatically to a value equal to the maximum number of tasks specified for the CICS region (the MXT value). For information about explicitly setting the MAXXPTCBS parameter yourself, see MAXXPTCBS . You can change the maximum value by overriding the appropriate system initialization parameter or by using the SET DISPATCHER command. To change the maximum value of the JVM server, use the SET JVMSERVER command. Reset characteristic: not reset
Time Max TCB Pool Limit last reached	DSGLTCBL	The time at which the pool reached the maximum TCB limit. If the DFHSTUP report shows the time as --:--:--:---- then that indicates that the pool limit has not been reached since the statistics were last reset. Reset characteristic: reset to zero
Times at Max TCB Pool Limit	DSGNTCBL	The number of times the system reached the limit for the number of TCBs allowed in this pool: • OPEN TCB pool • SSL TCB pool • THRD TCB pool • XP TCB pool Reset characteristic: reset to zero
Total Requests delayed by Max TCB Pool Limit	DSGTOTNW	The total number of TCB requests delayed because the system reached the limit for the number of TCBs allowed in this pool. Reset characteristic: reset to zero

Table 26. Dispatcher domain: TCB Pool statistics (continued)

DFHSTUP name	Field name	Description
Total Max TCB Pool Limit delay time	DSGTOTWL	The total time that TCB requests were delayed because the system had reached the limit for the number of TCBs allowed in this pool. Reset characteristic: reset to zero
Current Requests delayed by Max TCB Pool Limit	DSGCURNW	The number of TCB requests that are currently delayed because the system has reached the limit for the number of TCBs allowed in this pool. Reset characteristic: not reset
Current Max TCB Pool Limit delay time	DSGCURWT	The current delay time for the TCB requests that are currently delayed because the system has reached the limit for the number of TCBs allowed in this pool. Reset characteristic: not reset
Peak Requests delayed by Max TCB Pool Limit	DSGPEANW	The peak number of TCB requests that were delayed because the system had reached the limit for the number of TCBs allowed in this pool. Reset characteristic: not reset
Total Number of TCB Mismatch waits	DSGMMWTS	The total number of TCB mismatch waits; that is, TCB requests that waited because no TCB was available that matched the request, but at least one non-matching TCB was free. Reset characteristic: reset to zero
Total TCB Mismatch wait time	DSGMMWTM	The total time spent in TCB mismatch waits by TCB requests using this pool. Reset characteristic: reset to zero
Current TCB Mismatch waits	DSGCMMWS	The current number of TCB mismatch waits by TCB requests using this pool. Reset characteristic: not reset
Current TCB Mismatch wait time	DSGCMMWT	The current wait time for current TCB mismatch waits by TCB requests using this pool. Reset characteristic: not reset
Peak TCB mismatch waits	DSGPMMWS	The peak number of TCB mismatch waits by TCB requests using this pool. Reset characteristic: reset to current value

Table 26. Dispatcher domain: TCB Pool statistics (continued)

DFHSTUP name	Field name	Description
Requests delayed by MVS storage constraint	DSGTOTMW	The total number of MVS storage requests that have waited because no TCB was available, and none was created because of MVS storage constraints. Reset characteristic: reset to zero
Total MVS storage constraint delay time	DSGTOTMT	The total time spent in MVS storage waits by TCB requests using this pool. Reset characteristic: reset to zero

Related information:

EXTRACT STATISTICS

Dispatcher domain: MVS TCB statistics

You can retrieve dispatcher domain MVS TCB statistics by using the **EXEC CICS EXTRACT STATISTICS DISPATCHER**, **EXTRACT STATISTICS MVSTCB**, and **INQUIRE MVSTCB** system commands. The statistics data is mapped by the DFHDSGDS, DFHDSTDS, and DFHDSRDS DSECTs.

Reset characteristics: These statistics are produced by a separate server address space, not by CICS. Following a reset, these fields are reset by the server, not CICS. As a general rule, high-water and low-water marks (max, min and highest, lowest) are reset to current; counts are reset to zero.

Table 27. Dispatcher domain: MVS TCB statistics

DFHSTUP Name	Field Name	Description
Dispatcher MVS TCB		
Dispatcher Start Time and Date	DSGLSTRT	The local time and date at which the CICS dispatcher started.
Address Space Accumulated CPU Time	MVS field ASCBEJST	The accumulated CPU time since reset for this CICS address space. If the time is greater than 24 hours, this time is prefixed with the number of days.
Address Space Accumulated SRB Time	MVS field ASCBSRBT	The accumulated SRB time since reset for this CICS address space.
Address Space CPU Time (Since Reset)	DSGEJST	The accumulated CPU time for this CICS address space.
Address Space SRB Time (Since Reset)	DSGSRBT	The accumulated SRB time for this CICS address space.
Current number of CICS TCBs	DSTDS_CICSTCB_COUNT	The current number of CICS TCBs in the address space.
Current CICS TCB CPU time	DSTDS_CICSTCB_CPUTIME	The total CPU time so far for the currently attached CICS TCBs.
Current CICS TCB Private Stg below 16MB	DSTDS_CICSTCB_STG_BELOW	The total private storage below 16 MB allocated to CICS TCBs.
Current CICS TCB Private Stg below 16MB in use	DSTDS_CICSTCB_STG_BELOW_INUSE	The total private storage below 16 MB in use by CICS TCBs. [1]

Table 27. Dispatcher domain: MVS TCB statistics (continued)

DFHSTUP Name	Field Name	Description
Current CICS TCB Private Stg above 16MB	DSTDS_CICSTCB_STG_ABOVE	The total private storage above 16 MB allocated to CICS TCBs.
Current CICS TCB Private Stg above 16MB in use	DSTDS_CICSTCB_STG_ABOVE_INUSE	The total private storage above 16 MB in use by CICS TCBs. [1]
Current number of non-CICS TCBs	DSTDS_NONCICSTCB_COUNT	The current number of non-CICS TCBs in the address space.
Current non-CICS TCB CPU time	DSTDS_NONCICSTCB_CPUTIME	The total CPU time so far for the currently attached non-CICS TCBs.
Current non-CICS TCB Private Stg below 16MB	DSTDS_NONCICSTCB_STG_BELOW	The total private storage below 16 MB allocated to non-CICS TCBs.
Current non-CICS TCB Private Stg below 16MB in use	DSTDS_NONCICSTCB_STG_BELOW_INUSE	The total private storage below 16 MB in use by non-CICS TCBs.
Current non-CICS TCB Private Stg above 16MB	DSTDS_NONCICSTCB_STG_ABOVE	The total private storage above 16 MB allocated to non-CICS TCBs.
Current non-CICS TCB Private Stg above 16MB in use	DSTDS_NONCICSTCB_STG_ABOVE_INUSE	The total private storage above 16 MB in use by non-CICS TCBs.
TCB Address	DSRDS_TCB_ADDRESS	The address of the MVS TCB.
TCB Name	DSRDS_TCB_NAME	The name of the MVS TCB (if known to CICS).
CICS TCB	DSRDS_TCB_TYPE	The type of TCB, CICS or non-CICS.
Current TCB CPU Time	DSRDS_TCB_CPUTIME	The total CPU time so far for this TCB.
Current TCB Private Stg Below 16MB Allocated	DSRDS_TCB_STG_BELOW	The total private storage below 16 MB allocated to this TCB.
Current TCB Private Stg Below 16MB In Use	DSRDS_TCB_STG_BELOW_INUSE	The total private storage below 16 MB in use by this TCB.
Current TCB Private Stg Above 16MB Allocated	DSRDS_TCB_STG_ABOVE	The total private storage above 16 MB allocated to this TCB.
Current TCB Private Stg Above 16MB In Use	DSRDS_TCB_STG_ABOVE_INUSE	The total private storage above 16 MB in use by this TCB.
Task Number	DSRDS_TCB_CICS_TASK	The CICS task number currently associated with this TCB. None means there are no CICS transactions currently assigned to this TCB.
Tran ID	EXEC CICS INQUIRE TASK() TRANSACTION()	Transaction ID of the task currently associated with this TCB, if any.
Task Status	EXEC CICS INQUIRE TASK() RUNSTATUS()	Status of the task currently associated with this TCB, if any.
Mother TCB	DSRDS_TCB_MOTHER	Address of mother TCB.
Sister TCB	DSRDS_TCB_SISTER	Address of sister TCB.
Daughter TCB	DSRDS_TCB_DAUGHTER	Address of daughter TCB.

Note:

1. The statistics for storage in use show the amount of storage that tasks obtain by using a GETMAIN request. This might be less than the amount of storage allocated to the TCBs, because storage is always allocated to TCBs in page multiples (4096 bytes).

Related information:

EXTRACT STATISTICS

INQUIRE MVSTCB

Dispatcher domain: Summary global statistics

Dispatcher domain Summary statistics are not available online.

Table 28. Dispatcher domain: Summary global statistics

DFHSTUP name	Description
Dispatcher Start Date and Time	is the date and time at which the CICS dispatcher started. This value can be used as an approximate date and time at which CICS started. The DFHSTUP report expresses this time as *day/month/year hours:minutes:seconds.decimals* at the local time; however, the DSECT field contains the time as a local store clock (STCK) value.
Address Space CPU Time	is the total CPU time taken by the CICS address space. The DFHSTUP report expresses this as *days-hours:minutes:seconds.decimals*
Address Space SRB Time	is the total SRB time taken by the CICS address space. The DFHSTUP report expresses this as *days-hours:minutes:seconds.decimals*
Peak number of dispatcher tasks	is the peak number of dispatcher tasks concurrently in the system.
Peak ICV time (msec)	is the peak ICV time value (expressed in *milliseconds*) specified in the SIT, or as an override, or changed dynamically.
Peak ICVR time (msec)	is the peak ICVR time value (expressed in *milliseconds*) specified in the SIT, or as an override, or changed dynamically.
Peak ICVTSD time (msec)	is the peak ICVTSD time value (expressed in *milliseconds*) specified in the SIT, or as an override, or changed dynamically.
Peak PRTYAGE time (msec)	is the peak PRTYAGE time value (expressed in *milliseconds*) specified in the SIT, or as an override, or changed dynamically.
Peak MRO (QR) Batching (MROBTCH) value	is the peak MROBTCH value specified in the SIT, or as an override, or changed dynamically.
Number of Excess TCB scans	is the total number of CICS dispatcher excess MVS TCB scans.
Excess TCB scans – No TCB detached	is the total number of CICS dispatcher excess MVS TCB scans which resulted in no MVS TCB being detached.

Table 28. Dispatcher domain: Summary global statistics (continued)

DFHSTUP name	Description
Number of Excess TCBs detached	is the total number of MVS TCBs that have been detached by the CICS dispatcher's excess MVS TCB management processing.
Average Excess TCBs Detached per Scan	is the average number of MVS TCBs that have been detached by each scan of the CICS dispatcher's excess MVS TCB management processing.
Number of CICS TCB MODEs	is the number of CICS dispatcher TCB modes.
Number of CICS TCB POOLs	is the number of CICS dispatcher TCB pools.

Dispatcher domain: Summary TCB Mode statistics

Dispatcher domain Summary TCB Mode statistics are not available online.

Two passes are made at the data, producing two summary TCB Mode statistics tables, because the statistics cannot all be fitted into a single table in the format of the report. The first table mainly contains the TCB event information, such as attaches, detaches, and steals, for each mode. The second table has timing information, such as operating system wait time, waits, TCB dispatch, and CPU times.

Table 29. Dispatcher domain: Summary TCB Mode statistics - Pass 1

DFHSTUP name	Description
Mode	The name of the CICS dispatcher TCB mode, either QR, RO, CO, SZ, RP, FO, SL, SO, SP, EP, TP, D2, S8, L8, L9, X8, X9, orT8.
Open	Indicates whether the CICS dispatcher TCB mode is open, not open, or unknown. A TCB mode of type `Unk` indicates that this TCB mode has not been activated.
TCB Pool	The name of the CICS TCB pool, either N/A, OPEN, THRD, SSL, or XP.
Peak TCBs Attached	The peak number of MVS TCBs attached in this TCB mode.
Peak TCBs In Use	The peak number of MVS TCBs attached and in use in this TCB mode.
TCB Attaches	The number of MVS TCBs that have been attached in this TCB mode.
Detached Unclean	The total number of MVS TCBs that have been, or are in the process of being, detached from this TCB mode because the CICS transaction that was associated with the TCB has abended.

Table 29. Dispatcher domain: Summary TCB Mode statistics - Pass 1 (continued)

DFHSTUP name	Description
Detached Stolen	The total number of MVS TCBs that have been stolen, or are in the process of being stolen, from this TCB mode because they are required by another TCB mode.
Detached Excess	The total number of MVS TCBs that have been, or are in the process of being, detached from this TCB mode because of the dispatcher excess TCB management processing.
Detached Other	The total number of MVS TCBs that have been detached, or are in the process of being detached, from this TCB mode. They are being detached, for example, the limit for the number of TCBs allowed in the TCB pool has been lowered, or too many TCBs are attached in relation to the number of TCBs in use.
TCB Steals	The total number of MVS TCBs that have been stolen from other TCB modes.
TCB Mismatches	The total number of MVS TCB mismatches that have occurred for this TCB mode.

Table 30. Dispatcher domain: Summary TCB Mode statistics - Pass 2

DFHSTUP name	Description
Mode	The name of the CICS dispatcher TCB mode, either QR, RO, CO, SZ, RP, FO, SL, SO, SP, EP, TP, D2, S8, L8, L9, X8, X9, orT8.
Peak TCBs Attached	The peak number of MVS TCBs attached in this TCB mode.
Peak TCBs In Use	The peak number of MVS TCBs attached and in use in this TCB mode.
TCB Attaches	The number of MVS TCBs that have been attached in this TCB mode.
Attach Failures	The total number of MVS TCB attach failures that have occurred in this TCB mode.
MVS Waits	The total number of MVS waits that occurred on this TCB mode.
Total Time in MVS wait	The total real time that the TCBs in this mode were in an MVS wait. The DFHSTUP report expresses this time as *days-hours:minutes:seconds.decimals*.
Total Time Dispatched	The total real time that the TCBs in this mode were dispatched by MVS. The DFHSTUP report expresses this time as *days-hours:minutes:seconds.decimals*.
Total CPU Time / TCB	The total CPU time taken for all the TCBs in this mode. The DFHSTUP report expresses this time as *days-hours:minutes:seconds.decimals*.

Dispatcher domain: Summary TCB Pool statistics

Statistics are produced for each TCB pool: the OPENAPI TCB pool, the SSL TCB pool, the JVM server THRD TCB pool, and the XP TCB pool.

Table 31. Dispatcher domain: Summary TCB Pool statistics

DFHSTUP name	Description
TCB Pool	The name of the CICS TCB pool, either OPEN, SSL, THRD, or XP.
Peak TCBs attached in this TCB Pool	The peak number of TCBs attached in the TCB modes that are in this TCB pool.
Peak TCBs in use in this TCB Pool	The peak number of CICS TCBs used that were attached in this TCB pool.
Max TCB Pool limit	The value for the maximum number of TCBs allowed in this pool: • The **MAXOPENTCBS** system initialization parameter, if specified, sets the value for the open TCB pool. If the MAXOPENTCBS system initialization is not specified, CICS sets the limit for the L8 and L9 mode open TCB pool automatically based on the maximum number of tasks specified for the CICS region (the MXT value), using the following formula: `(2 * MXT Value) + 32`. For information about explicitly setting the MAXOPENTCBS parameter yourself, see MAXOPENTCBS. • The **MAXSSLTCBS** system initialization parameter specifies the value for the SSL TCB pool. • The **MAXTHRDTCBS** system initialization parameter specifies the value for the JVM server THRD TCB pool. The number of threads reserved for each JVM server is the THREADLIMIT value on the JVMSERVER resource, plus 1, up to a limit of 2000. • The **MAXXPTCBS** system initialization parameter, if specified, sets the value for the XP TCB pool. If the **MAXXPTCBS** system initialization is not specified, CICS sets the limit for the X8 and X9 mode XP TCB pool automatically to a value equal to the maximum number of tasks specified for the CICS region (the MXT value). For information about explicitly setting the MAXXPTCBS parameter yourself, see MAXXPTCBS .
Times at Max TCB Pool Limit	The total number of times that the limit for the number of TCBs allowed in this pool has been reached: • OPEN TCB pool • SSL TCB pool • THRD TCB pool • XP TCB pool
Total Requests delayed by Max TCB Pool Limit	The total number of TCB requests that have been delayed because the system had reached the limit for the number of TCBs allowed in this pool.
Total Max TCB Pool Limit delay time	The total time spent waiting by those tasks that were delayed because the system had reached the limit for the number of TCBs allowed in this pool.
Average Max TCB Pool Limit delay time	The average time spent waiting by those tasks that were delayed because the system had reached the limit for the number of TCBs allowed in this pool.

Table 31. Dispatcher domain: Summary TCB Pool statistics (continued)

DFHSTUP name	Description
Peak Requests delayed by Max TCB Pool Limit	The peak number of TCB requests that were delayed because the system had reached the limit for the number of TCBs allowed in this pool.
Total number of TCB Mismatch waits	The total number of TCB mismatch waits; that is, TCB requests that waited because no TCB matching the request was available, but at least one non-matching TCB was free.
Total TCB Mismatch wait time	The total time spent in TCB mismatch waits by TCB requests using this pool.
Average TCB Mismatch wait time	The average time spent in TCB mismatch waits by TCB requests using this pool.
Peak TCB Mismatch waits	The peak number of TCB mismatch waits by TCB requests using this pool.
Requests delayed by MVS storage constraint	The total number of MVS storage requests that have waited because no TCB was available, and none could be created because of MVS storage constraints.
Total MVS storage constraint delay time	The total time spent in MVS storage waits by TCB requests using this pool.

Document template statistics

Document templates are used in CICS web support to produce the body of HTTP messages. They can be specified in a URIMAP definition to provide a static response to a web client request, or they can be used by an application program to make an HTTP request or response, or for other uses.

Usage statistics are provided for each document template. A DFH0STAT report lists each document template that is defined in the CICS region, and gives information about its source and usage.

For more information about the document template statistics report, see "Document Templates report" on page 399.

Related reference:

"Document Templates report" on page 399
The Document Templates report is produced using the **EXEC CICS EXTRACT STATISTICS DOCTEMPLATE** command and the **EXEC CICS INQUIRE DOCTEMPLATE** command. The statistics data is mapped by the DFHDHDDS DSECT.

Document templates: Resource statistics

You can access document templates resource statistics by using the **EXEC CICS EXTRACT STATISTICS DOCTEMPLATE** system command. They are mapped by the DFHDHDDS DSECT.

The resource information gives details of various attribute settings of each DOCTEMPLATE resource, and the usage of the document template.

Table 32. Document templates: Resource statistics

DFHSTUP name	Field name	Description
DOCTEMPLATE name	DHD_DOCTEMPLATE_NAME	The name of the DOCTEMPLATE resource definition. Reset characteristic: not reset
Template name	DHD_TEMPLATE_NAME	The name by which the template is known to application programs (the TEMPLATENAME attribute in the DOCTEMPLATE resource definition). Reset characteristic: not reset
Append crlf	DHD_APPEND_CRLF	Whether CICS appends carriage-return line-feed to each logical record of the template. Reset characteristic: not reset
Template contents	DHD_TEMPLATE_CONTENTS	The format of the contents of the template, either binary or EBCDIC. Reset characteristic: not reset
Template type	DHD_TEMPLATE_TYPE	The type for the source of the document template, which can be an exit program, a CICS file name for a data set, an zFS file, a member of a PDS, a program, a transient data queue, or a temporary storage queue. Reset characteristic: not reset

Table 32. Document templates: Resource statistics (continued)

DFHSTUP name	Field name	Description
Template type name	DHD_TEMPLATE_EXIT_PROGRAM DHD_TEMPLATE_FILE_NAME DHD_TEMPLATE_PROGRAM_NAME DHD_TEMPLATE_PDS_MEMBER DHD_TEMPLATE_TDQUEUE DHD_TEMPLATE_TSQUEUE DHD_TEMPLATE_HFSFILE	The name for the source of the document template, such as a program name or zFS file name. Reset characteristic: not reset
Template cache size	DHD_TEMPLATE_CACHE_SIZE	The amount of storage required for a cached copy of the document template. • Before the first use of the template, this field is zero. • This field is always zero for templates in a CICS program, which are never cached, and for templates in an exit program if they are not specified for caching. Reset characteristic: not reset
Use count	DHD_TEMPLATE_USE_COUNT	The total number of times the document template was referenced for any reason. Reset characteristic: reset to zero
Newcopy count	DHD_TEMPLATE_NEWCOPIES	The number of times the SET DOCTEMPLATE NEWCOPY command was issued for this document template. Reset characteristic: reset to zero

Table 32. Document templates: Resource statistics (continued)

DFHSTUP name	Field name	Description
Read count	DHD_TEMPLATE_READ_COUNT	The number of times the document template was read from the source. This read happens on the first use, including the first reference after deletion from the cache, or by a SET DOCTEMPLATE NEWCOPY command. Reset characteristic: reset to zero
Cache copy used	DHD_TEMPLATE_CACHE_USED	The number of times an application used the cached copy of the document template. Reset characteristic: reset to zero
Cache copy deleted	DHD_TEMPLATE_CACHE_DELETED	The number of times the cached copy of the document template was deleted because of a short-on-storage condition. Reset characteristic: reset to zero
Not in DFHSTUP report	DHD_TEMPLATE_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	DHD_TEMPLATE_CHANGE_TIME	The time stamp (STCK) in local time of the CSD record change. Reset characteristic: not reset

Table 32. Document templates: Resource statistics (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	DHD_TEMPLATE_CHANGE_USERID	The user ID that ran the CHANGE_AGENT. Reset characteristic: not reset
Not in DFHSTUP report	DHD_TEMPLATE_CHANGE_AGENT	The agent that was used to make the last change. Reset characteristic: not reset
Not in DFHSTUP report	DHD_TEMPLATE_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	DHD_TEMPLATE_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	DHD_TEMPLATE_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Related information:

EXTRACT STATISTICS

Document templates: Summary resource statistics

Document templates summary resource statistics are not available online.

The resource information gives details of various attribute settings of each DOCTEMPLATE resource definition, and the usage of the document template.

Table 33. Document templates: Summary resource statistics

DFHSTUP name	Description
DOCTEMPLATE name	The name of the DOCTEMPLATE resource definition.
Template name	The name by which the template is known to application programs (the TEMPLATENAME attribute in the DOCTEMPLATE resource definition).
Append crlf	Whether CICS appends carriage-return line-feed to each logical record of the template.
Template contents	The format of the contents of the template, either binary or EBCDIC.
Template type	The name of the DOCTEMPLATE resource definition.
[Template type] name	The name for the source of the document template, such as a program name or z/OS UNIX file name.
Template cache size	The amount of storage required for a cached copy of the document template. In the summary resource statistics, this value shows the most recent non-zero template size.
Use count	The total number of times the document template was referenced for any reason.
Newcopy count	The number of times the SET DOCTEMPLATE NEWCOPY command was issued for this document template.
Read count	The number of times the document template was read from the source.
Cache copy used	The number of times an application used the cached copy of the document template.
Cache copy deleted	The number of times the cached copy of the document template was deleted because of a short-on-storage condition.

Dump domain statistics

Both transaction and system dumps are very expensive and should be thoroughly investigated and eliminated.

Dump domain: System dump statistics

The dump domain collects global and resource statistics for both system and transaction dumps which occur during the CICS run.

Related concepts:

"Dump domain statistics"
Both transaction and system dumps are very expensive and should be thoroughly

investigated and eliminated.

Dump domain: Global statistics - system dump

You can retrieve system dump global statistics by using the **EXEC CICS EXTRACT STATISTICS SYSDUMPCODE** system command. They are mapped by the DFHSDGDS DSECT.

These statistics fields contain the global data collected by the dump domain for system dumps.

Table 34. Dump domain: Global statistics - system dump

DFHSTUP name	Field name	Description
Dumps taken	SYS_DUMPS_TAKEN	is the number of system dumps taken by the whole system during the present run of CICS. This number does not include suppressed dumps. A set of related dumps may be taken across the sysplex if the dump code includes the RELATED option. In this case, the count is incremented by one for the CICS system which initiated the dump. The number is unchanged for all other CICS systems even if they have issued a dump as part of the related request. Reset characteristic: reset to zero
Dumps suppressed	SYS_DUMPS_SUPPR	is the number of system dumps, requested from the dump domain by CICS or by a user, which were suppressed by one of: • A user exit • The dump table • A global system dump suppression. Reset characteristic: reset to zero

Related information:

EXTRACT STATISTICS

Dump domain: Resource statistics - system dump

You can retrieve system dump resource statistics by using the **EXEC CICS EXTRACT STATISTICS SYSDUMPCODE** system command. They are mapped by the DFHSDRDS DSECT.

These statistics fields contain the data collected by the dump domain for system dumps, by dump code

Table 35. Dump domain: Resource statistics - system dump

DFHSTUP name	Field name	Description
Dumpcode	SDRCODE	is the system dump code. This code is a CICS message number with the DFH prefix and the action code suffix (if any) removed. For guidance information about CICS messages, see *CICS Messages and Codes*. Reset characteristic: not reset

Table 35. Dump domain: Resource statistics - system dump (continued)

DFHSTUP name	Field name	Description
Dumps	SDRSTKN	is the number of system dumps taken for the dump code identified in the Dumpcode (SDRCODE) field. A set of related dumps may be taken across the sysplex if the dump code includes the RELATED option. In this case, the count is incremented by one for the CICS system which initiated the dump. The number is unchanged for all other CICS systems even if they have issued a dump as part of the related request. Reset characteristic: reset to zero
Dumps suppressed	SDRSSUPR	is the number of system dumps, for the dump code identified in the Dumpcode (SDRCODE) field, which were suppressed by one of: • A user exit • The dump table • A global system dump suppression. Reset characteristic: reset to zero
NOT IN THE DFHSTUP REPORT	SDRTTKN & SDRTSUPR	These fields are always zero. They exist here only for compatibility with the transaction dump statistics record format. A transaction dump can force a system dump to be taken as well (it is an option in the transaction dump table), but a system dump cannot force a transaction dump to be taken. Reset characteristic: not applicable

Related information:

EXTRACT STATISTICS

Dump domain: Summary global statistics - system dump

Dump domain Summary global statistics are not available online.

Table 36. Dump domain: Summary system dump global statistics

DFHSTUP name	Description
Dumps taken	is the total number of system dumps taken by the whole system during the entire run of CICS. This number does not include suppressed dumps. A set of related dumps may be taken across the sysplex if the dump code includes the RELATED option. In this case, the count is incremented by one for the CICS system which initiated the dump. The number is unchanged for all other CICS systems even if they have issued a dump as part of the related request.
Dumps suppressed	is the total number of system dumps, requested from the dump domain by CICS or by a user, which were suppressed by one of: • A user exit • The dump table • A global system dump suppression.

Dump domain: Summary resource statistics - system dump

Dump domain Summary resource statistics are not available online.

Table 37. Dump domain: Summary resource statistics - system dump

DFHSTUP name	Description
Dumpcode	is the system dump code. This code is a CICS message number with the DFH prefix and the action code suffix (if any) removed. For guidance information about CICS messages, see *CICS Messages and Codes*.
Dumps	is the total number of system dumps taken for the dump code identified in the Dumpcode field. A set of related dumps may be taken across the sysplex if the dump code includes the RELATED option. In this case, the count is incremented by one for the CICS system which initiated the dump. The number is unchanged for all other CICS systems even if they have issued a dump as part of the related request.
Dumps suppressed	is the total number of system dumps, for the dump code identified in the Dumpcode field, which were suppressed by one of: • A user exit • The dump table • A global system dump suppression.

Dump domain: Transaction dump statistics

The dump domain collects global and resource statistics for both system and transaction dumps which occur during the CICS run.

Related concepts:

"Dump domain statistics" on page 62
Both transaction and system dumps are very expensive and should be thoroughly investigated and eliminated.

Dump domain: Global statistics - transaction dump

You can retrieve transaction dump global statistics by using the **EXEC CICS EXTRACT STATISTICS TRANDUMPCODE** system command. They are mapped by the DFHTDGDS DSECT.

These statistics fields contain the global data collected by the dump domain for transaction dumps.

Table 38. Dump domain: Global statistics - transaction dump

DFHSTUP name	Field name	Description
Dumps taken	TRANS_DUMP_TAKEN	is the number of transaction dumps taken by the whole system during the present run of CICS. This number does not include suppressed dumps. Reset characteristic: reset to zero

Table 38. Dump domain: Global statistics - transaction dump (continued)

DFHSTUP name	Field name	Description
Dumps suppressed	TRANS_DUMP_SUPP	is the number of transaction dumps, requested from the dump domain by CICS or by a user, which were suppressed by one of: • A user exit • The dump table. Reset characteristic: reset to zero

Related information:

EXTRACT STATISTICS

Dump domain: Resource statistics - transaction dump

You can retrieve transaction dump resource statistics by using the **EXEC CICS EXTRACT STATISTICS TRANDUMPCODE** system command. They are mapped by the DFHTDRDS DSECT.

These statistics fields contain the data collected by the dump domain for transaction dumps, by dump code

Table 39. Dump domain: Resource statistics - transaction dump

DFHSTUP name	Field name	Description
Dumpcode	TDRCODE	is the transaction dump code. Reset characteristic: not reset
Dumps	TDRTTKN	is the number of transaction dumps taken for the dump code identified in the Dumpcode (TDRCODE) field. Reset characteristic: reset to zero
Dumps suppressed	TDRTSUPR	is the number of transaction dumps suppressed for the dump code identified in the Dumpcode (TDRCODE) field. Reset characteristic: reset to zero
System dumps	TDRSTKN	is the number of system dumps forced by the transaction dump identified in the Dumpcode (TDRCODE) field. A set of related dumps may be taken across the sysplex if the dump code includes the RELATED option. In this case, the count is incremented by one for the CICS system which initiated the dump. The number is unchanged for all other CICS systems even if they have issued a dump as part of the related request. Reset characteristic: reset to zero
System dumps suppressed	TDRSSUPR	is the number of system dumps, forced by the transaction dump identified in the Dumpcode (TDRCODE) field, which were suppressed by one of: • A user exit • The transaction dump table • A global system dump suppression. Reset characteristic: reset to zero

Related information:

EXTRACT STATISTICS

Dump domain: Summary global statistics - transaction dump

Dump domain Summary global statistics are not available online.

Table 40. Dump domain: Summary global statistics - transaction dump

DFHSTUP name	Description
Dumps taken	is the total number of transaction dumps taken by the whole system during the entire run of CICS. This number does not include suppressed dumps.
Dumps suppressed	is the total number of transaction dumps, requested from the dump domain by CICS or by a user, which were suppressed by one of: • A user exit • The dump table.

Dump domain: Summary resource statistics - transaction dump

Dump domain Summary resource statistics are not available online.

Table 41. Dump domain: Summary resource statistics - transaction dump

DFHSTUP name	Description
Dumpcode	is the transaction dump code.
Dumps	is the total number of transaction dumps taken for the dump code identified in the Dumpcode field.
Dumps suppressed	is the total number of transaction dumps suppressed for the dump code identified in the Dumpcode field.
System dumps	is the total number of system dumps forced by the transaction dump identified in the Dumpcode field. A set of related dumps may be taken across the sysplex if the dump code includes the RELATED option. In this case, the count is incremented by one for the CICS system which initiated the dump. The number is unchanged for all other CICS systems even if they have issued a dump as part of the related request.
System dumps suppressed	is the total number of system dumps, forced by the transaction dump identified in the Dumpcode field, which were suppressed by one of: • A user exit • The transaction dump table • A global system dump suppression.

Enqueue domain statistics

The enqueue domain collects global statistics for enqueue requests.

Related concepts:

"Interpreting enqueue statistics"
The enqueue domain supports the CICS recovery manager. Enqueue statistics contain the global data collected by the enqueue domain for enqueue requests.

Related reference:

"Enqueue Manager report" on page 401
The Enqueue Manager report is produced using the **EXEC CICS EXTRACT STATISTICS ENQUEUE** command. The statistics data is mapped by the **DFHNQGDS DSECT**.

"Enqueue Models report" on page 402
The Enqueue Models report is produced using the **EXEC CICS INQUIRE ENQMODEL** command.

Interpreting enqueue statistics

The enqueue domain supports the CICS recovery manager. Enqueue statistics contain the global data collected by the enqueue domain for enqueue requests.

Waiting for an enqueue on a resource can add significant delays in the execution of a transaction. The enqueue statistics allow you to assess the impact of waiting for enqueues in the system and the impact of retained enqueues on waiters. Both the current activity and the activity since the last reset are available.

Enqueue domain: Global statistics - enqueue requests

You can retrieve enqueue request statistics by using the **EXEC CICS EXTRACT STATISTICS ENQUEUE** system command. They are mapped by the DFHNQGDS DSECT.

These statistics fields contain the global data collected by the enqueue domain for enqueue requests.

Table 42. Enqueue domain: Global statistics - enqueue requests

DFHSTUP name	Field name	Description
NOT IN THE DFHSTUP REPORT	NQGNPOOL	is the number of enqueue pools. Reset characteristic: not reset
ENQ Poolname	NQGPOOL	is the enqueue pool id. Reset characteristic: not reset
ENQs Issued	NQGTNQSI	is the total number of enqueue requests issued. Reset characteristic: reset to zero
ENQs Waited	NQGTNQSW	is the total number of enqueue requests that had waited due to the enqueues being held. This is a subset of NQGTNQSI. Note that this value does not include the enqueue requests currently waiting (see NQGCNQSW). Reset characteristic: reset to zero
Enqueue Waiting time	NQGTNQWT	is the total waiting time for the enqueue requests that waited (NQGTNQSW). Note that this value does not include the time for the enqueue requests currently waiting (see NQGCNQWT). Reset characteristic: reset to zero
NOT IN THE DFHSTUP REPORT	NQGCNQSW	is the current number of enqueue requests waiting. Reset characteristic: not reset
NOT IN THE DFHSTUP REPORT	NQGCNQWT	is the total waiting time for the enqueue requests that are currently waiting due to the enqueue being held by another transaction. Reset characteristic: not reset

Table 42. Enqueue domain: Global statistics - enqueue requests (continued)

DFHSTUP name	Field name	Description
Sysplex Waited	NQGGNQSW	is the total number of sysplex enqueue requests that had waited due to the enqueues being held. Reset characteristic: reset to zero
Sysplex Waiting time	NQGGNQWT	is the total waiting time for the sysplex enqueue requests that waited (NQGGNQSW). Reset characteristic: reset to zero
NOT IN THE DFHSTUP REPORT	NQGSNQSW	is the current number of sysplex enqueues waiting. Reset characteristic: not reset
NOT IN THE DFHSTUP REPORT	NQGSNQWT	is the total waiting time for the sysplex enqueues that are currently waiting (NQGSNQSW). Reset characteristic: not reset
Enqueues Retained	NQGTNQSR	is the total number of enqueues that were retained due to the owning UOW being shunted. Note that this value does not include the enqueues that are currently retained (see NQGCNQSR). For more information about shunted UOWs see "Recovery manager statistics" on page 237. Reset characteristic: reset to zero
Enqueue Retention	NQGTNQRT	is the total retention time for the enqueues that were retained due to the owning UOW being shunted. Note that this value does not include the enqueue retention time for those currently retained (see NQGCNQRT). For more information about shunted UOWs see "Recovery manager statistics" on page 237. Reset characteristic: reset to zero
NOT IN THE DFHSTUP REPORT	NQGCNQSR	is the current number of enqueues retained. Reset characteristic: not reset
NOT IN THE DFHSTUP REPORT	NQGCNQRT	is the current enqueue retention time. Reset characteristic: not reset

Immediate-rejection

Table 42. Enqueue domain: Global statistics - enqueue requests (continued)

DFHSTUP name	Field name	Description
–Enqbusy	NQGTIRJB	is the total number of enqueue requests that were immediately rejected due to the enqueue being busy (ENQBUSY response). This value is a subset of the total number of enqueue requests (NQGTNQSI). Reset characteristic: reset to zero
–Retained	NQGTIRJR	is the total number of enqueue requests that were immediately rejected due to the enqueue being in a retained state. This value is a subset of the total number of enqueue requests (NQGTNQSI). Reset characteristic: reset to zero
Waiting rejection		
–Retained	NQGTWRJR	is the total number of waiting enqueue requests that were rejected due to the required enqueue moving into a retained state. This value is a subset of the number of enqueue requests that waited (NQGTNQSW). Reset characteristic: reset to zero
–Operator	NQGTWPOP	is the total number of waiting enqueue requests that were rejected due to the operator purging the waiting transaction. This value is a subset of the number of enqueue requests that waited (NQGTNQSW). Reset characteristic: reset to zero
–Timeout	NQGTWPTO	is the total number of waiting enqueue requests that were rejected due to the timeout value (DTIMEOUT) being exceeded. This value is a subset of the number of enqueue requests that waited (NQGTNQSW). Reset characteristic: reset to zero

Related information:

EXTRACT STATISTICS

Enqueue domain: Summary global statistics

Enqueue domain Summary global statistics are not available online.

These statistics fields contain the enqueue summary global data.

Table 43. Enqueue domain: Summary global statistics

DFHSTUP name	Description
ENQ Poolname	is the enqueue pool id.
ENQs Issued	is the total number of enqueue requests that were issued.
ENQs Waited	is the total number of enqueues requests that waited.
Enqueue Waiting time	is the waiting time for enqueue requests that waited.

Table 43. Enqueue domain: Summary global statistics (continued)

DFHSTUP name	Description
Sysplex Waited	is the total number of sysplex enqueue requests that had waited due to the enqueues being held.
Sysplex Waiting time	is the total waiting time for the sysplex enqueue requests that waited.
ENQs Retained	is the total number of enqueues retained.
Enqueue Retention	is the enqueue retention time.
Immediate-rejection	
–Enqbusy	is the total number of enqueue requests that were immediately rejected ENQBUSY.
–Retained	is the total number of enqueue requests immediately rejected due to the enqueue being in a retained state.
Waiting rejection	
–Retained	is the total number of waiting enqueue requests that were rejected due to the required enqueue moving into a retained state.
–Operator	is the total number of waiting enqueue requests that were rejected due to the operator purging the waiting transaction.
–Timeout	is the total number of waiting enqueue requests that were rejected due to the timeout value being exceeded.

Event processing statistics

CAPTURESPEC statistics

Shows information and statistics about the capture specifications for each event.

Related reference:

"CAPTURESPEC report" on page 403
The CAPTURESPEC report shows information and statistics about the capture specifications for each event. This report is produced using a combination of **EXEC CICS INQUIRE EVENTBINDING**, **EXEC CICS INQUIRE CAPTURESPEC**, **EXEC CICS EXTRACT STATISTICS EVENTBINDING**, and **CAPTURESPEC** commands.

CAPTURESPEC: Resource statistics

You can retrieve CAPTURESPEC resource statistics by using the **EXEC CICS EXTRACT STATISTICS CAPTURESPEC RESID()** command. They are mapped by the DFHECCDS DSECT.

Table 44. CAPTURESPEC: Resource statistics

DFHSTUP name	Field name	Description
EVENTBINDING Name	ECC_EVENTBINDING_NAME	The name of the associated event binding. Reset characteristic: not reset
CAPTURESPEC Name	ECC_ CAPTURESPEC_NAME	The name of the capture specification. Reset characteristic: not reset
CAPTURESPEC Capture point	ECC_CAPTURE_POINT	The capture point associated with the capture specification. Reset characteristic: not reset
CAPTURESPEC Capture point type	ECC_CAPTURE_POINT_TYPE	The capture point type associated with the capture specification. Reset characteristic: not reset
CAPTURESPEC Event name	ECC_EVENT_NAME	The associated business event name. Reset characteristic: not reset

Table 44. CAPTURESPEC: Resource statistics (continued)

DFHSTUP name	Field name	Description
CAPTURESPEC Events Captured	ECC_EVENTS_CAPTURED	The total number of events captured. Reset characteristic: reset to zero
CAPTURESPEC Capture Failures	ECC_CAPTURE_FAILURES	The number of capture failures, recorded by capture specification. When displayed, this statistic is totaled by event binding. Reset characteristic: reset to zero

Related reference:

"EVENTBINDING: Global statistics" on page 75
Shows information and global statistics about event bindings.

"EVENTBINDING: Summary global statistics" on page 77
Shows information and summary global statistics about event bindings.

"EVENTBINDING: Resource statistics" on page 76
Shows information and resource statistics about event bindings.

"EVENTBINDING: Summary resource statistics" on page 77
Shows information and summary resource statistics about event bindings.

"EVENTPROCESS: Global statistics" on page 77
Shows information and global statistics about event processing.

"EVENTPROCESS: Summary global statistics" on page 80
Shows information and summary global statistics about event processing.

Related information:

EXTRACT STATISTICS

CAPTURESPEC: Summary resource statistics

Shows summary information and statistics about the capture specifications for each event.

Summary statistics are not available online.

Table 45. CAPTURESPEC: Summary resource statistics

DFHSTUP name	Description
EVENTBINDING Name	The name of the associated event binding.
CAPTURESPEC Name	The name of the capture specification.
CAPTURESPEC Capture point	The capture point associated with the capture specification.
CAPTURESPEC Capture point type	The capture point type associated with the capture specification.
CAPTURESPEC Event name	The associated business event name.
CAPTURESPEC Events Captured	The total number of events captured.
CAPTURESPEC Capture Failures	The number of capture failures, recorded by capture specification. When displayed, this statistic is totaled by event binding.

EPADAPTER statistics

Shows information and statistics about EP adapters.

EPADAPTER: Resource statistics

Shows information and resource statistics about EP adapters

You can retrieve EPADAPTER statistics by using the **EXEC CICS EXTRACT STATISTICS EVENTPROCESS RESID()** command. They are mapped by the DFHEPRDS DSECT.

Table 46. EPADAPTER: resource statistics

DFHSTUP name	Field name	Description
EPADAPTER Name	EPR_ADAPTER_NAME	The name of the EP adapter. Reset characteristic: not reset
EPADAPTER Type	EPR_ADAPTER_TYPE	The adapter type. Reset characteristic: not reset
EPADAPTER Emission mode	EPR_EMISSION_MODE	The EP adapter emission mode. This identifies whether the EP adapter is for synchronous or asynchronous events. Reset characteristic: not reset
EPADAPTER Number of put events	EPR_PUT_EVENTS	The number of events passed to EP for emission by this adapter. Reset characteristic: not reset
Not in DFHSTUP report	EPR_ADA_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	EPR_ADA_CHANGE_TIME	The time stamp (STCK) in local time of CSD record change. Reset characteristic: not reset
Not in DFHSTUP report	EPR_ADA_CHANGE_USERID	The user ID that ran the change agent. Reset characteristic: not reset
Not in DFHSTUP report	EPR_ADA_CHANGE_AGENT	The agent that made the last change. Reset characteristic: not reset
Not in DFHSTUP report	EPR_ADA_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	EPR_ADA_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset

Table 46. EPADAPTER: resource statistics (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	EPR_ADA_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Related reference:

"CAPTURESPEC: Resource statistics" on page 71
You can retrieve CAPTURESPEC resource statistics by using the **EXEC CICS EXTRACT STATISTICS CAPTURESPEC RESID()** command. They are mapped by the DFHECCDS DSECT.

"CAPTURESPEC: Summary resource statistics" on page 72
Shows summary information and statistics about the capture specifications for each event.

"EVENTBINDING: Global statistics" on page 75
Shows information and global statistics about event bindings.

"EVENTBINDING: Summary global statistics" on page 77
Shows information and summary global statistics about event bindings.

"EVENTBINDING: Resource statistics" on page 76
Shows information and resource statistics about event bindings.

"EVENTBINDING: Summary resource statistics" on page 77
Shows information and summary resource statistics about event bindings.

Related information:

EXTRACT STATISTICS

EPADAPTER: Summary resource statistics

Shows information and summary resource statistics about EP adapters.

Summary statistics are not available online.

Table 47. EPADAPTER: summary resource statistics

DFHSTUP name	Description
EPADAPTER Name	The name of the EP adapter.
EPADAPTER Type	The adapter type.
EPADAPTER Emission mode	The EP adapter emission mode. This identifies whether the EP adapter is for synchronous or asynchronous events.
EPADAPTER Number of put events	The number of events passed to EP for emission by this adapter.

EVENTBINDING statistics

Shows information and statistics about each event binding.

Related reference:

"EVENTBINDING report" on page 404
The EVENTBINDING report shows information and statistics about each event binding and the event binding status. This report is produced using a combination of **EXEC CICS INQUIRE EVENTBINDING** and **EXEC CICS EXTRACT STATISTICS EVENTBINDING** commands.

EVENTBINDING: Global statistics

Shows information and global statistics about event bindings.

You can retrieve EVENTBINDING global statistics by using the **EXTRACT STATISTICS EVENTBINDING** system command. They are mapped by the DFHECGDS DSECT.

Table 48. EVENTBINDING: Global statistics

DFHSTUP name	Field name	Description
Total event filter operations	ECG_EB_EVENT_FILTER_OPS	The number of event filtering operations. Reset characteristic: reset to zero
Events with disabled EVENTBINDING	ECG_EB_EVENTS_DISABLED	The number of events that were not captured because of a disabled event binding. Reset characteristic: reset to zero
Total events captured	ECG_EB_EVENTS_CAPTURED	The total number of application and system events captured. Reset characteristic: reset to zero
Total system events captured	ECG_SYS_EVENTS_CAPTURED	The number of system events captured. Reset characteristic: reset to zero
Filter operations failed	ECG_FILTER_OPS_FAILED	The number of filtering operations that did not complete because CICS was unable to determine whether an event should have been captured. Reset characteristic: reset to zero
Capture operations failed	ECG_CAPTURE_OPS_FAILED	The number of capture operations that did not complete because CICS determined that an event was required but failed to capture it. Reset characteristic: reset to zero

Related reference:

"CAPTURESPEC: Resource statistics" on page 71
You can retrieve CAPTURESPEC resource statistics by using the **EXEC CICS EXTRACT STATISTICS CAPTURESPEC RESID()** command. They are mapped by the DFHECCDS DSECT.

"CAPTURESPEC: Summary resource statistics" on page 72
Shows summary information and statistics about the capture specifications for each event.

"EVENTPROCESS: Global statistics" on page 77
Shows information and global statistics about event processing.

"EVENTPROCESS: Summary global statistics" on page 80
Shows information and summary global statistics about event processing.

Related information:

EXTRACT STATISTICS

EVENTBINDING: Resource statistics

Shows information and resource statistics about event bindings.

You can retrieve EVENTBINDING resource statistics by using the **EXEC CICS EXTRACT STATISTICS EVENTBINDING RESID()** command, They are mapped by the DFHECRDS DSECT.

Table 49. EVENTBINDING: resource statistics

DFHSTUP name	Field name	Description
EVENTBINDING Name	ECR_EVENTBINDING_NAME	The name of the event binding. Reset characteristic: not reset
EVENTBINDING EPADAPTER name	ECR_EPADAPTER_NAME	The name of the EP adapter. Reset characteristic: not reset
Not in DFHSTUP report	ECR_EB_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information , see Summary of the resource signature field values Reset characteristic: not reset
Not in DFHSTUP report	ECR_EB_CHANGE_TIME	The time stamp (STCK) in local time of CSD record change. Reset characteristic: not reset
Not in DFHSTUP report	ECR_EB_CHANGE_USERID	The user ID that ran the change agent. Reset characteristic: not reset
Not in DFHSTUP report	ECR_EB_CHANGE_AGENT	The agent that made the last change. Reset characteristic: not reset
Not in DFHSTUP report	ECR_EB_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	ECR_EB_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	ECR_EB_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Related reference:

"CAPTURESPEC: Resource statistics" on page 71
You can retrieve CAPTURESPEC resource statistics by using the **EXEC CICS EXTRACT STATISTICS CAPTURESPEC RESID()** command. They are mapped by the DFHECCDS DSECT.

"CAPTURESPEC: Summary resource statistics" on page 72
Shows summary information and statistics about the capture specifications for each event.

"EVENTPROCESS: Global statistics"
Shows information and global statistics about event processing.

"EVENTPROCESS: Summary global statistics" on page 80
Shows information and summary global statistics about event processing.

Related information:

EXTRACT STATISTICS

EVENTBINDING: Summary global statistics

Shows information and summary global statistics about event bindings.

Summary statistics are not available online.

Table 50. EVENTBINDING: Summary global statistics

DFHSTUP name	Description
Total Event Filter operations	The number of event filtering operations.
Events with disabled EVENTBINDING	The number of events that were not captured because of a disabled event binding.
Total Events Captured	The total number of application and system events captured.
Total system events captured	The number of system events captured.
Filter operations failed	The number of filtering operations that did not complete because CICS was unable to determine whether an event should have been captured.
Capture operations failed	The number of capture operations that did not complete because CICS determined that an event was required but failed to capture it.

EVENTBINDING: Summary resource statistics

Shows information and summary resource statistics about event bindings.

Summary statistics are not available online.

Table 51. EVENTBINDING: Summary resource statistics

DFHSTUP name	Description
EVENTBINDING Name	The name of the event binding.
EVENTBINDING EPADAPTER Name	The name of the EP adapter.

EVENTPROCESS statistics

Shows information and statistics about event processing.

EVENTPROCESS: Global statistics

Shows information and global statistics about event processing.

You can retrieve EVENTPROCESS statistics by using the **EXTRACT STATISTICS EVENTPROCESS** system command. They are mapped by the DFHEPGDS DSECT.

Table 52. EVENTPROCESS: global statistics

DFHSTUP name	Field name	Description
Number of put events	EPG_PUT_EVENTS	The number of events passed to the EP component for emission. Reset characteristic: reset to zero
Number of commit forward events	EPG_COMMIT_FORWARD_EVENTS	The number of units of work that have been committed, and that included one or more asynchronous transactional events. Reset characteristic: reset to zero
Number of commit backward events	EPG_COMMIT_BACKWARD_EVENTS	The number of units of work that have been backed out, and that included one or more asynchronous transactional events. Reset characteristic: reset to zero
Current event capture queue	EPG_CURRENT_EVC_QUEUE	The current number of events on the event capture queue. Reset characteristic: not reset
Peak event capture queue	EPG_PEAK_EVC_QUEUE	The peak number of events on the event capture queue. Reset characteristic: reset to current
Current transactional queue	EPG_CURRENT_TRANS_QUEUE	The current number of events on the transactional queue. Reset characteristic: not reset
Peak transactional queue	EPG_PEAK_TRANS_QUEUE	The peak number of events on the transactional queue. Reset characteristic: reset to current
Number of async normal events	EPG_ASYNC_NORMAL_EVENTS	The number of asynchronous normal priority events. Reset characteristic: reset to zero
Number of async priority events	EPG_ASYNC_PRIORITY_EVENTS	The number of asynchronous high priority events. Reset characteristic: reset to zero
Number of transactional events	EPG_TRANS_EVENTS	The number of transactional events. Reset characteristic: reset to zero
Transaction events discarded	EPG_TRANS_EVENTS_DISCARDED	The number of transactional events discarded. Reset characteristic: reset to zero
Number of synchronous events	EPG_SYNC_EVENTS	The number of synchronous emission events captured. Reset characteristic: reset to zero

Table 52. EVENTPROCESS: global statistics (continued)

DFHSTUP name	Field name	Description
Number of sync events failed	EPG_SYNC_EVENTS_FAILED	The number of synchronous emission events that were not emitted. Reset characteristic: reset to zero
Number of dispatcher attaches	EPG_DISPATCHERS_ATTACHED	The number of dispatcher tasks attached. Reset characteristic: reset to zero
Current dispatcher tasks	EPG_CURRENT DISPATCHERS	The current number of dispatcher tasks. Reset characteristic: not reset
Peak dispatcher tasks	EPG_PEAK_DISPATCHERS	The peak number of dispatcher tasks. Reset characteristic: reset to current
Events to WebSphere® MQ EP adapter	EPG_WMQ_ADAPTER_EVENTS	The number of events dispatched to the WebSphere MQ EP adapter. Reset characteristic: reset to zero
Events to Transaction EP adapter	EPG_TRANS_ADAPTER_EVENTS	The number of events dispatched to the Transaction EP adapter. Reset characteristic: reset to zero
Events to Tdqueue EP adapter	EPG_TDQ_ADAPTER_EVENT	The number of events dispatched to the TD queue EP adapter. Reset characteristic: reset to zero
Events to Tsqueue EP adapter	EPG_TSQ_ADAPTER_EVENT	The number of events dispatched to the TS queue EP adapter. Reset characteristic: reset to zero
Events to Custom EP adapter	EPG_CUSTOM_ADAPTER_EVENTS	The number of events dispatched to the Custom EP adapter. Reset characteristic: reset to zero
Events to HTTP EP adapter	EPG_HTTP_ADAPTER_EVENTS	The number of events dispatched to the HTTP EP adapter. Reset characteristic: reset to zero
Events lost (dispatch) - config	EPG_DISPATCH_FAILURE_CONFIG	The number of events that were captured but not dispatched to an EP adapter because the dispatcher encountered a problem relating to a resource specified in the `eventDispatcherPolicy` section of the event binding. Reset characteristic: reset to zero
Events lost (dispatch) - other	EPG_DISPATCH_FAILURE_OTHER	The number of events that were captured but not dispatched to an EP adapter because the dispatcher encountered a problem in the CICS environment, for example, insufficient storage. Reset characteristic: reset to zero

Table 52. EVENTPROCESS: global statistics (continued)

DFHSTUP name	Field name	Description
Events lost (adapter) - config	EPG_ADAPTER_FAILURE_CONFIG	The number of events that were captured but not emitted because the EP adapter encountered a problem relating to a resource specified in the `eventDispatcherAdapter` configuration section of the event binding. Reset characteristic: reset to zero
Events lost (adapter) - other	EPG_ADAPTER_FAILURE_OTHER	The number of events that were captured but not emitted because the EP adapter encountered a problem in the CICS environment, for example, insufficient storage. Reset characteristic: reset to zero
Events lost - adapter unavailable	EPG_EVENTS_ADAPTER_UNAVAIL	The number of events that were not emitted because the EP adapter is disabled or not installed. Reset characteristic: reset to zero

Related reference:

"CAPTURESPEC: Resource statistics" on page 71
You can retrieve CAPTURESPEC resource statistics by using the **EXEC CICS EXTRACT STATISTICS CAPTURESPEC RESID()** command. They are mapped by the DFHECCDS DSECT.

"CAPTURESPEC: Summary resource statistics" on page 72
Shows summary information and statistics about the capture specifications for each event.

"EVENTBINDING: Global statistics" on page 75
Shows information and global statistics about event bindings.

"EVENTBINDING: Summary global statistics" on page 77
Shows information and summary global statistics about event bindings.

"EVENTBINDING: Resource statistics" on page 76
Shows information and resource statistics about event bindings.

"EVENTBINDING: Summary resource statistics" on page 77
Shows information and summary resource statistics about event bindings.

Related information:

EXTRACT STATISTICS

EVENTPROCESS: Summary global statistics

Shows information and summary global statistics about event processing.

Summary statistics are not available online.

Table 53. EVENTPROCESS: summary global statistics

DFHSTUP name	Description
Number of put events	The number of events passed to the EP component for emission.
Number of commit forward events	The number of units of work that have been committed, and that included one or more asynchronous transactional events.

Table 53. EVENTPROCESS: summary global statistics (continued)

DFHSTUP name	Description
Number of commit backward events	The number of units of work that have been backed out, and that included one or more asynchronous transactional events.
Current event capture queue	The current number of events on the event capture queue.
Peak event capture queue	The peak number of events on the event capture queue.
Current transactional queue	The current number of events on the transactional queue.
Peak transactional queue	The peak number of events on the transactional queue.
Number of async normal events	The number of asynchronous normal priority events.
Number of async priority events	The number of asynchronous high priority events.
Number of transactional events	The number of transactional events.
Transactional events discarded	The number of transactional events discarded.
Number of synchronous events	The number of synchronous emission events captured.
Number of sync events failed	The number of synchronous emission events that were not emitted.
Number of dispatcher attaches	The number of dispatcher tasks attached.
Current dispatcher tasks	The current number of dispatcher tasks.
Peak dispatcher tasks	The peak number of dispatcher tasks.
Events to WebSphere MQ EP adapter	The number of events dispatched to the WebSphere MQ EP adapter.
Events to transaction EP adapter	The number of events dispatched to the Transaction EP adapter.
Events to Tdqueue EP adapter	The number of events dispatched to the TD queue EP adapter.
Events to Tsqueue EP adapter	The number of events dispatched to the TS queue EP adapter.
Events to custom EP adapter	The number of events dispatched to the Custom EP adapter.
Events to HTTP EP adapter	The number of events dispatched to the HTTP EP adapter.
Events lost (dispatch) - config	The number of events that were captured but not dispatched to an EP adapter because the dispatcher encountered a problem relating to a resource specified in the `eventDispatcherPolicy` section of the event binding.
Events lost (dispatch) - other	The number of events that were captured but not dispatched to an EP adapter because the dispatcher encountered a problem in the CICS environment, for example, insufficient storage.
Events lost (adapter) - config	The number of events that were captured but not emitted because the EP adapter encountered a problem relating to a resource specified in the `eventDispatcherAdapter` configuration section of the event binding.

Table 53. EVENTPROCESS: summary global statistics (continued)

DFHSTUP name	Description
Events lost (adapter) - other	The number of events that were captured but not emitted because the EP adapter encountered a problem in the CICS environment, for example, insufficient storage.
Events lost - adapter unavailable	The number of events that were not emitted because the EP adapter is disabled or not installed.

Front end programming interface (FEPI) statistics

FEPI statistics contain data about the use of each FEPI connection, each FEPI pool, and a target in any pool.

CICS monitoring and statistics data can be used to help tune FEPI applications, and to control the resources that they use. For information about the performance aspects of the FEPI, see Improving FEPI performance.

FEPI: Connection statistics

You can retrieve FEPI connection statistics by using the **EXEC CICS COLLECT STATISTICS NODE TARGET** system command. They are mapped by the DFHA23DS DSECT.

Table 54. FEPI: Connection statistics

DFHSTUP name	Field name	Description
Pool Name	A23POOL	is the FEPI pool name. Reset characteristic: not reset
Target Name	A23TARG	is the FEPI target name. Reset characteristic: not reset
Node Name	A23NODE	is the FEPI node. Reset characteristic: not reset
Acquires	A23ACQ	is the number of times the connection was acquired. Reset characteristic: reset to zero
Conversations	A23CNV	is the number of conversations that have used this connection. Reset characteristic: reset to zero
Unsolicited Inputs	A23USI	is the number of times unsolicited input was received on this connection. Reset characteristic: reset to zero

Characters

Table 54. FEPI: Connection statistics (continued)

DFHSTUP name	Field name	Description
–Sent	A23CHOUT	is the number of characters of data sent on this connection. Reset characteristic: reset to zero
–Received	A23CHIN	is the number of characters of data received on this connection. Reset characteristic: reset to zero
Receive Timeouts	A23RTOUT	is the number of times a FEPI RECEIVE timed-out on this connection. Reset characteristic: reset to zero
Error Conditions	A23ERROR	is the number of z/OS Communications Server error conditions raised for this connection. Reset characteristic: reset to zero

Related reference:

COLLECT STATISTICS

FEPI: Pool statistics

You can retrieve FEPI pool statistics by using the **EXEC CICS COLLECT STATISTICS POOL** system command. They are mapped by the DFHA22DS DSECT.

Table 55. FEPI: Pool statistics

DFHSTUP name	Field name	Description
Pool Name	A22POOL	is the FEPI pool name. Reset characteristic: not reset
Targets	A22TRGCT	is the current number of targets in the pool. Reset characteristic: not reset
Nodes	A22NDCT	is the current number of nodes in the pool. Reset characteristic: not reset
Available Connections		
–Current	A22CONCT	is the number of connections in the pool. Reset characteristic: not reset

Table 55. FEPI: Pool statistics (continued)

DFHSTUP name	Field name	Description
–Peak	A22CONPK	is the peak number of connections in the pool. This field is needed because targets and nodes may be deleted between intervals. Reset characteristic: reset to current value (A22CONCT)
Allocates		
–Total	A22ALLOC	is the number of conversations that have been allocated from this pool. Reset characteristic: reset to zero
–Peak	A22PKALL	is the peak number of concurrent conversations allocated from this pool. Reset characteristic: reset to current value
Allocate Waits		
NOT IN THE DFHSTUP REPORT	A22WAIT	is the current number of conversations waiting to be allocated. Reset characteristic: not reset
–Total	A22TOTWT	is the number of conversations that had to wait to be allocated. Reset characteristic: reset to zero
–Peak	A22PKWT	is the peak number of conversations that had to wait to be allocated. Reset characteristic: reset to current value (A22WAIT)
Allocate Timeouts	A22TIOUT	is the number of conversation allocates that timed out. Reset characteristic: reset to zero

Related reference:

COLLECT STATISTICS

FEPI: Target statistics

You can retrieve statistics a particular target in a pool by using the **EXEC CICS COLLECT STATISTICS POOL TARGET** system command. They are mapped by the DFHA24DS DSECT.

Table 56. FEPI: Target statistics

DFHSTUP name	Field name	Description
Target name	A24TARG	is the FEPI target name. Reset characteristic: not reset

Table 56. FEPI: Target statistics (continued)

DFHSTUP name	Field name	Description
Pool name	A24POOL	is the FEPI pool name. Reset characteristic: not reset
Applid	A24APPL	is the z/OS Communications Server applid of the target. Reset characteristic: not reset
Nodes	A24NDCT	is the number of nodes connected to this target. Reset characteristic: not reset
Allocates	A24ALLOC	is the number of conversations **specifically** allocated to this target in this pool. Reset characteristic: reset to zero
Allocate Waits		
–Total	A24TOTWT	is the number of conversations that had to wait to be allocated to this target in this pool. Reset characteristic: reset to zero
–Wait	A24WAIT	is the number of current conversations waiting to be allocated to this target in this pool Reset characteristic: reset to zero
–Peak	A24PKWT	is the peak number of conversations that had to wait to be allocated to this target in this pool. Reset characteristic: reset to current value (A24WAIT)
Allocate Timeouts	A24TIOUT	is the number of conversation allocates to this target in this pool that timed out. Reset characteristic: reset to zero

Related reference:

COLLECT STATISTICS

FEPI: Unsolicited connection statistics

Unsolicited connection statistics are produced when a connection is destroyed. This occurs when an **EXEC CICS FEPI DELETE POOL**, **DISCARD NODELIST**, **DISCARD POOL** or **DISCARD TARGETLIST** command is used. The statistics are mapped by the DFHA23DS DSECT. They contain the same information as the interval statistics.

FEPI: Unsolicited pool statistics

Unsolicited pool statistics are produced when a pool is discarded. The statistics are mapped by the DFHA22DS DSECT. They contain the same information as the interval statistics.

FEPI: Unsolicited target statistics

Unsolicited target statistics are produced when a target is destroyed or removed from a pool. This occurs when a **DELETE POOL**, **DISCARD POOL** or **DISCARD TARGETLIST** command is used. The statistics are mapped by the DFHA24DS DSECT. They contain the same information as the interval statistics.

FEPI: Summary connection statistics

FEPI Summary connection statistics are not available online.

Table 57. FEPI: Summary connection statistics

DFHSTUP name	Description
Pool name	is the FEPI pool name.
Target name	is the FEPI target name.
Node name	is the FEPI node.
Acquires	is the total number of times the connection was acquired.
Conversations	is the total number of conversations that have used this connection.
Unsolicited Inputs	is the total number of times unsolicited input was received on this connection.
Characters Sent	
–Sent	is the total number of characters of data sent on this connection.
–Received	is the total number of characters of data received on this connection.
Receive timeouts	is the total number of times a FEPI RECEIVE timed-out on this connection.
Error conditions	is the total number of z/OS Communications Server error conditions raised for this connection.

FEPI: Summary pool statistics

FEPI Summary pool statistics are not available online.

Table 58. FEPI: Summary pool statistics

DFHSTUP name	Description
Pool name	is the FEPI pool name.
Targets	is the number of targets in the pool.
Nodes	is the number of nodes in the pool.
Available connections	
–Current	is the number of connections in the pool.
–Peak	is the highest peak number of connections in the pool.
Allocates	
–Totals	is the total number of conversations allocated from this pool.
–Peak	is the highest peak number of concurrent conversations allocated from this pool.
Allocate waits	
–Total	is the total number of conversations that had to wait to be allocated.
–Peak	is the highest peak number of conversations that had to wait to be allocated.
Allocate timeouts	is the total number of conversation allocates that timed out.

FEPI: Summary target statistics

FEPI: Summary target statistics are not available online.

Table 59. FEPI: Summary target statistics

DFHSTUP name	Description
Target name	is the FEPI target name.
Pool name	is the FEPI pool name.
Applid	is the z/OS Communications Server applid of the target.
Nodes	is the number of nodes in the pool.
Allocates	is the total number of conversations **specifically** allocated to this target in this pool.
Allocate waits	
–Total	is the total number of conversations that had to wait to be allocated to this target in this pool.
–Peak	is the highest peak number of conversations that had to wait to be allocated to this target in this pool.
Allocate timeouts	is the total number of conversations allocated to this target in this pool that timed out.

File control statistics

There are four sections in the DFHSTUP report for file statistics, dealing with resource information, requests information, data table requests information, and performance information.

Unsolicited file statistics are printed in a statistics report separate from other types of CICS statistics.

You can retrieve these statistics by using the **EXEC CICS EXTRACT STATISTICS FILE** system command. They are mapped by the DFHA17DS DSECT.

Related reference:

"Files report" on page 407
The Files report is produced using a combination of the **EXEC CICS INQUIRE FILE** and **EXEC CICS EXTRACT STATISTICS FILE** commands. The statistics data is mapped by the **DFHA17DS DSECT**.

"File Requests report" on page 408
The File Requests report is produced using a combination of the **EXEC CICS INQUIRE FILE** and **EXEC CICS EXTRACT STATISTICS FILE** commands. The statistics data is mapped by the **DFHA17DS DSECT**.

"Data Tables reports" on page 378
The Data Tables Requests and Data Tables Storage reports are produced using a combination of the **EXEC CICS INQUIRE FILE** and **EXEC CICS EXTRACT STATISTICS FILE** commands. The statistics data is mapped by the **DFHA17DS DSECT**.

"Data Set Name report" on page 378
The Data Set Name report is produced using the **EXEC CICS INQUIRE DSNAME** command.

Related information:

EXTRACT STATISTICS

Interpreting file statistics

File statistics collect data about the number of application requests against your data sets. They indicate the number of requests for each type of service that are

processed against each file. If the number of requests is totalled daily or for every CICS execution, the activity for each file can be monitored for any changes that occur.

These file statistics may have been reset during the day; to obtain a figure of total activity against a particular file during the day, refer to the DFHSTUP summary report. Other data pertaining to file statistics and special processing conditions are also collected.

The wait-on-string number is only significant for files related to VSAM data sets. For VSAM, STRNO=5 in the file definition means, for example, that CICS permits five concurrent requests to this file. If a transaction issues a sixth request for the same file, this request must wait until one of the other five requests has completed ("wait-on-string").

The number of strings associated with a file when specified through resource definition online.

String number setting is important for performance. Too low a value causes excessive waiting for strings by tasks and long response times. Too high a value increases VSAM virtual storage requirements and therefore real storage usage. However, as both virtual storage and real storage are above the 16MB line, this may not be a problem. In general, the number of strings should be chosen to give near zero "wait on string" count.

Note: Increasing the number of strings can increase the risk of deadlocks because of greater transaction concurrency. To minimize the risk you should ensure that applications follow the standards set in Transaction deadlocks.

A file can also "wait-on-string" for an LSRpool string. This type of wait is reflected in the local shared resource pool statistics section (see "Interpreting LSR pool statistics" on page 188) and not in the file wait-on-string statistics.

If you are using data tables, an extra line appears in the DFHSTUP report for those files defined as data tables. "Read requests", "Source reads", and "Storage alloc(K)" are usually the numbers of most significance. For a CICS-maintained table a comparison of the difference between "read requests" and "source reads" with the total request activity reported in the preceding line shows how the request traffic divides between using the table and using VSAM and thus indicates the effectiveness of converting the file to a CMT. "Storage alloc(K)" is the total storage allocated for the table and provides guidance to the cost of the table in storage resource, bearing in mind the possibility of reducing LSRpool sizes in the light of reduced VSAM accesses.

Files: Resource statistics - resource information

The file resource information statistics provide information about files.

Table 60. Files: Resource statistics - resource information

DFHSTUP name	Field name	Description
File name	A17FNAM	The name you specified in the DEFINE FILE command of resource definition online. Reset characteristic: not reset

Table 60. Files: Resource statistics - resource information (continued)

DFHSTUP name	Field name	Description
Data set name	A17DSNAM	The 44-character name that defines the physical data set to the system. This name can be specified as follows: • The DSNAME operand specified in the DEFINE FILE command of resource definition online • The operand specified in the DD DSN= operand of the CICS JCL • Dynamic allocation of a data set to a file through the use of **CEMT SET FILE DSNAME** or **EXEC CICS SET FILE DSNAME** commands. If no data set is currently allocated to the file, this field is blank. If the file is remote, no data set name is printed, but the word remote is substituted for the data set name. Reset characteristic: not reset
Base data set name (if applicable)	A17BDSNM	If the file is a VSAM PATH, this field gives the base data set name. Reset characteristic: not reset.
Data set type	A17DSTYP	The data set type, which can be BDAM, standard ESDS, extended ESDS, KSDS, RRDS, VRRDS, or PATH. If the file is remote or not open, this field is blank. **Key** **Statistics type** **B** BDAM **E** Standard ESDS **K** KSDS **P** PATH **R** RRDS **V** VRRDS **X** Extended ESDS Reset characteristic: not reset.
RLS	A17DSRLS	Indicates whether the file is RLS. • 'R' =RLS accessed file • ' ' =Non-RLS These values are shown as Yes and No, respectively, in the DFHSTUP report. Reset characteristic: not reset.

Table 60. Files: Resource statistics - resource information (continued)

DFHSTUP name	Field name	Description
DataTable indicator	A17DT	A 1-byte field that contains the value R, S T, L K, or X, if data table statistics fields are present in the record. • R indicates that this is a remote file for which table read and source read statistics are present. • S indicates that the resource was not opened as a table but was able to access data from a table associated with the same data set. • T indicates that the resource is a shared data table. • L indicates that the resource is a coupling facility data table (locking model). • K indicates that the resource is a coupling facility data table (contention model). • X indicates that the resource has been opened with a source data set which has an associated CICS maintained data table and the resource has been updated which has caused the data table to also be updated. Reset characteristic: not reset
Time opened	A17LOPNT	The time at which this file was opened. If this field is not set, A17LOPNT contains the hexadecimal value X'00000000 00000000', shown in the report as CLOSED. If the field is set, it contains a time expressed as a store clock (STCK) value in local time. This field contains a valid time if: • The file was open at the time the statistics were taken. • This is an unsolicited statistics request due to the file being closed. Reset characteristic: not reset
Time closed	A17LCLST	The time at which this file was closed. If this field is not set, A17LCLST contains the hexadecimal value X'00000000 00000000', shown in the report as OPEN. If the field is set, it contains a time expressed as a store clock (STCK) value in local time. Reset characteristic: not reset

Table 60. Files: Resource statistics - resource information (continued)

DFHSTUP name	Field name	Description
Remote Name	A17RNAME	The name by which this file is known in the system or region in which it is resident. Reset characteristic: not reset.
Remote Sysid	A17RSYS	When operating in an IPIC, ISC, or MRO environment, and the file is held by a remote system, this field specifies the system upon which the file is resident. Reset characteristic: not reset.
LSR	A17POOL	The identity of the local shared resource pool. This value is that specified by: • The LSRPOOLNUM operand of the resource definition online DEFINE FILE command. "N" means that it is not defined in an LSR pool. Reset characteristic: not reset.
CFDT PoolName	A17DTCFP	The name of the coupling facility data table pool defined for the data table associated with the file Reset characteristic: not reset
NOT IN THE DFHSTUP REPORT	A17FLOC	States whether the file is defined as being local to this CICS system, or resides on a remote CICS system. The field is one byte long, and is set to R if remote. Reset characteristic: not reset
Not in DFHSTUP report	A17_FILE_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	A17_FILE_CHANGE_TIME	The time stamp (STCK) in local time of CSD record change. Reset characteristic: not reset

Table 60. Files: Resource statistics - resource information (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	A17_FILE_CHANGE_USERID	The user ID that ran the change agent. Reset characteristic: not reset
Not in DFHSTUP report	A17_FILE_CHANGE_AGENT	The agent that made the last change. Reset characteristic: not reset
Not in DFHSTUP report	A17_FILE_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	A17_FILE_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	A17_FILE_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset

Note: When the source data set of a user-maintained table is closed, the "time opened" is reset to the time at which the source was closed.

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Files: Resource statistics - requests information

File requests information statistics provide information about the requests made against files.

The following eight items are service request statistics. They do not tell you directly how many I/O accesses are being carried out for each transaction (a single-transaction measurement is required for this). Nevertheless, by regularly totaling the service requests against individual data sets, they can enable you to anticipate data set problems when I/O activity increases.

They list the number of service requests processed against the data set. These are dependent on the type of requests that are allowed on the data set.

Table 61. Files: Resource statistics - requests information

DFHSTUP name	Field name	Description
File name	A17FNAM	is the name you specified in: • The DEFINE FILE command of resource definition online • (for BDAM files only) The TYPE=FILE, FILE operand of the DFHFCT macro. Reset characteristic: not reset
GET requests	A17DSRD	is the number of GET requests attempted against this file. Reset characteristic: reset to zero
GET upd requests	A17DSGU	is the number of GET UPDATE requests attempted against this file. Reset characteristic: reset to zero
Browse requests	A17DSBR	is the number of GETNEXT and GETPREV requests attempted against this file. Reset characteristic: reset to zero
Update requests	A17DSWRU	is the number of PUT UPDATE requests attempted against this file. Reset characteristic: reset to zero
Add requests	A17DSWRA	is the number of PUT requests attempted against this file. Reset characteristic: reset to zero
Delete requests	A17DSDEL	is the number of DELETE requests attempted against this file. Reset characteristic: reset to zero
Brws upd requests	A17DSBRU	is the number of browse READNEXT UPDATE and READPREV UPDATE requests issued against this file. Note that this field is only applicable to RLS accessed files. Reset characteristic: reset to zero

VSAM EXCP requests

Table 61. Files: Resource statistics - requests information (continued)

DFHSTUP name	Field name	Description
–Data	A17DSXCP	A value is printed if the file has been opened and used as a VSAM KSDS during the CICS run, even if the file is not being used as a KSDS at the time of taking statistics. See notes 1 on page 95, 2 on page 95 and 3 on page 95.
–Index	A17DSIXP	See notes 1 on page 95, 2 on page 95 and 3 on page 95. Reset characteristic: reset to zero
RLS req timeouts	A17RLSWT	is the number of RLS requests made to this file that were not serviced in the specified time limit, and therefore the requests were terminated. Reset characteristic: reset to zero
Not in DFHSTUP report	A17_FILE_DEFINE_SOURCE	The name of the CSD group that contains to this resource. Reset characteristic: not reset
Not in DFHSTUP report	A17_FILE_CHANGE_TIME	The time stamp (STCK) in local time of CSD record change. Reset characteristic: not reset
Not in DFHSTUP report	A17_FILE_CHANGE_USERID	The user ID that ran the change agent. Reset characteristic: not reset
Not in DFHSTUP report	A17_FILE_CHANGE_AGENT	The agent that made the last change. Reset characteristic: not reset
Not in DFHSTUP report	A17_FILE_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	A17_FILE_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	A17_FILE_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset

Table 61. Files: Resource statistics - requests information (continued)

DFHSTUP name	Field name	Description

Notes: The "VSAM EXCP requests" fields indicate the number of I/O operations on the file for data and index records respectively. Also, note the following points:

1. The values printed for both items relate to the file. If dynamic allocation has been used to change the physical data sets associated with a file, the value shown is an accumulation for all the data sets.
2. Take care when using these values for files participating in data set name sharing, because VSAM maintains only one count of EXCPs for all access method control blocks (ACBs) thus connected. In this situation, the value reported against each file represents the total accesses for all sharing ACBs during the period for which the file was open. Therefore, if all files in the data set name sharing group were open for the same period, each file would have the same EXCP values reported against it, which would be the total for all the files in the group. When the count of EXCPs rises above x'80000000', the count is no longer reliable, and you should consider redefining the file.
3. For RLS, this value is a count of the number of calls to the system buffer manager. It includes calls that result in either a coupling facility cache access or an I/O.
4. The EXCP count for RLS files is the count of all EXCPs for all tasks accessing the RLS file within that CICS region. It should be noted as stated in note 2, EXCP counts are stored in the file's corresponding ACB within that CICS region.

Files: Resource statistics - data table requests information

If the file is a data table, further fields are present in the statistics record.

The presence of these additional fields is indicated by the value "R", or "S", or "T", or "L", or "K", or "X" in the field A17DT. Their names and meanings are as follows:

Table 62. Files: Resource statistics - data table requests information

DFHSTUP name	Field name	Description
File Name	A17FNAM	The name you specified in the DEFINE FILE command of resource definition online. Reset characteristic: not reset
Close type	A17DTTYP	This 1 byte field is set to: • "C" when a CICS maintained table is closed • "P" when a file which has been accessing a CICS-maintained table is closed but the table remains open because there are other files still open which are using the table • "S" when the source data set for a user-maintained table is being closed • "U" when a user maintained table is closed • "L" when a locking model coupling facility data table is closed • "K" when a contention model coupling facility data table is closed. Reset characteristic: not reset

Table 62. Files: Resource statistics - data table requests information (continued)

DFHSTUP name	Field name	Description
Read requests	A17DTRDS	The number of attempts to retrieve records from the table. Reset characteristic: reset to zero
Recs¬[not] in table	A17DTRNF	The number of reads where the record was not found in the data table, so CICS retrieved the record from the source file. Reset characteristic: reset to zero
Adds from reads	A17DTAVR	The number of records placed in the table by the loading process or as a result of API READ requests issued while loading was in progress. Reset characteristic: reset to zero
Add requests	A17DTADS	The number of attempts to add records to the table as a result of WRITE requests. Reset characteristic: reset to zero
Adds rejected – exit	A17DTARJ	The number of records CICS attempted to add to the table which were rejected by the global user exit. Reset characteristic: reset to zero
Adds rejected – table full	A17DTATF	The number of records CICS attempted to add to the table but was unable to do so because the table already contained the maximum number of records specified. Reset characteristic: reset to zero
Rewrite requests	A17DTRWS	The number of attempts to update records in the table as a result of REWRITE requests. Reset characteristic: reset to zero
Delete requests	A17DTDLS	The number of attempts to delete records from the table as a result of DELETE requests. Reset characteristic: reset to zero
Highest table size	A17DTSHI	The peak number of records present in the table. Reset characteristic: reset at close

Table 62. Files: Resource statistics - data table requests information (continued)

DFHSTUP name	Field name	Description
Storage alloc(K)	A17DTALT	The total amount of storage allocated to the data table. The DFHSTUP report expresses the storage in KB. DFHSTUP does not total the storage allocated for all data tables because multiple files can share the same data table. Reset characteristic: not reset
Chng Resp/Lock Waits	A17DTCON	For a CFDT that is using the locking model, records are locked down when they are read for update. This count is the number of times it was necessary to WAIT for an already locked record. For a CFDT that is using the contention model, records are not locked when they are read for update. If a subsequent rewrite or delete request finds that the record has already changed, a CHANGED response is returned. This count is the number of times that a CHANGED response was issued. Reset characteristic: reset to zero
NOT IN THE DFHSTUP REPORT	A17DTLDS	The number of times that a LOADING response was issued. When a CFDT is in the process of being loaded, and requests issued for records beyond the range of those already loaded get a LOADING response. Reset characteristic. reset to zero

Note: The request information statistics output for a data table represents the activity of the source data set, and the data table request information represents the activity of the data table. Thus, for a CICS-maintained table, you would expect to find similar counts in both sections of the statistics output for requests which modify the table, because both the source data set and the table must be updated. For a user-maintained table, updating activity is not shown in the data table resource information.

When using the shared data tables feature the statistics records contain the additional information as follows:

Table 63. Files: shared data table statistics

DFHSTUP name	Field name	Description
NOT IN THE DFHSTUP REPORT	A17DTSIZ	The current number of records in the data table. Reset characteristic: not reset
NOT IN THE DFHSTUP REPORT	A17DTUST	The total amount of storage (KB) in use for the data table. Reset characteristic: not reset
NOT IN THE DFHSTUP REPORT	A17DTALE	The total amount of storage (KB) allocated for the record entry blocks. Reset characteristic: not reset

Table 63. Files: shared data table statistics (continued)

DFHSTUP name	Field name	Description
NOT IN THE DFHSTUP REPORT	A17DTUSE	The total amount of storage (KB) in use for the record entry blocks. Reset characteristic: not reset
NOT IN THE DFHSTUP REPORT	A17DTALI	The total amount of storage (KB) allocated for the index. Reset characteristic: not reset
NOT IN THE DFHSTUP REPORT	A17DTUSI	The total amount of storage (KB) in use for the index. Reset characteristic: not reset
NOT IN THE DFHSTUP REPORT	A17DTALD	The total amount of storage (KB) allocated for the record data. Reset characteristic: not reset
NOT IN THE DFHSTUP REPORT	A17DTUSD	The total amount of storage (KB) in use for the record data. Reset characteristic: not reset
NOT IN THE DFHSTUP REPORT	A17DTRRS	The total number of read retries, that is the number of times reads in an AOR must be retried because the FOR changed the table during the read. A17DTRRS is **not** a count of accesses which failed because a file owning region (FOR) was updating the specific record that the AOR wanted to read. In such cases, the request is function shipped and is counted in the "source reads". Reset characteristic: not reset
Not in DFHSTUP report	A17_FILE_DEFINE_SOURCE	The name of the CSD group that contains to this resource. Reset characteristic: not reset
Not in DFHSTUP report	A17_FILE_CHANGE_TIME	The time stamp (STCK) in local time of CSD record change. Reset characteristic: not reset

Table 63. Files: shared data table statistics (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	A17_FILE_CHANGE_USERID	The user ID that ran the change agent. Reset characteristic: not reset
Not in DFHSTUP report	A17_FILE_CHANGE_AGENT	The agent that made the last change. Reset characteristic: not reset
Not in DFHSTUP report	A17_FILE_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	A17_FILE_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	A17_FILE_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset

Note: Data table fields are present in the statistics records but contain zeros if shared data tables are not installed or the resource is not a data table.

Files: Resource statistics - performance information

These statistics are available online, and are mapped by the DFHA17DS DSECT.

Table 64. Files: Resource statistics - performance information

DFHSTUP name	Field name	Description
File name	A17FNAM	is the name you specified in the DEFINE FILE command of resource definition online. Reset characteristic: not reset
Strings	A17STRNO	The maximum permissible number of concurrent updates. For RLS, the value specified in the ACB macro is ignored. After OPEN a value of 1024 is returned, indicating the maximum number of strings allowed. Reset characteristic: not reset.
Active strings	A17DSASC	The current number of updates against the file. Reset characteristic: not reset.
Wait on Strings: Current	A17DSASW	The current number of 'waits' for strings against the file. Reset characteristic: not reset

Table 64. Files: Resource statistics - performance information (continued)

DFHSTUP name	Field name	Description
Wait on Strings: Total	A17DSTSW	The total number of 'waits' for strings against the file. Reset characteristic: reset to zero
Wait on Strings: Highest	A17DSHSW	The highest number of 'waits' for strings against the file. Reset characteristic: reset to current value
Buffers: Data	A17DSDNB	is the number of buffers to be used for data. For RLS, BUFND is ignored and the value specified in the ACB is returned. This parameter has no effect for z/OS UNIX files. Reset characteristic: not reset.
Buffers: Index	A17DSINB	is the number of buffers to be used for index. For RLS, BUFNI is ignored and the value specified in the ACB is returned. This parameter has no effect for z/OS UNIX files. Reset characteristic: not reset.
Excl Cntl Conflicts	A17FCXCC	is the number of exclusive control conflicts that have occurred against VSAM control intervals in this file. Reset characteristic: reset to zero
Not in DFHSTUP report	A17_FILE_DEFINE_SOURCE	The name of the CSD group that contains to this resource. Reset characteristic: not reset
Not in DFHSTUP report	A17_FILE_CHANGE_TIME	The time stamp (STCK) in local time of CSD record change. Reset characteristic: not reset
Not in DFHSTUP report	A17_FILE_CHANGE_USERID	The user ID that ran the change agent. Reset characteristic: not reset
Not in DFHSTUP report	A17_FILE_CHANGE_AGENT	The agent that made the last change. Reset characteristic: not reset
Not in DFHSTUP report	A17_FILE_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset

Table 64. Files: Resource statistics - performance information (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	A17_FILE_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	A17_FILE_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset

Files: Summary statistics - resource information

File resource summary statistics are unavailable online.

Table 65. Files: Summary statistics - resource information

DFHSTUP name	Description
File Name	The name you specified in the DEFINE FILE command of resource definition online.
Data set name	The 44-character name defining the physical data set to the system. For remote files the data set name is shown as REMOTE.
Base data set name (If applicable)	In the instance that the file is a VSAM PATH, this field gives the base data set name.
Data set type	The data set type, which can be BDAM, standard ESDS, extended ESDS, KSDS, RRDS, VRRDS, or PATH. If the file is remote or not open, this field is blank. **Key** **Statistics type** **B** BDAM **E** Standard ESDS **K** KSDS **P** PATH **R** RRDS **V** VRRDS **X** Extended ESDS
RLS	An indicator of whether the file is RLS accessed or not. YES indicates an RLS-accessed file; NO indicates a non-RLS file.

Table 65. Files: Summary statistics - resource information (continued)

DFHSTUP name	Description
Data Table indicator	A 1-byte field that contains one of the following values: R, S, T, L, K, or X., if data table statistics fields are present in the record. • R indicates that this is a remote file for which table read and source read statistics are present. • S indicates that the resource was not opened as a table but was able to access data from a table associated with the same data set. • T indicates that the resource is a data table. • L indicates that the resource is a coupling facility data table that uses the locking model. • K indicates that the resource is a coupling facility data table that uses the contention model. • X indicates that the resource has been opened with a source data set that has an associated CICS maintained data table, and the resource has been updated, which has caused the data table to also be updated.
Remote name	The name by which this file is known in the system or region in which it is resident.
Remote sysid	When operating in an IPIC, ISC, or MRO environment, and the file is held by a remote system, this field specifies the system upon which the file is resident.
LSR	The identity of the local shared resource pool. This value is that specified using the LSRPOOLNUM operand of the resource definition online DEFINE FILE command."N" means that it is not defined in an LSR pool.
CFDT PoolName	The name of the coupling facility data table pool defined for the data table associated with the file.

Files: Summary statistics - requests information

File requests summary statistics are not available online.

Table 66. Files: Summary statistics - requests information

DFHSTUP name	Description
File name	is the name you specified in: • The DEFINE FILE command of resource definition online • (for BDAM files only) The TYPE=FILE, FILE operand of the DFHFCT macro.
Get requests	is the total number of GET requests issued against this file.
Get upd requests	is the total number of GET UPDATE requests issued against this file.
Browse requests	is the total number of GETNEXT and GETPREV requests issued against this file.

Table 66. Files: Summary statistics - requests information (continued)

DFHSTUP name	Description
Update requests	is the total number of PUT UPDATE requests issued against this file.
Add requests	is the total number of PUT requests issued against this file.
Delete requests	is the total number of DELETE requests issued against this file.
Brws upd requests	is the total number of READNEXT UPDATE and READPREV UPDATE requests issued against this file (RLS only).
VSAM EXCP request: Data	A value is printed if the file has been opened and used as a VSAM KSDS during the CICS run. See notes 1, 2 and 3.
VSAM EXCP request: Index	See notes 1, 2 and 3.
VSAM EXCP request: RLS req timeouts	is the total number of RLS requests made to this file that were not serviced in the specified time limit, and therefore the requests were terminated.

Notes: The "VSAM EXCP requests" fields indicate the number of I/O operations on the file for data and index records respectively. Also, note the following points:

1. The values printed for both items relate to the file. If dynamic allocation has been used to change the physical data sets associated with a file, the value shown is an accumulation for all the data sets.
2. Take care when using these values for files participating in data set name sharing, because VSAM maintains only one count of EXCPs for all access method control blocks (ACBs) thus connected. In this situation, the value reported against each file represents the total accesses for all sharing ACBs during the period for which the file was open. Therefore, if all files in the data set name sharing group were open for the same period, each file would have the same EXCP values reported against it, which would be the total for all the files in the group. When the count of EXCPs rises above x'80000000', the count is no longer reliable, and you should consider redefining the file.
3. For RLS, this value is a count of the number of calls to the system buffer manager. It includes calls that result in either a coupling facility cache access or an I/O.
4. The EXCP count for RLS files is the count of all EXCPs for all tasks accessing the RLS file within that CICS region. It should be noted as stated in note 2, EXCP counts are stored in the file's corresponding ACB within that CICS region.

Files: Summary statistics - data table requests information

File data table requests summary statistics are unavailable online.

Table 67. Files: Summary statistics - data table requests information

DFHSTUP name	Description
File Name	The name you specified in the DEFINE FILE command of resource definition online.

Table 67. Files: Summary statistics - data table requests information (continued)

DFHSTUP name	Description
Table type	This 1 byte field is set as follows: • C when a CICS maintained table is closed. • P when a file that accessed a CICS maintained table is closed, but the table remains open because other files that are using the table are still open. • S when the source data set for a user maintained table is being closed. • U when a user maintained table is closed. • L when a locking model coupling facility data table is closed. • K when a contention model coupling facility data table is closed.
Successful reads	The total number of reads from the data table.
Recs in table	The number of reads where the record was not found in the data table, so CICS retrieved the record from the source file.
Adds from reads	The total number of records placed in the table by the loading process, or as a result of API READ requests issued while loading was in progress.
Add requests	The total number of attempts to add records to the table as a result of WRITE requests.
Adds rejected - exit	The total number of records CICS attempted to add to the table that were rejected by the global user exit.
Adds rejected - table full	The total number of records CICS attempted to add to the table but was could not because the table already contained the maximum number of records specified.
Rewrite requests	The total number of attempts to update records in the table as a result of REWRITE requests.
Delete requests	The total number of attempts to delete records from the table as a result of DELETE requests.
Highest table size	The peak number of records present in the table.
Chng Resp/Lock Waits	For a CFDT that uses the locking model, records are locked down when they are read for update. This count is the number of times it was necessary to wait for a record that was already locked. For a CFDT that uses the contention model, records are not locked when they are read for update. If a subsequent rewrite or delete request finds that the record has already changed, a CHANGED response is returned. This count is the number of times that a CHANGED response was issued.

Files: Summary statistics - performance information

File performance summary statistics are unavailable online.

Table 68. Files: Summary statistics - performance information

DFHSTUP name	Description
File name	The name you specified in the DEFINE FILE command of resource definition online.
Strings	The maximum permissible number of concurrent updates. For RLS, the value specified in the ACB macro is ignored. After OPEN a value of 1024 is returned, indicating the maximum number of strings allowed.
Wait on strings: Total	The total number of 'waits' for strings against the file.
Wait on strings: HWM	The highest number of 'waits' for strings against the file.

Table 68. Files: Summary statistics - performance information (continued)

DFHSTUP name	Description
Buffers: Data	The number of buffers to be used for data. For RLS, BUFND is ignored and the value specified in the ACB is returned. This parameter has no effect for z/OS UNIX files.
Buffers: Index	The number of buffers to be used for index. For RLS, BUFNI is ignored and the value specified in the ACB is returned. This parameter has no effect for z/OS UNIX files.
Excl Cntl Conflicts	The total number of exclusive control conflicts that have occurred against VSAM control intervals in this file.

ISC/IRC system and mode entry statistics

The ISC/IRC system and mode entry statistics area of the DFHSTUP listing is for a CICS system using intersystem communication. This provides summary statistics for the CICS intercommunication facility.

Note: ISC/IRC system and mode entry statistics contain information about intersystem communication over SNA (ISC over SNA) and multiregion operation (MRO) connections. Information about IP interconnectivity (IPIC) connections is in IPCONN statistics.

The two types of intersystem communication, ISC over SNA and IPIC, are described in Communication between systems.

Related concepts:

"Interpreting ISC/IRC system and mode entry statistics"
You can use the ISC/IRC system and mode entry statistics to detect some problems in a CICS intersystem environment.

Related reference:

"Connections and Modenames report" on page 373
The Connections and Modenames report is produced using a combination of the **EXEC CICS INQUIRE CONNECTION**, **EXEC CICS INQUIRE MODENAME** and **EXEC CICS COLLECT STATISTICS CONNECTION** commands. The statistics data is mapped by the DFHA14DS DSECT.

Interpreting ISC/IRC system and mode entry statistics

You can use the ISC/IRC system and mode entry statistics to detect some problems in a CICS intersystem environment.

The following topics identify the questions you might have about system performance, and describe how answers to those questions can be derived from the statistics report. The topics also describe what actions, if any, you can take to resolve ISC/IRC performance problems.

Here are some questions you might have:

- Are there enough sessions defined?
- Is the balance of contention winners to contention losers correct?
- Is there conflicting usage of APPC modegroups?

- What can be done if there are unusually high numbers, compared with normal or expected numbers, in the statistics report?

Summary connection type for statistics fields

The following two tables show the connection type that is relevant for each statistics field:

Table 69. ISC/IRC system entries

System entry	Field	IRC	LU6.1	APPC
Connection name	A14CNTN	X	X	X
AIDS in chain	A14EALL	X	X	X
Generic AIDS in chain	A14ESALL	X	X	X
ATIs satisfied by contention losers	A14ES1		X	
ATIs satisfied by contention winners	A14ES2	X	X	
Peak contention losers	A14E1HWM	X	X	
Peak contention winners	A14E2HWM	X	X	
Peak outstanding allocates	A14ESTAM	X	X	X
Total number of allocates	A14ESTAS	X	X	X
Queued allocates	A14ESTAQ	X	X	X
Failed link allocates	A14ESTAF	X	X	X
Failed allocates due to sessions in use	A14ESTAO	X	X	X
Total bids sent	A14ESBID		X	
Current bids in progress	A14EBID		X	
Peak bids in progress	A14EBHWM		X	
File control function shipping requests	A14ESTFC	X	X	X
Interval control function shipping requests	A14ESTIC	X	X	X
TD function shipping requests	A14ESTTD	X	X	X
TS function shipping requests	A14ESTTS	X	X	X
DLI function shipping requests	A14ESTDL	X	X	X
Terminal sharing requests	A14ESTTC	X		X

All the fields in the table are specific to the mode group of the mode name given.

Table 70. ISC/IRC mode entries

Mode entry	Field	IRC	LU6.1	APPC
Mode name	A20MODE			X
ATIs satisfied by contention losers	A20ES1			X
ATIs satisfied by contention winners	A20ES2			X
Peak contention losers	A20E1HWM			X
Peak contention winners	A20E2HWM			X
Peak outstanding allocates	A20ESTAM			X
Total specific allocate requests	A20ESTAS			X
Total specific allocates satisfied	A20ESTAP			X

Table 70. ISC/IRC mode entries (continued)

Mode entry	Field	IRC	LU6.1	APPC
Total generic allocates satisfied	A20ESTAG			X
Queued allocates	A20ESTAQ			X
Failed link allocates	A20ESTAF			X
Failed allocates due to sessions in use	A20ESTAO			X
Total bids sent	A20ESBID			X
Current bids in progress	A20EBID			X
Peak bids in progress	A20EBHWM			X

For more information about the usage of individual fields, see the CICS statistics described under "ISC/IRC system and mode entry statistics" on page 105.

General guidance for interpreting ISC/IRC statistics

Guidance information on interpreting the ISC/IRC statistics

1. Usage of A14xxx and A20xxx fields:
   - In most cases, the guidance given in the following section relates to all connection types, that is, IRC, LU6.1, and APPC. Where the guidance is different for a particular connection type, the text indicates the relevant type of connection.
   - The statistics fields that relate to IRC and LU6.1 are always prefixed A14, whereas the APPC fields can be prefixed by A14 or A20. For more information on which field relates to which connection type, see Table 69 on page 106 and Table 70 on page 106.
2. Use of the terms "Contention Winner" and "Contention Loser":
   - APPC sessions are referred to as either *contention winners* or *contention losers*. These are equivalent to secondaries (SEND sessions) and primaries (RECEIVE sessions) when referring to LU6.1 and IRC.
3. Tuning the number of sessions defined:
   - In the following sections, it is sometimes stated that, if certain counts are too high, you should consider making more sessions available. In these cases, be aware that, as the number of sessions defined in the system is increased, it may have the following effects:
     - Increased use of real and virtual storage.
     - Increased use of storage on GATEWAY NCPs in the network.
     - Increased use of storage by z/OS Communications Server.
     - Increased line loading in the network.
     - The back-end CICS system (AOR) may not be able to cope with the increased workload from the TOR.
     - Possible performance degradation due to increased control block scanning by CICS.
   - The recommendation is to set the number of sessions available to the highest value you think you may need and then, through monitoring the statistics (both ISC/IRC and terminal statistics) over a number of CICS runs, reduce the number of sessions available to slightly more than the number required to avoid problems.
4. Tuning the number of contention winner and contention loser sessions available:

- Look at both sides of the connection when carrying out any tuning, because changing the loading on one side could inversely affect the other. Any change made to the number of contention winner sessions available in the TOR has an effect on the number of contention loser sessions in the AOR.

5. Establish a connection profile for comparison and measurement.

   One of the objectives of a tuning exercise should be to establish a profile of the usage of CICS connections during both normal and peak periods. Such usage profiles can then be used as a reference point when analyzing statistics to help you:

   - Determine changed usage patterns over a period of time
   - Anticipate potential performance problems before they become critical.

Are enough sessions defined?

To help you determine whether you have enough sessions defined, you can check a number of peak fields that CICS provides in the statistics report.

The peak fields are:

1. *"Peak outstanding allocates"* (fields A14ESTAM and A20ESTAM) *"Total number of allocates"* (field A14ESTAS) *"Total specific allocate requests"* (field A20ESTAS).

   When reviewing the number of sessions for APPC modegroups, and the number of "Peak outstanding allocates" appears high in relation to the "Total number of allocates", or the "Total specific allocate requests" within a statistics reporting period, it could indicate that the total number of sessions defined is too low.

2. *"Peak contention winners"* (fields A14E2HWM and A20E2HWM) *"Peak contention losers"* (fields A14E1HWM and A20E1HWM)

   If the number of ("Peak contention winners" + "Peak contention losers") equals the maximum number of sessions available (as defined in the SESSIONS definition), this indicates that, at some point in the statistics reporting period, all the sessions available were, potentially, in use. While these facts alone may not indicate a problem, if CICS also queued or rejected some allocate requests during the same period, the total number of sessions defined is too low.

3. *"Failed allocates due to sessions in use"* (fields A14ESTAO and A20ESTAO)

   This value is incremented for allocates that are rejected with a SYSBUSY response because no sessions are immediately available (that is, for allocate requests with the NOSUSPEND or NOQUEUE option specified). This value is also incremented for allocates that are queued and then rejected with an AAL1 abend code; the AAL1 code indicates the allocate is rejected because no session became available within the specified deadlock timeout (DTIMOUT) time limit.

   If the number of "Failed allocates due to sessions in use" is high within a statistics reporting period, it indicates that not enough sessions were immediately available, or available within a reasonable time limit.

Action: Consider making more sessions available with which to satisfy the allocate requests. Enabling CICS to satisfy allocate requests without the need for queueing may lead to improved performance.

However, be aware that increasing the number of sessions available on the front end potentially increases the workload to the back end, and you should investigate whether this is likely to cause a problem.

Is the balance of contention winners to contention losers correct?

There are several ways to determine the answer to this, because CICS provides a number of fields which show contention winner and contention loser usage.

The following fields should give some guidance as to whether you need to increase the number of contention winner sessions defined:

1. *"Current bids in progress"* (fields A14EBID and A20EBID) *"Peak bids in progress"* (fields A14EBHWM and A20EBHWM)

   The value "Peak bids in progress" records the maximum number of bids in progress at any one time during the statistics reporting period. "Current bids in progress" is always less than or equal to the "Peak bids in progress".

   Ideally, these fields should be kept to zero. If either of these fields is high, it indicates that CICS is having to perform a large number of bids for contention loser sessions.

2. *"Peak contention losers"* (fields A14E1HWM and A20E1HWM).

   If the number of "Peak contention losers" is equal to the number of contention loser sessions available, the number of contention loser sessions defined may be too low. Alternatively, for APPC/LU6.1, CICS could be using the contention loser sessions to satisfy allocates due to a lack of contention winner sessions. This should be tuned at the front-end in conjunction with winners at the back-end. For details of how to specify the maximum number of sessions, and the number of contention winners, see the information on defining SESSIONS in SESSIONS resources.

Actions:

For APPC, consider making more contention winner sessions available, which should reduce the need to use contention loser sessions to satisfy allocate requests and, as a result, should also make more contention loser sessions available.

For LU6.1, consider making more SEND sessions available, which decreases the need for LU6.1 to use primaries (RECEIVE sessions) to satisfy allocate requests.

For IRC, there is no bidding involved, as MRO can never use RECEIVE sessions to satisfy allocate requests. If "Peak contention losers (RECEIVE)" is equal to the number of contention loser (RECEIVE) sessions on an IRC link, the number of allocates from the remote system is possibly higher than the receiving system can cope with. In this situation, consider increasing the number of RECEIVE sessions available.

Note: The usage of sessions depends on the direction of flow of work. Any tuning which increases the number of winners available at the front-end should also take into account whether this is appropriate for the direction of flow of work over a whole period, such as a day, week, or month.

Is there conflicting usage of APPC modegroups?

There is a possibility of conflicting APPC modegroup usage, where a mixture of generic and specific allocate requests is used within a CICS region.

A specific allocate is an allocate request that specifies a particular (specific) mode group of sessions to allocate from, whereas a generic allocate does not specify any particular mode group only the system to which an allocate is required. In the latter case CICS determines the session and mode group to allocate.

The fields you need to investigate to answer this question, are:

- *"Total generic allocates satisfied"* (field A20ESTAG)
- *"Total specific allocate requests"* (field A20ESTAS)
- *"Peak outstanding allocates"* (field A20ESTAM)
- *"Total specific allocates satisfied"* (field A20ESTAP).

If the "Total generic allocates satisfied" is much greater than "Total specific allocate requests", and "Peak outstanding allocates" is not zero, it could indicate that generic allocates are being made only, or mainly, to the first modegroup for a connection.

This could cause a problem for any specific allocate, because CICS initially tries to satisfy a generic allocate from the first modegroup before trying other modegroups in sequence.

Action: Consider changing the order of the installed modegroup entries. Modegroups for a connection are represented by TCT mode entries (TCTMEs), with the modegroup name being taken from the MODENAME specified on the SESSIONS definition. The order of the TCTMEs is determined by the order in which CICS installs the SESSIONS definitions, which is in the order of the SESSIONS name as stored on the CSD (ascending alphanumeric key sequence). See Figure 1 for an illustration of this. To change the order of the TCTMEs, you must change the names of the SESSIONS definitions. You can rename the definition with a different SESSIONS name within the CSD group. By managing the order in which the TCTMEs are created you can ensure that specific allocates reference modegroups further down the TCTME chain, and avoid conflict with the generic ALLOCATEs. *Alternatively, make all allocates specific allocates*.

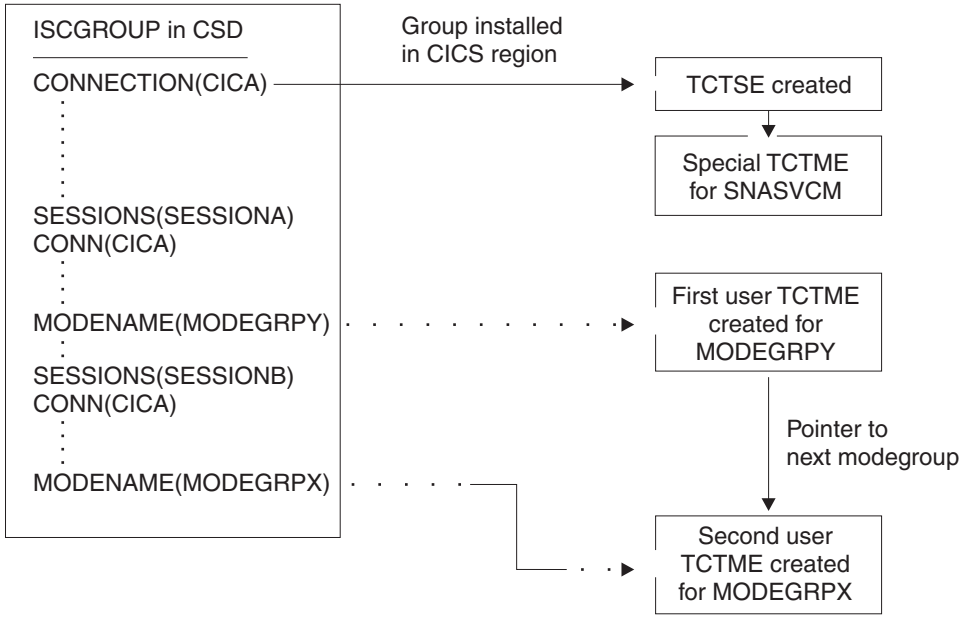


Figure 1. How the sequence of TCT mode entries is determined

What if there are unusually high numbers in the statistics report?

When looking down the *ISC/IRC system and mode entries* statistics report, you may notice a number of fields that appear to be unusually high in relation to all others. This section lists some of those fields, and what action you can take to reduce their numbers:

1. *"Peak contention losers"* (fields A14E1HWM and A20E1HWM).

   If the number of "Peak contention losers" is equal to the number of contention loser sessions available, the number of contention loser sessions defined may be too low, or, if your links are APPC/LU6.1, CICS could be using the contention loser sessions to satisfy allocates due to a lack of contention winner sessions.

   Action: Consider making more contention winner sessions available with which to satisfy the allocate requests. If IRC, increase the RECEIVES.

2. *"Peak outstanding allocates"* (fields A14ESTAM and A20ESTAM)

   If the number of "Peak outstanding allocates" appears high, in relation to the "Total number of allocates", or the "Total specific allocate requests" for APPC modegroups within a statistics reporting period, it could indicate that the total number of sessions defined is too low, or that the remote system cannot cope with the amount of work being sent to it.

   Action: Consider making more sessions available with which to satisfy the allocate requests, or reduce the number of allocates being made.

3. *"Failed link allocates"* (fields A14ESTAF and A20ESTAF)

   If this value is high within a statistics reporting period, it indicates something was wrong with the state of the connection. The most likely cause is that the connection is released, out of service, or has a closed mode group.

   Action: Examine the state of the connection that CICS is trying to allocate a session on, and resolve any problem that is causing the allocates to fail.

   To help you to resolve a connection failure, check the CSMT log for the same period covered by the statistics for any indication of problems with the connection that the statistics relate to.

   It may also be worth considering writing a connection status monitoring program, which can run in the background and regularly check connection status and take remedial action to reacquire a released connection. This may help to minimize outage time caused by connections being unavailable for use. See INQUIRE CONNECTION, INQUIRE MODENAME, SET CONNECTION, and SET MODENAME for programming information about the commands that you would use in such a program.

4. *"Failed allocates due to sessions in use"* (fields A14ESTAO and A20ESTAO)

   This value is incremented for allocates that have been rejected with a SYSBUSY response because no sessions were immediately available, and the allocate requests were made with the NOSUSPEND or NOQUEUE option specified. This value is also incremented for allocates that have been queued and then rejected with an AAL1 abend code; the AAL1 code indicates the allocate was rejected because no session was available within the specified deadlock timeout (DTIMOUT) time limit.

   If the number of "Failed allocates due to sessions in use" is high, within a statistics reporting period, it indicates that not enough sessions were immediately available, or available within a reasonable time limit.

   Action: The action is to consider making more contention winner sessions available. This action would result in a reduction in the amount of bidding being carried out, and the subsequent usage of contention loser sessions. Increase the sessions if IRC is used.

5. *"Peak bids in progress"* (fields A14EBHWM and A20EBHWM)

   Ideally, these fields should be kept to zero. If either of these fields are high, it indicates that CICS is having to perform a large amount of bidding for sessions.

   Action: Consider making more contention winner sessions available, to satisfy allocate requests.

ISC/IRC system entry: Resource statistics

You can retrieve ISC/IRC system entry resource statistics by using the **EXEC CICS EXTRACT STATISTICS CONNECTION** system command. They are mapped by the DFHA14DS DSECT,

The system entry statistics record information for both ISC and IRC connections. Some of the information is unique to each type of connection. ISC/IRC system and mode entry statistics contain information about intersystem communication over SNA (ISC over SNA) and multiregion operation (MRO) connections. Information about IP interconnectivity connections is in IPCONN statistics.

Note:

The two types of intersystem communication, ISC over SNA and IPIC, are described in Communication between systems.

This DSECT is to be used:

- For processing data returned for an online enquiry for a connection (**EXEC CICS EXTRACT STATISTICS**)
- For processing connection statistics offline (SMF)
- For processing the connection totals (the summation of all defined connections in this CICS region).

CICS always allocates a SEND session when sending an IRC request to another region. Either a SEND or RECEIVE session can be allocated when sending requests using LU6.1 ISC, and either a contention loser or a contention winner session can be allocated when sending requests using APPC.

In LU6.1, SEND sessions are identified as secondaries, and RECEIVE sessions are identified as primaries.

Table 71. ISC/IRC system entry: Resource statistics

DFHSTUP name	Field name	Description
Connection name	A14CNTN	corresponds to each system entry defined by a CONNECTION definition in the CSD, or by autoinstall. Reset characteristic: not reset
Connection netname	A14ESID	is the name by which the remote system is known in the network—that is, its applid. Reset characteristic: not reset

Table 71. ISC/IRC system entry: Resource statistics (continued)

DFHSTUP name	Field name	Description
Access Method / Protocol	A14ACCM	is the communication access method used for this connection. The values are: • X'01' =A14VTAM • X'02' =A14IRC • X'03' =A14XM • X'04' =A14XCF
Access Method / Protocol	A14EFLGS	is the communication protocol used for this connection. The values are: • X'01' =A14APPC • X'02' =A14LU61 • X'03' =A14EXCI Reset characteristic: not reset
Autoinstalled Connection Create Time	A14AICT	is the time at which this connection was autoinstalled, in local time. The time is expressed as *hours:minutes:seconds.decimals*. The DSECT field contains the value as a store clock (STCK). This field is only applicable to an autoinstalled APPC connection. For all other types of connection the value will be nulls (x'00').
Autoinstalled Connection Delete Time	A14AIDT	is the time at which this connection was deleted, in local time. The time is expressed as *hours:minutes:seconds.decimals*. The DSECT field contains the value as a store clock (STCK). This field is only set if this is an autoinstalled APPC connection that has been deleted, that is, this field is only set in an unsolicited statistics (USS) record. For all other types of connection and all other types of statistics record the value will be nulls (x'00').
Send session count	A14ESECN	is the number of SEND sessions for this connection. This field applies to MRO and LU6.1 connections only. Reset characteristic: not reset
Receive session count	A14EPRMN	is the number of RECEIVE sessions for this connection. This field applies to MRO and LU6.1 connections only. Reset characteristic: not reset
AIDs in chain	A14EALL	is the current number of automatic initiate descriptors (AIDs) in the AID chain. Reset characteristic: not reset

Table 71. ISC/IRC system entry: Resource statistics (continued)

DFHSTUP name	Field name	Description
Generic AIDs in chain	A14ESALL	is the current number of automatic initiate descriptors (AIDs) that are waiting for a session to become available to satisfy an allocate request. Reset characteristic: not reset
ATIs satisfied by contention losers	A14ES1	is the number of ATI requests (queued allocates) that have been satisfied by contention loser sessions (primaries for LU6.1). This is always zero for IRC system entries. For APPC, this field is zero when written to SMF, but if accessed online using the **EXEC CICS EXTRACT STATISTICS** command, this field is the summation of the equivalent mode entry statistics. Reset characteristic: reset to zero
ATIs satisfied by contention winners	A14ES2	is the number of ATI requests (queued allocates) that have been satisfied by contention winner sessions (secondaries for LU6.1). This field is the total ATIs when the system entry is for IRC. For APPC, this field is zero when written to SMF, but if accessed online using the **EXEC CICS EXTRACT STATISTICS** command, this field is the summation of the equivalent mode entry statistics. Reset characteristic: reset to zero
Current contention losers	A14E1RY	is the number of contention loser sessions (primaries for LU6.1) that are currently in use. Reset characteristic: not reset
Peak contention losers	A14E1HWM	is the peak number of contention loser sessions (primaries for LU6.1) that were in use at any one time. Reset characteristic: reset to current value
Current contention winners	A14E2RY	is the number of contention winner sessions (secondaries for LU6.1) that are currently in use. Reset characteristic: not reset
Peak contention winners	A14E2HWM	is the peak number of contention winner sessions (secondaries for LU6.1) that were in use at any one time. Reset characteristic: reset to current value

Table 71. ISC/IRC system entry: Resource statistics (continued)

DFHSTUP name	Field name	Description
Total bids sent	A14ESBID	is the total number of bids that were sent. A bid is sent on an LU6.1 RECEIVE session only. This field is always zero for IRC entries. For APPC, this field is zero when written to SMF, but if accessed online using the **EXEC CICS EXTRACT STATISTICS** command, this field is the summation of the equivalent mode entry statistics. Reset characteristic: reset to zero
Current bids in progress	A14EBID	is the number of bids currently in progress. A bid is sent on an LU6.1 RECEIVE session only. This field is always zero for IRC system entries. For APPC, this field is zero when written to SMF, but if accessed online using the **EXEC CICS EXTRACT STATISTICS** command, this field is the summation of the equivalent mode entry statistics. Reset characteristic: not reset
Peak bids in progress	A14EBHWM	is the peak number of bids that were in progress at any one time. A bid is sent on an LU6.1 RECEIVE session only. Reset characteristic: reset to current value
Peak outstanding allocates For more information see note following this table.	A14ESTAM	is the peak number of allocate requests that were queued for this system. For APPC this field is incremented only for generic allocate requests. Reset characteristic: reset to current value
Total number of allocates For more information see note following this table.	A14ESTAS	is the number of allocate requests against this system. For APPC: • This field is incremented only for generic allocate requests • If accessed online using the**EXEC CICS EXTRACT STATISTICS** command, this field also contains the summation of the equivalent mode entry statistics. Reset characteristic: reset to zero

Table 71. ISC/IRC system entry: Resource statistics (continued)

DFHSTUP name	Field name	Description
Queued allocates For more information see note following this table.	A14ESTAQ	is the current number of queued allocate requests against this system. An allocate is queued due to a session not being available at this moment. This includes waiting for a bind, a bid, or all sessions are currently in use. For APPC: • This field is incremented only for generic allocate requests • If accessed online using the **EXEC CICS EXTRACT STATISTICS** command, this field also contains the summation of the equivalent mode entry statistics. Reset characteristic: not reset
Failed link allocates For more information see note following this table.	A14ESTAF	is the number of allocate requests that failed due to the connection being released, out of service, or with a closed mode group. For APPC: • This field is incremented only for generic allocate requests • If accessed online using the **EXEC CICS EXTRACT STATISTICS** command, this field also contains the summation of the equivalent mode entry statistics. Reset characteristic: reset to zero
Failed allocates due to sessions in use For more information see note following this table.	A14ESTAO	is the number of allocate requests that failed due to a session not being currently available for use. These requests get SYSBUSY responses to the allocate. This field is incremented for allocates failing with an AAL1 abend code. For APPC only: • This field is only incremented for generic allocate requests • If accessed online using the **EXEC CICS EXTRACT STATISTICS** command, this field also contains the summation of the equivalent mode entry statistics. Reset characteristic: reset to zero
Maximum queue time (seconds)	A14EMXQT	is the MAXQTIME specified on the CONNECTION definition. This value represents the maximum time you require to process an allocate queue on this connection. If the allocate queue would take greater than this time to process then the entire queue would be purged. This value only takes effect if the QUEUELIMIT value (A14EALIM) has been reached. Reset characteristic: not reset

Table 71. ISC/IRC system entry: Resource statistics (continued)

DFHSTUP name	Field name	Description
Allocate queue limit	A14EALIM	is the QUEUELIMIT parameter specified on the CONNECTION definition. If this value is reached then allocates are rejected. If a QUEUELIMIT of No has been set, this field has a value of -1. Reset characteristic: not reset
Number of QUEUELIMIT allocates rejected	A14EALRJ	the total number of allocates rejected due to the QUEUELIMIT value (A14EALIM) being reached. Reset characteristic: reset to zero
Number of MAXQTIME allocate queue purges	A14EQPCT	is the total number of times an allocate queue has been purged due to the MAXQTIME value (A14EMXQT). A queue is purged when the total time it would take to process a queue exceeds the MAXQTIME value. Reset characteristic: reset to zero
Number of MAXQTIME allocates purged	A14EMQPC	is the total number of allocates purged due to the queue processing time exceeding the MAXQTIME value (A14EMXQT). If sessions have not been freed after this mechanism has been invoked then any subsequent allocate requests are purged and included in this statistic as the MAXQTIME purging mechanism is still in operation. Reset characteristic: reset to zero
Number of XZIQUE allocates rejected	A14EZQRJ	is the total number of allocates rejected by the XZIQUE exit. Reset characteristic: reset to zero
Number of XZIQUE allocate queue purges	A14EZQPU	is the total number of allocate queue purges that have occurred at XZIQUE request for this connection. If accessed online using the **EXEC CICS EXTRACT STATISTICS** command, this field additionally contains the summation of the equivalent mode entry statistics. Reset characteristic: reset to zero

Table 71. ISC/IRC system entry: Resource statistics (continued)

DFHSTUP name	Field name	Description
Number of XZIQUE allocates purged	A14EZQPC	is the total number of allocates purged due to XZIQUE requesting that queues should be purged (A14EZQPU) for this connection. If XZIQUE has not overridden this mechanism (by response) then any subsequent allocate requests are purged and included in this statistic as the XZIQUE purging mechanism is still in operation. If accessed online using the **EXEC CICS EXTRACT STATISTICS** command, this field additionally contains the summation of the equivalent mode entry statistics. Reset characteristic: reset to zero
File control (FC) function shipping requests	A14ESTFC	is the number of file control requests for function shipping. Reset characteristic: reset to zero
Interval control IC) function shipping requests	A14ESTIC	is the number of interval control requests for function shipping. Reset characteristic: reset to zero
Program control (PC) function shipping requests	A14ESTPC	is the number of program control link requests for function shipping. Reset characteristic: reset to zero
Transient data (TD) function shipping requests	A14ESTTD	is the number of transient data requests for function shipping. Reset characteristic: reset to zero
Temporary storage (TS) function shipping requests	A14ESTTS	is the number of temporary storage requests for function shipping. Reset characteristic: reset to zero
DL/I function shipping requests	A14ESTDL	is the number of DL/I requests for function shipping. Reset characteristic: reset to zero
Terminal sharing requests	A14ESTTC	is the number of transaction routing commands. This number is incremented on both regions when the transaction is routed, and when the terminal I/O request is routed between regions. This field is not supported for LU6.1. Reset characteristic: reset to zero

Table 71. ISC/IRC system entry: Resource statistics (continued)

DFHSTUP name	Field name	Description
NOT IN THE DFHSTUP REPORT	A14GACT	is the time at which this connection was autoinstalled, in GMT. The time is expressed as *hours:minutes:seconds.decimals*. The DSECT field contains the value as a store clock (STCK). This field is only applicable to an autoinstalled APPC connection. For all other types of connection the value will be nulls (x'00'). Reset characteristic: not reset
NOT IN THE DFHSTUP REPORT	A14GADT	is the time at which this connection was deleted, in GMT. The time is expressed as *hours:minutes:seconds.decimals*. The DSECT field contains the value as a store clock (STCK). This field is only set if this is an autoinstalled APPC connection that has been deleted, that is, this field is only set in an unsolicited statistics (USS) record. For all other types of connection and all other types of statistics record the value will be nulls (x'00'). Reset characteristic: not reset
Terminal-sharing channel requests	A14ESTTC_CHANNEL	is the number of terminal-sharing channel requests. Reset characteristic: reset to zero
Number of bytes sent on terminal-sharing channel requests	A14ESTTC_CHANNEL_SENT	is the number of bytes sent on terminal-sharing channel requests. This is the total amount of data sent on the connection, including any control information. Reset characteristic: reset to zero
Number of bytes received on terminal-sharing channel requests	A14ESTTC_CHANNEL_RCVD	is the number of bytes received on terminal-sharing channel requests. This is the total amount of data sent on the connection, including any control information. Reset characteristic: reset to zero
Program control function-shipping LINK requests, with channels	A14ESTPC_CHANNEL	is the number of program control LINK requests, with channels, for function shipping. This is a subset of the number in A14ESTPC. Reset characteristic: reset to zero
Number of bytes sent on LINK channel requests	A14ESTPC_CHANNEL _SENT	is the number of bytes sent on LINK channel requests. This is the total amount of data sent on the connection, including any control information. Reset characteristic: reset to zero

Table 71. ISC/IRC system entry: Resource statistics (continued)

DFHSTUP name	Field name	Description
Number of bytes received on LINK channel requests	A14ESTPC_CHANNEL _RCVD	is the number of bytes received on LINK channel requests. This is the total amount of data received on the connection, including any control information. Reset characteristic: reset to zero
Interval control function-shipping START requests, with channels	A14ESTIC_CHANNEL	is the number of interval control START requests, with channels, for function shipping. This is a subset of the number in A14ESTIC. Reset characteristic: reset to zero
Number of bytes sent on START channel requests	A14ESTIC_CHANNEL_SENT	is the number of bytes sent on START channel requests. This is the total amount of data sent on the connection, including any control information. Reset characteristic: reset to zero
Number of bytes received on START channel requests	A14ESTIC_CHANNEL_RCVD	is the number of bytes received on START channel requests. This is the total amount of data sent on the connection including any control information. Reset characteristic: reset to zero
Not in DFHSTUP report	A14ESTPC_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	A14ESTPC_CHANGE_TIME	The time stamp (STCK) in local time of CSD record change. Reset characteristic: not reset
Not in DFHSTUP report	A14ESTPC_CHANGE_USERID	The user ID that ran the change agent. Reset characteristic: not reset
Not in DFHSTUP report	A14ESTPC_CHANGE_AGENT	The agent that made the last change. Reset characteristic: not reset
Not in DFHSTUP report	A14ESTPC_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset

Table 71. ISC/IRC system entry: Resource statistics (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	A14ESTPC_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	A14ESTPC_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset

Note:

1. For APPC only, if an allocate request does not specify a mode group (so it is a generic allocate request), CICS takes the first mode group within the sessions available, and the statistics for these allocates are reported against the system entry and against the mode entry (in the statistic 'Total generic allocates satisfied'). If an allocate specifically requests a mode entry (so it is a specific allocate request), the statistics for these allocates go into that mode entry.

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Related information:

EXTRACT STATISTICS

ISC/IRC system entry: Summary resource statistics

ISC/IRC system entry summary resource statistics are not available online.

Table 72. ISC/IRC system entry: Summary resource statistics

DFHSTUP name	Description
Connection name	is the system entry defined by the CONNECTION definition in the CSD or by autoinstall.
Connection netname	is the name by which the remote system is known in the network—that is, its applid.
Access Method / Protocol	is the combined communication access method and protocol used for the connection.
Average autoinstalled connection time	is the average autoinstalled connection time. This field applies to autoinstalled connections and is summarized from the unsolicited system entry statistics records only.

Table 72. ISC/IRC system entry: Summary resource statistics (continued)

DFHSTUP name	Description
Send session count	is the last value encountered for the SENDCOUNT specified on the CONNECTION definition. This field applies to MRO and LU6.1 connections only.
Receive session count	is the last value encountered for the RECEIVECOUNT specified on the CONNECTION definition. This field applies to MRO, LU6.1, and EXCI connections only.
Average number of AIDs in chain	is the average number of automatic initiate descriptors (AIDs) in the AID chain.
Average number of generic AIDs in chain	is the average number of AIDs waiting for a session to become available to satisfy an allocate request.
ATIs satisfied by contention losers	is the total number of ATI requests (queued allocates) that have been satisfied by contention loser sessions (primaries for LU6.1). This is always zero for IRC system entries.
ATIs satisfied by contention winners	is the total number of ATI requests (queued allocates) that have been satisfied by contention winner sessions (secondaries for LU6.1). This field is the total ATIs when the system entry is for IRC.
Peak contention losers	is the peak number of contention loser sessions (primaries for LU6.1) that were in use at any one time.
Peak contention winners	is the peak number of contention winner sessions (secondaries for LU6.1) that were in use at any one time.
Total bids sent	is the total number of bids that were sent. A bid is sent on an LU6.1 RECEIVE session only. This field is always zero for IRC and APPC system entries.
Average bids in progress	is the average number of bids in progress. A bid is sent on an LU6.1 RECEIVE session only. This field is always zero for IRC and APPC system entries.
Peak bids in progress	is the peak number of bids that were in progress at any one time. A bid is sent on an LU6.1 RECEIVE session only. This field is always zero for IRC and APPC system entries.
Peak outstanding allocates For more information see 1 on page 124	is the peak number of allocation requests that were queued for this system. For APPC this field contains only generic allocate requests.
Total number of allocates For more information see 1 on page 124	is the total number of allocate requests against this system. For APPC this field contains only generic allocate requests.
Average number of queued allocates For more information see 1 on page 124	is the average number of queued allocate requests against this system. For APPC this field is incremented only for generic allocate requests.

Table 72. ISC/IRC system entry: Summary resource statistics (continued)

DFHSTUP name	Description
Failed link allocates For more information see 1 on page 124	is the total number of allocate requests that failed due to the connection being released, out of service, or with a closed mode group. For APPC this field is incremented only for generic allocate requests.
Failed allocates due to sessions in use For more information see 1 on page 124	is the total number of allocate requests that failed due to a session not being currently available for use. These requests get SYSBUSY responses to the allocate. This field is incremented for allocates failing with an AAL1 abend code. For APPC this field is incremented only for generic allocate requests.
Maximum queue time (seconds)	is the last non-zero value encountered for the MAXQTIME parameter specified on the CONNECTION definition. This value represents the maximum time you require to process an allocate queue on this connection. If the allocate queue would take greater than this time to process the entire queue would be purged. This value only takes effect if the QUEUELIMIT value has been reached.
Allocate queue limit	is the last non-zero value encountered for the QUEUELIMIT parameter specified on the CONNECTION definition. If this value is reached then allocates are rejected.
Number of QUEUELIMIT allocates rejected	is the is the total number of allocates rejected due to the QUEUELIMIT value being reached.
Number of MAXQTIME allocate queue purges	is the total number of times an allocate queue has been purged due to the MAXQTIME value. A queue is purged when the total time it would take to process a queue exceeds the MAXQTIME value.
Number of MAXQTIME allocates purged	is the total number of allocates purged due to the queue processing time exceeding the MAXQTIME value. If sessions have not been freed after this mechanism has been invoked then any subsequent allocate requests are purged and included in this statistic as the MAXQTIME purging mechanism is still in operation.
Number of XZIQUE allocates rejected	is the total number of allocates rejected by the XZIQUE exit
Number of XZIQUE allocate queue purges	is the total number of allocate queue purges that have occurred at XZIQUE request for this connection.
Number of XZIQUE allocates purged	is the total number of allocates purged due to XZIQUE requesting that queues should be purged for this connection. If XZIQUE has not overridden this mechanism (by response) then any subsequent allocate requests are purged and included in this statistic as the XZIQUE purging mechanism is still in operation.
File control (FC) function shipping requests	is the total number of file control requests for function shipping.

Table 72. ISC/IRC system entry: Summary resource statistics (continued)

DFHSTUP name	Description
Interval control (IC) function shipping requests	is the total number of interval control requests for function shipping.
Program control (PC) function shipping requests	is the total number of program control link requests for function shipping.
Transient data (TD) function shipping requests	is the total number of transient data requests for function shipping.
Temporary storage (TS) function shipping requests	is the total number of temporary storage requests for function shipping.
DL/I function shipping requests	is the total number of DL/I requests for function shipping.
Terminal sharing requests	is the total number of transaction routing commands. This number is incremented on both regions when the transaction is routed, and when the terminal I/O request is routed between regions. This field is not supported for LU6.1.

Note:

1. For APPC only, if an allocate request does not specify a mode group (so it is a generic allocate request), CICS takes the first mode group within the sessions available, and the statistics for these allocates are reported against the system entry and against the mode entry (in the statistic 'Total generic allocates satisfied'). If an allocate specifically requests a mode entry (so it is a specific allocate request), the statistics for these allocates go into that mode entry.

ISC mode entry: Resource statistics

These statistics cannot be retrieved using the **EXEC CICS EXTRACT STATISTICS** command. They are only produced for offline processing (written to SMF).

These statistics are collected only if you have an APPC connection defined in your CICS region, and they are then produced for each mode group defined in that connection.

These statistics are mapped by the DFHA20DS DSECT. This DSECT is also used to map the mode entry totals records.

Table 73. ISC mode entry: Resource statistics

DFHSTUP name	Field name	Description
NOT IN THE DFHSTUP REPORT	A20SYSN	is the name of the APPC connection/system that owns this mode entry. It corresponds to the system entry, defined by a CONNECTION definition in the CSD or by autoinstall. Reset characteristic: not reset

Table 73. ISC mode entry: Resource statistics (continued)

DFHSTUP name	Field name	Description
Mode name	A20MODE	is the mode group name related to the the intersystem connection name (A20SYSN). This corresponds to modename in the sessions definition. Reset characteristic: not reset
ATIs satisfied by contention losers	A20ES1	is the number of ATI requests (queued allocates) that have been satisfied by “contention loser” sessions belonging to this mode group. Reset characteristic: reset to zero
ATIs satisfied by contention winners	A20ES2	is the number of ATI requests (queued allocates) that have been satisfied by “contention winner” sessions belonging to this mode group. Reset characteristic: reset to zero
Current contention losers in use	A20E1RY	is the number of contention loser sessions currently in use. Reset characteristic: not reset
Peak contention losers	A20E1HWM	is the peak number of “contention loser” sessions belonging to this mode group that were in use at any one time. There can be sessions not defined (by the MAXIMUM parameter) as “contention winners” or “contention losers”, and their states are dynamically decided at bind time. Reset characteristic: reset to current value
Current contention winners in use	A20E2RY	is the number of contention winner sessions currently in use. Reset characteristic: not reset
Peak contention winners	A20E2HWM	is the peak number of “contention winner” sessions belonging to this mode group that were in use at any one time. There can be sessions not defined (by the MAXIMUM parameter) as “contention winners” or “contention losers”, and their states are dynamically decided at bind time. Reset characteristic: reset to current value
Total bids sent	A20ESBID	is the number of bids that were sent on the sessions defined to this mode group. A bid is sent on an APPC “contention loser” session when there are no “contention winner” sessions available to allocate. Reset characteristic: reset to zero

Table 73. ISC mode entry: Resource statistics (continued)

DFHSTUP name	Field name	Description
Current bids in progress	A20EBID	is the number of bids that are in progress on the sessions defined to this mode group. A bid is sent on an APPC "contention loser" session when there are no "contention winner" sessions available to allocate. Reset characteristic: not reset
Peak bids in progress	A20EBHWM	is the peak number of bids that were in progress at any one time, on the sessions defined to this mode group. A bid is sent on an APPC "contention loser" session when there are no "contention winner" sessions available to allocate. Reset characteristic: reset to current value
Peak outstanding allocates For more information see 1 on page 128	A20ESTAM	is the peak number of allocation requests that were queued for this mode group. Reset characteristic: reset to current value
Total specific allocate requests For more information see 1 on page 128	A20ESTAS	is the number of specific allocate requests against this mode group. Reset characteristic: reset to zero
Total specific allocates satisfied For more information see 1 on page 128	A20ESTAP	is the number of specific allocates satisfied by this mode group. Reset characteristic: reset to zero
Total generic allocates satisfied	A20ESTAG	is the number of generic allocates satisfied from this mode group. The allocates are made for APPC without the mode group being specified. Reset characteristic: reset to zero
Queued allocates For more information see 1 on page 128	A20ESTAQ	is the current number of queued specific allocate requests against this mode group. An allocate is queued due to a session in this mode group not being available at this moment. This includes waiting for a bind, a bid, or all sessions are currently in use. Reset characteristic: not reset
Failed link allocates For more information see 1 on page 128	A20ESTAF	is the number of specific allocate requests that failed due to the connection being released, out of service, or with a closed mode group. Reset characteristic: reset to zero

Table 73. ISC mode entry: Resource statistics (continued)

DFHSTUP name	Field name	Description
Failed allocates due to sessions in use For more information see 1 on page 128	A20ESTAO	is the number of specific allocate requests that failed due to a session not being currently available for use in this mode group. These requests get SYSBUSY responses to the allocate. This field is incremented for allocates failing with an AAL1 abend code. Reset characteristic: reset to zero
Number of XZIQUE allocate queue purges	A20EQPCT	is the total number of allocate queue purges that have occurred at XZIQUE request for this mode entry. Reset characteristic: reset to zero
Number of XZIQUE allocates purged	A20EZQPC	is the total number of allocates purged due to XZIQUE requesting that queues should be purged (A20EQPCT) for this mode entry. If XZIQUE has not overridden this mechanism (by response) then any subsequent allocate requests are purged and included in this statistic as the XZIQUE purging mechanism is still in operation. Reset characteristic: reset to zero
Maximum session count	A20ELMAX	is the maximum number of sessions that the definition of the session group permits. Reset characteristic: not reset
Current maximum session count	A20EMAXS	is the current number of sessions in the group (the number "bound"). Reset characteristic: not reset
Maximum contention winners acceptable	A20EMCON	is the maximum number of sessions that the definition of the session group permits to be contention winners. Reset characteristic: not reset
Current CNOS contention losers	A20ECONL	is the current number of CNOS negotiated contention loser sessions. Reset characteristic: not reset
Current CNOS contention winners	A20ECONW	is the current number of CNOS negotiated contention winner sessions. Reset characteristic: not reset

Note:

1. This field is incremented when an allocate is issued against a specific mode group. If a generic allocate request is made, the equivalent system entry statistics ***only*** are incremented.

ISC mode entry: Summary resource statistics

ISC mode entry summary resource statistics are not available online.

These statistics are collected only if you have an APPC connection defined in your CICS region, and they are then produced for each mode group defined in that connection.

Table 74. ISC mode entry: Summary resource statistics

DFHSTUP name	Description
Connection name	is the name of the APPC connection/system that owns this mode entry.
Mode name	is the mode group name related to the intersystem connection name in the previous row. It corresponds to the modename in the sessions definition.
ATIs satisfied by contention losers	is the total number of ATI requests (queued allocates) that have been satisfied by "contention loser" sessions belonging to this mode group.
ATIs satisfied by contention winners	is the total number of ATI requests (queued allocates) that have been satisfied by "contention winner" sessions belonging to this mode group.
Peak contention losers	is the peak number of "contention loser" sessions belonging to this mode group that were in use at any one time. There can be sessions not defined as "contention winners" or "contention losers", and their states are dynamically decided at bind time.
Peak contention winners	is the peak number of "contention winner" sessions belonging to this mode group that were in use at any one time. There can be sessions not defined as "contention winners" or "contention losers", and their states are dynamically decided at bind time.
Total bids sent	is the total number of bids that were sent on the sessions defined to this mode group. A bid is sent on an APPC "contention loser" session when there are no "contention winner" sessions available to allocate.
Average bids in progress	is the average number of bids in progress.
Peak bids in progress	is the peak number of bids that were in progress at any one time, on the sessions defined to this mode group. A bid is sent on an APPC "contention loser" session when there are no "contention winner" sessions available to allocate.
Peak outstanding allocates	is the peak number of allocation requests that were queued for this mode group.

For more information see 1 on page 129

Table 74. ISC mode entry: Summary resource statistics (continued)

DFHSTUP name	Description
Total specific allocate requests For more information see 1	is the total number of specific allocate requests against this mode group.
Total specific allocates satisfied For more information see 1	is the total number of specific allocates satisfied by this mode group.
Total generic allocates satisfied	is the total number of generic allocates satisfied from this mode group. The allocates are made for APPC without the mode group being specified.
Average number of queued allocates For more information see 1	is the average number of queued specific allocate requests against this mode group. An allocate is queued due to a session in this mode group not being available at this moment. This includes waiting for a bind, a bid, or all sessions are currently in use.
Failed link allocates For more information see 1	is the total number of specific allocate requests that failed due to the connection being released, out of service, or with a closed mode group.
Failed allocates due to sessions in use For more information see 1	is the total number of specific allocate requests that failed due to a session not being currently available for use in this mode group. These requests get SYSBUSY responses to the allocate. This field is incremented for allocates failing with an AAL1 abend code.
Number of XZIQUE allocate queue purges	is the total number of allocate queue purges that have occurred at XZIQUE request for this mode entry.
Number of XZIQUE allocates purged	is the total number of allocates purged due to XZIQUE requesting that queues should be purged (Number of XZIQUE allocate queue purges) for this mode entry. If XZIQUE has not overridden this mechanism (by response) then any subsequent allocate requests are purged and included in this statistic as the XZIQUE purging mechanism is still in operation.

Note:

1. The next three fields only contain allocates against specific mode groups. Generic allocate requests are contained in the equivalent system entry statistics.

ISC/IRC attach time entry statistics

The ISC/IRC attach time statistics of the DFHSTUP listing is for a CICS system using intersystem communication or interregion communication. It provides summary statistics for the number of times that the entries on the Persistent Verification "signed on from" list are either reused or timed out. Using this data you can adjust the USRDELAY, and the PVDELAY system initialization parameters.

Related concepts:

"Interpreting ISC and IRC attach time entry statistics" on page 130
ISC and IRC signon activity and ISC persistent verification (PV) activity give information about the best settings for your **USRDELAY** and **PVDELAY** system initialization parameters.

Interpreting ISC and IRC attach time entry statistics

ISC and IRC signon activity and ISC persistent verification (PV) activity give information about the best settings for your **USRDELAY** and **PVDELAY** system initialization parameters.

If the number of entries reused in signon activity is low, and the entries timed out value for signon activity is high, increase the value of the **USRDELAY** system initialization parameter. The average reuse time between entries value gives some indication of the time that you might want to set for the **USRDELAY** system initialization parameter.

Review your **USRDELAY** system initialization parameter, because with z/OS 1.11 and later, CICS is notified immediately if RACF® profile changes occur.

ISC persistent verification (PV) activity. If the number of entries reused in the PV activity is low, and the entries timed out value is high, increase the **PVDELAY** system initialization parameter. The average reuse time between entries value gives some indication of the time that you might want to set for the **PVDELAY** system initialization parameter.

If a lot of signed on or PV entries are timed out, and not many are reused, your performance might be degraded because of the need to make calls to an external security manager, such as RACF, for security checking.

ISC/IRC attach time: Resource statistics

These statistics are collected if you have either an LU6.2 connection or IRC defined in your CICS region, and they are then produced globally, one per system.

These statistics cannot be retrieved using the **EXEC CICS EXTRACT STATISTICS** command; they are only produced for offline processing (written to SMF).

These statistics are mapped by the DFHA21DS DSECT.

Table 75. ISC/IRC attach time: Resource statistics

DFHSTUP name	Field name	Description
Persistent Verification refresh time	A21_SIT_LUIT_TIME	is the time in minutes set by the PVDELAY system initialization parameter. It specifies the password re-verification interval. The range is from zero through 10080 minutes (seven days) and the default is 30 minutes. If a value of zero is specified, entries are deleted immediately after use. Reset characteristic: not reset
ISC Persistent Verification Activity: Entries reused	A21_LUIT_TOTAL_REUSES	refers to the number of entries in the PV "signed on from" list of a remote system that were reused without reference to an external security manager (ESM), such as RACF. Reset characteristic: reset to zero

Table 75. ISC/IRC attach time: Resource statistics (continued)

DFHSTUP name	Field name	Description
ISC Persistent Verification Activity: Entries timed out	A21_LUIT_TOTAL_TIMEOUT	refers to the number of entries in the PV “signed on from” list of a remote system that were timed out. Reset characteristic: reset to zero
ISC Verification Activity: Average reuse time between entries	A21_LUIT_AV_REUSE_TIME	refers to the average time that has elapsed between each reuse of an entry in the PV “signed on from” list of a remote system. Reset characteristic: reset to zero

ISC/IRC attach time: Summary resource statistics

ISC/IRC attach time: Summary resource statistics are not available online.

These statistics are collected only if you have either an LU6.2 connection or IRC defined in your CICS region, and they are then produced globally, one per system.

Table 76. ISC/IRC attach time: Summary resource statistics

DFHSTUP name	Description
Persistent verification refresh time	is the time in minutes set by the PVDELAY parameter of the SIT. It specifies how long entries are allowed to remain unused in the PV 'signed on from' list of a remote system.
Entries reused	refers to the number of times that user's entries in the PV 'signed on from' list were reused without referencing the ESM of the remote system.
Entries timed out	refers to the number of user's entries in the PV 'signed on from' list that were timed out after a period of inactivity.
Average reuse time between entries	refers to the average amount of time that has elapsed between each reuse of a user's entry in the PV 'signed on from' list.

IPCONN statistics

You can use IPCONN statistics to detect problems with IPIC connections.

IPIC is described in Communication between systems.

Interpreting IPCONN statistics

Information about the purpose of IPCONN statistics.

Note: Information about intersystem communication over SNA (ISC over SNA) and MRO connections is in ISC/IRC system and mode entry statistics.

Some of the questions you may be seeking an answer to when looking at these statistics are:

- Are there enough sessions defined?
- Is the balance of receive and send sessions correct?
- What can be done if there are unusually high numbers, compared with normal or expected numbers, in the statistics report?

IPCONN: Resource statistics

You can retrieve IPCONN statistics by using the **EXEC CICS EXTRACT STATISTICS** system command. They are mapped by the DFHISRDS DSECT.

IPCONN statistics

You can use IPCONN statistics to detect problems with IP interconnectivity (IPIC) connections.

IPIC is described in Communication between systems.

Use the DFHISRDS DSECT to process the following information:

- Data returned for an online enquiry for a connection (EXEC CICS EXTRACT STATISTICS)
- Connection statistics offline (SMF)
- Connection totals (the summation of all defined connections in this CICS region).

Table 77. IPCONN: resource statistics

DFHSTUP name	Field name	Description
IPCONN Name	ISR_IPCONN_NAME	The name of an IPIC connection defined by an IPCONN definition in the CSD or by autoinstall. Reset characteristic: not reset
Autoinstalled IPCONN Create Date / Time	ISR_IPCONN_CREATE_TIME	The date and time when the IPCONN was autoinstalled. The time shown is local time. If the IPCONN was not autoinstalled, this field is not shown.
Autoinstalled IPCONN Delete Date / Time	ISR_IPCONN_DELETE_TIME	The date and time when the autoinstalled IPCONN was deleted. The time shown is local time. If the IPCONN was not autoinstalled, this field is not shown.
IPCONN Applid	ISR_APPLID	The APPLID of the remote system, as specified in its system initialization table. Reset characteristic: not reset

Table 77. IPCONN: resource statistics (continued)

DFHSTUP name	Field name	Description
IPCONN Network ID	ISR_NETWORK_ID	The network ID (that is, the z/OS Communications Server NETID or, for non-z/OS Communications Server systems, the value of the UOWNETQL system initialization parameter) of the remote system. This ID is used, in combination with the APPLID, to ensure unique naming for connecting systems. The name can be up to 8 characters in length and follows assembler language rules. It must start with an alphabetic character. This attribute is optional. If not specified, the z/OS Communications Server NETID (or, for non-z/OS Communications Server systems, the value of the UOWNETQL system initialization parameter) of the CICS on which the definition is installed is used. Reset characteristic: not reset
TCPIPSERVICE Name	ISR_TCPIP_SERVICE	The name of the PROTOCOL(IPIC) TCPIPSERVICE definition that defines the attributes of the inbound processing for this connection.
IPCONN Port Number	ISR_PORT_NUMBER	The decimal number of the port that is combined with the HOST value to specify the destination for outbound requests on this connection. Reset characteristic: not reset
IPCONN Host	ISR_HOST_NAME	The host name of the target system for this connection. Reset characteristic: not reset
IPCONN IP Family	ISR_IPCONN_IP_FAMILY	The address format of the IP Resolved Address. Reset characteristic: not reset
IPCONN IP Resolved Address	ISR_IPCONN_IP_ADDRESS	The IPv4 or IPv6 address of the host. Reset characteristic: not reset

Table 77. IPCONN: resource statistics (continued)

DFHSTUP name	Field name	Description
Receive Sessions	ISR_RECEIVE_SESSIONS	The defined number of receive sessions. The actual number of receive sessions that are used depends also on the number of send sessions defined in the remote system. When the connection is established, these values are exchanged and the lower value is used. Reset characteristic: not reset
Current Receive Sessions	ISR_CURRENT_RECEIVE_SESSIONS	The current number of receive sessions in use for this connection. Reset characteristic: reset to current value
Peak Receive Sessions	ISR_PEAK_RECEIVE_SESSIONS	The peak number of receive sessions in use for this connection. Reset characteristic: reset to current value
Total Allocates	ISR_TOTAL_ALLOCATES	The total number of allocate requests for this connection. Reset characteristic: reset to zero
Current Allocates Queued	ISR_CURRENT_QUEUED_ALLOCATES	The current number of allocate requests that have been queued for this connection. Reset characteristic: reset to current value
Peak Allocates Queued	ISR_PEAK_QUEUED_ALLOCATES	The peak number of allocate requests that have been queued for this connection. Reset characteristic: reset to current value
Allocates Failed - Link	ISR_ALLOCATES_FAILED_LINK	The number of allocate requests that failed because the connection is released or out-of-service. Reset characteristic: reset to zero
Allocate queue limit	ISR_ALLOCATE_QUEUE_LIMIT	The value of the QUEUELIMIT parameter specified on the IPCONN definition. This value is the maximum number of allocate requests that CICS is to queue while waiting for free sessions.

Table 77. IPCONN: resource statistics (continued)

DFHSTUP name	Field name	Description
Maximum queue time (seconds)	ISR_MAX_QUEUE_TIME	The MAXQTIME specified on the IPCONN definition. This value represents the maximum time that queued allocate requests, waiting for free sessions on a connection that appears to be unresponsive, can wait. The maximum queue time is used only if a queue limit is specified for QUEUELIMIT; and the time limit is applied only when the queue length has reached the queue limit value. Reset characteristic: not reset
Number of MAXQTIME allocate queue purges	ISR_MAXQTIME_ALLOC_QPURGES	The total number of times an allocate queue has been purged because of the MAXQTIME value. A queue is purged when the total time it would take to process a queue exceeds the MAXQTIME value. Reset characteristic: reset to zero
Number of MAXQTIME allocates purged	ISR_MAXQTIME_ALLOCS_PURGED	The total number of allocate requests purged because the queue time exceeds the MAXQTIME value. Reset characteristic: reset to zero
Number of transactions attached	ISR_TRANS_ATTACHED	The total number of transactions attached for this connection. Reset characteristic: reset to zero
Remote Terminal Starts	ISR_REMOTE_TERM_STARTS	The total number of **START** requests sent from a remote terminal. Reset characteristic: reset to zero
Transaction Routing requests	ISR_TR_REQUESTS	The number of transaction routing requests on this connection. Reset characteristic: reset to zero
Bytes Sent by Transaction Routing requests	ISR_TR_BYTES_SENT	The number of bytes sent on transaction routing requests. Reset characteristic: reset to zero
Bytes Rcvd by Transaction Routing requests	ISR_TR_BYTES_RECEIVED	The number of bytes received by transaction routing requests. Reset characteristic: reset to zero

Table 77. IPCONN: resource statistics (continued)

DFHSTUP name	Field name	Description
Send Sessions	ISR_SEND_SESSIONS	The defined number of send sessions. The actual number of sessions used depends also on the number of receive sessions defined in the partner system. When the connection is established, these values are exchanged and the lower value is used. Reset characteristic: not reset
Current Send Sessions	ISR_CURRENT_SEND_SESSIONS	The current number of send sessions in use. Reset characteristic: reset to current value
Peak Send Sessions	ISR_PEAK_SEND_SESSIONS	The peak number of send sessions in use. Reset characteristic: reset to current value
Allocates Failed - Other	ISR_ALLOCATES_FAILED_OTHER	The number of allocate requests that failed because of other reasons. Reset characteristic: reset to zero
Number of QUEUELIMIT allocates rejected	ISR_QLIMIT_ALLOC_REJECTS	The total number of allocate requests rejected because the QUEUELIMIT value is reached. Reset characteristic: reset to zero
Number of XISQUE allocate requests rejected	ISR_XISQUE_ALLOC_REJECTS	The total number of allocate requests rejected by an XISQUE global user exit program. Reset characteristic: reset to zero
Number of XISQUE allocate queue purges	ISR_XISQUE_ALLOC_QPURGES	The total number of allocate queue purges that have occurred because of an XISQUE request for this connection. Reset characteristic: reset to zero.

Table 77. IPCONN: resource statistics (continued)

DFHSTUP name	Field name	Description
Number of XISQUE allocates purged	ISR_XISQUE_ALLOCS_PURGED	The total number of allocate requests purged because XISQUE requests that allocate queues are purged (ISR_XISQUE_ALLOC_QPURGES) for this connection. If XISQUE does not subsequently cancel this instruction, any subsequent allocate requests are purged and included in this statistic, because the XISQUE purging mechanism is still in operation. Reset characteristic: reset to zero
Function Shipped Program requests	ISR_FS_PG_REQUESTS	The number of program control LINK requests for function shipping on this connection. Reset characteristic: reset to zero
Bytes Sent by Program requests	ISR_FS_PG_BYTES_SENT	The number of bytes sent on LINK requests. Reset characteristic: reset to zero
Bytes Received by Program requests	ISR_FS_PG_BYTES_RECEIVED	The number of bytes received on LINK requests. Reset characteristic: reset to zero
Function Shipped Interval Control requests	ISR_FS_IC_REQUESTS	The number of interval control requests for function shipping on this connection. Reset characteristic: reset to zero
Bytes Sent by Interval Control requests	ISR_FS_IC_BYTES_SENT	The number of bytes sent on interval control requests. Reset characteristic: reset to zero
Bytes Rcvd by Interval Control Requests	ISR_FS_IC_BYTES_RECEIVED	The number of bytes received by interval control requests. Reset characteristic: reset to zero
Function Shipped File Control requests	ISR_FS_FC_REQUESTS	The number of file control requests for function shipping on this connection. Reset characteristic: reset to zero

Table 77. IPCONN: resource statistics (continued)

DFHSTUP name	Field name	Description
Bytes Sent by File Control Requests	ISR_FS_FC_BYTES_SENT	The number of bytes sent by file control requests. Reset characteristic: reset to zero
Bytes Rcvd by File Control Requests	ISR_FS_FC_BYTES_RECEIVED	The number of bytes received by file control requests. Reset characteristic: reset to zero
Function Shipped Transient Data Requests	ISR_FS_TD_REQUESTS	The number of transient data requests for function shipping on this connection. Reset characteristic: reset to zero
Bytes Sent by Transient Data Requests	ISR_FS_TD_BYTES_SENT	The number of bytes sent by transient data requests. Reset characteristic: reset to zero
Bytes Rcvd by Transient Data Requests	ISR_FS_TD_BYTES_RECEIVED	The number of bytes received by transient data requests. Reset characteristic: reset to zero
Function Shipped Temporary Storage Requests	ISR_FS_TS_REQUESTS	The number of temporary storage requests for function shipping on this connection. Reset characteristic: reset to zero
Bytes Sent by Temporary Storage Requests	ISR_FS_TS_BYTES_SENT	The number of bytes sent by temporary storage requests. Reset characteristic: reset to zero
Bytes Rcvd by Temporary Storage Requests	ISR_FS_TS_BYTES_RECEIVED	The number of bytes received by temporary storage requests. Reset characteristic: reset to zero
Unsupported Requests	ISR_UNSUPPORTED_REQUESTS	The number of attempts to route requests for unsupported function across this connection. Reset characteristic: reset to zero

Table 77. IPCONN: resource statistics (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	ISR_IPCONN_GMT_CREATE_TIME	The date and time when the IPCONN was autoinstalled. The time shown is GMT. If the IPCONN was not autoinstalled, this field is not shown.
Not in DFHSTUP report	ISR_IPCONN_GMT_DELETE_TIME	The date and time when the autoinstalled IPCONN was deleted. The time shown is GMT. If the IPCONN was not autoinstalled, this field is not shown.
Not in DFHSTUP report	ISR_SSL_SUPPORT	Whether secure socket layer (SSL) authentication is supported. SSL_YES SSL_NO Reset characteristic: not reset
Not in DFHSTUP report	ISR_USERAUTH	The type of user authentication used. DEFAULTUSER IDENTIFY LOCAL VERIFY Reset characteristic: not reset
Not in DFHSTUP report	ISR_LINKAUTH	The type of link authentication used. CERTUSER SECUSER Reset characteristic: not reset
Not in DFHSTUP report	ISR_IPCONN_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	ISR_IPCONN_CHANGE_TIME	The time stamp (STCK) in local time of the CSD record change. Reset characteristic: not reset
Not in DFHSTUP report	ISR_IPCONN_CHANGE_USERID	The user ID that ran the CHANGE_AGENT. Reset characteristic: not reset

Table 77. IPCONN: resource statistics (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	ISR_IPCONN_CHANGE_AGENT	The agent that was used to make the last change. Reset characteristic: not reset
Not in DFHSTUP report	ISR_IPCONN_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	ISR_IPCONN_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	ISR_IPCONN_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	ISR_MIRRORLIFE	The minimum lifetime of the mirror task for function-shipped requests received by this region. REQUEST TASK UOW Reset characteristic: not reset

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Related concepts:

"Interpreting IPCONN statistics" on page 131
Information about the purpose of IPCONN statistics.

Related reference:

"IPCONN report" on page 410
The IPCONN report shows information and statistics about IPCONN resource definitions, which define IP interconnectivity (IPIC) connections.

Related information:

EXTRACT STATISTICS

IPCONN: Summary resource statistics

A summary listing of resource statistics for each IPCONN. You can use IPCONN statistics to detect problems with IP interconnectivity (IPIC) connections.

Summary resource statistics are not available online.

IPIC is described in Communication between systems.

Table 78. IPCONN: summary resource statistics

DFHSTUP name	Description
IPCONN Name	The name of an IPIC connection defined by an IPCONN definition in the CSD, or by autoinstall.
Autoinstalled IPCONN Create Date / Time	The date and time when the IPCONN was autoinstalled. The time shown is local time. If the IPCONN was not autoinstalled, this field is not shown.
Autoinstalled IPCONN Delete Date / Time	The date and time when the autoinstalled IPCONN was deleted. The time shown is local time. If the IPCONN was not autoinstalled, this field is not shown.
IPCONN Applid	The APPLID of the remote system, as specified in its system initialization table.
IPCONN Network ID	The network ID (that is, the z/OS Communications Server NETID or, for non-z/OS Communications Server systems, the value of the UOWNETQL system initialization parameter) of the remote system. This ID is used, in combination with the APPLID, to ensure unique naming for connecting systems. The name can be up to 8 characters in length and follows assembler language rules. It must start with an alphabetic character. This attribute is optional. If it is not specified, the z/OS Communications Server NETID (or, for non-z/OS Communications Server systems, the value of the UOWNETQL system initialization parameter) of the CICS on which the definition is installed is used.
TCPIPSERVICE name	The name of the PROTOCOL(IPIC) TCPIPSERVICE definition that defines the attributes of the inbound processing for this connection.
IPCONN Port Number	The decimal number of the port that is combined with the HOST value to specify the destination for outbound requests on this connection.
IPCONN Host	The host name of the target system for this connection.
IPCONN IP Family	The address format of the IP Resolved Address.
IPCONN IP Resolved Address	The IPv4 or IPv6 address of the host.
Receive Sessions	The defined number of receive sessions.
Peak Receive Sessions	The peak number of receive sessions in use for this connection.
Total Allocates	The total number of allocate requests for this connection.
Peak Allocates Queued	The peak number of allocate requests that have been queued for this connection.
Allocates Failed - Link	The number of allocate requests that failed because the connection is released or out-of-service.
Allocate queue limit	The value of the QUEUELIMIT parameter specified on the IPCONN definition. This value is the maximum number of allocate requests that CICS is to queue while waiting for free sessions.

Table 78. IPCONN: summary resource statistics (continued)

DFHSTUP name	Description
Maximum queue time (seconds)	The MAXQTIME specified on the IPCONN definition. This value represents the maximum time that queued allocate requests, waiting for free sessions on a connection that appears to be unresponsive, can wait. The maximum queue time is used only if a queue limit is specified for QUEUELIMIT; and the time limit is applied only when the queue length has reached the queue limit value.
Number of MAXQTIME allocate queue purges	The total number of times an allocate queue has been purged because of the MAXQTIME value. A queue is purged when the total time it would take to process a queue exceeds the MAXQTIME value.
Number of MAXQTIME allocates purged	The total number of allocate requests purged because the queue time exceeds the MAXQTIME value.
Number of transactions attached	The total number of transactions attached for this connection.
Function Shipped Program requests	The number of program control LINK requests for function shipping on this connection.
Bytes Sent by Program requests	The number of bytes sent on LINK requests.
Bytes Received by Program requests	The number of bytes received on LINK requests.
Function Shipped Interval Control requests	The number of interval control requests for function shipping on this connection.
Bytes Sent by Interval Control Requests	The number of bytes sent by interval control requests.
Bytes Rcvd by Interval Control Requests	The number of bytes received by interval control requests.
Send Sessions	The defined number of send sessions. The actual number of sessions used depends also on the number of receive sessions defined in the partner system. When the connection is established, these values are exchanged and the lower value is used.
Peak Send Sessions	The peak number of send sessions in use.
Allocates Failed - Other	The number of allocate requests that failed because of other reasons.
Number of QUEUELIMIT allocates rejected	The total number of allocate requests rejected because the QUEUELIMIT value is reached.
Number of XISQUE allocates rejected	The total number of allocate requests rejected by an XISQUE global user exit program.
Number of XISQUE allocate queue purges	The total number of allocate queue purges that have occurred because of an XISQUE request for this connection.
Number of XISQUE allocates purged	The total number of allocate requests purged because XISQUE requests that allocate queues are purged (ISR_XISQUE_ALLOC_QPURGES) for this connection. If XISQUE has not subsequently canceled this instruction, any subsequent allocate requests are purged and included in this statistic, because the XISQUE purging mechanism is still in operation.
Remote Terminal Starts	The total number of **START** requests sent from a remote terminal.
Transaction Routing requests	The number of transaction routing requests on this connection.

Table 78. IPCONN: summary resource statistics (continued)

DFHSTUP name	Description
Bytes Sent by Transaction Routing requests	The number of bytes sent on transaction routing requests.
Bytes Rcvd by Transaction Routing requests	The number of bytes received by transaction routing requests.
Function Shipped File Control requests	The number of file control requests for function shipping on this connection.
Bytes Sent by File Control Requests	The number of bytes sent by file control requests.
Bytes Rcvd by File Control Requests	The number of bytes received by file control requests.
Function Shipped Temporary Storage Requests	The number of temporary storage requests for function shipping on this connection.
Bytes Sent by Temporary Storage Requests	The number of bytes sent by temporary storage requests.
Bytes Rcvd by Temporary Storage Requests	The number of bytes received by temporary storage requests.
Function Shipped Transient Data Requests	The number of transient data requests for function shipping on this connection.
Bytes Sent by Transient Data Requests	The number of bytes sent by transient data requests.
Bytes Rcvd by Transient Data Requests	The number of bytes received by transient data requests.
Unsupported Requests	The number of attempts to route requests for unsupported function across this connection.

Journalname statistics

CICS collects statistics on the data written to each journal which can be used to analyze the activity of a single region.

Journalname statistics contain data about the use of each journal, as follows:

- The journal type (MVS logger, SMF, or dummy)
- The log stream name for MVS logger journal types only
- The number of API journal writes
- The number of bytes written
- The number of flushes of journal data to log streams or SMF.

Note that the CICS system journalname statistics for the last three items on this list are always zero.

Journalnames are a convenient means of identifying a destination log stream that is to be written to. CICS applications write data to journals with journalname. CICS itself usually uses the underlying log stream name when issuing requests to the CICS log manager, and this must be considered when interpreting journalname and log stream resource statistics. For example, these may show many operations

against a log stream, but relatively few, if any, writes to a journalname which maps to that log stream. This indicates that it is CICS that accesses the resource at the log stream level, not an application writing to it through the CICS application programming interface. These results can typically be seen when examining the journalname resource statistics for DFHLOG and DFHSHUNT, and comparing them with the resource statistics for their associated CICS system log streams.

For more information about logging and journaling, see CICS logging and journaling.

Related reference:

"Journalnames report" on page 414
The Journalnames report is produced using a combination of the **EXEC CICS INQUIRE JOURNALNAME** and **EXEC CICS EXTRACT STATISTICS JOURNALNAME** commands. The statistics data is mapped by the **DFHLGRDS DSECT**.

Journalname: Resource statistics

You can retrieve Journalname statistics by using the **EXEC CICS EXTRACT STATISTICS JOURNALNAME** system command. They are mapped by the DFHLGRDS DSECT.

For more information about logging and journaling, see CICS logging and journaling. For the system logs DFHLOG and DFHSHUNT, CICS does not use the journal for writing purposes, but writes directly to the log stream. So for these journals, "N/A" appears in the report under the headings Write requests, Bytes written and Buffer flushes.

These statistics fields contain the resource data that is collected by the log manager domain.

Table 79. Journalname: Resource statistics

DFHSTUP name	Field name	Description
Journal Name	LGRJNLNAME	The journal name. Reset characteristic: not reset
Journal Type	LGRJTYPE	The type of journal: MVS, SMF, or dummy. Reset characteristic: not reset
Log Stream Name	LGRSTREAM	The log stream name that is associated with the journal. Only journals that are defined as type MVS have associated log streams. The same log stream can be associated with more than one journal. Reset characteristic: not reset
Write Requests	LGRWRITES	The total number of times that a journal record was written to the journal. Reset characteristic: reset to zero

Table 79. Journalname: Resource statistics (continued)

DFHSTUP name	Field name	Description
Bytes Written	LGRBYTES	The total number of bytes written to the journal. Reset characteristic: reset to zero
Buffer Flushes	LGRBUFLSH	The total number of times that a journal block was written to the log stream (in the case of a journal that is defined as type MVS), or to the System Management Facility (in the case of a journal that is defined as type SMF). Journal blocks are flushed in the following circumstances: • An application executes an **EXEC CICS WRITE JOURNALNAME** or **EXEC CICS WRITE JOURNALNUM** command with the WAIT option. • An application executes an **EXEC CICS WAIT JOURNALNAME** or **EXEC CICS WAIT JOURNALNUM** command. • The journal buffer is full. This applies only to journals defined as type SMF (journals that are defined as type MVS use log stream buffers). • The log stream buffer is full. This applies only to journals defined as type MVS. Reset characteristic: reset to zero

Related information:

EXTRACT STATISTICS

Journalname: Summary resource statistics

Journalname summary resource statistics are not available online.

These statistics fields contain the journalname summary resource data. For the system logs DFHLOG and DFHSHUNT, CICS does not use the journal for writing purposes, but writes directly to the log stream. So for these journals, "N/A" appears in the summary report under the headings Write requests, Bytes written and Buffer flushes.

Table 80. Journalname: Summary resource statistics

DFHSTUP name	Description
Journal Name	is the journal name.
Journal Type	is the journal type: • MVS • SMF • dummy
Log Stream Name	is the name of the log stream associated with the journal.
Write Requests	is the total number of times that a journal record was written to the journal.

Table 80. Journalname: Summary resource statistics (continued)

DFHSTUP name	Description
Bytes Written	is the total number of bytes written.
Buffer Flushes	is the total number of times that a journal block was written to the log stream (in the case of a journal defined as type MVS), or to the System Management Facility (in the case of a journal defined as type SMF).

JVM server statistics

CICS collects statistics for JVM servers and for Java™ programs that run in JVMs. You can use these statistics to manage and tune the Java workloads that are running in your CICS regions.

You can gather the following statistics related to Java:

- JVM server statistics, which tell you about the activity of the JVM that is used by a particular JVM server.
- JVM program statistics, which tell you about Java programs that run in JVM servers.

For information about how to tune JVM servers, see Improving Java performance.

Related reference:

"JVM Programs report" on page 415
The JVM Programs report shows information and statistics about Java programs that run in JVM servers or pooled JVMs. This report is produced using a combination of the **EXEC CICS INQUIRE PROGRAM** and **EXEC CICS EXTRACT STATISTICS JVMPROGRAM** commands. The statistics data is mapped by the **DFHPGRDS DSECT**.

Related information:

Improving Java performance

JVMSERVER statistics

The JVM (SJ) domain collects statistics for JVM servers, including statistics on heap storage and garbage collection. Each JVM server is represented by a JVMSERVER resource.

You can get some information about the JVM server by inquiring on the JVMSERVER resource. The resource provides information such as the initial, maximum, and current heap size and the garbage collection policy that is being used by Java. Unlike pooled JVMs, the garbage collection is handled by Java automatically depending on the policy that is specified.

The DFH0STAT and DFHSTUP statistics programs provide more in-depth information about a JVM server:

- The statistics report how long Java applications are waiting for threads in the JVM server. If the waits are high and many tasks are suspended with the JVMTHRD wait, you can increase the value of the THREADLIMIT attribute on the JVMSERVER resource to make more threads available to the applications.

- The statistics report the heap sizes of the JVM. If the heap size after garbage collection is close to the maximum heap size, garbage collection might be occurring too often and you might need to increase the maximum heap size. If the peak heap size is much lower than the maximum heap size, you can either run more work in the JVM server, or edit the JVM profile and reduce the maximum heap size to save on storage.
- The statistics report the system threads in the JVM server. System threads are used to collect statistics and are also used by inquire and browse commands, but not by applications. You can find out how many times the JVM server was accessed for information and the associated processor usage. If the number is high, you might change the statistics interval or stop the inquire and browse requests.
- The statistics report major and minor garbage collection events. Minor garbage collection is only available on certain policies, so you might want to change the policy based on the information in the statistics.

These statistics can be a good starting point for tuning the performance of your Java workload.

JVMSERVER: Resource statistics

You can retrieve JVMSERVER statistics by using the **EXEC CICS EXTRACT STATISTICS JVMSERVER** system command. They are mapped by the DFHSJSDS DSECT.

Table 81. JVMSERVER: resource statistics

DFHSTUP name	Field name	Description
JVMSERVER name	SJS_JVMSERVER_NAME	The name of the JVMSERVER resource. Reset characteristic: not reset
JVMSERVER profile name	SJS_JVMSERVER_JVMPROFILE	The name of the JVM profile that is specified on the JVMSERVER resource. Reset characteristic: not reset
JVMSERVER LE runtime options	SJS_JVMSERVER_LE_RUNOPTS	The name of the Language Environment runtime options program that is specified on the JVMSERVER resource. Reset characteristic: not reset
JVMSERVER use count	SJS_JVMSERVER_USE_COUNT	The number of times the JVM server has been called. Reset characteristic: reset to zero
JVMSERVER thread limit	SJS_JVMSERVER_THREAD_LIMIT	The maximum number of threads in the JVM server. Reset characteristic: not reset
JVMSERVER current threads	SJS_JVMSERVER_THREAD_CURRENT	The current number of threads in the JVM server. Reset characteristic: not reset

Table 81. JVMSERVER: resource statistics (continued)

DFHSTUP name	Field name	Description
JVMSERVER peak threads	SJS_JVMSERVER_THREAD_HWM	The peak number of threads in the JVM server. Reset characteristic: reset to current value (SJS_JVMSERVER_THREAD_CURRENT)
JVMSERVER thread limit waits	SJS_JVMSERVER_THREAD_WAITS	The number of tasks that waited for a free thread. Reset characteristic: reset to zero
JVMSERVER thread limit wait time	SJS_JVMSERVER_THREAD_WAIT_TIME	The amount of time in seconds that tasks waited for a free thread. Reset characteristic: reset to zero
JVMSERVER current thread waits	SJS_JVMSERVER_THREAD_WAIT_CUR	The number of tasks that are currently waiting for a free thread. Reset characteristic: reset to zero
JVMSERVER peak thread waits	SJS_JVMSERVER_THREAD_WAIT_HWM	The peak number of tasks that waited for a free thread. Reset characteristic: reset to number of tasks current waiting (SYS_JVMSERVER_THREAD_WAIT_CURR)
JVMSERVER system thread use count	SJS_JVMSERVER_SYS_USE_COUNT	The number of times that the system thread has been used. Reset characteristic: reset to zero
JVMSERVER system thread waits	SJS_JVMSERVER_SYS_WAITED	The number of CICS tasks that waited for a system thread. Reset characteristic: reset to zero
JVMSERVER system thread wait time	SJS_JVMSERVER_SYS_WAITED_TIME	The accumulated time in seconds that tasks spent waiting for a system thread. Reset characteristic: reset to zero
JVMSERVER current sys thread waits	SJS_JVMSERVER_SYS_WAIT_CUR	The current number of tasks that are waiting for a system thread. Reset characteristic: not reset

Table 81. JVMSERVER: resource statistics (continued)

DFHSTUP name	Field name	Description
JVMSERVER peak system thread waits	SJS_JVMSERVER_SYS_WAIT_HWM	The highest number of tasks that waited for a system thread. Reset characteristic: reset to current number of waiting tasks (SJS_JVMSERVER_SYS_WAIT_CURR)
JVMSERVER creation time of JVM	SJS_JVMSERVER_JVM_CREATION_LCL	The time stamp (STCK) in local time of when the JVM was created for the JVM server. Reset characteristic: not reset
JVMSERVER status	SJS_JVMSERVER_STATE	The state of the JVMSERVER resource. Reset characteristic: not reset
JVMSERVER current heap size	SJS_JVMSERVER_CURRENT_HEAP	The size in bytes of the heap that is currently allocated to the JVM server. Reset characteristic: not reset
JVMSERVER initial heap size	SJS_JVMSERVER_INITIAL_HEAP	The size in bytes of the initial heap that is allocated to the JVM server. This value is set by the **-Xms** option in the JVM profile. Reset characteristic: not reset
JVMSERVER maximum heap size	SJS_JVMSERVER_MAX_HEAP	The size in bytes of the maximum heap that can be allocated to the JVM server. This value is set by the **-Xmx** option in the JVM profile. Reset characteristic: not reset
JVMSERVER peak heap size	SJS_JVMSERVER_PEAK_HEAP	The size in bytes of the largest heap that has been allocated to the JVM server. Reset characteristic: not reset
JVMSERVER heap occupancy	SJS_JVMSERVER_OCCUPANCY	The size in bytes of the heap immediately after the last garbage collection occurred. Reset characteristic: not reset
JVMSERVER Garbage Collection (GC)	SJS_JVMSERVER_GC_POLICY	The garbage collection policy that is being used by the JVM. Reset characteristic: not reset

Table 81. JVMSERVER: resource statistics (continued)

DFHSTUP name	Field name	Description
JVMSERVER no. of major GC events	SJS_JVMSERVER_MJR_GC_EVENTS	The number of major garbage collection events that have occurred. Reset characteristic: reset to zero
JVMSERVER total elapsed time spent in major GC	SJS_JVMSERVER_MJR_GC_CPU	The total elapsed time in milliseconds that was spent performing major garbage collection. Reset characteristic: reset to zero
JVMSERVER total memory freed by major GC	SJS_JVMSERVER_MJR_HEAP_FREED	The total memory in bytes that was freed by performing major garbage collection. Reset characteristic: reset to zero
JVMSERVER no. of minor GC events	SJS_JVMSERVER_MNR_GC_EVENTS	The number of minor garbage collections that have occurred. Reset characteristic: reset to zero
JVMSERVER total elapsed time spent in minor GC	SJS_JVMSERVER_MNR_GC_CPU	The total elapsed time in milliseconds that was spent performing minor garbage collection. Reset characteristic: reset to zero
JVMSERVER total memory freed by minor GC	SJS_JVMSERVER_MNR_HEAP_FREED	The total memory in bytes that was freed by performing minor garbage collection. Reset characteristic: reset to zero
Not in DFHSTUP report	SJS_JVMSERVER_JVM_CREATION_GMT	The time stamp (STCK) in GMT of when the JVM was created for the JVM server. Reset characteristic: not reset
Not in DFHSTUP report	SJS_JVMSERVER_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	SJS_JVMSERVER_CHANGE_TIME	The time stamp (STCK) in local time of the CSD record change. Reset characteristic: not reset

Table 81. JVMSERVER: resource statistics (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	SJS_JVMSERVER_CHANGE_USERID	The user ID that ran the change agent. Reset characteristic: not reset
Not in DFHSTUP report	SJS_JVMSERVER_CHANGE_AGENT	The agent that was used to make the last change. Reset characteristic: not reset
Not in DFHSTUP report	SJS_JVMSERVER_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	SJS_JVMSERVER_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	SJS_JVMSERVER_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Related information:

EXTRACT STATISTICS

JVMSERVER: Summary resource statistics

A summary listing of resource statistics for JVM servers, including the number of times the JVM server has been used by Java applications and thread usage.

Summary statistics are not available online.

Table 82. JVMSERVER: Summary resource statistics

DFHSTUP name	Description
JVMSERVER name	The name of the JVMSERVER resource.
JVMSERVER LE runtime options	The name of the program that defines the runtime options of the Language Environment enclave.
JVMSERVER use count	The number of times that the JVM server has been called.
Thread limit	The maximum number of threads that are allowed to run in the JVM server.

Table 82. JVMSERVER: Summary resource statistics (continued)

DFHSTUP name	Description
Peak threads	The peak number of threads in the JVM server.
Thread limit waits	The number of tasks that waited for a free thread.
Thread limit wait time	The amount of time that tasks waited for a free thread.
Peak thread limit waits	The peak number of tasks that waited for a free thread.
System thread use count	The number of times that the system thread has been used.
System thread waits	The number of CICS tasks that waited for a system thread.
System thread wait time	The accumulated time that tasks spent waiting for a system thread.
Current sys thread waits	The current number of tasks that are waiting for a system thread.
Peak system thread waits	The highest number of tasks that waited for a system thread.
JVMSERVER status	The status of the JVMSERVER resource.
Current heap size	The size in bytes of the heap that is currently allocated to the JVM server.
Initial heap size	The size in bytes of the initial heap that is allocated to the JVM server. This value is set by the **-Xms** option in the JVM profile.
Max heap size	The size in bytes of the maximum heap that can be allocated to the JVM server. This value is set by the **-Xmx** option in the JVM profile.
Peak heap size	The size in bytes of the largest heap that has been allocated to the JVM server.
Heap occupancy	The size in bytes of the heap immediately after the last garbage collection occurred.
Garbage Collection (GC)	The garbage collection policy that is being used by the JVM.
Number of major GC events	The number of major garbage collection events that have occurred.
Elapsed time in major GC	The elapsed time that was spent performing major garbage collection.
Total memory freed by major GC	The total memory that was freed by performing major garbage collection.
Number of minor GC events	The number of minor garbage collections that have occurred.
Elapsed time in minor GC	The elapsed time that was spent performing minor garbage collection.
Total memory freed by minor GC	The total memory that was freed by performing minor garbage collection.

JVM program statistics

JVM program statistics are collected for every installed JVM program in the CICS region that runs in a JVM server. Statistics for programs that run in a JVM are collected separately from statistics for other programs, because the Java programs are not loaded by CICS.

For public JVM programs, these statistics are mapped by the DFHPGRDS DSECT. For private JVM programs for applications that are deployed on platforms, these statistics are mapped by the DFHPGPDS DSECT. The statistics records for private JVM programs have information about the application for which the JVM program was defined.

JVM programs that are defined as application entry points are identified by a field in the statistics record. When interval statistics, end-of-day statistics, requested statistics, requested reset statistics, or unsolicited statistics are produced for a JVM program that is defined as an application entry point, two statistics records are written, one mapped by the DFHPGRDS DSECT for public JVM programs, and one mapped by the DFHPGPDS DSECT for private JVM programs.

Viewing statistics for Java programs

CICS does not collect statistics for Java programs when an **EXEC CICS EXTRACT STATISTICS PROGRAM** command is issued. To see them, you must use the **EXEC CICS EXTRACT STATISTICS JVMPROGRAM** command instead. However, when you browse program names by using the **EXEC CICS INQUIRE PROGRAM** command, Java programs are found. An application that collects statistics for programs by browsing with the **EXEC CICS INQUIRE PROGRAM** command, and then issuing the **EXEC CICS EXTRACT STATISTICS PROGRAM** command for the program names that it finds, would receive a “not found” response when it attempted to collect statistics for any Java programs.

To avoid receiving this response, make the application check the RUNTIME value for each program name that it finds. If the RUNTIME value is JVM, the application must not issue the **EXEC CICS EXTRACT STATISTICS PROGRAM** command for that program name. If you want to see the statistics for programs with a RUNTIME value of JVM, you can make the application issue the **EXEC CICS EXTRACT STATISTICS JVMPROGRAM** command for those programs. The statistics information that is collected for Java programs is not the same as the statistics information collected for other programs.

Java programs that run in a JVM have their own DFH0STAT report, the JVM Programs report. The DFH0STAT report for Program Totals also includes a figure for the number of Java programs, but this figure is obtained using the JVMPROGRAM keyword.

JVM programs - Public: Resource statistics

You can retrieve statistics for public JVM programs by using the **EXEC CICS EXTRACT STATISTICS JVMPROGRAM** system command. They are mapped by the DFHPGRDS DSECT

JVM program resource statistics for public JVM programs show information and statistics about each public JVM program, including the JVM profile that is used.

Statistics for public JVM programs are mapped by the DFHPGRDS DSECT. For private JVM programs for applications that are deployed on platforms, these statistics are mapped by the DFHPGPDS DSECT, which has information about the

application for which the JVM program was defined. For details of the DSECT and DFHSTUP report for private JVM programs, see "JVM programs - Private: Resource statistics" on page 155.

JVM programs that are defined as application entry points are identified by the PGR_JVMPROGRAM_ENTRYPOINT field. Both public and private statistics records are written for these programs, mapped once by each DSECT.

Table 83. JVM programs - Public: Resource statistics

DFHSTUP name	Field name	Description
Program name	PGR_JVMPROGRAM_NAME	The name of the Java program. Reset characteristic: not reset
Not in DFHSTUP report	PGR_JVMPROGRAM_ENTRYPOINT	Whether the program is defined as an application entry point for an application deployed on a platform. Reset characteristic: not reset
Times used	PGR_JVMPROGRAM_USECOUNT	The number of times the program has been used. Reset characteristic: reset to zero
Exec key	PGR_JVMPROGRAM_EXEC_KEY	The execution key that the program requires, either CICS key or user key, as specified in the EXECKEY attribute of the PROGRAM resource. Programs that run in a JVM server always run in CICS key. Reset characteristic: not reset
JVM class	PGR_JVMPROGRAM_JVMCLASS	The main class in the program as specified in the JVMCLASS attribute of the PROGRAM resource. Reset characteristic: not reset
JVM server	PGR_JVMPROGRAM_SERVER	The name of the JVMSERVER resource that the program requires to run in a JVM server, as specified in the JVMSERVER attribute of the PROGRAM resource. Reset characteristic: not reset

Related information:

EXTRACT STATISTICS

JVM programs - Public: Summary resource statistics

A summary listing of resource statistics for all public Java programs that run in a JVM.

Summary statistics are not available online.

Private JVM programs for applications that are deployed on platforms are reported in a separate summary report. For details of this report, see “JVM programs - Private: Summary resource statistics” on page 157. JVM programs that are defined as application entry points appear in both the public and private resource summary reports.

Table 84. JVM programs - Public: Summary resource statistics

DFHSTUP name	Description
Program name	The name of the Java program.
JVM server	The name of the JVMSERVER resource that the program requires to run in a JVM server, as specified in the JVMSERVER attribute of the PROGRAM resource.
Times used	The number of times the program has been used.
Exec key	Java programs that run in a JVM server always use CICS key.
JVM class	The main class in the program, as specified in the JVMCLASS attribute of the PROGRAM resource.

JVM programs - Private: Resource statistics

You can retrieve statistics for private Java programs by using the **EXEC CICS EXTRACT STATISTICS JVMPROGRAM** system command. They are mapped by the DFHPGPDS DSECT.

JVM program resource statistics for private JVM programs show information and statistics about the private JVM programs for applications that are deployed on platforms.

Statistics for private Java programs for applications that are deployed on platforms are mapped by the DFHPGPDS DSECT. For public Java programs, these statistics are mapped by the DFHPGRDS DSECT. For details of the DSECT and DFHSTUP report for public JVM programs, see “JVM programs - Public: Resource statistics” on page 153.

JVM programs that are defined as application entry points are identified by an application operation being named in the PGP_JVMPROGRAM_OPERATION_NAME field. Both public and private statistics records are written for these programs, mapped once by each DSECT.

The DFHSTUP report shows the private Java programs for each application that is deployed on a platform. For programs that are declared as application entry points, the report shows the application operation that is named for the application entry point.

Table 85. JVM programs - Private: Resource statistics

DFHSTUP name	Field name	Description
Platform	PGP_JVMPROGRAM_PLATFORM_NAME	The name of the platform where the application that uses the private programs is deployed. Reset characteristic: not reset
Application	PGP_JVMPROGRAM_APPLICATION_NAME	The name of the application that uses the private programs. Reset characteristic: not reset
Major version	PGP_JVMPROGRAM_APPL_MAJOR_VER	The major version number of the application that uses the private programs. Reset characteristic: not reset
Minor version	PGP_JVMPROGRAM_APPL_MINOR_VER	The minor version number of the application that uses the private programs. Reset characteristic: not reset
Micro version	PGP_JVMPROGRAM_APPL_MICRO_VER	The micro version number of the application that uses the private programs. Reset characteristic: not reset
Program name	PGP_JVMPROGRAM_NAME	The name of the Java program. Reset characteristic: not reset
Times used	PGP_JVMPROGRAM_USECOUNT	The number of times the program has been used. Reset characteristic: reset to zero
Exec key	PGP_JVMPROGRAM_EXEC_KEY	The execution key that the program requires, either CICS key or user key, as specified in the EXECKEY attribute of the PROGRAM resource. Programs that run in a JVM server always run in CICS key. Reset characteristic: not reset

Table 85. JVM programs - Private: Resource statistics (continued)

DFHSTUP name	Field name	Description
JVM class	PGP_JVMPROGRAM_JVMCLASS	The main class in the program as specified in the JVMCLASS attribute of the PROGRAM resource. Reset characteristic: not reset
JVM server	PGP_JVMPROGRAM_SERVER	The name of the JVMSERVER resource that the program requires to run in a JVM server, as specified in the JVMSERVER attribute of the PROGRAM resource. Reset characteristic: not reset
Operation	PGP_JVMPROGRAM_OPERATION_NAME	For programs that are declared as application entry points, the application operation that is named for the application entry point. Reset characteristic: not reset

Related information:

EXTRACT STATISTICS

JVM programs - Private: Summary resource statistics

A summary listing of resource statistics for all private Java programs for applications that are deployed on platforms.

Summary statistics are not available online.

Public JVM programs are reported in a separate summary report. For details of this report, see "JVM programs - Public: Summary resource statistics" on page 154. JVM programs that are defined as application entry points appear in both the public and private resource summary reports.

Table 86. JVM programs - Private: Summary resource statistics

DFHSTUP name	Description
Platform	The name of the platform where the application that uses the private programs is deployed.
Application	The name of the application that uses the private programs.
Major version	The major version number of the application that uses the private programs.
Minor version	The minor version number of the application that uses the private programs.
Micro version	The micro version number of the application that uses the private programs.
Program name	The name of the Java program.
Operation	For programs that are declared as application entry points, the application operation that is named for the application entry point.
JVM server	The name of the JVMSERVER resource that the program requires to run in a JVM server, as specified in the JVMSERVER attribute of the PROGRAM resource.
Times used	The number of times the program has been used.

Table 86. JVM programs - Private: Summary resource statistics (continued)

DFHSTUP name	Description
Exec key	Java programs that run in a JVM server always use CICS key.
JVM class	The main class in the program, as specified in the JVMCLASS attribute of the PROGRAM resource.

LIBRARY statistics

LIBRARY statistics report resource data for dynamic program LIBRARY concatenations, which are data sets from which program load modules can be loaded.

For public LIBRARY resources, these statistics are mapped by the DFHLDBDS DSECT. For private LIBRARY resources for applications that are deployed on platforms, these statistics are mapped by the DFHLDYDS DSECT. The statistics records for private LIBRARY resources have information about the application for which the LIBRARY resource was defined.

LIBRARY - Public: Resource statistics

You can retrieve statistics for public LIBRARY resources by using the **EXEC CICS EXTRACT STATISTICS LIBRARY** system command. They are mapped by the DFHLDBDS DSECT.

These statistics fields contain the resource data collected by the loader for each dynamic program LIBRARY concatenation.

Statistics for public LIBRARY resources are mapped by the DFHLDBDS DSECT. For private LIBRARY resources for applications that are deployed on platforms, these statistics are mapped by the DFHLDYDS DSECT, which has information about the application for which the LIBRARY resource was loaded. For details of the DSECT and DFHSTUP report for private LIBRARY resources, see "LIBRARY - Private: Resource statistics" on page 163.

Table 87. LIBRARY - Public: Resource statistics

DFHSTUP name	Field name	Description
LIBRARY name	LDB_LIBRARY_NAME	The name of the library. Reset characteristic: not reset

Table 87. LIBRARY - Public: Resource statistics (continued)

DFHSTUP name	Field name	Description
Search position	LDB_LIBRARY_SEARCH_POS	The current absolute position of this library in the overall library search order. The first enabled library in the search order will have a search position of 1, the next library will have a search position of 2, and so on. The search position is not the same as the ranking, although its value is determined by the relative ranking values of the various library resources in the system. The search position values, relative to other library resources with the same ranking value, are indeterminate, but their search position values relative to each other are retained across a warm or emergency restart. The relative search position values of library resources with the same ranking are not guaranteed to be the same after a cold or initial start. If the library is disabled, the search position is 0, indicating that the library does not participate in the overall search. Reset characteristic: not reset
Ranking	LDB_LIBRARY_RANKING	Indicates where this library appears in the overall library search order, relative to other library concatenations. A lower number indicates that this library is searched for programs to load before other library resources with higher ranking numbers. Reset characteristic: not reset

Table 87. LIBRARY - Public: Resource statistics (continued)

DFHSTUP name	Field name	Description
Critical	LDB_LIBRARY_CRITICAL	Indicates whether the library is critical to CICS starting. The values are as follows: **Yes** The LIBRARY is critical to CICS starting. If the LIBRARY cannot be successfully installed during CICS startup for any reason, then a `GO` or `CANCEL` message is issued. The operator decides whether to override the critical status and allow CICS to start. If CICS is allowed to continue, the LIBRARY is installed in a DISABLED status, unless installation was not possible at all; for example, because of a short-on-storage condition. If the reply is to continue with the startup, the LIBRARY is not recataloged as NONCRITICAL, so the critical status is explicitly set to NONCRITICAL if it is decided that the LIBRARY is not to be regarded as critical in future. **No** The LIBRARY is not critical to CICS startup. If the LIBRARY cannot be successfully installed during CICS startup, the LIBRARY is left in an installed but disabled state and a warning message is issued, but CICS startup continues. Reset characteristic: not reset

Table 87. LIBRARY - Public: Resource statistics (continued)

DFHSTUP name	Field name	Description
Enable status	LDB_LIBRARY_ENABLE_STATUS	Identifies whether the LIBRARY is included in the overall LIBRARY search order. The values are as follows: **DISABLED** The LIBRARY is disabled, and is not currently included in the LIBRARY search order. The data sets in this LIBRARY concatenation are not searched for program artifacts to load. **DISABLING** A request to disable the LIBRARY was received, but is still being processed. **ENABLED** The LIBRARY is enabled, and is currently included in the LIBRARY search order. The data sets in this LIBRARY concatenation searched for program artifacts to load. **ENABLING** A request to enable the LIBRARY was received, but is still being processed. **DISCARDING** A request to discard the LIBRARY from the CICS system was received, but is still being processed. Reset characteristic: not reset
Program loads	LDB_LIBRARY_PROG_LOADS	The number of times the loader has issued an MVS LOAD request to load programs from the DFHRPL or dynamic LIBRARY concatenation into CICS-managed storage. Reset characteristic: reset to zero
Not in DFHSTUP report	LDB_LIBRARY_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	LDB_LIBRARY_CHANGE_TIME	The time stamp (STCK) in local time of the CSD record change. Reset characteristic: not reset
Not in DFHSTUP report	LDB_LIBRARY_CHANGE_USERID	The user ID that ran the CHANGE_AGENT. Reset characteristic: not reset

Table 87. LIBRARY - Public: Resource statistics (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	LDB_LIBRARY_CHANGE_AGENT	The agent that was used to make the last change. Reset characteristic: not reset
Not in DFHSTUP report	LDB_LIBRARY_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	LDB_LIBRARY_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	LDB_LIBRARY_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset
Number Dsnames	LDB_LIBRARY_NUMDSNAMES	The number of data sets in the LIBRARY concatenation. For a dynamically defined LIBRARY, this number indicates the non blank DSNAMExx values, and cannot be a value larger than 16. For the statically defined DFHRPL, this number indicates the data sets in the concatenation, and can be a value larger than 16. Reset characteristic: not reset
Concatenation	Not in the DSECT; added when report is formatted	The concatenation number of the data set in the LIBRARY concatenation. Reset characteristic: not reset
LIBRARY Dsname	LDB_DSNAME	The 44-character name of each data set in the LIBRARY concatenation. If this library is dynamically defined, these are the data sets specified on the LIBRARY definition, all but one of which can be blank. If this DFHRPL is the statically defined one, these are the first 16 data sets in the DFHRPL concatenation, or as many data sets as are specified up to 16, with the remaining DSNAMExx fields being blank. Reset characteristic: not reset

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource

signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Related information:

EXTRACT STATISTICS

LIBRARY - Private: Resource statistics

You can retrieve statistics for private LIBRARY resources by using the **EXEC CICS EXTRACT STATISTICS LIBRARY** system command. They are mapped by the DFHLDYDS DSECT.

These statistics fields contain the resource data collected by the loader for each dynamic program LIBRARY concatenation for applications that are deployed on platforms.

Statistics for private LIBRARY resources for applications that are deployed on platforms are mapped by the DFHLDYDS DSECT. For public LIBRARY resources, these statistics are mapped by the DFHLDBDS DSECT. For details of the DSECT and DFHSTUP report for public LIBRARY resources, see "LIBRARY - Public: Resource statistics" on page 158.

Table 88. LIBRARY - Private: Resource statistics

DFHSTUP name	Field name	Description
Platform	LDY_LIBRARY_PLATFORM_NAME	The name of the platform where the application that uses the private LIBRARY resources is deployed. Reset characteristic: not reset
Application	LDY_LIBRARY_APPLICATION_NAME	The name of the application that uses the private LIBRARY resources. Reset characteristic: not reset
Major version	LDY_LIBRARY_APPL_MAJOR_VER	The major version number of the application that uses the private LIBRARY resources. Reset characteristic: not reset
Minor version	LDY_LIBRARY_APPL_MINOR_VER	The minor version number of the application that uses the private LIBRARY resources. Reset characteristic: not reset
Micro version	LDY_LIBRARY_APPL_MICRO_VER	The micro version number of the application that uses the private LIBRARY resources. Reset characteristic: not reset

Table 88. LIBRARY - Private: Resource statistics (continued)

DFHSTUP name	Field name	Description
LIBRARY name	LDY_LIBRARY_NAME	The name of the LIBRARY resource. Reset characteristic: not reset
Search position	LDY_LIBRARY_SEARCH_POS	The current absolute position of this library in the overall library search order. The first enabled library in the search order has a search position of 1, the next library has a search position of 2, and so on. The search position is not the same as the ranking, although its value is determined by the relative ranking values of the various library resources in the system. The search position values, relative to other library resources with the same ranking value, are indeterminate, but their search position values relative to each other are retained across a warm or emergency restart. The relative search position values of library resources with the same ranking are not guaranteed to be the same after a cold or initial start. If the library is disabled, the search position is 0, indicating that the library does not participate in the overall search. Reset characteristic: not reset
Ranking	LDY_LIBRARY_RANKING	Indicates where this library appears in the overall library search order, relative to other library concatenations. A lower number indicates that this library is searched for programs to load before other library resources with higher ranking numbers. Reset characteristic: not reset
Critical	LDY_LIBRARY_CRITICAL	This attribute does not apply to private LIBRARY resources for applications deployed on platforms. Reset characteristic: not reset

Table 88. LIBRARY - Private: Resource statistics (continued)

DFHSTUP name	Field name	Description
Enable status	LDY_LIBRARY_ENABLE_STATUS	Identifies whether the LIBRARY is included in the overall LIBRARY search order. The values are as follows: **DISABLED** The LIBRARY is disabled, and is not currently included in the LIBRARY search order. The data sets in this LIBRARY concatenation are not searched for program artifacts to load. **DISABLING** A request to disable the LIBRARY was received, but is still being processed. **ENABLED** The LIBRARY is enabled, and is currently included in the LIBRARY search order. The data sets in this LIBRARY concatenation searched for program artifacts to load. **ENABLING** A request to enable the LIBRARY was received, but is still being processed. **DISCARDING** A request to discard the LIBRARY from the CICS system was received, but is still being processed. Reset characteristic: not reset
Program loads	LDY_LIBRARY_PROG_LOADS	The number of times the loader has issued an MVS LOAD request to load programs from the DFHRPL or dynamic LIBRARY concatenation into CICS-managed storage. Reset characteristic: reset to zero
Not in DFHSTUP report	LDY_LIBRARY_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	LDY_LIBRARY_CHANGE_TIME	The time stamp (STCK) in local time of the CSD record change. Reset characteristic: not reset

Table 88. LIBRARY - Private: Resource statistics (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	LDY_LIBRARY_CHANGE_USERID	The user ID that ran the CHANGE_AGENT. Reset characteristic: not reset
Not in DFHSTUP report	LDY_LIBRARY_CHANGE_AGENT	The agent that was used to make the last change. Reset characteristic: not reset
Not in DFHSTUP report	LDY_LIBRARY_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	LDY_LIBRARY_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	LDY_LIBRARY_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset
Number Dsnames	LDY_LIBRARY_NUMBER_DSNAMES	The number of data sets in the LIBRARY concatenation. For a dynamically defined LIBRARY, this number indicates the non blank DSNAMExx values, and cannot be a value larger than 16. For the statically defined DFHRPL, this number indicates the data sets in the concatenation, and can be a value larger than 16. Reset characteristic: not reset
Concatenation	Not in the DSECT; added when report is formatted	The concatenation number of the data set in the LIBRARY concatenation. Reset characteristic: not reset

Table 88. LIBRARY - Private: Resource statistics (continued)

DFHSTUP name	Field name	Description
LIBRARY Dsname	LDY_LIBRARY_DSNAME	The 44-character name of each data set in the LIBRARY concatenation. If this library is dynamically defined, these are the data sets specified on the LIBRARY definition, all but one of which can be blank. If this DFHRPL is the statically defined one, these are the first 16 data sets in the DFHRPL concatenation, or as many data sets as are specified up to 16, with the remaining DSNAMExx fields being blank. Reset characteristic: not reset

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Related information:

EXTRACT STATISTICS

Loader domain statistics

Related concepts:

"Interpreting loader statistics"
If "Average loading time" has increased over a period, consider MVS library lookaside usage. "Not-in-use" program storage is freed progressively so that the "amount of the dynamic storage area occupied by not in use programs", and the free storage in the dynamic storage area are optimized for performance.

Related reference:

"Loader and Program Storage report" on page 420
The Loader and Program Storage report is produced using a combination of the **EXEC CICS EXTRACT STATISTICS PROGRAM** and **EXEC CICS EXTRACT STATISTICS STORAGE** commands. The statistics data is mapped by the **DFHLDGDS** and **DFHSMDDS DSECT**.

Interpreting loader statistics

If "Average loading time" has increased over a period, consider MVS library lookaside usage. "Not-in-use" program storage is freed progressively so that the "amount of the dynamic storage area occupied by not in use programs", and the free storage in the dynamic storage area are optimized for performance.

"Average loading time" = "Total loading time" / "Number of library load requests". This statistic indicates the response time of tasks when accessing a program that must be brought into storage. Loader attempts to keep not-in-use

programs in storage long enough to reduce the performance overhead of reloading the program. As the amount of free storage in the dynamic storage decreases, the not-in-use programs are released by using a freemain request, in the order of those least frequently used, to avoid a potential short-on-storage condition.

Note: The values reported are for the instant at which the statistics are gathered and vary since the last report.

"Average Not-In-Use queue membership time" = "Total Not-In-Use queue membership time" / "Number of programs removed by compression". This statistic indicates how long a program is left in storage when not in use before being removed by the dynamic program storage compression (DPSC) mechanism. If the interval between uses of a program (interval time divided by the number of times used in the interval) is less than this value, there is a high probability that the program is in storage already when it is next required.

Note: This value is meaningful only if there has been significant loader domain activity during the interval and might be distorted by startup usage patterns.

"Average suspend time" = "Total waiting time" / "Number of waited loader requests".

This statistic indicates the response time impact that a task might suffer because of contention for loader domain resources.

Note: This calculation is not performed on requests that are currently waiting.

Loader domain: Global statistics

These statistics fields contain the global data collected by the loader domain. The loader domain maintains global statistics to assist the user in tuning and accounting.

These statistics can be retrieved using the **EXTRACT STATISTICS PROGRAM** system command, and are mapped by the DFHLDGDS DSECT.

Table 89. Loader domain: Global statistics — All Areas

DFHSTUP name	Field name	Description
Library load requests	LDGLLR	The number of times the loader issued an MVS LOAD request to load programs from the DFHRPL or dynamic LIBRARY concatenation into CICS managed storage. Modules in the LPA are not included in this value. The value includes both program load requests that ran on open TCBs, and program load requests that used the RO (resource-owning) TCB. Reset characteristic: reset to zero
Library load requests on the RO TCB	LDGLLRRO	The number of times the loader issued a program load request that used the RO (resource-owning) TCB. This value is a subset of the number of library loads shown by LDGLLR. To calculate the number of program load requests that ran on open TCBs, subtract this value from the value shown by LDGLLR. Reset characteristic: reset to zero

Table 89. Loader domain: Global statistics — All Areas (continued)

DFHSTUP name	Field name	Description
Total loading time	LDGLLT	The time taken for the number of library loads shown by LDGLLR. The value includes both program load requests that ran on open TCBs, and program load requests that used the RO (resource-owning) TCB. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*; however, the DSECT field contains a 4-byte field which expresses the time in 16-microsecond units. Reset characteristic: reset to zero
Total loading time on the RO TCB	LDGLLTRO	The time taken for the number of library loads shown by LDGLLRRO. This value is a subset of the time shown by LDGLLT. To calculate the time taken for program load requests that ran on open TCBs, subtract this value from the value shown by LDGLLT. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*; however, the DSECT field contains a 4-byte field which expresses the time in 16-microsecond units. Reset characteristic: reset to zero
Average loading time		The average time taken to load a program. The value is an average including both program load requests that ran on open TCBs, and program load requests that used the RO (resource-owning) TCB. This value is calculated offline by DFHSTUP and hence is not available to online users. DFHSTUP expresses this time as *hours:minutes:seconds.decimals*. Reset characteristic: none
Average loading time on the RO TCB		The average time taken to complete only those program load requests that used the RO (resource-owning) TCB. This value is calculated offline by DFHSTUP and hence is not available to online users. DFHSTUP expresses this time as *hours:minutes:seconds.decimals*. Reset characteristic: none
Program uses	LDGPUSES	The number of uses of any program by the CICS system. Reset characteristic: not reset

Table 89. Loader domain: Global statistics — All Areas (continued)

DFHSTUP name	Field name	Description
Waiting requests	LDGWLR	The number of loader domain requests that are currently waiting for the loader domain to complete an operation on the program on behalf of another task. Program load requests might wait for the following reasons: • The program is being loaded by another task that is running on an open TCB. • The loader domain is searching the link pack area (LPA) for the program. • A NEWCOPY request or physical load is in progress for the program. Reset characteristic: not reset
Requests that waited	LDGWTDLR	The number of loader domain requests that waited for the loader domain to complete an operation on the program on behalf of another task. This figure is the number of tasks that waited in the past, and does not include tasks that are currently waiting (LDGWLR). Program load requests might wait for the following reasons: • The program is being loaded by another task that is running on an open TCB. • The loader domain is searching the link pack area (LPA) for the program. • A NEWCOPY request or physical load is in progress for the program. Reset characteristic: reset to zero
Peak waiting Loader requests	LDGWLRHW	The maximum number of tasks suspended at one time. Reset characteristic: reset to current value (LDGWLR)
Times at peak	LDGHWMT	The number of times the high-water mark indicated by LDGWLRHW was reached. This, along with the fields LDGWTDLR and LDGWLRHW, is an indication of the level of contention for loader resource. Reset characteristic: reset to 1
Total waiting time	LDGTTW	The suspended time for the number of tasks indicated by LDGWTDLR. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*; however, the DSECT field contains a 4-byte field which expresses the time in 16-microsecond units. Reset characteristic: reset to zero

Table 89. Loader domain: Global statistics — All Areas (continued)

DFHSTUP name	Field name	Description
Times DFHRPL re-opened	LDGDREBS	The number of times the loader received an end-of-extent condition during a load operation, and successfully closed and re-opened the DFHRPL or dynamic LIBRARY concatenation and retried the load operation. Reset characteristic: reset to zero

Loader domain: Global statistics — CDSA

DFHSTUP name	Field name	Description
Programs removed by compression	LDGDPSCR	The number of program instances removed from storage by the Dynamic Program Storage Compression (DPSC) mechanism. Reset characteristic: reset to zero
Total Not In Use queue membership time	LDGDPSCT	The program Not-In-Use (NIU) queue membership time. For each program that becomes eligible for removal from storage by the DPSC mechanism, the time between the program becoming eligible and the actual time of its being removed from storage is calculated. This field is the sum of these times for all programs removed by the DPSC mechanism and as such can be greater than the elapsed CICS run time. This field does not include the wait time for those programs reclaimed from the Not-In-Use queue. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*; however, the DSECT field contains the time as a store clock (STCK) value. Reset characteristic: reset to zero
Average Not In Use queue membership time		The average length of time that a program is eligible for removal from storage by the DPSC mechanism. This value is calculated by DFHSTUP. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*. Reset characteristic: none
Reclaims from Not In Use queue	LDGRECNIU	The number of reclaims that CICS has made from the Not-In-Use (NIU) queue. Reclaims occur when a request is issued for programs currently in the Not-In-Use queue. The reclaimed instance of a program is no longer eligible for program compression (DPSC). Reset characteristic: reset to zero
Programs loaded but Not In Use	LDGPROGNIU	The number of programs on the Not-In-Use (NIU) queue. Reset characteristic: not reset

Loader domain: Global statistics — CDSA

DFHSTUP name	Field name	Description
Amount of DSA occupied by Not In Use programs	LDGSTGNIU	The current amount of CDSA storage which is occupied by Not-In-Use (NIU) programs. Reset characteristic: not reset

Loader domain: Global statistics — ECDSA

DFHSTUP name	Field name	Description
Programs removed by compression	LDGDPSCR	The number of program instances removed from storage by the Dynamic Program Storage Compression (DPSC) mechanism. Reset characteristic: reset to zero
Total Not In Use queue membership time	LDGDPSCT	The program Not-In-Use (NIU) queue membership time. For each program that becomes eligible for removal from storage by the DPSC mechanism, the time between the program becoming eligible and the actual time of its being removed from storage is calculated. This field is the sum of these times for all programs removed by the DPSC mechanism and as such can be greater than the elapsed CICS run time. This field does not include the wait time for those programs reclaimed from the Not-In-Use queue. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*; however, the DSECT field contains the time as a store clock (STCK) value. Reset characteristic: reset to zero
Average Not In Use queue membership time		The average length of time that a program is eligible for removal from storage by the DPSC mechanism. This value is calculated by DFHSTUP. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*. Reset characteristic: none
Reclaims from Not In Use queue	LDGRECNIU	The number of reclaims that CICS has made from the Not-In-Use (NIU) queue. Reclaims occur when a request is issued for programs currently in the Not-In-Use queue. The reclaimed instance of a program is no longer eligible for program compression (DPSC). Reset characteristic: reset to zero
Programs loaded but Not In Use	LDGPROGNIU	The number of programs on the Not-In-Use (NIU) queue. Reset characteristic: not reset

Loader domain: Global statistics — ECDSA

DFHSTUP name	Field name	Description
Amount of DSA occupied by Not In Use programs	LDGSTGNIU	The current amount of ECDSA storage which is occupied by Not-In-Use (NIU) programs. Reset characteristic: not reset

Loader domain: Global statistics — SDSA

DFHSTUP name	Field name	Description
Programs removed by compression	LDGDPSCR	The number of program instances removed from storage by the Dynamic Program Storage Compression (DPSC) mechanism. Reset characteristic: reset to zero
Total Not In Use queue membership time	LDGDPSCT	The program Not-In-Use (NIU) queue membership time. For each program that becomes eligible for removal from storage by the DPSC mechanism, the time between the program becoming eligible and the actual time of its being removed from storage is calculated. This field is the sum of these times for all programs removed by the DPSC mechanism and as such can be greater than the elapsed CICS run time. This field does not include the wait time for those programs reclaimed from the Not-In-Use queue. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*; however, the DSECT field contains the time as a store clock (STCK) value. Reset characteristic: reset to zero
Average Not In Use queue membership time		The average length of time that a program is eligible for removal from storage by the DPSC mechanism. This value is calculated by DFHSTUP. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*. Reset characteristic: none
Reclaims from Not In Use queue	LDGRECNIU	The number of reclaims that CICS has made from the Not-In-Use (NIU) queue. Reclaims occur when a request is issued for programs currently in the Not-In-Use queue. The reclaimed instance of a program is no longer eligible for program compression (DPSC). Reset characteristic: reset to zero
Programs loaded but Not In Use	LDGPROGNIU	The number of programs on the Not-In-Use (NIU) queue. Reset characteristic: not reset

Loader domain: Global statistics — SDSA

DFHSTUP name	Field name	Description
Amount of DSA occupied by Not In Use programs	LDGSTGNIU	The current amount of SDSA storage which is occupied by Not-In-Use (NIU) programs. Reset characteristic: not reset

Loader domain: Global statistics — ESDSA

DFHSTUP name	Field name	Description
Programs removed by compression	LDGDPSCR	The number of program instances removed from storage by the Dynamic Program Storage Compression (DPSC) mechanism. Reset characteristic: reset to zero
Total Not In Use queue membership time	LDGDPSCT	The program Not-In-Use (NIU) queue membership time. For each program that becomes eligible for removal from storage by the DPSC mechanism, the time between the program becoming eligible and the actual time of its being removed from storage is calculated. This field is the sum of these times for all programs removed by the DPSC mechanism and as such can be greater than the elapsed CICS run time. This field does not include the wait time for those programs reclaimed from the Not-In-Use queue. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*; however, the DSECT field contains the time as a store clock (STCK) value. Reset characteristic: reset to zero
Average Not In Use queue membership time		The average length of time that a program is eligible for removal from storage by the DPSC mechanism. This value is calculated by DFHSTUP. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*. Reset characteristic: none
Reclaims from Not In Use queue	LDGRECNIU	The number of reclaims that CICS has made from the Not-In-Use (NIU) queue. Reclaims occur when a request is issued for programs currently in the Not-In-Use queue. The reclaimed instance of a program is no longer eligible for program compression (DPSC). Reset characteristic: reset to zero
Programs loaded but Not In Use	LDGPROGNIU	The number of programs on the Not-In-Use (NIU) queue. Reset characteristic: not reset

Loader domain: Global statistics — ESDSA

DFHSTUP name	Field name	Description
Amount of DSA occupied by Not In Use programs	LDGSTGNIU	The current amount of ESDSA storage which is occupied by Not-In-Use (NIU) programs. Reset characteristic: not reset

Loader domain: Global statistics — RSDA

DFHSTUP name	Field name	Description
Programs removed by compression	LDGDPSCR	The number of program instances removed from storage by the Dynamic Program Storage Compression (DPSC) mechanism. Reset characteristic: reset to zero
Total Not In Use queue membership time	LDGDPSCT	The program Not-In-Use (NIU) queue membership time. For each program that becomes eligible for removal from storage by the DPSC mechanism, the time between the program becoming eligible and the actual time of its being removed from storage is calculated. This field is the sum of these times for all programs removed by the DPSC mechanism and as such can be greater than the elapsed CICS run time. This field does not include the wait time for those programs reclaimed from the Not-In-Use queue. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*; however, the DSECT field contains the time as a store clock (STCK) value. Reset characteristic: reset to zero
Average Not In Use queue membership time		The average length of time that a program is eligible for removal from storage by the DPSC mechanism. This value is calculated by DFHSTUP. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*. Reset characteristic: none
Reclaims from Not In Use queue	LDGRECNIU	The number of reclaims that CICS has made from the Not-In-Use (NIU) queue. Reclaims occur when a request is issued for programs currently in the Not-In-Use queue. The reclaimed instance of a program is no longer eligible for program compression (DPSC). Reset characteristic: reset to zero
Programs loaded but Not In Use	LDGPROGNIU	The number of programs on the Not-In-Use (NIU) queue. Reset characteristic: not reset

Loader domain: Global statistics — ERDSA

DFHSTUP name	Field name	Description
Programs removed by compression	LDGDPSCR	The number of program instances removed from storage by the Dynamic Program Storage Compression (DPSC) mechanism. Reset characteristic: reset to zero
Total Not In Use queue membership time	LDGDPSCT	The program Not-In-Use (NIU) queue membership time. For each program that becomes eligible for removal from storage by the DPSC mechanism, the time between the program becoming eligible and the actual time of its being removed from storage is calculated. This field is the sum of these times for all programs removed by the DPSC mechanism and as such can be greater than the elapsed CICS run time. This field does not include the wait time for those programs reclaimed from the Not-In-Use queue. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*; however, the DSECT field contains the time as a store clock (STCK) value. Reset characteristic: reset to zero
Average Not In Use queue membership time		The average length of time that a program is eligible for removal from storage by the DPSC mechanism. This value is calculated by DFHSTUP. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*. Reset characteristic: none
Reclaims from Not In Use queue	LDGRECNIU	The number of reclaims that CICS has made from the Not-In-Use (NIU) queue. Reclaims occur when a request is issued for programs currently in the Not-In-Use queue. The reclaimed instance of a program is no longer eligible for program compression (DPSC). Reset characteristic: reset to zero
Programs loaded but Not In Use	LDGPROGNIU	The number of programs on the Not-In-Use (NIU) queue. Reset characteristic: not reset
Amount of DSA occupied by Not In Use programs	LDGSTGNIU	The current amount of ERDSA storage which is occupied by Not-In-Use (NIU) programs. Reset characteristic: not reset

Related information:

EXTRACT STATISTICS

Loader domain: Summary global statistics

These statistics fields contain the summary global data for the loader.

Summary statistics are not available online.

Table 90. Loader domain: Summary global statistics

DFHSTUP name	Description
Library load requests	The number of times the loader issued an MVS LOAD request to load programs from the DFHRPL or dynamic LIBRARY concatenation into CICS managed storage. Modules in the LPA are not included in this value. The value includes both program load requests that ran on open TCBs, and program load requests that used the RO (resource-owning) TCB.
Library load requests on the RO TCB	The number of times the loader issued a program load request that used the RO (resource-owning) TCB. This value is a subset of the number of library loads shown by "Library load requests". To calculate the number of program load requests that ran on open TCBs, subtract this value from the value shown by "Library load requests".
Total loading time	The time taken for the number of library loads shown by "Library load requests". The value includes both program load requests that ran on open TCBs, and program load requests that used the RO (resource-owning) TCB. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*.
Total loading time on the RO TCB	The time taken for the number of library loads shown by "Library load requests on the RO TCB". This value is a subset of the time shown by "Total loading time". To calculate the time taken for program load requests that ran on open TCBs, subtract this value from the value shown by "Total loading time". The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*.
Average loading time	The average time taken to load a program. The value is an average including both program load requests that ran on open TCBs, and program load requests that used the RO (resource-owning) TCB. DFHSTUP expresses this time as *hours:minutes:seconds.decimals*.
Average loading time on the RO TCB	The average time taken to complete only those program load requests that used the RO (resource-owning) TCB. DFHSTUP expresses this time as *hours:minutes:seconds.decimals*.
Program uses	The number of uses of any program by the CICS system.
Requests that waited	The number of loader domain requests that waited for the loader domain to complete an operation on the program on behalf of another task. Program load requests might wait for the following reasons: • The program is being loaded by another task that is running on an open TCB. • The loader domain is searching the link pack area (LPA) for the program. • A NEWCOPY request or physical load is in progress for the program.
Peak waiting Loader requests	The maximum number of tasks suspended at one time.

Table 90. Loader domain: Summary global statistics (continued)

DFHSTUP name	Description
Times at peak	The number of times the high-water mark indicated by LDGWLRHW was reached. This, along with the previous 2 values, is an indication of the level of contention for loader resource.
Total waiting time	The suspended time for the number of tasks indicated by the "Requests that waited" statistic. The DFHSTUP report expresses this time as *days-hours:minutes:seconds.decimals*.
Times DFHRPL re-opened	The number of times the loader received an end-of-extent condition during a load operation, and successfully closed and re-opened the DFHRPL or dynamic LIBRARY concatenation and retried the load operation.
CDSA	
Programs removed by compression	The total number of program instances removed from storage by the Dynamic Program Storage Compression (DPSC) mechanism.
Total Not In Use queue membership time	The total program Not-In-Use (NIU) queue membership time. For each program that becomes eligible for removal from storage by the DPSC mechanism, the time between the program becoming eligible and the actual time of its being removed from storage is calculated. This field is the sum of these times for all programs removed by the DPSC mechanism and as such can be greater than the elapsed CICS run time. This field does not include the wait time for those programs reclaimed from the Not-In-Use queue. The DFHSTUP report expresses this time as *days-hours:minutes:seconds.decimals*.
Average Not In Use queue membership time	The average time between a program becoming eligible for removal from storage by the DPSC and the actual time of its removal from storage. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*.
Reclaims from Not In Use queue	The total number of reclaims that CICS has made from the Not-In-Use (NIU) queue. Reclaims occur when a request is issued for programs currently in the Not-In-Use queue. The reclaimed instance of a program is no longer eligible for program compression (DPSC).
Programs loaded but Not In Use	The total number of programs on the Not-In-Use (NIU) queue.
ECDSA	
Programs removed by compression	The total number of program instances removed from storage by the Dynamic Program Storage Compression (DPSC) mechanism.

Table 90. Loader domain: Summary global statistics (continued)

DFHSTUP name	Description
Total Not In Use queue membership time	The total program Not-In-Use (NIU) queue membership time. For each program that becomes eligible for removal from storage by the DPSC mechanism, the time between the program becoming eligible and the actual time of its being removed from storage is calculated. This field is the sum of these times for all programs removed by the DPSC mechanism and as such can be greater than the elapsed CICS run time. This field does not include the wait time for those programs reclaimed from the Not-In-Use queue. The DFHSTUP report expresses this time as *days-hours:minutes:seconds.decimals*.
Average Not In Use queue membership time	The average time between a program becoming eligible for removal from storage by the DPSC and the actual time of its removal from storage. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*.
Reclaims from Not In Use queue	The total number of reclaims that CICS has made from the Not-In-Use (NIU) queue. Reclaims occur when a request is issued for programs currently in the Not-In-Use queue. The reclaimed instance of a program is no longer eligible for program compression (DPSC).
Programs loaded but Not In Use	The total number of programs on the Not-In-Use (NIU) queue.
SDSA	
Programs removed by compression	The total number of program instances removed from storage by the Dynamic Program Storage Compression (DPSC) mechanism.
Total Not In Use queue membership time	The total program Not-In-Use (NIU) queue membership time. For each program that becomes eligible for removal from storage by the DPSC mechanism, the time between the program becoming eligible and the actual time of its being removed from storage is calculated. This field is the sum of these times for all programs removed by the DPSC mechanism and as such can be greater than the elapsed CICS run time. This field does not include the wait time for those programs reclaimed from the Not-In-Use queue. The DFHSTUP report expresses this time as *days-hours:minutes:seconds.decimals*.
Average Not In Use queue membership time	The average time between a program becoming eligible for removal from storage by the DPSC and the actual time of its removal from storage. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*
Reclaims from Not In Use queue	The total number of reclaims that CICS has made from the Not-In-Use (NIU) queue. Reclaims occur when a request is issued for programs currently in the Not-In-Use queue. The reclaimed instance of a program is no longer eligible for program compression (DPSC).
Programs loaded but Not In Use	The total number of programs on the Not-In-Use (NIU) queue.

Table 90. Loader domain: Summary global statistics (continued)

DFHSTUP name	Description
ESDSA	
Programs removed by compression	The total number of program instances removed from storage by the Dynamic Program Storage Compression (DPSC) mechanism.
Total Not In Use queue membership time	The total program Not-In-Use (NIU) queue membership time. For each program that becomes eligible for removal from storage by the DPSC mechanism, the time between the program becoming eligible and the actual time of its being removed from storage is calculated. This field is the sum of these times for all programs removed by the DPSC mechanism and as such can be greater than the elapsed CICS run time. This field does not include the wait time for those programs reclaimed from the Not-In-Use queue. The DFHSTUP report expresses this time as *days-hours:minutes:seconds.decimals*.
Average Not In Use queue membership time	The average time between a program becoming eligible for removal from storage by the DPSC and the actual time of its removal from storage. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*.
Reclaims from Not In Use queue	The total number of reclaims that CICS has made from the Not-In-Use (NIU) queue. Reclaims occur when a request is issued for programs currently in the Not-In-Use queue. The reclaimed instance of a program is no longer eligible for program compression (DPSC).
Programs loaded but Not In Use	The total number of programs on the Not-In-Use (NIU) queue.
RDSA	
Programs removed by compression	The total number of program instances removed from storage by the Dynamic Program Storage Compression (DPSC) mechanism.
Total Not In Use queue membership time	The total program Not-In-Use (NIU) queue membership time. For each program that becomes eligible for removal from storage by the DPSC mechanism, the time between the program becoming eligible and the actual time of its being removed from storage is calculated. This field is the sum of these times for all programs removed by the DPSC mechanism and as such can be greater than the elapsed CICS run time. This field does not include the wait time for those programs reclaimed from the Not-In-Use queue. The DFHSTUP report expresses this time as *days-hours:minutes:seconds.decimals*.
Average Not In Use queue membership time	The average time between a program becoming eligible for removal from storage by the DPSC and the actual time of its removal from storage. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*.

Table 90. Loader domain: Summary global statistics (continued)

DFHSTUP name	Description
Reclaims from Not In Use queue	The total number of reclaims that CICS has made from the Not-In-Use (NIU) queue. Reclaims occur when a request is issued for programs currently in the Not-In-Use queue. The reclaimed instance of a program is no longer eligible for program compression (DPSC).
Programs loaded but Not In Use	The total number of programs on the Not-In-Use (NIU) queue.
ERDSA	
Programs removed by compression	The total number of program instances removed from storage by the Dynamic Program Storage Compression (DPSC) mechanism.
Total Not In Use queue membership time	The total program Not-In-Use (NIU) queue membership time. For each program that becomes eligible for removal from storage by the DPSC mechanism, the time between the program becoming eligible and the actual time of its being removed from storage is calculated. This field is the sum of these times for all programs removed by the DPSC mechanism and as such can be greater than the elapsed CICS run time. This field does not include the wait time for those programs reclaimed from the Not-In-Use queue. The DFHSTUP report expresses this time as *days-hours:minutes:seconds.decimals*.
Average Not In Use queue membership time	The average time between a program becoming eligible for removal from storage by the DPSC and the actual time of its removal from storage. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals*.
Reclaims from Not In Use queue	The total number of reclaims that CICS has made from the Not-In-Use (NIU) queue. Reclaims occur when a request is issued for programs currently in the Not-In-Use queue. The reclaimed instance of a program is no longer eligible for program compression (DPSC).
Programs loaded but Not In Use	The total number of programs on the Not-In-Use (NIU) queue.

Logstream statistics

CICS collects statistics on the data written to each log stream which can be used to analyze the activity of a single region. However, because log streams can be shared across multiple MVS images, it can be more useful to examine the statistics generated by MVS.

Log stream statistics contain data about the use of each log stream including the following:

- The number of write requests to the log stream
- The number of bytes written to the log stream
- The number of log stream buffer waits
- The number of log stream browse and delete requests.

The CICS system log stream statistics for the last three items on this list are always zero.

Journalnames are a convenient means of identifying a destination log stream that is to be written to. CICS applications write data to journals using their journalname. CICS itself usually uses the underlying log stream name when issuing requests to the CICS log manager, and this must be considered when interpreting journalname and log stream resource statistics. For example, the statistics might show many operations against a log stream, but relatively few, if any, writes to a journalname which maps to that log stream. This indicates that it is CICS that accesses the resource at the log stream level, not an application writing to it through the CICS application programming interface. The results can typically be seen when examining the journalname resource statistics for DFHLOG and DFHSHUNT, and comparing them with the resource statistics for their associated CICS system log streams.

For more information about logging and journaling, see CICS logging and journaling.

Related reference:

"Logstreams reports" on page 424
There are four Logstreams reports: the Logstream Global report, the Logstream System Logs report, the Logstreams Resource report, and the Logstreams Requests report.

Logstream: Global statistics

You can retrieve global log stream statistics by using the **EXEC CICS EXTRACT STATISTICS STREAMNAME** system command. They are mapped by the DFHLGGDS DSECT.

These statistics fields contain the global data collected by the log manager domain.

For more information about logging and journaling, see CICS logging and journaling.

Table 91. Logstream: Global statistics

DFHSTUP name	Field name	Description
Activity Keypoint Frequency (AKPFREQ)	LGGAKPFREQ	The current activity keypoint trigger value, which is the number of logging operations between the taking of keypoints. This is the AKPFREQ value specified in the SIT, or as an override, or changed dynamically. Reset characteristic: not reset
Activity Keypoints Taken	LGGAKPSTKN	The number of activity keypoints taken. Reset characteristic: reset to zero
Log Deferred Force (LGDFINT) Interval (msec)	LGGLGDEFER	The current log deferral interval, which is the period of time used by CICS Log Manager when determining how long to delay a forced journal write request before invoking the MVS system logger. This is the LGDFINT value specified in the SIT, or as an override, or changed dynamically. Reset characteristic: not reset

Related information:

EXTRACT STATISTICS

Logstream: Resource statistics

You can retrieved log stream resource statistics by using the **EXEC CICS EXTRACT STATISTICS STREAMNAME** system command. They are mapped by the DFHLGSDS DSECT.

These statistics fields contain the resource data collected by the log manager domain.

For more information about logging and journaling, see CICS logging and journaling.

Table 92. Logstream: Resource statistics

DFHSTUP name	Field name	Description
Log Stream Name	LGSTRNAM	The logstream name. Reset characteristic: not reset
System Log	LGSSYSLG	Indicates if the logstream forms part of the System Log. Reset characteristic: not reset
Structure Name	LGSSTRUC	The coupling facility (CF) structure name for the logstream. The structure name is only applicable to coupling facility type logstreams. Reset characteristic: not reset
Max Block Length	LGSMAXBL	The maximum block size allowed by the MVS Logger for the logstream. Reset characteristic: not reset
DASD Only	LGSDONLY	Indicates the type of logstream. If set to 'YES' the logstream is of type DASDONLY. If set to 'NO' the logstream is of type coupling facility (CF). Reset characteristic: not reset
Retention Period	LGSRETPD	The logstream retention period (in days) that the data must be kept before it can be physically deleted by the MVS Logger. Reset characteristic: not reset

Table 92. Logstream: Resource statistics (continued)

DFHSTUP name	Field name	Description
Auto Delete	LGSAUTOD	The log data auto delete indicator. If set to 'YES' the MVS Logger automatically deletes the data as it matures beyond the retention period, irrespective of any logstream delete calls. If set to 'NO' the data is only deleted when a logstream delete call is issued and the data has matured beyond the retention period. Reset characteristic: not reset
Delete Requests	LGSDELETES	The number of DELETEs of blocks of data from the logstream. For non-system logs, the report will show 'N/A' here, as CICS does not issue Log Delete requests against non-system logs. Reset characteristic: reset to zero
Query Requests	LGSQUERIES	The number of queries that CICS made to check the status of the logstream. Reset characteristic: reset to zero

Related information:

EXTRACT STATISTICS

Logstream: Request statistics

You can retrieve log stream request statistics by using the **EXEC CICS EXTRACT STATISTICS STREAMNAME** system command. They are mapped by the DFHLGSDS DSECT.

These statistics fields contain the request data collected by the log manager domain.

Table 93. Logstream: Request statistics

DFHSTUP name	Field name	Description
Log Stream Name	LGSTRNAM	is the logstream name. Reset characteristic: not reset
Write Requests	LGSWRITES	is the number of WRITEs of blocks of data to the logstream. Reset characteristic: reset to zero
Bytes Written	LGSBYTES	is the total number of bytes written to the logstream Reset characteristic: reset to zero
Buffer Appends	LGSBUFAPP	is the number of occasions on which a journal record was successfully appended to the current logstream buffer. Reset characteristic: reset to zero

Table 93. Logstream: Request statistics (continued)

DFHSTUP name	Field name	Description
Waits Buff Full	LGSBUFWAIT	is the total number of attempts made to append a journal record to the current logstream buffer while the buffers were logically full. This situation arises when the current logstream buffer has insufficient space to accommodate the journal record, and I/O is already in progress for the alternate logstream buffer. Reset characteristic: reset to zero
Current Frce Wtrs	LGSCUFWTRS	is the current number of tasks suspended while requesting a flush of the logstream buffer currently in use. Reset characteristic: not reset
Peak Frce Wtrs	LGSPKFWTRS	is the peak number of tasks suspended while requesting a flush of the logstream buffer currently in use. Reset characteristic: reset to current
Total Force Wts	LGSTFCWAIT	is the total number of tasks suspending while requesting a flush of the logstream buffer currently in use. Reset characteristic: reset to zero
Browse Starts	LGSBRWSTRT	is the number of BROWSE operations started on the logstream. For non-system log logstreams, the report will show 'N/A' here, as you cannot browse these. Reset characteristic: reset to zero
Browse Reads	LGSBRWREAD	is the number of READs of blocks of data from the logstream. For non-system log logstreams, the report will show 'N/A' here, as you cannot browse these. Reset characteristic: reset to zero
Retry Errors	LGSRTYERRS	is the number of occasions on which MVS system logger retryable errors occurred when a block of data was being written to the logstream. Reset characteristic: reset to zero

Related information:

EXTRACT STATISTICS

Logstream: Summary global statistics

These statistics fields contain the logstream summary global data.

Summary statistics are not available online.

Table 94. Logstream: Summary global statistics

DFHSTUP name	Description
Activity Keypoint Frequency (AKPFREQ)	The last activity keypoint trigger value, which is the number of logging operations between the taking of keypoints. This is the last AKPFREQ value as specified in the SIT, or as an override, or changed dynamically using the **EXEC CICS SET SYSTEM AKP(fullword binary data-value)** command.
Total Activity Keypoints Taken	The total number of activity keypoints taken.
Log Deferred Force (LGDFINT) Interval (msec)	The last log deferral interval, which is the period of time used by CICS Log Manager when determining how long to delay a forced journal write request before invoking the MVS system logger. This is the last LGDFINT value that was specified in the SIT, or as an override, or changed dynamically using the **EXEC CICS SET SYSTEM LOGDEFER(halfword binary data-value)** command.

Logstream: Summary resource statistics

These statistics fields contain the logstream summary resource data.

Summary statistics are not available online.

Table 95. Logstream: Summary resource statistics

DFHSTUP name	Description
Log Stream Name	is the logstream name.
System Log	indicates if the logstream forms part of the System Log.
Structure Name	is the coupling facility (CF) structure name for the logstream. The structure name is only applicable to coupling facility type logstreams.
Max Block Length	is the maximum block size allowed by the MVS Logger for the logstream.
DASD Only	indicates the type of logstream. If set to 'YES' the logstream is of type DASDONLY. If set to 'NO' the logstream is of type coupling facility (CF).
Retention Period	is the logstream retention period (in days) that the data must be kept before it can be physically deleted by the MVS Logger.
Auto Delete	is the log data auto delete indicator. If set to 'YES' the MVS Logger automatically deletes the data as it matures beyond the retention period, irrespective of any logstream delete calls. If set to 'NO' the data is only deleted when a logstream delete call is issued and the data has matured beyond the retention period.
Log Delete Requests	is the total number of DELETEs of blocks of data from the logstream. For non-system logs, the report will show 'N/A' here, as CICS does not issue Log Delete requests against non-system logs.

Table 95. Logstream: Summary resource statistics (continued)

DFHSTUP name	Description
Log Query Requests	is the total number of queries that CICS made to check the status of the logstream.

Logstream: Summary request statistics

These statistics fields contain the logstream summary request data.

Summary statistics are not available online.

Table 96. Logstream: Summary request statistics

DFHSTUP name	Description
Log Stream Name	is the logstream name.
Write Requests	is the total number of WRITEs of blocks of data to the logstream.
Bytes Written	is the total number of bytes written to the logstream.
Buffer Appends	is the total number of occasions on which a journal record was successfully appended to the current logstream buffer.
Waits Buffer Full	is the total number of attempts made to append a journal record to the current logstream while the buffers were logically full.
Peak Force Wtrs	is the peak number of tasks suspended while requesting a FLUSH of the logstream buffer currently in use.
Total Force Waits	is the total number of tasks suspended while requesting a FLUSH of the logstream buffer currently in use.
Log Browse Starts	is the total number of BROWSE operations started on the logstream. For non-system log logstreams, the report will show 'N/A' here, as you cannot browse these.
Log Browse Reads	is the total number of READs of blocks of data from the logstream. For non-system log logstreams, the report will show 'N/A' here, as you cannot browse these.
Retry Errors	is the total number of occasions on which MVS system logger retryable errors occurred when a block of data was being written to the logstream.

LSR pool statistics

CICS supports the use of up to 255 LSR pools, and produces two sets of statistics for LSR pool activity: one set detailing the activity for each LSR pool, and one set giving details for each file associated with an LSR pool.

Related concepts:

"Interpreting LSR pool statistics"
CICS supports the use of up to 255 LSR pools. CICS produces two sets of statistics for LSR pool activity: one set detailing the activity for each LSR pool, and one set giving details for each file associated with an LSR pool. Statistics are printed for all pools that have been built (a pool is built when at least one file that uses the pool has been opened).

Related reference:

"LSR pools report" on page 427
The LSR pools report is produced using the **EXEC CICS EXTRACT STATISTICS LSRPOOL** command. The statistics data is mapped by the **DFHA08DS DSECT**.

Interpreting LSR pool statistics

CICS supports the use of up to 255 LSR pools. CICS produces two sets of statistics for LSR pool activity: one set detailing the activity for each LSR pool, and one set giving details for each file associated with an LSR pool. Statistics are printed for all pools that have been built (a pool is built when at least one file that uses the pool has been opened).

You should aim to have no requests that waited for a string. If you do, the use of MXT might be more effective.

When the last open file in an LSR pool is closed, the pool is deleted. The subsequent unsolicited statistics (USS) LSR pool record written to SMF can be mapped by the DFHA08DS DSECT.

The fields relating to the size and characteristics of the pool (maximum key length, number of strings, number, and size of buffers) can be those that you have specified for the pool, through resource definition online command DEFINE LSRPOOL. Alternatively, if some, or all, of the fields were not specified, the values of the unspecified fields are those calculated by CICS when the pool was built.

It is possible to change the LSR pool specification of a file when it is closed, but you must then consider the characteristics of the pool that the file is to share if the pool is already built, or the file open might fail. If the pool is not built and the pool characteristics are specified by you, ensure that these are adequate for the file. If the pool is not built and CICS calculates all or some of the operands, it can build the pool creations of that pool. The statistics show all creations of the pool, so any changed characteristics are visible.

You should consider specifying separate data and index buffers if you have not already done so. This is especially true if index CI sizes are the same as data CI sizes.

You should also consider using Hiperspace™ buffers while retaining a reasonable number of address space buffers. Hiperspace buffers tend to give processor savings of keeping data in memory, using the relatively cheap expanded storage, while allowing central storage to be used more effectively.

LSR pool: Resource statistics for each LSR pool

You can retrieve LSR pool resource statistics by using the **EXEC CICS EXTRACT STATISTICS LSRPOOL** system command. They are mapped by the DFHA08DS DSECT.

The following information describes the size and characteristics of the pool, and shows the data collected for the use of strings and buffers.

Table 97. LSR pool: Resource statistics for each LSR pool

DFHSTUP name	Field name	Description
Pool Number	A08SRPID	The identifying number of the pool. This value must be in the range 1 through 255. Reset characteristic: not reset
NOT IN THE DFHSTUP REPORT	A08FLAGS	A flag set to value X'80' if separate data and index pools are used, or set to value X'00' if data and index buffers share the same pool. Reset characteristic: not reset
Time Created	A08LKCTD	The time when this LSR pool was created. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals* in local time. Reset characteristic: not reset
Time Deleted	A08LKDTD	The local time (STCK) when this LSR pool was deleted. This field is printed only if the pool has been deleted (that is, if all the files using the pool have been closed). If no value is set, the DSECT field contains the packed hexadecimal value X'00000000 00000000'. This field is only printed for unsolicited statistics when the pool is deleted. The process of deleting an LSR pool results in the output of unsolicited statistics for the pool. Information for the deleted pool is not printed in subsequent statistics output. For this reason, the “time pool deleted” field is normally printed only in this unsolicited statistics output. Reset characteristic: not reset
NOT IN DFHSTUP REPORT	A08GBKCD	The time when this LSR pool was created. The DFHSTUP report expresses this time as *hours:minutes:seconds.decimals* in GMT. Reset characteristic: not reset

Table 97. LSR pool: Resource statistics for each LSR pool (continued)

DFHSTUP name	Field name	Description
NOT IN DFHSTUP REPORT	A08GBKDD	The time when this LSR pool was deleted expressed in GMT. This field is printed only if the pool has been deleted (that is, if all the files using the pool have been closed). If no value is set, the DSECT field contains the packed hexadecimal value X'00000000 00000000' This field is only printed for unsolicited statistics when the pool is deleted. The process of deleting an LSR pool results in the output of unsolicited statistics for the pool. Information for the deleted pool is not printed in subsequent statistics output. For this reason, the "time pool deleted" field is normally printed only in this unsolicited statistics output. Reset characteristic: not reset
Maximum key length	A08BKKYL	The length of the largest key of a VSAM data set that can use the LSR pool. The value is obtained from one of the following sources: • The MAXKEYLENGTH option of the DEFINE LSRPOOL command in resource definition online, if it has been coded • A CICS calculation at the time the LSR pool is built. Reset characteristic: not reset
Total number of strings	A08BKSTN	The value obtained from one of the following sources: • The STRINGS option of the DEFINE LSR command in resource definition online, if it has been coded • A CICS calculation at the time the LSR pool is built. Reset characteristic: not reset
Peak requests that waited for string	A08BKHSW	The highest number of requests that were queued at one time because all the strings in the pool were in use. Reset characteristic: reset to current value
Total requests that waited for string	A08BKTSW	The number of requests that were queued because all the strings in the pool were in use. This number reflects the number of requests that were delayed during CICS execution due to a restriction in LSR pool string resources. Reset characteristic: reset to zero

Table 97. LSR pool: Resource statistics for each LSR pool (continued)

DFHSTUP name	Field name	Description
Peak concurrently active strings	A08BKHAS	The maximum number of strings that were active during CICS execution. If you have coded a value for the number of strings the pool is to use, this statistic is always less than or equal to the value you have coded. If your coded value for string numbers is consistently higher than this value in the statistics, you could consider reducing it so that your pool of VSAM strings is not bigger than you need. Reset characteristic: reset to current value

Note that if separate data and index pools are not being used, all the statistics for the totals are obtained from the A08TO*xxx*_DATA variables, the index totals being unused.

Related information:

EXTRACT STATISTICS

LSR pool: Data buffer statistics

Table 98. LSR pool: Data buffer statistics

DFHSTUP name	Field name	Description
Size	A08BKBSZ	The size of the buffers that are available to CICS. Buffers may be specified through: • The DEFINE LSRPOOL command of resource definition online • A CICS calculation at the time the LSRPOOL is built, of the buffers to use. Reset characteristic: not reset
Number	A08TOBFN_DATA	The number of data buffers used by the pool. Reset characteristic: not reset
Lookasides	A08TOBFF_DATA	The number of successful lookasides to data buffers for the pool. Reset characteristic: not reset
Reads	A08TOFRD_DATA	The number of read I/Os to the data buffers for the pool. Reset characteristic: not reset
User writes	A08TOUIW_DATA	The number of user-initiated buffer WRITEs from data buffers for the pool. Reset characteristic: not reset

Table 98. LSR pool: Data buffer statistics (continued)

DFHSTUP name	Field name	Description
Non-user writes	A08TONUW_DATA	The number of non-user-initiated buffer WRITEs from data buffers for the pool. Reset characteristic: not reset

LSR pool: Hiperspace data buffer statistics

Table 99. LSR pool: Hiperspace data buffer statistics

DFHSTUP name	Field name	Description
Size	A08BKBSZ	The size of the buffers that are available to CICS. Buffers can be specified through: • The DEFINE LSRPOOL command of resource definition online • A CICS calculation at the time the LSRPOOL is built, of the buffers to use. Reset characteristic: not reset
Number	A08TOHBN_DATA	The number of Hiperspace data buffers specified for the pool Reset characteristic: not reset
Hiperspace reads	A08TOCRS_DATA	The number of successful CREAD requests issued to transfer data from Hiperspace data buffers to virtual data buffers. Reset characteristic: not reset
Hiperspace writes	A08TOWRS_DATA	The number of successful CWRITE requests issued to transfer data from virtual data buffers to Hiperspace data buffers. Reset characteristic: not reset
Hiperspace failed reads	A08TOCRF_DATA	The number of CREAD requests that failed. MVS had withdrawn the space and VSAM had to read data from DASD. Reset characteristic: not reset
Hiperspace failed writes	A08TOCWF_DATA	The number of CWRITE requests that failed. There was insufficient Hiperspace and VSAM had to write data to DASD. Reset characteristic: not reset

LSR pool: Index buffer statistics

Table 100. LSR pool: Index buffer statistics

DFHSTUP name	Field name	Description
Size	A08BKBSZ	The size of the buffers that are available to CICS. Buffers can be specified through: • The DEFINE LSRPOOL command of resource definition online • A CICS calculation at the time the LSRPOOL is built, of the buffers to use. Reset characteristic: not reset
Number	A08TOBFN_INDX	The number of index buffers used by the pool. Reset characteristic: not reset
Lookasides	A08TOBFF_INDX	The number of successful lookasides to index buffers for the pool. Reset characteristic: not reset
Reads	A08TOFRD_INDX	The number of read I/Os to the index buffers for the pool. Reset characteristic: not reset
User writes	A08TOUIW_INDX	The number of user-initiated buffer WRITEs from index buffers for the pool. Reset characteristic: not reset
Non-user writes	A08TONUW_INDX	The number of non-user-initiated buffer WRITEs from index buffers for the pool. Reset characteristic: not reset

LSR pool: Hiperspace index buffer statistics

The following group of statistics fields describes the characteristics and usage of the different buffer sizes available for use by the pool.

LSR pool Hiperspace index buffer statistics are available online, and are mapped by the A08BSSDS DSECT defined in the DFHA08DS DSECT. This DSECT is repeated for each of the 11 CISIZEs available.

Table 101. LSR pool: Hiperspace index buffer statistics

DFHSTUP name	Field name	Description
Size	A08BKBSZ	The size of the buffers that are available to CICS. Buffers can be specified through: • The DEFINE LSRPOOL command of resource definition online • A CICS calculation at the time the LSRPOOL is built, of the buffers to use. Reset characteristic: not reset
Number	A08TOHBN_INDX	The number of Hiperspace index buffers specified for the pool Reset characteristic: not reset
Hiperspace reads	A08TOCRS_INDX	The number of successful CREAD requests issued to transfer data from Hiperspace index buffers to virtual index buffers. Reset characteristic: not reset
Hiperspace writes	A08TOWRS_INDX	The number of successful CWRITE requests issued to transfer data from virtual index buffers to Hiperspace index buffers. Reset characteristic: not reset
Hiperspace failed reads	A08TOCRF_INDX	The number of CREAD requests that failed. MVS had withdrawn the space and VSAM had to read data from DASD. Reset characteristic: not reset
Hiperspace failed writes	A08TOCWF_INDX	The number of CWRITE requests that failed. There was insufficient Hiperspace and VSAM had to write data to DASD. Reset characteristic: not reset

LSR pool: Buffer statistics

Table 102. LSR pool: Buffer statistics

DFHSTUP name	Field name	Description
Buffer Size	A08BKBSZ	The size of the buffers that are available to CICS. Buffers can be specified through: • The DEFINE LSRPOOL command of resource definition online • A CICS calculation at the time the LSRPOOL is built buffers to use. Reset characteristic: not reset

Table 102. LSR pool: Buffer statistics (continued)

DFHSTUP name	Field name	Description
Number	A08BKBFN	The number of buffers of each size available to CICS: Reset characteristic: not reset
Lookasides	A08BKBFF	The number of read requests that VSAM was able to satisfy without initiating an I/O operation; that is, the requested record, whether index or data, was already present in one of the buffer resident CIs. This means that no physical I/O must be done to put the control interval in the buffer. The tuning methodology usually employed involves either increasing the number of buffers of a particular CI size until the ratio of lookasides to READs stops increasing significantly or, conversely, reducing the number of buffers until the ratio of lookasides to READs begins to drop significantly. For most data sets, successful lookaside hits on indexes are more likely. These statistics are obtained from VSAM and represent the activity after the pool was created. Note that these statistics are ***not*** reset by CICS under any circumstances. Reset characteristic: not reset
Reads	A08BKFRD	The number of I/O operations to the buffers that VSAM was required to initiate to satisfy the CICS application's activity. This figure represents failures to find the control interval in the buffers. These statistics are obtained from VSAM and represent the activity after the pool was created. Note that these statistics are ***not*** reset by CICS under any circumstances. Reset characteristic: not reset
User writes	A08BKUIW	The number of user-initiated I/O WRITE operations from the buffers that VSAM was required to initiate to satisfy the CICS application's activity. These statistics are obtained from VSAM and represent the activity after the pool was created. Note that these statistics are ***not*** reset by CICS under any circumstances. Reset characteristic: not reset
Non-user writes	A08BKNUW	The number of non-user initiated I/O WRITE operations from the buffers that VSAM was forced to initiate due to no buffers being available for reading the contents of a CI. These statistics are obtained from VSAM and represent the activity after the pool was created. Note that these statistics are ***not*** reset by CICS under any circumstances. Reset characteristic: not reset

LSR pool: Hiperspace buffer statistics

Table 103. LSR pool: Hiperspace buffer statistics

DFHSTUP name	Field name	Description
Size	A08BKBSZ	The size of the buffers that are available to CICS. Buffers can be specified through: • The DEFINE LSRPOOL command of resource definition online • A CICS calculation at the time the LSRPOOL is built, of the buffers to use. Reset characteristic: not reset
Number	A08BKHBN	The number of Hiperspace buffers specified for the pool. Reset characteristic: not reset
Hiperspace reads	A08BKCRS	The number of successful CREAD requests issued to transfer data from Hiperspace buffers to virtual buffers. Reset characteristic: not reset
Hiperspace writes	A08BKCWS	The number of successful CWRITE requests issued to transfer data from virtual buffers to Hiperspace buffers. Reset characteristic: not reset
Hiperspace failed reads	A08BKCRF	The number of CREAD requests that failed. MVS had withdrawn the space and VSAM had to read data from DASD. Reset characteristic: not reset
Hiperspace failed writes	A08BKCWF	The number of CWRITE requests that failed. There was insufficient Hiperspace and VSAM had to write data to DASD. Reset characteristic: not reset

These Hiperspace statistics are obtained from VSAM and represent the activity after the pool was created. Note that these statistics are ***not*** reset by CICS under any circumstances.

LSR pool: Summary resource statistics for each LSR pool

Summary statistics are unavailable online.

Table 104. LSR pool: Summary resource statistics for each LSR pool

DFHSTUP name	Description
Total number of pools built	The total number of LSR pools that were built during the entire CICS run.

Table 104. LSR pool: Summary resource statistics for each LSR pool (continued)

DFHSTUP name	Description
Peak requests that waited for string	The highest number of requests that were queued at one time because all the strings in the pool were in use.
Total requests that waited for string	The total number of requests that were queued because all the strings in the pool were in use. This number reflects the number of requests that were delayed during CICS execution due to a restriction in LSR pool string resources.
Peak concurrently active strings	The peak number of strings that were active during CICS execution. If you have coded a value for the number of strings the pool is to use, this statistic is always less than or equal to the value you have coded. If your coded value for string numbers is consistently higher than this value in the statistics, you could consider reducing it so that your pool of VSAM strings is not bigger than you need.

LSR pool: Summary data buffer statistics

The following group of statistics fields summarizes the usage of each of the 255 LSR pools during the entire CICS run.

Summary statistics are unavailable online.

Table 105. LSR pool: Summary data buffer statistics

DFHSTUP name	Description
Pool Number	The identifying number of the pool. This value must be in the range 1 through 255.
Lookasides	The total number of successful lookasides to data buffers for the pool.
Reads	The total number of read I/O operations to the data buffers for the pool.
User writes	The total number of user-initiated buffer WRITE requests from data buffers for the pool.
Non-user writes	The total number of non-user-initiated buffer WRITE requests from data buffers for the pool.

LSR pool: Summary Hiperspace data buffer statistics

Summary statistics are unavailable online.

Table 106. LSR pool: Summary Hiperspace data buffer statistics

DFHSTUP name	Description
Pool Number	The identifying number of the pool. This value must be in the range 1 through 255.

Table 106. LSR pool: Summary Hiperspace data buffer statistics (continued)

DFHSTUP name	Description
Hiperspace reads	The total number of successful CREAD requests issued to transfer data from Hiperspace data buffers to virtual data buffers.
Hiperspace writes	The total number of successful CWRITE requests issued to transfer data from virtual data buffers to Hiperspace data buffers.
Hiperspace failed reads	The total number of CREAD requests that failed. MVS had withdrawn the space and VSAM had to read data from DASD.
Hiperspace failed writes	The total number of CWRITE requests that failed. There was insufficient Hiperspace and VSAM had to write data to DASD.

LSR pool: Summary index buffer statistics

Summary statistics are unavailable online.

Table 107. LSR pool: Summary index buffer statistics

DFHSTUP name	Description
Pool Number	The identifying number of the pool. This value must be in the range 1 through 255.
Lookasides	The total number of successful lookasides to index buffers for the pool.
Reads	The total number of read I/O operations to the index buffers for the pool.
User writes	The total number of user-initiated buffer WRITE requests from index buffers for the pool.
Non-user writes	The total number of non-user-initiated buffer WRITE requests from index buffers for the pool.

LSR pool: Summary Hiperspace index buffer statistics

Summary statistics are unavailable online.

Table 108. LSR pool: Summary Hiperspace index buffer statistics

DFHSTUP name	Description
Pool Number	The identifying number of the pool. This value must be in the range 1 through 255.
Hiperspace reads	The total number of successful CREAD requests issued to transfer data from Hiperspace index buffers to virtual index buffers.

Table 108. LSR pool: Summary Hiperspace index buffer statistics (continued)

DFHSTUP name	Description
Hiperspace writes	The total number of successful CWRITE requests issued to transfer data from virtual index buffers to Hiperspace index buffers.
Hiperspace failed reads	The total number of CREAD requests that failed. MVS had withdrawn the space and VSAM had to read data from DASD.
Hiperspace failed writes	The total number of CWRITE requests that failed. There was insufficient Hiperspace and VSAM had to write data to DASD.

LSR pool: Summary buffer statistics

Summary statistics are unavailable online.

Table 109. LSR pool: Summary buffer statistics

DFHSTUP name	Description
Pool Number	The identifying number of the pool. This value must be in the range 1 through 255.
Lookasides	The total number of read requests that VSAM was able to satisfy without initiating an I/O operation; that is, the requested record, whether index or data, was already present in one of the buffer resident CIs. This means that no physical I/O had to be done to put the control interval in the buffer. The tuning methodology employed involves either increasing the number of buffers of a particular CI size until the ratio of lookasides to READ requests stops increasing significantly or, conversely, reducing the number of buffers until the ratio of lookasides to READ requests begins to drop significantly. For most data sets, successful lookaside hits on indexes are more likely. These statistics are obtained from VSAM and represent the activity after the pool was created. Note that these statistics are not reset by CICS under any circumstances.
Reads	The total number of I/O operations to the buffers that VSAM was required to initiate to satisfy the CICS application's activity. This figure represents failures to find the control interval in the buffers. These statistics are obtained from VSAM and represent the activity after the pool was created. Note that these statistics are not reset by CICS under any circumstances.
User writes	The total number of user-initiated I/O WRITE operations from the buffers that VSAM was required to initiate to satisfy the CICS application's activity. These statistics are obtained from VSAM and represent the activity after the pool was created. Note that these statistics are not reset by CICS under any circumstances.

Table 109. LSR pool: Summary buffer statistics (continued)

DFHSTUP name	Description
Non-user writes	The total number of non-user initiated I/O WRITE operations from the buffers that VSAM was forced to initiate due to no buffers being available for reading the contents of a CI. These statistics are obtained from VSAM and represent the activity after the pool was created. Note that these statistics are not reset by CICS under any circumstances.

LSR pool: Summary Hiperspace buffer statistics

Summary statistics are unavailable online.

Table 110. LSR pool: Summary Hiperspace buffer statistics

DFHSTUP name	Description
Pool Number	The identifying number of the pool. This value must be in the range 1 through 255.
Hiperspace reads	The total number of successful CREAD requests issued to transfer data from Hiperspace buffers to virtual buffers.
Hiperspace writes	The total number of successful CWRITE requests issued to transfer data from virtual buffers to Hiperspace buffers.
Hiperspace failed reads	The total number of CREAD requests that failed. MVS had withdrawn the space and VSAM had to read data from DASD.
Hiperspace failed writes	The total number of CWRITE requests that failed. There was insufficient Hiperspace and VSAM had to write data to DASD. The Hiperspace statistics are obtained from VSAM and represent the activity after the pool was created. Note that these statistics are not reset by CICS under any circumstances.

If the allocation of files to the LSR pool is changed during the period that the statistics cover, no history of this is available and only the current list of files sharing the pool are printed in this section. The activity of all files that have used the pool are, however, included in all the preceding sections of these statistics.

LSR pool: Files - Resource statistics for each file specified to use the pool

Table 111. LSR pool: Files - Resource statistics for each file specified to use the pool

DFHSTUP name	Field name	Description
Pool Number	A09SRPID	The LSR pool number, in the range 1 through 255, associated with this file. Reset characteristic: not reset

Table 111. LSR pool: Files - Resource statistics for each file specified to use the pool (continued)

DFHSTUP name	Field name	Description
File Name	A09DSID	The CICS file identifier you specified through resource definition online. Reset characteristic: not reset
Data Buff Size	A09DBN	The buffer size used for the file's data records. This value is one of the 11 possible VSAM buffer sizes ranging from 512-bytes to 32 KB. The value is zero if the file has not been opened yet. Reset characteristic: not reset
Index Buff Size	A09IBN	The buffer size used for the file's index records. This is printed, even if the file has later been dynamically allocated to a VSAM RRDS. The values this field can take are the same as for the data buffer size statistic. Reset characteristic: not reset
Total Buff Waits	A09TBW	The number of requests that must wait because all buffers of the size used by the data set for data (or index) in the LSR pool were in use. Reset characteristic: reset to zero
Peak Buff Waits	A09HBW	The peak number of requests that must wait because all buffers of the size used by the data set for data (or index) in the LSR pool were in use. If the data sets are waiting for buffers you should examine the numbers of buffers defined for the data and index buffer sizes used by the data set. The buffer size used by VSAM depends on the control interval size in the VSAM definition of the data set. If no buffer size exists for the specified control interval size, the next largest buffer size available is used. Reset characteristic: reset to current value

LSR pool: Files - Summary resource statistics

Summary statistics are unavailable online.

Table 112. LSR pool: Files - Summary resource statistics

DFHSTUP name	Description
Pool Number	The LSR pool number, in the range 1 through 255, associated with this file.
File Name	The CICS file identifier you specified through resource definition online.

Table 112. LSR pool: Files - Summary resource statistics (continued)

DFHSTUP name	Description
Data Buff Size	The last non-zero value encountered for the buffer size used for the file's data records. This value is one of the 11 possible VSAM buffer sizes ranging from 512-bytes to 32 KB. The value is zero if the file has not been opened yet. The last non-zero value is produced only if it has been opened.
Index Buff Size	The last non-zero value encountered for the buffer size used for the file's index records. This is printed, even if the file has later been dynamically allocated to a VSAM RRDS. This field can take are the same values as the data buffer size statistic.
Total Buff Waits	The total number of requests that had to wait because all buffers of the size used by the data set for data (or index) in the LSR pool were in use.
Peak Buff Waits	The peak number of requests that had to wait because all buffers of the size used by the data set for data (or index) in the LSR pool were in use. If the data sets are waiting for buffers you should examine the numbers of buffers defined for the data and index buffer sizes used by the data set. The buffer size used by VSAM depends on the control interval size in the VSAM definition of the data set. If no buffer size exists for the specified control interval size, the next largest buffer size available is used.

Monitoring domain statistics

You can use monitoring domain statistics to measure the amount of CPU, storage, temporary-storage requests, and other resources used, by task. This information provides a view of the performance of the CICS system.

Related reference:

"System Status report" on page 458
The System Status report is produced from various sources. The commands used are detailed in the table.

Monitoring domain: global statistics

You can retrieve monitoring domain global statistics by using the **EXEC CICS EXTRACT STATISTICS MONITOR** system command. They are mapped by the DFHMNGDS DSECT.

These statistics fields are collected from the monitoring domain.

Table 113. Monitoring domain: global statistics

DFHSTUP name	Field name	Description
CEC Machine Type and Model Number	MNGMCHTP, MNGMDLID	The CEC machine type and model number for the physical hardware environment where the CICS region is running. CEC (central electronics complex) is a commonly used synonym for CPC (central processing complex). Reset characteristic: not reset

Table 113. Monitoring domain: global statistics (continued)

DFHSTUP name	Field name	Description
Exception records	MNGER	The number of exception records written to SMF. Reset characteristic: reset to zero
Exception records suppressed	MNGERS	The number of exception records suppressed by the global user exit (XMNOUT). Reset characteristic: reset to zero
Performance records	MNGPR	The number of performance records scheduled for output to SMF. The monitoring domain buffers performance class records. If monitoring is deactivated, the performance class records that have been buffered are not in the report. Reset characteristic: reset to zero
Performance records suppressed	MNGPRS	The number of performance records suppressed by the global user exit (XMNOUT). Reset characteristic: reset to zero
Resource records	MNGRR	The number of transaction resource records scheduled for output to SMF. The monitoring domain buffers transaction resource class records. If monitoring is deactivated, the resource class records that have been buffered are not in the report. Reset characteristic: reset to zero
Resource records suppressed	MNGRRS	The number of resource records suppressed by the global user exit (XMNOUT). Reset characteristic: reset to zero
Identity records	MNGIR	The number of identity records scheduled for output to SMF. The monitoring domain buffers identity class records. If monitoring is deactivated, the identity class records that have been buffered are not in the report. Reset characteristic: reset to zero

Table 113. Monitoring domain: global statistics (continued)

DFHSTUP name	Field name	Description
Identity records suppressed	MNGIRS	The number of identity records suppressed by the global user exit (XMNOUT). Reset characteristic: reset to zero
SMF records	MNGSMFR	The number of SMF records written to the SMF data set. CICS writes exception class SMF records as soon as the monitor domain is notified of the exception completion, so each SMF record has one exception record. The performance class, for example, has many performance class records per SMF record. The SMF record for the performance class is written when the buffer is full, performance class is deactivated, or CICS is quiescing. Reset characteristic: reset to zero
SMF errors	MNGSMFE	The number of non-OK responses from the request to write a record to SMF. This count is incremented when an SMF write fails for any reason; for example, when SMF is inactive. Reset characteristic: reset to zero
SMF Records Compressed	MNGSMFCM	The number of compressed monitoring records written to the SMF data set. This information is collected only when data compression for monitoring records is active. Reset characteristic: not reset
SMF Records Not Compressed	MNGSMFNC	The number of monitoring records written to the SMF data set for which data compression was not performed. This information is collected only when data compression for monitoring records is active. Reset characteristic: not reset
Average Compressed Record Length	MNGAVCRL	The rolling average compressed record length for monitoring records written to the SMF data set, calculated from those monitoring records that were compressed. This information is collected only when data compression for monitoring records is active. Reset characteristic: not reset

Table 113. Monitoring domain: global statistics (continued)

DFHSTUP name	Field name	Description
Average Uncompressed Record Length	MNGAVURL	The rolling average record length for monitoring records written to the SMF data set for which data compression was not performed. This information is only collected when data compression for monitoring records is active. Reset characteristic: not reset
Data Compression Option	MNGMRCMP	Whether data compression is active for the CICS SMF 110 monitoring records produced by the CICS monitoring facility. Values are as follows: **0** Not active **1** Active Reset characteristic: not reset
DPL Resource Limit	MNGDPLRL	The maximum number of distributed program links for which transaction resource monitoring is being performed. Reset characteristic: not reset
File Resource Limit	MNGFRL	The maximum number of files for which transaction resource monitoring is being performed. Reset characteristic: not reset
Tsqueue Resource Limit	MNGTRL	The maximum number of temporary storage queues for which transaction resource monitoring is being performed. Reset characteristic: not reset
MVS WLM Mode	MNGWLMMD	The z/OS Workload Manager (WLM) mode that is in operation in the CICS region. Reset characteristic: not reset
MVS WLM Server	MNGWLMST	Whether the CICS region is a z/OS Workload Manager server. Reset characteristic: not reset

Table 113. Monitoring domain: global statistics (continued)

DFHSTUP name	Field name	Description
MVS WLM Service Class	MNGWLMSC	The class name of the z/OS Workload Manager service for the CICS region. Reset characteristic: not reset
MVS WLM Workload Name	MNGWLMWN	The name of the workload defined for the CICS region. Reset characteristic: not reset
MVS WLM Resource Group	MNGWLMRG	The name of the z/OS Workload Manager resource group, if any. Reset characteristic: not reset
MVS WLM Report Class	MNGWLMRC	The name of the z/OS Workload Manager report class, if any. Reset characteristic: not reset
MVS WLM Goal Type	MNGWLMGT	The z/OS Workload Manager goal type for the CICS address space, if any. Values are as follows: **0** Not applicable **1** Velocity **2** Discretionary **3** System Reset characteristic: not reset
MVS WLM CPU Critical	MNGWLMCC	Whether long-term processor protection is assigned to the CICS address space in the z/OS Workload Manager. Values are as follows: **0** Not critical **1** Critical Reset characteristic: not reset
MVS WLM Storage Critical	MNGWLMSK	Whether long-term storage protection is assigned to the CICS address space in the z/OS Workload Manager. Values are as follows: **0** Not critical **1** Critical Reset characteristic: not reset

Table 113. Monitoring domain: global statistics (continued)

DFHSTUP name	Field name	Description
WLM Address Space Goal Mgmt	MNGWLMGM	Whether z/OS Workload Manager manages the CICS address space using region goals, transaction goals, or both. Values are as follows: **0** Transaction goals **1** Region goals **2** Both goals Reset characteristic: not reset
MVS WLM Goal Value	MNGWLMGV	For a z/OS Workload Manager goal type of velocity, the goal value for the CICS address space, 1 - 99. For other goal types, this field is zero. Reset characteristic: not reset
MVS WLM Goal Importance	MNGWLMGI	The importance level of the z/OS Workload Manager goal for the CICS address space. Reset characteristic: not reset
--User transactions ended	MNGUTNUM	is the number of user transactions that have ended. Reset characteristic: reset to zero
System transactions ended	MNGSTNUM	is the number of system transactions that have ended. Reset characteristic: reset to zero
Time last user transaction attached	MNGLUTAT	is the date and time of the last transaction attach processed by the monitoring domain. The DFHSTUP report expresses this time as *day/month/year hours:minutes:seconds:decimals*; however, the DSECT field contains the time as a store clock (STCK) value in local time. If the DFHSTUP report shows the date and time as --/--/---- --:--:--:---- then that indicates that a user transaction has not been ended since the statistics were last reset. Reset characteristic: reset to zero

Table 113. Monitoring domain: global statistics (continued)

DFHSTUP name	Field name	Description
Time last user transaction ended	MNGLUTCL	is the date and time at which the last transaction ended. The DFHSTUP report expresses this time as *day/month/year hours:minutes:seconds:decimals*; however, the DSECT field contains the time as a store clock (STCK) value in local time. If the DFHSTUP report shows the date and time as --/--/---- --:--:--:---- then that indicates that a user transaction has not been ended since the statistics were last reset. Reset characteristic: reset to zero
MXT at last user transaction attach	MNGMXUTA	The current MXT value at the time of the last transaction attached. Reset characteristic: reset to zero
Current tasks at last attach	MNGCAUTA	The current number of user transactions attached in the region at the time of the last transaction attached. Reset characteristic: reset to zero
Average user transaction resp time	MNGAUTRT	The rolling average user transaction response time. Reset characteristic: reset to zero
Peak user transaction resp time	MNGPUTRT	is the maximum user transaction response time (expressed in STCK units). Reset characteristic: reset to zero
Peak user transaction resp time at	MNGLUTRT	is the timestamp (expressed in STCK units in local time) of the maximum user transaction response time. Reset characteristic: reset to zero
Total transaction CPU time	MNGCPUT	The total transaction CPU time accumulated for the CICS dispatcher managed TCB modes used by the transactions that have completed during the interval. Reset characteristic: reset to zero

Table 113. Monitoring domain: global statistics (continued)

DFHSTUP name	Field name	Description
Total transaction CPU time on CP	MNGTONCP	The total transaction CPU time on a standard processor accumulated by the CICS dispatcher managed TCB modes used by the transactions that have completed during the interval. Reset characteristic: reset to zero
Total transaction CPU offload on CP	MNGOFLCP	The total transaction CPU time on a standard processor but was eligible for offload to a specialty processor (zIIP or zAAP) accumulated for the CICS dispatcher managed TCB modes used by the transactions that have completed during the interval. Reset characteristic: reset to zero

Related information:

EXTRACT STATISTICS

Monitoring domain: summary global statistics

Monitoring domain summary global statistics are not available online.

Table 114. Monitoring domain: summary global statistics

DFHSTUP name	Description
CEC Machine Type and Model Number	The CEC machine type and model number for the physical hardware environment where the CICS region is running. CEC (central electronics complex) is a commonly used synonym for CPC (central processing complex).
Exception Records	The total number of exception records written to SMF.
Exception Records Suppressed	The total number of exception records suppressed by the global user exit (XMNOUT).
Performance Records	The total number of performance records scheduled for output to SMF. The monitoring domain buffers performance class records. If monitoring is deactivated, the performance class records that have been buffered are not in the report.
Performance Records Suppressed	The total number of performance records suppressed by the global user exit (XMNOUT).
Resource Class Records	The number of transaction resource records scheduled for output to SMF. The monitoring domain buffers transaction resource class records. If monitoring is deactivated, the resource class records that have been buffered are not in the report.

Table 114. Monitoring domain: summary global statistics (continued)

DFHSTUP name	Description
Resource Records Suppressed	The total number of resource records suppressed by the global user exit (XMNOUT).
Identity records	The total number of identity class records scheduled for output to SMF. The monitoring domain buffers identity class records. If monitoring is deactivated, the identity class records that have been buffered are not in the report.
Identity records suppressed	The total number of identity class records suppressed by the global user exit (XMNOUT).
SMF Records	The total number of SMF records written to the SMF data set. CICS writes exception class SMF records as soon as the monitor domain is notified of the exception completion, so each SMF record has one exception record. The performance class, however, has many performance class records per SMF record. The SMF record for the performance class is written when the buffer is full, performance class is deactivated, or CICS is quiescing.
SMF Errors	The total number of non-OK responses from the request to write a record to SMF. This count is incremented when an SMF write fails for any reason; for example, when SMF is inactive.
SMF Records Compressed	The number of compressed monitoring records written to the SMF data set. This information is collected only when data compression for monitoring records is active.
SMF Records Not Compressed	The number of monitoring records written to the SMF data set for which data compression was not performed. This information is collected only when data compression for monitoring records is active.
Average Compressed Record Length	The rolling average compressed record length for monitoring records written to the SMF data set, calculated from those monitoring records that were compressed. This information is collected only when data compression for monitoring records is active.
Average Uncompressed Record Length	The rolling average record length for monitoring records written to the SMF data set for which data compression was not performed. This information is only collected when data compression for monitoring records is active.
Data Compression Option	Whether data compression is active for the CICS SMF 110 monitoring records produced by the CICS monitoring facility. Values are as follows: **0** Not active **1** Active

Table 114. Monitoring domain: summary global statistics (continued)

DFHSTUP name	Description
File Resource Limit	The maximum number of files for which transaction resource monitoring is being performed.
Tsqueue Resource Limit	The maximum number of temporary storage queues for which transaction resource monitoring is being performed.
MVS WLM Mode	The z/OS Workload Manager (WLM) mode that is in operation in the CICS region.
MVS WLM Server	Whether the CICS region is a z/OS Workload Manager server.
MVS WLM Service Class	The class name of the z/OS Workload Manager service for the CICS region..
MVS WLM Workload Name	The name of the workload defined for the CICS region.
MVS WLM Resource Group	The name of the z/OS Workload Manager resource group, if any.
MVS WLM Report Class	The name of the z/OS Workload Manager report class, if any.
MVS WLM Goal Type	The z/OS Workload Manager goal type for the CICS address space, if any. Values are as follows: **0** Not applicable **1** Velocity **2** Discretionary **3** System
MVS WLM CPU Critical	Whether long-term processor protection is assigned to the CICS address space in the z/OS Workload Manager. Values are as follows: **0** Not critical **1** Critical
MVS WLM Storage Critical	Whether long-term storage protection is assigned to the CICS address space in the z/OS Workload Manager. Values are as follows: **0** Not critical **1** Critical
WLM Address Space Goal Mgmt	Whether z/OS Workload Manager manages the CICS address space using region goals, transaction goals, or both. Values are as follows: **0** Transaction goals **1** Region goals **2** Both goals

Table 114. Monitoring domain: summary global statistics (continued)

DFHSTUP name	Description
MVS WLM Goal Value	For a z/OS Workload Manager goal type of velocity, the goal value for the CICS address space, 1 - 99. For other goal types, this field is zero.
MVS WLM Goal Importance	The importance level of the z/OS Workload Manager goal for the CICS address space.
User transactions ended	The total number of user transactions that have ended.
System transactions ended	The total number of system transactions that have ended.
Total transaction CPU time	The total transaction CPU time accumulated for the CICS dispatcher managed TCB modes used by the transactions that have completed.
Total transaction CPU time on CP	The total transaction CPU time on a standard processor accumulated by the CICS dispatcher managed TCB modes used by the transactions that have completed.
Total transaction CPU offload on CP	The total transaction CPU time on a standard processor but was eligible for offload to a specialty processor (zIIP or zAAP) accumulated for the CICS dispatcher managed TCB modes used by the transactions that have completed.

Named counter sequence number server

Named counter sequence number server statistics are provided by the AXM page pool management routines for the pools AXMPGANY and AXMPGLOW.

Named counter sequence number server statistics

The statistics are described in detail in the DFHNCS4D data area.

Reset characteristics: these statistics are produced by a separate server address space, not by CICS. Following a reset, these fields are reset by the server, not CICS. As a general rule, high and low watermarks (max, min and highest, lowest) are reset to current, counts are reset to zero.

The individual fields of the structure have the following meanings.

Table 115. Named counter server: list structure statistics

Statistic name	Field	Description
Lists		
	S4NAME	Full name of list structure
	S4PREF	First part of structure name
	S4POOL	Pool name part of structure name
	S4CNNAME	Name for connection to structure
	S4CNPREF	Prefix for connection name
	S4CNSYSN	Own MVS system name from CVTSNAME
Size	S4SIZE	Current allocated size for the list structure.

Table 115. Named counter server: list structure statistics (continued)

Statistic name	Field	Description
Max size	S4SIZEMX	Maximum size to which this structure could be altered.
Entries		
In Use	S4ENTRCT	Number of entries currently in use.
Max Used	S4ENTRHI	Maximum number of entries in use (since last reset).
Min Free	S4ENTRLO	Minimum number of free entries (since last reset).
Total	S4ENTRMX	Total entries in the currently allocated structure (initially set at structure connection time and updated on completion of any structure alter request).
Requests		
Create	S4CRECT	Create counter
Get	S4GETCT	Get and increment counter
Set	S4SETCT	Set counter
Delete	S4DELCT	Delete counter
Inquire	S4KEQCT	Inquire KEQ
Browse	S4KGECT	Inquire KGE
Responses		
Asynch	S4ASYCT	Number of requests for which completion was asynchronous.
Unavail	S4RSP9CT	Structure temporarily unavailable, for example during rebuild.
Normal	S4RSP1CT	Number of normal responses.
Not Fnd	S4RSP2CT	The specified entry (table or item) was not found.
Vers Chk	S4RSP3CT	A version check failed for an entry being updated, indicating that another task had updated it first.
List Chk	S4RSP4CT	A list authority comparison failed, usually meaning that the table is in the process of being deleted.
Str Full	S4RSP5CT	The list structure became full.
I/O Err	S4RSP6CT	Some other error code was returned by IXLLIST.

Named counter server: storage statistics

These are statistics returned by the AXM page pool management routines for the pools AXMPGANY and AXMPGLOW. Storage in these pools is allocated in multiples of 4K pages on a 4K boundary. The most frequent use is for segments of LIFO stack storage.

Storage is initially allocated from the pool using a bit map. For faster allocation, free areas are not normally returned to the pool but are added to a vector of free chains depending on the size of the free area (1 to 32 pages). When storage is being acquired, this vector is checked before going to the pool bit map.

If there are no free areas of the right size and there is not enough storage left in the pool, free areas in the vector are put back into the pool, starting from the smallest end, until a large enough area has been created. This action appears as a compress attempt in the statistics. If there is still insufficient storage to satisfy the request, the request fails.

These statistics are for the named storage page pool produced since the most recent statistics (if any). Each of the storage statistics is shown in kilobytes and as a percentage of the total size.

Reset characteristics: these statistics are produced by a separate server address space, not by CICS. Following a reset, these fields are reset by the server, not CICS. As a general rule, high and low watermarks (max, min and highest, lowest) are reset to current, counts are reset to zero.

The statistics are described in detail in the DFHNCS5D data area.

Table 116. Temporary storage data sharing: LOC=ANY usage statistics

Statistic name	Field	Description
Name	S5ANYNAM	Pool name AXMPGANY.
Size	S5ANYSIZ	Size of the storage pool area.
	S5ANYPTR	Address of storage pool area.
	S5ANYMX	Total pages in the storage pool.
In Use	S5ANYUS	Number of used pages in the pool.
Free	S5ANYFR	Number of free pages in the pool.
Min Free	S5ANYLO	The lowest free pages (since reset).
Gets	S5ANYRQG	Storage GET requests.
Frees	S5ANYRQF	Storage FREE requests.
Fails	S5ANYRQS	GETs which failed to obtain storage.
Retries	S5ANYRQC	Compress (defragmentation) attempts.

Table 117. Temporary storage data sharing: LOC=BELOW usage statistics

Statistic name	Field	Description
Name	S5LOWNAM	Pool name AXMPGLOW.
Size	S5LOWSIZ	Size of the storage pool area.
	S5LOWPTR	Address of the storage pool area.
	S5LOWMX	Total pages in the storage pool.
In Use	S5LOWUS	Number of used pages in the storage pool.
Free	S5LOWFR	Number of free pages in the storage pool.
Min Free	S5LOWLO	The lowest number of free pages (since reset).
Gets	S5LOWRQG	Storage GET requests.
Frees	S5LOWRQF	Storage FREE requests.
Fails	S5LOWRQS	GETs which failed to obtain storage.
Retries	S5LOWRQC	Compress (defragmentation) attempts.

Program autoinstall statistics

Related reference:

"Program Autoinstall report" on page 435
The Program Autoinstall report shows information and statistics about the status of program autoinstall, catalog program definitions, and the number of autoinstalls that were attempted, rejected, and failed.

Program autoinstall: Global statistics

You can retrieved program autoinstall global statistics by using the **EXEC CICS EXTRACT STATISTICS PROGAUTO** system command They are mapped by the DFHPGGDS DSECT.

Table 118. Program autoinstall: Global statistics

DFHSTUP name	Field name	Description
Program autoinstall attempts	PGGATT	is the number of times that a program autoinstall was attempted. Reset characteristic: reset to zero
Rejected by autoinstall exit	PGGREJ	is the number of times that a program autoinstall request was rejected by the program autoinstall user-replaceable program. Reset characteristic: reset to zero
Failed autoinstall attempts	PGGFAIL	is the number of times that a program autoinstall failed due to a number of reasons other than rejects (as counted by PGGREJ). For example the autoinstall user-replaceable program did not provide valid attributes; the model name specified by the user-replaceable program was not defined; the exit tried to recurse, and disabled the user-replaceable program. Reset characteristic: reset to zero

Related information:

EXTRACT STATISTICS

Program autoinstall: Summary global statistics

Program autoinstall: Summary global statistics are not available online.

Table 119. Program autoinstall: Summary global statistics

DFHSTUP name	Description
Program autoinstall attempts	is the number of times that a program was autoinstalled.
Rejected by autoinstall exit	is the number of times that a program is rejected by the autoinstall exit.
Failed autoinstall attempts	is the number of times that a program failed to autoinstall.

PIPELINE definition statistics

PIPELINE resource definitions are used in web services support when a CICS application is in the role of a web service provider or requester. They provide information about the message handler programs that act on a service request and on the response.

Statistics are provided for each PIPELINE resource definition, and a total use count for all PIPELINE definitions is also available. For information about the PIPELINE reports, see "PIPELINEs report" on page 432.

Related reference:

"PIPELINEs report" on page 432
The PIPELINEs report is produced using a combination of **EXEC CICS INQUIRE PIPELINE** and **EXEC CICS EXTRACT STATISTICS PIPELINE RESID()** commands. The statistics data is mapped by the **DFHPIRDS DSECT**.

PIPELINE definitions: Resource statistics

You can retrieve PIPELINE definition resource statistics by using the **EXEC CICS EXTRACT STATISTICS PIPELINE RESID** system command. They are mapped by the DFHPIRDS DSECT.

The resource information gives details of various attribute settings of each PIPELINE resource. A total use count for all PIPELINE resources is also available.

Table 120. PIPELINE definitions: resource statistics

DFHSTUP name	Field name	Description
PIPELINE Name	PIR_PIPELINE_NAME	The name of the PIPELINE resource definition. Reset characteristic: not reset
PIPELINE Mode	PIR_PIPELINE_MODE	The operating mode of the pipeline. Reset characteristic: not reset
Configuration file	PIR_CONFIGURATION_FILE	The name of the zFS file that provides information about the message handlers and their configuration. Reset characteristic: not reset
Shelf directory	PIR_SHELF_DIRECTORY	The fully qualified name of the shelf directory for the PIPELINE definition. Reset characteristic: not reset
WSDIR pickup directory	PIR_WSDIR_DIRECTORY	The fully qualified name of the web service binding directory (also known as the pickup directory). Reset characteristic: not reset
PIPELINE use count	PIR_PIPELINE_USE_COUNT	The number of times this PIPELINE resource definition was used to install a web service or to process a web service request. Reset characteristic: reset to zero

Table 120. PIPELINE definitions: resource statistics (continued)

DFHSTUP name	Field name	Description
PIPELINE JSON_JAVA_PARSER	PIR_JSON_JAVA_PARSER	For a JSON PIPELINE resource, specifies if the JSON request message is parsed using Java or from within the CICS pipeline. Reset characteristic: never reset PIR_JSON_JAVA_PARSER is expected to take 1 of 3 values: • pir_json_java_parser_notapplic = 0 pir_json_java_parser_notapplic is set for a PIPELINE that is not for JSON; for example, a SOAP PIPELINE. • pir_json_java_parser_yes = 1 pir_json_java_parser_yes is set when a JSON PIPELINE configuration file contains the attribute `java_parser=yes`. This is the default value. • pir_json_java_parser_no = 2 pir_json_java_parser_no is set when a JSON PIPELINE configuration file contains the attribute `java_parser=no`.
Not in DFHSTUP report	PIR_PIPELINE_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	PIR_PIPELINE_CHANGE_TIME	The time stamp (STCK) in local time of CSD record change. Reset characteristic: not reset
Not in DFHSTUP report	PIR_PIPELINE_CHANGE_USERID	The user ID that ran the CHANGE_AGENT. Reset characteristic: not reset
Not in DFHSTUP report	PIR_PIPELINE_CHANGE_AGENT	Identifies the agent that made the last change. Reset characteristic: not reset
Not in DFHSTUP report	PIR_PIPELINE_INSTALL_AGENT	Identifies the agent that installed the resource. Reset characteristic: not reset

Table 120. PIPELINE definitions: resource statistics (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	PIR_PIPELINE_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	PIR_PIPELINE_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset
PIPELINE message format	PIR_PIPELINE_MSGFORMAT	The message format processed by the PIPELINE. Reset characteristic: not reset

Pipeline totals:

The resource statistics also include a total PIPELINE use count, which shows the total number of times a PIPELINE resource definition was used to install a web service or to process a web service request.

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Related information:

EXTRACT STATISTICS

PIPELINE definitions: Summary resource statistics

Summary statistics are not available online.

The resource information gives details of various attribute settings of each PIPELINE definition. A total use count for all PIPELINE definitions is also available.

Table 121. PIPELINE definitions: Summary resource statistics

DFHSTUP name	Description
PIPELINE Name	The name of the PIPELINE resource definition.
PIPELINE Mode	The operating mode of the pipeline.

Table 121. PIPELINE definitions: Summary resource statistics (continued)

DFHSTUP name	Description
Configuration file	The name of the z/OS UNIX file that provides information about the message handlers and their configuration.
Shelf directory	The fully qualified name of the shelf directory for the PIPELINE definition.
WSDIR pickup directory	The fully qualified name of the web service binding directory (also known as the pickup directory).
PIPELINE use count	The number of times this PIPELINE resource definition was used to install a web service or to process a web service request.
PIPELINE JSON_JAVA_PARSER	For a JSON PIPELINE resource, specifies if the JSON request message is parsed by using Java or from within the CICS pipeline.

Pipeline Totals:

The summary statistics also include a total PIPELINE use count, which shows the total number of times a PIPELINE resource definition was used to install a web service or to process a web service request.

Program statistics

Program statistics report the resource data collected by the loader for each program.

For public programs, these statistics are mapped by the DFHLDRDS DSECT. For private programs for applications that are deployed on platforms, these statistics are mapped by the DFHLDPDS DSECT. The statistics records for private programs have information about the application for which the program was loaded.

Programs that are defined as application entry points are not identified in the program loader statistics, and only a private program statistics record is produced for them.

Information about Java programs that run in a JVM is not included in the program statistics, because JVM programs are not loaded by CICS. For this information, see "JVM program statistics" on page 153.

Related concepts:

"Interpreting program statistics" on page 220
Average fetch time is an indication of how long it takes MVS to perform a load from the partitioned data set in the DFHRPL or dynamic LIBRARY concatenation into CICS managed storage.

Related reference:

"Programs report" on page 433
The Programs report is produced using a combination of the **EXEC CICS INQUIRE PROGRAM** and **EXEC CICS EXTRACT STATISTICS PROGRAM** commands. The statistics data was mapped by the **DFHLDRDS DSECT**.

"Program Totals report" on page 437
The Program Totals Report is calculated from data obtained using the **EXEC CICS INQUIRE PROGRAM** and **EXEC CICS EXTRACT STATISTICS PROGRAM** commands. The statistics data was mapped by the **DFHLDRDS DSECT**.

"DFHRPL and LIBRARY Analysis report" on page 387
The DFHRPL and LIBRARY Analysis report is produced using a combination of the **EXEC CICS INQUIRE PROGRAM**, **EXEC CICS COLLECT STATISTICS PROGRAM** and **EXEC CICS EXTRACT LIBRARY** commands. This analysis includes all public programs and those private programs that are defined as application entry points. It does not include an analysis of private programs. The statistics data was mapped by the DFHLDRDS and **DFHLDBDS DSECT**.

"Programs by DSA and LPA report" on page 436
The Programs by DSA and LPA report is produced using a combination of the **EXEC CICS INQUIRE PROGRAM** and **EXEC CICS EXTRACT STATISTICS PROGRAM** commands. The statistics data was mapped by the **DFHLDRDS DSECT**.

"JVM Programs report" on page 415
The JVM Programs report shows information and statistics about Java programs that run in JVM servers or pooled JVMs. This report is produced using a combination of the **EXEC CICS INQUIRE PROGRAM** and **EXEC CICS EXTRACT STATISTICS JVMPROGRAM** commands. The statistics data is mapped by the **DFHPGRDS DSECT**.

"User Exit Programs report" on page 497
The User Exit Programs report is produced from two tables. This report is produced using the **EXEC CICS INQUIRE EXITPROGRAM** command.

"Global User Exits report" on page 409
The Global User Exits report is produced using the **EXEC CICS INQUIRE EXITPROGRAM** command.

Interpreting program statistics

Average fetch time is an indication of how long it takes MVS to perform a load from the partitioned data set in the DFHRPL or dynamic LIBRARY concatenation into CICS managed storage.

The average for each LIBRARY offset (Lbry ofst) of "Program size" / "Average fetch time". is an indication of the byte transfer rate during loads from a particular partitioned data set. A comparison of these values may assist you to detect bad channel loading or file layout problems.

Programs - Public: Resource statistics

You can retrieve statistics for public programs by using the **EXEC CICS EXTRACT STATISTICS PROGRAM** system command. They are mapped by the DFHLDRDS DSECT.

Program resource statistics for public programs contain the resource data collected by the loader for each public program.

Statistics for public programs are mapped by the DFHLDRDS DSECT. For private programs for applications that are deployed on platforms, these statistics are mapped by the DFHLDPDS DSECT, which has information about the application for which the program was loaded. For details of the DSECT and DFHSTUP report

for private programs, see “Programs - Private: Resource statistics” on page 223. Programs that are defined as application entry points are not identified in the program loader statistics.

Table 122. Programs - Public: Resource statistics

DFHSTUP name	Field name	Description
Program name	LDRPNAME	The name of the program. Reset characteristic: not reset
Times used	LDRTU	The number of times CICS tasks within the system have issued load requests to the loader domain to obtain access to a usable instance of this program. These load requests may cause the loader domain to issue an MVS LOAD. Reset characteristic: reset to zero
Fetch count	LDRFC	The number of times the loader domain has issued an MVS LOAD request to load a copy of the program from the static DFHRPL or dynamic LIBRARY concatenation into CICS managed storage. Reset characteristic: reset to zero
NOT IN THE DFHSTUP REPORT	LDRFT	The time taken to perform all fetches. The DSECT field contains a four-byte value that expresses the time in 16-microsecond units. Reset characteristic: reset to zero
Average fetch time	Calculated by DFHSTUP	The average time taken to perform a fetch of the program. The DFHSTUP report expresses this time as *minutes:seconds.decimals*. Reset characteristic: reset to zero
Lbry ofst	LDRRPLO	The offset into the static DFHRPL or dynamic LIBRARY DD concatenation of the data set from which the program is currently loaded or will be loaded when next required (non-LPA resident modules only). **Note:** The offset values begin with zero for the first partitioned data set in the concatenation and thus this field may not be used to deduce whether a copy of the program is available to the loader domain. Reset characteristic: not reset
NEWCOPY count	LDRTN	The number of times a NEWCOPY has been requested against this program. Reset characteristic: reset to zero

Table 122. Programs - Public: Resource statistics (continued)

DFHSTUP name	Field name	Description
Program size	LDRPSIZE	The size of the program in bytes, if known (otherwise zero). Reset characteristic: not reset
Times removed	LDRRPC	The number of times an instance of this program has been removed from CICS managed storage due to the actions of the Dynamic Program Storage Compression (DPSC) mechanism. Reset characteristic: reset to zero
Current Location	LDRLOCN	The location of the current storage resident instance of the program, if any. It has one of the values shown in Table 123. Reset characteristic: not reset
LIBRARY name	LDRLBNM	The name of the LIBRARY from which the program was loaded. Reset characteristic: not reset
LIBRARY Dsname	LDRLBDNM	The name of the data set in the LIBRARY from which the program was loaded. Reset characteristic: not reset

Table 123. Values for Location (LDRLOCN)

DFHSTUP value	DSECT value	Meaning
NONE	LDRNOCO (X'00')	No current copy
CDSA	LDRCDCO (X'01')	Current copy in the CDSA
SDSA	LDRSDCO (X'08')	Current copy in the SDSA
LPA	LDRLPACO (X'03')	Current copy in the LPA
ECDSA	LDRECDCO (X'04')	Current copy in the ECDSA
ESDSA	LDRESDCO (X'09')	Current copy in the ESDSA
ERDSA	LDRERDCO (X'06')	Current copy in the ERDSA
RDSA	LDRRDCO (X'0A')	Current copy in the RDSA

Related information:

EXTRACT STATISTICS

Programs - Public: Summary resource statistics

A summary listing of resource statistics for the loader for each public program.

Summary statistics are not available online.

Private programs for applications that are deployed on platforms are reported in a separate summary report. For details of this report, see "Programs - Private: Summary resource statistics" on page 226.

Table 124. Programs - Public: Summary resource statistics

DFHSTUP name	Description
Program name	The name of the program.
Times used	The total number of times CICS tasks within the system have issued load requests to the loader domain to obtain access to a usable instance of this program. These load requests may cause the loader domain to issue MVS LOAD requests to obtain access to usable instances of this program.
Fetch count	The total number of times the loader domain has issued an MVS LOAD request to load a copy of the program from the DFHRPL or dynamic LIBRARY concatenation into CICS managed storage.
Average fetch time	The average time taken to perform a fetch of the program. The DFHSTUP report expresses this time as *minutes:seconds.decimals*.
NEWCOPY count	is the total number of times a NEWCOPY has been requested against this program.
Times removed	The total number of times an instance of this program has been removed from CICS managed storage due to the actions of the Dynamic Program Storage Compression (DPSC) mechanism.
LIBRARY name	The name of the LIBRARY concatenation from which the program was loaded.
LIBRARY Dsname	The name of the data set in the LIBRARY concatenation from which the program was loaded.

Programs - Private: Resource statistics

You can retrieve statistics for private programs for applications that are deployed on platforms by using the **EXEC CICS EXTRACT STATISTICS PROGRAM** system command. They are mapped by the DFHLDPDS DSECT.

Program resource statistics for private programs contain the resource data collected by the loader for each private program for applications deployed on platforms.

Statistics for private programs for applications that are deployed on platforms are mapped by the DFHLDPDS DSECT. For public programs, these statistics are

mapped by the DFHLDRDS DSECT. For details of the DSECT and DFHSTUP report for public programs, see “Programs - Public: Resource statistics” on page 220. Programs that are defined as application entry points are not identified in the program loader statistics.

Table 125. Programs - Private: Resource statistics

DFHSTUP name	Field name	Description
Platform	LDP_PLATFORM_NAME	The name of the platform where the application that uses the private programs is deployed. Reset characteristic: not reset
Application	LDP_APPLICATION_NAME	The name of the application that uses the private programs. Reset characteristic: not reset
Major version	LDP_APPL_MAJOR_VER	The major version number of the application that uses the private programs. Reset characteristic: not reset
Minor version	LDP_APPL_MINOR_VER	The minor version number of the application that uses the private programs. Reset characteristic: not reset
Micro version	LDP_APPL_MICRO_VER	The micro version number of the application that uses the private programs. Reset characteristic: not reset
Program name	LDPPNAME	The name of the program. Reset characteristic: not reset
Times used	LDPTU	The number of times CICS tasks within the system have issued load requests to the loader domain to obtain access to a usable instance of this program. These load requests may cause the loader domain to issue an MVS LOAD. Reset characteristic: reset to zero
Fetch count	LDPFC	The number of times the loader domain has issued an MVS LOAD request to load a copy of the program from the static DFHRPL or dynamic LIBRARY concatenation into CICS managed storage. Reset characteristic: reset to zero

Table 125. Programs - Private: Resource statistics (continued)

DFHSTUP name	Field name	Description
NOT IN THE DFHSTUP REPORT	LDPFT	The time taken to perform all fetches. The DSECT field contains a four-byte value that expresses the time in 16-microsecond units. Reset characteristic: reset to zero
Average fetch time	Calculated by DFHSTUP	The average time taken to perform a fetch of the program. The DFHSTUP report expresses this time as *minutes:seconds.decimals*. Reset characteristic: reset to zero
Lbry ofst	LDPRPLO	The offset into the static DFHRPL or dynamic LIBRARY DD concatenation of the data set from which the program is currently loaded or will be loaded when next required (non-LPA resident modules only). **Note:** The offset values begin with zero for the first partitioned data set in the concatenation and thus this field may not be used to deduce whether a copy of the program is available to the loader domain. Reset characteristic: not reset
NEWCOPY count	LDPTN	The number of times a NEWCOPY has been requested against this program. Reset characteristic: reset to zero
Program size	LDPPSIZE	The size of the program in bytes, if known (otherwise zero). Reset characteristic: not reset
Times removed	LDPRPC	The number of times an instance of this program has been removed from CICS managed storage due to the actions of the Dynamic Program Storage Compression (DPSC) mechanism. Reset characteristic: reset to zero
Current Location	LDPLOCN	The location of the current storage resident instance of the program, if any. It has one of the values shown in Table 126 on page 226. Reset characteristic: not reset
LIBRARY name	LDPLBNM	The name of the LIBRARY from which the program was loaded. Reset characteristic: not reset

Table 125. Programs - Private: Resource statistics (continued)

DFHSTUP name	Field name	Description
LIBRARY Dsname	LDPLBDNM	The name of the data set in the LIBRARY from which the program was loaded. Reset characteristic: not reset
Operation	LDP_OPERATION_NAME	For programs that are declared as application entry points, the application operation that is named for the application entry point. Reset characteristic: not reset

Table 126. Values for Location (LDPLOCN)

DFHSTUP value	DSECT value	Meaning
NONE	LDPNOCO (X'00')	No current copy
CDSA	LDPCDCO (X'01')	Current copy in the CDSA
SDSA	LDPSDCO (X'08')	Current copy in the SDSA
LPA	LDPLPACO (X'03')	Current copy in the LPA
ECDSA	LDPECDCO (X'04')	Current copy in the ECDSA
ESDSA	LDPESDCO (X'09')	Current copy in the ESDSA
ERDSA	LDPERDCO (X'06')	Current copy in the ERDSA
RDSA	LDPRDCO (X'0A')	Current copy in the RDSA

Related information:

EXTRACT STATISTICS

Programs - Private: Summary resource statistics

A summary listing of resource statistics for the loader for private programs for applications that are deployed on platforms.

Summary statistics are not available online.

Public programs are reported in a separate summary report. For details of this report, see "Programs - Public: Summary resource statistics" on page 223.

Table 127. Programs - Private: Summary resource statistics

DFHSTUP name	Description
Platform	The name of the platform where the application that uses the private programs is deployed.
Application	The name of the application that uses the private programs.
Major version	The major version number of the application that uses the private programs.
Minor version	The minor version number of the application that uses the private programs.
Micro version	The micro version number of the application that uses the private programs.
Program name	The name of the program.
Operation	For programs that are declared as application entry points, the application operation that is named for the application entry point.
Times used	The total number of times CICS tasks within the system have issued load requests to the loader domain to obtain access to a usable instance of this program. These load requests may cause the loader domain to issue MVS LOAD requests to obtain access to usable instances of this program.
Fetch count	The total number of times the loader domain has issued an MVS LOAD request to load a copy of the program from the DFHRPL or dynamic LIBRARY concatenation into CICS managed storage.
Average fetch time	The average time taken to perform a fetch of the program. The DFHSTUP report expresses this time as *minutes:seconds.decimals*.
NEWCOPY count	The total number of times a NEWCOPY has been requested against this program.
Times removed	The total number of times an instance of this program has been removed from CICS managed storage due to the actions of the Dynamic Program Storage Compression (DPSC) mechanism.
LIBRARY name	The name of the LIBRARY concatenation from which the program was loaded.
LIBRARY Dsname	is the name of the data set in the LIBRARY concatenation from which the program was loaded.

Program definition statistics

Program definition statistics report the resource data collected by the Program Manager for each program.

For public programs, these statistics are mapped by the DFHPGDDS DSECT. For private programs for applications that are deployed on platforms, these statistics are mapped by the DFHPGEDS DSECT. The statistics records for private program definitions have information about the application for which the program was defined.

Program definitions that are declared as application entry points are identified by a field in the DFHPGDDS and DFHPGRDS DSECTs for public program definitions and JVM programs, and by a field in the DFHPGEDS and DFHPGPDS DSECTs for

private program definitions and JVM programs. When interval statistics, end-of-day statistics, requested statistics, requested reset statistics, or unsolicited statistics are produced for a program definition that is declared as an application entry point, two statistics records are written, one mapped by the DSECT for public resources, and one mapped by the DSECT for private resources.

Program definitions - Public: Resource statistics

You can retrieve statistics for public program definitions by using the **EXEC CICS EXTRACT STATISTICS PROGRAMDEF** system command. They are mapped by the DFHPGDDS DSECT.

Program definition resource statistics for public program definitions contain the resource data collected by the Program Manager for each program.

Statistics for public program definitions are mapped by the DFHPGDDS DSECT. For private program definitions for applications that are deployed on platforms, these statistics are mapped by the DFHPGEDS DSECT, which has information about the application for which the program was defined. For details of the DSECT and DFHSTUP report for private program definitions, see "Program definitions - Private: Resource statistics" on page 232.

Programs that are defined as application entry points are identified by the PGD_PROGRAM_ENTRYPOINT field. Both public and private statistics records are written for these programs, mapped once by each DSECT.

Table 128. Program definitions - Public: resource statistics

DFHSTUP name	Field name	Description
Program Name	PGD_PROGRAM_NAME	The name of the program. Reset characteristic: not reset
Type	PGD_PROGRAM_TYPE	The type of module. Reset characteristic: not reset
EXEC key	PGD_PROGRAM_EXEC_KEY	The access key in which the program will run. Reset characteristic: not reset
Data loc	PGD_PROGRAM_DATA_LOC	The storage location that the program can accept. Reset characteristic: not reset
Not in DFHSTUP report	PGD_PROGRAM_EXECUTION_SET	Whether the module is restricted to the distributed program link subset of the CICS API. EXECUTIONSET applies only to executable programs, and governs the API only when a program is invoked locally. Reset characteristic: not reset

Table 128. Program definitions - Public: resource statistics (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	PGD_PROGRAM_LANG_DEDUCED	The language of the module. Reset characteristic: not reset
Not in DFHSTUP report	PGD_PROGRAM_LANGUAGE	The program language as defined in the LANGUAGE attribute of the program definition. Reset characteristic: not reset
Runtime	PGD_PROGRAM_RUNTIME_ENV	The runtime environment of the program. Reset characteristic: not reset
Concurrency	PGD_PROGRAM_CONCURRENCY	The concurrency attribute (QUASIRENT, THREADSAFE, or REQUIRED) of the installed program definition. Reset characteristic: not reset
API	PGD_PROGRAM_API	The API attribute (CICS or OPEN) of the installed program definition Reset characteristic: not reset
Remote	PGD_PROGRAM_REMOTE	Whether, if the program is the subject of a program-link request, it can be statically routed. Reset characteristic: not reset
Dynamic	PGD_PROGRAM_DYNAMIC	Whether, if the program is the subject of a program-link request, it can be dynamically routed. Reset characteristic: not reset
Not in DFHSTUP report	PGD_PROGRAM_JVM	Whether the program is a Java program that must run in a JVM server. Reset characteristic: not reset
Not in DFHSTUP report	PGD_PROGRAM_ENTRYPOINT	Whether the program is defined as an application entry point for an application deployed on a platform. Reset characteristic: not reset

Table 128. Program definitions - Public: resource statistics (continued)

DFHSTUP name	Field name	Description
Remote Name	PGD_PROGRAM_REMOTE_NAME	For programs only, the name by which the module is known in the CICS region named in the Remote System field, and only to those defined to be remote. Reset characteristic: not reset
Remote Tran	PGD_PROGRAM_TRAN_ID	For programs only, the name of the transaction under which this module, which must be a program, runs remotely; that is, the transaction identifier that the remote region assigns to the task created there to execute it when a task in the local region LINKs to it. Reset characteristic: not reset
Remote System	PGD_PROGRAM_REMOTE_SYSID	For programs only, the name of the CICS region in which the module is defined. It applies only to programs, and only to those defined to be remote. Reset characteristic: not reset
Not in DFHSTUP report	PGD_PROGRAM_JVMSERVER	For a Java program, the name of the JVM server in which this Java program runs. Reset characteristic: not reset
Not in DFHSTUP report	PGD_PROGRAM_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	PGD_PROGRAM_CHANGE_TIME	The time stamp (STCK) in local time of CSD record change. Reset characteristic: not reset
Not in DFHSTUP report	PGD_PROGRAM_CHANGE_USERID	The user ID that ran the CHANGEAGENT. Reset characteristic: not reset
Not in DFHSTUP report	PGD_PROGRAM_CHANGE_AGENT	The agent that made the last change. Reset characteristic: not reset

Table 128. Program definitions - Public: resource statistics (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	PGD_PROGRAM_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	PGD_PROGRAM_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	PGD_PROGRAM_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Related information:

EXTRACT STATISTICS

Program definitions - Public: summary resource statistics

A summary listing of resource statistics for all public program definitions.

Summary resource statistics are not available online.

Private program definitions for applications that are deployed on platforms are reported in a separate summary report. For details of this report, see "Program definitions - Private: summary resource statistics" on page 236. Programs that are defined as application entry points appear in both the public and private resource summary reports.

Table 129. Program definitions - public: summary resource statistics

DFHSTUP name	Description
Program Name	The name of the program.
Type	The type of module.
Concurrency	The concurrency attribute of the installed program definition.
API	The API attribute (CICS or OPEN) of the installed program definition
EXEC Key	The access key in which the program runs.
Data Loc	The storage location that the program can accept.
Language Deduced	The language of the program.
Runtime Environment	The runtime environment of the program.
Remote	Whether, if the program is the subject of a program-link request, it can be statically routed.

Table 129. Program definitions - public: summary resource statistics (continued)

DFHSTUP name	Description
Dynamic	Whether, if the program is the subject of a program-link request, it can be dynamically routed.
Remote Name	For programs only, the name by which the module is known in the CICS region named in the Remote System field, and only to those defined to be remote.
Remote Tran	For programs only, the name of the transaction under which this module, which must be a program, runs remotely (that is, the transaction identifier that the remote region assigns to the task created there to run it when a task in the local region LINKs to it).
Remote System	For programs only, the name of the CICS region in which the module is defined. It applies only to programs, and only to those defined to be remote.

Program definitions - Private: Resource statistics

You can retrieve statistics for private program definitions for applications that are deployed on platforms by using the **EXEC CICS EXTRACT STATISTICS PROGRAMDEF** system command. They are mapped by the DFHPGEDS DSECT.

Program definition resource statistics for private program definitions contain resource data, collected by the Program Manager, for the private programs for applications that are deployed on platforms.

Statistics for private program definitions for applications that are deployed on platforms are mapped by the DFHPGEDS DSECT. For public program definitions, these statistics are mapped by the DFHPGDDS DSECT. For details of the DSECT and DFHSTUP report for public program definitions, see "Program definitions - Public: Resource statistics" on page 228.

Programs that are defined as application entry points are identified by an application operation being named in the PGE_PROGRAM_OPERATION_NAME field. Both public and private statistics records are written for these programs, mapped once by each DSECT.

The DFHSTUP report shows the private programs for each application that is deployed on a platform. For programs that are declared as application entry points, the report shows the application operation that is named for the application entry point.

Table 130. Program definitions - Private: resource statistics

DFHSTUP name	Field name	Description
Platform	PGE_PROGRAM_PLATFORM_NAME	The name of the platform where the application that uses the private programs is deployed. Reset characteristic: not reset
Application	PGE_PROGRAM_APPLICATION_NAME	The name of the application that uses the private programs. Reset characteristic: not reset

Table 130. Program definitions - Private: resource statistics (continued)

DFHSTUP name	Field name	Description
Major version	PGE_PROGRAM_APPL_MAJOR_VER	The major version number of the application that uses the private programs. Reset characteristic: not reset
Minor version	PGE_PROGRAM_APPL_MINOR_VER	The minor version number of the application that uses the private programs. Reset characteristic: not reset
Micro version	PGE_PROGRAM_APPL_MICRO_VER	The micro version number of the application that uses the private programs. Reset characteristic: not reset
Program Name	PGE_PROGRAM_NAME	The name of the private program. Reset characteristic: not reset
Type	PGE_PROGRAM_MODULE_TYPE	The type of module. Reset characteristic: not reset
EXEC key	PGE_PROGRAM_EXEC_KEY	The access key in which the program will run. Reset characteristic: not reset
Data loc	PGE_PROGRAM_DATA_LOC	The storage location that the program can accept. Reset characteristic: not reset
Not in DFHSTUP report	PGE_PROGRAM_EXECUTION_SET	Whether the module is restricted to the distributed program link subset of the CICS API. EXECUTIONSET applies only to executable programs, and governs the API only when a program is invoked locally. Reset characteristic: not reset
Language Deduced	PGE_PROGRAM_LANG_DEDUCED	The language of the module. Reset characteristic: not reset

Table 130. Program definitions - Private: resource statistics (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	PGE_PROGRAM_LANGUAGE	The program language as defined in the LANGUAGE attribute of the program definition. Reset characteristic: not reset
Runtime	PGE_PROGRAM_RUNTIME_ENV	The runtime environment of the program. Reset characteristic: not reset
Concurrency	PGE_PROGRAM_CONCURRENCY	The concurrency attribute (QUASIRENT, THREADSAFE, or REQUIRED) of the installed program definition. Reset characteristic: not reset
API	PGE_PROGRAM_API	The API attribute (CICS or OPEN) of the installed program definition Reset characteristic: not reset
Remote	PGE_PROGRAM_REMOTE	Whether, if the program is the subject of a program-link request, it can be statically routed. Reset characteristic: not reset
Dynamic	PGE_PROGRAM_DYNAMIC	Whether, if the program is the subject of a program-link request, it can be dynamically routed. Reset characteristic: not reset
Not in DFHSTUP report	PGE_PROGRAM_JVM	Whether the program is a Java program that must run in a JVM server. Reset characteristic: not reset
Not in DFHSTUP report	PGE_PROGRAM_ENTRYPOINT	Whether the program is defined as an application entry point for an application deployed on a platform. Reset characteristic: not reset

Table 130. Program definitions - Private: resource statistics (continued)

DFHSTUP name	Field name	Description
Remote Name	PGE_PROGRAM_REMOTE_NAME	For programs only, the name by which the module is known in the CICS region named in the Remote System field, and only to those defined to be remote. Reset characteristic: not reset
Remote Tran	PGE_PROGRAM_TRAN_ID	For programs only, the name of the transaction under which this module, which must be a program, runs remotely; that is, the transaction identifier that the remote region assigns to the task created there to execute it when a task in the local region LINKs to it. Reset characteristic: not reset
Remote System	PGE_PROGRAM_REMOTE_SYSID	For programs only, the name of the CICS region in which the module is defined. It applies only to programs, and only to those defined to be remote. Reset characteristic: not reset
Not in DFHSTUP report	PGE_PROGRAM_JVMSERVER	For a Java program, the name of the JVM server in which this Java program runs. Reset characteristic: not reset
Not in DFHSTUP report	PGE_PROGRAM_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	PGE_PROGRAM_CHANGE_TIME	The time stamp (STCK) in local time of CSD record change. Reset characteristic: not reset
Not in DFHSTUP report	PGE_PROGRAM_CHANGE_USERID	The user ID that ran the CHANGEAGENT. Reset characteristic: not reset
Not in DFHSTUP report	PGE_PROGRAM_CHANGE_AGENT	The agent that made the last change. Reset characteristic: not reset

Table 130. Program definitions - Private: resource statistics (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	PGE_PROGRAM_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	PGE_PROGRAM_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	PGE_PROGRAM_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset
Operation	PGE_PROGRAM_OPERATION_NAME	For programs that are declared as application entry points, the application operation that is named for the application entry point. Reset characteristic: not reset

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Related information:

EXTRACT STATISTICS

Program definitions - Private: summary resource statistics

A summary listing of resource statistics for all private program definitions for applications that are deployed on platforms.

Summary resource statistics are not available online.

Public program definitions are reported in a separate summary report. For details of this report, see “Program definitions - Public: summary resource statistics” on page 231. Programs that are defined as application entry points appear in both the public and private resource summary reports.

Table 131. Program definitions - private: summary resource statistics

DFHSTUP name	Description
Platform	The name of the platform where the application that uses the private programs is deployed.
Application	The name of the application that uses the private programs.

Table 131. Program definitions - private: summary resource statistics (continued)

DFHSTUP name	Description
Major version	The major version number of the application that uses the private programs.
Minor version	The minor version number of the application that uses the private programs.
Micro version	The micro version number of the application that uses the private programs.
Program Name	The name of the private program.
Operation	For programs that are declared as application entry points, the application operation that is named for the application entry point.
Type	The type of module.
Concurrency	The concurrency attribute of the installed program definition.
API	The API attribute (CICS or OPEN) of the installed program definition
EXEC Key	The access key in which the program runs.
Data Loc	The storage location that the program can accept.
Language Deduced	The language of the program.
Runtime Environment	The runtime environment of the program.
Remote	Whether, if the program is the subject of a program-link request, it can be statically routed.
Dynamic	Whether, if the program is the subject of a program-link request, it can be dynamically routed.
Remote Name	For programs only, the name by which the module is known in the CICS region named in the Remote System field, and only to those defined to be remote.
Remote Tran	For programs only, the name of the transaction under which this module, which must be a program, runs remotely (that is, the transaction identifier that the remote region assigns to the task created there to run it when a task in the local region LINKs to it).
Remote System	For programs only, the name of the CICS region in which the module is defined. It applies only to programs, and only to those defined to be remote.

Recovery manager statistics

Recovery manager statistics detail the sync point activity of all the transactions in the system. From these statistics, you can assess the impact of shunted UOWs (units of work that suffered an indoubt failure and are waiting for resynchronization with their recovery coordinator, or for the problem with the resources to be resolved).

Shunted UOWs still hold locks and enqueues until they are resolved. Statistics are available on any forced resolutions of shunted UOWs to help assess whether any integrity exposures have been introduced. The current activity and the activity since the last reset is available.

Related reference:

"Recovery Manager report" on page 439
The Recovery Manager report is produced using the **EXEC CICS EXTRACT STATISTICS RECOVERY** command. The statistics data is mapped by the **DFHRMGDS DSECT**.

Recovery manager: Global statistics

You can retrieve recovery manager statistics by using the **EXEC CICS EXTRACT STATISTICS RECOVERY** system command. They are mapped by the DFHRMGDS DSECT.

Table 132. Recovery manager: Global statistics

DFHSTUP name	Field name	Description
Total number of syncpoints (forward)	RMGSYFWD	is the total number of syncpoint requests to commit forward. Reset characteristic: reset to zero
Total number of syncpoints (backward)	RMGSYBWD	is the total number of syncpoint requests to commit backward (for example, EXEC CICS SYNCPOINT ROLLBACK). Reset characteristic: reset to zero
Total number of resynchronizations	RMGRESYN	is the total number of resynchronization requests. Reset characteristic: reset to zero
Total shunted UOWs for indoubt failure	RMGTSHIN	is the total number of units of work that lost connection to their recovery coordinator during syncpoint processing and had to be shunted for indoubt failure, but have now completed. Note that this value does not include those units of work that are currently shunted for indoubt failure. Reset characteristic: reset to zero
Total time shunted for indoubt failure	RMGTSHTI	is the total time (STCK) that the units of work shunted for indoubt failure (RMGTSHIN) spent waiting in this condition, but have now completed. Note that this value does not include those units of work that are currently shunted for indoubt failure. Reset characteristic: reset to zero
Total shunted UOWs for commit/backout failure	RMGTSHRO	is the total number of units of work that had to be shunted for commit/backout failure because a local resource manager could not perform commit/backout processing at this time on behalf of the UOW during syncpoint, but have now completed. Note that this value does not include those units of work that are currently shunted for commit/backout failure. Reset characteristic: reset to zero
Total time shunted for commit/backout failure	RMGTSHTR	is the total time (STCK) that the units of work shunted for commit/backout (RMGTSHRO) failures spent waiting in this condition, but have now completed. Note that this value does not include those units of work that are currently shunted for commit/backout failure. Reset characteristic: reset to zero

Table 132. Recovery manager: Global statistics (continued)

DFHSTUP name	Field name	Description
Current shunted UOWs for indoubt failure	RMGCSHIN	is the current number of units of work that lost the connection to their recovery coordinator during syncpoint processing, and have been shunted for indoubt failure. Reset characteristic: reset to zero
Current time shunted for indoubt failure	RMGCSHTI	is the total time (STCK) that the units of work currently shunted for indoubt failure (RMGCSHIN) have been waiting in this condition so far. Reset characteristic: reset to zero
Current shunted UOWs for resource failure	RMGCHSHR	is the current number of units of work that have been shunted for commit/backout failure because a local resource manager was not able to perform commit/backout processing at this time on behalf of the UOW during syncpoint Reset characteristic: reset to zero
Current time shunted for resource failure	RMGCSHTR	is the total time (STCK) that the units of work currently shunted for commit/backout (RMGCHSHR) failures have been waiting in this condition so far. Reset characteristic: reset to zero

The following fields detail the reasons why UOWs may have introduced integrity exposures because they were forced to complete prematurely. The UOWs were not allowed to shunt, not capable of shunting, or forced to terminate a shunt, regardless of the outcome.

DFHSTUP name	Field name	Description
Total forces of indoubt action by trandef	RMGIAFTR	is the total number of UOWs that were forced to complete syncpoint processing, despite losing the connection to the recovery coordinator, because their transaction definition specified that they could not wait indoubt. The UOWs would have committed or backed out according to the transaction definition indoubt action attribute, regardless of the actions specified or taken by any other participating region in this distributed UOW. Reset characteristic: reset to zero

The following fields detail the reasons why UOWs may have introduced integrity exposures because they were forced to complete prematurely. The UOWs were not allowed to shunt, not capable of shunting, or forced to terminate a shunt, regardless of the outcome.

DFHSTUP name	Field name	Description
Total forces of indoubt action by timeout	RMGIAFTI	is the total number of shunted indoubt UOWs that were forced to complete syncpoint processing, although still unconnected to the recovery coordinator, because their transaction definition wait for indoubt timeout value was exceeded. The UOWs would have committed or backed out according to the transaction definition indoubt action attribute, regardless of the actions specified or taken by any other participating region in this distributed UOW. Reset characteristic: reset to zero
Total forces of indoubt action by operator	RMGIAFOP	is the total number of shunted indoubt UOWs that were forced to complete syncpoint processing, although still unconnected to the recovery coordinator, through a CEMT, or EXEC CICS, SET UOW command forced a resolution. The UOWs would have committed or backed out according to the command option, regardless of the actions specified or taken by any other participating region in this distributed UOW. Reset characteristic: reset to zero
Total forces of indoubt action by no wait	RMGIAFNW	is the total number of UOWs that were forced to complete syncpoint processing, despite having the ability to wait indoubt, because a local resource owner or connected resource manager used by the UOW was unable to wait indoubt. The UOWs would have committed or backed out according to the transaction definition indoubt action attribute, regardless of the actions specified or taken by any other participating region in this distributed UOW. See the following section on no support for indoubt waiting breakdown. Reset characteristic: reset to zero
Total forces of indoubt action by other	RMGIAFOT	is the total number of UOWs that were forced to complete syncpoint processing, despite having the ability to wait indoubt, because of reasons other than those already referenced in this table (for example, a cold start of the coordinator, level of RMI adapter modification, and resynchronization errors). The UOWs would have committed or backed out according to the transaction definition indoubt action attribute, regardless of the actions specified or taken by any other participating region in this distributed UOW. Reset characteristic: reset to zero

The following fields further detail the reasons why a UOW did not have the ability to wait indoubt (shunt) at the time of indoubt failure (lost coordinator), and are breakdowns of the field RMGIAFNW. This is because the UOW uses either recoverable local resources, recoverable resources across intersystem links, or external resource managers (RMI), which do not have the ability to wait indoubt. As a result of a resolution of a UOW being forced for this reason, integrity exposures may occur.

DFHSTUP name	Field name	Description
–Indoubt action forced by TD queues	RMGNWTD	is the number of UOW forces that occurred because the UOW uses a recoverable transient data queue defined with an indoubt attribute of WAIT=NO. Reset characteristic: reset to zero
–Indoubt action forced by LU61 connections	RMGNW61	is the number of UOW forces that occurred because the UOW uses an LU6.1 intersystem link, which cannot support indoubt waiting. Note that if an LU6.1 intersystem link can operate as last agent in syncpoint processing the lack of waiting ability is immaterial. For more details about last agent processing, see Syncpoint exchanges in the *CICS Intercommunication Guide*. Reset characteristic: reset to zero
–Indoubt action forced by MRO connections	RMGNWMRO	is the number of UOW forces that occurred because the UOW uses an MRO intersystem link to a downlevel CICS region, which cannot support indoubt waiting. Note that if an MRO intersystem link can operate as last agent in syncpoint processing the lack of waiting ability is immaterial. For more details about last agent processing, see Syncpoint exchanges in the *CICS Intercommunication Guide*. Reset characteristic: reset to zero
–Indoubt action forced by RMI exits (TRUEs)	RMGNWRMI	is the number of UOW forces that occurred because the UOW uses an RMI that declared an interest in syncpoint but could not support indoubt waiting. Note that if an RMI intersystem link can operate as last agent in syncpoint processing the lack of waiting ability is immaterial. For more details about last agent processing, see Syncpoint exchanges in the *CICS Intercommunication Guide*. Reset characteristic: reset to zero
–Indoubt action forced by others	RMGNWOTH	is the number of UOW forces that occurred because the UOW uses recoverable facilities other than already referenced in this table (for example, terminal RDO), which invalidate the ability to support indoubt waiting. Reset characteristic: reset to zero

The following fields further detail the reasons why a UOW did not have the ability to wait indoubt (shunt) at the time of indoubt failure (lost coordinator), and are breakdowns of the field RMGIAFNW. This is because the UOW uses either recoverable local resources, recoverable resources across intersystem links, or external resource managers (RMI), which do not have the ability to wait indoubt. As a result of a resolution of a UOW being forced for this reason, integrity exposures may occur.

DFHSTUP name	Field name	Description
–Total number of indoubt action mismatches	RMGIAMIS	is the total number of UOWs that were forced to resolve using an indoubt action attribute, whether by definition, option or operator override (as detailed in the fields already referenced in this table), and on so doing detected an indoubt action attribute mismatch with a participating system or RMI. For example, a participating system in a distributed UOW resolves its work forward while other systems back out theirs. The opposite also applies. Reset characteristic: reset to zero

Related information:

EXTRACT STATISTICS

Recovery manager: Summary global statistics

Recovery manager summary statistics are not available online.

Table 133. Recovery manager: Summary global statistics

DFHSTUP name	Description
Total number of syncpoints (forward)	is the total number of syncpoint requests to commit forward.
Total number of syncpoints (backward)	is the total number of syncpoint requests to commit backward. For example, EXEC CICS SYNCPOINT ROLLBACK.
Total number of resynchronizations	is the total number of resynchronization requests.
Total shunted UOWs for indoubt failure	is the total number of UOWs that have lost connection to their recovery coordinator during syncpoint processing, had to be shunted for indoubt failure, but have now completed.
Total time shunted for indoubt failure	is the total time (STCK) that the UOWs shunted for indoubt failure ('Total number of shunts for indoubt failure) spent waiting in this condition.
Total shunted UOWs for commit/backout failure	is the total number of UOWs that had to be shunted for commit/backout failure because a local resource manager was not able to perform commit/backout processing at that time, but have now completed.
Total time shunted for commit/backout failure	is the total time (STCK) that the UOWs shunted for commit/ backout ('Total UOWs shunted for commit/backout failure) failures waited in this condition, but have now completed.
Outstanding shunted UOWs for indoubt failure	is the current number of UOWs that have been shunted for indoubt failure because the connection to their recovery coordinator during syncpoint processing was lost.
Outstanding time shunted for indoubt failure	is the total time (STCK) that the UOWs currently shunted for indoubt failure spent waiting in this condition so far.
Outstanding shunted UOWs for resource failure	is the current number of UOWs that have been shunted for commit/ backout failure because a local resource manager was unable to perform commit/backout processing at that time on behalf of the UOW.
Outstanding time shunted for resource failure	is the total time (STCK) that the UOWs currently shunted for commit/backout failures have been waiting in this condition so far.

The following fields detail the reasons why UOWs may have introduced integrity exposures because they were forced to complete prematurely. The UOWs were not allowed to shunt, not capable of shunting, or forced to terminate a shunt, regardless of the outcome.

Table 133. Recovery manager: Summary global statistics (continued)

DFHSTUP name	Description
Total forces of indoubt action by trandef	is the total number of UOWs that were forced to complete syncpoint processing, despite losing the connection to the recovery coordinator, because their transaction definition specified that they could not wait indoubt.
Total forces of indoubt action by timeout	is the total number of shunted indoubt UOWs that were forced to complete syncpoint processing, although still unconnected to the recovery coordinator, because their transaction definition wait for indoubt timeout value was exceeded.
Total forces of indoubt action by operator	is the total number of shunted indoubt UOWs that were forced to complete syncpoint processing, although still unconnected to the recovery coordinator because the operator (CEMT) forced a resolution.
Total forces of indoubt action by no wait	is the total number of UOWs that were forced to complete syncpoint processing, despite having the ability to wait indoubt, because a local resource owner or connected resource manager that the UOW used was unable to wait indoubt. Further details are provided by the section in the table titled, No support for indoubt waiting breakdown.
Total forces of indoubt action by other	is the total number of UOWs that were forced to complete syncpoint processing, despite having the ability to wait indoubt, because of reasons other than those already referenced in the table (for example, a cold start of the coordinator, level of RMI adapter modification, and resynchronization errors).
No support for indoubt waiting breakdown	

The following fields further detail the reasons why a UOW did not have the ability to wait indoubt (shunt) at the time of indoubt failure (lost coordinator), and are breakdowns of the field 'Total forces of indoubt action by no wait'. This is because the UOW uses either recoverable local resources, recoverable resources across intersystem links, or external resource managers (RMI), which do not have the ability to wait indoubt. As a result of a resolution of a UOW being forced for this reason, integrity exposures may occur.

–Indoubt action forced by TD queues	is the number of UOW forces that occurred because the UOW was using a recoverable transient data queue defined with an indoubt attribute of WAIT=NO.
–Indoubt action forced by LU61 connections	is the number of UOW forces that occurred because the UOW used an LU6.1 intersystem link, which cannot support indoubt waiting.
–Indoubt action forced by MRO connections	is the number of UOW forces that occurred because the UOW used an MRO intersystem link to a downlevel CICS region, which cannot support indoubt waiting.
–Indoubt action forced by RMI exits (TRUEs)	is the number of UOW forces that occurred because the OUW used an RMI that declared an interest in syncpoint but could not support indoubt waiting.
–Indoubt action forced by others	is the number of UOW forces that occurred because the UOW used recoverable facilities other than those already referenced in the table, for example, terminal RDO, which invalidates the ability to support indoubt waiting.
Total number of indoubt action mismatches	is the total number of UOWs that were forced to resolve using an indoubt action attribute, whether by definition, option, or operator override (as detailed in this table), and detected an indoubt action attribute mismatch with a participating system or RMI. For example, a participating system in a distributed UOW resolves its work forward while other systems back out theirs. The opposite also applies.

Shared temporary storage queue server statistics

Shared temporary storage queue server statistics are provided by the AXM page pool management routines for the pools AXMPGANY and AXMPGLOW.

Shared TS queue server: coupling facility statistics

For queues that do not exceed 32K bytes, the data is included in the queue index; otherwise, it is stored as a separate list.

Reset characteristics: these statistics are produced by a separate server address space, not by CICS. Following a reset, these fields are reset by the server, not CICS. As a general rule, high and low watermarks (max, min and highest, lowest) are reset to current, counts are reset to zero.

The statistics are described in detail in the DFHXQS1D data area. The individual fields have the following meanings.

Table 134. Shared TS queue server: coupling facility statistics

Statistic name	Field	Description
Structure	S1PREF	First part of structure name
Structure	S1POOL	Poolname part of structure name
Structure	S1CNPREF	Prefix for connection name
Structure	S1CNSYSN	Own MVS system name from CVTSNAME
Structure: Size	S1SIZE	Current allocated size of the list structure.
Structure: Elem size	S1ELEMLN	Data element size, fullword, used for the structure.
Structure: Max size	S1SIZEMX	Maximum size to which this structure could be altered.
Lists: Total	S1HDRS	Maximum number of list headers
Lists: Control	S1HDRSCT	Headers used for control lists
Lists: Data	S1HDRSQD	Headers available for queue data
Lists: In use	S1USEDCT	Number of entries on used list
Lists: Max used	S1USEDHI	Highest number of entries on used list
Entries: In Use	S1ENTRCT	Number of entries currently in use.
Entries: Max Used	S1ENTRHI	Maximum number in use (since last reset).
Entries: Min Free	S1ENTRLO	Minimum number of free entries (since last reset).
Entries: Total	S1ENTRMX	Total data entries in the currently allocated structure. (Obtained at connection time, may be updated by ALTER).
Entries	S1FREECT	Number of entries on free list
Entries	S1ENTRRT	Entry size of entry to element ratio
Entries	S1FREEHI	Highest number of entries on free list
Elements: In use	S1ELEMCT	Number of elements currently in use.
Elements: Max used	S1ELEMHI	Maximum number in use (since last reset).
Elements: Min free	S1ELEMLO	Number of elements currently free (total minus used).
Elements: Total	S1ELEMMX	Total data elements in the currently allocated structure. (Obtained at connection time, may be updated by ALTER).
Elements	S1ELEMPW	Data element size, power of 2, used for the structure.
Elements	S1ELEMPE	Maximum number of elements per entry (for 32K)
Elements	S1ELEMRT	Element size of entry to element ratio.
Queues: Current	S1INDXCT	Number of queues currently in existence.
Queues: Highest	S1INDXHI	Highest number of queues at any time (since last reset).
Index access counts: Wrt adjs	S1WRACT	Number of index writes to update adjunct area only. (This area contains the read cursor for small queues and the queue status including last used data).
Index access counts: Inquires	S1INQCT	Inquire on queue index entry
Index access counts: Reads	S1RDQCT	Read queue index entry
Index access counts: Writes	S1WRQCT	Write queue index entry.
Index access counts: Deletes	S1DLQCT	Delete queue index entry.

Table 134. Shared TS queue server: coupling facility statistics (continued)

Statistic name	Field	Description
index access counts: Rereads	S1RRQCT	Number of index data reads which had to be repeated because the data was larger than the default data transfer size.
Data access counts: Creates	S1CRLCT	Number of times a separate data list was created.
Data access counts: Writes	S1WRLCT	Number of queue writes (new or update) for list data.
Data access counts: Reads	S1RDLCT	Number of list data reads.
Data access counts: Deletes	S1DLLCT	Delete list (1 per overall delete).
Data access counts: Rereads	S1RRLCT	Number of list data reads which had to be repeated because the data was larger than the default data transfer size.
Data access counts: Rewrites	S1RWLCT	Rewrite list entry.
Data access counts:	S1INLCT	Inquire on list entry
Response counts: Asynch	S1ASYCT	Number of asynchronous requests.
Response counts: Unavail	S1RSP9CT	Structure temporarily unavailable, for example during rebuild.
Response counts: Normal	S1RSP1CT	Number of normal responses.
Response counts: Timeout	S1RSP2CT	Request timed out by the CF and should be restarted.
Response counts: Not fnd	S1RSP3CT	Specified entry (queue or item) was not found.
Response counts: Vers chk	S1RSP4CT	A version check failed for an entry being updated, indicating another task had updated it first.
Response counts: List chk	S1RSP5CT	A list authority comparison failed, usually indicating big queue was deleted.
Response counts: List full	S1RSP6CT	Maximum list key reached, indicating max queue size or max queues reached depending on list.
Response counts: Str full	S1RSP7CT	The list structure is out of space.
Response counts: I/O err	S1RSP8CT	An IXLLIST return code occurred other than those already referenced.

Shared TS queue server: buffer pool statistics

These statistics are for the queue index buffer pool, which is used to read and write queue index entries plus the associated data if the total queue size does not exceed 32K bytes.

Buffers containing recently accessed queue index entries are added to a least recently used chain. This means that if another request for the same queue arrives shortly afterward, it may be possible to optimize the processing based on the assumption that the copy in the buffer is probably already correct. If all other buffers are in use, a request for a new buffer will discard the contents of the least recently used buffer and reuse the storage as a free buffer. The queue server does not use some of the AXM management functions (such as KEEP or PURGE) so those counters will be zero. These fields describe the current state of the buffer pool.

Reset characteristics: these statistics are produced by a separate server address space, not by CICS. Following a reset, these fields are reset by the server, not CICS. As a general rule, high and low watermarks (max, min and highest, lowest) are reset to current, counts are reset to zero.

The statistics are described in detail in the DFHXQS2D data area. The individual fields have the following meanings:

Table 135. Shared TS queue server: buffer pool statistics

Statistic name	Field	Description
Buffers: Total	S2BFQTY	Number of buffers in the pool.
Buffers: Max used	S2BFENTH	Highest number ever used (not affected by reset).
Buffers: Active	S2BFACTS	Buffers currently in use.
Buffers: On LRU	S2BFLRUS	Buffers with valid contents on LRU chain to allow reuse.
Buffers: Empty	S2BFEMPS	Buffers previously used but now empty.
Requests: Gets	S2BFGETS	Requests to get a buffer.
Requests: Puts	S2BFPUTS	Put back buffer with valid contents
Requests: Keep	S2BFKEPS	Keeps (put back buffer with modified contents).
Requests: Free	S2BFFRES	Requests to put back a buffer as empty.
Requests: Purges	S2BFPURS	Request to discard contents of a previously valid buffer.
Results (Get): Got hit	S2BFHITS	Buffer requests that found a valid buffer.
Results (Get): Got free	S2BFGFRS	Buffer requests that used a free buffer.
Results (Get): Got new	S2BFGNWS	Buffer requests that obtained a buffer not previously used.
Results (Get): Got LRU	S2BFGLRS	Buffer requests that discarded and reused the oldest valid buffer.
Results (Get): No buf	S2BFGNBS	Buffer requests that returned no buffer.
Error: Not freed	S2BFFNOS	A request tried to release a buffer it did not own. (This can occur during error recovery).
Error: No purge	S2BFPNFS	A purge request did not find a matching buffer.
Error: Not owned	S2BFPNOS	A purge request hit a buffer owned by another task.
Wait: Pool lock	S2BFPWTS	Waits on buffer pool lock.
Wait: Buf lock	S2BFLWTS	GET wait on buffer lock.

Shared TS queue server: storage statistics

These statistics are for the named storage page pool produced since the most recent statistics.

Storage in the AXMPGANY and AXMPGLOW pools is allocated in multiples of 4K pages on a 4K boundary. The most frequent use is for segments of LIFO stack storage. Storage is initially allocated from the pool using a bit map. For faster allocation, free areas are not normally returned to the pool but are added to a vector of free chains depending on the size of the free area (1 to 32 pages). When storage is being acquired, this vector is checked before going to the pool bit map. If there are no free areas of the right size and there is not enough storage remaining in the pool, free areas in the vector are put back into the pool, starting from the smallest end, until a large enough area has been created. This action appears as a compress attempt in the statistics. If there is still insufficient storage to satisfy the request, the request fails.

These statistics are for the named storage page pool produced since the most recent statistics (if any). Each of the storage statistics is shown in kilobytes and as a percentage of the total size.

Reset characteristics: these statistics are produced by a separate server address space, not by CICS. Following a reset, these fields are reset by the server, not CICS. As a general rule, high and low watermarks (max, min and highest, lowest) are reset to current, counts are reset to zero.

The statistics are described in detail in the DFHXQS3D data area.

Table 136. Temporary storage data sharing: usage statistics. **LOC=ANY storage pool statistics**

Statistic name	Field	Description
Name	S3ANYNAM	Name of the storage pool AXMPGANY.
Size	S3ANYSIZ	The total size of the storage pool.
Address	S3ANYPTR	Address of storage pool area.
Total pages	S3ANYMX	Total pages in the storage pool.
In Use	S3ANYUS	The number of pages currently in use.
Free	S3ANYFR	The number of pages within the pool that are currently free.
Min Free	S3ANYLO	The lowest number of pages that have been free (since reset).
Gets	S3ANYRQG	The number of storage GET requests.
Frees	S3ANYRQF	The number of requests to release storage within the pool.
Fails	S3ANYRQS	The number of times that a storage request was unable to obtain the requested amount of storage even after a retry.
Retries	S3ANYRQC	The number of times that a storage request initially failed and was retried after merging any adjacent small free areas to form larger areas.

LOC=BELOW storage pool statistics

Statistic name	Field	Description
Name	S3LOWNAM	Name of the storage pool AXMPGLOW.
Size	S3LOWSIZ	The total size of the storage pool.
Address	S3LOWPTR	Address of the storage pool area.
Total pages	S3LOWMX	Total pages in the storage pool.
In Use	S3LOWUS	Number of used pages in the storage pool
Free	S3LOWFR	The number of pages within the pool that are currently free.
Min Free	S3LOWLO	The lowest number of pages that have been free.
Gets	S3LOWRQG	The number of requests to obtain storage within the pool.
Frees	S3LOWRQF	The number of requests to release storage within the pool.
Fails	S3LOWRQS	The number of times that a storage request was unable to obtain the requested amount of storage even after a retry.
Retries	S3LOWRQC	The number of times that a storage request initially failed and was retried after merging any adjacent small free areas to form larger areas.

Statistics domain statistics

Statistics recording on to an SMF data set can be a CPU-intensive activity. The amount of activity depends more on the number of resources defined than the extent of their use. This is another reason to maintain CICS definitions by removing redundant or over-allocated resources.

Statistics domain: Global statistics

You can retrieve statistics domain statistics by using the **EXEC CICS EXTRACT STATISTICS STATS** system command. They are mapped by the DFHSTGDS DSECT.

Table 137. Statistics domain: Global statistics

DFHSTUP name	Field name	Description
Interval Collections so far	STGNC	is the number of interval collections made during the CICS run, or from one end-of-day to the following end-of-day. Reset characteristic: This field is reset to zero only at every end-of-day collection.
Number of SMF writes	STGSMFW	is the number of SMF writes since the last reset time. This figure includes records written for all types of statistics collections. Reset characteristic: reset to zero
Number of SMF writes suppressed	STGSMFS	is the number of SMF writes for statistics records that were suppressed by the global user exit (XSTOUT). Reset characteristic: reset to zero
Number of SMF errors	STGSMFE	is the number of non-OK responses from the request to write a record to SMF. This count is incremented when an SMF write fails for any reason, for example, when SMF is inactive. Reset characteristic: reset to zero
Number of INT statistics records	STGINTR	is the number of SMF writes for interval (INT) statistics records. Reset characteristic: reset to zero
Number of EOD statistics records	STGEODR	is the number of SMF writes for end-of-day (EOD) statistics records. Reset characteristic: reset to zero
Number of USS statistics records	STGUSSR	is the number of SMF writes for unsolicited (USS) statistics records. Reset characteristic: reset to zero

Table 137. Statistics domain: Global statistics (continued)

DFHSTUP name	Field name	Description
Number of REQ statistics records	STGREQR	is the number of SMF writes for requested (REQ) statistics records. Reset characteristic: reset to zero
Number of RRT statistics records	STGRRTR	is the number of SMF writes for requested reset (RRT) statistics records. Reset characteristic: reset to zero
Statistics CICS Start Date and Time	STGCSTRT	is the date and time at which the CICS statistics domain was initialized. The DFHSTUP report expresses the date and time as mm/dd/yyyy and hh:mm:ss; however, the DSECT field contains the date and time as a store clock (STCK) value. Reset characteristic: not reset
Statistics Last Reset Date and Time	STGLRT	is the date and time at which the statistics values were last reset. The DFHSTUP report expresses the date and time as mm/dd/yyyy and hh:mm:ss; however, the DSECT field contains the date and time as a store clock (STCK) value. Reset characteristic: reset to current
Statistics Interval	STGINTVL	is the current statistics recording interval. This is the STATINT value specified in the SIT, or as an override, or changed dynamically using the **EXEC CICS SET STATISTICS INTERVAL(4-byte packed decimal data-area)** command. Reset characteristic: not reset
Statistics End-of-Day Time	STGEODT	is the current statistics end-of-day time. This is the STATEOD value specified in the SIT, or as an override, or changed dynamically using the **EXEC CICS SET STATISTICS ENDOFDAY(4-byte packed decimal data-area)** command. Reset characteristic: not reset
Statistics Recording	STGSTRCD	is the current setting for interval statistics recording. This is the STATRCD setting specified in the SIT, or as an override, or changed dynamically using the **EXEC CICS SET STATISTICS RECORDING(cvda)** command. Reset characteristic: not reset

Table 137. Statistics domain: Global statistics (continued)

DFHSTUP name	Field name	Description
NOT IN THE DFHSTUP REPORT	STGLDW	is the length of data written to SMF during an interval, expressed as bytes. This figure includes length of data written during an interval for unsolicited, requested, and interval/end-of-day collections. Reset characteristic: reset to zero **Note:** This field contains the accumulated length of statistics records excluding the SMF headers.

Interval, end-of-day, and requested statistics all contain the same items.

Related information:

EXTRACT STATISTICS

Statistics domain: Summary global statistics

Statistics domain summary global statistics are not available online.

Table 138. Statistics domain: Summary global statistics

DFHSTUP name	Description
Total number of Interval Collections	is the total number of interval collections made during the entire CICS run.
Total number of SMF writes	is the total number of SMF writes during the entire CICS run. This figure includes records written during an interval for unsolicited, requested, and interval/end-of-day collections.
Total number of SMF writes suppressed	is the total number of SMF writes for statistics records that were suppressed by the global user exit (XSTOUT).
Total number of SMF errors	is the total number of non-OK responses from the request to write a record to SMF.
Total number of INT statistics records	is the total number of SMF writes for interval (INT) statistics records.
Total number of EOD statistics records	is the total number of SMF writes for end-of-day (EOD) statistics records.
Total number of USS statistics records	is the total number of SMF writes for unsolicited (USS) statistics records.
Total number of REQ statistics records	is the total number of SMF writes for requested (REQ) statistics records.
Total number of RRT statistics records	is the total number of SMF writes for requested reset (RRT) statistics records.
Statistics Interval	is the last statistics recording interval (STATINT) value that was specified in the SIT, or as an override, or changed dynamically.

Table 138. Statistics domain: Summary global statistics (continued)

DFHSTUP name	Description
Statistics End-of-Day Time	is the last statistics end-of-day time (STATEOD) value that was specified in the SIT, or as an override, or changed dynamically.
Statistics Recording	is the last setting for interval statistics recording (STATRCD) setting that was specified in the SIT, or as an override, or changed dynamically.

Storage manager statistics

These statistics are produced to aid all aspects of storage management.

Note that the terms 'DSA' (dynamic storage area), and 'pagepool', are interchangeable.

Related concepts:

"Interpreting storage manager statistics"
You can use the "Times went short on storage", "Times request suspended", and "Times cushion released" statistics to assess whether there is sufficient storage.

Related reference:

"Storage reports" on page 440
There are five storage reports. The storage reports provide information about the use of MVS and CICS virtual storage. There are separate reports for storage below 16 MB, storage above 16 MB but below 2 GB, and storage above 2 GB.

"Storage - Domain Subpools reports" on page 454
The storage subpool reports provide statistics about CICS domain and task storage subpool allocations and use.

"Storage - Program Subpools report" on page 457
The Storage Subpools Report is produced using the **EXEC CICS EXTRACT STATISTICS STORAGE** command. The statistics data is mapped by the **DFHSMDDS DSECT**.

Interpreting storage manager statistics

You can use the "Times went short on storage", "Times request suspended", and "Times cushion released" statistics to assess whether there is sufficient storage.

As free storage reduces towards a short-on-storage condition, dynamic program storage compression (DPSC) progressively releases programs that are not in use. However, short-on-storage conditions can still occur and are reported in the "Times went short on storage" statistic. If this value is above zero, consider increasing the size of the dynamic storage area. Alternatively, consider using the maximum tasks (Setting the maximum task specification (MXT)) and transaction class (MAXACTIVE) limits to constrain the virtual storage of your system.

Storage manager requests "Times request suspended", and "Times cushion released", indicate that storage stress situations have occurred, some of which may not have produced a short-on-storage condition. For example, a GETMAIN request may cause the storage cushion to be released. However, loader can compress some programs, obtain the cushion storage, and avoid the short-on-storage condition.

Note: In the task subpools statistics, the “Current elem stg” statistic is the number of bytes used, while the “Current page stg” statistic is the number of pages containing one or more of these bytes.

Storage manager: Domain subpools statistics

You can retrieve domain subpool statistics by using the **EXEC CICS EXTRACT STATISTICS STORAGE** command. They are mapped by the DFHSMDDS DSECT.

Table 139. Storage manager: Domain subpools statistics

DFHSTUP name	Field name	Description
Subpool Name	SMDSPN	The unique 8-character name of the domain subpool. The values of the domain subpool field are described in CICS subpools. Reset characteristic: Not reset
NOT IN THE DFHSTUP REPORT	SMDETYPE	The assembler DSECT field name indicates whether all the elements in the subpool are fixed length or variable length. • X'01' fixed • X'02' variable For further information about subpool elements, see CICS subpools. Reset characteristic: Not reset
NOT IN THE DFHSTUP REPORT	SMDFLEN	The length of each subpool element (applicable to fixed length subpools only). For further information about subpool elements, see CICS subpools. Reset characteristic: Not reset
NOT IN THE DFHSTUP REPORT	SMDELCHN	The assembler DSECT field name has the value X'01' or X'02', indicating whether the storage manager maintains an element chain for the subpool with the addresses and lengths of each element. Reset characteristic: Not reset
NOT IN THE DFHSTUP REPORT	SMDBNDRY	The boundary on which each element is aligned. This is a power of 2 in the range 8 through 4096 bytes. This field does not apply to 64-bit (above-the-bar) storage. Reset characteristic: Not reset

Table 139. Storage manager: Domain subpools statistics (continued)

DFHSTUP name	Field name	Description
NOT IN THE DFHSTUP REPORT	SMDLOCN	The storage location of this domain subpool. The assembler DSECT field name has the following values: • SMDBELOW (X'01') below 16 MB (below the line). • SMDABOVE (X'02') above 16 MB but below 2 GB (above the line). • SMDABOVEBAR (X'03') above the bar. Reset characteristic: Not reset
Location	SMDDSANAME	The name of the DSA that the domain subpool is allocated from. Values can be CDSA, SDSA, RDSA, ECDSA, ESDSA, ERDSA, ETDSA, GCDSA, or GSDSA. Reset characteristic: Not reset
NOT IN THE DFHSTUP REPORT	SMDDSAINDEX	A unique identifier for the dynamic storage area that this subpool is allocated from. Values can be as follows: • SMDCDSA (X'01') indicating that the subpool storage is obtained from the CDSA. • SMDSDSA (X'03') indicating that the subpool storage is obtained from the UDSA. • SMDRDSA (X'04') indicating that the subpool storage is obtained from the RDSA. • SMDECDSA (X'09') indicating that the subpool storage is obtained from the ECDSA. • SMDESDSA (X'0B') indicating that the subpool storage is obtained from the ESDSA. • SMDERDSA (X'0C') indicating that the subpool storage is obtained from the ERDSA. • SMDETDSA (X'0D') indicating that the subpool storage is obtained from the ETDSA. • SMDGCDSA (X'11') indicating that the subpool storage is obtained from the GCDSA. • SMDGSDSA (X'13') indicating that the subpool storage is obtained from the GSDSA. Reset characteristic: Not reset
Access	SMDACCESS	The type of access of the subpool. Values are CICS, USER, READONLY, or TRUSTED. If storage protection is not active, storage areas revert to an access type of CICS, except for those in the RDSA and ERDSA. • SMDCICS (X'01') access is CICS key. • SMDUSER (X'02') access is USER key. • SMDREADONLY (X'03') is read-only protection. • SMDTRUSTED (X'04') access is CICS key. Reset characteristic: Not reset

Table 139. Storage manager: Domain subpools statistics (continued)

DFHSTUP name	Field name	Description
NOT IN THE DFHSTUP REPORT	SMDIFREE	The size of the initial free area for the subpool (which might be zero). For further information about the initial free area, see Defining programs as resident, nonresident, or transient. This value is expressed in bytes. Reset characteristic: Not reset
Getmain Requests	SMDGMREQ	The total number of GETMAIN requests for the subpool. Reset characteristic: Reset to zero
Freemain Requests	SMDFMREQ	The total number of FREEMAIN requests for the subpool. Reset characteristic: Reset to zero
Current Elements	SMDCELEM	The current number of storage elements in the subpool. Reset characteristic: Not reset
Current Elem Stg	SMDCES	The sum of the lengths of all the elements in the subpool, expressed in bytes. Reset characteristic: Not reset
Current Page Stg	SMDCPS	The space taken by all the pages allocated to the subpool, expressed in bytes (or megabytes for 64-bit (above-the-bar) storage). Reset characteristic: Not reset
Peak Page Stg	SMDHWMPS	The peak page storage allocated to support the storage requirements of this subpool, expressed in bytes (or megabytes for 64-bit (above-the-bar) storage). Reset characteristic: Reset to current value

Related information:

EXTRACT STATISTICS

Storage manager: Global statistics

You can retrieve storage manager global statistics by using the **EXEC CICS EXTRACT STATISTICS STORAGE** system command. They are mapped by the DFHSMSDS DSECT.

These statistics are collected for each dynamic storage area (DSA). .

Table 140. Storage manager: Global statistics

DFHSTUP name	Field name	Description
Storage protection	SMSSTGPROT	Whether storage protection is active: • X'01' active • X'00' not active Reset characteristic: Not reset
Transaction isolation	SMSTRANISO	Whether transaction isolation is active: • X'01' active • X'00' not active Reset characteristic: Not reset
Reentrant programs	SMSRENTPGM	Whether write protection for reentrant programs is enabled: • X'01' PROTECT - RDSA and ERDSA are obtained from key 0 storage. • X'00' NOPROTECT - RDSA and ERDSA are obtained from key 8 storage. Reset characteristic: Not reset
Current DSA limit	SMSDSALIMIT	The current limit of the CICS dynamic storage areas, as defined by the **DSALIM** system initialization parameter. Reset characteristic: Not reset
Current DSA total	SMSDSATOTAL	The total amount of storage currently allocated to the DSAs below 16 MB (below the line). This value might be smaller or larger than “Current DSA limit”. Reset characteristic: Not reset
Peak DSA total	SMSHWMDSATOTAL	The peak amount of storage allocated to the DSAs below 16 MB (below the line). This value might be smaller or larger than “Current DSA limit”. Reset characteristic: Not reset
Current EDSA limit	SMSEDSALIMIT	The current limit of the CICS extended dynamic storage areas, as defined by the **EDSALIM** system initialization parameter. Reset characteristic: Reset to current value
Current EDSA total	SMSEDSATOTAL	The total amount of storage currently allocated to the DSAs above 16 MB but below 2 GB (above the line). This value might be smaller or larger than “Current EDSA limit”. Reset characteristic: Not reset
Peak EDSA total	SMSHWMESDATOTAL	The peak amount of storage allocated to the DSAs above 16 MB but below 2 GB (above the line). This value might be smaller or larger than “Current EDSA limit”. Reset characteristic: Not reset
MEMLIMIT size	SMSMEMLIMIT	The value of the z/OS **MEMLIMIT** parameter, which limits the amount of 64-bit storage for the CICS region. This value can be in megabytes, gigabytes, terabytes, petabytes, or exabytes, depending on size. A value of `NOLIMIT` indicates that no upper limit is imposed. Reset characteristic: Reset to current value

Table 140. Storage manager: Global statistics (continued)

DFHSTUP name	Field name	Description
MEMLIMIT set by	SMSMEMLIMITSRC	The source of the **MEMLIMIT** value: SMFPRM indicates that **MEMLIMIT** is set by SYS1.PARMLIB(SMFPRMxx). JCL indicates that **MEMLIMIT** is set by JCL. REGION indicates that **MEMLIMIT** is set to NOLIMIT because REGION=0M is specified in JCL. IEFUSI indicates that **MEMLIMIT** is set by the z/OS installation exit IEFUSI. Reset characteristic: Not reset
GETSTOR request size	SMSGETSTORSIZE	The GETSTOR request size. Reset characteristic: Not reset
Current Address Space active	SMSASACTIVE	The current address space available above the bar. Reset characteristic: Not reset
Peak Address Space active	SMSHWMASACTIVE	The peak amount of address space available above the bar. Reset characteristic: Reset to current value
Current GDSA active	SMSGDSAACTIVE	The current storage in use above the bar. Reset characteristic: Not reset
Peak GDSA active	SMSHWMGDSAACTIVE	The peak amount of storage in use above the bar. Reset characteristic: Reset to current value
MVS storage request waits	SMSMVSSTGREQWAITS	The total number of MVS storage requests that have waited for MVS storage above 16 MB. Reset characteristic: Reset to zero
Total time waiting for MVS storage	SMSTIMEWAITMVS	The total time that MVS storage requests have spent waiting for MVS storage above 16 MB. Reset characteristic: Reset to zero
Bytes Allocated to Private Memory Objects	SMSLVABYTES	The number of bytes allocated from large virtual memory in private memory objects. [1] Reset characteristic: Not reset
Bytes Hidden within Private Memory Objects	SMSLVHBYTES	The number of bytes hidden in large virtual memory private memory objects. [1] Reset characteristic: Not reset
Peak Bytes Usable within Private Memory Objects	SMSLVGBYTES	The high-water mark of usable bytes in large virtual memory private memory objects. [1] Reset characteristic: Not reset
Number of Private Memory Objects	SMSLVNMEMOBJ	The number of private memory objects allocated. [1] Reset characteristic: Not reset
Auxiliary Slots backing Private Memory Objects	SMSHVAUXSLOTS	The number of auxiliary storage slots that are used to back 64-bit private memory objects. [1] Reset characteristic: Not reset
HWM Auxiliary Slots backing Private Memory Objects	SMSHVGAUXSLOTS	The high-water mark of auxiliary storage slots that are used to back 64-bit private memory objects. [1] Reset characteristic: Not reset

Table 140. Storage manager: Global statistics (continued)

DFHSTUP name	Field name	Description
Real Frames backing Private Memory Objects	SMSHVPAGESINREAL	The number of real storage frames that are used to back 64-bit private memory objects. [1] Reset characteristic: Not reset
HWM Real Frames backing Private Memory Objects	SMSHVGPAGESINREAL	The high-water mark for the number of real storage frames that are used to back 64-bit private memory objects. [1] Reset characteristic: Not reset
Number of Large Memory Objects Allocated	SMSLARGEMEMOBJ	The number of large memory objects allocated by this address space. [1] Reset characteristic: Not reset
Number of Large Pages backed in Real Storage	SMSLARGEPAGESINREAL	The number of large pages (1 MB pages) backed in real storage owned by this address space. [1] Reset characteristic: Not reset
Shared Bytes from Large Memory Objects	SMSLVSHRBYTES	The number of shared bytes allocated from high virtual memory. [1] Reset characteristic: Not reset
Peak Shared Bytes within Large Memory Objects	SMSLVSHRGBYTES	The high-water mark for the number of shared bytes in large virtual memory objects. [1] Reset characteristic: Not reset
Number of Shared Memory Objects	SMSLVSHRNMEMOBJ	The number of shared memory objects allocated.[1] Reset characteristic: Not reset
Number of FROMGUARD Failures	SMSFROMGUARDFAIL	The number of times that a request for 64-bit storage has failed, where the request uses the z/OS IARV64 macro with the REQUEST=CHANGEGUARD, CONVERT=FROMGUARD parameters. [1] Reset characteristic: Reset to zero
FROMGUARD Failure size	SMSFROMGUARDFAILSIZE	The size of the largest request for 64-bit storage that has failed, in bytes, where the request uses the z/OS IARV64 macro with the REQUEST=CHANGEGUARD, CONVERT=FROMGUARD parameters. [1] Reset characteristic: Reset to zero
Current GDSA allocated	SMSGDSAALLOC	The total amount of storage currently allocated to the DSAs above the bar. Reset characteristic: Not reset
Peak GDSA allocated	SMSHWMGDSAALLOC	The peak amount of storage allocated to the DSAs above the bar. Reset characteristic: Reset to current value

Note:

1. For more information about the memory that this statistic refers to, see Using the 64-bit Address Space in the z/OS MVS Programming: Extended Addressability Guide.

Related information:

EXTRACT STATISTICS

Storage manager: Subspace statistics

You can retrieve storage manager subspace statistics by using the **EXEC CICS EXTRACT STATISTICS STORAGE** system command. They are mapped by the DFHSMSDS DSECT.

These statistics are collected for each DSA.

Table 141. Storage manager: Subspace statistics

DFHSTUP name	Field name	Description
Current unique subspace users	SMSUSSCUR	Current number of unique subspace users. Number of tasks currently allocated a unique subspace. **Reset characteristic:** Not reset.
Total unique subspace users	SMSUSSCUM	Total number of tasks that have been allocated a unique subspace. **Reset characteristic:** Reset to zero.
Peak unique subspace users	SMSUSSHWM	The peak number of tasks concurrently allocated a unique subspace. **Reset characteristic:** Reset to current.
Current common subspace users	SMSCSSCUR	Number of tasks currently allocated to the common subspace **Reset characteristic:** Not reset.
Total common subspace users	SMSCSSCUM	Total number of tasks allocated to the common subspace **Reset characteristic:** Reset to zero.
Peak common subspace users	SMSCSSHWM	The peak number of tasks concurrently allocated to the common subspace. **Reset characteristic:** Reset to current.

Related information:

EXTRACT STATISTICS

Storage manager: Dynamic storage areas statistics

You can retrieve storage manager dynamic storage area statistics by using the **EXEC CICS EXTRACT STATISTICS STORAGE** system command. They are mapped by the DFHSMSDS DSECT.

The dynamic storage areas statistics are collected for each DSA.

Note: All the fields, except NOT IN THE DFHSETUP REPORT, are mapped by the SMSBODY DSECT within the DFHSMSDS DSECT. The SMSBODY DSECT is repeated for each DSA in the CICS region (SMSNPAGP).

Table 142. Storage manager: Dynamic storage areas statistics

DFHSTUP name	Field name	Description
NOT IN THE DFHSTUP REPORT	SMSNPAGP	The number of DSAs in the CICS region. There are 12 DSAs: • CDSA, UDSA, SDSA, RDSA • ECDSA, EUDSA, ESDSA, ERDSA, ETDSA • GCDSA, GUDSA, GSDSA Reset characteristic: Not reset

Table 142. Storage manager: Dynamic storage areas statistics (continued)

DFHSTUP name	Field name	Description
Header in DFHSTUP report	SMSDSANAME	Name of the DSA that this record represents. The value can be CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, ERDSA, ETDSA, GCDSA, GUDSA, or GSDSA. Reset characteristic: Not reset
NOT IN THE DFHSTUP REPORT	SMSDSAINDEX	A unique identifier for the dynamic storage area that this subpool is allocated from. Values can be: • SMSCDSA (X'01'). The page pool is the CDSA. • SMSUDSA (X'02'). The page pool is the UDSA. • SMSSDSA (X'03'). The page pool is the SDSA. • SMSRDSA (X'04'). The page pool is the RDSA. • SMSECDSA (X'09'). The page pool is the ECDSA. • SMSEUDSA (X'0A'). The page pool is the EUDSA. • SMSESDSA (X'0B'). The page pool is the ESDSA. • SMSERDSA (X'0C'). The page pool is the ERDSA. • SMSETDSA (X'0D'). The page pool is the ETDSA. • SMSGCDSA (X'11'). The page pool is the GCDSA. • SMSGUDSA (X'12'). The page pool is the GUDSA. • SMSGSDSA (X'13'). The page pool is the GSDSA. Reset characteristic: Not reset
NOT IN THE DFHSTUP REPORT	SMSLOCN	The location of this DSA. The assembler DSECT field name has the following values: • SMSBELOW (X'01') below the 16 MB line • SMSABOVE (X'02') above 16 MB but below 2 GB • SMSABOVEBAR (X'03') above the bar Reset characteristic: Not reset
Current DSA Size	SMSDSASZ	The current size of the DSA. For the CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, ERDSA, and ETDSA, this value is expressed in bytes. For the GCDSA, GUDSA, and GSDSA, this value is expressed in megabytes. Reset characteristic: Not reset
Peak DSA Size	SMSHWMDSASZ	The peak size of the DSA since the last time that statistics were recorded. For the CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, ERDSA, and ETDSA, this value is expressed in bytes. For the GCDSA, GUDSA, and GSDSA, this value is expressed in megabytes. Reset characteristic: Reset to current value

Table 142. Storage manager: Dynamic storage areas statistics (continued)

DFHSTUP name	Field name	Description
Cushion Size	SMSCSIZE	The size of the cushion. The cushion forms part of each DSA and is the amount of storage below which CICS goes short on storage (SOS). For the CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, ERDSA, and ETDSA, this value is expressed in bytes. For the GCDSA, GUDSA, and GSDSA, this value is expressed in megabytes. Reset characteristic: Not reset
Free storage (inc. cushion)	SMSFSTG	The amount of free storage in this DSA; that is, the number of free pages multiplied by the page size. For the CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, ERDSA, and ETDSA, the page size is 4 KB and this value is expressed in bytes. For the GCDSA, GUDSA, and GSDSA, the page size is 1 MB and this value is expressed in megabytes. Reset characteristic: Not reset
Percentage free storage		The percentage of the storage that is free. This value is calculated offline by DFHSTUP and is, therefore, not accessible from the **EXEC CICS EXTRACT STATISTICS** command. This field does not apply to the GCDSA, GUDSA, and GSDSA. Reset characteristic: Not reset
Peak free storage	SMSHWMFSTG	The peak amount of free storage in this DSA since the last time that statistics were recorded. Free storage is the number of free pages multiplied by the page size. For the CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, ERDSA, and ETDSA, the page size is 4 KB and this value is expressed in bytes. For the GCDSA, GUDSA, and GSDSA, the page size is 1 MB and this value is expressed in megabytes. Reset characteristic: Reset to current value
Lowest free storage	SMSLWMFSTG	The smallest amount of free storage in this DSA since the last time that statistics were recorded. Free storage is the number of free pages multiplied by the page size. For the CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, ERDSA, and ETDSA, the page size is 4 KB and this value is expressed in bytes. For the GCDSA, GUDSA, and GSDSA, the page size is 1 MB and this value is expressed in megabytes. Reset characteristic: Reset to current value

Table 142. Storage manager: Dynamic storage areas statistics (continued)

DFHSTUP name	Field name	Description
Largest free area	SMSLFA	The length of the largest contiguous free area in this DSA. For the CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, ERDSA, and ETDSA, this value is expressed in bytes. For the GCDSA, GUDSA, and GSDSA, this value is expressed in megabytes. For an indication of the storage fragmentation in this DSA, compare this value with "Free storage" (SMSFSTG) in the DSA. If the ratio is large, this DSA is fragmented. Reset characteristic: Not reset
Getmain Requests	SMSGMREQ	The number of GETMAIN requests from the CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, ERDSA, ETDSA, GCDSA, GUDSA, or GSDSA. Reset characteristic: Reset to zero
Freemain Requests	SMSFMREQ	The number of FREEMAIN requests from the CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, ERDSA, ETDSA, GCDSA, GUDSA, or GSDSA. Reset characteristic: Reset to zero
Add Subpool Requests	SMSASR	The number of ADD_SUBPOOL requests to create a subpool (domain or task) from the CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, ERDSA, ETDSA, GCDSA, GUDSA, or GSDSA. Reset characteristic: Reset to zero
Delete Subpool Requests	SMSDSR	The number of DELETE_SUBPOOL requests (domain or task) from the CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, ERDSA, ETDSA, GCDSA, GUDSA, or GSDSA. Reset characteristic: Reset to zero
Current no of Subpools	SMSCSUBP	The current number of subpools (domain and task) in the CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, ERDSA, ETDSA, GCDSA, GUDSA, or GSDSA. Reset characteristic: Not reset
Times no storage returned	SMSCRISS	The number of times a GETMAIN request with SUSPEND(NO) returned the condition INSUFFICIENT_STORAGE. Reset characteristic: Reset to zero
Times request suspended	SMSUCSS	The number of times a GETMAIN request with SUSPEND(YES) was suspended because of insufficient storage to satisfy the request at that moment. Reset characteristic: Reset to zero

Table 142. Storage manager: Dynamic storage areas statistics (continued)

DFHSTUP name	Field name	Description
Current suspended	SMSCSS	The number of GETMAIN requests that are currently suspended for storage. Reset characteristic: Not reset
Peak requests suspended	SMSHWMSS	The peak number of GETMAIN requests that were suspended for storage. Reset characteristic: Reset to current value
Purged while waiting	SMSPWWS	The number of requests that were purged while suspended for storage. Reset characteristic: Reset to zero
Times cushion released	SMSCREL	The number of times a GETMAIN request caused the storage cushion to be released. The cushion is said to be released when the number of free pages drops below the number of pages in the cushion and there are no more free extents available to increase the size of this DSA. Reset characteristic: Reset to zero
Times went short on storage	SMSSOS	The number of times CICS went SOS in this DSA, where SOS means that the cushion is currently in use, or at least one task is suspended for storage, or both. This field applies to CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, ERDSA, ETDSA, GCDSA, GUDSA, and GSDSA. Reset characteristic: Reset to zero
Total time SOS	SMSTSOS	The accumulated time that CICS has been SOS in this DSA. The DFHSTUP report expresses this time as *days:hours:minutes:seconds.decimals*. The DSECT field contains the time as a store clock (STCK) value. Reset characteristic: Reset to zero
Storage violations	SMSSV	The number of storage violations recorded in the DSA. Reset characteristic: Reset to zero

Table 142. Storage manager: Dynamic storage areas statistics (continued)

DFHSTUP name	Field name	Description
Access	SMSACCESS	The type of access of the DSA. Values are CICS, USER, READONLY, or TRUSTED. If storage protection is not active, storage areas revert to an access type of CICS, except for those in the RDSA or ERDSA. • SMSCICS (X'01') access is CICS key. • SMSUSER (X'02') access is USER key. • SMSREADONLY (X'03') is read-only protection. • SMSTRUSTED (X'04') access is CICS key. Reset characteristic: Not reset
Current extents	SMSEXTS	The number of extents currently allocated to this DSA. Reset characteristic: Not reset
Extents added	SMSEXTSA	The number of extents added to the DSA since the last time statistics were recorded. Reset characteristic: Reset to zero
Extents released	SMSEXTSR	The number of extents that were released from the DSA since the last time statistics were recorded. Reset characteristic: Reset to zero

Related information:

EXTRACT STATISTICS

Storage manager: Task subpools statistics

Task subpools statistics are collected for each dynamic storage area (DSA). They are mapped by the DFHSMTDS DSECT.

These statistics are produced for offline processing (written to SMF). They cannot be accessed online by using the **EXTRACT STATISTICS** command.

Although task subpools are dynamically created and deleted for each task in the system, these statistics are the sum of all task subpool figures for the task-related DSAs (CDSA, UDSA, ECDSA, EUDSA, GCDSA, and GUDSA). If further granularity of task storage usage is required, use the performance class data of the CICS monitoring facility.

Apart from the SMTNTASK field, the fields in the following table are mapped by the SMTBODY DSECT in the DFHSMTDS DSECT. The SMTBODY DSECT is repeated for each task subpool in the CICS region (SMTNTASK).

Table 143. Storage manager: Task subpools statistics

DFHSTUP name	Field name	Description
NOT IN THE DFHSTUP REPORT	SMTNTASK	The number of task subpools in the CICS region. Reset characteristic: not reset
DSA Name	SMTDSANAME	The name of the dynamic storage area from which this task storage has been allocated. Values can be CDSA, UDSA, ECDSA, EUDSA, GCDSA, and GUDSA. Reset characteristic: not reset
NOT IN THE DFHSTUP REPORT	SMTDSAINDEX	A unique identifier for the dynamic storage area that these statistics refer to. Values can be: • SMTCDSA (X'01'), indicating that the task storage is obtained from the CDSA • SMTUDSA (X'02'), indicating that the task storage is obtained from the UDSA • SMTECDSA (X'09'), indicating that the task storage is obtained from the ECDSA • SMTEUDSA (X'0A'), indicating that the task storage is obtained from the EUDSA • SMTGCDSA (X'11'), indicating that the task storage is obtained from the GCDSA • SMTGUDSA (X'12'), indicating that the task storage is obtained from the GUDSA Reset characteristic: not reset
NOT IN THE DFHSTUP REPORT	SMTLOCN	Indicates the storage location of the DSA: • SMTBELOW (X'01') below the 16 MB line • SMTABOVE (X'02') above 16 MB but below 2 GB (above the line) • SMTABOVEBAR (X'03') above the bar Reset characteristic: not reset
Access	SMTACCESS	The type of access of the subpool. Access type can be CICS (key 8) or USER (key 9). • SMTCICS (X'01') access is CICS key • SMTUSER (X'02') access is USER key Reset characteristic: not reset
Getmain Requests	SMTGMREQ	The total number of task subpool GETMAIN requests from this dynamic storage area. Reset characteristic: reset to zero

Table 143. Storage manager: Task subpools statistics (continued)

DFHSTUP name	Field name	Description
Freemain Requests	SMTFMREQ	The total number of task subpool FREEMAIN requests from this dynamic storage area. Reset characteristic: reset to zero
Current Elements	SMTCNE	The number of elements in all the task subpools in this dynamic storage area. Reset characteristic: not reset
Current Elem Stg	SMTCES	The sum of the storage occupied by all elements in task subpools in this dynamic storage area, expressed in bytes. Reset characteristic: not reset
Current Page Stg	SMTCPS	The sum of the storage in all pages allocated to task subpools in this dynamic storage area. This value is expressed in bytes (or megabytes for 64-bit (above-the-bar) storage). Reset characteristic: not reset
Peak Page Stg	SMTHWMPS	The peak page storage allocated to support task storage activity in this dynamic storage area. This value is expressed in bytes (or megabytes for 64-bit (above-the-bar) storage). Reset characteristic: reset to current value

Storage manager: Summary domain subpools statistics

Shows summary information and statistics about domain subpools.

Summary statistics are not available online.

Table 144. Storage manager: Summary domain subpools statistics

DFHSTUP name	Description
Subpool Name	The unique 8-character name of the domain subpool. The values of the domain subpool field are described in CICS subpools.
Location	The name of the DSA that the domain subpool is allocated from. Values can be CDSA, SDSA, RDSA, ECDSA, ESDSA, ERDSA, ETDSA, GCDSA, or GSDSA.

Table 144. Storage manager: Summary domain subpools statistics (continued)

DFHSTUP name	Description
Access	The type of access of the subpool. Values are CICS, USER, READONLY, or TRUSTED. If storage protection is not active, storage areas revert to an access type of CICS, except for those in the RDSA and ERDSA. • SMDCICS (X'01') access is CICS key. • SMDUSER (X'02') access is USER key. • SMDREADONLY (X'03') is read-only protection. • SMDTRUSTED (X'04') access is CICS key.
Getmain Requests	The total number of GETMAIN requests for the subpool.
Freemain Requests	The total number of FREEMAIN requests for the subpool.
Peak Elements	The peak number of storage elements in the subpool.
Peak Elem Stg	The peak amount of element storage in the subpool, expressed in bytes.
Peak Page Stg	The peak page storage allocated to support the storage requirements of this subpool, expressed in bytes (or megabytes for 64-bit (above-the-bar) storage).

Storage manager: Summary global statistics

Storage manager summary global statistics are not available online.

Table 145. Storage manager: Summary global statistics

DFHSTUP name	Description
Storage protection	Whether storage protection is active: • X'01' active • X'00' not active
Transaction isolation	Whether transaction isolation is active: • X'01' active • X'00' not active
Reentrant programs	Whether write protection for reentrant programs is enabled: • X'01' PROTECT - RDSA and ERDSA are obtained from key 0 storage. • X'00' NOPROTECT - RDSA and ERDSA are obtained from key 8 storage.
Current DSA limit	The current limit of the CICS dynamic storage areas, as defined by the **DSALIM** system initialization parameter.
Current DSA total	The total amount of storage currently allocated to the DSAs below 16 MB (below the line). This value might be smaller or larger than “Current DSA limit”.

Table 145. Storage manager: Summary global statistics (continued)

DFHSTUP name	Description
Peak DSA total	The peak amount of storage allocated to the DSAs below 16 MB (below the line). This value might be smaller or larger than “Current DSA limit”.
Current EDSA limit	The current limit of the CICS extended dynamic storage areas, as defined by the **EDSALIM** system initialization parameter.
Current EDSA total	The total amount of storage currently allocated to the DSAs above 16 MB but below 2 GB (above the line). This value might be smaller or larger than “Current EDSA limit”.
Peak EDSA total	The peak amount of storage allocated to the DSAs above 16 MB but below 2 GB (above the line). This value might be smaller or larger than “Current EDSA limit”.
MEMLIMIT size	The value of the z/OS **MEMLIMIT** parameter, which limits the amount of 64-bit storage for the CICS region. This value can be in megabytes, gigabytes, terabytes, petabytes, or exabytes, depending on size. A value of NOLIMIT indicates that no upper limit is imposed.
MEMLIMIT set by	The source of the **MEMLIMIT** value: SMFPRM indicates that **MEMLIMIT** is set by SYS1.PARMLIB(SMFPRMxx). JCL indicates that **MEMLIMIT** is set by JCL. REGION indicates that **MEMLIMIT** is set to NOLIMIT because REGION=0M is specified in JCL. IEFUSI indicates that **MEMLIMIT** is set by the z/OS installation exit IEFUSI.
Current GDSA allocated	The total amount of storage currently allocated to the DSAs above the bar.
Peak GDSA allocated	The peak amount of storage allocated to the DSAs above the bar.
Current GDSA active	The current storage in use above the bar.
Peak GDSA active	The peak amount of storage in use above the bar.
MVS storage request waits	The total number of MVS storage requests that have waited for MVS storage above 16 MB.
Total time waiting for MVS storage	The total time that MVS storage requests have spent waiting for MVS storage above 16 MB.

Storage manager: Summary subspace statistics

Storage manager summary subspace statistics are not available online.

Table 146. Storage manager: Summary subspace statistics

DFHSTUP name	Description
Total unique subspace users	The total number of tasks that have been allocated a unique subspace.
Peak unique subspace users	The peak number of tasks concurrently allocated a unique subspace.
Total common subspace users	The total number of tasks allocated to the common subspace.

Table 146. Storage manager: Summary subspace statistics (continued)

DFHSTUP name	Description
Peak common subspace users	The peak number of tasks concurrently allocated to the common subspace.

Storage manager: Summary dynamic storage areas statistics

Shows summary information and statistics about dynamic storage areas.

Summary statistics are not available online.

Table 147. Storage manager: Summary dynamic storage areas statistics

DFHSTUP name	Description
Current DSA size	The current size of the DSA. For the CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, ERDSA, and ETDSA, this value is expressed in bytes. For the GCDSA, GUDSA, and GSDSA, this value is expressed in megabytes.
Peak DSA size	The peak size of the DSA since the last time that statistics were recorded. For the CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, ERDSA, and ETDSA, this value is expressed in bytes. For the GCDSA, GUDSA, and GSDSA, this value is expressed in megabytes.
Cushion size	The size of the cushion. The cushion forms part of each DSA and is the amount of storage below which CICS goes short on storage (SOS). For the CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, ERDSA, and ETDSA, this value is expressed in bytes. For the GCDSA, GUDSA, and GSDSA, this value is expressed in megabytes.
Peak free storage	The peak amount of free storage in this DSA since the last time that statistics were recorded. Free storage is the number of free pages multiplied by the page size. For the CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, ERDSA, and ETDSA, the page size is 4 KB and this value is expressed in bytes. For the GCDSA, GUDSA, and GSDSA, the page size is 1 MB and this value is expressed in megabytes.
Lowest free storage	The smallest amount of free storage in this DSA since the last time that statistics were recorded. Free storage is the number of free pages multiplied by the page size. For the CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, ERDSA, and ETDSA, the page size is 4 KB and this value is expressed in bytes. For the GCDSA, GUDSA, and GSDSA, the page size is 1 MB and this value is expressed in megabytes.
Getmain requests	The number of GETMAIN requests from the CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, ERDSA, ETDSA, GCDSA, GUDSA, or GSDSA.
Freemain requests	The number of FREEMAIN requests from the CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, ERDSA, ETDSA, GCDSA, GUDSA, or GSDSA.
Times no storage returned	The number of times a GETMAIN request with SUSPEND(NO) returned the condition INSUFFICIENT_STORAGE.

Table 147. Storage manager: Summary dynamic storage areas statistics (continued)

DFHSTUP name	Description
Times request suspended	The number of times a GETMAIN request with SUSPEND(YES) was suspended because of insufficient storage to satisfy the request at that moment.
Peak requests suspended	The peak number of GETMAIN requests that were suspended for storage.
Purged while waiting	The number of requests that were purged while suspended for storage.
Times cushion released	The number of times a GETMAIN request caused the storage cushion to be released. The cushion is said to be released when the number of free pages drops below the number of pages in the cushion and there are no more free extents available to increase the size of this DSA.
Times went short on storage	The number of times CICS went SOS in this DSA, where SOS means that the cushion is currently in use, or at least one task is suspended for storage, or both.
Total time SOS	The accumulated time that CICS has been SOS in this DSA.
Storage violations	The number of storage violations recorded in the DSA.
Access	The type of access of the DSA. Values are CICS, USER, READONLY, or TRUSTED. If storage protection is not active, storage areas revert to an access type of CICS, except for those in the RDSA or ERDSA.
Current extents	The number of extents currently allocated to this DSA.
Extents added	The number of extents added to the DSA since the last time statistics were recorded.
Extents released	The number of extents that were released from the DSA since the last time statistics were recorded.

Storage manager: Summary task subpools statistics

This report shows summary information and statistics about task subpools.

Summary statistics are not available online.

The following fields are mapped by the SMTBODY DSECT within the DFHSMTDS DSECT. The SMTBODY DSECT is repeated for each task subpool in the CICS region (SMTNTASK).

Table 148. Storage manager: Summary task subpools statistics

DFHSTUP name	Description
DSA Name	The name of the dynamic storage area from which this task storage has been allocated. Values can be CDSA, UDSA, ECDSA, EUDSA, GCDSA, and GUDSA.
Access	The type of access of the subpool. Access type can be CICS (key 8) or USER (key 9).
Getmain Requests	The total number of task subpool GETMAIN requests from this dynamic storage area.
Freemain Requests	The total number of task subpool FREEMAIN requests from this dynamic storage area.
Peak Elements	The peak of the current number of elements in all the task subpools in this dynamic storage area.
Peak Elem Stg	The peak of the current amount of storage occupied by all elements in task subpools within this dynamic storage area, expressed in bytes.
Peak Page Stg	The peak page storage allocated to support task storage activity in this dynamic storage area.

Table manager statistics

Table manager: Global statistics

You can retrieve table manager global statistics by using the **EXEC CICS COLLECT STATISTICS TABLEMGR** system command. They are mapped by the DFHA16DS DSECT.

Table 149. Table manager: Global statistics. Apart from the first field, the following fields are mapped by the A16STATS DSECT, which is repeated for each table (A16NTAB).

DFHSTUP name	Field name	Description
NOT IN THE DFHSTUP REPORT	A16NTAB	is the number of tables defined to the table manager. Reset characteristic: not reset
Table Name	A16TNAM	is the name of a CICS table supported by the table manager. Reset characteristic: not reset
Total Size of Table Manager Storage (bytes)	A16TSIZE	is the amount of storage, expressed in bytes, used by the table manager to support the table named in the Table Name field (for example, for scatter tables and directory segments). This does not include storage used by the tables themselves. Reset characteristic: not reset

Related reference:

COLLECT STATISTICS

Table manager: Summary global statistics

Table manager summary global statistics are not available online.

Table 150. Table manager: Summary global statistics

DFHSTUP name	Description
Table Name	is the name of a CICS table supported by the table manager.
Average Table Size (bytes)	is the average amount of storage, expressed in bytes, used by the table manager to support the table named in the Table Name field (for example, for scatter tables and directory segments). This does not include storage used by the tables themselves.
Peak Table Size (bytes)	is the peak amount of storage, expressed in bytes, used by the table manager to support the table named in the Table Name field (for example, for scatter tables and directory segments). This does not include storage used by the tables themselves.

TCP/IP global and TCP/IP Service statistics

TCP/IP support is the basis for CICS web support and web services in CICS. Each port on which TCP/IP requests can be received is defined by a TCPIPSERVICE resource definition. The statistics include global statistics and statistics for each TCPIPSERVICE definition.

DFH0STAT reports: See TCP/IP report and TCP/IP services report

Related reference:

"TCP/IP report" on page 465
The TCP/IP report is produced using a combination of **EXEC CICS INQUIRE TCPIP** and **EXEC CICS EXTRACT STATISTICS TCPIP** commands. The statistics data is mapped by the **DFHSOGDS DSECT**.

"TCP/IP services report" on page 468
The TCP/IP services report is produced using a combination of **EXEC CICS INQUIRE TCPIPSERVICE** and **EXEC CICS EXTRACT STATISTICS TCPIPSERVICE** commands. The statistics data is mapped by the **DFHSORDS DSECT**.

TCP/IP: Global statistics

You can retrieve TCP/IP global statistics by using the **EXEC CICS EXTRACT STATISTICS TCPIP** system command. They are mapped by the DFHSOGDS DSECT.

Table 151. TCP/IP: Global statistics

DFHSTUP name	Field name	Description
Current number of inbound sockets	SOG_CURR_INBOUND_SOCKETS	is the current number of inbound sockets. Reset characteristic: not reset
Current number of non-persistent inbound sockets	SOG_CURR_NPERS_INB_SOCKETS	is the current number of non-persistent inbound sockets. Reset characteristic: reset to zero
Peak number of inbound sockets	SOG_PEAK_INBOUND_SOCKETS	is the peak number of inbound sockets. Reset characteristic: reset to current

Table 151. TCP/IP: Global statistics (continued)

DFHSTUP name	Field name	Description
Peak number of non-persistent inbound sockets	SOG_PEAK_NPERS_INB_SOCKETS	is the peak number of non-persistent inbound sockets. Reset characteristic: reset to current
Peak number of persistent inbound sockets	SOG_PEAK_PERS_INB_SOCKETS	is the peak number of persistent inbound sockets. Reset characteristic: reset to current
Total number of inbound sockets created	SOG_INB_SOCKETS_CREATED	is the total number of inbound sockets created. Reset characteristic: reset to zero
Total number of non-persistent inbound sockets created	SOG_NPERS_INB_SOCKETS_CREATED	is the total number of non-persistent inbound sockets created. Reset characteristic: reset to zero
Current number of non-persistent outbound sockets	SOG_CURR_OUTB_SOCKETS	is the current number of non-persistent outbound sockets. Reset characteristic: not reset
Current number of persistent outbound sockets	SOG_CURR_PERS_OUTB_SOCKETS	is the current number of persistent outbound sockets. Reset characteristic: not reset
Peak number of outbound sockets	SOG_PEAK_BOTH_OUTB_SOCKETS	is the peak number of both persistent and non-persistent outbound sockets. Reset characteristic: reset to current
Peak number of non-persistent outbound sockets	SOG_PEAK_OUTB_SOCKETS	is the peak number of non-persistent outbound sockets. Reset characteristic: reset to current
Peak number of persistent outbound sockets	SOG_PEAK_PERS_OUTB_SOCKETS	is the peak number of persistent outbound sockets. Reset characteristic: reset to current
Total number of times outbound sockets reused	SOG_TIMES_OUTB_REUSED	is the total number of times a pooled connection was reused. Reset characteristic: reset to zero
Total number of outbound sockets created	SOG_OUTB_SOCKETS_CREATED	is the total number of outbound sockets created. Reset characteristic: reset to zero
Total number of persistent outbound sockets created	SOG_PERS_OUTBOUND_CREATED	is the total number of persistent outbound sockets created. Reset characteristic: reset to zero
Total number of outbound sockets closed	SOG_OUTB_SOCKETS_CLOSED	is the total number of outbound sockets closed. Reset characteristic: reset to zero
Total number of inbound and outbound sockets created	SOG_INB_SOCKETS_CREATED + SOG_OUTB_SOCKETS_CREATED	is the total number of inbound and outbound sockets created. Reset characteristic: reset to zero

Table 151. TCP/IP: Global statistics (continued)

DFHSTUP name	Field name	Description
SSLCACHE setting	SOG_SSLCACHE	reports whether SSL caching is taking place locally within a CICS region, or across a sysplex.
Current MAXSOCKETS limit	SOG_MAXSOCKETS_LIMIT	Reset characteristic: not reset is the maximum number of IP sockets that can be managed by the CICS sockets domain.
Number of times the MAXSOCKETS limit was reached	SOG_TIMES_AT_MAX_SOCKETS	Reset characteristic: not reset is the number of times the maximum number of IP sockets limit (MAXSOCKETS) was reached.
Number of create socket requests delayed by MAXSOCKETS limit	SOG_DELAYED_AT_MAX_SOCKETS	Reset characteristic: reset to zero is the number of create socket requests that were delayed because the system had reached the MAXSOCKETS limit.
Total MAXSOCKETS delay time	SOG_QTIME_AT_MAX_SOCKETS	Reset characteristic: reset to zero is the total time that create socket requests were delayed because the system had reached the MAXSOCKETS limit.
Number of create sockets requests timed out at MAXSOCKETS	SOG_TIMEDOUT_AT_MAX_SOCKETS	Reset characteristic: reset to zero is the number of create socket requests that were timed out while delayed because the system had reached the MAXSOCKETS limit.
Current create socket requests delayed by MAXSOCKETS limit	SOG_CURR_DELAYED_AT_MAX	Reset characteristic: reset to zero is the current number of create socket requests delayed because the system is at the MAXSOCKETS limit.
Peak create socket requests delayed at MAXSOCKETS	SOG_PEAK_DELAYED_AT_MAX	Reset characteristic: not reset is the peak number of create socket requests delayed because the system is at the MAXSOCKETS limit.
Current MAXSOCKETS delay time	SOG_CURRENT_QTIME_AT_MAX	Reset characteristic: reset to current is the current total delay time for the create socket requests that are currently delayed because the system is at the MAXSOCKETS limit.
Performance tuning for HTTP connections	SOG_SOTUNING	Reset characteristic: not reset indicates whether performance tuning for HTTP connections is enabled.
Socket listener has paused listening for HTTP connections	SOG_PAUSING_HTTP_LISTENING	Reset characteristic: not reset indicates whether the listener has paused listening for HTTP connection requests because the number of tasks in the region has reached the limit for accepting new HTTP connection requests.

Table 151. TCP/IP: Global statistics (continued)

DFHSTUP name	Field name	Description
Number of times socket listener notified at task accept limit	SOG_TIMES_AT_ACCEPT_LIMIT	is the number of times the listener has been notified that the number of tasks in the region has reached the limit for accepting new HTTP connection requests. Reset characteristic: reset to zero
Last time socket listener paused listening for HTTP connections	SOG_TIME_LAST_PAUSED_HTTP_LISTENING	is the last time the socket listener paused listening for HTTP connection requests because the number of tasks in the region had reached the limit for accepting new HTTP connection requests. The DFHSTUP report expresses this time as `day/month/year hours:minutes:seconds:decimals`; however, the DSECT field contains the time as a store clock (STCK) value in local time. If the DFHSTUP report shows the date and time as `--/--/---- --:--:--:----`, that indicates that the listener has never paused listening for HTTP connection requests since the statistics were last reset. Reset characteristic: reset to zero
Region stopping HTTP connection persistence	SOG_STOPPING_PERSISTENCE	indicates whether the region is closing existing persistent connections when their next request completes and is making new connections non-persistent, because the number of tasks in the region has exceeded the limit. Reset characteristic: not reset
Number of times region stopped HTTP connection persistence	SOG_TIMES_STOPPED_PERSISTENT	is the number of times the region took action to close existing persistent connections when their next request completes and make new connections non-persistent, because the number of tasks in the region had exceeded the limit. Reset characteristic: reset to zero
Last time stopped HTTP connection persistence	SOG_TIME_LAST_STOPPED_PERSISTENT	is the last time the region took action to close existing persistent connections when their next request completes and make new connections non-persistent, because the number of tasks in the region had exceeded the limit. The DFHSTUP report expresses this time as `day/month/year hours:minutes:seconds:decimals`; however, the DSECT field contains the time as a store clock (STCK) value in local time. If the DFHSTUP report shows the date and time as `--/--/---- --:--:--:----`, that indicates that this situation has not occurred since the statistics were last reset. Reset characteristic: reset to zero

Table 151. TCP/IP: Global statistics (continued)

DFHSTUP name	Field name	Description
Number of persistent connections made non-persistent	SOG_TIMES_MADE_NON_PERSISTENT	is the number of times a persistent HTTP connection was made non-persistent because the number of tasks in the region had exceeded the limit. Reset characteristic: reset to zero
Number of times disconnected an HTTP connection at max uses	SOG_TIMES_CONN_DISC_AT_MAX	is the number of times a persistent HTTP connection was disconnected because the number of uses had exceeded the limit. Reset characteristic: reset to zero

Related information:

EXTRACT STATISTICS

TCP/IP: Summary global statistics

TCP/IP summary global statistics are not available online.

Table 152. TCP/IP: Summary global statistics

DFHSTUP name	Description
Peak number of inbound sockets	is the peak number of inbound sockets.
Peak number of non-persistent inbound sockets	is the peak number of non-persistent inbound sockets.
Peak number of persistent inbound sockets	is the peak number of persistent inbound sockets.
Total number of inbound sockets created	is the total number of inbound sockets created.
Total number of non-persistent inbound sockets created	is the total number of non-persistent inbound sockets created.
Peak number of outbound sockets	is the peak number of both persistent and non-persistent outbound sockets.
Peak number of non-persistent outbound sockets	is the peak number of non-persistent outbound sockets.
Peak number of persistent outbound sockets	is the peak number of persistent outbound sockets.
Total number of times outbound sockets reused	is the total number of times a pooled connection was reused.
Total number of outbound sockets created	is the total number of outbound sockets created.
Total number of persistent outbound sockets created	is the total number of persistent outbound sockets created.
Total number of outbound sockets closed	is the total number of outbound sockets closed.
Total number of inbound and outbound sockets created	is the total number of inbound and outbound sockets created.
SSLCACHE setting	reports whether SSL caching is taking place locally within a CICS region, or across a sysplex.
MAXSOCKETS limit	is the maximum number of IP sockets that can be managed by the CICS sockets domain.

Table 152. TCP/IP: Summary global statistics (continued)

DFHSTUP name	Description
Times the MAXSOCKETS limit was reached	is the number of times the maximum number of IP sockets limit (MAXSOCKETS) was reached.
Total number of create socket requests timed out at MAXSOCKETS	is the total number of create socket requests that were timed out while delayed because the system had reached the MAXSOCKETS limit.
Peak number of create socket requests delayed at MAXSOCKETS	is the peak number of create socket requests delayed becuase the system was at the MAXSOCKETS limit.
Total number of create socket requests delayed at MAXSOCKETS	is the total number of create socket requests that were delayed because the system had reached the MAXSOCKETS limit.
Total MAXSOCKETS delay time	is the total time that create socket requests were delayed because the system had reached the MAXSOCKETS limit.
Average MAXSOCKETS delay time	is the average time that create socket requests were delayed because the system had reached the MAXSOCKETS limit.

TCP/IP services: Resource statistics

You can retrieve TCP/IP services resource statistics by using the **EXEC CICS EXTRACT STATISTICS TCPIPSERVICE** system command. They are mapped by the TCPIPSERVICE and the DFHSORDS DSECTs.

Table 153. TCP/IP Services: resource statistics

DFHSTUP name	Field name	Description
TCPIPSERVICE Name	SOR_SERVICE_NAME	The name of the TCP/IP service. Reset characteristic: not reset
TCPIPSERVICE Open Date/Time	SOR_OPEN_LOCAL	The date and time on which this TCP/IP service was opened. If this field is not set, SOR_OPEN_LOCAL contains the hexadecimal value X'0000000000000000', shown in the report as "CLOSED". If the field is set, it contains a date expressed in *mm/dd/yyyy* format. This field contains a valid date if the following statements apply: • The TCP/IP service is open at the time the statistics are taken. • The statistics request is unsolicited because the TCP/IP service is closed. Reset characteristic: not reset
TCPIPSERVICE Close Date/Time	SOR_CLOSE_LOCAL	The date and time on which this TCP/IP service was closed. If this field is not set, SOR_CLOSE_LOCAL contains the hexadecimal value X'0000000000000000', shown in the report as "OPEN". If the field is set, it contains a time expressed as a store clock (STCK) value in local time. Reset characteristic: not reset
TCPIPSERVICE Protocol	SOR_PROTOCOL	The protocol defined for this TCP/IP service. This protocol can be “ECI”, “HTTP”, “IIOP”, “IPIC", "USER", or blank (which means HTTP). Reset characteristic: not reset

Table 153. TCP/IP Services: resource statistics (continued)

DFHSTUP name	Field name	Description
TCPIPSERVICE Port	SOR_PORT_NUMBER	The port number being used for this TCP/IP service. Reset characteristic: not reset
TCPIPSERVICE Host	SOR_HOSTNAME	The hostname or IPv4 or IPv6 address of the remote system. Reset characteristic: not reset
TCPIPSERVICE IP Family	SOR_IP_FAMILY	The address format of the address returned in IP Resolved Address. Reset characteristic: not reset
TCPIPSERVICE IP Resolved Address	SOR_IP_ADDRESS	The IPv4 or IPv6 resolved address of the host. Reset characteristic: not reset
TCPIPSERVICE Transaction ID	SOR_TCPIPS_TRANID	The ID of the CICS transaction attached to process new requests received for this service. Reset characteristic: not reset
TCPIPSERVICE Backlog Setting	SOR_BACKLOG	The initial backlog setting for the TCP/IP service. The setting controls the maximum number of connection requests that are allowed to queue in the backlog queue for the TCP/IP service before it starts to reject incoming connections. This is per stack if the TCP/IP service is listening on multiple stacks. Reset characteristic: not reset
TCPIPSERVICE URM	SOR_TCPIPS_URM	The name of a user-replaceable program to be called by this service. Reset characteristic: not reset
Current Maximum Backlog	SOR_CURR_MAX_BACKLOG	The maximum number of connection requests that the TCP/IP service currently allows in its backlog queue, summed over all appropriate stacks if the TCP/IP service is listening on multiple stacks. This value can be greater than the TCPIPSERVICE Backlog Setting (SOR_BACKLOG) of the TCP/IP service because the TCP/IP service might temporarily increase this value if, for example, it determines that there is a SYN flood. Reset characteristic: not reset by CICS
TCPIPSERVICE SSL Type	SOR_SSL_SUPPORT	The level of SSL support defined for this TCP/IP service. Reset characteristic: not reset
TCPIPSERVICE Maxdata	SOR_MAXDATA_LENGTH	The maximum length of data that can be received on this TCP/IP service. Reset characteristic: not reset

Table 153. TCP/IP Services: resource statistics (continued)

DFHSTUP name	Field name	Description
TCPIPSERVICE Authenticate	SOR_AUTHENTICATE	The authentication and identification scheme specified for this TCP/IP service. Reset characteristic: not reset
TCPIPSERVICE Privacy	SOR_PRIVACY	The level of SSL encryption support that applies to this TCP/IP service. Reset characteristic: not reset
TCPIPSERVICE Attachsec	SOR_ATTACHSEC	The level of attach-time security required for this TCP/IP service. Reset characteristic: not reset
Current Connections	SOR_CURRENT_CONNS	The current number of connections for the TCP/IP service. Reset characteristic: reset to zero
Peak Connections	SOR_PEAK_CONNS	The peak number of connections for the TCP/IP service. Reset characteristic: reset to zero
Transactions Attached	SOR_TRANS_ATTACHED	The number of transactions attached by the TCP/IP service. Reset characteristic: reset to zero
Total Connections	SOR_TOTAL_CONNS	The total number of connections made for the TCP/IP service. Reset characteristic: reset to zero
Send requests	SOR_SENDS	The number of send requests issued for the TCP/IP service. Reset characteristic: reset to zero
Total Bytes Sent	SOR_BYTES_SENT	The number of bytes sent for the TCP/IP service. Reset characteristic: reset to zero
Receive requests	SOR_RECEIVES	The number of receive requests issued for the TCP/IP Service. Reset characteristic: reset to zero
Total Bytes Received	SOR_BYTES_RECEIVED	The number of bytes received for the TCP/IP service. Reset characteristic: reset to zero
Requests processed	SOR_REQUESTS	The number of requests processed by the TCP/IP service. Reset characteristic: reset to zero
Maximum Persistent Connections	SOR_TCPIPS_MAX_PERSIST	The maximum number of persistent connections from Web clients that the CICS region accepts at any one time. Reset characteristic: not reset

Table 153. TCP/IP Services: resource statistics (continued)

DFHSTUP name	Field name	Description
Non-Persistent Connections	SOR_TCPIPS_NON_PERSIST	The number of connections where CICS did not allow the Web client to have a persistent connection. Reset characteristic: reset to zero
Made non-persistent at MAXPERSIST	SOR_NONP_AT_MAXPERSIST	The number of times a new persistent connection was made non-persistent because MAXPERSIST was reached. Reset characteristic: reset to zero
Disconnected after maximum uses	SOR_DISC_AT_MAX_USES	The number of times a persistent HTTP connection was disconnected because its number of uses had exceeded the limit. Reset characteristic: reset to zero
Made non-persistent at task limit	SOR_NONP_AT_TASK_LIMIT	The number of times a new persistent HTTP connection was made non-persistent because the number of tasks in the region has exceeded the limit. Reset characteristic: reset to zero
Disconnected at task limit	SOR_DISC_AT_TASK_LIMIT	The number of times an existing persistent HTTP connection was closed because the number of tasks in the region has exceeded the limit. Reset characteristic: reset to zero
Current backlog	SOR_CURR_BACKLOG	The current number of connection requests waiting in the backlog queue, summed over all appropriate stacks if the TCP/IP service is listening on multiple stacks. Reset characteristic: not reset
Connections dropped	SOR_CONNS_DROPPED	The total number of connections that were dropped because the backlog queue was full. Reset characteristic: not reset by CICS
Time connection last dropped	SOR_CONN_LAST_DROPPED	The time that a connection was last rejected because the backlog queue of the TCP/IP service was full. Reset characteristic: not reset by CICS
Not in DFHSTUP report	SOR_SERVICE_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	SOR_SERVICE_CHANGE_TIME	The time stamp (STCK) in local time of the CSD record change. Reset characteristic: not reset
Not in DFHSTUP report	SOR_SERVICE_CHANGE_USERID	The user ID that ran the CHANGE_AGENT. Reset characteristic: not reset

Table 153. TCP/IP Services: resource statistics (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	SOR_SERVICE_CHANGE_AGENT	The agent that was used to make the last change. Reset characteristic: not reset
Not in DFHSTUP report	SOR_SERVICE_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	SOR_SERVICE_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	SOR_SERVICE_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Related information:

EXTRACT STATISTICS

TCP/IP services: Summary resource statistics

A summary listing of resource statistics for a TCPIPSERVICE resource.

Summary statistics are not available online.

Table 154. TCP/IP services: summary resource statistics

DFHSTUP name	Description
TCPIPSERVICE Name	The name of the TCPIPSERVICE resource.
TCPIPSERVICE Protocol	The protocol defined for this TCPIPSERVICE resource. This can be ECI, HTTP, IPIC, USER, or blank (which means HTTP).
TCPIPSERVICE Port	The port number being used for this TCPIPSERVICE resource.
TCPIPSERVICE Host	The hostname, IPv4 or IPv6 address of the remote system.
TCPIPSERVICE IP Family	The address format of the address returned in IP Address.
TCPIPSERVICE IP Address	The IPv4 or IPv6 resolved address of the host.
TCPIPSERVICE Transaction ID	The ID of the CICS transaction attached to process new requests received for this service.
TCPIPSERVICE Backlog Setting	The port backlog defined for this TCP/IP service.
TCPIPSERVICE URM	The name of a user-replaceable program to be called by this service.
TCPIPSERVICE Maxdata	The maximum length of data that can be received on this TCP/IP service.

Table 154. TCP/IP services: summary resource statistics (continued)

DFHSTUP name	Description
TCPIPSERVICE SSL Type	The level of SSL support defined for this TCP/IP service.
TCPIPSERVICE Authenticate	The authentication and identification scheme specified for this TCP/IP service.
TCPIPSERVICE Privacy	The level of SSL encryption support that applies to this TCP/IP service.
TCPIPSERVICE Attachsec	The level of attach-time security required for this TCP/IP service.
Peak Connections	The peak number of connections for the TCP/IP service.
Transactions Attached	The total number of transactions attached for the TCP/IP service.
Total Connections	The total number of connections made for the TCP/IP service.
Send requests	The total number of send requests issued for the TCP/IP service.
Total Bytes Sent	The total number of bytes sent for the TCP/IP service.
Receive requests	The total number of receive requests issued for the TCP/IP service.
Total Bytes Received	The number of bytes received for the TCP/IP service.
Requests processed	The number of requests processed by the TCP/IP service.
Maximum Persistent Connections	The maximum number of persistent connections from web clients that the CICS region accepts at any one time.
Non-Persistent Connections	The number of connections where CICS did not allow the web client to have a persistent connection.
Non-persistent at MAXPERSIST	The number of times a new persistent connection was made non-persistent because MAXPERSIST was reached.
Disconnected after maximum uses	The number of times a persistent HTTP connection was disconnected because its number of uses had exceeded the limit.
Non-persistent at task limit	The number of times a new persistent HTTP connection was made non-persistent because the number of tasks in the region has exceeded the limit.
Disconnected at task limit	The number of times an existing persistent HTTP connection was closed because the number of tasks in the region has exceeded the limit.
Peak backlog queue depth	The peak number of connection requests that has been recorded waiting in the backlog queue, summed over all appropriate stacks if the TCP/IP service is listening on multiple stacks.
Connections dropped	The total number of connections that were dropped because the backlog queue was full.
Time connection last dropped	The time that a connection was last rejected because the backlog queue of the TCP/IP service was full.

Temporary storage statistics

Temporary storage statistics are produced for the data that is written into a temporary storage queue.

For more information about how to use these statistics, see CICS temporary storage: Performance and tuning.

Related concepts:

"Interpreting temporary storage statistics" on page 282
If a data item is written to temporary storage (using WRITEQ TS), a temporary storage queue is built and temporary storage statistics are produced.

Related reference:

"Temporary Storage report" on page 471
The Temporary Storage report is produced using the **EXEC CICS EXTRACT STATISTICS TSQUEUE** command. The statistics data is mapped by the **DFHTSGDS DSECT**.

"Temporary Storage Main - Storage Subpools report" on page 475
The Temporary Storage Main - Storage Subpools report is produced using the **EXEC CICS EXTRACT STATISTICS STORAGE** command. The statistics data is mapped by the **DFHSMDDS**.

"Temporary Storage Queues report" on page 477
The Temporary Storage Queues report is produced using the **EXEC CICS INQUIRE TSQUEUE** command.

"Tsqueue Totals report" on page 482
The Tsqueue Totals report shows totals that are calculated from data gathered using the **EXEC CICS INQUIRE TSQUEUE** command.

"Temporary Storage Queues by Shared TS Pool report" on page 477
The Temporary Storage Queues by Shared TS Pool report shows temporary storage queues that are in shared TS Pools on the TS Pool servers. These temporary storage queues might or might not currently be in the address space of your system. If they are not in the address space of your system, they are not shown on the other temporary storage queue reports.

"Temporary Storage Models report" on page 476
The Temporary Storage Models report is produced using the **EXEC CICS INQUIRE TSMODEL** command.

Interpreting temporary storage statistics

If a data item is written to temporary storage (using WRITEQ TS), a temporary storage queue is built and temporary storage statistics are produced.

The following statistics might require the actions described:

Writes more than control interval
The number of writes of records whose length was greater than the control interval (CI) size of the TS data set. Use this value to adjust the CI size. If the reported value is large, increase the CI size. If the value is zero, consider reducing the CI size until a small value is reported.

Times aux. storage exhausted
The number of situations where one or more transactions might have been suspended because of a NOSPACE condition, or might have been forced to abend (by using a HANDLE CONDITION NOSPACE command, or using RESP on the WRITEQ TS command, or WRITEQ TS NOSUSPEND command). If this item appears in the statistics, increase the size of the temporary storage data set.

Buffer writes
The number of WRITEs to the temporary storage data set. This includes both WRITEs required for recovery and WRITEs required when the buffer is needed to accommodate another control interval (CI). To minimize input/output activity caused by the second situation, increase buffer allocation. Use the system initialization parameter, TS=(*b*,*s*), where *b* is the number of buffers and *s* is the number of strings.

Peak number of strings in use
The peak number of concurrent I/O operations to the data set. If this is

significantly less than the number of strings specified in the **TS** system initialization parameter, consider reducing the SIT value to approach this number.

Times string wait occurred
The number of input/output requests that were queued because no strings were available. If this value is not zero, consider increasing the number of strings. For details about adjusting the size of the TS data set and the number of strings and buffers, see Storage calculations for temporary storage data sharing.

Temporary storage: Global statistics

You can retrieve temporary storage global statistics by using the **EXEC CICS EXTRACT STATISTICS TSQUEUE** system command. They are mapped by the DFHTSGDS DSECT.

Table 155. Temporary storage: Global statistics

DFHSTUP name	Field name	Description
Put/Putq main storage requests	TSGSTA5F	The number of records that application programs wrote to main temporary storage. Reset characteristic: reset to zero
Get/Getq main storage requests	TSGNMG	The number of records that application programs obtained from main temporary storage. Reset characteristic: reset to zero
Current TSMAINLIMIT setting	TSGTSMLM	The current limit for the amount of storage that CICS makes available for data in main temporary storage. This amount is expressed in bytes. Reset characteristic: not reset
Times at TSMAINLIMIT	TSGTSLHT	The number of times that main temporary storage use attempted to exceed the limit for the amount of storage allowed for data. Reset characteristic: reset to zero
Current storage used for TSMAINLIMIT	TSGTSMUS	The amount of storage that is currently in use for data in main temporary storage. This amount is expressed in bytes. Reset characteristic: not reset
Peak storage used for TSMAINLIMIT	TSGTSMAX	The peak amount of storage that was used for data in main temporary storage. This amount is expressed in bytes. Reset characteristic: reset to current value

Table 155. Temporary storage: Global statistics (continued)

DFHSTUP name	Field name	Description
Number of queues auto deleted	TSGTSQDL	The number of temporary storage queues that CICS has deleted automatically by using the clean up task. Reset characteristic: reset to zero
Count of clean up task runs	TSGTSCTR	The number of times that the clean up task, which deletes eligible temporary storage queues automatically, has run. Reset characteristic: reset to zero
Put/Putq auxiliary storage requests	TSGSTA7F	The number of records that application programs wrote to auxiliary temporary storage. Reset characteristic: reset to zero
Get/Getq auxiliary storage requests	TSGNAG	The number of records that application programs obtained from auxiliary temporary storage. Reset characteristic: reset to zero
Peak temporary storage names in use	TSGQNUMH	The peak number of temporary storage queue names in use at any one time. Reset characteristic: reset to current value
Current temporary storage names in use	TSGQNUM	The current number of temporary storage queue names in use. Reset characteristic: not reset
Number of entries in longest queue	TSGQINH	The peak number of items in any one temporary storage queue, up to a maximum of 32767. Reset characteristic: reset to zero
Times queues created	TSGSTA3F	The number of times that CICS created individual temporary storage queues. Reset characteristic: reset to zero
Control interval size	TSGCSZ	The size of the VSAM unit of transmission between DASD and main storage, specified in the CONTROLINTERVALSIZE parameter in the VSAM CLUSTER definition for the temporary storage data set. In general, using large control intervals (CIs) permits more data to be transferred at one time, resulting in less system overhead. Reset characteristic: not reset

Table 155. Temporary storage: Global statistics (continued)

DFHSTUP name	Field name	Description
Available bytes per control interval	TSGNAVB	The number of bytes available for use in the temporary storage data set control interval. Reset characteristic: not reset
Segments per control interval	TSGSPCI	The number of segments available in each temporary storage data set control interval. Reset characteristic: not reset
Bytes per segment	TSGBPSEG	The number of bytes per segment of the temporary storage data set. Reset characteristic: not reset
Writes more than control interval	TSGSTABF	The number of writes of records whose length was greater than the control interval (CI) size. If the reported value is large, increase the CI size. If the value is zero, consider reducing the CI size until a small value is reported. Reset characteristic: reset to zero
Longest auxiliary temp storage record	TSGLAR	The size, expressed in bytes, of the longest record written to the temporary storage data set. Reset characteristic: not reset
Number of control intervals available	TSGNCI	The number of control intervals (CIs) available for auxiliary temporary storage. This is the total available space on the temporary storage data set, expressed as a number of control intervals. This is not the space remaining at termination. Reset characteristic: not reset
Peak control intervals in use	TSGNCIAH	The peak number of control intervals (CIs) that contain active data. Reset characteristic: reset to current value
Current control intervals in use	TSGNCIA	The current number of control intervals (CIs) that contain active data. Reset characteristic: not reset

Table 155. Temporary storage: Global statistics (continued)

DFHSTUP name	Field name	Description
Times aux. storage exhausted	TSGSTA8F	The number of situations where one or more transactions might have been suspended because of a NOSPACE condition, or might have been forced to end abnormally (by using a HANDLE CONDITION NOSPACE command). If statistics are present for this field, increase the size of the temporary storage data set. Reset characteristic: reset to zero
Number of temp. storage compressions	TSGSTA9F	The number of times that the temporary storage buffers were compressed. Reset characteristic: reset to zero
Temporary storage buffers	TSGNBCA	The number of temporary storage buffers specified in the TS= system initialization parameter, or in the overrides. The number of buffers allocated might exceed the number requested. Reset characteristic: not reset
Buffer waits	TSGBWTN	The number of times a request was queued because all buffers were allocated to other tasks. A buffer wait also occurs if the required control interval is already in a locked buffer, and therefore unavailable, even if there are other buffers available. Reset characteristic: reset to zero
Peak users waiting on buffer	TSGBUWTH	The peak number of requests queued because no buffers were available. Reset characteristic: reset to current value
Current users waiting on buffer	TSGBUWT	The current number of requests queued because no buffers are available. Reset characteristic: not reset
Buffer writes	TSGTWTN	The number of WRITEs to the temporary storage data set. This includes both WRITEs required for recovery (see Forced writes for recovery) and WRITEs required when the buffer is needed to accommodate another control interval (CI). To minimize input/output activity caused by the second situation, increase buffer allocation. Reset characteristic: reset to zero
Forced writes for recovery	TSGTWTNR	The subset of the total number of WRITEs caused by recovery being specified for queues. This input/output activity is not affected by buffer allocation. Reset characteristic: reset to zero

Table 155. Temporary storage: Global statistics (continued)

DFHSTUP name	Field name	Description
Buffer reads	TSGTRDN	The number of times a control interval (CI) must be read from disk. To decrease this activity, increase the buffer allocation. Reset characteristic: reset to zero
Format writes	TSGTWTNF	The number of times a new control interval (CI) was successfully written at the end of the data set to increase the amount of available space in the data set. A formatted write is attempted only if the current number of CIs available in the auxiliary data set have all been used. Reset characteristic: reset to zero
Temporary storage strings	TSGNVCA	The number of temporary storage strings specified in the TS= system initialization parameter, or in the overrides. The number of strings allocated might exceed the number requested. Reset characteristic: not reset
Peak number of strings in use	TSGNVCAH	The peak number of concurrent input/output operations. If this is significantly less than the number specified in the system initialization table (SIT), consider reducing the SIT value to approach this number. Reset characteristic: reset to current value
Times string wait occurred	TSGVWTN	The number of input/output requests that were queued because no strings were available. If the number of strings is the same as the number of buffers, this number is zero. If this number is a high percentage (over 30%) of the total number of input/output requests (for this purpose, the sum of TSGTWTN, Buffer writes, and TSGTRDN, Buffer reads), consider increasing the number of strings initially allocated. Reset characteristic: reset to zero
Peak number of users waiting on string	TSGVUWTH	The peak number of input/output requests that were queued at any one time because all strings were in use. Reset characteristic: reset to current value
Current users waiting on string	TSGVUWT	The current number of input/output requests that are queued because all strings are in use. Reset characteristic: not reset

Table 155. Temporary storage: Global statistics (continued)

DFHSTUP name	Field name	Description
I/O errors on TS data set	TSGSTAAF	The number of input/output errors that occurred on the temporary storage data set. Normally, this number should be zero. If it is not, inspect the CICS and VSAM messages to determine the cause. Reset characteristic: reset to zero
Shared pools defined	TSGSHPDF	The number of unique shared TS queue pools defined to CICS. Reset characteristic: reset to zero
Shared pools currently connected	TSGSHPCN	The number of the shared TS pools that this CICS region is connected to. Reset characteristic: reset to zero
Shared read requests	TSGSHRDS	The number of TS READQs from the Shared TS Queue pool of TS queues. Reset characteristic: reset to zero
Shared write requests	TSGSHWTS	The number of TS WRITEQs to the Shared TS Queue pool of TS queues. Reset characteristic: reset to zero

Related information:

EXTRACT STATISTICS

Temporary storage: Summary global statistics

Temporary storage summary global statistics are not available online.

Table 156. Temporary storage: Summary global statistics

DFHSTUP name	Description
Put/Putq main storage requests	The number of records that application programs wrote to main temporary storage.
Get/Getq main storage requests	The number of records that application programs obtained from main temporary storage.
Current TSMAINLIMIT setting	The current limit for the amount of storage that CICS makes available for data in main temporary storage.
Times at TSMAINLIMIT	The number of times that main temporary storage use attempted to exceed the limit for the amount of storage allowed for data.

Table 156. Temporary storage: Summary global statistics (continued)

DFHSTUP name	Description
Peak storage used for TSMAINLIMIT	The peak amount of storage that was used for data in main temporary storage.
Number of queues auto deleted	The number of temporary storage queues that CICS has deleted automatically by using the clean up task.
Count of clean up task runs	The number of times that the clean up task, which deletes eligible temporary storage queues automatically, has run.
Put/Putq auxiliary storage requests	The number of records that application programs wrote to auxiliary temporary storage.
Get/Getq auxiliary storage requests	The number of records that application programs obtained from auxiliary temporary storage.
Peak temporary storage names in use	The peak number of temporary storage queue names in use at any one time.
Number of entries in longest queue	The peak number of items in any one temporary storage queue, up to a maximum of 32767.
Times queues created	The number of times that CICS created individual temporary storage queues.
Control interval size	The size of the VSAM unit of transmission between DASD and main storage, specified in the CONTROLINTERVALSIZE parameter in the VSAM CLUSTER definition for the temporary storage data set. In general, using large control intervals (CIs) permits more data to be transferred at one time, resulting in less system overhead.
Available bytes per control interval	The number of bytes available for use in the temporary storage data set control interval.
Segments per control interval	The number of segments available in each temporary storage data set control interval.
Bytes per segment	The number of bytes per segment of the temporary storage data set.
Writes more than control interval	The number of writes of records whose length was greater than the control interval (CI) size. If the reported value is large, increase the CI size. If the value is zero, consider reducing the CI size until a small value is reported.
Longest auxiliary temporary storage record	The size, expressed in bytes, of the longest record written to the temporary storage data set.
Number of control intervals available	The number of control intervals (CIs) available for auxiliary temporary storage. This is the total available space on the temporary storage data set, expressed as a number of control intervals. This is not the space remaining at termination.
Peak control intervals in use	The peak number of control intervals (CIs) that contain active data.

Table 156. Temporary storage: Summary global statistics (continued)

DFHSTUP name	Description
Times aux. storage exhausted	The number of situations where one or more transactions might have been suspended because of a NOSPACE condition, or might have been forced to end abnormally (by using a HANDLE CONDITION NOSPACE command). If statistics are present for this field, increase the size of the temporary storage data set.
Number of temp. storage compressions	The number of times that the temporary storage buffers were compressed.
Temporary storage buffers	The number of temporary storage buffers specified in the TS= system initialization parameter, or in the overrides. The number of buffers allocated might exceed the number requested.
Buffer waits	The number of times a request was queued because all buffers were allocated to other tasks. A buffer wait also occurs if the required control interval is already in a locked buffer, and therefore unavailable, even if there are other buffers available.
Peak users waiting on buffers	The peak number of requests queued because no buffers were available.
Buffer writes	The number of WRITEs to the temporary storage data set. This includes both WRITEs required for recovery (see Forced writes for recovery) and WRITEs required when the buffer is needed to accommodate another control interval (CI). To minimize input/output activity caused by the second situation, increase buffer allocation.
Forced writes for recovery	The subset of the total number of WRITEs caused by recovery being specified for queues. This input/output activity is not affected by buffer allocation.
Buffer reads	The number of times a control interval (CI) must be read from disk. To decrease this activity, increase the buffer allocation.
Format writes	The number of times a new control interval (CI) was successfully written at the end of the data set to increase the amount of available space in the data set. A formatted write is attempted only if the current number of CIs available in the auxiliary data set have all been used.
Temporary storage strings	The number of temporary storage strings specified in the TS= system initialization parameter, or in the overrides. The number of strings allocated might exceed the number requested.
Peak number of strings in use	The peak number of concurrent input/output operations. If this is significantly less than the number specified in the system initialization table (SIT), consider reducing the SIT value to approach this number.
Times string wait occurred	The number of input/output requests that were queued because no strings were available. If the number of strings is the same as the number of buffers, this number is zero. If this number is a high percentage (over 30%) of the total number of input/output requests (for this purpose, the sum of TSGTWTN, Buffer writes, and TSGTRDN, Buffer reads), consider increasing the number of strings initially allocated.

Table 156. Temporary storage: Summary global statistics (continued)

DFHSTUP name	Description
Peak number of users waiting on string	The peak number of input/output requests that were queued at any one time because all strings were in use.
I/O errors on TS data set	The number of input/output errors that occurred on the temporary storage data set. Normally, this number should be zero. If it is not, inspect the CICS and VSAM messages to determine the cause.
Shared pools defined	The number of unique shared TS queue pools defined to CICS.
Shared pools currently connected	The number of the shared TS pools that this CICS region is connected to.
Shared read requests	The number of TS READQs from the Shared TS Queue pool of TS queues.
Shared write requests	The number of TS WRITEQs to the Shared TS Queue pool of TS queues.

Terminal control statistics

There are a number of ways in which terminal statistics are important for performance analysis. From them, you can get the number of inputs and outputs, that is, the loading of the system by users. Line-transmission faults and transaction faults are shown (these both have a negative influence on performance behavior).

Terminal control: Resource statistics

You can retrieve terminal control: resource statistics by using the **EXEC CICS COLLECT STATISTICS TERMINAL** system command. They are mapped by the DFHA06DS DSECT.

These statistics are gathered for each terminal, including ISC and IRC (MRO) sessions.

In addition to this, this DSECT should be used to map the terminal totals record.

Table 157. Terminal control: Resource statistics

DFHSTUP name	Field name	Description
Term Id	A06TETI	is the identifier of each terminal, which may have been statically defined, autoinstalled, or generated from the SESSIONS definition for a connection. Reset characteristic: not reset
LUname	A06LUNAM	is the terminal LU name. Reset characteristic: not reset
Terminal Type	A06TETT	is the terminal type as defined in the TCT. For information about terminal types and their codes, see ASSIGN TERMCODE. Reset characteristic: not reset
Acc Meth	A06EAMIB	is the terminal access method as defined in the TCT. This may be “SNA1”, “MRO”, “GAM”, “SNA2”, “BSAM”, or “VTAM” (now the z/OS Communications Server). For more information about access methods and their codes, see the DFHTCTTE DSECT in the *CICS Data Areas* guide. Reset characteristic: not reset

Table 157. Terminal control: Resource statistics (continued)

DFHSTUP name	Field name	Description
Conn ID	A06SYSID	is the owning connection name of this terminal/session. Reset characteristic: not reset
No. of Xactions	A06TEOT	is the number of transactions, both conversational and pseudoconversational, that were started at this terminal. The transaction count is less than input messages if conversational transactions are being used. Reset characteristic: reset to zero When the operator signs off, the transaction count is not reset. At this time, message DFHSN1200 is issued containing the transaction count for that operator.
Xaction Errors	A06TEOE	is the number of transactions associated with this particular terminal that could not be started. This could mean that a transaction identifier has not been defined in the CSD data set, or that the operator does not have the proper security to enter the transaction, or that the transaction has been disabled. Reset characteristic: reset to zero When the operator signs off, the transaction error count is not reset. At this time, message DFHSN1200 is issued containing the transaction error count for that operator.
Storage Viols	A06CSVC	is the number of storage violations that have occurred on this terminal. Reset characteristic: reset to zero
Input Messages For more information see1 on page 293	A06TENI	See note. Reset characteristic: reset to zero
Output Messages For more information see 1 on page 293	A06TENO	See note. Reset characteristic: reset to zero
Xmission Errors	A06TETE	is the number of errors for this terminal, or the number of disconnects for this session. Reset characteristic: reset to zero
Pipeline Message: NOT IN THE DFHSTUP REPORT	A06TCNT	is the total throwaway count. Reset characteristic: reset to zero
Pipeline Message: NOT IN THE DFHSTUP REPORT	A06SCNT	is the number of consecutive throwaways. Reset characteristic: reset to zero
Pipeline Message: NOT IN THE DFHSTUP REPORT	A06MCNT	is the maximum throwaway count. Reset characteristic: reset to zero
Pipeline Message: NOT IN THE DFHSTUP REPORT	A06PRTY	is the terminal priority Reset characteristic: not reset
Pipeline Message: TIOA Storage	A06STG	is the TIOA storage allowed at this terminal. Reset characteristic: reset to zero

Table 157. Terminal control: Resource statistics (continued)

DFHSTUP name	Field name	Description
Autoinstall Time: Logon	A06ONTM	is time at which this terminal/session was autoinstalled. This time is expressed as *hours:minutes:seconds.decimals*. The DSECT field contains the value as a store clock (STCK) value in local time. Reset characteristic: not reset
Autoinstall Time: Logoff	A06OFFTM	is the time at which this terminal/session was logged off. This time is expressed as *hours:minutes:seconds.decimals*. The DSECT field contains the value as a store clock (STCK) value in local time. Note that this field is only set on an Unsolicited Statistics (USS) record. Reset characteristic: not reset
Autoinstall Time: NOT IN THE DFHSTUP REPORT	A06GONTM	is the time at which this terminal/session was autoinstalled. The DSECT field contains the value as a store clock (STCK) value in GMT. Reset characteristic: not reset
Autoinstall Time: NOT IN THE DFHSTUP REPORT	A06GOFTM	is the time at which this terminal/session was logged off. The DSECT field contains the value as a store clock (STCK) value in GMT. Note that this field is only set on an Unsolicited Statistics (USS) record. Reset characteristic: not reset

Note:

1. Input messages (A06TENI) and output messages (A06TENO) are the amount of message activity per terminal. Input and output messages should represent the message traffic between CICS and the terminal. Input traffic should be the result of operator initiated input: that is, initial transaction input or input as a result of a conversational read to the terminal. Output messages should be output written by the application program or messages sent by CICS.

   Input and output messages can vary because of differences in the application program being used on different terminals. ATI-initiated transactions would typically not have terminal input but could result in one or many output messages. A batch oriented terminal could initiate a single transaction that did multiple reads to the terminal resulting in multiple input messages. The differences between the remote and local terminal counts may be a result of different applications that run on them. Otherwise, they should be similar.

Related reference:

COLLECT STATISTICS

Terminal control: Summary resource statistics

Terminal control summary resource statistics are not available online.

Table 158. Terminal control: Summary resource statistics

DFHSTUP name	Description
Term Id	is the identifier of each terminal, which may have been statically defined, autoinstalled, or generated from the SESSIONS definition for a connection.

Table 158. Terminal control: Summary resource statistics (continued)

DFHSTUP name	Description
LUname	is the terminal LU name.
Terminal Type	is the terminal type as defined in the TCT. For information about terminal types and their codes, see ASSIGN TERMCODE.
Acc Meth	is the terminal access method as defined in the TCT. This may be "SNA1", "MRO", "GAM", "SNA2", "BSAM", or "VTAM" (now z/OS Communications Server). For more information about access methods and their codes, see the DFHTCTTE DSECT in the *CICS Data Areas* guide.
Conn ID	is the last value found for the owning connection name for this terminal/session.
No. of Xactions	is the number of transactions, both conversational and pseudoconversational, that were started at this terminal. The transaction count is less than input messages if conversational transactions are being used. When the operator signs off, the transaction count is not reset. At this time, message DFHSN1200 is issued containing the transaction count for that operator.
Xaction Errors	is the number of transactions associated with this particular terminal that could not be started. This could mean that a transaction identifier has not been defined in the CSD data set, or that the operator does not have the proper security to enter the transaction, or that the transaction has been disabled. When the operator signs off, the transaction error count is not reset. At this time, message DFHSN1200 is issued containing the transaction error count for that operator.
Storage Viols	is the number of storage violations that have occurred on this terminal.
Input Messages	See note.
Output Messages	See note.
Xmission Errors	is the number of errors for this terminal, or the number of disconnects for this session.
Pipeline Message: Avg TIOA Storage	is the average TIOA storage used by this terminal.
Pipeline Message: Avg logged on time	is the average logged on time for an autoinstalled terminal/session. This field is blank if the terminal/session is not autoinstalled.

Note: Input messages and output messages are the amount of message activity per terminal. Input and output messages should represent the message traffic between CICS and the terminal. Input traffic should be the result of operator initiated input: that is, initial transaction input or input as a result of a conversational read to the terminal. Output messages should be output written by the application program or messages sent by CICS.

Input and output messages can vary because of differences in the application program being used on different terminals. ATI-initiated transactions would typically not have terminal input but could result in one or many output messages. A batch oriented terminal could initiate a single transaction that did multiple reads to the terminal resulting in multiple input messages. The differences between the remote and local terminal counts may be a result of different applications that run on them. Otherwise, they should be similar.

Transaction class (TCLASS) statistics

Related concepts:

"Interpreting transaction class (TRANCLASS) statistics" on page 313
If you are never at the limit of your transaction class setting, you might consider resetting its value, or review whether there is any need to continue specifying any transaction types with that class.

Related reference:

"Transaction Classes report" on page 486
The Transaction Classes report is produced using a combination of the **EXEC CICS INQUIRE TRANCLASS** and **EXEC CICS EXTRACT STATISTICS TRANCLASS** commands.

Transaction class: resource statistics

You can retrieve transaction class resource statistics by using the **EXEC CICS EXTRACT STATISTICS TRANCLASS** system command. They are mapped by the DFHXMCDS DSECT.

Table 159. Transaction class: resource statistics

DFHSTUP name	Field name	Description
Tclass Name	XMCTCL	The 8-character name of the transaction class. Reset characteristic: not reset
Number Trandfs	XMCITD	The number of installed transaction definitions that are defined to belong to this transaction class. **Note:** This will be a reference count from the latest version of the transaction definition table. This statistic is useful to identify redundant transaction classes. Reset characteristic: not reset
Max Act	XMCMXT	The maximum number of transactions in the named transaction class that may be active concurrently. Reset characteristic: not reset
Purge Thresh	XMCTH	The queue limit of the purge threshold at which transactions in the named transaction class is purged instead of being added to the queue of transactions that are waiting for membership of the transaction class. Reset characteristic: not reset
TOTAL		
–Attaches	XMCTAT	The total number of attach requests made for transactions in this transaction class. Reset characteristic: reset to zero
–AcptImm	XMCAI	The number of transactions that did not have to queue to become active in this transaction class. They are accepted immediately. Reset characteristic: reset to zero

Table 159. Transaction class: resource statistics (continued)

DFHSTUP name	Field name	Description
–PrgImm	XMCPI	The number of transactions that were purged immediately because the queue reached the purge threshold for this transaction class. Reset characteristic: reset to zero
–Queued	XMCTQ	The total number of transaction that have queued for this transaction class. Reset characteristic: reset to zero
NOT IN THE DFHSTUP REPORT	XMCAAQ	The number of transactions that have become active in this transaction class but queued first. Reset characteristic: reset to zero
–PrgQ'd	XMCPWQ	The number of transactions that have been purged while queuing for acceptance into the transaction class. This includes those transactions purged explicitly through Master Terminal, or implicitly through the purge threshold of the transaction class being lowered. Reset characteristic: reset to zero
–Q-Time	XMCTQTME	The total time in STCK units spent waiting by those transactions that were queued in the transaction class. **Note:** This time only includes the time spent by those that have finished queuing. In order to calculate the average queuing time, current queue must be subtracted from the 'queued' count. Reset characteristic: reset to zero
Peak Act	XMCPAT	The highest number of active transactions reached in the transaction class. Reset characteristic: reset to current value
Peak Queued	XMCPQT	The highest number of transactions queued waiting for admittance to the transaction class. Reset characteristic: reset to current value

Table 159. Transaction class: resource statistics (continued)

DFHSTUP name	Field name	Description
Times MaxAct	XMCTAMA	The number of separate times that the number of active transactions in the transaction class was equal to the maximum value (XMCMXT). Also registers times when maxactive setting of the transaction class is zero and there are no active transactions in the transaction class. Reset characteristic: reset to zero or one if transaction class is currently at its maxactive limit.
Times PrgThr	XMCTAPT	The number of separate times that the purge threshold of the transaction class has been reached (times at purge threshold). Reset characteristic: reset to zero or one if transaction class is currently at its purge threshold limit.
CURRENT		
–Act	XMCCAT	The current number of transactions currently active in this transaction class. Reset characteristic: not reset
–Queued	XMCCQT	The number of transactions that are currently queuing in this transaction class. Reset characteristic: not reset
–Queue Time	XMCCQTME	The total time in STCK units spent waiting by those transactions that are currently queuing in this transaction class. Reset characteristic: not reset
Not in DFHSTUP report	XMC_TCLASS_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	XMC_TCLASS_CHANGE_TIME	The time stamp (STCK) in local time of the CSD record change. Reset characteristic: not reset

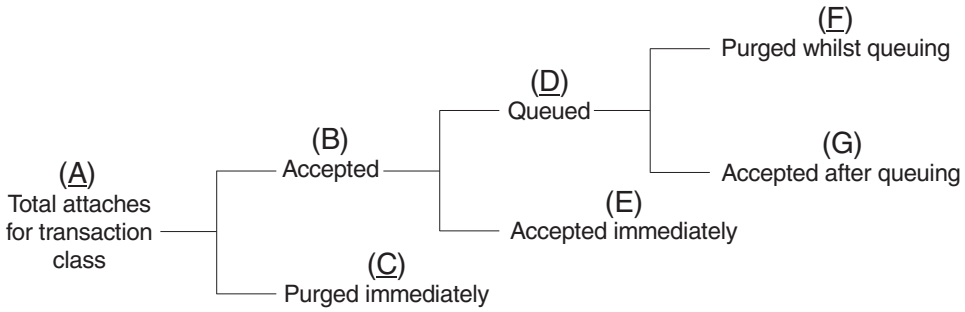
Table 159. Transaction class: resource statistics (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	XMC_TCLASS_CHANGE_USERID	The user ID that ran the CHANGE_AGENT. Reset characteristic: not reset
Not in DFHSTUP report	XMC_TCLASS_CHANGE_AGENT	The agent that was used to make the last change. Reset characteristic: not reset
Not in DFHSTUP report	XMC_TCLASS_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	XMC_TCLASS_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	XMC_TCLASS_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Figure 2 on page 299 illustrates the transaction class statistics.



Attaches for Transaction class	=A		(XMCTAT)
Accepted	=B	(A - C)	
Purged immediately	=C		(XMCPI)
Queued	=D	(B - E)	
Accepted immediately	=E	(B - D)	(XMCAI)
Purged whilst queuing	=F		(XMCPWQ)
Accepted after queuing	=G	(D - F)	(XMCAAQ)

Figure 2. The transaction class statistics

Related information:

EXTRACT STATISTICS

Transaction class: Summary resource statistics

Transaction class summary resource statistics are not available online.

Table 160. Transaction class: Summary resource statistics

DFHSTUP name	Description
Tclass Name	is the 8 character name of the transaction class.
Max Act	The maximum number of transactions in the named tclass that may be active concurrently.
Purge Thresh	The queue limit at which transactions in the named tclass will be purged instead of being added to the queue of transactions that are waiting for membership of the transaction class.
Total	
–Attaches	is the total number of attach requests made for transactions in this transaction class.
–AccptImm	The total number of transactions that did not have to queue to become active in this transaction class.
–PurgdImm	The total number of transactions that were purged immediately because they made the queue reach the purge threshold for this transaction class.
–Queued	The total number of transactions that have been made to queue in this transaction class.

Table 160. Transaction class: Summary resource statistics (continued)

DFHSTUP name	Description
–PurgQ'd	The total number of transactions that have been purged while queuing for acceptance into the transaction class. This includes those transactions purged explicitly via Master Terminal, or implicitly via the purge threshold of the transaction class being lowered.
–Queuing-Time	The total time spent waiting by those transactions that were queued. Note this time only includes the time spent by those have finished queuing. In order to calculate the average queuing time, current queue must be subtracted from the 'queued' count.
Peak Act	The highest number of active transactions reached in the transaction class.
Peak Queued	The highest number of transactions queued waiting for admittance to the transaction class.
Times Max Act	The total number of separate times that the number of active transactions in the transaction class was equal to the maximum value.
Times PurgeThr	The total number of separate times that the purge threshold has been reached.
Average Queuing-Time	The average time spent waiting by those transactions that were queued.

Transaction statistics

Related concepts:

"Interpreting transaction statistics" on page 303
Use these statistics to find out which transactions (if any) had storage violations.

"Interpreting transaction manager statistics"
The "Times the MAXTASK limit reached" indicates whether MXT is constraining your system, or any possible integrity exposures are resulting from forced resolutions of UOWs relating to the transactions. The only time that you must constrain your system in this way is to reduce virtual storage usage.

Related reference:

"Transaction Manager report" on page 488
The Transaction Manager report is produced using the **EXEC CICS EXTRACT STATISTICS TRANSACTION** command.

"Transactions report" on page 485
The Transactions report is produced using a combination of the **EXEC CICS INQUIRE TRANSACTION** and **EXEC CICS EXTRACT STATISTICS TRANSACTION** commands. The statistics data is mapped by the **DFHXMRDS**.

"Transaction Totals report" on page 489
The Transactions Totals report is produced using the **EXEC CICS EXTRACT STATISTICS STORAGE** command.

Interpreting transaction manager statistics

The "Times the MAXTASK limit reached" indicates whether MXT is constraining your system, or any possible integrity exposures are resulting from forced

resolutions of UOWs relating to the transactions. The only time that you must constrain your system in this way is to reduce virtual storage usage.

As most CICS virtual storage is above the 16 MB line you may be able to run your system without MXT constraints, but note that CICS does preallocate storage, above and below the 16 MB line, for each MXT whether it is used. Changing MXT affects your calculations for the dynamic storage areas. See Setting the maximum task specification (MXT) for more information.

Transaction manager: Global statistics

You can retrieve transaction manager global statistics by using the **EXEC CICS EXTRACT STATISTICS TRANSACTION** system command. They are mapped by the DFHXMGDS DSECT.

Table 161. Transaction manager: Global statistics

DFHSTUP name	Field name	Description
Total number of transactions (user + system)	XMGNUM	is the number of transactions (user + system) that have run in the system. Reset characteristic: reset to zero
Current MAXTASKS limit	XMGMXT	is the latest MXT value (expressed as a number of tasks) specified in the SIT, or as an override, or changed dynamically using CEMT SET SYSTEM MAXTASKS(value) or EXEC CICS SET SYSTEM MAXTASKS(fullword binary data-value) commands. Reset characteristic: not reset
Time MAXTASKS last changed	XMGLSMXT	is the date and time when the maximum number of user transactions (MXT) was last set or changed dynamically. The DFHSTUP report expresses this time as *day/month/year hours:minutes:seconds:decimals*; however, the DSECT field contains the time as a store clock (STCK) value in local time. Reset characteristic: not reset.
Current number of active user transactions	XMGCAT	is the current number of active user transactions in the system. Reset characteristic: not reset
Time last transaction attached	XMGLTAT	is the date and time when the last user transaction was attached. The DFHSTUP report expresses this time as *day/month/year hours:minutes:seconds:decimals*; however, the DSECT field contains the time as a store clock (STCK) value in local time. If the DFHSTUP report shows the date and time as --/--/---- --:--:--:---- then that indicates that a user transaction has not been attached since the statistics were last reset. Reset characteristic: reset to zero.

Table 161. Transaction manager: Global statistics (continued)

DFHSTUP name	Field name	Description
Current number of MAXTASK queued user transactions	XMGCQT	is the current number of queued user transactions in the system. Note that this does not include transactions queueing for transaction class membership. Note that the current queueing time for these transactions is in field XMGCQTME. Reset characteristic: not reset
Times the MAXTASKS limit reached	XMGTAMXT	is the number of times the MXT limit has been reached Reset characteristic: reset to zero (or one if at MXT)
Time the MAXTASKS limit last reached	XMGLAMXT	is the date and time when the number of active user transactions last equalled the specified maximum number of user transactions (MXT). The DFHSTUP report expresses this time as *day/month/year hours:minutes:seconds:decimals*; however, the DSECT field contains the time as a store clock (STCK) value in local time. Reset characteristic: not reset.
Currently at MAXTASKS limit	XMGATMXT	Indicates whether the CICS region is currently at the maximum number of user transactions (MXT). Reset characteristic: not reset.
Peak number of MAXTASK queued user transactions	XMGPQT	is the peak number of MAXTASK queued user transactions reached in the system. Reset characteristic: reset to current value (XMGCQT)
Peak number of active user transactions	XMGPAT	is the number of user transactions that have become active. Reset characteristic: reset to current value (XMGCAT)
Total number of active user transactions	XMGTAT	is the total number of user transactions that have become active. Reset characteristic: reset to zero
Total number of MAXTASK delayed user transactions	XMGTDT	is the number of user transactions that had to queue for MXT reasons. This value does not include those transactions that are currently queueing for MXT (see XMGCQT). Note that the queueing time for these transactions is in field XMGTQTME. Reset characteristic: reset to zero

Table 161. Transaction manager: Global statistics (continued)

DFHSTUP name	Field name	Description
Total MAXTASK queuing time	XMGTQTME	is the total time spent waiting by those user transactions that had to queue for MXT reasons. This value does not include the time spent by those transactions that are currently queueing for MXT (see XMGCQTME). Reset characteristic: reset to zero
Total MAXTASK queuing time of currently queued user transactions	XMGCQTME	is the total time spent waiting so far by those user transactions currently queuing for MXT reasons. Reset characteristic: not reset

Related information:

EXTRACT STATISTICS

Transactions: resource statistics

You can retrieve transaction resource statistics by using the **EXEC CICS EXTRACT STATISTICS TRANSACTION** system command. They are mapped by the DFHXMRDS DSECT.

There are two sections in the DFHSTUP report for transaction manager resource statistics:

- "Transactions: Resource statistics - resource information"
- "Transactions: Resource statistics - integrity information" on page 307

Related information:

EXTRACT STATISTICS

Interpreting transaction statistics

Use these statistics to find out which transactions (if any) had storage violations.

It is also possible to use these statistics for capacity planning purposes. But remember, many systems experience both increasing cost per transaction as well as increasing transaction rate.

Transactions: Resource statistics - resource information

The transaction statistics show how often each transaction is called.

Table 162. Transactions: resource statistics - resource information

DFHSTUP name	Field name	Description
Trans ID	XMRTI	The transaction identifier associated with the transaction definition. Reset characteristic: not reset

Table 162. Transactions: resource statistics - resource information (continued)

DFHSTUP name	Field name	Description
Program Name	XMRPN	The name of the initial program to which the transaction linked. Reset characteristic: not reset
Tclass Name	XMRTCL	The name of the transaction class in which the transaction is defined. Reset characteristic: not reset
Prty	XMRPRTY	The priority of the transaction, from 0 - 255. Reset characteristic: not reset
Remote Name	XMRRNAM	The name of the transaction on the remote system. Reset characteristic: not reset
Remote Sysid	XMRRSYS	The name of the remote system where the transaction resides. Reset characteristic: not reset
Dynamic	XMRDYN	Indicates whether the transaction is defined as DYNAMIC=YES (Y) or DYNAMIC=NO (N). Reset characteristic: not reset
Attach Count	XMRAC	The number of times that this transaction has been attached. If a transaction definition is used to start a transaction remotely, the transaction is included in the Attach Count for the region where the transaction runs. Reset characteristic: reset to zero
Retry Count	XMRRC	The number of times that this transaction definition has been used to retry a transaction. Reset characteristic: reset to zero

Table 162. Transactions: resource statistics - resource information (continued)

DFHSTUP name	Field name	Description
Dynamic Local	XMRDLC	The number of times that the dynamic transaction routing exit chose to run this transaction on the local system. This field is zero if the transaction was not defined as DYNAMIC=YES. For further information about dynamic transaction routing, see the programming information in Writing a dynamic routing program. Reset characteristic: reset to zero
Dynamic Remote	XMRDRC	The number of times that the dynamic transaction routing exit chose to run this transaction on a remote system. This field is zero if the transaction is not defined as DYNAMIC=YES. For further guidance about dynamic transaction routing, see the programming information in Writing a dynamic routing program. Reset characteristic: reset to zero
Remote Starts	XMRRSC	The number of times that this transaction definition has been used to attempt to start the transaction on a remote system. (This might not necessarily be the same as the number of successful starts.) A Remote Start is counted only in the CICS region that initiates the process, and not in the remote system where the transaction runs. In some circumstances, the use of a transaction definition for a remote start is not counted. These circumstances include the case in which a transaction definition that specifies the local sysid or nothing as the REMOTESYSTEM value is used to start a transaction in a remote system, with the remote system specified on the SYSID option of the START command. Reset characteristic: reset to zero
Storage Violations	XMRSVC	The number of storage violations for this transaction that have been detected by CICS storage management. This statistic raises a serious concern if it occurs in a production system. You must act immediately to identify the cause of the problem because it can lead to data corruption, and therefore cannot be allowed to continue in an operational system. Reset characteristic: reset to zero

Table 162. Transactions: resource statistics - resource information (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	XMR_TRAN_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	XMR_TRAN_CHANGE_TIME	The time stamp (STCK) in local time of the CSD record change. Reset characteristic: not reset
Not in DFHSTUP report	XMR_TRAN_CHANGE_USERID	The user ID that ran the CHANGE_AGENT. Reset characteristic: not reset
Not in DFHSTUP report	XMR_TRAN_CHANGE_AGENT	The agent that was used to make the last change. Reset characteristic: not reset
Not in DFHSTUP report	XMR_TRAN_ENTRYPOINT	Whether the transaction is defined as an application entry point. Reset characteristic: not reset
Not in DFHSTUP report	XMR_TRAN_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	XMR_TRAN_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	XMR_TRAN_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see

Summary of the resource signature field values.

Transactions: Resource statistics - integrity information

The integrity information statistics show the potential integrity exposures that may have occurred during transaction execution as a result of inabilities to shunt UOWs, or forcing of shunted UOWs to complete regardless of the decisions made by participating systems.

Table 163. Transactions: Resource statistics - integrity information

DFHSTUP name	Field name	Description
Trans ID	XMRTI	is the transaction identifier associated with the transaction definition. Reset characteristic: not reset
Indoubt Wait	XMRIWTOP	Is the indicator of whether the transaction has been defined to support Indoubt Waiting in the event of an two-phase commit indoubt window failure. This means the failing UOW will be shunted by the CICS recovery manager awaiting resynchronisation with its coordinator. The indoubt wait option can have the following settings: • XMRIWTY = 'Y' = Transaction can support waiting • XMRIWTN = 'N' = Transaction cannot support waiting. Reset characteristic: not reset
Indoubt Wait timeout	XMRITOV	Is the indoubt wait timeout limit defined for this transaction, specified in minutes. This value has meaning only if the transaction is also defined to be able to wait indoubt (see XMRIWTOP). A value of zero, specifies that there is no timeout should this transaction be shunted by the CICS recovery manager. Reset characteristic: not reset
Indoubt Action	XMRIACTN	Is an indicator of which way this transaction will commit its UOWs in the event of not being able to wait indoubt (shunted), when an indoubt wait failure occurs. Or if the transaction had been waiting that, the timeout value specified has expired. Both of these events will force a resolution of the UOW in the direction specified by this field. The values can be : • XMRIACOM = 'C' = UOW will syncpoint forwards • XMRIABCK = 'B' = UOW will syncpoint backwards (rollback) Reset characteristic: not reset
Indoubt Waits	XMRIWAIT	Is the number of indoubt waits (shunts) that have occurred for UOWs executing on behalf of this transaction. Reset characteristic: not reset

Table 163. Transactions: Resource statistics - integrity information (continued)

DFHSTUP name	Field name	Description
Indoubt action forced: Trandefn	XMRFATXN	Is the number of times this transaction id had a UOW that could not be shunted when an indoubt failure occurred, because the transaction definition for this transaction id specified that it could not support indoubt waiting (ie. XMRIWTOP = XMTIWTN). The UOW would have been forced to resolve in the direction specified by XMRIACTN, regardless of the actions taken by any other participating region in this distributed UOW. Reset characteristic: not reset
Indoubt action forced: Timeout	XMRFAIT	Is the number of times this transaction id had a UOW that, although shunted because of an indoubt failure, had the wait for resynchronization with its recovery coordinator terminated prematurely, because the indoubt wait timeout value (XMRITOV) had been exceeded. The UOW would have been forced to resolve in the direction specified by XMRIACTN, regardless of the actions taken by any other participating region in this distributed UOW. Reset characteristic: not reset
Indoubt action forced: Operator	XMRFAOP	Is the number of times this transaction id had a UOW that although shunted because of an indoubt failure, had the wait for resynchronization with its recovery coordinator terminated prematurely, because an operator (CEMT) or system command forced a resolution. The UOW would have been forced to resolve in the direction specified by XMRIACTN by default, or in the direction specified by the operator, regardless of the actions taken by any other participating region in this distributed UOW. Reset characteristic: reset to zero
Indoubt action forced: No waiting	XMRFANW	Is the number of times this transaction id had a UOW that could not be shunted when an indoubt failure occurred, although the transaction definition specified that it could (XMRIWTOP = XMRIWTY), because the resource managers (RMIs) or CICS resources or CICS connections used by the UOW could not support indoubt waiting (shunting). The UOW would have been forced to resolve in the direction specified by XMRIACTN, regardless of the actions taken by any other participating region in this distributed UOW. Reset characteristic: reset to zero

Table 163. Transactions: Resource statistics - integrity information (continued)

DFHSTUP name	Field name	Description
Indoubt action forced: Other	XMRFAOT	Is the number of times this transaction id had a UOW that although shunted because of an indoubt failure, had the wait for resynchronization with its recovery coordinator terminated prematurely, for reasons other than those already referenced in this table. This could be, for example, a recovery coordinator which has been cold started, a resynchronization protocol violation or failure, or because the level of resource manager (RMI) adaptor has not yet been changed to support indoubt resolution. The UOW would have been forced to resolve in the direction specified by XMRIACTN, regardless of the actions taken by any other participating region in this distributed UOW. Reset characteristic: reset to zero
Action mismatch	XMRAMISM	is the number of times this transaction id had a UOW that was forced to resolve using the indoubt action attribute, whether by definition, option or operator override (as detailed in the fields already described in this table), and on doing so detected an indoubt action attribute mismatch with a participating system or resource manager (RMI). For example, a participating system in a distributed UOW resolves its work forward while other systems back out theirs. The opposite also applies. Reset characteristic: reset to zero

Transaction manager: Summary global statistics

Transaction manager summary global statistics are not available online.

Table 164. Transaction manager: Summary global statistics

DFHSTUP name	Description
Total number of transactions (user + system)	is the total number of tasks that have run in the system.
MAXTASK limit	is the last MXT value (expressed as a number of tasks) that was specified in the SIT, or as an override, or changed dynamically using the **EXEC CICS SET SYSTEM MAXTASKS(fullword binary data-value)** command.
Time the MAXTASK limit last changed	is the date and time when the maximum number of user transactions (MXT) was last set or changed dynamically.
Times the MAXTASK limit reached	is the total number of times MXT has been reached.
Time the MAXTASK limit last reached	is the date and time when the number of active user transactions last equalled the specified maximum number of user transactions (MXT).
Peak number of MAXTASK queued user transactions	is the peak number of MAXTASK queued user transactions reached in the system.

Table 164. Transaction manager: Summary global statistics (continued)

DFHSTUP name	Description
Peak number of active user transactions	is the peak number of active user transactions reached in the system.
Total number of active user transactions	is the total number of user transactions that have become active.
Total number of MAXTASK delayed user transactions	is the total number of transactions that had to queue for MXT reasons.
Total MAXTASK queuing time	is the total time spent waiting by those user transactions that had to queue for MXT reasons.
Average MAXTASK queuing time of queued transactions	is the average time spent waiting by those user transactions that had to queue for MXT reasons.

Transactions: Summary resource statistics - resource information

Transactions summary resource statistics - resource information are not available online.

Table 165. Transactions: Summary resource statistics - resource information

DFHSTUP name	Description
Trans ID	is the transaction identifier associated with the transaction definition.
Program Name	is the name of the initial program to which the transaction was linked.
Tclass Name	is the name of the transaction class in which the transaction is defined.
Prty	is the priority of the transaction, from 1–255.
Remote Name	is the name of the transaction on the remote system.
Remote Sysid	is the name of the remote system where the transaction resides.
Dynamic	indicates whether the transaction has been defined as DYNAMIC=YES (Y) or DYNAMIC=NO (NO).
Attach Count	is the number of times that this transaction has been attached. If a transaction definition is used to start a transaction remotely, the transaction is included in the Attach Count for the region where the transaction runs.
Retry Count	is the total number of times that this transaction definition has been used to retry a transaction.

Table 165. Transactions: Summary resource statistics - resource information (continued)

DFHSTUP name	Description
Dynamic Local	is the total number of times the dynamic transaction routing exit has chosen to run this transaction on the local system. This field is zero if the transaction was not defined as DYNAMIC=YES. For further guidance and programming information about dynamic transaction routing, see Writing a dynamic routing program.
Dynamic Remote	is the total number of times the dynamic transaction routing exit has chosen to run this transaction on a remote system. This field is zero if the transaction was not defined as DYNAMIC=YES. For further information about dynamic transaction routing, see Writing a dynamic routing program
Remote Starts	is the number of times that this transaction definition has been used to attempt to start the transaction on a remote system. (This might not necessarily be the same as the number of successful starts.) A Remote Start is only counted in the CICS region that initiates the process, and not in the remote system where the transaction runs. In some circumstances, the use of a transaction definition for a remote start is not counted. This includes the case where a transaction definition that specifies the local sysid or nothing as the REMOTESYSTEM value, is used to start a transaction in a remote system, with the remote system specified on the SYSID option of the START command.
Storage Violations	is the total number of storage violations for this transaction that have been detected by CICS storage management. This is a serious concern if it occurs in a production system. You should act immediately to identify the cause of the problem because it can lead to data corruption, and therefore should not be allowed to continue in an operational system.

Transactions: Summary resource statistics - integrity information

Transactions summary resource statistics - integrity information are not available online.

Table 166. Transactions: Summary resource statistics - integrity information

DFHSTUP name	Description
Trans ID	is the transaction identifier associated with the transaction definition.
Indoubt Wait	is the last value encountered for the indicator of whether the transaction has been defined to support indoubt waiting in the event of an two-phase commit indoubt window failure. This means the failing UOW will be shunted by the CICS recovery manager awaiting resynchronization with its coordinator.
Indoubt Wait timeout	is the last value encountered for the indoubt wait timeout limit defined for this transaction, specified in minutes. This value only has any meaning if the transaction is also defined to be able to wait indoubt (see 'Indoubt Wait'). A value of zero specifies that there is no timeout should this transaction be shunted by the CICS recovery manager.

Table 166. Transactions: Summary resource statistics - integrity information (continued)

DFHSTUP name	Description
Indoubt Action	is the last value encountered for the indicator of which way this transaction will commit its UOWs in the event of not being able to wait indoubt (shunted), when an indoubt wait failure occurs. Or if the transaction had been waiting, that the timeout value specified had expired. Both of these events will force a resolution of the UOW in the direction specified by this field.
Indoubt Waits	is the number of indoubt waits (shunts) that have occurred for UOWs executing on behalf of this transaction.
Indoubt action forced: Trandefn	is the number of times this transaction id had a UOW that could not be shunted when an indoubt failure occurred, because the transaction definition for this transaction id specified that it could not support indoubt waiting (ie. Indoubt Wait = No). The UOW would have been forced to resolve in the direction specified by 'Indoubt Action', regardless of the actions taken by any other participating region in this distributed UOW.
Indoubt action forced: Timeout	is the number of times this transaction id had a UOW that although shunted because of an indoubt failure, had the wait for resynchronization with its recovery coordinator terminated prematurely, because the indoubt wait timeout value had been exceeded. The UOW would have been forced to resolve in the direction specified by 'Indoubt Action', regardless of the actions taken by any other participating region in this distributed UOW.
Indoubt action forced: Operator	is the number of times this transaction id had a UOW that although shunted because of an indoubt failure, had the wait for resynchronization with its recovery coordinator terminated prematurely, because an operator (CEMT) or system command forced a resolution. The UOW would have been forced to resolve in the direction specified by 'Indoubt Action' by default, or in the direction specified by the operator, regardless of the actions taken by any other participating region in this distributed UOW.
Indoubt action forced: No waiting	is the number of times this transaction id had a UOW that could not be shunted when an indoubt failure occurred, even though the transaction definition specified that it could (Indoubt Wait = Yes), because the resource managers (RMIs) or CICS resources or CICS connections used by the UOW could not support indoubt waiting (shunting). The UOW would have been forced to resolve in the direction specified by 'Indoubt Action', regardless of the actions taken by any other participating region in this distributed UOW.
Indoubt action forced: Other	is the number of times this transaction id had a UOW that although shunted because of an indoubt failure, had the wait for resynchronization with its recovery coordinator terminated prematurely, for reasons other than those already referenced in this table. This could be, for example, a cold started recovery coordinator, a resynchronization protocol violation or failure, or because the level of resource manager (RMI) adapter has not yet been changed to support indoubt resolution. The UOW would have been forced to resolve in the direction specified by 'Indoubt Action', regardless of the actions taken by any other participating region in this distributed UOW.

Table 166. Transactions: Summary resource statistics - integrity information (continued)

DFHSTUP name	Description
Action mismatch	is the number of times this transaction id had a UOW that was forced to resolve using the indoubt action attribute, whether by definition, option or operator override (as detailed in the fields already described in this table), and on doing so detected an indoubt action attribute mismatch with a participating system or resource manager (RMI). For example, a participating system in a distributed UOW resolves its work forward while other systems back out theirs. The opposite also applies.

Interpreting transaction class (TRANCLASS) statistics

If you are never at the limit of your transaction class setting, you might consider resetting its value, or review whether there is any need to continue specifying any transaction types with that class.

For more information, see the transaction class statistics "Transaction class (TCLASS) statistics" on page 294.

Transient data statistics

Related concepts:

"Interpreting transient data statistics"
Monitor the data provided by CICS on the amount of I/O activity for transient data, in the form of the number of READs and WRITEs to the transient data intrapartition data set.

Related reference:

"Transient Data report" on page 490
The Transient Data report is produced using the **EXEC CICS EXTRACT STATISTICS TDQUEUE** command. The statistics data is mapped by the **DFHTQGDS**.

"Transient Data Queues report" on page 492
The Transient Data Queues report is produced using a combination of the **EXEC CICS INQUIRE TDQUEUE** and **EXEC CICS EXTRACT STATISTICS TDQUEUE** commands. The statistics data is mapped by the **DFHTQRDS DSECT**.

"Transient Data Queue Totals report" on page 493
The Transient Data Queues Totals report is produced using a combination of the **EXEC CICS INQUIRE TDQUEUE** and **EXEC CICS EXTRACT STATISTICS TDQUEUE** commands. The statistics data is mapped by the **DFHTQRDS DSECT**.

Interpreting transient data statistics

Monitor the data provided by CICS on the amount of I/O activity for transient data, in the form of the number of READs and WRITEs to the transient data intrapartition data set.

If there is a large amount of READ activity, this indicates that the buffer allocation may be insufficient, even though the "peak concurrent string access" may be fewer than the number allocated.

You should aim to minimize the "Intrapartition buffer waits" and "string waits" by increasing the number of buffers and the number of strings if you can afford any associated increase in your use of real storage.

Transient data: Global statistics

You can retrieve transient data global statistics by using the **EXEC CICS EXTRACT STATISTICS TDQUEUE** system command. They are mapped by the DFHTQGDS DSECT.

For more information on using transient data statistics, see CICS transient data (TD) facility: Performance and tuning.

Table 167. Transient data: Global statistics

DFHSTUP name	Field name	Description
Control interval size	TQGACISZ	is the size of the control interval, expressed in bytes. Reset characteristic: not reset
Control intervals	TQGANCIS	is the number of control intervals in the intrapartition data set DFHINTRA. Reset characteristic: not reset
Current control intervals in use	TQGACTCI	is the current number of control intervals in the intrapartition data set DFHINTRA. Reset characteristic: not reset
Peak control intervals used	TQGAMXCI	is the peak value of the number of control intervals concurrently active in the system. Reset characteristic: reset to current value
Times NOSPACE occurred	TQGANOSP	is the number of times that a NOSPACE condition has occurred. Reset characteristic: reset to zero
Writes to intrapartition data set	TQGACTPT	is the number of WRITEs to the intrapartition transient data set. This includes both WRITEs needed for recovery (see below) and WRITEs forced by the buffer being needed to accommodate another CI. I/O activity caused by the latter reason can be minimized by increasing the buffer allocation. Reset characteristic: reset to zero
Reads from intrapartition data set	TQGACTGT	is the number of times a CI has to be read from disk. Increasing the buffer allocation decreases this activity. Reset characteristic: reset to zero

Table 167. Transient data: Global statistics (continued)

DFHSTUP name	Field name	Description
Formatting writes	TQGACTFT	is the number of times a new CI was written at the end of the data set in order to increase the amount of available space. Reset characteristic: reset to zero
I/O errors	TQGACTIO	is the number of input/output errors that have occurred during this run of CICS. Reset characteristic: reset to zero
In the statistics produced for buffer usage:		
Intrapartition buffers	TQGANBFA	is the number of transient data buffers specified in the system initialization table (SIT) or in the SIT overrides. The number of buffers allocated may exceed the number requested. Reset characteristic: not reset
Current buffers containing valid data	TQGACNIU	is the current number of intrapartition buffers that contain valid data. Reset characteristic: not reset
Peak intra. buffers containing valid data	TQGAMXIU	is the peak number of intrapartition buffers which contain valid data. Reset characteristic: reset to current value
Intrapartition accesses	TQGATNAL	is the number of times intrapartition buffers have been accessed. Reset characteristic: reset to current value
Current concurrent buffer accesses	TQGACNAL	is the current value of the number of concurrent intrapartition buffer accesses. Reset characteristic: not reset
Peak concurrent intrapartition accesses	TQGAMXAL	is the peak value of the number of concurrent intrapartition buffer accesses. Reset characteristic: reset to current value

Table 167. Transient data: Global statistics (continued)

DFHSTUP name	Field name	Description
Intrapartition buffer waits	TQGATNWT	is the number of times a request was queued because all buffers were allocated to other tasks. A buffer wait also occurs if the required control interval is already in a locked buffer, and therefore unavailable, even if there are other buffers available. Reset characteristic: reset to current value
Current intrapartition buffer waits	TQGACNWT	is the current number of requests queued because no buffers were available. Reset characteristic: not reset
Peak intrapartition buffer waits	TQGAMXWT	is the peak number of requests queued because no buffers were available. Reset characteristic: reset to current value

All of the intrapartition data set statistics referenced in the table are printed, even if the values reported are zero.

CICS produces the following statistics for multiple strings:

Number of strings	TQGSNSTA	is the number of strings currently active. Reset characteristic: not reset
Times string accessed	TQGSTNAL	is the number of times a string was accessed. Reset characteristic: reset to current value
Current concurrent string accesses	TQGSCNAL	is the current number of strings concurrently accessed in the system. Reset characteristic: not reset
Peak concurrent string accesses	TQGSMXAL	is the peak number of strings concurrently accessed in the system. Reset characteristic: reset to current value
Intrapartition string waits	TQGSTNWT	is the number of times that tasks had to wait because no strings were available. Reset characteristic: reset to current value
Current intrapartition string waits	TQGSCNWT	is the current number of concurrent string waits in the system. Reset characteristic: not reset

Table 167. Transient data: Global statistics (continued)

DFHSTUP name	Field name	Description
Peak string waits	TQGSMXWT	is the peak number of concurrent string waits in the system. Reset characteristic: reset to current value

CICS produces the following statistics for buffer usage:

DFHSTUP name	Field name	Description
Intrapartition buffers	TQGANBFA	is the number of transient data buffers specified in the system initialization table (SIT) or in the SIT overrides. The number of buffers allocated may exceed the number requested. Reset characteristic: not reset
Current buffers containing valid data	TQGACNIU	is the current number of intrapartition buffers that contain valid data. Reset characteristic: not reset
Peak intra. buffers containing valid data	TQGAMXIU	is the peak number of intrapartition buffers which contain valid data. Reset characteristic: reset to current value
Intrapartition accesses	TQGATNAL	is the number of times intrapartition buffers have been accessed. Reset characteristic: reset to current value
Current concurrent buffer accesses	TQGACNAL	is the current value of the number of concurrent intrapartition buffer accesses. Reset characteristic: not reset
Peak concurrent intrapartition accesses	TQGAMXAL	is the peak value of the number of concurrent intrapartition buffer accesses. Reset characteristic: reset to current value
Intrapartition buffer waits	TQGATNWT	is the number of times a request was queued because all buffers were allocated to other tasks. A buffer wait also occurs if the required control interval is already in a locked buffer, and therefore unavailable, even if there are other buffers available. Reset characteristic: reset to current value

CICS produces the following statistics for buffer usage:

DFHSTUP name	Field name	Description
Current intrapartition buffer waits	TQGACNWT	is the current number of requests queued because no buffers were available. Reset characteristic: not reset
Peak intrapartition buffer waits	TQGAMXWT	is the peak number of requests queued because no buffers were available. Reset characteristic: reset to current value

All of the intrapartition data set statistics referenced in the table are printed, even if the values reported are zero.

CICS produces the following statistics for multiple strings:

DFHSTUP name	Field name	Description
Number of strings	TQGSNSTA	is the number of strings currently active. Reset characteristic: not reset
Times string accessed	TQGSTNAL	is the number of times a string was accessed. Reset characteristic: reset to current value
Current concurrent string accesses	TQGSCNAL	is the current number of strings concurrently accessed in the system. Reset characteristic: not reset
Peak concurrent string accesses	TQGSMXAL	is the peak number of strings concurrently accessed in the system. Reset characteristic: reset to current value
Intrapartition string waits	TQGSTNWT	is the number of times that tasks had to wait because no strings were available. Reset characteristic: reset to current value
Current intrapartition string waits	TQGSCNWT	is the current number of concurrent string waits in the system. Reset characteristic: not reset
Peak string waits	TQGSMXWT	is the peak number of concurrent string waits in the system. Reset characteristic: reset to current value

Related information:

EXTRACT STATISTICS

Transient data: resource statistics

You can retrieve transient data resource statistics by using the **EXEC CICS EXTRACT STATISTICS TDQUEUE** system command. They are mapped by the DFHTQRDS DSECT.

Transient data resource statistics are collected for each queue. You can use the information from the statistics for each queue to calculate the average number of transient data accesses per transaction. The items in this listing reflect the information you placed in the definition for the transient data queue.

The TQRQTYPE field is not displayed in the DFHSTUP report. It signifies the queue type, which can be one of the following fields:

- TQRQTEXT (X'01') for extrapartition queues
- TQRQTINT (X'02') for intrapartition queues
- TQRQTIND (X'03') for indirect queues
- TQRQTREM (X'04') for remote queues.

TQRQTYPE is reset to zero.

Related information:

EXTRACT STATISTICS

Transient data: Resource statistics - intrapartition transient data queues

Table 168. Transient data: Resource statistics - intrapartition transient data queues

DFHSTUP name	Field name	Description
Queue id	TQRQID	The destination identifier (queue) that you specified in the transient data queue definition. Reset characteristic: Not reset
Request Counts: Number of Writes	TQRWRITE	The total number of requests to write to this queue. Reset characteristic: Reset to zero
Request Counts: Number of Reads	TQRREAD	The total number of successful requests to read from this queue. Reset characteristic: Reset to zero
Request Counts: Number of Deletes	TQRDELET	The total number of requests to delete this queue. Reset characteristic: Reset to zero

Table 168. Transient data: Resource statistics - intrapartition transient data queues (continued)

DFHSTUP name	Field name	Description
ATI Information: Trigger level	TQRTRIGL	The value of the ATI trigger level. If the number of items in this queue reaches this value the transaction id in TQRATRAN is attached to process the items in the queue. Reset characteristic: Not reset
ATI Information: Tran Id	TQRATRAN	The id of the transaction that will be scheduled against a terminal or session or in the background (see TQRFTYPE) when the trigger level (TQRTRIGL) has been reached. Reset characteristic: Not reset
ATI Information: Facility Type	TQRFTYPE	The ATI facility type for this transient data queue. This will be where and how the transaction id in TQRATRAN is attached when the ATI trigger level (TQRTRIGL) is reached. It can have the following values: • TQRFTNA X'00' Not Applicable (N/A) • TQRFTTRM X'01' Terminal (TERM) • TQRFTSYS X'02' System (SYS) • TQRFTNTE X'03' No terminal (NONE). Reset characteristic: Not reset
ATI Information: Facility Name	TQRFNAME	The id of the system or terminal that the trigger transaction will be attached against. This value is blank when there is no facility. Reset characteristic: Not reset
ATI Information: No. of triggers	TQRTRIGN	The number of times the trigger transaction (TQRATRAN) has been scheduled, as a result of the trigger level (TQRTRIGL) being exceeded. Reset characteristic: Reset to zero
Recovery: Rcvy type	TQRRTYPE	The recoverable type of this transient data queue. It can have the following values: • TQRRTNA X'00' Not applicable (N/A) • TQRRTPH X'01' Physical recoverable (PH) • TQRRTLG X'02' Logical recoverable (LG) • TQRRTNR X'03' Non-recoverable (NR) Reset characteristic: Not reset

Table 168. Transient data: Resource statistics - intrapartition transient data queues (continued)

DFHSTUP name	Field name	Description
Recovery: Wait opt.	TQRWAIT	Indicates whether any transactions that use this queue can, if they lose the connection to their recovery coordinator, wait indoubt (shunted). If the queue supports indoubt waiting (TQRWTYES), the locks that are associated with that UOW will be held until syncpoint resolution. If not, the UOW will be committed (forward or backward) at the time of indoubt failure, according to the settings in the transaction definition, and the locks released as a result. This field has meaning only if the queue is logically recoverable. The indoubt wait option can have the following settings: • TQRWTNA X'00' Not Applicable (N/A) • TQRWTYES X'01' Queue supports indoubt waiting (YES) • TQRWTNO X'02' Does not support indoubt waiting (NO) Reset characteristic: Not reset
Recovery: Wait Action	TQRWAITA	Indicates whether this transient data queue will reject or suspend subsequent requests to this queue. This can be when a UOW that has used this queue has been shunted because of an indoubt failure and is therefore retaining enqueues against this queue. This field has no meaning if the queue is non-recoverable or does not support indoubt waiting (see TQRWAIT). The possible values for this field are: • TQRWANA X'00' Not Applicable (N/A) • TQRWAREJ X'01' Further requests will be rejected (REJECT) • TQRWAQUE X'02' Further requests will be queued (QUEUE) Reset characteristic: Not reset
DFHINTRA usage: Current CIs used	TQRCCIUS	The number of control intervals (CIs) that are currently in use on the DFHINTRA data set by this queue. Reset characteristic: Not reset
DFHINTRA usage: Peak CIs used	TQRPCIUS	The peak number of control intervals (CIs) that have been used on the DFHINTRA data set by this queue. Reset characteristic: Reset to current

Table 168. Transient data: Resource statistics - intrapartition transient data queues (continued)

DFHSTUP name	Field name	Description
DFHINTRA usage: Current items	TQRCNITM	The current number of items in this intrapartition queue. Reset characteristic: Not reset
DFHINTRA usage: Peak items	TQRPNITM	The peak number of items in this intrapartition queue. Reset characteristic: Reset to current
Not in DFHSTUP report	TQR_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values . Reset characteristic: not reset
Not in DFHSTUP report	TQR_CHANGE_TIME	The time stamp (STCK) in local time of CSD record change. Reset characteristic: not reset
Not in DFHSTUP report	TQR_CHANGE_USERID	The user ID that ran the change agent. Reset characteristic: not reset
Not in DFHSTUP report	TQR_CHANGE_AGENT	The agent that made the last change. Reset characteristic: not reset
Not in DFHSTUP report	TQR_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	TQR_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	TQR_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID.

For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Transient data: Resource statistics - extrapartition transient data queues

Table 169. Transient data: Resource statistics - extrapartition transient data queues

DFHSTUP name	Field name	Description
Queue ID	TQRQID	The destination identifier (queue) that you specified in the transient data queue definition. Reset characteristic: Not reset
DD name (assoc.)	TQRDDNM	The associated DD name of this data set in the CICS start-up JCL. Reset characteristic: Not reset
Data set name (Destination/origin of data)	TQRDSNNM	The data set name of the extrapartition transient data queue. Reset characteristic: Not reset
Member Name	TQRPDSMN	The name of a member in the partitioned data set referenced by the ddname for the extrapartition transient data queue. Reset characteristic: Not reset
I/O Type	TQRIOTYP	Is an indicator of the input/output type of the extrapartition data set. It might contain one of the following values: • TQRIONA X'00' Not Applicable • TQRIOIN X'01' Input • TQRIOOUT X'02' Output • TQRIORDB X'03' Readback (input but read backwards) Reset characteristic: Not reset
No. of Writes	TQRWRITE	The total number of write operations to the output data set. Reset characteristic: Reset to zero
No. of Reads	TQRREAD	The total number of read operations from the input data set. Reset characteristic: Reset to zero

Table 169. Transient data: Resource statistics - extrapartition transient data queues (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	TQR_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	TQR_CHANGE_TIME	The time stamp (STCK) in local time of CSD record change. Reset characteristic: not reset
Not in DFHSTUP report	TQR_CHANGE_USERID	The user ID that ran the change agent. Reset characteristic: not reset
Not in DFHSTUP report	TQR_CHANGE_AGENT	The agent that made the last change. Reset characteristic: not reset
Not in DFHSTUP report	TQR_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	TQR_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	TQR_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Transient data: Resource statistics - indirect transient data queues

Table 170. Transient data: Resource statistics - indirect transient data queues

DFHSTUP name	Field name	Description
Queue ID	TQRQID	The destination identifier (queue) that you specified in the transient data queue definition. Reset characteristic: Not reset
Indirect Queue id	TQRIQID	The name of the indirect queue. Reset characteristic: Not reset
Request Counts: Writes	TQRWRITE	The total number of requests to write to this queue. Reset characteristic: Reset to zero
Request Counts: Reads	TQRREAD	The total number of requests to read from this queue. Reset characteristic: Reset to zero
Request Counts: Deletes	TQRDELET	The total number of requests to delete this queue.. Reset characteristic: Reset to zero
Not in DFHSTUP report	TQR_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	TQR_CHANGE_TIME	The time stamp (STCK) in local time of CSD record change. Reset characteristic: not reset
Not in DFHSTUP report	TQR_CHANGE_USERID	The user ID that ran the change agent. Reset characteristic: not reset
Not in DFHSTUP report	TQR_CHANGE_AGENT	The agent that made the last change. Reset characteristic: not reset

Table 170. Transient data: Resource statistics - indirect transient data queues (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	TQR_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	TQR_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	TQR_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Transient data: Resource statistics - remote transient data queues

Table 171. Transient data: Resource statistics - remote transient data queues

DFHSTUP name	Field name	Description
Queue Id	TQRQID	The destination identifier (queue) that you specified in the transient data queue definition. Reset characteristic: Not reset
Remote: Queue	TQRRQID	The name of the queue on the remote system (TQRRSYS). Reset characteristic: Not reset
Remote: Sysid	TQRRSYS	The connection id of the CICS system that owns this queue. Reset characteristic: Not reset
Request Counts: Writes	TQRWRITE	The total number of requests to write to this queue. Reset characteristic: Reset to zero

Table 171. Transient data: Resource statistics - remote transient data queues (continued)

DFHSTUP name	Field name	Description
Request Counts: Reads	TQRREAD	The total number of requests to read from this queue. Reset characteristic: Reset to zero
Request Counts: Deletes	TQRDELET	The total number of requests to delete this queue. Reset characteristic: Reset to zero
Not in DFHSTUP report	TQR_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	TQR_CHANGE_TIME	The time stamp (STCK) in local time of CSD record change. Reset characteristic: not reset
Not in DFHSTUP report	TQR_CHANGE_USERID	The user ID that ran the change agent. Reset characteristic: not reset
Not in DFHSTUP report	TQR_CHANGE_AGENT	The agent that made the last change. Reset characteristic: not reset
Not in DFHSTUP report	TQR_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	TQR_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	TQR_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID,

DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Transient data: Summary global statistics

Transient data summary global statistics are not available online.

Table 172. Transient data: Summary global statistics. **In the statistics produced for the intrapartition data set:**

DFHSTUP name	Description
Control interval size	is the last value encountered for the size of the control interval, expressed in bytes.
Peak control intervals used	is the peak number of control intervals concurrently in the system.
Times NOSPACE occurred	is a total number of times that a NOSPACE condition has occurred.
Writes to intrapartition data set	is the total number of WRITEs to the transient data data set. This includes both WRITEs needed for recovery and WRITEs forced by the buffer being needed to accommodate another CI. I/O activity caused by the latter reason can be minimized by increasing the buffer allocation.
Reads from intrapartition data set	is the total number of times a CI has to be read from disk. Increasing the buffer allocation decreases this activity.
Formatting writes	is the total number of times a new CI was written at the end of the data set in order to increase the amount of available space.
I/O errors	is the total number of input/output errors that have occurred during this run of CICS.

In the statistics produced for buffer usage:

DFHSTUP name	Description
Intrapartition buffers	is the last value encountered for the number of transient data buffers specified by the TD system initialization parameter. The number of buffers allocated may exceed the number requested.
Peak intra. buffers containing valid data	is the peak number of intrapartition buffers which contain valid data.
Intrapartition accesses	is the total number of times that intrapartition buffers have been accessed.
Peak concurrent intrapartition accesses	is the peak number of concurrent intrapartition buffer accesses.
Intrapartition buffer waits	is the total number of times a request was queued because all buffers were allocated to other tasks. A buffer wait also occurs if the required control interval is already in a locked buffer, and therefore unavailable, even if there are other buffers available.

In the statistics produced for buffer usage:

DFHSTUP name	Description
Peak intrapartition buffer waits	is the peak number of requests queued because no buffers were available.

All of the intrapartition data set statistics referenced in the table are printed, even if the values reported are zero.

CICS produces the following statistics for multiple strings:

DFHSTUP name	Description
Times string accessed	is the total number of times a string was accessed.
Peak concurrent string accesses	is the peak number of strings concurrently accessed in the system.
Intrapartition string waits	is the total number of times that tasks had to wait because no strings were available.
Peak string waits	is the peak number of concurrent string waits in the system.

Transient data: Summary resource statistics

Transient data: Summary resource statistics are not available online.

Table 173. Transient data: Summary resource statistics - intrapartition transient data queues

DFHSTUP name	Description
Queue ID	is the destination identifier (queue) that you specified in the transient data queue definition.
Request Counts: Number of Writes	is the total number of requests to write to this queue.
Request Counts: Number of Reads	is the total number of requests to read from this queue.
Request Counts: Number of Deletes	is the total number of requests to delete this queue.
ATI Information: Trigger level	is the value of the ATI trigger level. If the number of items in this queue reaches this value, the transaction id in 'Tran Id' is attached to process the items in the queue.
ATI Information: Tran Id	is the id of the transaction that will be scheduled against a terminal/session or in the background (depending on the value of 'Facility Type'), when the trigger level ('Trigger level') has been reached.
ATI Information: Facility Type	is the ATI facility type for this transient data queue. This will be where and how the transaction id in 'Tran Id' is attached when the ATI trigger level ('Trigger level') is reached. It can have the following values:- • N/A — Not Applicable • TERM — Terminal • SYS — System • NONE — No terminal.
ATI Information: Facility Name	is the id of the system or terminal that the trigger transaction will be attached against. This value is blank when there is no facility.

Table 173. Transient data: Summary resource statistics - intrapartition transient data queues (continued)

DFHSTUP name	Description
ATI Information: No. of triggers	is the number of times the trigger transaction ('Tran Id') has been scheduled, as a result of the trigger level ('Trigger level') being exceeded.
Recovery: Rcvy type	is the recoverable type of this transient data queue. It can have the following values:- • N/A — Not applicable • PH — Physical recoverable • LG — Logical recoverable • NR — Non-recoverable
Recovery: Wait opt.	is an indicator of whether any transactions that use this queue will be able, in the event of losing the connection to their recovery coordinator, to wait indoubt (shunted). If the queue supports indoubt waiting (Wait opt. = Yes) then the locks that are associated with that UOW will be held until syncpoint resolution. If not, the UOW will be committed (forward or backward) at the time of indoubt failure according to the settings in the transaction definition and the locks released as a result. This field has meaning only if the queue is logically recoverable. The indoubt wait option can have the following settings: • N/A — Not Applicable • Yes — Queue supports indoubt waiting • No — Does not support indoubt waiting
Recovery: Wait Action	is an indicator of whether this transient data queue will reject or suspend subsequent requests to this queue. This can be when a UOW that has used this queue has been shunted because of an indoubt failure and is therefore retaining enqueues against this queue. This field has no meaning if the queue is non-recoverable (Rcvy Type is NR), or does not support indoubt waiting (Wait opt. is No). The possible values for this field are: • N/A — Not Applicable • Reject — Further requests will be rejected • Queue — Further requests will be queued
DFHINTRA usage: Current CIs used	is the current number of CIs used by this intrapartition queue.
DFHINTRA usage: Peak CIs used	is the peak number of CIs used by this intrapartition queue.
DFHINTRA usage: Current items	is the current number of items in this intrapartition queue.
DFHINTRA usage: Peak items	is the peak number of items in this intrapartition queue.

Table 174. Transient data: Summary resource statistics - extrapartition transient data queues

DFHSTUP name	Description
Queue ID	is the destination identifier (queue) that you specified in the transient data queue definition.
DDNAME (assoc.)	is the DDNAME of the extrapartition queue.

Table 174. Transient data: Summary resource statistics - extrapartition transient data queues (continued)

DFHSTUP name	Description
Data set name (Destination/origin of data)	is the data set name of the extrapartition queue.
Member Name	is the name of a member in the partitioned data referenced by the ddname for the extrapartition transient data queue.
I/O Type	is the type of I/O data set. Can be one of input, output or readback.
No. of Writes	is the total number of write operations to the output data set.
No. of Reads	is the total number of read operations from the input data set.

Table 175. Transient data: Summary resource statistics - indirect transient data queues

DFHSTUP name	Description
Queue ID	is the destination identifier (queue) that you specified in the transient data queue definition.
Indirect Queue id	is the name of the indirect queue.
Request Counts: Writes	is the total number of requests to write to this queue.
Request Counts: Reads	is the total number of requests to read from this queue.
Request Counts: Deletes	is the total number of requests to delete this queue.

Table 176. Transient data: Summary resource statistics - remote transient data queues

DFHSTUP name	Description
Queue Id	is the destination identifier (queue) that you specified in the transient data queue definition.
Remote: Queue	is the name of the remote queue.
Remote: Sysid	is the name of the remote system.
Request Counts: Writes	is the total number of requests to write to this queue.
Request Counts: Reads	is the total number of requests to read from this queue.
Request Counts: Deletes	is the total number of requests to delete this queue.

URIMAP definition statistics

URIMAP resource definitions match the URIs of HTTP or web service requests, and provide information about how to process the requests. The statistics include global statistics and statistics for each URIMAP definition.

DFH0STAT reports: See URIMAP global report and URIMAP report

Related reference:

"URIMAPs Global report" on page 493
The URIMAPs Global report is produced using the **EXEC CICS EXTRACT STATISTICS URIMAP** command. The statistics data is mapped by the **DFHWBGDS DSECT**.

"URIMAPs report" on page 495
The URIMAPs report is produced using a combination of **EXEC CICS INQUIRE URIMAP** and **EXEC CICS EXTRACT STATISTICS URIMAP RESID()** commands. The statistics data is mapped by the DFHWBRDS DSECT.

"Virtual Hosts report" on page 500
The Virtual Hosts report is produced using the **EXEC CICS INQUIRE HOST** command.

URIMAP definitions: Global statistics

You can retrieve URIMAP definition global statistics by using the **EXEC CICS EXTRACT STATISTICS URIMAP** system command. They are mapped by the DFHWBGDS DSECT.

Table 177. URIMAP definitions: Global statistics

DFHSTUP name	Field name	Description
URIMAP reference count	WBG_URIMAP_REFERENCE_COUNT	Number of times a search for a matching URIMAP definition was made. Reset characteristic: reset to zero
Entry point reference count	WBG_URIMAP_ENTRYPOINT_REF	Number of times a search for a matching URIMAP definition that is defined as an application entry point was made. Reset characteristic: reset to zero
Disabled	WBG_URIMAP_MATCH_DISABLED	Number of times a URIMAP definition with a matching host and path was found, but the URIMAP definition was disabled. Reset characteristic: reset to zero
Host/Path no match count	WBG_URIMAP_NO_MATCH_COUNT	Number of times a search for a matching URIMAP definition was made, but no URIMAP definition with a matching host and path was found. Reset characteristic: reset to zero
Host/Path match count	WBG_URIMAP_MATCH_COUNT	Number of times a search for a matching URIMAP definition was made, and a URIMAP definition with a matching host and path was found. Reset characteristic: reset to zero

Table 177. URIMAP definitions: Global statistics (continued)

DFHSTUP name	Field name	Description
Redirected	WBG_URIMAP_MATCH_REDIRECT	Number of times a URIMAP definition with a matching host and path was found, and the request was redirected. Reset characteristic: reset to zero
Analyzer used	WBG_URIMAP_MATCH_ANALYZER	Number of times a URIMAP definition with a matching host and path was found, and the analyzer program associated with the TCPIPSERVICE definition was called. Reset characteristic: reset to zero
Static content delivered	WBG_URIMAP_STATIC_CONTENT	Number of times a URIMAP definition with a matching host and path was found, and static content (document template or zFS file) was delivered as a response. Reset characteristic: reset to zero
Dynamic content delivered	WBG_URIMAP_DYNAMIC_CONTENT	Number of times a URIMAP definition with a matching host and path was found, and dynamic content (produced by an application program) was delivered as a response. Reset characteristic: reset to zero
PIPELINE requests	WBG_URIMAP_PIPELINE_REQS	Number of times a URIMAP definition with a matching host and path was found, and the request was handled by a web service. Reset characteristic: reset to zero
ATOMSERVICE requests	WBG_URIMAP_ATOMSERV_REQS	Number of times a URIMAP definition with a matching host and path was found, and the request was handled by a Atom service. Reset characteristic: reset to zero
Scheme (HTTP) requests	WBG_URIMAP_SCHEME_HTTP	Number of times a URIMAP definition with a matching host and path was found, and the scheme was HTTP. Reset characteristic: reset to zero

Table 177. URIMAP definitions: Global statistics (continued)

DFHSTUP name	Field name	Description
Scheme (HTTPS) requests	WBG_URIMAP_SCHEME_HTTPS	Number of times a URIMAP definition with a matching host and path was found, and the scheme was HTTPS (HTTP with SSL). Reset characteristic: reset to zero
Virtual host disabled count	WBG_HOST_DISABLED_COUNT	Number of times a URIMAP definition with a matching host and path was found, but the virtual host was disabled. Reset characteristic: reset to zero
Direct attach count	WBG_URIMAP_DIRECT_ATTACH	Number of requests that are processed by directly attached user task. Reset characteristic: reset to zero

Related information:

EXTRACT STATISTICS

URIMAP definitions: Resource statistics

You can retrieve URIMAP definition resource statistics by using the **EXEC CICS EXTRACT STATISTICS URIMAP** system command. They are mapped by the DFHWBRDS DSECT.

The resource information gives details of various attribute settings of each URIMAP resource.

Table 178. URIMAP definitions: resource statistics

DFHSTUP name	Field name	Description
URIMAP Name	WBR_URIMAP_NAME	The name of the URIMAP definition. Reset characteristic: not reset

Table 178. URIMAP definitions: resource statistics (continued)

DFHSTUP name	Field name	Description
URIMAP Usage	WBR_URIMAP_USAGE	The intended use of this URIMAP: **SERVER** The URIMAP definition is used to locate the resources for CICS to produce an HTTP response to the request identified by HOST and PATH. **CLIENT** The URIMAP definition is used to specify information for making an HTTP request from CICS as an HTTP client. **PIPELINE** The URIMAP definition is used to locate the resources for CICS to produce an XML response to the request identified by HOST and PATH. **ATOM** The URIMAP definition is used for an incoming request for data that CICS makes available as an Atom feed. **JVMSERVER** The URIMAP resource is used to map an inbound request from a web client to a servlet or JSP that is running in a JVM server. Reset characteristic: not reset
URIMAP Scheme	WBR_URIMAP_SCHEME	The scheme for the HTTP request, HTTP with SSL (HTTPS) or without (HTTP). Reset characteristic: not reset
Authenticate	WBR_URIMAP_AUTHENTICATE	For USAGE(CLIENT), whether credentials (authentication information) are sent for outbound web requests. Reset characteristic: not reset
URIMAP Port	WBR_URIMAP_PORT	For USAGE(CLIENT), the port number used for the client connection. For USAGE(SERVER), the port number that is being used for the communication, even if PORT(NO) is specified on the URIMAP at define time. Reset characteristic: not reset

Table 178. URIMAP definitions: resource statistics (continued)

DFHSTUP name	Field name	Description
URIMAP Host	WBR_URIMAP_HOSTNAME	For the USAGE(CLIENT) option, the host name of the target URL to which the HTTP request is to be sent. For any other usage type, the host name on the incoming HTTP request that is used to select this URIMAP definition. Reset characteristic: not reset
URIMAP IP Family	WBR_URIMAP_IP_FAMILY	The address format of the IP Resolved Address. Reset characteristic: not reset
URIMAP IP Resolved Address	WBR_URIMAP_IP_ADDRESS	The IPv4 or IPv6 address of the host. Reset characteristic: not reset
URIMAP Path	WBR_URIMAP_PATH	For the USAGE(CLIENT) option, the path of the target URL to which the HTTP request is to be sent. For any other usage type, the path on the incoming HTTP request that is used to select this URIMAP definition. The path might end in an asterisk, meaning that it is generic, and matches any path with characters that are the same up to but excluding the asterisk. Reset characteristic: not reset
TCPIPSERVICE name	WBR_URIMAP_TCPIPSERVICE	The TCPIPSERVICE resource to which this URIMAP definition applies. Only requests received using this TCPIPSERVICE resource are matched to this URIMAP definition. If no TCPIPSERVICE resource is specified, the URIMAP definition applies to all incoming HTTP requests. Reset characteristic: not reset
WEBSERVICE name	WBR_URIMAP_WEBSERVICE	The name of the WEBSERVICE resource definition for the web service that handles the incoming HTTP request. Reset characteristic: not reset
PIPELINE name	WBR_URIMAP_PIPELINE	The name of the PIPELINE resource definition for the web service that handles the incoming HTTP request. Reset characteristic: not reset

Table 178. URIMAP definitions: resource statistics (continued)

DFHSTUP name	Field name	Description
ATOMSERVICE name	WBR_URIMAP_ATOMSERVICE	The name of the ATOMSERVICE resource definition for the Atom document. Reset characteristic: not reset
Templatename	WBR_URIMAP_TEMPLATENAME	The name of a CICS document template, the contents of which are returned as the HTTP response. Reset characteristic: not reset
HFS file	WBR_URIMAP_HFSFILE	The name of a file in the z/OS UNIX System Services Hierarchical File System (HFS), with the contents that are returned as the HTTP response. Reset characteristic: not reset
Analyzer	WBR_URIMAP_ANALYZER_USE	Whether or not the analyzer associated with the TCPIPSERVICE definition is called to process the request. Reset characteristic: not reset
Converter	WBR_URIMAP_CONVERTER	The name of a converter program that is used to transform the HTTP request into a form suitable for the application program specified in PROGRAM. Reset characteristic: not reset
Transaction ID	WBR_URIMAP_TRANS_ID	The name of the alias transaction that processes the incoming HTTP request. Reset characteristic: not reset
Program name	WBR_URIMAP_PROGRAM_NAME	The name of the application program that processes the incoming HTTP request. Reset characteristic: not reset
Redirection type	WBR_URIMAP_REDIRECT_TYPE	Whether or not matching requests will be redirected, on a temporary or permanent basis. Reset characteristic: not reset

Table 178. URIMAP definitions: resource statistics (continued)

DFHSTUP name	Field name	Description
Location for redirection	WBR_URIMAP_LOCATION	An alternative URL to which the Web client is redirected, if redirection is specified. Reset characteristic: not reset
URIMAP reference count	WBR_URIMAP_REFERENCE_COUNT	Number of times this URIMAP definition was referenced. Reset characteristic: reset to zero
Disabled	WBR_URIMAP_MATCH_DISABLED	Number of times this host and path were matched, but the URIMAP definition was disabled. Reset characteristic: reset to zero
Redirected	WBR_URIMAP_MATCH_REDIRECT	Number of times that this host and path were matched and the request was redirected. Reset characteristic: reset to zero
Time out for pooled sockets	WBR_URIMAP_SOCKETCLOSE	The time after which CICS discards pooled client HTTP connections created using this URIMAP resource if they are not reused. Reset characteristic: not reset
Number of pooled sockets	WBR_URIMAP_SOCKPOOLSIZE	Current number of open client HTTP connections held in the pool for reuse. Reset characteristic: not reset
Peak number of pooled sockets	WBR_URIMAP_SOCKPOOLSIZE_PEAK	Peak number of open client HTTP connections held in the pool for reuse. Reset characteristic: reset to zero
Number of reclaimed sockets	WBR_URIMAP_SOCKETS_RECLAIMED	Number of pooled connections that were closed in the pool by CICS because the CICS region had reached the MAXSOCKETS limit. Reset characteristic: reset to zero

Table 178. URIMAP definitions: resource statistics (continued)

DFHSTUP name	Field name	Description
Number of timed out sockets	WBR_URIMAP_SOCKETS_TIMEDOUT	Number of pooled connections that were closed in the pool by CICS because they reached their timeout value without being reused. Reset characteristic: reset to zero
Not in DFHSTUP report	WBR_URIMAP_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	WBR_URIMAP_CHANGE_TIME	The time stamp (STCK) in local time of CSD record change. Reset characteristic: not reset
Not in DFHSTUP report	WBR_URIMAP_CHANGE_USERID	The user ID that ran the change agent. Reset characteristic: not reset
Not in DFHSTUP report	WBR_URIMAP_CHANGE_AGENT	The agent that made the last change. Reset characteristic: not reset
Not in DFHSTUP report	WBR_URIMAP_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	WBR_URIMAP_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	WBR_URIMAP_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID,

DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Related information:

EXTRACT STATISTICS

URIMAP definitions: Summary global statistics

These global statistics show summary information and statistics about URIMAP resource definitions. Summary statistics are not available online.

Table 179. URIMAP definitions: summary global statistics

DFHSTUP name	Description
URIMAP reference count	Number of times a search for a matching URIMAP definition was made.
Entry point reference count	Number of times a search for a matching URIMAP definition that is defined as an application entry point was made.
Disabled	Number of times a URIMAP definition with a matching host and path was found, but the URIMAP definition was disabled.
Redirected	Number of times a URIMAP definition with a matching host and path was found, and the request was redirected.
Host/Path no match count	Number of times a search for a matching URIMAP definition was made, but no URIMAP definition with a matching host and path was found.
Host/Path match count	Number of times a search for a matching URIMAP definition was made, and a URIMAP definition with a matching host and path was found.
Analyzer used	Number of times a URIMAP definition with a matching host and path was found, and the analyzer program associated with the TCPIPSERVICE definition was called.
Static content delivered	Number of times a URIMAP definition with a matching host and path was found, and static content (document template or z/OS UNIX file) was delivered as a response.
Dynamic content delivered	Number of times a URIMAP definition with a matching host and path was found, and dynamic content (produced by an application program) was delivered as a response.
PIPELINE requests	Number of times a URIMAP definition with a matching host and path was found, and the request was handled by a web service.
ATOMSERVICE requests	Number of times a URIMAP definition with a matching host and path was found, and the request was handled by an Atom service.
Scheme (HTTP) requests	Number of times a URIMAP definition with a matching host and path was found, and the scheme was HTTP.
Scheme (HTTPS) requests	Number of times a URIMAP definition with a matching host and path was found, and the scheme was HTTPS (HTTP with SSL).
Virtual host disabled count	Number of times a URIMAP definition with a matching host and path was found, but the virtual host was disabled.
Direct attach count	Number of requests that are processed by directly attached user task.

URIMAP definitions: Summary resource statistics

A summary listing of resource statistics for a URIMAP definition.

Summary statistics are not available online.

The resource information gives details of various attribute settings of each URIMAP definition.

Table 180. URIMAP definitions: summary resource statistics

DFHSTUP name	Description
URIMAP Name	The name of the installed URIMAP resource.
URIMAP Usage	The intended use of this URIMAP resource: **SERVER** The URIMAP resource is used to locate the resources for CICS to produce an HTTP response to the request identified by HOST and PATH. **CLIENT** The URIMAP resource is used to specify information for making an HTTP request from CICS as an HTTP client. **PIPELINE** The URIMAP resource is used to locate the resources for CICS to produce an XML response to the request identified by HOST and PATH. **ATOM** The URIMAP resource is used for an incoming request for data that CICS makes available as an Atom feed. **JVMSERVER** The URIMAP resource is used to map an inbound request from a web client to a servlet or JSP that is running in a JVM server.
URIMAP Scheme	The scheme for the HTTP request, HTTP with SSL (HTTPS) or without SSL (HTTP).
Authenticate	For USAGE(CLIENT), whether credentials (authentication information) are sent for outbound Web requests.
URIMAP Port	For USAGE(CLIENT), the port number used for the client connection. For USAGE(SERVER), the port number that is being used for the communication, even if PORT(NO) is specified on the URIMAP at define time.
URIMAP Host	For USAGE(CLIENT), the host name of the target URL to which the HTTP request is to be sent. For any other usage type, the host name on the incoming HTTP request that is used to select this URIMAP definition.
URIMAP IP Family	The address format of the address returned in URIMAP IP Resolved Address.
URIMAP IP Resolved Address	The IPv4 or IPv6 resolved address of the host.

Table 180. URIMAP definitions: summary resource statistics (continued)

DFHSTUP name	Description
URIMAP Path	For USAGE(CLIENT), the path of the target URL to which the HTTP request is to be sent. For any other usage type, the path on the incoming HTTP request that is used to select this URIMAP definition. The PATH might end in an asterisk, meaning that it is generic, and matches any path with characters that are the same up to but excluding the asterisk.
TCPIPSERVICE name	The TCPIPSERVICE resource to which this URIMAP definition applies. Only requests received using this TCPIPSERVICE resource are matched to this URIMAP definition. If no TCPIPSERVICE resource is specified, the URIMAP definition applies to all incoming HTTP requests.
WEBSERVICE name	The name of the WEBSERVICE resource definition for the web service that handles the incoming HTTP request.
PIPELINE name	The name of the PIPELINE resource definition for the web service that handles the incoming HTTP request.
ATOMSERVICE name	The name of the ATOMSERVICE resource definition for the Atom document.
Templatename	The name of a CICS document template, with the contents that are returned as the HTTP response.
zFS File	The name of a file in the z/OS UNIX System Services file system, with the contents that are returned as the HTTP response.
Analyzer	Whether the analyzer associated with the TCPIPSERVICE definition is called to process the request.
Converter	The name of a converter program that is used to transform the HTTP request into a form suitable for the application program specified in PROGRAM.
Transaction ID	The name of the alias transaction that processes the incoming HTTP request.
Program name	The name of the application program that processes the incoming HTTP request.
Redirection type	Whether matching requests will be redirected, on a temporary or permanent basis.

Table 180. URIMAP definitions: summary resource statistics (continued)

DFHSTUP name	Description
Location for redirection	An alternative URL to which the Web client is redirected, if redirection is specified.
URIMAP reference count	Number of times this URIMAP definition was referenced.
Disabled	Number of times that this URIMAP host and path were matched, but the URIMAP definition was disabled.
Redirected	Number of times that this URIMAP host and path were matched and the number of times that the request was redirected.
Time out for pooled sockets	The time after which CICS discards pooled client HTTP connections created using this URIMAP resource if they are not reused.
Peak number of pooled sockets	Peak number of open client HTTP connections held in the pool for reuse.
Number of reclaimed sockets	Number of pooled connections that were closed in the pool by CICS because the CICS region had reached the MAXSOCKETS limit.
Number of timed out sockets	Number of pooled connections that were closed in the pool by CICS because they reached their timeout value without being reused.

User domain statistics

These statistics are not available online, and are mapped by the DFHUSGDS DSECT.

Related concepts:

"Interpreting user domain statistics"
The user domain attempts to minimize the number of times it calls the security domain to create user security blocks (such as the ACEE), because this operation is expensive in both processor time and input/output operations.

Interpreting user domain statistics

The user domain attempts to minimize the number of times it calls the security domain to create user security blocks (such as the ACEE), because this operation is expensive in both processor time and input/output operations.

If possible, each unique representation of a user is shared between multiple transactions. A user-domain representation of a user can be shared if the following attributes are identical:

- The user ID.
- The group ID.
- The applid, which is not necessarily the same for all the users in a region. The applid is shipped with the user ID across MRO links.
- The port of entry, which can be the netname, for users signed on at z/OS Communications Server terminals, or the console name, for users signed on at consoles. It is null for other terminal types and for users associated with nonterminal transactions.

The user domain keeps a count of the number of concurrent usages of a shared instance of a user. The count includes the number of times the instance has been associated with a CICS resource, such as a transient data queue, and the number of active transactions that are using the instance.

Whenever CICS adds a new user instance to the user domain, the domain tries to locate that instance in its user directory. If the user instance exists with the parameters described, that instance is reused. The **USGDRRC** parameter records how many times reuse occurs. However, if the user instance does not exist, it must be added, requiring a call of the security domain and the external security manager. The **USGDRNFC** parameter records how many times this is necessary.

When the count associated with the instance is reduced to zero, the user instance is not immediately deleted; instead, it is placed in a timeout queue controlled by the **USRDELAY** system initialization parameter. While it is in the timeout queue, the user instance is still eligible to be reused. If it is reused, it is removed from the timeout queue. The **USGTORC** parameter records how many times a user instance is reused while it was being timed out, and the **USGTOMRT** parameter records the average time that user instances remain on the timeout queue until they are removed.

However, if a user instance remains on the timeout queue for a full **USRDELAY** interval without being reused, it is deleted. The **USGTOEC** parameter records how many times this happens.

If the value of **USGTOEC** is large compared to the value of **USGTORC**, consider increasing the value of **USRDELAY**. But if the value of **USGTOMRT** is much smaller than the value of **USRDELAY**, you might be able to reduce the value of **USRDELAY** without significant performance effect.

High values of **USRDELAY** can affect the ability of your security administrator to change the authorities and attributes of CICS users, because those changes are not reflected in CICS until the user instance is refreshed in CICS by being flushed from the timeout queue after the **USRDELAY** interval. Some security administrators might require you to specify **USRDELAY=0**, which still allows some sharing of user instances if the usage count is never reduced to zero. Generally, however, remote users are flushed out immediately after the transaction that they are running has ended, so that their user control blocks must be reconstructed frequently. This reconstruction results in poor performance.

If you specify a low value for the **USRDELAY** system initialization parameter to ensure that CICS detects changes to RACF profiles promptly, you might want to increase this value, because for z/OS 1.11 and later, CICS is notified immediately if RACF profile changes occur. The primary impact of a high **USRDELAY** value is that the amount of storage used for RACF control blocks is increased.

User domain: Global statistics

Table 181. User domain: Global statistics

DFHSTUP name	Field name	Description
Timeout mean reuse time	USGTOMRT	the average time user instances remain on the timeout queue until they are reused. Reset characteristic: reset to zero
Timeout reuse count	USGTORC	the number of times a user instance is reused from the timeout queue.. Reset characteristic: reset to zero
Timeout expiry count	USGTOEC	the number of times a user instance remains on the timeout queue for a full USRDELAY interval without being reused, and is deleted. Reset characteristic: reset to zero
Directory reuse count	USGDRRC	the number of times a user instance was reused. Reset characteristic: reset to zero
Directory not found count	USGDRNFC	the number of times a user instance was not found in the directory, but was later successfully added. Reset characteristic: reset to zero

User domain: Summary global statistics

Summary statistics are not available online.

Table 182. User domain: Summary global statistics

DFHSTUP name	Description
Average timeout reuse time	is the average time user instances remain on the timeout queue until they are reused.
Timeout reuse count	is the number of times a user instance is reused from the timeout queue.
Timeout expiry count	is the number of times a user instance remains on the timeout queue for a full USRDELAY interval without being reused, and is consequently deleted.
Directory reuse count	records how many times an existing user instance is reused.
Directory not found count	records the number of times the user instance needs to be added if it does not already exist in the directory.

SNA statistics

You can retrieve statistics for z/OS Communications Server by using the **EXEC CICS COLLECT STATISTICS VTAM** system command. They are mapped by the DFHA03DS DSECT.

Note: VTAM® is now z/OS Communications Server.

Related concepts:

"Interpreting z/OS Communications Server statistics"
This topic helps you understand the statistics returned by the **EXEC CICS COLLECT STATISTICS VTAM** system command.

Related reference:

"Program Autoinstall report" on page 435
The Program Autoinstall report shows information and statistics about the status of program autoinstall, catalog program definitions, and the number of autoinstalls that were attempted, rejected, and failed.

Related information:

EXTRACT STATISTICS

Interpreting z/OS Communications Server statistics

This topic helps you understand the statistics returned by the **EXEC CICS COLLECT STATISTICS VTAM** system command.

The "peak RPLs posted" includes only the receive-any RPLs defined by the RAPOOL system initialization parameter. In non-HPO systems, the value shown can be larger than the value specified for RAPOOL, because CICS reissues each receive-any request as soon as the input message associated with the posted RPL has been disposed of. The z/OS Communications Server may well cause this reissued receive-any RPL to be posted during the current dispatch of terminal control. While this does not necessarily indicate a performance problem, a number much higher than the number of receive-any requests specified via RAPOOL may indicate, for MVS, that the Communications Server was required to queue incoming messages in subpool 229 when no receive-any was available to accept the input. You should limit this Communications Server queueing activity by providing a sufficient number of receive-any requests to handle all but the input message rate peaks.

In addition to indicating whether the value for the RAPOOL system initialization parameter is large enough, you can also use the maximum number of RPLs posted statistic (A03RPLX) to determine other information. This depends upon whether your MVS system has HPO or not.

For HPO, RAPOOL(A,B) allows the user to tune the active count (B). The size of the pool (A) should be dependent on the speed at which they get processed. The active count (B) has to be able to satisfy the Communications Server at any given time, and is dependent on the inbound message rate for receive-any requests.

Here is an example to illustrate the differences for an HPO and a non-HPO system. Suppose two similar CICS executions use a RAPOOL value of 2 for both runs. The number of RPLs posted in the MVS/HPO run is 2, while the MVS/non-HPO run is 31. This difference is better understood when we look at the next item in the statistics.

This item is not printed if the maximum number of RPLs posted is zero. In our example, let us say that the MVS/HPO system reached the maximum 495 times. The non-HPO MVS system reached the maximum of 31 only once. You might deduce from this that the pool is probably too small (RAPOOL=2) for the HPO system and it needs to be increased. An appreciable increase in the RAPOOL value, from 2 to, say, 6 or more, should be tried. As you can see in this example, the RAPOOL value was increased to 8 and the maximum was reached only 16 times:

```
MAXIMUM NUMBER OF RPLS POSTED         8
NUMBER OF TIMES REACHED MAXIMUM      16
```

In a non-HPO system, these two statistics are less useful, except that, if the maximum number of RPLs posted is less than RAPOOL, RAPOOL can be reduced, thereby saving virtual storage.

VTAM SOS means that a CICS request for service from the Communications Server was rejected with a Communications Server sense code indicating that the Communications Server was unable to acquire the storage required to service the request. The Communications Server does not give any further information to CICS, such as what storage it was unable to acquire.

Note: VTAM is now the z/OS Communications Server.

This situation most commonly arises at network startup or shutdown when CICS is trying to schedule requests concurrently, to a larger number of terminals than during normal execution. If the count is not very high, it is probably not worth tracking down. In any case, CICS automatically retries the failing requests later on.

If your network is growing, however, you should monitor this statistic and, if the count is starting to increase, you should take action. Use D NET,BFRUSE to check if the Communications Server is short on storage in its own region and increase Communications Server allocations accordingly if this is required.

The maximum value for this statistic is 99, at which time a message is sent to the console and the counter is reset to zero. However, the Communications Server controls its own buffers and gives you a facility to monitor buffer usage.

If you feel that D NET,BFRUSE is insufficient, you can activate SMS tracing in the Communications Server to sample buffer activity at regular intervals. If you have installed NetView®, you can also have dynamic displays of the data that is obtained with D NET, BFRUSE.

If you use the BMS 3270 Intrusion Detection Service (IDS) feature, the following statistics report the number of BMS 3270 intrusions detected and the actions taken:

- BMS 3270 Validation
- *Number of* BMS 3270 Validation Failures Abended
- *Number of* BMS 3270 Validation Failures Ignored
- *Number of* BMS 3270 Validation Failures Logged

For more information about the BMS 3270 Intrusion Detection Service (IDS) feature, see BMS 3270 Intrusion Detection Service.

z/OS Communications Server: Global statistics

Table 183. z/OS Communications Server: Global statistics

DFHSTUP name	Field name	Description
Times at RPL maximum	A03RPLXT	is the number of times the peak RPLs posted value (A03RPLX) was reached. Reset characteristic: reset to zero.
Peak RPLs posted	A03RPLX	is the maximum number of receive-any request parameter lists (RPLs) that are posted by the Communications Server on any one dispatch of terminal control. Reset characteristic: reset to zero.
Short on storage count	A03VTSOS	is a counter that is incremented in the Communications Server SYNAD exit in the CICS terminal control program each time the Communications Server indicates that there is a temporary Communications Server storage problem. Reset characteristic: reset to zero.
Dynamic opens count	A03DOC	is the number of times the Communications Server access method control block (ACB) was opened through the control terminal. If the Communications Server is started before CICS and stays active for the whole CICS run, this value is zero. Reset characteristic: reset to zero.
Current LUs in session	A03LUNUM	is the current number of LUs in session. The types of LU that are included are: • LU6.1 primaries and secondaries in session (bound). • LU6.2 primaries and secondaries in session (bound). • Communications Server SNA LUs. Reset characteristic: not reset.
HWM LUs in session	A03LUHWM	is the current highest number of LUs logged on. The types of LU that are included are: • LU6.1 primaries and secondaries in session (bound). • LU6.2 primaries and secondaries in session (bound). • Communications Server SNA LUs. Reset characteristic: reset to current value.
PS inquire count	A03PSIC	is the number of times CICS issued INQUIRE OPTCD=PERSESS. Reset characteristic: reset to current value.

Table 183. z/OS Communications Server: Global statistics (continued)

DFHSTUP name	Field name	Description
PS nib count	A03PSNC	is the number of Communications Server sessions that persisted. Reset characteristic: reset to current value.
PS opndst count	A03PSOC	is the number of persisting sessions that were successfully restored. Reset characteristic: reset to current value.
PS unbind count	A03PSUC	is the number of persisting sessions that were terminated. Reset characteristic: reset to current value.
PS error count	A03PSEC	is the number of persisting sessions that were already unbound when CICS tried to restore them. Reset characteristic: reset to current value.
BMS 3270 Validation	A03BMVL	specifies whether the BMS 3270 validation URM is ON or OFF.
Number of BMS 3270 Validation Failures Ignored	A03BMIG	is the number of times the BMS 3270 validation URM has detected invalid 3270 data but ignored the detection in response. Reset characteristic: not reset.
Number of BMS 3270 Validation Failures Logged	A03BMLG	is the number of times the BMS 3270 validation URM has detected invalid 3270 data and issued a DFHTF0200 message to log the event. Reset characteristic: not reset.
Number of BMS 3270 Validation Failures Abended	A03BMAB	is the number of times the BMS 3270 validation URM has detected invalid 3270 data, issued a DFHTF0200 message to log the event, and terminated the transaction with an ABMX abend code. Reset characteristic: not reset.

z/OS Communications Server: Summary global statistics

Summary statistics are not available online.

Table 184. z/OS Communications Server: Summary global statistics

DFHSTUP name	Description
Times at RPL maximum	is the total number of times the peak RPLs posted value was reached.
Peak RPLs posted	is the peak number of receive-any request parameter lists (RPLs) that are posted by the Communications Server on any one dispatch of terminal control.

Table 184. z/OS Communications Server: Summary global statistics (continued)

DFHSTUP name	Description
Short on storage count	is a counter that is incremented in the Communications Server SYNAD exit in the CICS terminal control program each time the Communications Server indicates that there is a temporary Communications Server storage problem.
Dynamic opens count	is the total number of times that the Communications Server access method control block (ACB) was opened through the control terminal. If the Communications Server is started before CICS and stays active for the whole CICS run, this value is 0.
Average LUs in session	is the average value for the number of LUs logged on.
HWM LUs in session	is the highest value of the number of LUs logged on.
PS inquire count	is the total number of times CICS issued INQUIRE OPTCD=PERSESS.
PS nib count	is the total number of Communications Server sessions that persisted.
PS opndst count	is the total number of persisting sessions that were successfully restored.
PS unbind count	is the total number of persisting sessions that were terminated.
PS error count	is the total number of persisting sessions that were already unbound when CICS tried to restore them.
BMS 3270 Validation	specifies whether the BMS 3270 validation URM is ON or OFF.
Number of BMS 3270 Validation Failures Ignored	is the number of times the BMS 3270 validation URM has detected invalid 3270 data but ignored the detection in response.
Number of BMS 3270 Validation Failures Logged	is the number of times the BMS 3270 validation URM has detected invalid 3270 data and issued a DFHTF0200 message to log the event.
Number of BMS 3270 Validation Failures Abended	is the number of times the BMS 3270 validation URM has detected invalid 3270 data, issued a DFHTF0200 message to log the event, and terminated the transaction with an ABMX abend code.

Web service statistics

Web services support in CICS enables CICS applications to act in the role of both web service provider and web service requester, where the services are defined by using web services description language (WSDL).

WEBSERVICE resource definitions are used to define aspects of the runtime environment for CICS application programs deployed in a web services setting. Statistics are provided for each WEBSERVICE resource definition, and a total use count for all WEBSERVICE definitions is also available.

For information about the web services report, see “Web Services report” on page 500.

Web services: Resource statistics

You can retrieve web services resource statistics by using the **EXEC CICS EXTRACT STATISTICS WEBSERVICE RESID** system command. They are mapped by the DFHPIWDS DSECT.

The resource information gives details of various attribute settings of each WEBSERVICE resource definition. A total use count for all WEBSERVICE definitions is also available.

Table 185. Web Services: resource statistics

DFHSTUP name	Field name	Description
WEBSERVICE Name	PIW_WEBSERVICE_NAME	The name of the WEBSERVICE resource definition. Reset characteristic: not reset
PIPELINE name	PIW_PIPELINE_NAME	The name of the PIPELINE resource that contains this WEBSERVICE resource. Reset characteristic: not reset
URIMAP name	PIW_URIMAP_NAME	The name of a dynamically installed URIMAP resource definition, if there is one that is associated with this WEBSERVICE resource definition. Reset characteristic: not reset
Web service description (WSDL)	PIW_WSDL_FILE	The file name of the Web service description (WSDL) file associated with the WEBSERVICE resource. Reset characteristic: not reset
Archive file	PIW_ARCHIVE_FILE	The file name of the archive file containing one or more web service description (WSDL) files associated with the WEBSERVICE resource. Reset characteristic: not reset
Web service binding file	PIW_WSBIND_FILE	The file name of the Web service binding file associated with the WEBSERVICE resource. Reset characteristic: not reset

Table 185. Web Services: resource statistics (continued)

DFHSTUP name	Field name	Description
Web service WSDL binding	PIW_WSDL_BINDING	The WSDL binding represented by the WEBSERVICE resource. This binding is one of (potentially) many that appear in the WSDL file. Reset characteristic: not reset
Endpoint	PIW_ENDPOINT_URI	The URI specifying the location on the network (or endpoint) of the web service, as defined in the web service description. Reset characteristic: not reset
Validation	PIW_MSG_VALIDATION	Indicates whether full validation of SOAP messages against the corresponding schema in the web service description is specified. Reset characteristic: not reset
Program interface	PIW_PROGRAM_INTERFACE	For a service provider, indicates whether CICS passes data to the target application program in a COMMAREA or a channel. Reset characteristic: not reset
Program name	PIW_WEBSERVICE_PROGRAM	The name of the target application program. Reset characteristic: not reset
Container	PIW_CONTAINER_NAME	When CICS passes data to the target application program in a channel, indicates the name of the container that holds the top-level data. Reset characteristic: not reset
WEBSERVICE use count	PIW_WEBSERVICE_USE_COUNT	The number of times this WEBSERVICE resource definition was used to process a message. Reset characteristic: reset to zero

Table 185. Web Services: resource statistics (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	PIW_WEBSERVICE_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	PIW_WEBSERVICE_CHANGE_TIME	The time stamp (STCK) in local time of CSD record change. Reset characteristic: not reset
Not in DFHSTUP report	PIW_WEBSERVICE_CHANGE_USERID	The user ID that ran the CHANGE_AGENT. Reset characteristic: not reset
Not in DFHSTUP report	PIW_WEBSERVICE_CHANGE_AGENT	Identifies the agent that made the last change. Reset characteristic: not reset
Not in DFHSTUP report	PIW_WEBSERVICE_INSTALL_AGENT	Identifies the agent that installed the resourcee. Reset characteristic: not reset
Not in DFHSTUP report	PIW_WEBSERVICE_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	PIW_WEBSERVICE_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset

WEBSERVICE totals: The resource statistics also include a total WEBSERVICE use count, which shows the total number of times a WEBSERVICE resource definition was used to process a message.

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Related information:

EXTRACT STATISTICS

Web services: Summary resource statistics

The resource information gives details of various attribute settings of each WEBSERVICE resource definition.

Summary statistics are not available online.

Table 186. Web services: Summary resource statistics

DFHSTUP name	Description
WEBSERVICE name	The name of the WEBSERVICE resource definition.
PIPELINE name	The name of the PIPELINE resource that contains this WEBSERVICE resource.
URIMAP name	The name of a dynamically installed URIMAP resource definition, if there is one that is associated with this WEBSERVICE.
Web service description (WSDL)	The file name of the web service description (WSDL) file associated with the WEBSERVICE resource.
Archive file	The file name of the archive file containing one or more web service description (WSDL) files associated with the WEBSERVICE resource.
Web service binding file	The file name of the web service binding file associated with the WEBSERVICE resource.
Web service WSDL binding	The WSDL binding represented by the WEBSERVICE. This binding is one of (potentially) many that appear in the WSDL file.
Endpoint	The URI specifying the location on the network (or endpoint) of the web service, as defined in the web service description.
Validation	Indicates whether full validation of SOAP messages against the corresponding schema in the web service description is specified.
Program interface	For a service provider, indicates whether CICS passes data to the target application program in a COMMAREA or a channel.
Program name	The name of the target application program.
Container	When CICS passes data to the target application program in a channel, indicates the name of the container that holds the top level data.

Table 186. Web services: Summary resource statistics (continued)

DFHSTUP name	Description
WEBSERVICE use count	The number of times this WEBSERVICE resource definition was used to process a message.

WEBSERVICE Totals:

The summary statistics also include a total WEBSERVICE use count, which shows the total number of times a WEBSERVICE resource definition was used to process a message.

IBM MQ statistics

Statistics are provided for the IBM MQ Connection and each installed IBM MQ monitor.

IBM MQ Connection statistics

You can retrieve IBM MQ Connection statistics by using the **EXEC CICS EXTRACT STATISTICS MQCONN** system command. They are mapped by the DFHMQGDS DSECT.

Table 187. IBM MQConnection: Global statistics

DFHSTUP name	Field name	Description
MQCONN name	MQG_MQCONN_NAME	The name of the installed MQCONN definition for the CICS region, which defines the attributes of the connection between CICS and IBM MQ. Reset characteristic: not reset
IBM MQ Connect Date / Time	MQG_CONNECT_TIME_LOCAL	The date and time when the most recent connection between CICS and IBM MQ was started. In the summary statistics, this field is not present; instead, a field Total IBM MQ Connection Time shows the total time for which CICS was connected to IBM MQ. Reset characteristic: not reset
IBM MQ Connection Status	MQG_CONNECTION_STATUS	The status of the connection between CICS and IBM MQ: **C** Connected **N** Not connected Reset characteristic: not reset In the summary statistics, this field is not present.

Table 187. IBM MQConnection: Global statistics (continued)

DFHSTUP name	Field name	Description
IBM MQ Disconnect Date / Time	MQG_ DISCONNECT_TIME_LOCAL	The date and time when the most recent connection between CICS and IBM MQ ended. If CICS is currently connected to IBM MQ, this field is blank. In the summary statistics, this field is not present. Reset characteristic: not reset
Mqname	MQG_MQNAME	The name of the IBM MQ queue manager or queue-sharing group that is specified in the MQNAME attribute of the installed MQCONN definition for the CICS region. CICS uses this as the default for the connection. Reset characteristic: not reset
IBM MQ Queue Manager name	MQG_QMGR_NAME	The name of the IBM MQ queue manager to which CICS is currently connected. If CICS is not connected to IBM MQ, this field is blank. Reset characteristic: not reset
Resync Group member	MQG_RESYNCMEMBER	Shows whether the MQCONN definition for the CICS region specifies resynchronization if there are indoubt units of work when CICS reconnects to IBM MQ: **YES** CICS connects to the same queue manager, waiting, if necessary, until the queue manager becomes active. **NO** CICS makes one attempt to connect to the same queue manager. If that attempt fails, CICS connects to any member of the queue-sharing group. **GROUPRESYNC** CICS connects to any member of the queue-sharing group. The queue manager is chosen by IBM MQ and it asks CICS to resolve indoubt units of work on behalf of all eligible queue managers in the queue-sharing group. This function is called group unit of recovery. Reset characteristic: not reset
IBM MQ Release Initiation Queue name	MQG_MQ_RELEASE MQG_INITIATION_QUEUE	The release of IBM MQ that is connected to CICS. The name of the default initiation queue for the connection between CICS and IBM MQ. Reset characteristic: not reset
Number of current tasks	MQG_TTasks	The number of current tasks that have issued an MQI call. In the summary statistics, this field is not present. Reset characteristic: not reset

Table 187. IBM MQConnection: Global statistics (continued)

DFHSTUP name	Field name	Description
Number of futile attempts	MQG_TFutilAtt	A count of the number of MQI calls made while the connection status is "not connected". This is reset to zero when the connection is established. Reset characteristic: reset to zero
Total number of API calls	MQG_TApi	The total number of MQI calls since the connection was made. Reset characteristic: reset to zero
Number of API calls completed OK	MQG_TApiOk	The total number of calls that have completed successfully. Reset characteristic: reset to zero
Number of OPEN requests	MQG_TOPEN	The number of MQOPEN calls issued. Reset characteristic: reset to zero
Number of CLOSE requests	MQG_TCLOSE	The number of MQCLOSE calls issued. Reset characteristic: reset to zero
Number of GET requests	MQG_TGET	The number of MQGET calls issued. Reset characteristic: reset to zero
Number of GETWAIT requests	MQG_TGETWAIT	The number of MQGET calls issued with the MQGMO_WAIT option. Reset characteristic: reset to zero
Number of GETWAITs that waited	MQG_TWaitMsg	The number of MQGET calls issued with the MQGMO_WAIT option that waited for a message. Reset characteristic: reset to zero
Number of PUT requests	MQG_TPUT	The number of MQPUT calls issued. Reset characteristic: reset to zero
Number of PUT1 requests	MQG_TPUT1	The number of MQPUT1 calls issued. Reset characteristic: reset to zero

Table 187. IBM MQConnection: Global statistics (continued)

DFHSTUP name	Field name	Description
Number of INQ requests	MQG_TINQ	The number of MQINQ calls issued. Reset characteristic: reset to zero
Number of SET requests	MQG_TSET	The number of MQSET calls issued. Reset characteristic: reset to zero
Number of internal MQ calls	MQG_TCall	The total number of flows to IBM MQ on the connection. Reset characteristic: reset to zero
Number that completed synchronously	MQG_TCallSyncComp	The total number of calls completed synchronously. Reset characteristic: reset to zero
Number that needed I/O	MQG_TCallIO	The total number of calls that needed I/O. Reset characteristic: reset to zero
Number of calls with TCB switch	MQG_TSubtasked	The number of API calls with a TCB switch. Reset characteristic: reset to zero
Number of indoubt units of work	MQG_IndoubtUOW	The number of indoubt UOWs at adapter startup. Reset characteristic: reset to zero
Number of unresolved units of work	MQG_UnResolvedUOW	The number of UOWs that were in doubt at adapter startup, and that have not been resolved because of a CICS cold start. Reset characteristic: reset to zero
Number of resolved committed UOWs	MQG_ResolveComm	The number of UOWs that were in doubt at adapter startup that have now been resolved by committing. Reset characteristic: reset to zero
Number of resolved backout UOWs	MQG_ResolveBack	The number of UOWs that were in doubt at adapter startup that have now been resolved by backing out. Reset characteristic: reset to zero
Number of Backout UOWs	MQG_TBackUOW	The total number of backed out UOWs. Reset characteristic: reset to zero

Table 187. IBM MQConnection: Global statistics (continued)

DFHSTUP name	Field name	Description
Number of Committed UOWs	MQG_TCommUOW	The total number of committed UOWs. Reset characteristic: reset to zero
Number of tasks	MQG_TTaskend	The total number of tasks. Reset characteristic: reset to zero
Number of Single Phase Commits	MQG_TSPComm	The total number of single-phase commits. Reset characteristic: reset to zero
Number of Two Phase Commits	MQG_T2PComm	The total number of two-phase commits. Reset characteristic: reset to zero
Number of CB requests	MQG_TCB	The number of MQCB calls issued. Reset characteristic: reset to zero
Number of msgs consumed	MQG_TCONSUME	The number of messages passed to callback routines. Reset characteristic: reset to zero
Number of CTL requests	MQG_TCTL	The number of MQCTL calls issued. Reset characteristic: reset to zero
Number of SUB requests	MQG_TSUB	The number of MQSUB calls issued. Reset characteristic: reset to zero
Number of SUBRQ requests	MQG_TSUBRQ	The number of MQSUBRQ calls issued. Reset characteristic: reset to zero
Number of STAT requests	MQG_TSTAT	The number of MQSTAT calls issued. Reset characteristic: reset to zero
Number of CRTMH requests	MQG_TCRTMH	The number of MQCRTMH calls issued. Reset characteristic: reset to zero
Number of DLTMH requests	MQG_TDLTMH	The number of MQDLTMH calls issued. Reset characteristic: reset to zero

Table 187. IBM MQConnection: Global statistics (continued)

DFHSTUP name	Field name	Description
Number of SETMP requests	MQG_TSETMP	The number of MQSETMP calls issued. Reset characteristic: reset to zero
Number of INQMP requests	MQG_TINQMP	The number of MQINQMP calls issued. Reset characteristic: reset to zero
Number of DLTMP requests	MQG_TDLTMP	The number of MQDLTMP calls issued. Reset characteristic: reset to zero
Number of MHBUF requests	MQG_TMHBUF	The number of MQMHBUF calls issued. Reset characteristic: reset to zero
Number of BUFMH requests	MQG_TBUFMH	The number of MQBUFMH calls issued. Reset characteristic: reset to zero
Not in DFHSTUP report	MQG_Connect_time_gmt	The Greenwich mean time (GMT) when CICS connected to IBM MQ. The DFHSTUP report expresses this time as `hh:mm:ss`; however, the DSECT field contains the time as a GMT store clock (STCK) value. Reset characteristic: not reset
Not in DFHSTUP report	MQG_Disconnect_time_gmt	The Greenwich mean time (GMT) when CICS disconnected to IBM MQ. The DFHSTUP report expresses this time as `hh:mm:ss`; however, the DSECT field contains the time as a GMT store clock (STCK) value. Reset characteristic: not reset
Not in DFHSTUP report	MQG_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	MQG_CHANGE_TIME	The time stamp (STCK) in local time of CSD record change. Reset characteristic: not reset
Not in DFHSTUP report	MQG_CHANGE_USERID	The user ID that ran the change agent. Reset characteristic: not reset

Table 187. IBM MQConnection: Global statistics (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	MQG_CHANGE_AGENT	The agent that made the last change. Reset characteristic: not reset
Not in DFHSTUP report	MQG_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	MQG_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	MQG_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Related information:

EXTRACT STATISTICS

IBM MQ Connection: Summary global statistics

Summary global statistics for the IBM MQ Connection are available in the *IBM MQ Connection: Summary global statistics* report. Summary statistics are not available online.

Table 188. IBM MQ Connection: Summary global statistics

DFHSTUP name	Description
MQCONN name	The name of the installed MQCONN definition for the CICS region, which defines the attributes of the connection between CICS and IBM MQ.
Mqname	The name of the IBM MQ queue manager or queue-sharing group that is specified in the MQNAME attribute of the installed MQCONN definition for the CICS region. CICS uses this as the default for the connection.
IBM MQ Queue Manager name	The name of the IBM MQ queue manager to which CICS is currently connected. If CICS is not connected to IBM MQ, this field is blank.

Table 188. IBM MQ Connection: Summary global statistics (continued)

DFHSTUP name	Description
Resync Group member	Shows whether the MQCONN definition for the CICS region specifies resynchronization if there are indoubt units of work when CICS reconnects to IBM MQ: **YES** CICS connects to the same queue manager, waiting, if necessary, until the queue manager becomes active. **NO** CICS makes one attempt to connect to the same queue manager. If that attempt fails, CICS connects to any member of the queue-sharing group. **GROUPRESYNC** CICS connects to any member of the queue-sharing group. The queue manager is chosen by IBM MQ and it asks CICS to resolve indoubt units of work on behalf of all eligible queue managers in the queue-sharing group. This function is called group unit of recovery.
IBM MQ Release	The release of IBM MQ that is connected to CICS.
Initiation Queue name	The name of the default initiation queue for the connection between CICS and IBM MQ.
Number of futile attempts	A count of the number of MQI calls made while the connection status is "not connected". This is reset to zero when the connection is established.
Total number of API calls	The total number of MQI calls since the connection was made.
Number of API calls completed OK	The total number of calls that have completed successfully.
Number of OPEN requests	The number of MQOPEN calls issued.
Number of CLOSE requests	The number of MQCLOSE calls issued.
Number of GET requests	The number of MQGET calls issued.
Number of GETWAIT requests	The number of MQGET calls issued with the MQGMO_WAIT option.
Number of GETWAITs that waited	The number of MQGET calls issued with the MQGMO_WAIT option that waited for a message.
Number of PUT requests	The number of MQPUT calls issued.
Number of PUT1 requests	The number of MQPUT1 calls issued.
Number of INQ requests	The number of MQINQ calls issued.
Number of SET requests	The number of MQSET calls issued.
Number of internal MQ calls	The total number of flows to IBM MQ on the connection.
Number that completed synchronously	The total number of calls completed synchronously.
Number that needed I/O	The total number of calls that needed I/O.
Number of calls with TCB switch	The number of API calls with a TCB switch.
Number of indoubt units of work	The number of indoubt UOWs at adapter startup.
Number of unresolved units of work	The number of UOWs that were in doubt at adapter startup, and that have not been resolved because of a CICS cold start.
Number of resolved committed UOWs	The number of UOWs that were in doubt at adapter startup that have now been resolved by committing.
Number of resolved backout UOWs	The number of UOWs that were in doubt at adapter startup that have now been resolved by backing out.
Number of Backout UOWs	The total number of backed out UOWs.
Number of Committed UOWs	The total number of committed UOWs.
Number of tasks	The total number of tasks.
Number of Single Phase Commits	The total number of single-phase commits.
Number of Two Phase Commits	The total number of two-phase commits.
Number of CB requests	The number of MQCB calls issued.
Number of msgs consumed	The number of messages passed to callback routines.
Number of CTL requests	The number of MQCTL calls issued.
Number of SUB requests	The number of MQSUB calls issued.

Table 188. IBM MQ Connection: Summary global statistics (continued)

DFHSTUP name	Description
Number of SUBRQ requests	The number of MQSUBRQ calls issued.
Number of STAT requests	The number of MQSTAT calls issued.
Number of CRTMH requests	The number of MQCRTMH calls issued.
Number of DLTMH requests	The number of MQDLTMH calls issued.
Number of SETMP requests	The number of MQSETMP calls issued.
Number of INQMP requests	The number of MQINQMP calls issued.
Number of DLTMP requests	The number of MQDLTMP calls issued.
Number of MHBUF requests	The number of MQMHBUF calls issued.
Number of BUFMH requests	The number of MQBUFMH calls issued.

IBM MQ Monitor statistics

You can retrieve IBM MQ monitor statistics by using the **EXEC CICS EXTRACT STATISTICS MQMONITOR** system command. They are mapped by DFHMQRDS/DFHMQRPS/DFHMQRKS.

A record is produced for each MQMONITOR resource installed in the CICS region.

Table 189. IBM MQ Monitor statistics

DFHSTUP name	Field name	Description
MQMONITOR name	MQR_NAME	The name of an installed MQMONITOR definition in the CICS region.
MQMONITOR Start Date / Time	MQR_START_TIME_LOCAL	Reset characteristic: not reset The local date and time when the most recent instance of the MQ monitor was started.
MQMONITOR Stop Date / Time	MQR_STOP_TIME_LOCAL	Reset characteristic: not reset The local date and time when the most recent instance of the MQ monitor was stopped. If the MQ monitor is running, this field is blank.
Queue Name	MQR_QNAME	Reset characteristic: not reset The name of the MQ queue monitored by the MQ monitor.
Monitor Status	MQR_MONSTATUS	Reset characteristic: none The status of the MQ monitor: **STARTED** The MQ monitor is started. **STARTING** The MQ monitor is starting. **STOPPED** The MQ monitor is stopped. **STOPPING** The MQ monitor is stopping. Reset characteristic: not reset

Table 189. IBM MQ Monitor statistics (continued)

DFHSTUP name	Field name	Description
Monuserid	MQR_MONUSERID	The user ID used by the transaction monitoring the MQ queue. Reset characteristic: not reset
Task number	MQR_TASKNUM	Task number of the transaction monitoring the MQ queue. Reset characteristic: none
Tranid	MQR_TRANID	The ID of the CICS transaction used by the MQ monitor. Reset characteristic: not reset
Userid	MQR_USERID	The user ID to be used by the MQMONITOR transaction when issuing the start request for the application transaction if a suitable user ID is not available. Reset characteristic: not reset
Number of OPEN requests	MQR_TOPEN	The number of MQOPEN calls issued. Reset characteristic: reset to zero
Number of CLOSE requests	MQR_TCLOSE	The number of MQCLOSE calls issued. Reset characteristic: reset to zero
Number of GET requests	MQR_TGET	The number of MQGET calls issued. Reset characteristic: reset to zero
Number of GETWAIT requests	MQR_TGETWAIT	The number of MQGET calls issued with the MQGMO_WAIT option. Reset characteristic: reset to zero
Number of PUT requests	MQR_TPUT	The number of MQPUT calls issued. Reset characteristic: reset to zero
Number of PUT1 requests	MQR_TPUT1	The number of MQPUT1 calls issued. Reset characteristic: reset to zero
Number of INQ requests	MQR_TINQ	The number of MQINQ calls issued. Reset characteristic: reset to zero
Number of INQL requests	MQR_TINQL	The number of MQINQL calls issued. Reset characteristic: reset to zero
Number of SET requests	MQR_TSET	The number of MQSET calls issued. Reset characteristic: reset to zero
Number of COMMITOUW requests	MQR_TCOMMUOW	The number of UOWs that were in doubt at adapter startup that have now been resolved by committing. Reset characteristic: reset to zero
Number of BACKUOW requests	MQR_TBACKUOW	The number of UOWs that were in doubt at adapter startup that have now been resolved by backing out. Reset characteristic: reset to zero

Table 189. IBM MQ Monitor statistics (continued)

DFHSTUP name	Field name	Description
Number of OTHER requests	MQR_TOTHER	The number of other calls. Reset characteristic: reset to zero
Not in DFHSTUP report	MQR_START_TIME_GMT	The Greenwich mean time (GMT) when the MQ monitor was started. The DFHSTUP report expresses this time as `hh:mm:ss`; however, the DSECT field contains the time as a GMT store clock (STCK) value. Reset characteristic: not reset
Not in DFHSTUP report	MQR_STOP_TIME_GMT	The Greenwich mean time (GMT) when the MQ monitor was stopped. The DFHSTUP report expresses this time as `hh:mm:ss`; however, the DSECT field contains the time as a GMT store clock (STCK) value. Reset characteristic: not reset
Not in DFHSTUP report	MQR_MQMON_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	MQR_MQMON_CHANGE_TIME	The time stamp (STCK) in local time of CSD record change. Reset characteristic: not reset
Not in DFHSTUP report	MQR_MQMON_CHANGE_USERID	The ID of the user that ran the change agent. Reset characteristic: not reset
Not in DFHSTUP report	MQR_MQMON_CHANGE_AGENT	The agent that made the last change. Reset characteristic: not reset
Not in DFHSTUP report	MQR_MQMON_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	MQR_MQMON_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	MQR_MQMON_INSTALL_USERID	The ID of the user that installed the resource. Reset characteristic: not reset

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

IBM MQ Monitor: Summary statistics

This is a summary listing of MQMONITOR statistics for all MQMONITOR definitions. Summary statistics are not available online.

A record is produced for each MQMONITOR resource installed in the CICS region.

Table 190. IBM MQ Monitor: Summary statistics

DFHSTUP name	Description
Monitor name	The name of an installed MQMONITOR definition in the CICS region.
Queue name	The name of the MQ queue monitored by the MQ monitor.
Number of OPEN requests	The number of MQOPEN calls issued.
Number of CLOSE requests	The number of MQCLOSE calls issued.
Number of GET requests	The number of MQGET calls issued.
Number of GETWAIT requests	The number of MQGET calls issued with the MQGMO_WAIT option.
Number of PUT requests	The number of MQPUT calls issued.
Number of PUT1 requests	The number of MQPUT1 calls issued.
Number of INQ requests	The number of MQINQ calls issued.
Number of INQL requests	The number of MQINQL calls issued.
Number of SET requests	The number of MQSET calls issued.
Number of COMMITOUW requests	The number of UOWs that were in doubt at adapter startup that have now been resolved by committing.
Number of BACKUOW requests	The number of UOWs that were in doubt at adapter startup that have now been resolved by backing out.
Number of OTHER requests	The number of other calls.

XMLTRANSFORM statistics

The markup language (ML) domain collects statistics for XMLTRANSFORM resources, which define the XML binding and schema to transform application data to XML and vice versa.

CICS dynamically creates XMLTRANSFORM resources for you when you install BUNDLE or ATOMSERVICE resources.

Related reference:

"XMLTRANSFORMs report" on page 507
The XMLTRANSFORMs report shows information and statistics about XMLTRANSFORM resources. The XMLTRANSFORM resource defines where the XML binding is located on z/OS UNIX and its status. CICS dynamically creates an XMLTRANSFORM resource when you install a BUNDLE or ATOMSERVICE resource.

XMLTRANSFORM: resource statistics

You can retrieve XMLTRANSFORM resource statistics by using the **EXEC CICS EXTRACT STATISTICS XMLTRANSFORM** system command. They are mapped by the DFHMLRDS DSECT.

Table 191. XMLTRANSFORM: resource statistics

DFHSTUP name	Field name	Description
XMLTRANSFORM name	MLR_XMLTRANSFORM_NAME	The name of the XMLTRANSFORM resource. Reset characteristic: not reset
XML binding file	MLR_XSDBIND_FILE	The name and location of the XML binding in z/OS UNIX. Reset characteristic: not reset
XML schema file	MLR_XMLSCHEMA_FILE	The name and location of the XML schema in z/OS UNIX. Reset characteristic: not reset
Validation	MLR_MSG_VALIDATION	The status of XML validation. Reset characteristic: not reset
XMLTRANSFORM use count	MLR_XMLTRNFM_USE_COUNT	The number of times that the XML binding has been used for data transformation. Reset characteristic: not reset
Not in DFHSTUP report	MLR_XMLTRNFM_DEFINE_SOURCE	The source of the resource definition. Its value depends on the change agent. For more information, see Summary of the resource signature field values. Reset characteristic: not reset
Not in DFHSTUP report	MLR_XMLTRNFM_CHANGE_TIME	The time stamp (STCK) in local time of the CSD record change. Reset characteristic: not reset

Table 191. XMLTRANSFORM: resource statistics (continued)

DFHSTUP name	Field name	Description
Not in DFHSTUP report	MLR_XMLTRNFM_CHANGE_USERID	The user ID that ran the CHANGE_AGENT. Reset characteristic: not reset
Not in DFHSTUP report	MLR_XMLTRNFM_CHANGE_AGENT	The agent that was used to make the last change. Reset characteristic: not reset
Not in DFHSTUP report	MLR_XMLTRNFM_INSTALL_AGENT	The agent that installed the resource. Reset characteristic: not reset
Not in DFHSTUP report	MLR_XMLTRNFM_INSTALL_TIME	The time stamp (STCK) in local time when the resource was installed. Reset characteristic: not reset
Not in DFHSTUP report	MLR_XMLTRNFM_INSTALL_USERID	The user ID that installed the resource. Reset characteristic: not reset

The resource statistics fields for the resource signature

The resource signature captures details about when the resource is defined, installed, and last changed. The resource statistics field names for the resource signature end in CHANGE_AGENT, CHANGE_TIME, CHANGE_USERID, DEFINE_SOURCE, INSTALL_AGENT, INSTALL_TIME, and INSTALL_USERID. For detailed information about the content of the resource signature fields, see Summary of the resource signature field values.

Related information:

EXTRACT STATISTICS

XMLTRANSFORM: Summary resource statistics

Summary statistics are not available online.

Table 192. XMLTRANSFORM: Summary resource statistics

DFHSTUP name	Description
XMLTRANSFORM name	The name of the XMLTRANSFORM resource.
XML binding file	The name and location of the XML binding in z/OS UNIX.
XML schema file	The name and location of the XML schema in z/OS UNIX.
Validation	The status of XML validation.

Table 192. XMLTRANSFORM: Summary resource statistics (continued)

DFHSTUP name	Description
XMLTRANSFORM use count	The number of times that the XML binding has been used for data transformation.

Chapter 2. DFH0STAT reports

The sample statistics program DFH0STAT can produce reports about the statistics listed here. You can select the required statistics reports using the CICS Statistics Print Report Selection panels.

The heading of each report includes the generic APPLID, SYSID, job name, date, time, and the CICS version and release information.

ATOMSERVICEs report

The ATOMSERVICEs report shows information and statistics about ATOMSERVICE resource definitions, which define Atom feeds. This report is produced using a combination of **EXEC CICS INQUIRE ATOMSERVICE** and **EXEC CICS EXTRACT STATISTICS ATOMSERVICE** commands.

The statistics data is mapped by the DFHW2RDS DSECT.

Table 193. Fields in the ATOMSERVICEs report

Field Heading	Description
ATOMSERVICE Name	The name of the ATOMSERVICE resource definition. Source field: **EXEC CICS INQUIRE ATOMSERVICE**
ATOMSERVICE Enable Status	Whether the ATOMSERVICE definition is enabled or disabled. Source field: **EXEC CICS INQUIRE ATOMSERVICE() ENABLESTATUS**
Atom document type	The type of Atom document that is returned for this ATOMSERVICE resource definition. **Category** An Atom category document, which lists the categories for entries in a collection. **Collection** An Atom collection document, which contains a group of entry documents that can be edited. **Feed** An Atom feed document, which describes the metadata for a feed, and contains entry documents that provide data for the feed. **Service** An Atom service document, which provides information about the collections that are available on the server. Source field: **EXEC CICS INQUIRE ATOMSERVICE() ATOMTYPE**
Atom configuration file	The name of the Atom configuration file containing the XML for the Atom document. Source field: **EXEC CICS INQUIRE ATOMSERVICE() CONFIGFILE**
Atom binding file	The name of the Atom binding file for the resource used for the Atom feed. Source field: **EXEC CICS INQUIRE ATOMSERVICE() BINDFILE**

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Table 193. Fields in the ATOMSERVICEs report (continued)

Field Heading	Description
Resource type for Atom feed	The type of resource that provides the data for this Atom feed. **File** A CICS file. **Program** A service routine, which is a CICS application program written to supply content for Atom entries. **Tsqueue** A temporary storage queue. Source field: **EXEC CICS INQUIRE ATOMSERVICE() RESOURCETYPE**
Resource name for Atom feed	The name of the resource definition for the CICS resource that provides the data for this Atom feed or collection. Source field: **EXEC CICS INQUIRE FILE() DSNAME**
Dataset name	For resources of type File only, the name of the data set containing the file that provides the data for this Atom feed or collection. Source field: **EXEC CICS INQUIRE ATOMSERVICE() RESOURCENAME**
ATOMSERVICE reference count	The number of times this ATOMSERVICE resource definition was referenced. Source field: W2R-ATOMSERV-REF-COUNT
Disabled	The number of times this ATOMSERVICE resource definition was referenced, but the resource definition was disabled. Source field: W2R-ATOMSERV-REF-DISABLED
POST requests to the feed URL	The number of HTTP POST requests to add a new Atom entry to this Atom feed or collection. Source field: W2R-ATOMSERV-POST-FEED-CNT
GET requests to the feed URL	The number of HTTP GET requests to obtain a group of entries from this Atom feed or collection. Source field: W2R-ATOMSERV-GET-FEED-CNT
GET requests to the entry URL	The number of HTTP GET requests to obtain an individual Atom entry from this Atom feed or collection. Source field: W2R-ATOMSERV-GET-ENTRY-CNT
PUT requests to the entry URL	The number of HTTP PUT requests to edit an Atom entry in this Atom feed or collection. Source field: W2R-ATOMSERV-PUT-ENTRY-CNT
DELETE requests to the entry URL	The number of HTTP DELETE requests to delete an individual Atom entry from this Atom feed or collection. Source field: W2R-ATOMSERV-DEL-ENTRY-CNT

Bundles Report

The Bundles Report shows information and statistics about BUNDLE resources. The BUNDLE resource defines where a CICS bundle is deployed on z/OS UNIX and its status.

This report is produced using a combination of **EXEC CICS INQUIRE BUNDLE** and **EXEC CICS EXTRACT STATISTICS BUNDLE** commands. The statistics data is mapped by the DFHRLRDS DSECT.

Table 194. Fields in the Bundles report

Field Heading	Description
BUNDLE Name	The name of the BUNDLE resource. Source field: **EXEC CICS INQUIRE BUNDLE**
BUNDLE Enable Status	The status of the BUNDLE resource, either enabled or disabled. Source field: **EXEC CICS INQUIRE BUNDLE () ENABLESTATUS**
BUNDLE Directory	The location of the CICS bundle in z/OS UNIX. Source field: **EXEC CICS INQUIRE BUNDLE () BUNDLEDIR**
BUNDLE Scope Name	The scope of the bundle, as specified in the BASESCOPE attribute on the BUNDLE resource. For a bundle that is part of an application or platform, the scope is a URI that lists the platform, application, and application version. Source field: **EXEC CICS INQUIRE BUNDLE () BASESCOPE**
BUNDLEPART count	The number of imports, exports, entry points, policy scopes, and define statements that are defined in the bundle manifest. Source field: **EXEC CICS INQUIRE BUNDLE () PARTCOUNT**
Target enabled definitions	The total number of resources, entry points, and policy scopes that the bundle creates when enabled. Source field: **EXEC CICS INQUIRE BUNDLE () TARGETCOUNT**
Current enabled definitions	The number of resources, entry points, and policy scopes that were created by the bundle and are currently enabled in the CICS region. Source field: **EXEC CICS INQUIRE BUNDLE () ENABLEDCOUNT**

Connections and Modenames report

The Connections and Modenames report is produced using a combination of the **EXEC CICS INQUIRE CONNECTION**, **EXEC CICS INQUIRE MODENAME** and **EXEC CICS COLLECT STATISTICS CONNECTION** commands. The statistics data is mapped by the DFHA14DS DSECT.

Table 195. Fields in the Connections report

Field Heading	Description
Connection Name/Netname	The connection name (sysid) and the network name (applid) for the connection. Source field: **EXEC CICS INQUIRE CONNECTION() NETNAME()**
Access Method/Protocol	The communication access method and protocol used for the connection. Source field: **EXEC CICS INQUIRE CONNECTION() ACCESSMETHOD(cvda) PROTOCOL(cvda)**
Autoinstalled Connection Create Time	The local time at which this connection was autoinstalled. This field applies to APPC connections only. Source field: A14AICT
Peak Contention Losers	The peak number of contention loser sessions that were in use. Source field: A14E1HWM
ATIs satisfied by Losers	The number of queued allocate requests that have been satisfied by contention loser sessions. Source field: A14ES1
Receive Session Count	The number of receive sessions for this connection. (MRO and LU6.1 connections only) Source field: **EXEC CICS INQUIRE CONNECTION() RECEIVECOUNT()**
Send Session Count	The number of send sessions for this connection. (MRO and LU6.1 connections only) Source field: **EXEC CICS INQUIRE CONNECTION() SENDCOUNT()**
Peak Contention Winners	The peak number of contention winner sessions that were in use. Source field: A14E2HWM
ATIs satisfied by Winners	The number of queued allocate requests that have been satisfied by contention winner sessions. Source field: A14ES2
Current AIDs in chain	The current number of automatic initiate descriptors (AIDs) in the AID chain. Source field: A14EALL
Generic AIDs in chain	The current number of automatic initiate descriptors (AIDs) that are waiting for a session to become available to satisfy the allocate request. Source field: A14ESALL
Total number of Bids sent	The total number of bids sent. Source field: A14ESBID
Current Bids in progress	The current number of bids in progress. Source field: A14EBID
Peak Bids in progress	The peak number of bids that were in progress. Source field: A14EBHWM
Total Allocates	The total number of allocates for this connection. Source field: A14ESTAS
Allocates per second	The number of allocates issued per second for this connection. Source field: A14ESTAS / Elapsed seconds since reset

Table 195. Fields in the Connections report (continued)

Field Heading	Description
Allocates Queued	The current number of allocate requests queued for this connection. Source field: A14ESTAQ
Peak Allocates Queued	The peak number of allocate requests queued for this connection. Source field: A14ESTAM
Allocate Max Queue Time	The MAXQTIME value specified for this connection. Source field: A14EMXQT
Allocate Queue Limit	The last value encountered for the QUEUELIMIT parameter specified on the CONNECTION definition. When set, if this value is reached, then allocates are rejected. Source field: A14EALIM
Allocates Failed - Link	The number of allocate requests that failed due to the connection being released, out of service, or with a closed mode group. Source field: A14ESTAF
Allocates Failed - Other	The number of allocate requests that failed due to a session not being currently available for use. Source field: A14ESTAO
Allocates Rejected - Queue Limit	The number of allocate requests that were rejected due to the QUEUELIMIT value being reached. Source field: A14EALRJ
Max Queue Time - Allocate Purge	The number of times the allocate request queue has been purged due to the MAXQTIME value being reached. Source field: A14EQPCT
Allocates Purged - Max Queue Time	The total number of allocate requests purged due to the queueing time exceeding the MAXQTIME value. Source field: A14EMQPC
Transaction Routing - Total	The total number of transaction routing requests sent across the connection. Source field: A14ESTTC
Transaction Routing - Channel	The number of transaction routing requests sent across the connection, with channels. This is a subset of Transaction Routing - Total. Source field: A14ESTTC-CHANNEL
Allocates Rejected - XZIQUE	The number of allocate requests that were rejected by a XZIQUE global user exit. Source field: A14EZQRJ
XZIQUE - Allocate Purge	The number of times the allocate request queue has been purged by a XZIQUE global user exit. Source field: A14EZQPU
Allocates Purged - XZIQUE	The total number of allocate requests purged due to a XZIQUE global user exit requesting that the queued allocate requests should be purged. Source field: A14EZQPC

Table 195. Fields in the Connections report (continued)

Field Heading	Description
Function Shipping Requests: File Control	The number of file control requests function shipped across the connection. Source field: A14ESTFC
Function Shipping Requests: Interval Control - Total	The total number of interval control requests function shipped across the connection. Source field: A14ESTIC
Function Shipping Requests: Interval Control - Channel	The number of interval control requests, with channels, function shipped across the connection. This is a subset of Function Shipping Requests: Interval Control - Total. Source field: A14ESTIC-CHANNEL
Function Shipping Requests: Transient Data	The number of transient data requests function shipped across the connection. Source field: A14ESTTD
Function Shipping Requests: Temporary Storage	The number of temporary storage requests function shipped across the connection. Source field: A14ESTTS
Function Shipping Requests: Program Control - Total	The total number of program control requests function shipped across the connection. Source field: A14ESTPC
Function Shipping Requests: Program Control - Channel	The number of program control requests, with channels, function shipped across the connection. This is a subset of Function Shipping Requests: Program Control - Total. Source field: A14ESTPC-CHANNEL
Function Shipping Requests: Total	The total number of requests function shipped across the connection. Source field: A14ESTFC, A14ESTIC, A14ESTTD, A14ESTTS, A14ESTPC
Bytes Sent by Transaction Routing Requests	The number of bytes sent using channels, on transaction routing requests. This is the total amount of data sent using channels on the connection, including any control information. Source field: A14ESTTC-CHANNEL-SENT
Average Bytes Sent by Routing requests	The average number of bytes sent using channels, on transaction routing requests. Source field: A14ESTTC-CHANNEL-SENT / A14ESTTC-CHANNEL
Bytes Received by Transaction Routing Requests	The number of bytes received using channels, on transaction routing requests. This is the total amount of data received using channels on the connection, including any control information. Source field: A14ESTTC-CHANNEL-RCVD
Bytes Sent by Program Channel requests	The number of bytes sent on program control requests, with channels. This is the total amount of data sent on the connection for these requests, including any control information. Source field: A14ESTPC-CHANNEL-SENT
Average Bytes Sent by Channel request	The average number of bytes sent on program control requests, with channels. Source field: A14ESTPC-CHANNEL-SENT / A14ESTPC-CHANNEL

Table 195. Fields in the Connections report (continued)

Field Heading	Description
Bytes Received by Program Channel requests	The number of bytes received on program control requests, with channels. This is the total amount of data received on the connection for these requests, including any control information. Source field: A14ESTPC-CHANNEL-RCVD
Bytes Sent by Interval Channel requests	The number of bytes sent on interval control requests, with channels. This is the total amount of data sent on the connection for these requests, including any control information. Source field: A14ESTIC-CHANNEL-SENT
Average Bytes Sent by Channel request	The average number of bytes sent on interval control requests, with channels. Source field: A14ESTIC-CHANNEL-SENT / A14ESTIC-CHANNEL
Bytes Received by Interval Channel requests	The number of bytes received on interval control requests, with channels. This is the total amount of data received on the connection for these requests, including any control information. Source field: A14ESTIC-CHANNEL-RCVD

Table 196. Fields in the Modenames report

Field Heading	Description
Modename Connection Name	The name of the connection that owns this mode group entry. Source field: **EXEC CICS INQUIRE MODENAME() CONNECTION()**
Modename	The mode group name. Source field: **EXEC CICS INQUIRE MODENAME()**
Active Sessions	The number of sessions in this mode group currently in use. Source field: **EXEC CICS INQUIRE MODENAME() ACTIVE()**
Available Sessions	The current number of sessions in this mode group (bound). Source field: **EXEC CICS INQUIRE MODENAME() AVAILABLE()**
Maximum Sessions	The maximum number of sessions defined in this mode group. Source field: **EXEC CICS INQUIRE MODENAME() MAXIMUM()**
Maximum Contention Winners	The maximum number of sessions in this mode group that are defined to be contention winners. Source field: **EXEC CICS INQUIRE MODENAME() MAXWINNERS()**

Coupling Facility Data Table Pools report

The Coupling Facility Data Table Pools report shows information and statistics about Coupling Facility Data Table Pools, which contain one or more coupling facility data tables.

Table 197. Fields in the Coupling Facility Data Table Pools report

Field Heading	Description
Coupling Facility Data Table Pool	The name of the coupling facility data table pool. Source field: **EXEC CICS INQUIRE CFDTPOOL()**

Table 197. Fields in the Coupling Facility Data Table Pools report (continued)

Field Heading	Description
Connection Status	Indicates the connection status of the pool. Source field: **EXEC CICS INQUIRE CFDTPOOL() CONNSTATUS(cvda)**

Data Set Name report

The Data Set Name report is produced using the **EXEC CICS INQUIRE DSNAME** command.

Table 198. Fields in the Data Set Name report

Field Heading	Description
Data set name	The name of the data set. Source field: **EXEC CICS INQUIRE DSNAME()**
Access Method	The access method used with the data set. Source field: **EXEC CICS INQUIRE DSNAME() ACCESSMETHOD()**
Dsname Object	Indicates whether the object of the inquiry is a real data set containing records (a VSAM KSDS, ESDS, or RRDS, or an alternate index used directly) or a VSAM path definition that links an alternate index to its base cluster. BASE indicates a data set containing records. PATH indicates a VSAM path definition. A blank field in the report indicates either that the data set has not been opened by this CICS region, or that it is a BDAM data set. Source field: **EXEC CICS INQUIRE DSNAME() OBJECT()**
Dsname Validity	Indicates whether the data set name has been validated against the VSAM catalog by opening a file associated with the data set. Source field: **EXEC CICS INQUIRE DSNAME() VALIDITY()**
Dsname Availability	Indicates whether the data set is currently flagged, in this CICS region, as available or unavailable for use. Source field: **EXEC CICS INQUIRE DSNAME() AVAILABILITY()**
File Count	The number of installed file definitions that refer to this data set. Source field: **EXEC CICS INQUIRE DSNAME() FILECOUNT()**
Recovery Status	The recovery characteristics of the data set. Source field: **EXEC CICS INQUIRE DSNAME() RECOVSTATUS()**

Data Tables reports

The Data Tables Requests and Data Tables Storage reports are produced using a combination of the **EXEC CICS INQUIRE FILE** and **EXEC CICS EXTRACT STATISTICS FILE** commands. The statistics data is mapped by the **DFHA17DS DSECT**.

Table 199. Fields in the Data Tables Requests report

Field Heading	Description
Filename	The name of the file. Source field: **EXEC CICS INQUIRE FILE()**

Table 199. Fields in the Data Tables Requests report (continued)

Field Heading	Description
Successful Reads	The number of attempts to retrieve records from the table. Source field: A17DTRDS
Records Not Found	The number of times API READ requests were directed to the source data set because the record was not found in the table. Source field: A17DTRNF
Adds via Read	The number of records placed in the table by the loading process or as a result of API READ requests issued while loading was in progress. Source field: A17DTAVR
Adds via API	The number of attempts to add records to the table as a result of WRITE requests. Source field: A17DTADS
Adds Rejected	The number of records CICS attempted to add to the table which were rejected by the global user exit. Source field: A17DTARJ
Adds Full	The number of records CICS attempted to add to the table but was unable to do so because the table already contained the maximum number of records specified. Source field: A17DTATF
Rewrite Requests	The number of attempts to update records in the table as a result of REWRITE requests. Source field: A17DTRWS
Delete Requests	The number of attempts to delete records from the table as a result of DELETE requests. Source field: A17DTDLS
Read Retries	The total number of read retries, that is the number of times reads in an AOR had to be retried because the FOR changed the table during the read. Source field: A17DTRRS
Chng Resp/Lock Waits	For a CFDT that is using the locking model, records are locked when they are read for update. This count is the number of times it was necessary to WAIT for an already locked record. For a CFDT that is using the contention model, records are not locked when they are read for update. If a subsequent rewrite or delete request finds that the record has already changed a CHANGED response is returned. This count is the number of times that a CHANGED response was issued. Source field: A17DTCON

Table 200. Fields in the Data Tables Storage report

Field Heading	Description
Filename	The name of the file. Source field: **EXEC CICS INQUIRE FILE()**
Type	The type of data table, coupling facility, CICS-maintained or user-maintained. Source field: **EXEC CICS INQUIRE FILE() TABLE(cvda)**

Table 200. Fields in the Data Tables Storage report (continued)

Field Heading	Description
Current Records	The current number of records in the data table. Source field: A17DTSIZ
Peak Records	The peak number of records in the data table. Source field: A17DTSHI
Total - Storage Allocated	The total amount of storage (kilobytes) in allocated for the data table. Source field: A17DTALT
Total - Storage In-Use	The total amount of storage (kilobytes) in use for the data table. Source field: A17DTUST
Entries - Storage Allocated	The total amount of storage (kilobytes) allocated for the record entry blocks. Source field: A17DTALE
Entries - Storage In-Use	The total amount of storage (kilobytes) in use for the record entry blocks. Source field: A17DTUSE
Index - Storage Allocated	The total amount of storage (kilobytes) allocated for the index. Source field: A17DTALI
Index - Storage In-Use	The total amount of storage (kilobytes) in use for the index. Source field: A17DTUSI
Data - Storage Allocated	The total amount of storage (kilobytes) allocated for the record data. Source field: A17DTALD
Data - Storage In-Use	The total amount of storage (kilobytes) in use for the record data. Source field: A17DTUSD
Totals	Final total of the storage allocation for each storage column, for all the Data Tables listed in the report.

DB2 reports

There are two DB2 reports, the DB2 Connection report, and the DB2 Entries report.

DB2 Connection report

The DB2 Connection report shows information and statistics about DB2 Connection resource definitions, which define the connection between CICS and DB2 for a CICS region. The report also includes statistics about pool threads, DSNC commands, and tasks that wait for a TCB or pool thread.

This report is produced using a combination of the **EXEC CICS INQUIRE DB2CONN** and **EXEC CICS COLLECT STATISTICS DB2CONN** commands. The statistics data is mapped by the DFHD2GDS DSECT.

Table 201. Fields in the DB2 Connection report

Field Heading	Description
DB2 Connection Name	The name of the installed DB2CONN. Source field: D2G-DB2CONN-NAME

Table 201. Fields in the DB2 Connection report (continued)

Field Heading	Description
DB2 Group Id	The name of a data-sharing group of DB2 subsystems, specified in the installed DB2CONN definition. CICS connects to any active member of this group. Source field: D2G-DB2-GROUP-ID
Resync Group Member	If you are using group attach, specifies whether CICS attempts to resynchronize with the last connected DB2 data-sharing group member if outstanding units of work are being held. Source field: D2G-RESYNCMEMBER
DB2 Sysid	The name of the DB2 subsystem to which the CICS DB2 attachment is connected or will connect. If you are using group attach and the CICS DB2 attachment is connected or waiting to connect, this is the member of the data-sharing group of DB2 subsystems that has been chosen from the group. Source field: D2G-DB2-ID
DB2 Release	The version and release level of the DB2 subsystem to which CICS is currently connected. Source field: D2G-DB2-RELEASE
DB2 Connection Status	The current status of the CICS-DB2 Connection. Source field: **EXEC CICS INQUIRE DB2CONN CONNECTST**
DB2 Connect Date and Time	The date and time that the CICS connected to the DB2 subsystem. Source field: D2G-CONNECT-TIME-LOCAL
DB2 Connection Error	Specifies how CICS reports back to an application that issues an SQL request that CICS is not connected to DB2. Source field: **EXEC CICS INQUIRE DB2CONN CONNECTERROR**
DB2 Standby Mode	Specifies the action to be taken by the CICS-DB2 attachment if the DB2 subsystem is not active when an attempt to start the connection from CICS to DB2 is made. Source field: **EXEC CICS INQUIRE DB2CONN STANDBYMODE**
DB2 Pool Thread Plan Name	The name of the plan used for the pool. Source field: D2G-POOL-PLAN-NAME
DB2 Pool Thread Dynamic Plan Exit Name	The name of the dynamic plan exit used for pool threads. Source field: D2G-POOL-PLANEXIT-NAME
Dynamic Plan Exit Concurrency Status	Specifies whether the dynamic plan exit used for pool threads is defined as QUASIRENT or THREADSAFE. Source field: **EXEC CICS INQUIRE PROGRAM CONCURRENCY**
Pool Thread Authtype	The type of ID to be used for security checking when using pool threads. Source field: D2G-POOL-AUTHTYPE
Command Thread Authtype	The type of ID to be used for security checking when using command threads. Source field: D2G-COMD-AUTHTYPE
Pool Thread Authid	The ID to be used for security checking when using pool threads. Source field: D2G-POOL-AUTHID

Table 201. Fields in the DB2 Connection report (continued)

Field Heading	Description
Command Thread Authid	The ID to be used for security checking when using command threads. Source field: D2G-COMD-AUTHID
Signid for Pool/Entry/Command Threads	The authorization ID to be used by the CICS-DB2 attachment when signing on to DB2 for pool threads and DB2 entry threads when **Pool Thread Authtype** is SIGNID and for command threads when **Command Thread Authtype** is SIGNID. Source field: **EXEC CICS INQUIRE DB2CONN SIGNID**
Create Thread Error	Specifies the action to be taken when a create thread error occurs. Source field: **EXEC CICS INQUIRE DB2CONN THREADERROR**
Message TD Queue 1	The name of the first transient data queue to which unsolicited messages from the CICS-DB2 attachment are sent. Source field: **EXEC CICS INQUIRE DB2CONN MSGQUEUE1**
Protected Thread Purge Cycle	The length of time (mm:ss) of the protected thread purge cycle. Source field: **EXEC CICS INQUIRE DB2CONN PURGECYCLEM** and **PURGECYCLES**
Message TD Queue 2	The name of the second transient data queue to which unsolicited messages from the CICS-DB2 attachment are sent. Source field: **EXEC CICS INQUIRE DB2CONN MSGQUEUE2**
Deadlock Resolution	The action to be taken for a transaction using a pool thread that has been selected by DB2 as victim of a deadlock resolution. Source field: **EXEC CICS INQUIRE DB2CONN DROLLBACK**
Message TD Queue 3	The name of the third transient data queue to which unsolicited messages from the CICS-DB2 attachment are sent. Source field: **EXEC CICS INQUIRE DB2CONN MSGQUEUE3**
Non-Terminal Intermediate Syncpoint	Specifies whether non-terminal transactions release threads for reuse at intermediate sync points. Source field: **EXEC CICS INQUIRE DB2CONN NONTERMREL**
Pool Thread Wait Setting	Specifies whether transactions should wait for a pool thread or be abended if the number of active pool threads reaches the pool thread limit. Source field: D2G-POOL-THREADWAIT
Statistics TD Queue	The name of the transient data queue for the CICS-DB2 attachment statistics produced when the CICS-DB2 attachment is shut down. Source field: **EXEC CICS INQUIRE DB2CONN STATSQUEUE**
Pool Thread Priority	The priority of the pool thread subtasks relative to the CICS main task (QR TCB). If CICS is connected to DB2 Version 6 or later, this field contains zero, representing 'Not Applicable'. Source field: D2G-POOL-PRIORITY
DB2 Accounting records by	Specifies the frequency of DB2 accounting records to be produced for transactions using pool threads. Source field: D2G-POOL-ACCOUNTREC

Table 201. Fields in the DB2 Connection report (continued)

Field Heading	Description
Current TCB Limit	The maximum number of TCBs that can be used by the CICS DB2 attachment facility. Source field: D2G-TCB-LIMIT
Thread Reuselimit	The number of times a thread can be reused before being terminated. Source field: D2G-REUSELIMIT
Current number of Connections	The current number of connections in use by the CICS DB2 attachment facility. Source field: D2G-TCB-CURRENT
Peak number of Connections	The peak number of connections used by the CICS DB2 attachment facility. Source field: D2G-TCB-HWM
Current number of free Connections	The number of free connections available for use with CICS open TCBs. Source field: D2G-TCB-FREE
Current number of tasks on TCB Readyq	The number of CICS tasks queued waiting because the TCBLIMIT specified in the DB2CONN has been reached. Source field: D2G-TCB-READYQ-CURRENT
Peak number of tasks on TCB Readyq	The peak number of CICS tasks queued waiting because the TCBLIMIT specified in the DB2CONN has been reached. Source field: D2G-TCB-READYQ-PEAK
Pool Thread Limit	The maximum number of pool threads allowed. Source field: D2G-POOL-THREAD-LIMIT
Number of Calls using Pool Threads	The number of SQL calls made using pool threads. Source field: D2G-POOL-CALLS
Current number of Pool Threads	The current number of active pool threads. Source field: D2G-POOL-THREAD-CURRENT
Number of Pool Thread Signons	The number of DB2 signons performed for pool threads. Source field: D2G-POOL-SIGNONS
Peak number of Pool Threads	The peak number of active pool threads. Source field: D2G-POOL-THREAD-HWM
Number of Pool Thread Partial Signons	The number of DB2 partial signons performed for pool threads. Source field: D2G-POOL-PARTIAL-SIGNONS
Number of Pool Thread Waits	The number of times all available threads in the pool were busy and a transaction had to wait for a thread to become available. This count includes transactions that overflow to the pool to acquire a thread and have to wait for a pool thread. Source field: D2G-POOL-THREAD-WAITS
Number of Pool Thread Commits	The number of two phase commits performed for units of work using pool threads. Source field: D2G-POOL-COMMITS
Number of Pool Thread Aborts	The number of units of work using pool threads that were rolled back. Source field: D2G-POOL-ABORTS

Table 201. Fields in the DB2 Connection report (continued)

Field Heading	Description
Current number of Pool Tasks	The current number of CICS tasks using pool threads. Source field: D2G-POOL-TASK-CURRENT
Number of Pool Thread Single Phase	The number of units of work using pool threads that used single-phase commit, either because they were read-only UOWs, or because DB2 was the only recoverable resource updated in the UOW. Source field: D2G-POOL-SINGLE-PHASE
Peak number of Pool Tasks	The peak number of CICS tasks using pool threads. Source field: D2G-POOL-TASK-HWM
Number of Pool Thread Reuses	The number of times CICS transactions using the pool were able to reuse an already created DB2 thread. This count includes transactions that overflow to the pool to acquire a thread and reuse an existing thread. Source field: D2G-POOL-THREAD-REUSE
Current Total number of Pool Tasks	The current total number of tasks that have used a pool thread. Source field: D2G-POOL-TASK-TOTAL + D2G-POOL-TASK-CURRENT
Number of Pool Thread Terminates	The number of terminate thread requests made to DB2 for pool threads. This includes pool threads used by transactions that overflow to the pool. Source field: D2G-POOL-THREAD-TERM
Current number of Tasks on Pool Readyq	The current number of CICS tasks waiting for a pool thread to become available. Source field: D2G-POOL-READYQ-CURRENT
Times reuselimit hit by a pool thread	The number of times the reuselimit has been reached by a pool thread. Source field: D2G_POOL_REUSELIMIT_COUNT
Peak number of Tasks on Pool Readyq	The peak number of CICS tasks that waited for a pool thread to become available. Source field: D2G-POOL-READYQ-HWM
Current number of DSNC Command threads	The current number of active command threads servicing DB2 commands issued using the DSNC transaction. Source field: D2G-COMD-THREAD-CURRENT
Number of DSNC Command Calls	The number of DB2 commands issued using the DSNC transaction. Source field: D2G-COMD-CALLS
Peak number of DSNC Command threads	The peak number of command threads servicing DSNC DB2 commands. Source field: D2G-COMD-THREAD-HWM
Number of DSNC Command Signons	The number of DB2 signons performed for DSNC DB2 commands. Source field: D2G-COMD-SIGNONS
DSNC Command Thread Limit	The maximum number of command threads allowed for DSNC DB2 commands. Source field: D2G-COMD-THREAD-LIMIT
Number of DSNC Command Thread Terminates	The number of terminate thread requests made to DB2 for command threads. Source field: D2G-COMD-THREAD-TERM

Table 201. Fields in the DB2 Connection report (continued)

Field Heading	Description
Number of DSNC Command Thread Overflows	The number of times a DSNC DB2 command resulted in a pool thread being used because of the active number of command threads exceeding the command thread limit. Source field: D2G-COMD-THREAD-OVERF

DB2 Entries report

The DB2 Entries Report is produced using a combination of the **EXEC CICS INQUIRE DB2ENTRY** and **EXEC CICS EXTRACT STATISTICS DB2ENTRY** commands. The statistics data is mapped by the **DFHD2RDS DSECT**.

Table 202. Fields in the DB2 Entries report

Field Heading	Description
DB2Entry Name	The name of the installed DB2ENTRY. Source field: EXEC CICS INQUIRE DB2ENTRY
DB2Entry Static Plan Name	The name of the plan to be used for this DB2ENTRY. Source field: D2R-PLAN-NAME
DB2Entry Dynamic Plan Exit Name	The name of the dynamic plan exit used by this DB2ENTRY. Source field: D2R-PLANEXIT-NAME
Dynamic Plan Exit Concurrency Status	Whether the dynamic plan exit used by this DB2ENTRY is defined as QUASIRENT, THREADSAFE, or REQUIRED. Source field: **EXEC CICS INQUIRE PROGRAM CONCURRENCY**
DB2Entry Status	The current enabled status of this DB2ENTRY. Source field: **EXEC CICS INQUIRE DB2ENTRY ENABLESTATUS**
DB2Entry Disabled Action	The action to be taken for new CICS tasks that attempt to use this DB2ENTRY when it is disabled or being disabled. Source field: **EXEC CICS INQUIRE DB2ENTRY DISABLEDACT**
DB2Entry Deadlock Resolution	The action to be taken for a transaction using a thread from this DB2ENTRY that has been selected by DB2 as a victim of deadlock resolution. Source field: **EXEC CICS INQUIRE DB2ENTRY DROLLBACK**
DB2Entry Authtype	The type of id to be used for security checking for threads of this DB2ENTRY. Source field: D2R-AUTHTYPE
DB2Entry Accounting records by	specifies the frequency of DB2 accounting records to be produced for transactions using this DB2ENTRY. Source field: D2R-ACCOUNTREC
DB2Entry Authid	The id to be used for security checking for threads of this DB2ENTRY. Source field: D2R-AUTHID
Number of Calls using DB2Entry	The number of SQL calls made using a thread from this DB2ENTRY. Source field: D2R-CALLS

Table 202. Fields in the DB2 Entries report (continued)

Field Heading	Description
DB2Entry Thread Wait Setting	specifies whether transactions should wait for a DB2ENTRY thread, be abended, or overflow to the pool should the number of active threads reach the thread limit for this DB2ENTRY. Source field: D2R-THREADWAIT
Number of DB2Entry Signons	The number of DB2 signons performed for threads of this DB2ENTRY. Source field: D2R-SIGNONS
Number of DB2Entry Partial Signons	The number of DB2 partial signons performed for threads of this DB2ENTRY. Source field: D2R-PARTIAL-SIGNONS
DB2Entry Thread Priority	The priority of the thread subtasks for this DB2ENTRY relative to the CICS main task (QR TCB). If CICS is connected to DB2 Version 6 or later, this field contains zero, representing "Not Applicable". Source field: D2R-PRIORITY
Number of DB2Entry Commits	The number of two phase commits performed for units of work using threads from this DB2ENTRY. Source field: D2R-COMMITS
DB2Entry Thread Limit	The maximum number of threads allowed for this DB2ENTRY. Source field: D2R-THREAD-LIMIT
Number of DB2Entry Aborts	The number of units of work using threads from this DB2ENTRY that were rolled back. Source field: D2R-ABORTS
Current number of DB2Entry Threads	The current number of active threads using this DB2ENTRY. Source field: D2R-THREAD-CURRENT
Number of DB2Entry Single Phase	The number of units of work using threads from this DB2ENTRY that used single-phase commit, either because they were read-only UOWs, or because DB2 was the only recoverable resource updated in the UOW. Source field: D2R-SINGLE-PHASE
Peak number of DB2Entry Threads	The peak number of active threads for this DB2ENTRY. Source field: D2R-THREAD-HWM
Number of DB2Entry Thread Reuses	The number of times CICS transactions using this DB2ENTRY were able to reuse an already created DB2 thread. Source field: D2R-THREAD-REUSE
Number of DB2Entry Thread Terminates	The number of terminate thread requests made for threads for this DB2ENTRY. Source field: D2R-THREAD-TERM
DB2Entry Protected Thread Limit	The maximum number of protected threads allowed for this DB2ENTRY. Source field: D2R-PTHREAD-LIMIT
Number of DB2Entry Thread Waits/Overflows	The number of times all available threads for this DB2ENTRY were busy and a transaction must wait for a thread to become available or overflow to the pool and use a pool thread. Source field: D2R-THREAD-WAIT-OR-OVERFL

Table 202. Fields in the DB2 Entries report (continued)

Field Heading	Description
Current number of DB2Entry Protected Threads	The current number of inactive threads of this DB2ENTRY that are protected. Source field: D2R-PTHREAD-CURRENT
Peak number of DB2Entry Protected Threads	The peak number of inactive threads of this DB2ENTRY that were protected. Source field: D2R-PTHREAD-HWM
Current number of DB2Entry Tasks	The current number of CICS tasks using this DB2ENTRY. Source field: D2R-TASK-CURRENT
Peak number of DB2Entry Tasks	The peak number of CICS tasks using this DB2ENTRY. Source field: D2R-TASK-HWM
Current Total number of DB2Entry Tasks	The current total number of tasks that have used this DB2ENTRY. Source field: D2R-TASK-TOTAL + D2R-TASK-CURRENT
Current number of Tasks on DB2Entry Readyq	The current number of CICS tasks waiting for a thread to become available for this DB2ENTRY. Source field: D2R-READYQ-CURRENT
Peak number of Tasks on DB2Entry Readyq	The peak number of CICS tasks that waited for a thread to become available for this DB2ENTRY. Source field: D2R-READYQ-HWM

DFHRPL and LIBRARY Analysis report

The DFHRPL and LIBRARY Analysis report is produced using a combination of the **EXEC CICS INQUIRE PROGRAM**, **EXEC CICS COLLECT STATISTICS PROGRAM** and **EXEC CICS EXTRACT LIBRARY** commands. This analysis includes all public programs and those private programs that are defined as application entry points. It does not include an analysis of private programs. The statistics data was mapped by the DFHLDRDS and **DFHLDBDS DSECT**.

Table 203. Fields in the DFHRPL and LIBRARY Analysis report

Field Heading	Description
DFHRPL Offset	The offset into the DFHRPL DD program library concatenation. (DFHRPL report only)
DFHRPL Data set name	The name of the DFHRPL data set. (DFHRPL report only)
Programs	The current number of programs, maps, and partitionsets defined to CICS and located in this concatenation of the static DFHRPL or dynamic program LIBRARY.
Times Used	The number of times CICS tasks within the system have issued load requests to the loader domain to obtain access to a usable instance of this program that have fetched from this concatenation of the static DFHRPL or dynamic program LIBRARY . Source field: LDRTU
Fetches	The number of times programs were fetched from this concatenation of the static DFHRPL or dynamic program LIBRARY. Source field: LDRFC

Table 203. Fields in the DFHRPL and LIBRARY Analysis report (continued)

Field Heading	Description
Average Fetch Time	The average fetch time for programs fetched from this concatenation of the static DFHRPL or dynamic program LIBRARY. Source field: (LDRFT / LDRFC)
Newcopies	The number of times programs were newcopied which have been fetched from this concatenation of the static DFHRPL or dynamic program LIBRARY. Source field: LDRTN
Removes	The number of times programs were removed from CICS managed storage due to the actions of the Dynamic Program Storage Compression (DPSC) mechanism which had been fetched from this concatenation of the static DFHRPL or dynamic program LIBRARY. Source field: LDRRPC

Dispatcher reports

There are four dispatcher reports, the Dispatcher report, the Dispatcher MVS TCBs report, the Dispatcher TCB Modes report, and the Dispatcher TCB Pools report.

Dispatcher report

The Dispatcher report is produced using a combination of the **EXEC CICS INQUIRE SYSTEM** and **EXEC CICS EXTRACT STATISTICS DISPATCHER** commands. The statistics data is mapped by the **DFHDSGDS DSECT**.

Table 204. Fields in the Dispatcher Report

Field Heading	Description
Current ICV time	The current interval control value, expressed in milliseconds. Source field: DSGICVT
Current ICVR time	The current task runaway time interval, expressed in milliseconds. Source field: DSGICVRT
Current ICVTSD time	The current terminal scan delay value, expressed in milliseconds. With SNA and IPIC networks, the default ICVTSD value of 0 is appropriate. Source field: DSGICVSD
Current PRTYAGING time	The current task priority aging factor. Source field: DSGPRIAG
MRO (QR) Batching (MROBTCH) value	The number of events that must ocur before CICS is posted for dispatch due to the batching mechanism, as specified in the MROBTCH value in the SIT. Source field: DSGMBTCH
Concurrent Subtasking (SUBTSKS) value	The number of task control blocks (TCBs) that CICS can use for running tasks in concurrent mode, as specified in the SUBTSKS SIT parameter. Source field: DSGSTSKS
Current number of CICS Dispatcher tasks	The current number of tasks in the system. This figure includes all system tasks and all user tasks. Source field: DSGCNT

Table 204. Fields in the Dispatcher Report (continued)

Field Heading	Description
Peak number of CICS Dispatcher tasks	The peak number of tasks concurrently in the system. Source field: DSGPNT
Current number of TCBs attached	The current number of TCBs attached for this CICS address space. Source field: DSGTCBCA
Current number of TCBs in use	The number of CICS TCBs in use. Source field: DSGTCBCU
Last Excess TCB Scan	The date and time of the last CICS dispatcher excess MVS TCB scan. If the DFH0STAT report shows the date and time as --/--/---- --:--:--:---- then that indicates that an excess TCB scan has not happened yet. Source field: DSGLXSCN Reset characteristic: not reset
Number of Excess TCB Scans	The number of excess TCB scans performed by the CICS dispatcher. Source field: DSGXSCNS
Last Excess TCB scan — No TCB Detached	The date and time of the last CICS dispatcher excess MVS TCB scan that did not detach any TCBs. If the DFH0STAT report shows the date and time as --/--/---- --:--:--:---- then that indicates that an excess TCB scan has not happened yet. Source field: DSGLXSND Reset characteristic: not reset
Excess TCB scans — No TCB Detached	The number of excess TCB scans performed by the CICS dispatcher during which no CICS TCBs were detached. Source field: DSGXSCNN
Number of Excess TCBs Detached	The number of CICS TCBs that were detached by the CICS dispatcher during excess TCB scans. Source field: DSGXTCBD
Average Excess TCBs Detached per Scan	The average number of CICS TCBs that were detached by the CICS dispatcher during each excess TCB scan. Source field: DSGXTCBD / DSGXSCNS
Number of CICS TCB MODEs	The number of CICS TCB modes for this CICS address space. Source field: DSGASIZE
Number of CICS TCB POOLs	The number of CICS TCB pools for this CICS address space. Source field: DSGPSIZE

Dispatcher MVS TCBs report

The Dispatcher MVS TCBs report is produced using the **EXEC CICS EXTRACT STATISTICS MVSTCB**,**EXEC CICS EXTRACT STATISTICS DISPATCHER**, and **EXEC CICS INQUIRE MVSTCB** commands. The statistics data is mapped by the **DFHDSGDS**, **DFHDSTDS**, and **DFHDSRDS DSECT**.

Table 205. Fields in the Dispatcher MVS TCBs report

Field Heading	Description
Dispatcher Start Time and Date	The local time and date at which the CICS dispatcher started. Source field: DSGLSTRT
Address Space Accumulated CPU Time	The accumulated CPU time since reset for this CICS address space. **Note:** This field is not reset at CICS statistics intervals. Source field: MVS field ASCBEJST
Address Space Accumulated SRB Time	The accumulated SRB time since reset for this CICS address space. **Note:** This field is not reset at CICS statistics intervals. Source field: MVS field ASCBSRBT
Address Space CPU Time (Since Reset)	The accumulated CPU time for this CICS address space. Source field: DSGEJST
Address Space SRB Time (Since Reset)	The accumulated SRB time for this CICS address space. Source field: DSGSRBT
Current number of CICS TCBs	The current number of CICS TCBs in the address space. Source field: DSTDS_CICSTCB_COUNT
Current CICS TCB CPU time	The total CPU time so far for the currently attached CICS TCBs. Source field: DSTDS_CICSTCB_CPUTIME
Current CICS TCB Private Stg below 16MB	The total private storage below 16 MB allocated to CICS TCBs. Source field: DSTDS_CICSTCB_STG_BELOW
Current CICS TCB Private Stg below 16MB in use	The total private storage below 16 MB in use by CICS TCBs. [1] Source field: DSTDS_CICSTCB_STG_BELOW_INUSE
Current CICS TCB Private Stg above 16MB	The total private storage above 16 MB allocated to CICS TCBs. Source field: DSTDS_CICSTCB_STG_ABOVE
Current CICS TCB Private Stg above 16MB in use	The total private storage above 16 MB in use by CICS TCBs. [1] Source field: DSTDS_CICSTCB_STG_ABOVE_INUSE
Current number of non-CICS TCBs	The current number of non-CICS TCBs in the address space. Source field: DSTDS_NONCICSTCB_COUNT
Current non-CICS TCB CPU time	The total CPU time so far for the currently attached non-CICS TCBs. Source field: DSTDS_NONCICSTCB_CPUTIME
Current non-CICS TCB Private Stg below 16MB	The total private storage below 16 MB allocated to non-CICS TCBs. Source field: DSTDS_NONCICSTCB_STG_BELOW
Current non-CICS TCB Private Stg below 16MB in use	The total private storage below 16 MB in use by non-CICS TCBs. Source field: DSTDS_NONCICSTCB_STG_BELOW_INUSE
Current non-CICS TCB Private Stg above 16MB	The total private storage above 16 MB allocated to non-CICS TCBs. Source field: DSTDS_NONCICSTCB_STG_ABOVE
Current non-CICS TCB Private Stg above 16MB in use	The total private storage above 16 MB in use by non-CICS TCBs. Source field: DSTDS_NONCICSTCB_STG_ABOVE_INUSE

Table 205. Fields in the Dispatcher MVS TCBs report (continued)

Field Heading	Description
TCB Address	The address of the MVS TCB. Source field: DSRDS_TCB_ADDRESS
TCB Name	The name of the MVS TCB (if known to CICS). Source field: DSRDS_TCB_NAME
CICS TCB	The type of TCB, CICS or non-CICS. Source field: DSRDS_TCB_TYPE
Current TCB CPU Time	The total CPU time so far for this TCB. Source field: DSRDS_TCB_CPUTIME
Current TCB Private Stg Below 16MB Allocated	The total private storage below 16 MB allocated to this TCB. Source field: DSRDS_TCB_STG_BELOW
Current TCB Private Stg Below 16MB In Use	The total private storage below 16 MB in use by this TCB. Source field: DSRDS_TCB_STG_BELOW_INUSE
Current TCB Private Stg Above 16MB Allocated	The total private storage above 16 MB allocated to this TCB. Source field: DSRDS_TCB_STG_ABOVE
Current TCB Private Stg Above 16MB In Use	The total private storage above 16 MB in use by this TCB. Source field: DSRDS_TCB_STG_ABOVE_INUSE
Task Number	The CICS task number currently associated with this TCB. None means there are no CICS transactions currently assigned to this TCB. Source field: DSRDS_TCB_CICS_TASK
Tran ID	Transaction ID of the task currently associated with this TCB, if any. Source field: **EXEC CICS INQUIRE TASK() TRANSACTION()**
Task Status	Status of the task currently associated with this TCB, if any. Source field: **EXEC CICS INQUIRE TASK() RUNSTATUS()**
Mother TCB	Address of mother TCB. Source field: DSRDS_TCB_MOTHER
Sister TCB	Address of sister TCB. Source field: DSRDS_TCB_SISTER
Daughter TCB	Address of daughter TCB. Source field: DSRDS_TCB_DAUGHTER

Note:

1. The statistics for storage in use show the amount of storage that tasks obtain by using GETMAIN requests. This might be less than the amount of storage allocated to the TCBs, because storage is always allocated to TCBs in page multiples (4096 bytes).

Dispatcher TCB Modes report

The Dispatcher TCB Modes report is produced using the **EXEC CICS EXTRACT STATISTICS DISPATCHER** command. The statistics data is mapped by the **DFHDSGDS DSECT**.

In the Dispatcher TCB Modes report, some fields (for example, TCB Allocates) apply to open TCB modes only. The validity of these fields for each mode can be determined only after a TCB has been attached in that mode. Until the first TCB has been attached in that mode, the fields are marked "N/A". After the first TCB has been attached in that mode, if it is not an open TCB mode, the field continues to be marked "N/A". If it is an open TCB mode, the field is given a value.

Table 206. Fields in the Dispatcher TCB Modes report

Field Heading	Description
Dispatcher Start Time and Date	The local time and date at which the CICS dispatcher started. Source field: DSGLSTRT
Address Space Accumulated CPU Time	The accumulated CPU time since reset for this CICS address space. This field is not reset at CICS statistics intervals. Source field: MVS field ASCBEJST
Address Space Accumulated SRB Time	The accumulated SRB time since reset for this CICS address space. This field is not reset at CICS statistics intervals. Source field: MVS field ASCBSRBT
Address Space CPU Time (Since Reset)	The accumulated CPU time for this CICS address space. Source field: DSGEJST
Address Space SRB Time (Since Reset)	The accumulated SRB time for this CICS address space. Source field: DSGSRBT
TCB Mode	The name of the TCB mode to which the statistics refer. The names of the TCB modes are QR, RO, CO, SZ, RP, FO, SL, SO, SP, EP, TP, D2, S8, L8, L9, X8, X9, and T8. Source field: DSGTCBNM
TCBs Attached - Current	The current number of TCBs attached in this mode. Source field: DSGTCBCA
TCBs Attached - Peak	The peak number of TCBs attached in this mode. Source field: DSGTCBPA
Op. System Waits	The number of MVS waits that occurred on this TCB. Source field: DSGSYSW
Op. System Wait Time	The accumulated real time that this TCB was in an MVS wait; that is, the total time used between an MVS wait issued by the dispatcher and the return from the MVS wait. Source field: DSGTWT
Total TCB Dispatch Time	The accumulated real time that this TCB has been dispatched by MVS; that is, the total time used between the end of an MVS wait issued by the dispatcher and the start of the subsequent wait issued by the dispatcher. Source field: DSGTDT

Table 206. Fields in the Dispatcher TCB Modes report (continued)

Field Heading	Description
Total TCB CPU Time	The accumulated CPU time taken for this TCB; that is, the total time that this TCB has been running. Source field: DSGACT
DS TCB CPU Time	The accumulated CPU time taken for this DS task; that is, the processor time used by this TCB while running the default dispatcher task (DSTCB). Source field: DSGTCT
TCB CPU/Disp Ratio	The ratio (expressed as a percentage) of the accumulated CPU time to accumulated dispatch time for this TCB. This ratio is calculated only for the QR TCB. Source field: ((DSGACT / DSGTDT) * 100)
TCBs attached — Current	The total number of TCBs currently attached. Source field: DSGTCBCA for each TCB mode
Total TCB CPU Time	The total accumulated CPU time taken for the active TCBs. Source field: DSGACT for each TCB mode
DS TCB CPU Time	The total accumulated CPU time taken for the DS task on each active dispatcher TCB. Source field: DSGTCT for each TCB mode
TCB Mode	The name of the TCB mode to which the statistics refer. The names of the TCB modes are QR, RO, CO, SZ, RP, FO, SL, SO, SP, EP, TP, D2, S8, L8, L9, X8, X9, and T8. Source field: DSGTCBNM
Open	Indicates whether this TCB mode is an open TCB mode, not an open TCB mode, or unknown. Unknown means that this TCB mode has not been activated; the first request for a TCB in a particular mode causes the mode to be activated. Source field: DSGTCBMD
TCB Pool	The name of the TCB pool in which this TCB mode is defined: OPEN, SSL, THRD, XP, or N/A. Source field: DSGTCBMP
TCBs Attached - Current	The current number of TCBs attached in this mode. Source field: DSGTCBCA
TCBs Attached - Peak	The peak number of TCBs attached in this mode. Source field: DSGTCBPA
TCBs In Use - Current	The current number of TCBs in use in this mode. Source field: DSGTCBCU
TCBs In Use - Peak	The peak number of TCBs in use in this mode. Source field: DSGTCBPU
TCB Allocates	The number of times a TCB from this TCB mode was allocated to a task; that is, CICS assigned the TCB for the use of a particular task. TCB allocates apply only to open TCB modes. “N/A” means either that this TCB mode is not open or that no TCBs have yet been created in this mode. Source field: DSGTCBAL

Table 206. Fields in the Dispatcher TCB Modes report (continued)

Field Heading	Description
Dispatchable Queue - Current	The current number of dispatchable tasks queued for the TCB. Source field: DSGTMCDQ Reset characteristic: not reset
Dispatchable Queue - Peak	The peak number of dispatchable tasks that have been queued for the TCB. Source field: DSGTMPDQ Reset characteristic: reset to current
Dispatchable Queue - Average	The average number of dispatchable tasks that have been queued for the TCB. Source field: DSGTMADQ Reset characteristic: reset to current
TCBs Attached - Current	The total number of TCBs currently attached for all modes. Source field: DSGTCBCA for each TCB mode
TCBs In Use - Current	The total number of TCBs currently in use for all modes. Source field: DSGTCBCU for each TCB mode
TCB Allocates	The total number of times a TCB from this TCB mode was allocated to a task. Source field: DSGTCBAL for each TCB mode
TCB Mode	The name of the TCB mode to which the statistics refer. The names of the TCB modes are QR, RO, CO, SZ, RP, FO, SL, SO, SP, EP, TP, D2, S8, L8, L9, X8, X9, and T8. Source field: DSGTCBNM
Open	Indicates whether this TCB mode is an open TCB mode, not an open TCB mode, or unknown. Unknown means that this TCB mode has not been activated; the first request for a TCB in a particular mode will cause the mode to be activated. Source field: DSGTCBMD
TCB Pool	The name of the TCB pool in which this TCB mode is defined: OPEN, SSL, THRD, XP, or N/A. Source field: DSGTCBMP
TCB Attaches	The total number of MVS TCB attaches in this mode. Source field: DSGNTCBA
Attach Failures	The number of MVS TCB attach failures that have occurred in this mode. Source field: DSGTCBAF
TCBs Detached - Unclean	The number of MVS TCBs that have been, or are in the process of being, detached for this CICS dispatcher mode because the CICS transaction associated with the TCB has abended. Source field: DSGTCBDU
TCBs Detached - Stolen	The number of MVS TCBs that have been, or are in the process of being, stolen from this CICS dispatcher mode because it is required by another TCB mode. Source field: DSGTCBDS

Table 206. Fields in the Dispatcher TCB Modes report (continued)

Field Heading	Description
TCBs Detached - Excess	The number of MVS TCBs that have been, or are in the process of being, detached from this CICS dispatcher mode because of the CICS dispatcher excess TCB scans. Source field: DSGTCBDX
TCBs Detached - Other	The number of MVS TCBs that have been, or are in the process of being, detached from this CICS dispatcher TCB mode for other reasons, for example, because too many TCBs are attached in relation to the number of TCBs in use. Source field: DSGTCBDO
TCB Steals	The number of MVS TCBs that have been stolen from other TCB modes. Source field: DSGTCBST
TCB Mismatches	The number of TCB mismatches that have occurred for this TCB mode. Source field: DSGTCBMM
TCB Attaches	The total number of TCB attaches for all modes. Source field: DSGNTCBA for each TCB mode
Attach Failures	The total number of MVS TCB attach failures that have occurred in this mode. Source field: DSGTCBAF
TCBs Detached - Unclean	The total number of MVS TCBs that have been, or are in the process of being, detached because the CICS transaction associated with the TCB has abended, for all modes. Source field: DSGTCBDU for each TCB mode
TCBs Detached - Stolen	The total number of MVS TCBs that have been, or are in the process of being, stolen because they are required by another TCB mode, for all modes. Source field: DSGTCBDS for each TCB mode
TCBs Detached - Excess	The total number of MVS TCBs that have been, or are in the process of being, detached because of the CICS dispatcher excess TCB scans, for all modes. Source field: DSGTCBDX for each TCB mode
TCBs Detached - Other	The total number of MVS TCBs that have been, or are in the process of being, detached for other reasons, for all modes. Source field: DSGTCBDO for each TCB mode
TCB Steals	The total number of MVS TCBs that have been stolen from other TCB modes, for all modes. Source field: DSGTCBST for each TCB mode
TCB Mismatches	The total number of TCB mismatches that have occurred for all TCB modes. Source field: DSGTCBMM for each TCB mode

Dispatcher TCB Pools report

The Dispatcher TCB Pools report is produced for each TCB pool. The example shows the OPEN TCB pool. This report is produced using the **EXEC CICS EXTRACT STATISTICS DISPATCHER** command. The statistics data is mapped by the **DFHDSGDS DSECT**.

Table 207. Fields in the Dispatcher TCB Pools report

Field Heading	Description
TCB Pool	The name of the CICS TCB pool, either OPEN, SSL, THRD, or XP. Source field: DSGTCBPN
Current TCBs attached in this TCB Pool	The current number of TCBs attached in this TCB pool. Source field: DSGCNUAT
Peak TCBs attached in this TCB Pool	The peak number of TCBs attached in this TCB pool. Source field: DSGPNUAT
Current TCBs in use in this TCB Pool	The current number of TCBs in use in this TCB pool. Source field: DSGCNUUS
Peak TCBs in use in this TCB Pool	The peak number of TCBs in use in this TCB pool. Source field: DSGPNUUS
Max TCB Pool Limit	The value for the maximum number of TCBs allowed in this pool: • The **MAXOPENTCBS** system initialization parameter, if specified, sets the value for the open TCB pool. If the MAXOPENTCBS system initialization is not specified, CICS sets the limit for the L8 and L9 mode open TCB pool automatically based on the maximum number of tasks specified for the CICS region (the MXT value), using the following formula: `(2 * MXT Value) + 32`. For information about explicitly setting the MAXOPENTCBS parameter yourself, see MAXOPENTCBS. • The **MAXSSLTCBS** system initialization parameter specifies the value for the SSL TCB pool. • The **MAXTHRDTCBS** system initialization parameter specifies the value for the JVM server THRD TCB pool. The number of threads reserved for each JVM server is the THREADLIMIT value on the JVMSERVER resource, plus 1, up to a limit of 2000. • The **MAXXPTCBS** system initialization parameter, if specified, sets the value for the XP TCB pool. If the **MAXXPTCBS** system initialization is not specified, CICS sets the limit for the X8 and X9 mode XP TCB pool automatically to a value equal to the maximum number of tasks specified for the CICS region (the MXT value). For information about explicitly setting the MAXXPTCBS parameter yourself, see MAXXPTCBS . Source field: DSGMXTCB
Times at Max TCB Pool Limit	The number of times the system reached the limit for the number of TCBs allowed in this pool: • OPEN TCB pool • SSL TCB pool • THRD TCB pool • XP TCB pool Source field: DSGNTCBL
Time Pool Limit last reached	The time at which the pool reached the maximum TCB limit. Source field: DSGLTCBL Reset characteristic: reset to zero
Requests Delayed by Max TCB Pool Limit	The total number of TCB attaches delayed because the system reached the limit for the number of TCBs allowed in this pool. Source field: DSGTOTNW

Table 207. Fields in the Dispatcher TCB Pools report (continued)

Field Heading	Description
Total Max TCB Pool Limit delay time	The total time that TCB requests were delayed because the system had reached the limit for the number of TCBs allowed in this pool. Source field: DSGTOTWL
Average Max TCB Pool Limit delay time	The average time that a TCB request was delayed because the system had reached the limit for the number of TCBs allowed in this pool. Source field: (DSGTOTWL and DSGTOTNW)
Current Requests Delayed by Max TCB Pool Limit	The number of TCB requests that are currently delayed because the system has reached the limit for the number of TCBs allowed in this pool. Source field: DSGCURNW
Peak Requests Delayed by Max TCB Pool Limit	The peak number of TCB requests that were delayed because the system had reached the limit for the number of TCBs allowed in this pool. Source field: DSGPEANW
Total Delay Time for current delayed	The total delay time for the TCB requests that are currently delayed because the system has reached the limit for the number of TCBs allowed in this pool. Source field: DSGCURWT
Average Delay time for current delayed	The average delay time for the TCB requests that are currently delayed because the system has reached the limit for the number of TCBs allowed in this pool. Source field: (DSGCURWT and DSGCURNW)
Total number of TCB Mismatch Waits	The total number of TCB mismatch waits; that is, TCB requests that waited because no available TCB matched the request, but at least one non-matching TCB was free. Source field: DSGMMWTS
Total TCB Mismatch wait time	The total time spent in TCB mismatch waits by TCB requests using this pool. Source field: DSGMMWTM
Average TCB Mismatch wait time	The average time spent in a TCB mismatch wait by TCB requests using this pool. Source field: (DSGMMWTM and DSGMMWTS)
Current TCB Mismatch Waits	The current number of TCB mismatch waits by TCB requests using this pool. Source field: DSGCMMWS
Peak TCB Mismatch Waits	The peak number of TCB mismatch waits by TCB requests using this pool. Source field: DSGPMMWS
Total Wait time for current Mismatch Waits	The total wait time for current TCB mismatch waits by TCB requests using this pool. Source field: DSGCMMWT
Average Wait time for current Mismatch Waits	The average wait time for current TCB mismatch waits by TCB requests using this pool. Source field: (DSGCMMWT and DSGCMMWS)
Requests Delayed by MVS storage constraint	The total number of TCB requests that waited because no TCB was available, and none was created because of MVS storage constraints. Source field: DSGTOTMW

Table 207. Fields in the Dispatcher TCB Pools report (continued)

Field Heading	Description
Total MVS storage constraint delay time	The total time spent in waits caused by MVS storage constraints for TCB requests using this pool. Source field: DSGTOTMT
Average MVS storage constraint delay time	The average time spent in waits caused by MVS storage constraints for TCB requests using this pool. Source field: (DSGTOTMT and DSGTOTMW)
TCB Mode	The TCB modes currently active in this TCB Pool. The report states if no TCB modes are active. Source field: DSGTCBNM
TCBs Attached - Current	The current number of TCBs attached in this mode. Source field: DSGTCBCA
TCBs Attached - Peak	The peak number of TCBs attached in this mode. Source field: DSGTCBPA
TCBs In Use - Current	The current number of TCBs in use in this mode. Source field: DSGTCBCU
TCBs In Use - Peak	The peak number of TCBs in use in this mode. Source field: DSGTCBPU
TCB Attaches	The total number of MVS TCB attaches for this mode. Source field: DSGNTCBA
TCBs Detached - Unclean	The number of MVS TCBs that have been, or are in the process of being, detached for this CICS dispatcher mode because the CICS transaction associated with the TCB has abended. Source field: DSGTCBDU
TCBs Detached - Stolen	The number of MVS TCBs that have been, or are in the process of being, stolen from this CICS dispatcher mode because it is required by another TCB mode. Source field: DSGTCBDS
TCBs Detached - Excess	The number of MVS TCBs that have been, or are in the process of being, detached from this CICS dispatcher mode because of the CICS dispatcher excess TCB scans. Source field: DSGTCBDX
TCBs Detached - Other	The number of MVS TCBs that have been, or are in the process of being, detached from this CICS dispatcher TCB mode for other reasons; for example, because the TCB pool limit has been lowered, or because there are too many TCBs attached in relation to the number of TCBs in use. Source field: DSGTCBDO
TCB Steals	The number of MVS TCBs that have been stolen from other TCB modes. Source field: DSGTCBST
TCB Mismatches	The number of MVS TCB mismatches that have occurred for this TCB mode. Source field: DSGTCBMM

Table 207. Fields in the Dispatcher TCB Pools report (continued)

Field Heading	Description
TCBs Attached - Current	The total number of TCBs currently attached in this TCB pool for all modes. Source field: DSGTCBCA for each TCB mode
TCBs In Use - Current	The total number of TCBs currently in use in this TCB pool for all modes. Source field: DSGTCBCU for each TCB mode
TCB Attaches	The total number of MVS TCB attaches in this TCB pool for all modes. Source field: DSGNTCBA for each TCB mode
TCBs Detached - Unclean	The total number of MVS TCBs in this TCB pool that have been, or are in the process of being, detached because the CICS transaction associated with the TCB has abended. Source field: DSGTCBDU for each TCB mode
TCBs Detached - Stolen	The total number of MVS TCBs in this TCB pool that have been, or are in the process of being, stolen from a CICS dispatcher mode because they are required by another TCB mode. Source field: DSGTCBDS for each TCB mode
TCBS Detached - Excess	The total number of MVS TCBs in this TCB pool that have been or are in the process of being, detached because of the CICS dispatcher excess TCB scans. Source field: DSGTCBDX for each TCB mode
TCBs Detached - Other	The total number of MVS TCBs in this TCB pool that have been, or are in the process of being, detached for other reasons. Source field: DSGTCBDO for each TCB mode
TCB Steals	The total number of MVS TCBs in this TCB pool that have been stolen from other TCB modes. Source field: DSGTCBST for each TCB mode
TCB Mismatches	The number of MVS TCB mismatches that have occurred for this TCB mode. Source field: DSGTCBMM for each TCB mode

Document Templates report

The Document Templates report is produced using the **EXEC CICS EXTRACT STATISTICS DOCTEMPLATE** command and the **EXEC CICS INQUIRE DOCTEMPLATE** command. The statistics data is mapped by the DFHDHDDS DSECT.

Table 208. Fields in the Document Templates report

Field Heading	Description
DOCTEMPLATE Name	The name of the DOCTEMPLATE resource definition. Source field: **EXEC CICS INQUIRE DOCTEMPLATE**
Template Name	The name by which the template is known to application programs (the TEMPLATENAME attribute in the DOCTEMPLATE resource definition). Source field: DHD-TEMPLATE-NAME

Table 208. Fields in the Document Templates report (continued)

Field Heading	Description
Append crlf	Whether CICS appends carriage-return line-feed to each logical record of the template. Source field: DHD-APPEND-CRLF
Template contents	The format of the contents of the template, either binary or EBCDIC. Source field: DHD-TEMPLATE-CONTENTS
Template cache size	The amount of storage required for a cached copy of the document template. • Before the first use of the template, this field is zero. • This field is always zero for templates in a CICS program, which are never cached, and for templates in an exit program if they are not specified for caching. Source field: DHD-TEMPLATE-CACHE-SIZE
Template type	The type for the source of the document template, which can be an exit program, a CICS file name for a data set, a zFS file, a member of a PDS, a program, a transient data queue, or a temporary storage queue. Source field: DHD-TEMPLATE-TYPE
[Template type] name	The name for the source of the document template, such as a program name or z/OS UNIX file name. Source field: one of DHD-TEMPLATE-EXIT-PROGRAM, DHD-TEMPLATE-FILE-NAME, DHD-TEMPLATE-PROGRAM-NAME, DHD-TEMPLATE-PDS-MEMBER, DHD-TEMPLATE-TDQUEUE, DHD-TEMPLATE-TSQUEUE, DHD-TEMPLATE-HFSFILE
Data set name	Only for document templates of type "File". The name of the data set containing the document template. Source field: **EXEC CICS INQUIRE FILE() DSNAME()**
PDS Data set name	Only for document templates of type "PDS". The name of the partitioned data set containing the document template. Source field: **EXEC CICS INQUIRE DOCTEMPLATE() DSNAME()**
Use count	The total number of times the document template was referenced for any reason. Source field: DHD-TEMPLATE-USE-COUNT
Newcopy count	The number of times the SET DOCTEMPLATE NEWCOPY command was issued for this document template. Source field: DHD-TEMPLATE-NEWCOPIES
Read count	The number of times the document template was read from the source. This happens on the first use (including the first reference after deletion from the cache), or by a SET DOCTEMPLATE NEWCOPY command. Source field: DHD-TEMPLATE-READ-COUNT
Cache copy used	The number of times an application used the cached copy of the document template. Source field: DHD-TEMPLATE-CACHE-USED
Cache copy deleted	The number of times the cached copy of the document template was deleted because of a short-on-storage condition. Source field: DHD-TEMPLATE-CACHE-DELETED

Enqueue reports

There are two enqueue reports, the Enqueue Manager report, and the Enqueue Models report.

Enqueue Manager report

The Enqueue Manager report is produced using the **EXEC CICS EXTRACT STATISTICS ENQUEUE** command. The statistics data is mapped by the **DFHNQGDS DSECT**.

Table 209. Fields in the Enqueue Manager report

Field Heading	Description
ENQueue poolname	The enqueue pool name. Source field: NQGPOOL
ENQs issued	The number of enqueues issued. Source field: NQGTNQSI
ENQs waited	The number of enqueues that waited. Source field: NQGTNQSW
ENQueue waiting time	The total enqueue waiting time for the enqueues that waited. Source field: NQGTNQWT
Average Enqueue wait time	The average enqueue wait time. Source field: NQGTNQWT / NQGTNQSW
Current ENQs waiting	The current number of ENQs waiting. Source field: NQGCNQSW
Current ENQueue waiting time	The total enqueue waiting time for the ENQs currently waiting. Source field: NQGCNQWT
Sysplex ENQs waited	The number of sysplex enqueues that waited. Source field: NQGGNQSW
Sysplex ENQueue waiting time	The total sysplex enqueue waiting time for the sysplex enqueues that waited. Source field: NQGGNQWT
Average Sysplex Enqueue wait time	The average sysplex enqueue wait time. Source field: NQGGNQWT / NQGGNQSW
Current Sysplex ENQs waiting	The current number of sysplex enqueues waiting. Source field: NQGSNQSW
Current Sysplex ENQueue waiting time	The total enqueue waiting time for the sysplex ENQs currently waiting. Source field: NQGSNQWT
Total ENQs retained	The total number of enqueues retained. Source field: NQGTNQSR
Enqueue retention time	The total enqueue retention time. Source field: NQGTNQRT

Table 209. Fields in the Enqueue Manager report (continued)

Field Heading	Description
Average Enqueue retention time	The average enqueue retention time. Source field: NQGTNQRT / NQGTNQSR
Current ENQs retained	The current number of enqueues retained. Source field: NQGCNQSR
Current Enqueue retention time	The total enqueue retention time for enqueues currently retained. Source field: NQGCNQRT
Current Average Enqueue retention time	The current average enqueue retention time. Source field: NQGCNQRT / NQGCNQSR
Enqueues Rejected - Enqbusy	The number of enqueues rejected immediately - ENQBUSY. Source field: NQGTIRJB
Enqueues Rejected - Retained	The number of immediately rejected retained enqueues. Source field: NQGTIRJR
Waiting Enqueues - Rejected Retained	The number of retained enqueues awaiting rejection. Source field: NQGTWRJR
Waiting Enqueues Purged - Operator	The number of enqueues awaiting rejection because of operator intervention. Source field: NQGTWPOP
Waiting Enqueues Purged - Timeout	The number of enqueues awaiting rejection because of timeout. Source field: NQGTWPTO

Enqueue Models report

The Enqueue Models report is produced using the **EXEC CICS INQUIRE ENQMODEL** command.

Table 210. Fields in the Enqueue Models report

Field Heading	Description
ENQModel Name	The name (identifier) of the enqueue model. Source field: **EXEC CICS INQUIRE ENQMODEL()**
ENQModel Enqname	The resource name or generic name for this enqueue model. Source field: **EXEC CICS INQUIRE ENQMODEL() ENQNAME()**
ENQModel Enqscope	Indicates whether the enqueue is local or sysplex-wide. Source field: **EXEC CICS INQUIRE ENQMODEL() ENQSCOPE()**
ENQModel Status	The current status of this enqueue. Source field: **EXEC CICS INQUIRE ENQMODEL() STATUS(cvda)**

Event processing reports

There are four event processing reports, the CAPTURESPEC report, the EPADAPTER report, the EVENTBINDING report and the EVENTPROCESS report.

CAPTURESPEC report

The CAPTURESPEC report shows information and statistics about the capture specifications for each event. This report is produced using a combination of **EXEC CICS INQUIRE EVENTBINDING**, **EXEC CICS INQUIRE CAPTURESPEC**, **EXEC CICS EXTRACT STATISTICS EVENTBINDING**, and **CAPTURESPEC** commands.

The statistics data is mapped by the DFHECCDS DSECT.

Table 211. Fields in the CAPTURESPEC report

Field Heading	Description
EVENTBINDING Name	The name of the associated event binding. Source field: **EXEC CICS INQUIRE EVENTBINDING**
EPADAPTER Name	The 32-character name of an event binding. Source field: **EXEC CICS INQUIRE EVENTBINDING**
Enable Status	The current enable status of the event binding. Source field: **EXEC CICS INQUIRE EVENTBINDING ENABLESTATUS()**
CAPTURESPEC name	The name of the capture specification. Source field: **EXEC CICS INQUIRE CAPTURESPEC**
Capture point	The capture point associated with the capture specification. Source fields: **EXEC CICS INQUIRE CAPTURESPEC CAPTURETYPE** and **EXEC CICS INQUIRE CAPTURESPEC CAPTUREPOINT**
Current Program	The value of the current program application context predicate. Source fields: **EXEC CICS INQUIRE CAPTURESPEC CURRPGM**
Current Program Op	The value of the operator for the current program application context predicate. Source fields: **EXEC CICS INQUIRE CAPTURESPEC CURRPGMOP**
Current Transaction	The value of the current transaction application context predicate. Source fields: **EXEC CICS INQUIRE CAPTURESPEC CURRTRANID**
Current Transaction Op	The value of the operator for the current transaction application context predicate. Source fields: **EXEC CICS INQUIRE CAPTURESPEC CURRTRANIDOP**
Current Userid	The value of the current user ID application context predicate. Source fields: **EXEC CICS INQUIRE CAPTURESPEC CURRUSERID**
Current Userid Op	The value of the operator for the current user ID application context predicate. Source fields: **EXEC CICS INQUIRE CAPTURESPEC CURRUSERIDOP**
Event name	The associated business event name. Source field: **EXEC CICS INQUIRE CAPTURESPEC EVENTNAME**
Events Captured	The total number of events captured. Source field: ECC-EVENTS-CAPTURED
Capture Failures	The number of capture failures, recorded by capture specification. When displayed, this statistic is totaled by event binding. Source field: ECC-CAPTURE-FAILURES

EPADAPTER report

The EPADAPTER report shows information and statistics about each EP adapter. This report is produced using a combination of **EXEC CICS INQUIRE EPADAPTER** and **EXEC CICS EXTRACT STATISTICS EPADAPTER** commands.

The statistics data is mapped by the DFHEPRDS DSECT.

Table 212. Fields in the EPADAPTER report

Field Heading	Description
EPADAPTER name	The name of the EP adapter. Source field: EPR-ADAPTER-NAME
Enable status	The current enable status of the EP adapter. Source field: **EXEC CICS INQUIRE EPADAPTER ENABLESTATUS()**
EPADAPTER Type	The adapter type. Source field: EPR-ADAPTER-TYPE
EPADAPTER Emission mode	The EP adapter emission mode. This identifies whether the EP adapter is for synchronous or asynchronous events. Source field: EPR-EMISSION-MODE
EPADAPTER Number of put events	The number of events passed to EP for emission by this adapter. Source field: EPR-PUT-EVENTS

EVENTBINDING report

The EVENTBINDING report shows information and statistics about each event binding and the event binding status. This report is produced using a combination of **EXEC CICS INQUIRE EVENTBINDING** and **EXEC CICS EXTRACT STATISTICS EVENTBINDING** commands.

The statistics data is mapped by the DFHECGDS DSECT.

Table 213. Fields in the EVENTBINDING report

Field Heading	Description
EVENTBINDING Name	The 32-character name of an event binding. Source field: **EXEC CICS INQUIRE EVENTBINDING**
EVENTBINDING EPADAPTER Name	The 32-character name of an EP adapter. Source field: **EXEC CICS INQUIRE EVENTBINDING**
Enable Status	The current enable status of the event binding. Source field: **EXEC CICS INQUIRE EVENTBINDING ENABLESTATUS()**

EVENTPROCESS report

The EVENTPROCESS report shows information and statistics about event processing, queue status, tasks, and number of events captured. This report is produced using a combination of **EXEC CICS INQUIRE EVENTPROCESS**, **EXEC CICS EXTRACT STATISTICS EVENTPROCESS**, and **EXEC CICS EXTRACT STATISTICS EVENTBINDING** commands.

The statistics data is mapped by the DFHEPGDS and DFHECGDS DSECTs.

Table 214. Fields in the EVENTPROCESS report

Field heading	Description
Event processing status	The current status of event processing. Source field: **EXEC CICS INQUIRE EVENTPROCESS**
Put events	The number of events passed to the EP component for emission. Source field: EPG-PUT-EVENTS
Commit forward events	The number of units of work that have been committed, and that included one or more asynchronous transactional events. Source field: EPG-COMMIT-FORWARD-EVENTS
Commit backward events	The number of units of work that have been backed out, and that included one or more asynchronous transactional events. Source field: EPG-COMMIT-BACKWARD-EVENTS
Current event capture queue	The current number of events on the event capture queue. Source field: EPG-CURRENT-EVC-QUEUE
Peak event capture queue	The peak number of events on the event capture queue. Source field: EPG-PEAK-EVC-QUEUE
Current transactional queue	The current number of events on the transactional queue. Source field: EPG-CURRENT-TRANS-QUEUE
Peak transactional queue	The peak number of events on the transactional queue. Source field: EPG-PEAK-TRANS-QUEUE
Async normal events	The number of asynchronous normal priority events. Source field: EPG-ASYNC-NORMAL-EVENTS
Async priority events	The number of asynchronous high priority events. Source field: EPG-ASYNC-PRIORITY-EVENTS
Transactional events	The number of transactional events. Source field: EPG-TRANS-EVENTS
Transactional events discarded	The number of transactional events discarded. Source field: EPG-TRANS-EVENTS-DISCARDED
Synchronous events	The number of synchronous emission events captured. Source field: EPG-SYNC-EVENTS
Synchronous events failed	The number of synchronous emission events that were not emitted. Source field: EPG-SYNC-EVENTS-FAILED
Dispatcher tasks attached	The number of dispatcher tasks attached. Source field: EPG-DISPATCHERS-ATTACHED
Current dispatcher tasks	The current number of dispatcher tasks. Source field: EPG-CURRENT-DISPATCHERS

Table 214. Fields in the EVENTPROCESS report (continued)

Field heading	Description
Peak dispatcher tasks	The peak number of dispatcher tasks. Source field: EPG-PEAK-DISPATCHERS
Events to WebSphere MQ EP adapter	The number of events dispatched to the WebSphere MQ EP adapter. Source field: EPG-WMQ-ADAPTER-EVENTS
Events to transaction EP adapter	The number of events dispatched to the Transaction EP adapter. Source field: EPG-TRANS-ADAPTER-EVENTS
Events to tdqueue EP adapter	The number of events dispatched to the TD queue EP adapter. Source field: EPG-TDQ-ADAPTER-EVENTS
Events to tsqueue EP adapter	The number of events dispatched to the TS queue EP adapter. Source field: EPG-TSQ-ADAPTER-EVENTS
Events to custom EP adapter	The number of events dispatched to the Custom EP adapter. Source field: EPG-CUSTOM-ADAPTER-EVENTS
Events to HTTP EP adapter	The number of events dispatched to the HTTP EP adapter. Source field: EPG-HTTP-ADAPTER-EVENTS
Events lost (dispatcher) - config	The number of events that were captured but not dispatched to an EP adapter because the dispatcher encountered a problem relating to a resource specified in the `eventDispatcherPolicy` section of the event binding. Source field: EPG-DISPATCH-FAILURE-CONFIG
Events lost (dispatcher) - other	The number of events that were captured but not dispatched to an EP adapter because the dispatcher encountered a problem in the CICS environment, for example, insufficient storage. Source field: EPG-DISPATCH-FAILURE-OTHER
Events lost (adapter) - config	The number of events that were captured but not emitted because the EP adapter encountered a problem relating to a resource specified in the `eventDispatcherAdapter` configuration section of the event binding. Source field: ECG-EVENTS-LOST-CONFIG
Events lost (adapter) - other	The number of events that were captured but not emitted because the EP adapter encountered a problem in the CICS environment, for example, insufficient storage. Source field: ECG-EVENTS-LOST-OTHER
Events lost - adapter unavailable	The number of events that were not emitted because the EP adapter is disabled or not installed. Source field: EPG-EVENTS-ADAPTER-UNAVAIL
Event filtering operations	The number of event filtering operations. Source field: ECG-EB-EVENT-FILTER-OPS
Events with disabled EVENTBINDING	The number of events that were not captured because of a disabled event binding. Source field: ECG-EB-EVENTS-DISABLED
Events captured	The total number of application and system events captured. Source field: ECG-EB-EVENTS-CAPTURED

Table 214. Fields in the EVENTPROCESS report (continued)

Field heading	Description
System events captured	The number of system events captured. Source field: ECG-SYS-EVENTS-CAPTURED
Filter operations failed	The number of filtering operations that did not complete because CICS was unable to determine whether an event should have been captured. Source field: ECG-FILTER-OPS-FAILED
Capture operations failed	The number of capture operations that did not complete because CICS determined that an event was required but failed to capture it. Source field: ECG-CAPTURE-OPS-FAILED

Files report

The Files report is produced using a combination of the **EXEC CICS INQUIRE FILE** and **EXEC CICS EXTRACT STATISTICS FILE** commands. The statistics data is mapped by the **DFHA17DS DSECT**.

Table 215. Fields in the Files report

Field Heading	Description
Filename	The name of the file. Source field: **EXEC CICS INQUIRE FILE()**
Access Method	Indicates the access method for this file. Source field: **EXEC CICS INQUIRE FILE() ACCESSMETHOD(cvda)**
File Type	Indicates how the records are organized in the data set that corresponds to this file. Source field: **EXEC CICS INQUIRE FILE() TYPE(cvda)**
Remote Filename	The name by which the file is known in the remote system. Source field: **EXEC CICS INQUIRE FILE() REMOTENAME()**
Remote System	The name of the CICS region in which the file is defined. Source field: **EXEC CICS INQUIRE FILE() REMOTESYSTEM()**
LSRpool	The identity of the LSR pool defined for this file. “No” means that it is not defined in an LSR pool. Source field: **EXEC CICS INQUIRE FILE() LSRPOOLNUM()**
RLS	Indicates whether the file is to be opened in RLS mode. Source field: A17RLS
Data Table Type	The type of data table: coupling facility, CICS-maintained, user-maintained, or remote. If this field is blank, it indicates that the file is not known to be defined as a data table. This can be the case if the file is not currently open. Source field: **EXEC CICS INQUIRE FILE() TABLE(cvda) REMOTETABLE(cvda)**
CFDT Poolname	The name of the coupling facility data table pool in which the coupling facility data table resides. Source field: **EXEC CICS INQUIRE FILE() CFDTPOOL()**

Table 215. Fields in the Files report (continued)

Field Heading	Description
Table Name	The coupling facility data table name. Source field: **EXEC CICS INQUIRE FILE() TABLENAME()**
Recovery Status	Indicates the recovery status of the file. Source field: **EXEC CICS INQUIRE FILE() RECOVSTATUS(cvda)**
Strings	The number of VSAM strings that are defined for the file. Source field: A17STRNO
Buffers — Index	The number of index buffers that are defined for the file. Source field: A17DSINB
Buffers — Data	The number of data buffers that are defined for the file. Source field: A17DSDNB

File Requests report

The File Requests report is produced using a combination of the **EXEC CICS INQUIRE FILE** and **EXEC CICS EXTRACT STATISTICS FILE** commands. The statistics data is mapped by the **DFHA17DS DSECT**.

Table 216. Fields in the File Requests report

Field Heading	Description
Filename	The name of the file. Source field: **EXEC CICS INQUIRE FILE()**
Read Requests	The number of GET requests attempted against this file. Source field: A17DSRD
Get Update Requests	The number of GET UPDATE requests attempted against this file. Source field: A17DSGU
Browse Requests	The number of GETNEXT and GETPREV requests attempted against this file. Source field: A17DSBR
Browse Updates	The number of GETNEXT UPDATE and GETPREV UPDATE requests attempted against this file. Source field: A17DSBRU
Add Requests	The number of PUT requests attempted against this file. Source field: A17DSWRA
Update Requests	The number of PUT UPDATE requests attempted against this file. Source field: A17DSWRU
Delete Requests	The number of DELETE requests attempted against this file. Source field: A17DSDEL
RLS Req. Timeouts	The number of RLS file requests that timed out. Source field: A17RLSWT

Table 216. Fields in the File Requests report (continued)

Field Heading	Description
String Waits: Total	The total number of waits for strings against the file. Source field: A17DSTSW
String Waits: HWM	The peak number of waits for strings against the file. Source field: A17DSHSW

Global User Exits report

The Global User Exits report is produced using the **EXEC CICS INQUIRE EXITPROGRAM** command.

Table 217. Fields in the Global User Exits report

Field Heading	Description
Exit Name	The name of the global user exit point. Source field: **EXEC CICS INQUIRE EXITPROGRAM() EXIT()**
Program Name	The name of the exit program enabled at this global user exit point. Source field: **EXEC CICS INQUIRE EXITPROGRAM()**
Entry Name	The name of the entry point for this exit program at this global user exit point. Source field: **EXEC CICS INQUIRE EXITPROGRAM() ENTRYNAME()**
Global Area Entry Name	The name of the exit program that owns the global work area associated with this exit program. Source field: **EXEC CICS INQUIRE EXITPROGRAM() GAENTRYNAME()**
Global Area Length	The length of the global work area for this exit program. Source field: **EXEC CICS INQUIRE EXITPROGRAM() GALENGTH()**
Global Area Use Count	The number of exit programs that are associated with the global work area owned by this exit program. Source field: **EXEC CICS INQUIRE EXITPROGRAM() GAUSECOUNT()**
Number of Exits	The number of global user exit points at which this exit program is enabled. Source field: **EXEC CICS INQUIRE EXITPROGRAM() NUMEXITS()**
Program Status	Indicates whether this exit program is available for execution. Source field: **EXEC CICS INQUIRE EXITPROGRAM() STARTSTATUS(cvda)**
Program Concurrency	Indicates the concurrency attribute of this exit program. Source field: **EXEC CICS INQUIRE PROGRAM() CONCURRENCY(cvda)**
Concurrency Status	Indicates the concurrency status of this exit program. It takes into account the fact that the PROGRAM definition may have been overriden by options on the ENABLE command. Source field: **EXEC CICS INQUIRE EXITPROGRAM() CONCURRENCY(cvda)**

IPCONN report

The IPCONN report shows information and statistics about IPCONN resource definitions, which define IP interconnectivity (IPIC) connections.

The IPCONN report is produced using a combination of the **EXEC CICS INQUIRE IPCONN** and **EXEC CICS EXTRACT STATISTICS IPCONN** commands. The statistics data is mapped by the DFHISRDS DSECT.

Table 218. Fields in the IPCONN report

Field Heading	Description
IPCONN Name	The name of the IPCONN definition; that is, the name by which CICS knows the remote system. Source field: ISR-IPCONN-NAME
IPCONN Applid	The application identifier (APPLID) of the remote system. If the remote system is a CICS region, its APPLID is specified on the APPLID parameter of its system initialization table. Source field: ISR-APPLID
IPCONN Status	The state of the connection between CICS and the remote system; for example, Acquired, Freeing, Obtaining, or Released. Source field: **EXEC CICS INQUIRE IPCONN() CONNSTATUS()**
IPCONN Port Number	The port number used for outbound requests on this IP connection; that is, the number of the port on which the remote system is listening. Source field: **EXEC CICS INQUIRE IPCONN() PORT()**
IPCONN Host	The host name of the remote system or its IPv4 or IPv6 address. Source field: **EXEC CICS INQUIRE IPCONN() HOST()**
IPCONN IP Resolved Address	The IPv4 or IPv6 resolved address of the host. Source field: **EXEC CICS INQUIRE IPCONN() IPRESOLVED()**
IPCONN IP Family	The address format of the address returned in IPCONN IP Resolved Address. Source field: **EXEC CICS INQUIRE IPCONN() IPFAMILY()**
SSL Authentication	Whether secure socket layer (SSL) authentication is supported: Yes No Source field: ISR-SSL-SUPPORT.
Link Security	The type of link authentication used: Certificate Securityname Source field: ISR-LINKAUTH
Receive Session Count	The number of receive sessions defined for this connection. Source field: ISR-RECEIVE-SESSIONS
Current Receive Session Count	The current number of receive sessions on this connection. Source field: ISR-CURRENT-RECEIVE-SESSIONS

Table 218. Fields in the IPCONN report (continued)

Field Heading	Description
Peak Receive Session Count	The peak number of receive sessions in use on this connection. Source field: ISR-PEAK-RECEIVE-SESSIONS
Total Allocates	The total number of allocate requests for this connection. Source field: ISR-TOTAL-ALLOCATES
Current Allocates Queued	The current number of allocate requests queued for this connection. Source field: ISR-CURRENT-QUEUED-ALLOCATES
Peak Allocates Queued	The peak number of allocate requests queued for this connection. Source field: ISR-PEAK-QUEUED-ALLOCATES
Allocates Failed - Link	The number of allocate requests that failed because the connection is released or out-of-service. Source field: ISR-ALLOCATES-FAILED-LINK
Allocates Failed - Other	The number of allocate requests that failed because a session is not currently available for use. Source field: ISR-ALLOCATES-FAILED-OTHER
Number of Transactions Attached	The total number of transactions that have been attached on this connection. Source field: ISR-TRANS-ATTACHED
Remote Terminal Starts	The total number of **START** requests sent from a remote terminal. Source field: ISR_REMOTE_TERM_STARTS
Transaction Routing Requests	The number of transaction routing requests sent across the connection. Source field: ISR-TR-REQUESTS
Transaction Routing Total Bytes Sent	The number of bytes sent by transaction routing requests. Source field: ISR-TR-BYTES-SENT
Transaction Routing Total Bytes Received	The number of bytes received on transaction routing requests. Source field: ISR-TR-BYTES-RECEIVED
Function Shipping Program requests	The number of program control requests function shipped across the connection. Source field: ISR-FS-PG-REQUESTS
Function Shipping Interval Control requests	The number of interval control requests function shipped across the connection. Source field: ISR-FS-IC-REQUESTS
Function Shipping Total requests	The total number of function shipping requests shipped across the connection. Source field: ISR-FS-PG-REQUESTS + ISR-FS-IC-REQUESTS + ISR-FS-FC-REQUESTS + ISR-FS-TD-REQUESTS + ISR-FS-TS-REQUESTS
Program Requests Total Bytes Sent	The number of bytes sent on program control requests. Source field: ISR-FS-PG-BYTES-SENT
Program Requests Total Bytes Received	The number of bytes received on program control requests. Source field: ISR-FS-PG-BYTES-RECEIVED

Table 218. Fields in the IPCONN report (continued)

Field Heading	Description
Interval Control Requests Total Bytes Sent	The number of bytes sent on interval control requests. Source field: ISR-FS-IC-BYTES-SENT
Interval Control Requests Total Bytes Received	The number of bytes received on interval control requests. Source field: ISR-FS-IC-BYTES-RECEIVED
IPCONN Network ID	The network ID of the remote system. Source field: ISR-NETWORK-ID
IPCONN Service Status	Whether data can be passed on the connection: Inservice Outservice Source field: **EXEC CICS INQUIRE IPCONN() SERVSTATUS()**
TCPIPSERVICE Name	The name of the PROTOCOL(IPIC) TCPIPSERVICE definition that defines the attributes of the inbound processing for this connection. Source field: ISR-TCPIP-SERVICE
User Authentication	The type of user authentication used: Defaultuser Identify Local Verify Source field: ISR-USERAUTH
Mirror Lifetime	The minimum lifetime of the mirror task for function shipped requests received by this region. The following options are included: REQUEST TASK UOW Source field: **EXEC CICS INQUIRE IPCONN() MIRRORLIFE()**
Send Session Count	The number of send sessions defined for this connection. Source field: ISR-SEND-SESSIONS
Current Send Session Count	The current number of send sessions on this connection. Source field: ISR-CURRENT-SEND-SESSIONS
Peak Send Session Count	The peak number of send sessions in use on this connection. Source field: ISR-PEAK-SEND-SESSIONS
Allocates per second	The number of allocate requests issued per second for this connection. Source field: ISR-TOTAL-ALLOCATES / Elapsed seconds since reset
Allocate Queue Limit	The maximum number of allocate requests that can be queued for this connection. Source field: ISR-ALLOCATE-QUEUE-LIMIT
Allocates Rejected - Queue Limit	The number of allocate requests that were rejected because the QUEUELIMIT value is reached. Source field: ISR-QLIMIT-ALLOC-REJECTS

Table 218. Fields in the IPCONN report (continued)

Field Heading	Description
Max Queue Time (seconds)	The maximum time, in seconds, for which allocate requests can be queued on this connection. Source field: ISR-MAX-QUEUE-TIME
Max Queue Time - Allocate Queue Purge	The number of times that the allocate request queue has been purged because the MAXQTIME value is reached. Source field: ISR-MAXQTIME-ALLOC-QPURGES
Max Queue Time - Allocates Purged	The total number of allocate requests purged because the queueing time exceeds the MAXQTIME value. Source field: ISR-MAXQTIME-ALLOCS-PURGED
XISQUE - Allocates Rejected	The number of allocate requests that were rejected by an XISQUE global user exit program. Source field: ISR-XISQUE-ALLOC-REJECTS
XISQUE - Allocate Queue Purge	The number of times that the allocate request queue has been purged by an XISQUE global user exit program. Source field: ISR-XISQUE-ALLOC-QPURGES
XISQUE - Allocates Purged	The total number of allocate requests purged because an XISQUE global user exit program requests that the queued allocate requests are purged. Source field: ISR-XISQUE-ALLOC-PURGED
Transaction Routing Average Bytes Sent	The average number of bytes sent by transaction routing requests. Source field: ISR-TR-BYTES-SENT / ISR-TR-REQUESTS
Program Requests Average Bytes Sent	The average number of bytes sent on program control requests. Source field: ISR-FS-PG-BYTES-SENT / ISR-FS-PG-REQUESTS
Interval Control Requests Average Bytes Sent	The average number of bytes sent on interval control requests. Source field: ISR-FS-IC-BYTES-SENT / ISR-FS-IC-REQUESTS
Function Shipping File Control requests	The number of file control requests for function shipping on this connection. Source field: ISR_FS_FC_REQUESTS
File Control Requests Total bytes sent	The number of bytes sent by file control requests. Source field: ISR_FS_FC_BYTES_SENT
File Control Requests Total Bytes Rcvd	The number of bytes received by file control requests. Source field: ISR_FS_FC_BYTES_RECEIVED
Function Shipping Temporary Storage Requests	The number of temporary storage requests for function shipping on this connection. Source field: ISR_FS_TS_REQUESTS
Temporary Storage Requests Total Bytes Sent	The number of bytes sent by temporary storage requests. Source field: ISR_FS_TS_BYTES_SENT
Temporary Storage Requests Total Bytes Rcvd	The number of bytes received by temporary storage requests. Source field: ISR_FS_TS_BYTES_RECEIVED

Table 218. Fields in the IPCONN report (continued)

Field Heading	Description
Function Shipping Transient Data Requests	The number of transient data requests for function shipping on this connection. Source field: ISR_FS_TD_REQUESTS
Transient Data Requests Total Bytes Sent	The number of bytes sent by transient data requests. Source field: ISR_FS_TD_BYTES_SENT
Transient Data Requests Total Bytes Rcvd	The number of bytes received by transient data requests. Source field: ISR_FS_TD_BYTES_RECEIVED
Unsupported Requests	The number of attempts to route requests for unsupported function across this connection. Source field: ISR_UNSUPPORTED_REQUESTS

Journalnames report

The Journalnames report is produced using a combination of the **EXEC CICS INQUIRE JOURNALNAME** and **EXEC CICS EXTRACT STATISTICS JOURNALNAME** commands. The statistics data is mapped by the **DFHLGRDS DSECT**.

Table 219. Fields in the Journalnames report

Field Heading	Description
Journal Name	The name of the journal. Source field: **EXEC CICS INQUIRE JOURNALNAME()**
Journal Status	The current journal status. Source field: **EXEC CICS INQUIRE JOURNALNAME() STATUS(cvda)**
Journal Type	The type of journal, MVS, SMF or Dummy. Source field: **EXEC CICS INQUIRE JOURNALNAME() TYPE(cvda)**
Logstream Name	The name of the logstream associated with this journal (MVS journals only). Source field: LGRSTREAM
Write Requests	The number of write requests for this journal. Source field: LGRWRITES
Bytes Written	The number of bytes written to this journal. Source field: LGRBYTES
Average Bytes	The average number of bytes written to this journal per request. Source field: (LGRBYTES / LGRWRITES)
Buffer Flushes	The number of buffer flush requests issued for this journal. Source field: LGRBUFLSH

JVM Programs report

The JVM Programs report shows information and statistics about Java programs that run in JVM servers or pooled JVMs. This report is produced using a combination of the **EXEC CICS INQUIRE PROGRAM** and **EXEC CICS EXTRACT STATISTICS JVMPROGRAM** commands. The statistics data is mapped by the **DFHPGRDS DSECT**.

Table 220. Fields in the JVM Programs report

Field Heading	Description
Program Name	The name of the JVM program. Source field: **EXEC CICS INQUIRE PROGRAM()**
JVM server	The name of the JVMSERVER resource that the program requires to run in a JVM server, as specified in the JVMSERVER attribute of the PROGRAM resource. Source field: **EXEC CICS INQUIRE PROGRAM() JVMSERVER()**
Profile Name	The JVM profile that the program requires, as specified in the JVM attribute of the PROGRAM resource. Source field: **EXEC CICS INQUIRE PROGRAM() JVMPROFILE()**
Times Used	The number of times the program has been used. Source field: PGR-JVMPROGRAM-USECOUNT
EXEC Key	The execution key that the program requires, CICS key or user key, as specified in the EXECKEY attribute of the PROGRAM resource. Source field: **EXEC CICS INQUIRE PROGRAM() EXECKEY()**
JVMClass	The main class in the program, as specified in the JVMCLASS attribute of the PROGRAM resource. Source field: **EXEC CICS INQUIRE PROGRAM() JVMCLASS()**

JVMSERVERs report

The JVMSERVERs report shows information and statistics about JVMSERVER resource definitions. The JVMSERVER resource defines the runtime environment for a JVM server, including the JVM profile and the Language Environment runtime options.

This report is produced using a combination of **EXEC CICS INQUIRE JVMSERVER** and **EXEC CICS EXTRACT STATISTICS** commands. The statistics data is mapped by the DFHSJSDS DSECT.

Table 221. Fields in the JVMSERVERs report

Field Heading	Description
JVMSERVER Name	The name of the JVMSERVER resource definition. Source field: **EXEC CICS INQUIRE JVMSERVER**
JVMSERVER Enable Status	The status of the JVMSERVER resource definition. Source field: **EXEC CICS INQUIRE JVMSERVER () ENABLESTATUS**

Table 221. Fields in the JVMSERVERs report (continued)

Field Heading	Description
JVMSERVER JVM profile name	The name of the JVM profile that is used to start the JVM server. Source field: SJS-JVMSERVER-JVMPROFILE
JVMSERVER LE runtime options	The name of the Language Environment runtime options program that is specified on the JVMSERVER resource. Source field: SJS-JVMSERVER-LE-RUNOPTS
JVMSERVER use count	The number of times that the JVM server has been called. Source field: SJS-JVMSERVER-USE-COUNT
JVMSERVER thread limit	The maximum number of threads in the JVM server. Source field: SJS-JVMSERVER-THREAD-LIMIT
JVMSERVER current threads	The current number of threads in the JVM server. Source field: SJS-JVMSERVER-THREAD-CURRENT
JVMSERVER peak threads	The peak number of threads in the JVM server. Source field: SJS-JVMSERVER-THREAD-HWM
JVMSERVER thread limit waits	The number of tasks that waited for a free thread. Source field: SJS-JVMSERVER-THREAD-WAITS
JVMSERVER thread limit wait time	The amount of time in seconds that tasks have waited for a free thread. Source field: SJS-JVMSERVER-THREAD-WAIT-TIME
JVMSERVER current thread waits	The number of tasks that are currently waiting for a free thread. Source field: SJS-JVMSERVER-THREAD-WAIT-CUR
JVMSERVER peak thread waits	The peak number of threads that waited for a free thread. Source field: SJS-JVMSERVER-THREAD-WAIT-HWM
JVMSERVER system thread use count	The number of times that the system thread has been used. Source field: SJS-JVMSERVER-SYS-USE-COUNT

Table 221. Fields in the JVMSERVERs report (continued)

Field Heading	Description
JVMSERVER system thread waits	The number of CICS tasks that waited for a system thread. Source field: SJS-JVMSERVER-SYS-WAITED
JVMSERVER system thread wait time	The accumulated time in seconds that tasks spent waiting for a system thread. Source field: SJS-JVMSERVER-SYS-WAITED-TIME
JVMSERVER current sys thread waits	The current number of tasks that are waiting for a system thread. Source field: SJS-JVMSERVER-SYS-WAIT-CUR
JVMSERVER peak system thread waits	The highest number of tasks that waited for a system thread. Source field: SJS-JVMSERVER-SYS-WAIT-HWM
JVMSERVER current heap size	The size in bytes of the heap that is currently allocated to the JVM server. Source field: SJS-JVMSERVER-MAX-HEAP
JVMSERVER initial heap size	The size in bytes of the initial heap that is allocated to the JVM server. This value is set by the **-Xms** option in the JVM profile. Source field: SJS-JVMSERVER-CURRENT-HEAP
JVMSERVER maximum heap size	The size in bytes of the maximum heap that can be allocated to the JVM server. This value is set by the **-Xmx** option in the JVM profile. Source field: SJS-JVMSERVER-INITIAL-HEAP
JVMSERVER peak heap size	The size in bytes of the largest heap that has been allocated to the JVM server. Source field: SJS-JVMSERVER-PEAK-HEAP
JVMSERVER heap occupancy	The size in bytes of the heap immediately after the last garbage collection occurred. Source field: SJS-JVMSERVER-OCCUPANCY
JVMSERVER Garbage Collection (GC)	The garbage collection policy that is being used by the JVM. Source field: SJS-JVMSERVER-GC-POLICY
JVMSERVER no. of major GC events	The number of major garbage collection events that have occurred. Source field: SJS-JVMSERVER-MJR-GC-EVENTS

Table 221. Fields in the JVMSERVERs report (continued)

Field Heading	Description
JVMSERVER total elapsed time spent in major GC	The total elapsed time in milliseconds that was spent performing major garbage collection. Source field: SJS-JVMSERVER-MJR-GC-CPU
JVMSERVER total memory freed by major GC	The total memory in bytes that was freed by performing major garbage collection. Source field: SJS-JVMSERVER-MJR-HEAP-FREED
JVMSERVER no. of minor GC events	The number of minor garbage collections that have occurred. Source field: SJS-JVMSERVER-MNR-GC-EVENTS
JVMSERVER total elapsed time spent in minor GC	The total elapsed time in milliseconds that was spent performing minor garbage collection. Source field: SJS-JVMSERVER-MNR-GC-CPU
JVMSERVER total memory freed by minor GC	The total memory in bytes that was freed by performing minor garbage collection. Source field: SJS-JVMSERVER-MNR-HEAP-FREED

LIBRARY reports

There are two LIBRARY reports: LIBRARYs report, and LIBRARY Data set Concatenation report.

LIBRARYs report

The LIBRARYs report is produced using a combination of **EXEC CICS INQUIRE** LIBRARY and **EXEC CICS EXTRACT STATISTICS** LIBRARY RESID commands. The statistics data is mapped by the DFHLDBDS DSECT.

Table 222. Fields in the LIBRARYs report

Field Heading	Description
LIBRARY Name	The name of the LIBRARY. Source field: **EXEC CICS INQUIRE LIBRARY**
Search Position	The current absolute position of this LIBRARY in the overall LIBRARY search order. Source field: **EXEC CICS INQUIRE LIRBARY SEARCHPOS**
Ranking	The position this LIBRARY appears in the overall LIBRARY search order relative to other LIBRARY concatenations. Source field: **EXEC CICS INQUIRE LIBRARY RANKING**
Critical	Indicates whether this LIBRARY is critical to CICS startup. Source field: **EXEC CICS INQUIRE LIBRARY CRITICAL**

Table 222. Fields in the LIBRARYs report (continued)

Field Heading	Description
Enable Status	Indicates whether the LIBRARY is included in the overall LIBRARY search order. Source field: **EXEC CICS INQUIRE LIBRARY ENABLESTATUS**
Program Loads	The number of times the loader has issued an MVS LOAD request to load programs from the LIBRARY concatenation into CICS managed storage. Source field: LDB-LIBRARY-PROG-LOADS
Number Dsnames	The number of data sets in the LIBRARY concatenation. Source field: **EXEC CICS LIBRARY NUMDSNAMES**
Concatenation	The concatenation number of the data set in the LIBRARY concatenation. Source field: **EXEC CICS INQUIRE LIBRARY DSNAME01-16**
Data set Name	The 44 character name of each data set in the LIBRARY concatenation. Source field: **EXEC CICS INQUIRE LIBRARY DSNAME01-16**
Dsname Number	The position that the data set occupies within the LIBRARY. **Note:** DFHRPL does not have any Dsname Numbers.

LIBRARY Data set Concatenation report

The LIBRARY Data set Concatenation report is produced using a combination of **EXEC CICS INQUIRE LIBRARY** and **EXEC CICS EXTRACT STATISTICS LIBRARY RESID()** commands.

The statistics data is mapped by the DFHLDBDS DSECT.

Table 223. Fields in the LIBRARY Data set Concatenation report

Field Heading	Description
Concatenation	The concatenation number of the data set based on a concatenation of all LIBRARYs in the search order in which they appear. Source field: Generated by DFH0STAT
Dataset Name	The 44 character name of each data set in the LIBRARY concatenation. Source field: **EXEC CICS INQUIRE LIBRARY DSNAME01-16**
Dsname Number	The position that the data set occupies within the LIBRARY. **Note:** DFHRPL does not have any Dsname Numbers. Source field: Generated by DFH0STAT
LIBRARY Name	The name of the LIBRARY. Source field: **EXEC CICS INQUIRE LIBRARY**
Ranking	The position this LIBRARY appears in the overall LIBRARY search order relative to other LIBRARY concatenations. Source field: **EXEC CICS INQUIRE LIBRARY RANKING**
Critical	Indicates whether this LIBRARY is critical to CICS startup. Source field: **EXEC CICS INQUIRE LIBRARY CRITICAL**

Loader and Program Storage report

The Loader and Program Storage report is produced using a combination of the **EXEC CICS EXTRACT STATISTICS PROGRAM** and **EXEC CICS EXTRACT STATISTICS STORAGE** commands. The statistics data is mapped by the **DFHLDGDS** and **DFHSMDDS DSECT**.

Table 224. Fields in the Loader Storage report

Field Heading	Description
LIBRARY Load requests	The number of times the loader issued an MVS LOAD request to load programs from the DFHRPL or dynamic LIBRARY concatenation into CICS managed storage. Modules in the LPA are not included in this value. The value includes both program load requests that ran on open TCBs, and program load requests that used the RO (resource-owning) TCB. Source field: LDGLLR
LIBRARY Load Rate per second	The number of times per second the loader has issued an MVS LOAD request to load programs from the DFHRPL or dynamic LIBRARY concatenation into CICS managed storage. Modules in the LPA are not included in this value. The value includes both program load requests that ran on open TCBs, and program load requests that used the RO (resource-owning) TCB. Source field: LDGLLR / Elapsed seconds (since the last statistics reset)
LIBRARY Load requests on the RO TCB	The number of times the loader issued a program load request that used the RO (resource-owning) TCB. This value is a subset of the number of library loads shown by “LIBRARY Load requests”. To calculate the number of program load requests that ran on open TCBs, subtract this value from the value shown by “LIBRARY Load requests”. Source field: LDGLLRRO
Total LIBRARY Load time	The total time taken to load programs from the DFHRPL or dynamic LIBRARY concatenation into CICS managed storage. Modules in the LPA are not included in this value. The value includes both program load requests that ran on open TCBs, and program load requests that used the RO (resource-owning) TCB. Source field: LDGLLT
Total LIBRARY Load time on the RO TCB	The total time taken for program load requests that ran on the RO TCB. This value is a subset of the number of library loads shown by “Total LIBRARY Load time”. To calculate the number of program load requests that ran on open TCBs, subtract this value from the value shown by “Total LIBRARY Load time”. Source field: LDGLLTRO
Average LIBRARY Load time	The average time taken to load a program. The value is an average including both program load requests that ran on open TCBs, and program load requests that used the RO (resource-owning) TCB. Source field: (LDGLLT / LDGLLR)
Total Program Uses	The number of uses of any program by the CICS system. Source field: LDGPUSES
Average LIBRARY Load time on the RO TCB	The average time taken to complete only those program load requests that used the RO (resource-owning) TCB. Source field: (LDGLLT / LDGLLR)
Program Use to Load Ratio	The ratio of program uses to programs loads. Source field: (LDGPUSES / LDGLLR)

Table 224. Fields in the Loader Storage report (continued)

Field Heading	Description
LIBRARY Load requests that waited	The number of loader domain requests that waited for the loader domain to complete an operation on the program on behalf of another task. This figure is the number of tasks that waited in the past, and does not include tasks that are currently waiting ("Current Waiting LIBRARY Load requests"). Program load requests might wait for the following reasons: • The program is being loaded by another task that is running on an open TCB. • The loader domain is searching the link pack area (LPA) for the program. • A NEWCOPY request or physical load is in progress for the program. Source field: LDGWTDLR
Total LIBRARY Load request wait time	The total suspended time for the number of tasks shown in "LIBRARY Load requests that waited". Source field: LDGTTW
Times LIBRARY secondary extents detected	The number of times the loader received an end-of-extent condition during a LOAD and successfully closed and reopened the DFHRPL or dynamic LIBRARY and retried the LOAD. Source field: LDGDREBS
Average LIBRARY Load request wait time	The average loader domain request suspend time. Source field: (LDGTTW / LDGWTDLR)
Current Waiting LIBRARY Load requests	The number of loader domain requests that are currently waiting for the loader domain to complete an operation on the program on behalf of another task. Program load requests might wait for the following reasons: • The program is being loaded by another task that is running on an open TCB. • The loader domain is searching the link pack area (LPA) for the program. • A NEWCOPY request or physical load is in progress for the program. Source field: LDGWLR
Peak Waiting LIBRARY Load requests	The maximum number of tasks suspended at one time. Source field: LDGWLRHW
Times at Peak	The number of times the high-water mark shown in "Peak Waiting LIBRARY Load requests" was reached. This value together with the previous two values indicate the level of contention for loader resource. Source field: LDGHWMT
Average Not-In-Use program size	The average size of a program currently on the Not-In-Use queue. Source field: ((LDGSTGNIU + LDGSNIU + LDGRECNIU + LDGECNIU + LDGESNIU + LDGERNIU) / 1024) / LDGPROGNIU)
Programs Removed by compression	The number of program instances removed from storage by the Dynamic Program Storage Compression (DPSC) mechanism. Source field: LDGDPSCR

Table 224. Fields in the Loader Storage report (continued)

Field Heading	Description
Time on the Not-In-Use Queue	The program Not-In-Use (NIU) queue membership time. For each program that becomes eligible for removal from storage by the DPSC mechanism, the time between the program becoming eligible and the actual time of its being removed from storage is calculated. This field is the sum of these times for all programs removed by the DPSC mechanism and as such can be greater than the elapsed time CICS run time. This field does not include the wait time for those programs reclaimed from the Not-In-Use queue. Source field: LDGDPSCT
Average Time on the Not-In-Use Queue	The average length of time that a program is eligible for removal from storage by the DPSC mechanism. Source field: (LDGDPSCT / LDGDPSCR)
Programs Reclaimed from the Not-In-Use Queue	The number of reclaims that CICS has made from the Not-In-Use (NIU) queue. Reclaims occur when a request is issued for programs currently in the Not-In-Use queue. The reclaimed instance of a program is no longer eligible for program compression (DPSC). Source field: LDGRECNIU
Programs Loaded - on the Not-In-Use Queue	The number of programs on the Not-In-Use (NIU) queue. Source field: LDGPROGNIU
LIBRARY search order updates	The number of updates to the LIBRARY search order. Source field: LDGLBSOU
Total LIBRARY search order update time	The total time spent updating the LIBRARY search order. Source field: LDGLSORT
Average LIBRARY search order update time	The average time spent updating the LIBRARY search order. Source field: LDGLSORT/LDGLBSOU
Load requests waited - search order update	The total number of waits for programs to load while the search order is being updated. These operations could be: • Install of a dynamic LIBRARY. • Enable or disable of a dynamic LIBRARY. • Change in RANKING of a dynamic LIBRARY. Source field: LDGLWSOU

Table 225. Fields in the Program Storage report

Field Heading	Description
Nucleus Program Storage (CDSA)	The current amount of storage allocated to nucleus programs in the CDSA. Source field: (SMDCPS for subpool 'LDNUC ' and 'LDNRS / 1024)
Nucleus Program Storage (ECDSA)	The current amount of storage allocated to nucleus programs in the ECDSA. Source field: (SMDCPS for subpool 'LDENUC ' and 'LDENRS ' / 1024)
Program Storage (SDSA)	The current amount of storage allocated to programs in the SDSA. Source field: (SMDCPS for subpool 'LDPGM ' / 1024)
Program Storage (ESDSA)	The current amount of storage allocated to programs in the ESDSA. Source field: (SMDCPS for subpool 'LDEPGM ' / 1024)

Table 225. Fields in the Program Storage report (continued)

Field Heading	Description
Resident Program Storage (SDSA)	The current amount of storage allocated to resident programs in the SDSA. Source field: (SMDCPS for subpool 'LDRES ' / 1024)
Resident Program Storage (ESDSA)	The current amount of storage allocated to resident programs in the ESDSA. Source field: (SMDCPS for subpool 'LDERES ' / 1024)
Read-Only Nucleus Program Storage (RDSA)	The current amount of storage allocated to nucleus programs in the RDSA. Source field: (SMDCPS for subpool 'LDNUCRO ' and 'LDNRSRO ' / 1024)
Read-Only Nucleus Program Storage (ERDSA)	The current amount of storage allocated to nucleus programs in the ERDSA. Source field: (SMDCPS for subpool 'LDENUCRO ' and 'LDENRSRO ' / 1024)
Read-Only Program Storage (RDSA)	The current amount of storage allocated to programs in the RDSA. Source field: (SMDCPS for subpool 'LDPGMRO ' / 1024)
Read-Only Program Storage (ERDSA)	The current amount of storage allocated to programs in the ERDSA. Source field: (SMDCPS for subpool 'LDEPGMRO ' / 1024)
Read-Only Resident Program Storage (RDSA)	The current amount of storage allocated to resident programs in the RDSA. Source field: (SMDCPS for subpool 'LDRESRO ' / 1024)
Read-Only Resident Program Storage (ERDSA)	The current amount of storage allocated to resident programs in the ERDSA. Source field: (SMDCPS for subpool 'LDERESRO ' / 1024)
CDSA used by Not-In-Use programs	The current amount of CDSA storage that is occupied by Not-In-Use (NIU) programs. Source field: (LDGSTGNIU(1) / 1024)
ECDSA used by Not-In-Use programs	The current amount of ECDSA storage that is occupied by Not-In-Use (NIU) programs. Source field: (LDGSTGNIU(2) / 1024)
SDSA used by Not-In-Use programs	The current amount of SDSA storage that is occupied by Not-In-Use (NIU) programs. Source field: (LDGSTGNIU(3) / 1024)
ESDSA used by Not-In-Use programs	The current amount of ESDSA storage that is occupied by Not-In-Use (NIU) programs. Source field: (LDGSTGNIU(4) / 1024)
RDSA used by Not-In-Use programs	The current amount of RDSA storage that is occupied by Not-In-Use (NIU) programs. Source field: (LDGSTGNIU(5) / 1024)
ERDSA used by Not-In-Use programs	The current amount of ERDSA storage that is occupied by Not-In-Use (NIU) programs. Source field: (LDGSTGNIU(6) / 1024)

Logstreams reports

There are four Logstreams reports: the Logstream Global report, the Logstream System Logs report, the Logstreams Resource report, and the Logstreams Requests report.

Fields in the Logstream Global Report

The Logstream Global report is produced using the **EXEC CICS EXTRACT STATISTICS** STREAMNAME and **EXEC CICS INQUIRE** STREAMNAME commands. The statistics data is mapped by the **DFHLGGDS DSECT**.

For more information about logstreams, see CICS logging and journaling.

Table 226. Fields in the Logstream Global report

Field Heading	Description
Activity Keypoint Frequency (AKPFREQ)	The current activity keypoint trigger value, which is the number of logging operations between the taking of keypoints. Source field: **EXEC CICS INQUIRE STREAMNAME**
Activity Keypoints Taken	The number of activity keypoints taken. Source field: **EXEC CICS INQUIRE STREAMNAME()**
Average time between Activity Keypoints	The average time between the taking of activity keypoints.
Logstream Deferred Force Interval (LGDFINT)	The current logstream deferred force interval. Source field: **EXEC CICS INQUIRE STREAMNAME**

Fields in the Logstream System Logs Report

The Logstream System Logs Report is produced using the **EXEC CICS INQUIRE STREAMNAME** and **EXEC CICS EXTRACT STATISTICS STREAMNAME** commands. The statistics data is mapped by the **DFHLGSDS DSECT**.

For more information about logstreams, see CICS logging and journaling.

Table 227. Fields in the Logstream System Logs report

Field Heading	Description
Logstream Name	The name of the logstream. Source field: **EXEC CICS INQUIRE STREAMNAME()**
Logstream Status	The current status of the logstream. Source field: **EXEC CICS INQUIRE STREAMNAME() STATUS()**
DASD Only	Indicates the type of logstream. If set to YES, the logstream is of type DASDONLY. If set to NO, the log stream is of type coupling facility (CF). Source field: LGSDONLY
Retention Period (days)	The logstream retention period (in days) that the data must be kept before it can be physically deleted by the MVS Logger. Source field: LGSRETPD

Table 227. Fields in the Logstream System Logs report (continued)

Field Heading	Description
Coupling Facility Structure Name	The coupling facility (CF) structure name for the logstream. The structure name is only applicable to coupling facility type logstreams. Source field: LGSSTRUC
Auto Delete	The log data auto delete indicator. If set to YES the MVS Logger automatically deletes the data as it matures beyond the retention period, irrespective of any logstream delete calls. If set to NO, the data is only deleted when a logstream delete call is issued and the data has matured beyond the retention period. Source field: LGSAUTOD
Logstream Writes	The number of write (IXGWRITE) requests issued to this logstream. Source field: LGSWRITES
Maximum Block Length	The maximum block size allowed by the MVS Logger for the logstream. Source field: LGSMAXBL
Logstream Writes per second	The number of logstream writes per second for this logstream. Source field: (LGSWRITES / ELAPSED-SECONDS)
Average Bytes per Logstream Write	The average number of bytes written to this logstream per write request. Source field: (LGSBYTES / LGSWRITES)
Logstream Deletes (Tail Trims)	The number of delete (IXGDELET) requests issued to this logstream. Source field: LGSDELETES
Logstream Query Requests	The number of query requests issued for this logstream. Source field: LGSQUERIES
Logstream Browse Starts	The number of browse start requests issued for this logstream. Source field: LGSBRWSTRT
Logstream Browse Reads	The number of browse read requests issued for this logstream. Source field: LGSBRWREAD
Logstream Buffer Appends	The number of occasions on which a journal record was successfully appended to the current log stream buffer. Source field: LGSBUFAPP
Logstream Buffer Full Waits	The number of times buffer full has occurred for this logstream. Source field: LGSBUFWAIT
Logstream Force Waits	The total number of tasks suspending while requesting a flush of the logstream buffer currently in use. Source field: LGSTFCWAIT
Logstream Current® Force Waiters	The current number of force waiters for this logstream. Source field:
Logstream Retry Errors	The number of occasions on which MVS system logger retryable errors occurred when a block of data was being written to the log stream. Source field: LGSRTYERRS

Table 227. Fields in the Logstream System Logs report (continued)

Field Heading	Description
Logstream Peak Force Waiters	The peak number of force waiters for this logstream. Source field: LGSPKFWTRS

Fields in the Logstreams Resource Report

The Logstreams Resource Report is produced using the **EXEC CICS INQUIRE STREAMNAME** and **EXEC CICS EXTRACT STATISTICS STREAMNAME** commands. The statistics data is mapped by the **DFHLGSDS DSECT**.

For more information about logstreams, see CICS logging and journaling.

Table 228. Fields in the Logstreams Resource report

Field Heading	Description
Logstream Name	The name of the logstream. Source field: **EXEC CICS INQUIRE STREAMNAME()**
Use Count	The current use count of the logstream. Source field: **EXEC CICS INQUIRE STREAMNAME() USECOUNT()**
Status	The current status of the logstream. Source field: **EXEC CICS INQUIRE STREAMNAME() STATUS()**
Sys Log	Indicates if the log stream forms part of the System Log. Source field: LGSSYSLG
Structure Name	The coupling facility (CF) structure name for the log stream. The structure name is only applicable to coupling facility type logstreams. Source field: LGSSTRUC
Max Block Length	The maximum block size allowed by the MVS Logger for the log stream. Source field: LGSMAXBL
DASD Only	Indicates the type of log stream. If set to YES the log stream is of type DASDONLY. If set to NO the log stream is of type coupling facility (CF). Source field: LGSDONLY
Retention Period	The log stream retention period (in days) that the data must be kept before it can be physically deleted by the MVS Logger. Source field: LGSRETPD
Auto Delete	The log data auto delete indicator. If set to YES the MVS Logger automatically deletes the data as it matures beyond the retention period, irrespective of any logstream delete calls. If set to NO the data is only deleted when a logstream delete call is issued and the data has matured beyond the retention period. Source field: LGSAUTOD
Stream Deletes	The number of delete (IXGDELET) requests issued for this logstream. Source field: LGSDELETES
Browse Starts	The number of browse start requests issued for this logstream. Source field: LGSBRWSTRT

Table 228. Fields in the Logstreams Resource report (continued)

Field Heading	Description
Browse Reads	The number of browse read requests issued for this logstream. Source field: LGSBRWREAD

Fields in the Logstreams Requests Report

The Logstreams Requests Report is produced using the **EXEC CICS INQUIRE STREAMNAME** and **EXEC CICS EXTRACT STATISTICS STREAMNAME** commands. The statistics data is mapped by the **DFHLGSDS DSECT**.

For more information about logstreams, see CICS logging and journaling.

Table 229. Fields in the Logstreams Requests report

Field Heading	Description
Logstream Name	The name of the logstream. Source field:**EXEC CICS INQUIRE STREAMNAME()**
Write Requests	The number of IXGWRITE requests issued to this logstream. IXGWRITE occurs, for example, when the logstream buffer is full, or when the application issues an **EXEC CICS WRITE JOURNALNAME** command with the WAIT option specified. Source field: LGSWRITES
Bytes Written	The number of bytes written to this logstream. Source field: LGSBYTES
Average Bytes	The average number of bytes written to this logstream per request. Source field: (LGSBYTES / LGSWRITES)
Buffer Appends	The number of occasions on which a journal record was successfully appended to the current logstream buffer. Source field: LGSBUFAPP
Buffer Full Waits	The number of times buffer full has occurred for this logstream. Source field: LGSBUFWAIT
Force Waits	The total number of force waits for this logstream. Source field: LGSTFCWAIT
Peak Waiters	The peak number of force waiters for this logstream. Source field: LGSPKFWTRS
Retry Errors	The number of occasions on which MVS logger retry errors occurred when a block of data was being written to the log stream. Source field: LGSRTYERRS

LSR pools report

The LSR pools report is produced using the **EXEC CICS EXTRACT STATISTICS LSRPOOL** command. The statistics data is mapped by the **DFHA08DS DSECT**.

If you have combined data and index buffers, the report presents the statistics for data buffers and index buffers together as “Data and Index Buffer Statistics”. If

you have separate data and index buffers, the report presents the statistics separately, as “Data Buffer Statistics” and “Index Buffer Statistics”.

Table 230. Fields in the LSR pools report

Field Heading	Description
Pool Number	The identifying number of the LSR pool. This value must be in the range 1 - 255.
Time Created	The time when this LSR pool was created. Source field: A08LBKCD
Maximum key length	The length of the largest key of a VSAM data set that can use this LSR pool. Source field: A08BKKYL
Total number of strings	The total number of VSAM strings defined for this LSR pool. Source field: A08BKSTN
Peak concurrently active strings	The maximum number of strings that were active during CICS execution. If you have coded a value for the number of strings the pool is to use, this statistic is always less than or equal to the value you have coded. If your coded value for string numbers is consistently higher than this value in the statistics, you could consider reducing it so that your pool of VSAM strings is not bigger than you need. Source field: A08BKHAS
Total requests waited for strings	The number of requests that were queued because all the strings in the pool were in use. This number reflects the number of requests that were delayed during CICS execution due to a restriction in LSR pool string resources. Source field: A08BKTSW
Peak requests waited for strings	The highest number of requests that were queued at one time because all the strings in the pool were in use. Source field: A08BKHSW
Data Buffers	The number of data buffers specified for the LSR pool. Source field: A08TDBFN
Hiperspace Data Buffers	The number of Hiperspace data buffers specified for the LSR pool. Source field: A08TDHBW
Successful look asides	The number of successful lookasides to data buffers for this LSR pool. Source field: A08TDBFF
Buffer reads	The number of read I/O operations to the data buffers for this LSR pool. Source field: A08TDFRD
User initiated writes	The number of user-initiated I/O writes from the data buffers for this LSR pool. Source field: A08TDUIW
Non-user initiated writes	The number of non-user-initiated I/O writes from the data buffers for this LSR pool. Source field: A08TDNUW
Successful Hiperspace CREADS	The number of successful CREAD requests issued to transfer data from Hiperspace data buffers to virtual data buffers. Source field: A08TDCRS

Table 230. Fields in the LSR pools report (continued)

Field Heading	Description
Successful Hiperspace CWRITES	The number of successful CWRITE requests issued to transfer data from virtual data buffers to Hiperspace data buffers. Source field: A08TDCWS
Failing Hiperspace CREADS	The number of CREAD requests that failed. MVS had withdrawn the space and VSAM had to read data from DASD. Source field: A08TDCRF
Failing Hiperspace CWRITES	The number of CWRITE requests that failed. There was insufficient Hiperspace and VSAM had to write the data to DASD. Source field: A08TDCWF
Index Buffers	The number of index buffers specified for the LSR pool. Source field: A08TIBFN
Hiperspace Index Buffers	The number of Hiperspace index buffers specified for the LSR pool. Source field: A08TIHBW
Successful look asides	The number of successful lookasides to index buffers for this LSR pool. Source field: A08TIBFF
Buffer reads	The number of read I/Os to the index buffers for this LSR pool. Source field: A08TIFRD
User initiated writes	The number of user-initiated buffer writes from the index buffers for this LSR pool. Source field: A08TIUIW
Non-user initiated writes	The number of non-user-initiated buffer writes from the index buffers for this LSR pool. Source field: A08TINUW
Successful Hiperspace CREADS	The number of successful CREAD requests issued to transfer data from Hiperspace index buffers to virtual index buffers. Source field: A08TICRS
Successful Hiperspace CWRITES	The number of successful CWRITE requests issued to transfer data from virtual index buffers to Hiperspace index buffers. Source field: A08TICWS
Failing Hiperspace CREADS	The number of CREAD requests that failed. MVS had withdrawn the space and VSAM had to read index data from DASD. Source field: A08TICRF
Failing Hiperspace CWRITES	The number of CWRITE requests that failed. There was insufficient Hiperspace and VSAM had to write the index data to DASD. Source field: A08TICWF
Buffer Size	The size of the data buffers that are available to CICS. Source field: A08BKBSZ
No. of Buffers	The number of buffers of each size available to CICS. Source field: A08BKBFN

Table 230. Fields in the LSR pools report (continued)

Field Heading	Description
Hiperspace Buffers	The number of Hiperspace buffers specified for the pool. Source field: A08BKHBN
Look Asides	The number of read requests that VSAM was able to satisfy without initiating an I/O operation; that is, the requested record, whether index or data, was already present in one of the buffer resident CIs. This means that no physical I/O had to be done to put the control interval in the buffer. The tuning methodology usually employed involves either increasing the number of buffers of a particular CI size until the ratio of lookasides to READs stops increasing significantly or, conversely, reducing the number of buffers until the ratio of lookasides to READs begins to drop significantly. For most data sets, successful lookaside hits on indexes are more likely. These statistics are obtained from VSAM and represent the activity after the pool was created. Source field: A08BKBFF
Buffer Reads	The number of I/O operations to the buffers that VSAM was required to initiate to satisfy the CICS application's activity. This figure represents failures to find the control interval in the buffers. These statistics are obtained from VSAM and represent the activity after the pool was created. Source field: A08BKFRD
User Writes	The number of user-initiated I/O WRITE operations from the buffers that VSAM was required to initiate to satisfy the CICS application's activity. These statistics are obtained from VSAM and represent the activity after the pool was created. Source field: A08BKUIW
Non-User Writes	The number of non-user-initiated I/O WRITE operations from the buffers that VSAM was forced to initiate due to no buffers being available for reading the contents of a CI. These statistics are obtained from VSAM and represent the activity after the pool was created. Source field: A08BKNUW
Look-Aside Ratio	The ratio of buffer lookasides to buffer reads. Source field:((A08BKBFF / (A08BKBFF + A08BKFRD)) * 100)
Successful CREADS/ CWRITES	The number of successful CREAD requests issued to transfer data from Hiperspace buffers to virtual buffers, and of successful CWRITE requests issued to transfer data from virtual buffers to Hiperspace buffers. Source field: A08BKCRS + A08BKCWS
Failing CREADS/ CWRITES	The number of CREAD requests that failed (because MVS had withdrawn the space and VSAM had to read data from DASD), and the number of CWRITE requests that failed (because there was insufficient Hiperspace and VSAM had to write the data to DASD). Source field: A08BKCRF + A08BKCWF

Table 230. Fields in the LSR pools report (continued)

Field Heading	Description
Buffer Size	The size of the index data buffers that are available to CICS. Source field: A08IKBSZ
No. of Buffers	The number of buffers of each size available to CICS. Source field: A08IKBFN
Hiperspace Buffers	The number of Hiperspace buffers specified for the pool. Source field: A08IKHBN
Look Asides	The number of read requests that VSAM was able to satisfy without initiating an I/O operation; that is, the requested index record was already present in one of the buffer resident CIs. This means that no physical I/O had to be done to put the control interval in the buffer. The tuning methodology usually employed involves either increasing the number of buffers of a particular CI size until the ratio of lookasides to READs stops increasing significantly or, conversely, reducing the number of buffers until the ratio of lookasides to READs begins to drop significantly. For most data sets, successful lookaside hits on indexes are more likely. These statistics are obtained from VSAM and represent the activity after the pool was created. Source field: A08IKBFF
Buffer Reads	The number of I/O operations to the buffers that VSAM was required to initiate to satisfy the CICS application's activity. This figure represents failures to find the control interval in the buffers. These statistics are obtained from VSAM and represent the activity after the pool was created. Source field: A08IKFRD
User Writes	The number of user-initiated I/O WRITE operations from the buffers that VSAM was required to initiate to satisfy the CICS application's activity. These statistics are obtained from VSAM and represent the activity after the pool was created. Source field: A08IKUIW
Non-User Writes	The number of non-user initiated I/O WRITE operations from the buffers that VSAM was forced to initiate due to no buffers being available for reading the contents of a CI. These statistics are obtained from VSAM and represent the activity after the pool was created. Source field: A08IKNUW
Look-Aside Ratio	The ratio of buffer look asides to buffer reads. Source field: ((A08BKBFF / (A08BKBFF + A08BKFRD)) * 100)
Successful CREADS/ CWRITES	The number of successful CREAD requests issued to transfer data from Hiperspace buffers to virtual buffers, and of successful CWRITE requests issued to transfer data from virtual buffers to Hiperspace buffers. Source field: A08IKCRS + A08IKCWS

Table 230. Fields in the LSR pools report (continued)

Field Heading	Description
Failing CREADS/ CWRITES	The number of CREAD requests that failed (because MVS had withdrawn the space and VSAM had to read data from DASD), and the number of CWRITE requests that failed (because there was insufficient Hiperspace and VSAM had to write the data to DASD). Source field: A08IKCRF + A08IKCWF

Page Index report

The Page Index report contains a complete list of all the statistics reports produced by **DFH0STAT**, and shows the first page number for each statistics report.

PIPELINEs report

The PIPELINEs report is produced using a combination of **EXEC CICS INQUIRE PIPELINE** and **EXEC CICS EXTRACT STATISTICS PIPELINE RESID()** commands. The statistics data is mapped by the **DFHPIRDS DSECT**.

Table 231. Fields in the PIPELINEs report

Field Heading	Description
PIPELINE Name	The name of the PIPELINE resource definition. Source field: **EXEC CICS INQUIRE PIPELINE**
PIPELINE Mode	The operating mode of the pipeline. Source field: **EXEC CICS INQUIRE PIPELINE() MODE()**
PIPELINE Message Format	The message format processed by the PIPELINE. Source field: **EXEC CICS INQUIRE PIPELINE() MSGFORMAT()**
PIPELINE Enable Status	Whether the PIPELINE definition is enabled or disabled. Source field: **EXEC CICS INQUIRE PIPELINE() ENABLESTATUS**
Configuration file	The name of the z/OS UNIX file that provides information about the message handlers and their configuration. Source field: **EXEC CICS INQUIRE PIPELINE() CONFIGFILE**
Shelf directory	The fully qualified name of the shelf directory for the PIPELINE definition. Source field: **EXEC CICS INQUIRE PIPELINE() SHELF**
WSDIR pickup directory	The fully qualified name of the Web service binding directory (also known as the pickup directory). Source field: **EXEC CICS INQUIRE PIPELINE() WSDIR**
PIPELINE use count	The number of times this PIPELINE resource definition was used to install a web service or to process a web service request. Source field: PIR-PIPELINE-USE-COUNT
JSON JAVA parser	For a JSON PIPELINE resource, specifies if the JSON request message is parsed by using Java or from within the CICS pipeline. Source field: PIR_JSON_JAVA_PARSER

Program reports

There are five program reports, Programs report, Programs definitions report, Program Autoinstall report, Programs by DSA and LPA report, and Program Totals report.

Programs report

The Programs report is produced using a combination of the **EXEC CICS INQUIRE PROGRAM** and **EXEC CICS EXTRACT STATISTICS PROGRAM** commands. The statistics data was mapped by the **DFHLDRDS DSECT**.

Information about Java programs that run in a JVM is handled differently from information about other programs, because JVM programs are not loaded by CICS. For JVM programs, the Programs Report shows only the program name, execution key, and use count. This information is obtained using the **EXEC CICS EXTRACT STATISTICS JVMPROGRAM** command. For full information about JVM programs, see "JVM Programs report" on page 415.

Table 232. Fields in the Programs report

Field Heading	Description
Program Name	The name of the program. Source field: **EXEC CICS INQUIRE PROGRAM**
Data Loc	The storage location that the program is able to accept. Source field: **EXEC CICS INQUIRE PROGRAM DATALOCATION**
Exec Key	The access key in which the program will execute. Source field: **EXEC CICS INQUIRE PROGRAM EXECKEY**
Times Used	The number of times CICS tasks within the system have issued load requests to the loader domain to obtain access to a usable instance of this program. These load requests may cause the loader domain to issue an MVS LOAD. Source field: LDRTU
Times Fetched	The number of times the loader domain has issued an MVS LOAD request to load a copy of the program from the DFHRPL or dynamic LIBRARY concatenation into CICS managed storage. Source field: LDRFC
Total Fetch Time	The time taken to perform all fetches for this program. Source field: LDRFT
Average Fetch Time	The average time taken to perform a fetch of the program. Source field: (LDRFT / LDRFC)
LIBRARY name	The name of the LIBRARY from which the program was just loaded (non-LPA resident modules only). Source field: LDRLBNM

Table 232. Fields in the Programs report (continued)

Field Heading	Description
LIBRARY Offset	The offset into the DFHRPL or dynamic LIBRARY concatenation of the data set from which the program was last loaded (non-LPA resident modules only). If this field is blank, it indicates that the program has never been loaded, or that it has not been loaded from the LIBRARY. A value of zero appearing in the report indicates that the program has been loaded at least once from the LIBRARY, and has an offset value of zero. Source field: LDRRPLO
Times Newcopy	The number of times a NEWCOPY has been requested against this program. Source field: LDRTN
Times Removed	The number of times an instance of this program has been removed from CICS managed storage due to the actions of the Dynamic Program Storage Compression (DPSC) mechanism. Source field: LDRRPC
Program Size	The size of the program in bytes, if known (otherwise zero). Source field: LDRPSIZE
Program Location	The location of the current storage resident instance of the program, if any. It has one of the following values: • None - No current copy • CDSA - Current copy is in the CDSA • SDSA - Current copy is in the SDSA • RDSA - Current copy is in the RDSA • ECDSA - Current copy is in the ECDSA • ESDSA - Current copy is in the ESDSA • ERDSA - Current copy is in the ERDSA • LPA - Current copy is in the LPA • ELPA - Current copy is in the ELPA Source field: LDRLOCN

Programs definitions report

The programs definitions report is produced by using a combination of the **EXEC CICS INQUIRE PROGRAM** and **EXEC CICS EXTRACT STATISTICS PROGRAMDEF** commands. The statistics data was mapped by the **DFHPGDDS DSECT**.

Table 233. Fields in the programs definitions report

Field Heading	Description
Program Name	The name of the program. Source field: **EXEC CICS INQUIRE PROGRAM**
Type	The type of module. Source field: PGD-PROGRAM-TYPE
Concurrency	The concurrency attribute (QUASIRENT, THREADSAFE, or REQUIRED) of the installed program definition. Source field: PGD-PROGRAM-CONCURRENCY

Table 233. Fields in the programs definitions report (continued)

Field Heading	Description
API	The API attribute (CICS or OPEN) of the installed program definition. Source field: PGD-PROGRAM-API
EXEC key	The access key in which the program runs. Source field: PGD-PROGRAM-EXEC-KEY
Data Location	The storage location that the program is able to accept. Source field: PGD-PROGRAM-DATA-LOC
Language Deduced	The language of the module. Source field: PGD-PROGRAM-LANG-DEDUCED
Runtime Environment	The runtime environment of the program. Source field: PGD-PROGRAM-RUNTIME-ENV
JVM server	For a Java program, the name of the JVM server in which this Java program runs. Source field: PGD-PROGRAM-JVMSERVER
Dynamic	Whether, if the program is the subject of a program-link request, it can be dynamically routed. Source field: PGD-PROGRAM-DYNAMIC
Remote Name	For programs only, the name by which the module is known in the CICS region that is named in the **Remote System** field, and only to those programs defined to be remote. Source field: PGD-PROGRAM-REMOTE-NAME
Remote Tran	For programs only, the name of the transaction under which this module, which must be a program, runs remotely. The transaction identifier that the remote region assigns to the task created there to run it when a task in the local region LINKs to it. Source field: PGD-PROGRAM-TRAN-ID
Remote System	For programs only, the name of the CICS region in which the module is defined. It applies only to programs, and only to those programs defined to be remote. Source field: PGD-PROGRAM-REMOTE-SYSID

Program Autoinstall report

The Program Autoinstall report shows information and statistics about the status of program autoinstall, catalog program definitions, and the number of autoinstalls that were attempted, rejected, and failed.

The Program Autoinstall report is produced using a combination of the **EXEC CICS INQUIRE SYSTEM**, and the **EXEC CICS COLLECT STATISTICS PROGAUTO** commands. The statistics data is mapped by the DFHPGGDS DSECTs.

Table 234. Fields in the Program Autoinstall report

Field Heading	Description
Program Autoinstall Status	Indicates the current status of program autoinstall. Source field: **EXEC CICS INQUIRE SYSTEM PROGAUTOINST(cvda)**

Table 234. Fields in the Program Autoinstall report (continued)

Field Heading	Description
Autoinstall Program	The name of the user-replaceable program autoinstall model definition program. Source field: **EXEC CICS INQUIRE SYSTEM PROGAUTOEXIT()**
Catalog Program Definitions	Indicates whether, and when, autoinstalled program definitions are to be cataloged. Source field: **EXEC CICS INQUIRE SYSTEM PROGAUTOCTLG(cvda)**
Autoinstalls attempted	The number of program autoinstalls attempted. Source field: PGGATT
Autoinstalls rejected	The number of program autoinstalls rejected by the program autoinstall user-replaceable program. Source field: PGGREJ
Autoinstalls failed	The number of program autoinstalls failed for reasons other than being rejected by the program autoinstall user-replaceable program. Source field: PGGFAIL

Programs by DSA and LPA report

The Programs by DSA and LPA report is produced using a combination of the **EXEC CICS INQUIRE PROGRAM** and **EXEC CICS EXTRACT STATISTICS PROGRAM** commands. The statistics data was mapped by the **DFHLDRDS DSECT**.

Table 235. Fields in the Programs by DSA and LPA report

Field Heading	Description
Program Name	The name of the program. Source field: **EXEC CICS INQUIRE PROGRAM()**
Concurrency Status	The concurrency attribute of the program (QUASIRENT, THREADSAFE, or REQUIRED). Source field: **EXEC CICS INQUIRE PROGRAM() CONCURRENCY(cvda**)
API Status	The API attribute of the program (CICS or open API). Source field:**EXEC CICS INQUIRE PROGRAM() APIST(cvda)**
Times Used	The number of times CICS tasks within the system have issued load requests to the loader domain to obtain access to a usable instance of this program. These load requests can cause the loader domain to issue an MVS LOAD. Source field: LDRTU
Times Fetched	The number of times the loader domain has issued an MVS LOAD request to load a copy of the program from the static DFHRPL or dynamic LIBRARY concatenation into CICS managed storage. Source field: LDRFC
Total Fetch Time	The time taken to perform all fetches for this program. Source field: LDRFT
Average Fetch Time	The average time taken to perform a fetch of the program. Source field: (LDRFT / LDRFC)

Table 235. Fields in the Programs by DSA and LPA report (continued)

Field Heading	Description
LibDsn Offset	The offset into the LIBRARY DD concatenation from which the program was last loaded (non-LPA resident modules only). If this field is blank, it indicates that the program has never been loaded, or that it has not been loaded from the LIBRARY. A value of zero appearing in the report indicates that the program has been loaded at least once from the LIBRARY, and has an offset value of zero. Source field: LDRRPLO
Times Newcopy	The number of times a NEWCOPY has been requested against this program. Source field: LDRTN
Times Removed	The number of times an instance of this program has been removed from CICS managed storage due to the actions of the Dynamic Program Storage Compression (DPSC) mechanism. Source field: LDRRPC
Program Size	The size of the program in bytes, if known (otherwise zero). Source field: LDRPSIZE
Program Location	The location of the current storage resident instance of the program, if any. It has one of the following values: • None - No current copy • CDSA - Current copy is in the CDSA • SDSA - Current copy is in the SDSA • RDSA - Current copy is in the RDSA • ECDSA - Current copy is in the ECDSA • ESDSA - Current copy is in the ESDSA • ERDSA - Current copy is in the ERDSA • LPA - Current copy is in the LPA • ELPA - Current copy is in the ELPA Source field: LDRLOCN

Program Totals report

The Program Totals Report is calculated from data obtained using the **EXEC CICS INQUIRE PROGRAM** and **EXEC CICS EXTRACT STATISTICS PROGRAM** commands. The statistics data was mapped by the **DFHLDRDS DSECT**.

Information about Java programs that run in a JVM is handled differently from information about other programs, because these programs are not loaded by CICS. The number of Java programs that run in a JVM is included in the Program Totals Report. For full information about JVM programs, see "JVM Programs report" on page 415.

Table 236. Fields in the Program Totals report

Field Heading	Description
Programs	The current total number of programs defined to CICS in all languages. Source field: **EXEC CICS INQUIRE PROGRAM LANGDEDUCED(cvda) RUNTIME(cvda)**.
Programs - Assembler	The current total number of programs defined to CICS as Assembler programs. Source field: **EXEC CICS INQUIRE PROGRAM LANGDEDUCED(cvda) RUNTIME(cvda)**.

Table 236. Fields in the Program Totals report (continued)

Field Heading	Description
Programs - C	The current total number of programs defined to CICS as C programs. Source field: **EXEC CICS INQUIRE PROGRAM LANGDEDUCED(cvda) RUNTIME(cvda)**.
Programs - COBOL	The current total number of programs defined to CICS as COBOL programs. Source field: **EXEC CICS INQUIRE PROGRAM LANGDEDUCED(cvda) RUNTIME(cvda)**.
Programs - Java (JVM)	The current total number of programs defined to CICS as Java programs. Source field: **EXEC CICS INQUIRE PROGRAM LANGDEDUCED(cvda) RUNTIME(cvda)**.
Programs - Language Environment®	The current total number of programs defined to CICS as Language Environment programs. Source field: **EXEC CICS INQUIRE PROGRAM LANGDEDUCED(cvda) RUNTIME(cvda)**.
Programs - PL1	The current total number of programs defined to CICS as PL/I programs. Source field: **EXEC CICS INQUIRE PROGRAM LANGDEDUCED(cvda) RUNTIME(cvda)**.
Programs - Remote	The current total number of programs defined to CICS as remote programs. Source field: **EXEC CICS INQUIRE PROGRAM LANGDEDUCED(cvda) RUNTIME(cvda)**.
Programs - Not Deduced	The current total number of programs defined to CICS but whose language was not specified in the resource definition. Source field: **EXEC CICS INQUIRE PROGRAM LANGDEDUCED(cvda) RUNTIME(cvda)**.
Maps	The current number of maps defined to CICS.
Partitionsets	The current number of partitionsets defined to CICS.
Total	The total number of programs, maps, and partitionsets defined to CICS.
CDSA Programs	The number of programs, maps, and partitionsets defined to CICS currently residing in the CDSA.
SDSA Programs	The number of programs, maps, and partitionsets defined to CICS currently residing in the SDSA.
RDSA Programs	The number of programs, maps, and partitionsets defined to CICS currently residing in the RDSA.
ECDSA Programs	The number of programs, maps, and partitionsets defined to CICS currently residing in the ECDSA.
ESDSA Programs	The number of programs, maps, and partitionsets defined to CICS currently residing in the ESDSA.
ERDSA Programs	The number of programs, maps, and partitionsets defined to CICS currently residing in the ERDSA.
LPA Programs	The current number of programs, maps, and partitionsets defined to CICS residing in the LPA.
ELPA Programs	The current number of programs, maps, and partitionsets defined to CICS residing in the ELPA.
Unused Programs	The current number of programs, maps, and partitionsets defined to CICS and which have been located in DFHRPL or a dynamic LIBRARY concatenation but which have not been used by any CICS task.
Not Located Programs	The current number of programs, maps, and partitionsets defined to CICS but which have not been located in any DFHRPL or a dynamic LIBRARY concatenation.
Total	The total number of programs, maps, and partitionsets defined to CICS.

Recovery Manager report

The Recovery Manager report is produced using the **EXEC CICS EXTRACT STATISTICS RECOVERY** command. The statistics data is mapped by the **DFHRMGDS DSECT**.

Table 237. Fields in the Recovery Manager report

Field Heading	Description
Number of Syncpoints forward	The number of syncpoints issued. Source field: RMGSYFWD
Number of Syncpoints backward	The number of syncpoint rollbacks issued. Source field: RMGSYBWD
Number of Resynchronizations	The number of resyncs issued. Source field: RMGRESYN
Total UOWs shunted for indoubt failure	The total number of UOWs shunted for indoubt failure. Source field: RMGTSHIN
Total time UOWs shunted for indoubt failure	The total time UOWs were shunted for indoubt failure. Source field: RMGTSHTI
Current UOWs shunted for indoubt failure	The current number of UOWs shunted for indoubt failure. Source field: RMGCSHIN
Total time current UOWs shunted for indoubt failure	The total time for the current UOWs shunted for indoubt failure. Source field: RMGCSHTI
Total UOWs shunted for commit/backout failure	The total number of UOWs shunted for commit/backout failure. Source field: RMGTSHRO
Total time UOWs shunted for commit/backout failure	The total time UOWs were shunted for commit/backout failure. Source field: RMGTSHTR
Current UOWs shunted for commit/backout failure	The current number of UOWs shunted for commit/backout failure. Source field: RMGCSHRO
Total time current UOWs shunted for commit/backout failure	The total time for the current UOWs shunted for commit/backout failure. Source field: RMGCSHTR
Indoubt Action Forced by Trandef	The number of forced indoubt action resolutions due to the transaction definition specifying that it cannot support indoubt waiting. Source field: RMGIAFTR
Indoubt Action Forced by Timeout	The number of forced indoubt action resolutions due to the indoubt wait timing out. Source field: RMGIAFTI
Indoubt Action Forced by No Wait	The number of forced indoubt action resolutions due to a recoverable resource or resource manager coordinator being unable to support indoubt waiting. Source field: RMGIAFNW

Table 237. Fields in the Recovery Manager report (continued)

Field Heading	Description
Indoubt Action Forced by Operator	The number of forced indoubt action resolutions due to the operator (CEMT or SPI command) cancelling the wait for indoubt resolution. Source field: RMGIAFOP
Indoubt Action Forced by Other	The number of forced indoubt action resolutions due to reasons other than those already referenced in this table. Source field: RMGIAFOT
The following fields are a breakdown of 'Indoubt Action Forced by No Wait':	
Indoubt Action Forced by TD Queues	The number of forced indoubt action resolutions due to a recoverable transient data queue being unable to support indoubt waiting. Source field: RMGNWTD
Indoubt Action Forced by LU61 Connections	The number of forced indoubt action resolutions due to the use of an LU6.1 intersystem link, which is unable to support indoubt waiting. Source field: RMGNW61
Indoubt Action Forced by MRO Connections	The number of forced indoubt action resolutions due to the use of an MRO connection, which is unable to support indoubt waiting. Source field: RMGNWMRO
Indoubt Action Forced by RMI Exits	The number of forced indoubt action resolutions due to an RMI exit being unable to support indoubt waiting. Source field: RMGNWRMI
Indoubt Action Forced by Other	The number of forced indoubt action resolutions due to another recoverable resource or resource manager coordinator being unable to support indoubt waiting. Source field: RMGNWOTH
Number of Indoubt Action Mismatches	The number of forced indoubt action resolutions that a participating resource manager coordinator resolved in the opposite way to CICS. Source field: RMGIAMIS

Storage reports

There are five storage reports. The storage reports provide information about the use of MVS and CICS virtual storage. There are separate reports for storage below 16 MB, storage above 16 MB but below 2 GB, and storage above 2 GB.

Storage below 16 MB report

The Storage below 16 MB report provides information on the use of MVS and CICS virtual storage. It contains the information you need to understand your current use of virtual storage below 16 MB and helps you to verify the size values used for the CDSA, UDSA, SDSA, and RDSA and the value set for the DSA limit.

Table 238. Fields in the Storage below 16 MB report

Field Heading	Description
Region size established from REGION= parameter	The region size established from the REGION= parameter in the JCL. If the region requested was greater than 16 megabytes, the region established resides above 16 megabytes, and this field will be a minimum value of 32 megabytes.
Storage BELOW 16MB	**Description**

Table 238. Fields in the Storage below 16 MB report (continued)

Field Heading	Description
Private Area Region size below 16MB	The private area size below 16 MB, expressed in KB.
Max LSQA/SWA storage allocated below 16MB (SYS)	The maximum amount of virtual storage allocated from the local system queue area (LSQA) and the scheduler work area (SWA) subpools below 16 MB, expressed in KB.
Max User storage allocated below 16MB (VIRT)	The maximum amount of virtual storage allocated from the user subpools below 16 MB, expressed in KB.
System Use	An amount of virtual storage available for system use.
RTM	An amount of virtual storage available for use by the MVS recovery and termination manager included for calculation purposes, which could be allocated during a CICS region recovery and termination.
Private Area Storage available below 16MB	The amount of storage below 16 MB that could be allocated by increasing the DSALIM parameter or by MVS storage GETMAIN requests.
MVS PVT Size	The maximum MVS private area (PVT) size below 16 MB, expressed in KB.
MVS CSA Size / Allocated	The MVS common system area (CSA) size and the amount of the MVS CSA allocated below 16 MB, expressed in KB.
MVS SQA Size / Allocated	The MVS system queue area (SQA) size and the amount of the MVS SQA allocated below 16 MB, expressed in KB.
Current DSA Limit	The current DSA Limit, expressed in KB. Source field: (SMSDSALIMIT / 1024)
Current Allocation for DSAs	The current amount of storage allocated to the DSAs below 16 MB, expressed in KB. This value may be smaller or larger than the current DSA limit. Source field: (SMSDSATOTAL / 1024)
VIRT minus Current DSA Limit	The total amount of user storage allocated/used below 16 MB minus the current DSA limit. This indicates the amount of user storage that is allocated below 16 MB, and is not allocated to the DSA. Source field: ((VIRT - SMSDSALIMIT) / 1024)
Peak Allocation for DSAs	The peak amount of storage allocated to the DSAs below 16 MB, expressed in KB. This value may be smaller or larger than the current DSA limit. Source field: (SMSHWMDSATOTAL / 1024)
Current DSA Size	The current size of the CDSA, UDSA, SDSA, or RDSA, expressed in KB. Source field: (SMSDSASZ / 1024)
Current DSA Used	The current amount of storage used in this DSA, expressed in KB. Source field: ((SMSDSASZ - SMSFSTG) / 1024)
Current DSA Used as % of DSA	The current amount of storage used in this DSA, expressed as a percentage of the current DSA size. Source field: (((SMSDSASZ - SMSFSTG) / SMSDSASZ) * 100)
Peak DSA Used	The peak amount of storage used in this DSA, expressed in KB. Source field: (SMSHWMPS / 1024)
Peak DSA Size	The peak size of the CDSA, UDSA, SDSA, or the RDSA, expressed in KB. Source field: (SMSHWMDSASZ / 1024)

Table 238. Fields in the Storage below 16 MB report (continued)

Field Heading	Description
Cushion Size	The size of the cushion, expressed in KB. The cushion forms part of the CDSA, UDSA, SDSA, or the RDSA, and is the amount of storage below which CICS goes short on storage (SOS). Source field: (SMSCSIZE / 1024)
Free Storage (inc. Cushion)	The current amount of free storage in this DSA, expressed in KB. Source field: (SMSFSTG / 1024)
Peak Free Storage	The peak amount of free storage in this DSA, expressed in KB. Source field: (SMSHWMFSTG / 1024)
Lowest Free Storage	The lowest amount of free storage in this DSA, expressed in KB. Source field: (SMSLWMFSTG / 1024)
Largest Free Area	The length of the largest contiguous free area in the CDSA, UDSA, SDSA, or RDSA, expressed in bytes. Source field: (SMSLFA / 1024)
Largest Free Area as % of DSA	The largest contiguous free area in the CDSA, UDSA, SDSA, or RDSA, expressed as a percentage of the current DSA size. Source field: ((SMSLFA / SMSDSASZ) * 100)
Largest Free/Free Storage	An indication of the storage fragmentation in this DSA. This value is calculated by dividing the "Largest Free Area" (SMSLFA) by the "Free storage" (SMSFSTG). If the ratio is small, this DSA is fragmented. Source field: (SMSLFA / SMSFSTG)
Current number of extents	The number of extents currently allocated to this DSA. Source field: SMSEXTS
Number of extents added	The number of extents added to the DSA since the last time statistics were recorded. Source field: SMSEXTSA
Number of extents released	The number of extents that were released from the DSA since the last time statistics were recorded. Source field: SMSEXTSR
Getmain Requests	The number of GETMAIN requests from the CDSA, UDSA, SDSA, or RDSA. Source field: SMSGMREQ
Freemain Requests	The number of FREEMAIN requests from the CDSA, UDSA, SDSA, or RDSA. Source field: SMSFMREQ
Current number of Subpools	The current number of subpools (domain and task) in the CDSA, UDSA, SDSA, or RDSA. Source field: SMSCSUBP
Add Subpool Requests	The number of ADD_SUBPOOL requests to create a subpool (domain or task) from the CDSA, UDSA, SDSA, or RDSA. Source field: SMSASR

Table 238. Fields in the Storage below 16 MB report (continued)

Field Heading	Description
Delete Subpool Requests	The number of DELETE_SUBPOOL requests (domain or task) from the CDSA, UDSA, SDSA, or RDSA. Source field: SMSDSR
Times no storage returned	The number of times a GETMAIN request with SUSPEND(NO) returned the condition INSUFFICIENT_STORAGE. Source field: SMSCRISS
Times request suspended	The number of times a GETMAIN request with SUSPEND(YES) was suspended because of insufficient storage to satisfy the request at that moment.. Source field: SMSUCSS
Current requests suspended	The number of GETMAIN requests that are currently suspended for storage. Source field: SMSCSS
Peak requests suspended	The peak number of GETMAIN requests that were suspended for storage. Source field: SMSHWMSS
Requests purged while waiting	The number of requests that were purged while suspended for storage. Source field: SMSPWWS
Times cushion released	The number of times a GETMAIN request caused the storage cushion to be released. The cushion is said to be released when the number of free pages drops below the number of pages in the cushion and there are no more free extents available to increase the size of this DSA. Source field: SMSCREL
Times Short-On-Storage	The number of times CICS went SOS in this DSA, where SOS means that the cushion is currently in use, or at least one task is suspended for storage, or both. This field applies to the CDSA, UDSA, SDSA, and RDSA. Source field: SMSSOS
Total time Short-On-Storage	The accumulated time that CICS has been SOS in this DSA. Source field: SMSTSOS
Average Short-On-Storage time	The average time that CICS has been SOS in this DSA. Source field: (SMSTSOS / SMSSOS)
Storage Violations	The number of storage violations recorded in the DSA. This field applies to the CDSA, UDSA, SDSA, and RDSA. Source field: SMSSV
Access	The type of access of the DSA. Values are CICS, USER, or READONLY. If storage protection is not active, storage areas revert to an access type of CICS, except those in the RDSA. • CICS - access is CICS key • USER - access is user key • READONLY - access is read-only protection Source field: SMSACCESS

Storage above 16 MB report

The Storage above 16 MB report provides information about the use of MVS and CICS virtual storage. It contains the information you need to understand your current use of virtual storage between 16 MB and 2 GB (31-bit storage, also known as storage above the line). This report helps you to verify the size values used for the ECDSA, EUDSA, ESDSA, ERDSA, and ETDSA, and the value set for the EDSA limit.

This report is produced using the **EXEC CICS COLLECT STATISTICS STORAGE** command. The statistics data is mapped by the DFHSMSDS DSECT.

Table 239. Fields in the Storage above 16 MB report

Field Heading	Description
Private Area Region size above 16MB	The private area size above 16 MB, expressed in KB.
Max LSQA/SWA storage allocated above 16MB (SYS)	The maximum amount of virtual storage allocated from the local system queue area (LSQA) and the SWA subpools above 16 MB, expressed in KB.
Max User storage allocated above 16MB (EXT)	The maximum amount of virtual storage allocated from the user subpools above 16 MB, expressed in KB.
Private Area Storage available above 16MB	The amount of storage above 16 MB that could be allocated by increasing the EDSALIM parameter or by MVS storage GETMAIN requests.
EXT minus Current EDSA Limit	The total amount of user storage allocated or used above 16 MB minus the current EDSA limit. This value indicates the amount of user storage that is allocated above 16 MB, but is not allocated to the EDSA. Source field: ((EXT - SMSEDSALIMIT) / 1024)
MVS EPVT size	The maximum extended MVS private area (EPVT) size above 16 MB, expressed in KB.
MVS ECSA Size / Allocated	The MVS extended common service area (ECSA) size and the amount of the MVS CSA allocated above 16 MB, expressed in KB.
MVS ESQA Size / Allocated	The MVS extended system queue (ESQA) size and the amount of the MVS SQA allocated above 16 MB, expressed in KB.
Requests for MVS storage causing waits	The total number of MVS storage requests that have waited for MVS storage above 16 MB. Source field: SMSMVSSTGREQWAITS
Total time waiting for MVS storage	The total time that MVS storage requests have spent waiting for MVS storage above 16 MB. Source field: SMSTIMEWAITMVS
Current EDSA Limit	The current limit of the CICS extended dynamic storage areas, as defined by the **EDSALIM** system initialization parameter. This value is expressed in KB. Source field: (SMSEDSALIMIT / 1024)
Current Allocation for EDSAs	The total amount of storage currently allocated to the DSAs above 16 MB but below 2 GB (above the line). This value might be smaller or larger than “Current EDSA limit”. This value is expressed in KB and might be smaller or larger than the current EDSA limit. Source field: (SMSEDSATOTAL / 1024)

Table 239. Fields in the Storage above 16 MB report (continued)

Field Heading	Description
Peak Allocation for EDSAs	The peak amount of storage allocated to the DSAs above 16 MB but below 2 GB (above the line). This value might be smaller or larger than "Current EDSA limit". This value is expressed in KB and might be smaller or larger than the current EDSA limit. Source field: (SMSHWMEDSATOTAL / 1024)
Current DSA Size	The current size of the ECDSA, EUDSA, ESDSA, ERDSA, or ETDSA, expressed in KB. Source field: (SMSDSASZ / 1024)
Current DSA Used	The current amount of storage used in this DSA, expressed in KB. Source field: ((SMSDSASZ - SMSFSTG) / 1024)
Current DSA Used as % of DSA	The current amount of storage used in this DSA expressed as a percentage of the current DSA size. Source field: (((SMSDSASZ - SMSFSTG) / SMSDSASZ) * 100)
Peak DSA Used	The peak amount of storage used in this DSA, expressed in KB. Source field: (SMSHWMPS / 1024)
Peak DSA Size	The peak size of the ECDSA, EUDSA, ESDSA, ETDSA or the ETDSA, expressed in KB. Source field: (SMSHWMDSASZ / 1024)
Cushion Size	The size of the cushion, expressed in KB. The cushion forms part of the ECDSA, EUDSA, ESDSA, ERDSA, or ETDSA and is the amount of storage below which CICS goes SOS. Source field: (SMSCSIZE / 1024)
Free Storage (inc. Cushion)	The current amount of free storage in this DSA, expressed in KB. Source field: (SMSFSTG / 1024)
Peak Free Storage	The peak amount of free storage in this DSA, expressed in KB. Source field: (SMSHWMFSTG / 1024)
Lowest Free Storage	The lowest amount of free storage in this DSA, expressed in KB. Source field: (SMSLWMFSTG / 1024)
Largest Free Area	The length of the largest contiguous free area in the ECDSA, EUDSA, ESDSA, ERDSA, or ETDSA, expressed in KB. Source field: (SMSLFA / 1024)
Largest Free Area as % of DSA	The largest contiguous free area in the ECDSA, EUDSA, ESDSA, ERDSA, or ETDSA, expressed as a percentage of the current DSA Size. Source field: ((SMSLFA / SMSDSASZ) * 100)
Largest Free/Free Storage	An indication of the storage fragmentation in this DSA. This value is calculated by dividing the "Largest free area" (SMSLFA) by the "Free storage" (SMSFSTG). If the ratio is small, this DSA is fragmented. Source field: (SMSLFA / SMSFSTG)
Current number of extents	The number of extents currently allocated to this DSA. Source field: SMSEXTS

Table 239. Fields in the Storage above 16 MB report (continued)

Field Heading	Description
Number of extents added	The number of extents added to the DSA since the last time statistics were recorded. Source field: SMSEXTSA
Number of extents released	The number of extents that were released from the DSA since the last time statistics were recorded. Source field: SMSEXTSR
Getmain Requests	The number of GETMAIN requests from the ECDSA, EUDSA, ESDSA, ERDSA, or ETDSA. Source field: SMSGMREQ
Freemain Requests	The number of FREEMAIN requests from the ECDSA, EUDSA, ESDSA, ERDSA, or ETDSA. Source field: SMSFMREQ
Current number of Subpools	The current number of subpools (domain and task) in the ECDSA, EUDSA, ESDSA, ERDSA, or ETDSA. Source field: SMSCSUBP
Add Subpool Requests	The number of ADD_SUBPOOL requests to create a subpool (domain or task) from the ECDSA, EUDSA, ESDSA, ERDSA, or ETDSA. Source field: SMSASR
Delete Subpool Requests	The number of DELETE_SUBPOOL requests (domain or task) from the ECDSA, EUDSA, ESDSA, ERDSA, or ETDSA. Source field: SMSDSR
Times no storage returned	The number of times a GETMAIN request with SUSPEND(NO) returned the condition INSUFFICIENT_STORAGE. Source field: SMSCRISS
Times request suspended	The number of times a GETMAIN request with SUSPEND(YES) was suspended because of insufficient storage to satisfy the request at that moment. Source field: SMSUCSS
Current requests suspended	The number of GETMAIN requests that are currently suspended for storage. Source field: SMSCSS
Peak requests suspended	The peak number of GETMAIN requests that were suspended for storage. Source field: SMSHWMSS
Requests purged while waiting	The number of requests that were purged while suspended for storage. Source field: SMSPWWS
Times cushion released	The number of times a GETMAIN request caused the storage cushion to be released. The cushion is said to be released when the number of free pages drops below the number of pages in the cushion and there are no more free extents available to increase the size of this DSA. Source field: SMSCREL

Table 239. Fields in the Storage above 16 MB report (continued)

Field Heading	Description
Times Short-On-Storage	The number of times CICS went SOS in this DSA, where SOS means that the cushion is currently in use, or at least one task is suspended for storage, or both. This field applies to the ECDSA, EUDSA, ESDSA, ERDSA, and ETDSA. Source field: SMSSOS
Total time Short-On-Storage	The accumulated time that CICS has been SOS in this DSA. Source field: SMSTSOS
Average Short-On-Storage time	The average time that CICS has been SOS in this DSA. Source field: (SMSTSOS / SMSSOS)
Storage Violations	The number of storage violations recorded in the DSA. This field applies to the ECDSA, EUDSA, ESDSA, ERDSA, and ETDSA. Source field: SMSSV
Access	The type of access of the DSA. Values are CICS, USER, READONLY, or TRUSTED. If storage protection is not active, storage areas revert to an access type of CICS, except for those in the ERDSA. • CICS - access is CICS key • USER - access is USER key • READONLY - access is read-only protection • TRUSTED - access is CICS key. Source field: SMSACCESS

Storage above 2 GB report

The Storage above 2 GB report provides information about the use of MVS and CICS virtual storage. It contains the information you require to understand the use of 64-bit virtual storage, also known as storage above the bar. This report helps you to verify the allocation of storage for the CICS dynamic storage areas above the bar (GDSA) and for the CICS functions that use 64-bit storage.

This report is produced using the **EXEC CICS COLLECT STATISTICS STORAGE** command. The statistics data is mapped by the DFHSMSDS DSECT.

Table 240. Fields in the Storage above 2 GB report (part 1)

Field Heading	Description
MEMLIMIT Size	The value of the z/OS **MEMLIMIT** parameter, which limits the amount of 64-bit storage for the CICS region. This value can be in megabytes, gigabytes, terabytes, petabytes, or exabytes, depending on size. A value of NOLIMIT indicates that no upper limit is imposed. Source field: SMSMEMLIMIT
MEMLIMIT Set By	The source of the **MEMLIMIT** value: SMFPRM indicates that **MEMLIMIT** is set by SYS1.PARMLIB(SMFPRMxx). JCL indicates that **MEMLIMIT** is set by JCL. REGION indicates that **MEMLIMIT** is set to NOLIMIT because REGION=0M is specified in JCL. IEFUSI indicates that **MEMLIMIT** is set by the z/OS installation exit IEFUSI. Source field: SMSMEMLIMITSRC

Table 240. Fields in the Storage above 2 GB report (part 1) (continued)

Field Heading	Description
Current Address Space active (bytes)	The current address space available above the bar. This value is expressed in bytes. Source field: (SMSASACTIVE x 1048576)
Current Address Space active	The current address space available above the bar. This value is expressed in megabytes. Source field: SMSASACTIVE
Peak Address Space active	The peak amount of address space available above the bar. This value is expressed in megabytes. Source field: SMSHWMASACTIVE
MEMLIMIT minus Current Address Space active	The value of the z/OS **MEMLIMIT** parameter minus the current address space available above the bar. This value is expressed in megabytes. Source field: (SMSMEMLIMIT - SMSASACTIVE)
MEMLIMIT minus allocated to Private Memory Objects	The value of the z/OS **MEMLIMIT** parameter minus the amount of storage allocated from large virtual memory in private memory objects. This value is expressed in megabytes. When rounded down to units of GB, it represents the number of extra GDSA 1 GB extents that can be allocated by CICS currently. Source field: (SMSMEMLIMIT - (SMSLVABYTES / 1048576))
Number of Private Memory Objects	The number of private memory objects allocated.[1] Source field: SMSLVNMEMOBJ
....minus Current GDSA extents	The number of private memory objects allocated minus the number of extents that are currently allocated to this DSA. Source field: (SMSLVNMEMOBJ - SMSEXTS)
Bytes allocated to Private Memory Objects	The number of bytes allocated from large virtual memory in private memory objects. This value is expressed in megabytes and bytes.[1] Source field: SMSLVABYTES
....minus Current GDSA allocated	The number of bytes allocated from large virtual memory in private memory objects minus the total storage that is currently allocated to the DSAs above the bar. This value is expressed in megabytes and bytes. Source field: (SMSLVABYTES - SMSGDSAALLOC)
Bytes hidden within Private Memory Objects	The number of bytes hidden in large virtual memory private memory objects. This value is expressed in megabytes and bytes.[1] Source field: SMSLVHBYTES
....minus Current GDSA hidden	The number of bytes hidden in large virtual memory private memory objects minus the storage that is allocated to the DSAs above the bar that is not currently active. This value is expressed in megabytes and bytes. Source field: (SMSLVHBYTES - (SMSGDSAALLOC - SMSGDSAACTIVE))
....minus CICS Internal Trace Table hidden	The number of bytes hidden in large virtual memory private memory objects minus the storage that is allocated to the DSAs above the bar that is not currently active, and minus the size of the CICS internal trace table. This value is expressed in megabytes. Source field: (SMSLVHBYTES - ((SMSGDSAALLOC - SMSGDSAACTIVE) + EXEC CICS INQUIRE TRACEDEST TABLESIZE)) / 1048756

Table 240. Fields in the Storage above 2 GB report (part 1) (continued)

Field Heading	Description
Bytes usable within Private Memory Objects	The number of usable bytes in large virtual memory private memory objects, that is, the number of bytes allocated minus the number of bytes hidden in large virtual memory private memory objects. This value is expressed in megabytes and bytes. Source field: (SMSLVABYTES - SMSLVHBYTES)
Peak bytes usable within Private Memory Objects	The high-water mark of usable bytes in large virtual memory private memory objects. This value is expressed in megabytes and bytes.[1] Source field: SMSLVGBYTES
Current GDSA Allocated	The total amount of storage currently allocated to the DSAs above the bar. This value is expressed in megabytes and bytes. Source field: SMSGDSAALLOC
Peak GDSA Allocated	The peak amount of storage allocated to the DSAs above the bar. This value is expressed in megabytes. Source field: SMSHWMGDSAALLOC
Current GDSA Active	The current storage in use above the bar. This value is expressed in megabytes and bytes. Source field: SMSGDSAACTIVE
Peak GDSA Active	The peak amount of storage in use above the bar. This value is expressed in megabytes. Source field: SMSHWMGDSAACTIVE
Current GDSA Used	The current amount of storage used in this DSA, expressed in megabytes. Source field: (SMSDSASZ - SMSFSTG)
Number of Shared Memory Objects	The number of shared memory objects allocated.[1] Source field: SMSLVSHRNMEMOBJ
Bytes allocated to Shared Memory Objects	The number of shared bytes allocated from high virtual memory. This value is expressed in megabytes and bytes.[1] Source field: SMSLVSHRBYTES
Peak bytes usable within Shared Memory Objects	The high-water mark for the number of shared bytes in large virtual memory objects. This value is expressed in megabytes and bytes.[1] Source field: SMSLVSHRGBYTES
Auxiliary Slots backing Private Memory Objects	The number of auxiliary storage slots that are used to back 64-bit private memory objects.[1] Source field: SMSHVAUXSLOTS
HWM Auxiliary Slots backing Private Memory Object	The high-water mark of auxiliary storage slots that are used to back 64-bit private memory objects.[1] Source field: SMSHVGAUXSLOTS
Real Frames backing Private Memory Objects	The number of real storage frames that are used to back 64-bit private memory objects.[1] Source field: SMSHVPAGESINREAL

Table 240. Fields in the Storage above 2 GB report (part 1) (continued)

Field Heading	Description
HWM Real Frames backing Private Memory Objects	The high-water mark for the number of real storage frames that are used to back 64-bit private memory objects.[1] Source field: SMSHVGPAGESINREAL
Number of Large Memory Objects Allocated	The number of large memory objects allocated by this address space.[1] Source field: SMSLARGEMEMOBJ
Number of Large Pages backed in Real Storage	The number of large pages (1 MB pages) backed in real storage owned by this address space.[1] Source field: SMSLARGEPAGESINREAL
CICS Internal Trace table size (bytes)	The current size set for the CICS internal trace table, expressed in bytes. Source field: **EXEC CICS INQUIRE TRACEDEST TABLESIZE**
CICS Internal Trace table size	The current size set for the CICS internal trace table, expressed in KB. Source field: **(EXEC CICS INQUIRE TRACEDEST TABLESIZE) / 1024**
IARV64 GETSTOR request size	The GETSTOR request size. This value is expressed in megabytes. Source field: SMSGETSTORSIZE
Number of IARV64 FROMGUARD failures	The number of times that a request for 64-bit storage has failed, where the request uses the z/OS IARV64 macro with the REQUEST=CHANGEGUARD, CONVERT=FROMGUARD parameters. Source field: SMSFROMGUARDFAIL
Largest IARV64 FROMGUARD failure size	The size of the largest request for 64-bit storage that has failed, in bytes, where the request uses the z/OS IARV64 macro with the REQUEST=CHANGEGUARD, CONVERT=FROMGUARD parameters. Source field: SMSFROMGUARDFAILSIZE

Table 241. Fields in the Storage above 2 GB report (part 2)

Field Heading	Description
MEMLIMIT Size	The value of the z/OS **MEMLIMIT** parameter, which limits the amount of 64-bit storage for the CICS region. This value can be in megabytes, gigabytes, terabytes, petabytes, or exabytes, depending on size. A value of `NOLIMIT` indicates that no upper limit is imposed. Source field: SMSMEMLIMIT
MEMLIMIT Set By	The source of the **MEMLIMIT** value: SMFPRM indicates that **MEMLIMIT** is set by `SYS1.PARMLIB(SMFPRMxx)`. JCL indicates that **MEMLIMIT** is set by JCL. REGION indicates that **MEMLIMIT** is set to NOLIMIT because REGION=0M is specified in JCL. IEFUSI indicates that **MEMLIMIT** is set by the z/OS installation exit IEFUSI. Source field: SMSMEMLIMITSRC
Current Address Space active	The current address space available above the bar. This value is expressed in megabytes. Source field: SMSASACTIVE

Table 241. Fields in the Storage above 2 GB report (part 2) (continued)

Field Heading	Description
Peak Address Space active	The peak amount of address space available above the bar. This value is expressed in megabytes. Source field: SMSHWMASACTIVE
Current GDSA Allocated	The total amount of storage currently allocated to the DSAs above the bar. This value is expressed in megabytes. Source field: SMSGDSAALLOC
Peak GDSA Allocated	The peak amount of storage allocated to the DSAs above the bar. This value is expressed in megabytes. Source field: SMSHWMGDSAALLOC
Current GDSA Active	The current storage in use above the bar. This value is expressed in megabytes. Source field: SMSGDSAACTIVE
Peak GDSA Active	The peak amount of storage in use above the bar. This value is expressed in megabytes. Source field: SMSHWMGDSAACTIVE
CICS Internal Trace table size (bytes)	The current size set for the CICS internal trace table, expressed in bytes. Source field: **EXEC CICS INQUIRE TRACEDEST TABLESIZE**
CICS Internal Trace table size	The current size set for the CICS internal trace table, expressed in KB. Source field: **(EXEC CICS INQUIRE TRACEDEST TABLESIZE) / 1024**
Number of Private Memory Objects	The number of private memory objects allocated.[1] Source field: SMSLVNMEMOBJ
Bytes allocated to Private Memory Objects	The number of bytes allocated from large virtual memory in private memory objects.[1] Source field: SMSLVABYTES
Bytes hidden within Private Memory Objects	The number of bytes hidden in large virtual memory private memory objects.[1] Source field: SMSLVHBYTES
Peak bytes usable within Private Memory Objects	The high-water mark of usable bytes in large virtual memory private memory objects.[1] Source field: SMSLVGBYTES
Current DSA Size	The current size of the GCDSA, GUDSA, or GSDSA, expressed in megabytes. Source field: (SMSDSASZ / 1024)
Current DSA Used	The current amount of storage used in this DSA, expressed in megabytes. Source field: (SMSDSASZ - SMSFSTG)
Current DSA Used as % of DSA	The current amount of storage used in this DSA expressed as a percentage of the current DSA size. Source field: (((SMSDSASZ - SMSFSTG) / SMSDSASZ) * 100)
Peak DSA Used	The peak amount of storage used in this DSA, expressed in megabytes. Source field: SMSHWMPS

Table 241. Fields in the Storage above 2 GB report (part 2) (continued)

Field Heading	Description
Peak DSA Size	The peak size of this DSA, expressed in megabytes. Source field: (SMSHWMDSASZ / 1024)
Cushion Size	The size of the cushion for this DSA, expressed in megabytes. The cushion forms part of each DSA and is the amount of storage below which CICS goes SOS. Source field: SMSCSIZE
Free Storage (inc. Cushion)	The amount of free storage in this DSA; that is, the number of free pages multiplied by the page size (1 MB), expressed in megabytes. Source field: SMSFSTG
Peak Free Storage	The largest amount of storage that is free in this DSA since the last time that statistics were recorded, expressed in megabytes. Source field: SMSHWMFSTG
Lowest Free Storage	The smallest amount of storage that is free in this DSA since the last time that statistics were recorded, expressed in megabytes. Source field: SMSLWMFSTG
Largest Free Area	The length of the largest contiguous free area in this DSA, expressed in megabytes. Source field: SMSLFA
Largest Free Area as % of DSA	The largest contiguous free area in this DSA, expressed as a percentage of the current DSA Size. Source field: ((SMSLFA / SMSDSASZ) * 100)
Largest Free/Free Storage	An indication of the storage fragmentation in this DSA. This value is calculated by dividing the Largest free area (SMSLFA) by the Free storage (SMSFSTG). If the ratio is small, this DSA is fragmented. Source field: (SMSLFA / SMSFSTG)
Current number of extents	The number of extents currently allocated to this DSA. Source field: SMSEXTS
Number of extents added	The number of extents added to the DSA since the last time statistics were recorded. Source field: SMSEXTSA
Number of extents released	The number of extents that were released from the DSA since the last time statistics were recorded. Source field: SMSEXTSR
Getmain Requests	The number of GETMAIN requests from this DSA. Source field: SMSGMREQ
Freemain Requests	The number of FREEMAIN requests from this DSA. Source field: SMSFMREQ
Current number of Subpools	The current number of subpools (domain and task) in this DSA. Source field: SMSCSUBP

Table 241. Fields in the Storage above 2 GB report (part 2) (continued)

Field Heading	Description
Add Subpool Requests	The number of ADD_SUBPOOL requests to create a subpool (domain or task) from this DSA. Source field: SMSASR
Delete Subpool Requests	The number of DELETE_SUBPOOL requests (domain or task) from this DSA. Source field: SMSDSR
Times no storage returned	The number of times a GETMAIN request with SUSPEND(NO) returned the condition INSUFFICIENT_STORAGE. Source field: SMSCRISS
Times request suspended	The number of times a GETMAIN request with SUSPEND(YES) was suspended because of insufficient storage to satisfy the request at that moment. Source field: SMSUCSS
Current requests suspended	The number of GETMAIN requests that are currently suspended for storage. Source field: SMSCSS
Peak requests suspended	The peak number of GETMAIN requests that were suspended for storage. Source field: SMSHWMSS
Requests purged while waiting	The number of requests that were purged while suspended for storage. Source field: SMSPWWS
Times Cushion released	The number of times a GETMAIN request caused the storage cushion to be released. The cushion is said to be released when the number of free pages drops below the number of pages in the cushion and there are no more free extents available to increase the size of this DSA. Source field: SMSCREL
Times Short-On-Storage	The number of times CICS went SOS in this DSA, where SOS means that the cushion is currently in use, or at least one task is suspended for storage, or both. Source field: SMSSOS
Total time Short-On-Storage	The accumulated time that CICS has been SOS in this DSA. Source field: SMSTSOS
Average Short-On-Storage time	The average time that CICS has been SOS in this DSA. Source field: (SMSTSOS / SMSSOS)
Storage violations	The number of storage violations recorded in the DSA. Source field: SMSSV
Access	The type of access of this DSA. Values are CICS or USER. If storage protection is not active, storage areas revert to an access type of CICS. • CICS - access is CICS key • USER - access is user key Source field: SMSACCESS

Note:

1. For more information about the memory that this statistic refers to, see Using the 64-bit Address Space in the z/OS MVS Programming: Extended Addressability Guide.

Storage - Domain Subpools reports

The storage subpool reports provide statistics about CICS domain and task storage subpool allocations and use.

The subpool reports are in two parts:

- Domain subpools, consisting of only those storage domain subpools that are allocated in the CICS, read-only, and shared dynamic storage areas (DSAs), that is, the CDSA, RDSA, SDSA, ECDSA, ERDSA, ESDSA, ETDSA, GCDSA, and GSDSA. The information for this report is collected by using the **EXEC CICS INQUIRE SUBPOOL** and **EXEC CICS COLLECT STATISTICS SUBPOOL** commands. The domain subpools are split into two reports, with some shared fields, to represent all domain subpools information.
- Task subpools, consisting of only those subpools allocated for user task lifetime storage. The information for this report is collected using the **EXEC CICS COLLECT STATISTICS TASKSUBPOOL** command.

Table 242. Fields in the Storage - Domain Subpools report (Part 1)

Field Heading	Description
Subpool Name	The unique 8-character name of the domain subpool. The values of the domain subpool field are described in CICS subpools. Source field: SMDSPN
Location	The name of the DSA that the domain subpool is allocated from. Values can be CDSA, SDSA, RDSA, ECDSA, ESDSA, ERDSA, ETDSA, GCDSA, or GSDSA. Source field: SMDDSANAME
Access	The type of access of the subpool. Values are CICS, READONLY, or TRUSTED. If storage protection is not active, storage areas revert to an access type of CICS, except for those in the RDSA or ERDSA. • SMDCICS (X'01') access is CICS key. • SMDREADONLY (X'03') is read-only protection. • SMDTRUSTED (X'04') access is CICS key. Source field: SMDACCESS
Element Type	Indicates whether all elements in the subpool are fixed length or variable length. Source field: SMDETYPE
Element Length	The length of each subpool element (applicable to fixed length subpools only). For further information about subpool elements, see CICS subpools. Source field: SMDFLEN
Initial Free	The total number of kilobytes of the elements that are initially allocated when the domain subpool is preallocated. Source field: SMDIFREE
Current Elements	The current number of storage elements in the subpool. The number of elements remaining after FREEMAIN requests; that is, it is the difference between the number of GETMAIN and FREEMAIN requests. Source field: SMDCELEM

Table 242. Fields in the Storage - Domain Subpools report (Part 1) (continued)

Field Heading	Description
Current Element Stg	The sum of the lengths of all the elements in the subpool, expressed in bytes. Source field: SMDCES
Current Page Stg	The space taken by all the pages allocated to the subpool, expressed in bytes (or megabytes for 64-bit (above-the-bar) storage). Source field: SMDCPS
% of DSA	The current element storage of the subpool as a percentage of the DSA in which it resides. This field does not apply to the GCDSA or GSDSA. Source field: ((SMDCPS / *dsasize*) * 100)
Peak Page Stg	The peak page storage allocated to support the storage requirements of this subpool, expressed in bytes (or megabytes for 64-bit (above-the-bar) storage). Source field: SMDHWMPS

Table 243. Fields in the Storage - Domain Subpools report (Part 2)

Field Heading	Description
Subpool Name	The unique 8-character name of the domain subpool. The values of the domain subpool field are described in CICS subpools. Source field: SMDSPN
Location	The name of the DSA that the domain subpool is allocated from. Values can be CDSA, SDSA, RDSA, ECDSA, ESDSA, ERDSA, ETDSA, GCDSA, or GSDSA. Source field: SMDDSANAME
Getmain Requests	The total number of GETMAIN requests for the subpool. Source field: SMDGMREQ
Freemain Requests	The total number of FREEMAIN requests for the subpool. Source field: SMDFMREQ
Current Element Stg	The sum of the lengths of all the elements in the subpool, expressed in bytes. Source field: SMDCES
Current Page Stg	The space taken by all the pages allocated to the subpool, expressed in bytes (or megabytes for 64-bit (above-the-bar) storage). Source field: SMDCPS
Peak Page Stg	The peak page storage allocated to support the storage requirements of this subpool, expressed in bytes (or megabytes for 64-bit (above-the-bar) storage). Source field: SMDHWMPS

Table 244. Fields in the Storage - Domain Subpool Totals report

Field Heading	Description
DSA Name	The abbreviated name of the CICS dynamic storage area to which the subpool totals apply. Source field: SMDSANAME

Table 244. Fields in the Storage - Domain Subpool Totals report (continued)

Field Heading	Description
Number of Subpools	The total number of subpools in this DSA.
Getmain Requests	The total number of GETMAIN requests for subpools in this DSA. Source field: Total of SMDGMREQ values for each DSA.
Freemain Requests	The total number of FREEMAIN requests for subpools in this DSA. Source field: Total of SMDFMREQ values for each DSA.
Current Elements	The total number of elements remaining after FREEMAIN requests; that is, the difference between the total number of GETMAIN and FREEMAIN requests. Source field: Total of all SMDCELEM values for each DSA
Current Element Stg	The total amount of storage of the current elements, expressed in bytes. Source field: Total of all SMDCES values for each DSA.
Current Page Stg	The total amount of subpool page storage for all DSAs, expressed in kilobytes (or megabytes for 64-bit (above-the-bar) storage). Source field: Total of all SMDCPS values for each DSA.
% of DSA	The current element storage of all the subpools as a percentage of the DSA in which they reside. This field does not apply to the GCDSA or GSDSA. Source: ((Total of all SMDCPS values / *dsasize*) * 100)
% of DSA Limit	The current element storage of all the subpools as a percentage of the limit of DSA in which they reside. This field does not apply to the GCDSA or GSDSA. Source: ((Total of all SMDCPS values / *dsalimit*) * 100)

Table 245. Fields in the Task Subpools report

Field Heading	Description
Subpool Name	The name of the DSA page pool that contains the task storage. Source field: SMDSPN
Access	The type of access of the subpool. Access type can be CICS (key 8) or USER (key 9). Source field: SMTACCESS
Getmain Requests	The total number of task subpool GETMAIN requests from this dynamic storage area. That is, the number of GETMAIN requests issued for this subpool. Source field: SMTGMREQ
Freemain Requests	The total number of task subpool FREEMAIN requests from this dynamic storage area.. That is, the number of FREEMAIN requests issued for this subpool. Source field: SMTFMREQ

Table 245. Fields in the Task Subpools report (continued)

Field Heading	Description
Current Elements	The number of elements in all the task subpools in this dynamic storage area. That is, the number of elements remaining after FREEMAIN requests (the difference between the number of GETMAIN and FREEMAIN requests). Source field: SMTCNE
Current Element Stg	The sum of the storage occupied by all elements in task subpools in this dynamic storage area, expressed in bytes. Source field: SMTCES
Average Element Size	The average size in bytes of an element. Source field: (SMTCES / SMTCNE)
Current Page Stg	The sum of the storage in all pages allocated to task subpools in this dynamic storage area. This value is expressed in kilobytes. Source field: SMTCPS
% of DSA	The current element storage of the subpool as a percentage of the DSA in which it resides. Source field: ((SMTCPS / *dsasize*) * 100)
Peak Page Stg	The peak page storage allocated to support task storage activity in this dynamic storage area. This value is expressed in kilobytes. Source field: SMTHWMPS

Storage - Program Subpools report

The Storage Subpools Report is produced using the **EXEC CICS EXTRACT STATISTICS STORAGE** command. The statistics data is mapped by the **DFHSMDDS DSECT**.

Table 246. Fields in the Storage - Program Subpools report

Field Heading	Description
Subpool Name	The name of the domain subpool. Source field: SMDSPN
Subpool Location	The DSA location of the domain subpool. Source field: SMDLOCN
Current Storage	The current amount of storage allocated to this domain subpool. Source field: SMDCPS
Peak Storage	The peak amount of storage allocated to this domain subpool. Source field: SMDHWMPS

System Status report

The System Status report is produced from various sources. The commands used are detailed in the table.

Table 247. Fields in the System Status report

Field Heading	Description
System Status	
MVS Product Name	The product level of MVS. Source field: MVS field CVTPRODN
CICS Transaction Server Level	The product version, release, and modification number of CICS Transaction Server. Source field: **EXEC CICS INQUIRE SYSTEM CICSTSLEVEL**
CICS Startup	The type of CICS startup. Source field:**EXEC CICS INQUIRE SYSTEM STARTUP**(*cvda*)**COLDSTATUS**(*cvda*)
MVS Workload Manager (WLM) Mode	The z/OS Workload Manager (WLM) mode that is in operation in the CICS region. Source field: MNG-WLM-MODE
CICS Status	The status of the local CICS system. Source field: **EXEC CICS INQUIRE SYSTEM CICSSTATUS**(*cvda*)
WLM Server	Indicates whether the CICS region is an z/OS Workload Manager server. Source field: MNG-SERVER-STATUS
CEC Machine Type and Model	The CEC machine type and model number for the physical hardware environment where the CICS region is running. Source field: MNG-CEC-MACHINE-TYPE, MNG-CEC-MODEL-NUMBER
WLM Manage Region Using Goals of	Whether z/OS Workload Manager manages the CICS address space using region goals, transaction goals, or both. Source field: MNG-WLM-AS-GOAL-MANAGEMENT
WLM Workload Name	The name of the workload defined for the CICS region. Source field: MNG-WORKLOAD-NAME
VTAM Open Status	The status of the z/OS Communications Server connection for this CICS system (VTAM is the previous name for z/OS Communications Server). Source field:**EXEC CICS INQUIRE VTAM OPENSTATUS**(*cvda*)
WLM Service Class	The class name of the z/OS Workload Manager service class for the CICS region. Source field: MNG-SERVICE-CLASS
IRC Status	The status of IRC for this CICS system. Source field: **EXEC CICS INQUIRE IRC OPENSTATUS**(*cvda*)
WLM Report Class	The name of the z/OS Workload Manager report class, if any. Source field: MNG-REPORT-CLASS
IRC XCF Group Name	The name of the cross-system coupling facility (XCF) group of which this region is a member. Source field: **EXEC CICS INQUIRE IRC XCFGROUP**(*data-area*)

Table 247. Fields in the System Status report (continued)

Field Heading	Description
WLM Resource Group	The name of the z/OS Workload Manager resource group, if any. Source field: MNG-RESOURCE-GROUP
WLM Goal Type	The z/OS Workload Manager goal type for the CICS address space. Source field: MNG-WLM-AS-GOAL-TYPE
Storage Protection	The status of storage protection. Source field: **EXEC CICS INQUIRE SYSTEM STOREPROTECT**(*cvda*)
WLM Goal Value	For an z/OS Workload Manager goal type of velocity, the goal value for the CICS address space. Source field: MNG-WLM-AS-GOAL-VALUE
Transaction Isolation	Indicates the status of transaction isolation. Source field: SMSTRANISO
WLM Goal Importance	The importance level of the z/OS Workload Manager goal for the CICS address space. 5 is lowest, 1 is highest. Source field: MNG-WLM-AS-GOAL-IMPORTANCE
Reentrant Programs	Whether read-only programs reside in key-0 protected storage. Source field: SMSRENTPGM
WLM CPU Critical	Whether long-term processor protection is assigned to the CICS address space in the z/OS Workload Manager. Source field: MNG-WLM-AS-CPU-CRITICAL
Exec storage command checking	Whether CICS validates start addresses of storage referenced as output parameters on EXEC CICS commands. Source field: **EXEC CICS INQUIRE SYSTEM CMDPROTECT**(*cvda*)
WLM Storage Critical	Whether long-term storage protection is assigned to the CICS address space in the z/OS Workload Manager. Source field: MNG-WLM-AS-STG-CRITICAL
Force Quasi-Reentrant	Whether CICS forces all user application programs specified as CONCURRENCY(THREADSAFE) to run under the CICS QR TCB. Source field:**EXEC CICS INQUIRE SYSTEM FORCEQR**(*cvda*)
RLS Status	The status of VSAM RLS for this CICS system. Source field: **EXEC CICS INQUIRE SYSTEM RLSSTATUS**(*cvda*)
RRMS/MVS Status	The status of RRMS/MVS for this CICS system. Source field: **EXEC CICS INQUIRE RRMS OPENSTATUS**(*cvda*)
Program Autoinstall	The status of program autoinstall. Source field: **EXEC CICS INQUIRE SYSTEM PROGAUTOINST**(*cvda*)
Terminal Autoinstall	The status of terminal autoinstall. Source field**EXEC CICS INQUIRE AUTOINSTALL**(*cvda*)
TCP/IP Status	The status of TCP/IP for this CICS system. Source field: **EXEC CICS INQUIRE TCPIP OPENSTATUS**(*cvda*)

Table 247. Fields in the System Status report (continued)

Field Heading	Description
Activity Keypoint Frequency	The current activity keypoint trigger value, which is the number of logging operations between the taking of keypoints. Source field: **EXEC CICS INQUIRE SYSTEM AKP**(*data area*).
Max IP Sockets	The maximum number of IP sockets that can be managed by the CICS sockets domain. Source field:**EXEC CICS INQUIRE TCPIP MAXSOCKETS()**
Logstream Deferred Force Interval	The current logstream deferred force interval. Source field: **EXEC CICS INQUIRE SYSTEM LOGDEFER()**
Active IP Sockets	The current number of IP sockets managed by the CICS sockets domain. Source field: **EXEC CICS INQUIRE TCPIP ACTSOCKETS()**
DB2 Connection Name	The name of the currently installed DB2 connection. Source field: **EXEC CICS INQUIRE SYSTEM DB2CONN**(*data area*)
DB2 Connection Status	The status of the CICS-DB2 connection. Source field: **EXEC CICS INQUIRE DB2CONN() CONNECTST**(*cvda*)
WEB Garbage Collection Interval	The current interval at which the web garbage collection task runs to clean up web 3270 state data. Source field: **EXEC CICS INQUIRE WEB GARBAGEINT()**
Terminal Input timeout Interval	The current period after which inactive web 3270 sessions are eligible for garbage collection. Source field: **EXEC CICS INQUIRE WEB TIMEOUTINT()**
Monitoring	
Monitoring	Whether CICS monitoring is active in the system. Source field: **EXEC CICS INQUIRE MONITOR STATUS**(*cvda*)
Exception Class	Whether the exception class of CICS monitoring data is being collected. Source field: **EXEC CICS INQUIRE MONITOR EXCEPTCLASS**(*cvda*)
Performance Class	Whether the performance class of CICS monitoring data is being collected. Source field: **EXEC CICS INQUIRE MONITOR PERFCLASS**(*cvda*)
Resource Class	Whether the transaction resource class of CICS monitoring data is being collected. Source field: **EXEC CICS INQUIRE MONITOR RESRCECLASS**(*cvda*)
Identity Class	Whether the identity class of CICS monitoring data is being collected. Source field: **EXEC CICS INQUIRE MONITOR IDNTYCLASS**(*cvda*)
Data Compression Option	Whether data compression is active for the SMF 110 monitoring records output by CICS. Source field: MNG-COMPRESSION-OPTION
Application Naming	Whether CICS application support is enabled. Source field: **EXEC CICS INQUIRE MONITOR APPLNAMEST**(*cvda*)

Table 247. Fields in the System Status report (continued)

Field Heading	Description
RMI Option	Whether performance monitoring data is being collected for the resource managers used by your transaction. Source field: **EXEC CICS INQUIRE MONITOR RMIST**(*cvda*)
Converse Option	Whether a performance class record is being written each time a conversational task waits for terminal input as well as at task end, or if a single performance class record is being written for the combined terminal waits. Source field:**EXEC CICS INQUIRE MONITOR CONVERSEST**(*cvda*)
Syncpoint Option	Whether performance monitoring data is being recorded separately for each unit of work (UOW) in tasks that contain multiple UOWs, or if performance monitoring data is being combined over all UOWs in a single task for recording. Source field:**EXEC CICS INQUIRE MONITOR SYNCPOINTST**(*cvda*)
Time Option	Whether the performance class time-stamp fields returned to an application using the COLLECT STATISTICS MONITOR command are expressed in local or GMT. Source field: **EXEC CICS INQUIRE MONITOR TIME**(*cvda*)
DPL Resource Limit	The maximum number of distributed program links for which transaction resource monitoring is being performed. Source field: **EXEC CICS INQUIRE MONITOR DPLLIMIT**(*cvda*)
File Resource Limit	The maximum number of files for which transaction resource monitoring is being performed. Source field: **EXEC CICS INQUIRE MONITOR FILELIMIT**(*cvda*)
Tsqueue Resource Limit	The maximum number of temporary storage queues for which transaction resource monitoring is being performed. Source field:**EXEC CICS INQUIRE MONITOR TSQUEUELIMIT**(*cvda*)
Exception Class Records	The number of exception records written to SMF. Source field: MNGER
Exception Class Suppressed	The number of exception records suppressed by a global user exit program at exit point XMNOUT. Source field: MNGERS
Performance Class Records	The number of performance records scheduled for output to SMF. The monitoring domain buffers performance class records. If monitoring is deactivated, the performance class records that have been buffered are not in the report. Source field: MNGPR
Performance Records Suppressed	The number of performance records suppressed by a global user exit program at exit point XMNOUT. Source field: MNGPRS
Resource Class Records	The number of transaction resource records scheduled for output to SMF. The monitoring domain buffers transaction resource class records. If monitoring is deactivated, the transaction resource class records that have been buffered are not in the report. Source field: MNGRR

Table 247. Fields in the System Status report (continued)

Field Heading	Description
Resource Records Suppressed	The number of transaction resource records suppressed by a global user exit program at exit point XMNOUT. Source field: MNGRRS
Identity Class Records	The number of identity class records scheduled for output to SMF. The monitoring domain buffers identity class records. If monitoring is deactivated, the identity class records that have been buffered are not in the report. Source field: MNGIR
Identity Records Suppressed	The number of identity class records suppressed by a global user exit program at exit point XMNOUT. Source field: MNGIRS
Monitoring SMF Records	The number of monitoring SMF records written to the SMF data set. CICS writes exception class SMF records as soon as the monitor domain is notified of the exception completion, so each SMF record has one exception record. The performance class, for example, has many performance class records per SMF record. The SMF record for the performance class is written when the buffer is full, performance class is deactivated, or CICS is quiescing. Source field: MNGSMFR
Monitoring SMF Errors	The number of non-OK responses from the request to write a monitoring record to SMF. This count is incremented when an SMF write fails for any reason; for example, when SMF is inactive. Source field: MNGSMFE
Monitoring SMF Records Compressed	The number of compressed monitoring records written to the SMF data set. This information is collected only when data compression for monitoring records is active. Source field: MNGSMFCM
Monitoring SMF Records Not Compressed	The number of monitoring records written to the SMF data set for which data compression was not performed. This information is collected only when data compression for monitoring records is active. Source field: MNGSMFNC
Percentage of SMF Records Compressed	The percentage of monitoring records written to the SMF data set which were compressed. This information is collected only when data compression for monitoring records is active. Source field: (MNGSMFCM / (MNGSMFCM + MNGSMFNC)) * 100
Statistics	
Statistics Recording	The status of statistics recording. Source field: **EXEC CICS INQUIRE STATISTICS RECORDING**(*cvda*)
Statistics Last Reset Time	The time of the last statistics reset. Source field: **EXEC CICS EXTRACT STATISTICS LASTRESET()**
Elapsed Time Since Reset	The elapsed time since the last statistics reset.
Statistics Interval	The current statistics recording interval. Source field: **EXEC CICS INQUIRE STATISTICS INTERVAL**

Table 247. Fields in the System Status report (continued)

Field Heading	Description
Next Statistics Collection	The next statistics recording time. Source field: **EXEC CICS INQUIRE STATISTICS NEXTTIME**
Statistics End-of-Day Time	The current end-of-day time for recording statistics. Source field: **EXEC CICS INQUIRE STATISTICS ENDOFDAY**
Statistics Start Date and Time	The current start date and time for recording statistics. Source field: STGCSTRT
Statistics SMF Records	The number of suppressed requests to write a statistics record to SMF. Source field: STGSMFS
Statistics SMF Writes Suppressed	The number of statistics SMF records written to the SMF data set. Source field: STGSMFW
Statistics SMF Errors	The number of non-OK responses from the request to write a statistics record to SMF. This count is incremented when an SMF write fails for any reason; for example, when SMF is inactive. Source field: STGSMFE
Current tasks at last attach	The current number of user transactions attached in the region at the time of the last transaction attached. Source field: MNGCAUTA
MXT value at last attach	The current MXT value at the time of the last transaction attached. Source field: MNGMXUTA
Time last user transaction attached	The date and time of the last user transaction attached. If the DFH0STAT report shows the date and time as --/--/---- --:--:--:---- then that indicates that a user transaction has not been attached since the statistics were last reset. Source field: MNGLUTAT
Time last user transaction ended	The date and time that the last user transaction ended. If the DFH0STAT report shows the date and time as --/--/---- --:--:--:---- then that indicates that a user transaction has not been attached since the statistics were last reset. Source field: MNGLUTCL
System transactions	The number of system transactions that have ended durng the statistics interval. Source field: MNGSTNUM
User transactions ended	The number of user transactions that have ended during the statistics interval. Source field: MNGUTNUM
Total transactions ended	The total number of system and user trasactions that have ended during the statistics interval. Source field: (MNGSTNUM + MNGUTNUM)
Average user transaction resp time	The rolling average user transaction response time. Source field: MNGAUTRT

Table 247. Fields in the System Status report (continued)

Field Heading	Description
Peak user transaction resp time	The maximum user transaction response time. Source field: MNGPUTRT
Peak user transaction resp time at	The date and time of the maximum user transaction response time. Source field: MNGLUTRT
Total transaction CPU time	The total transaction CPU time accumulated for the CICS dispatcher managed TCB modes used by the transactions that have completed during the interval. Source field: MNGCPUT
Total transaction CPU time on CP	The total transaction CPU time on a standard processor accumulated for the CICS dispatcher managed TCB modes used by the transactions that have completed during the interval. Source field: MNGTONCP
Total transaction CPU offload on CP	The total transaction CPU time on a standard processor but was eligible for offload to a specialty processor (zIIP or zAAP) accumulated for the CICS dispatcher managed TCB modes used by the transactions that have completed during the interval. Source field: MNGOFLCP
Average Compressed Record Length	The rolling average compressed record length for monitoring records written to the SMF data set, calculated from those monitoring records that were compressed. This information is collected only when data compression for monitoring records is active. Source field: MNGAVCRL
Average Uncompressed Record Length	The rolling average record length for monitoring records written to the SMF data set for which data compression was not performed. This information is collected only when data compression for monitoring records is active. Source field: MNGAVURL
Average Record Compression Percent	The average record length compression percentage. This information is collected only when data compression for monitoring records is active. Source field: (MNGAVURL - MNGAVCRL) / MNGAVURL) * 100
Trace Status	
Internal Trace Status	The status of internal tracing. Source field: **EXEC CICS INQUIRE TRACEDEST INTSTATUS**(*cvda*)
Auxiliary Trace Status	The status of auxiliary tracing. Source field: **EXEC CICS INQUIRE TRACEDEST AUXSTATUS**(*cvda*)
GTF Trace Status	The status of GTF tracing. Source field: **EXEC CICS INQUIRE TRACEDEST GTFSTATUS**(*cvda*)
Internal Trace Table Size	The current size of the internal trace table. Source field: **EXEC CICS INQUIRE TRACEDEST TABLESIZE**
Current Auxiliary Dataset	The name of the current auxiliary trace data set. Source field: **EXEC CICS INQUIRE TRACEDEST CURAUXDS**(*cvda*)

Table 247. Fields in the System Status report (continued)

Field Heading	Description
Auxiliary Switch Status	The status of the auxiliary trace autoswitch facility. Source field:**EXEC CICS INQUIRE TRACEDEST SWITCHSTATUS**(*cvda*)
Dumps	
System Dumps	The number of system dumps taken. Source field: SDGSDREQ
System Dumps Suppressed	The number of system dumps suppressed. Source field: SDGSDSUP
Transaction Dumps	The number of transaction dumps taken. Source field: SDGTDREQ
Transaction Dumps Suppressed	The number of transaction dumps suppressed. Source field: SDGTDSUP

TCP/IP reports

There are two TCP/IP reports, TCP/IP report, and TCP/IP services report.

TCP/IP report

The TCP/IP report is produced using a combination of **EXEC CICS INQUIRE TCPIP** and **EXEC CICS EXTRACT STATISTICS TCPIP** commands. The statistics data is mapped by the **DFHSOGDS DSECT**.

Table 248. Fields in the TCP/IP report

Field Heading	Description
TCP/IP Status	The current status of TCP/IP for this CICS system. Source field: **EXEC CICS INQUIRE TCPIP OPENSTATUS()**
SSLCACHE setting	The setting for the SSLCACHE system initialization parameter, which specifies whether SSL is to use the local or sysplex caching of session ids. Source field: SOG-SSLCACHE
Active SSL TCBs	The number of S8 TCBs in the SSL pool. Source field: INQUIRE DISPATCHER ACTSSLTCBS()
Maximum SSL TCBs (MAXSSLTCBS)	The maximum number of S8 TCBs allowed in the SSL pool, as specified by the **MAXSSLTCBS** system initialization parameter. Source field: INQUIRE DISPATCHER MAXSSLTCBS()
Max IP sockets (MAXSOCKETS) limit	The maximum number of IP sockets that can be managed by the CICS sockets domain. Source field: SOG-MAXSOCKETS-LIMIT
Times the MAXSOCKETS limit was reached	The number of times the maximum number of IP sockets limit (MAXSOCKETS) was reached. Source field: SOG-TIMES-AT-MAXSOCKETS

Table 248. Fields in the TCP/IP report (continued)

Field Heading	Description
Current Active IP sockets	The current number of IP sockets managed by the CICS sockets domain. Source field: **EXEC CICS INQUIRE TCPIP ACTSOCKETS()**
Current number of inbound sockets	The current number of inbound sockets. Source field: SOG-CURR-INBOUND-SOCKETS
Current non-persistent inbound sockets	The current number of non-persistent inbound sockets. Source field: SOG-CURR-NPERS-INB-SOCKETS
Current persistent inbound sockets	The current number of persistent inbound sockets. Source field: SOG-CURR-INBOUND-SOCKETS - SOG-CURR-NPERS-INB-SOCKETS
Peak number of inbound sockets	The peak number of inbound sockets. Source field: SOG-PEAK-INBOUND-SOCKETS
Peak non-persistent inbound sockets	The peak number of non-persistent inbound sockets. Source field: SOG-PEAK-NPERS-INB-SOCKETS
Peak persistent inbound sockets	The peak number of persistent inbound sockets. Source field: SOG-PEAK-PERS-INB-SOCKETS
Number of inbound sockets created	The total number of inbound sockets created. Source field: SOG-INBOUND-SOCKETS-CREATED
Non-persistent inbound sockets created	The total number of non-persistent inbound sockets created. Source field: SOG-NPERS-INB-SOCKETS-CREATED
Persistent inbound sockets created	The total number of persistent inbound sockets created. Source field: SOG-INB-SOCKETS-CREATED - SOG-NPERS-INB-SOCKETS-CREATED
Current number of outbound sockets	The current number of outbound sockets. Source field: SOG-CURR-OUTB-SOCKETS + SOG-CURR-PERS-OUTB-SOCKETS
Current non-persistent outbound sockets	The current number of non-persistent outbound sockets. Source field: SOG-CURR-OUTB-SOCKETS
Current persistent outbound sockets	The current number of persistent outbound sockets. Source field: SOG-CURR-PERS-OUTB-SOCKETS
Peak number of outbound sockets	The peak number of both persistent and non-persistent outbound sockets. Source field: SOG-PEAK-BOTH-OUTB-SOCKETS
Peak non-persistent outbound sockets	The peak number of non-persistent outbound sockets. Source field: SOG-PEAK-OUTB-SOCKETS
Peak persistent outbound sockets	The peak number of persistent outbound sockets. Source field: SOG-PEAK-PERS-OUTB-SOCKETS
Total times pooled sockets reused	The total number of times a pooled connection was reused. Source field: SOG-TIMES-OUTB-REUSED

Table 248. Fields in the TCP/IP report (continued)

Field Heading	Description
Number of outbound sockets created	The total number of outbound sockets created. Source field: SOG-OUTBOUND-SOCKETS-CREATED
Persistent outbound sockets created	The total number of persistent outbound sockets created. Source field: SOG-PERS-OUTBOUND-CREATED
Number of outbound sockets closed	The total number of outbound sockets closed. Source field: SOG-OUTBOUND-SOCKETS-CLOSED
Total number of inbound and outbound sockets created	The total number of inbound and outbound sockets created. Source field: SOG-INBOUND-SOCKETS-CREATED + SOG-OUTBOUND-SOCKETS-CREATED
Create socket requests delayed by MAXSOCKETS	The number of create socket requests that were delayed because the system had reached the MAXSOCKETS limit. Source field: SOG-DELAYED-AT-MAX-SOCKETS
Total MAXSOCKETS delay time	The total time that create socket requests were delayed because the system had reached the MAXSOCKETS limit. Source field: SOG-QTIME-AT-MAX-SOCKETS
Average MAXSOCKETS delay time	The average time that a create socket request was delayed because the system had reached the MAXSOCKETS limit. Source field: SOG-QTIME-AT-MAX-SOCKETS / SOG-DELAYED-AT-MAX-SOCKETS
Create requests that timed-out at MAXSOCKETS	The number of create socket requests that were timed out while delayed because the system had reached the MAXSOCKETS limit. Source field: SOG-TIMEDOUT-AT-MAXSOCKETS
Current create requests delayed by MAXSOCKETS	The current number of create socket requests delayed because the system is at the MAXSOCKETS limit. Source field: SOG-CURR-DELAYED-AT-MAX
Peak create socket reqs delayed by MAXSOCKETS	The peak number of create socket requests delayed because the system had reached the MAXSOCKETS limit. Source field: SOG-PEAK-DELAYED-AT-MAX
Total delay time for current create requests	The total delay time for the create socket requests that are currently delayed because the system is at the MAXSOCKETS limit. Source field: SOG-CURRENT-QTIME-AT-MAX
Average delay for current requests	The average delay time for the create socket requests that are currently delayed because the system is at the MAXSOCKETS limit. Source field: SOG-CURRENT-QTIME-AT-MAX / SOG-CURR-DELAYED-AT-MAX
Performance tuning for HTTP connections	Indicates whether performance tuning for HTTP connections is enabled. Source field: SOG-SOTUNING
Listener pausing listening for HTTP connections	Indicates whether the listener has paused listening for HTTP connection requests because the number of tasks in the region has reached the limit for accepting new HTTP connection requests. Source field: SOG-PAUSING-HTTP-LISTENING

Table 248. Fields in the TCP/IP report (continued)

Field Heading	Description
Times listener notified at task accept limit	The number of times the listener has been notified that the number of tasks in the region has reached the limit for accepting new HTTP connection requests. Source field: SOG-TIMES-AT-ACCEPT-LIMIT
Last time paused listening	The last time the socket listener paused listening for HTTP connection requests because the number of tasks in the region had reached the limit for accepting new HTTP connection requests. The DFHSTUP report expresses this time as `day/month/year hours:minutes:seconds:decimals`; however, the DSECT field contains the time as a store clock (STCK) value in local time. If the DFHSTUP report shows the date and time as `--/--/---- --:--:--:----`, that indicates that the listener has never paused listening for HTTP connection requests since the statistics were last reset Source field: SOG-TIME-LAST-PAUSED-LISTENING
Region stopping HTTP connection persistence	Indicates whether the region is closing existing persistent connections when their next request completes and is making new connections non-persistent, because the number of tasks in the region has exceeded the limit. Source field: SOG-STOPPING-PERSISTENCE
Times region stopped HTTP connection persistence	The number of times the region took action to close existing persistent connections when their next request completes and make new connections non-persistent, because the number of tasks in the region had exceeded the limit. Source field: SOG-TIMES-STOPPED-PERSISTENT
Region last stopped persistence	The last time the region took action to close existing persistent connections when their next request completes and make new connections non-persistent, because the number of tasks in the region had exceeded the limit. If the DFH0STAT report shows the date and time as `--/--/---- --:--:--:----`, that indicates that this situation has not occurred since the statistics were last reset. Source field: SOG-TIME-LAST-STOPPED-PERSIST
Persistent connections made non-persistent	The number of times a persistent HTTP connection was made non-persistent because the number of tasks in the region had exceeded the limit. Source field: SOG-TIMES-MADE-NON-PERSISTENT
Times disconnected a connection at max uses	The number of times a persistent HTTP connection was disconnected because the number of uses had exceeded the limit. Source field: SOG-TIMES-CONN-DISC-AT-MAX

TCP/IP services report

The TCP/IP services report is produced using a combination of **EXEC CICS INQUIRE TCPIPSERVICE** and **EXEC CICS EXTRACT STATISTICS TCPIPSERVICE** commands. The statistics data is mapped by the **DFHSORDS DSECT**.

Table 249. Fields in the TCP/IP Services report

Field Heading	Description
TCPIPSERVICE Name	The name of the TCP/IP service. Source field: **EXEC CICS INQUIRE TCPIPSERVICE()**
TCPIPSERVICE Open Status	The current status of this TCP/IP service. Source field: **EXEC CICS INQUIRE TCPIPSERVICE() OPENSTATUS**(*cvda*)

Table 249. Fields in the TCP/IP Services report (continued)

Field Heading	Description
Open Date and Time	The date and time when this TCP/IP service was opened. Source field: SOR-OPEN-LOCAL
TCPIPSERVICE Protocol	The protocol being used for this service. Source field: **EXEC CICS INQUIRE TCPIPSERVICE() PROTOCOL**(*cvda*)
TCPIPSERVICE Port	The number of the port on which CICS is listening on behalf of this service. Source field: **EXEC CICS INQUIRE TCPIPSERVICE() PORT()**
TCPIPSERVICE Host	The host name of the remote system or its IP address. Source field: **EXEC CICS INQUIRE TCPIPSERVICE() HOST()**
TCPIPSERVICE IP Family	The address format of the address returned in the TCPIPSERVICE IP Resolved Address field. Source field: **EXEC CICS INQUIRE TCPIPSERVICE() IPFAMILY**(*cvda*)
TCPIPSERVICE IP Resolved Address	The IPv4 or IPv6 resolved address of the host. Source field: **EXEC CICS INQUIRE TCPIPSERVICE() IPRESOLVED()**
TCPIPSERVICE Transaction ID	The name of the transaction to be started to process a new request. Source field: **EXEC CICS INQUIRE TCPIPSERVICE() TRANSID()**
TCPIPSERVICE Backlog Setting	The port backlog setting for this TCP/IP service, which controls the number of requests that TCP/IP queues for this port before it starts to reject incoming requests. Source field: **EXEC CICS INQUIRE TCPIPSERVICE() BACKLOG()**
TCPIPSERVICE URM	The name of the service user-replaceable module (URM) to be invoked by the attached task. Source field: **EXEC CICS INQUIRE TCPIPSERVICE() TSQPREFIX**
Current Maximum Backlog	The maximum number of connection requests that the TCP/IP service currently allows in its backlog queue, summed over all appropriate stacks if the TCP/IP service is listening on multiple stacks. This value can be greater than the TCPIPSERVICE Backlog Setting (SOR_BACKLOG) because the TCP/IP service might temporarily increase this value if, for example, it determines that there is a SYN flood. Source field: SOR-CURR-MAX-BACKLOG
TCPIPSERVICE SSL Type	The level of secure sockets being used for the service. Source field: **EXEC CICS INQUIRE TCPIPSERVICE() SSLTYPE**(*cvda*)
TCPIPSERVICE Maxdata	The setting for the maximum length of data that can be received by CICS as an HTTP server. Source field: **EXEC CICS INQUIRE TCPIPSERVICE() MAXDATALEN()**
TCPIPSERVICE Authenticate	The authentication requested for clients using this service. Source field: **EXEC CICS INQUIRE TCPIPSERVICE() AUTHENTICATE**(*cvda*)
TCPIPSERVICE Privacy	The level of SSL encryption required for inbound connections to this service. Source field: **EXEC CICS INQUIRE TCPIPSERVICE() PRIVACY**(*cvda*)

Table 249. Fields in the TCP/IP Services report (continued)

Field Heading	Description
TCPIPSERVICE Attachsec	For ECI over TCP/IP services, the level of attach-time security used by connections to CICS clients. Source field: **EXEC CICS INQUIRE TCPIPSERVICE() ATTACHSEC**(*cvda*)
Current Connections	The current number of connections for this TCP/IP service. Source field: SOR-CURRENT-CONS
Peak Connections	The peak number of connections for this TCP/IP service. Source field: SOR-PEAK-CONS
Transactions Attached	The total number of transactions attached for this TCP/IP service. Source field: SOR-TRANS-ATTACHED
Total Connections	The total number of connections made for the TCP/IP service. Source field: SOR-TOTAL-CONNS
Send requests	The number of send requests issued for the TCP/IP service. Source field: SOR-SENDS
Total Bytes Sent	The total number of bytes per send request for the TCP/IP service. Source field: SOR-BYTES-SENT
Receive requests	The number of receive requests issued for the TCP/IP service. Source field: SOR-RECEIVES
Total Bytes Received	The total number of bytes per receive request for the TCP/IP service. Source field: SOR-BYTES-RECEIVED
Requests processed	The number of requests processed by the TCP/IP service. Source field: SOR-REQUESTS
Maximum Persistent Connections	The maximum number of persistent connections from web clients that the CICS region accepts at any one time. Source field: SOR-TCPIPS-MAX-PERSIST
Non-Persistent Connections	The number of connections where CICS did not allow the web client to have a persistent connection. Source field: SOR-TCPIPS-NON-PERSIST
Made non-persistent at MAXPERSIST	The number of times a new persistent connection was made non-persistent because MAXPERSIST was reached. Source field: SOR-NONP-AT-MAXPERSIST
Disconnected after maximum uses	The number of times a persistent HTTP connection was disconnected because its number of uses had exceeded the limit. Source field: SOR-DISC-AT-MAX-USES
Made non-persistent at task limit	The number of times a new persistent HTTP connection was made non-persistent because the number of tasks in the region has exceeded the limit. Source field: SOR-NONP-AT-TASK-LIMIT

Table 249. Fields in the TCP/IP Services report (continued)

Field Heading	Description
Disconnected at task limit	The number of times an existing persistent HTTP connection was closed because the number of tasks in the region has exceeded the limit. Source field: SOR-DISC-AT-TASK-LIMIT
Current backlog	The current number of connection requests waiting in the backlog queue, summed over all appropriate stacks if the TCP/IP service is listening on multiple stacks. Source field: SOR-CURR-BACKLOG
Connections dropped	The total number of connections that were dropped because the backlog queue was full. Source field: SOR-CONNS-DROPPED
Time connection last dropped	The time that a connection was last rejected because the backlog queue of the TCP/IP service was full. Source field: SOR-CONN-LAST-DROPPED

Temporary storage reports

There are five temporary storage reports, Temporary Storage report, Temporary Storage Main - Storage Subpools report, Temporary Storage Models report, Temporary Storage Queues report, and Temporary Storage Queues by shared TS Pool report.

Temporary Storage report

The Temporary Storage report is produced using the **EXEC CICS EXTRACT STATISTICS TSQUEUE** command. The statistics data is mapped by the **DFHTSGDS DSECT**.

Table 250. Fields in the Temporary Storage report

Field Heading	Description
Put/Putq main storage requests	The number of records that application programs wrote to main temporary storage. Source field: TSGSTA5F
Get/Getq main storage requests	The number of records that application programs obtained from main temporary storage. Source field: TSGNMG
Current TSMAINLIMIT setting	The current limit for the amount of storage that CICS makes available for data in main temporary storage. This amount is expressed in KB. Source field: (TSGTSMLM / 1024)
Times at TSMAINLIMIT	The number of times that main temporary storage use attempted to exceed the limit for the amount of storage allowed for data. Source field: TSGTSLHT
Current storage used for TSMAINLIMIT	The amount of storage that is currently in use for data in main temporary storage. This amount is expressed in KB. Source field: (TSGTSMUS / 1024)

Table 250. Fields in the Temporary Storage report (continued)

Field Heading	Description
Peak storage used for TSMAINLIMIT	The peak amount of storage that was used for data in main temporary storage. This amount is expressed in KB. Source field: (TSGTSMAX / 1024)
Number of queues auto deleted	The number of temporary storage queues that CICS has deleted automatically by using the clean up task. Source field: TSGTSQDL
Count of clean up task runs	The number of times that the clean up task, which deletes eligible temporary storage queues automatically, has run. Source field: TSGTSCTR
Put/Putq auxiliary storage requests	The number of records that application programs wrote to auxiliary temporary storage. Source field: TSGSTA7F
Get/Getq auxiliary storage requests	The number of records that application programs obtained from auxiliary temporary storage. Source field: TSGNAG
Times temporary storage queue created	The number of times that CICS created individual temporary storage queues. Source field: TSGSTA3F
Peak temporary storage queues in use	The peak number of temporary storage queue names in use at any one time. Source field: TSGQNUMH
Current temporary storage queues in use	The current number of temporary storage queue names in use. Source field: TSGQNUM
Items in longest queue	The peak number of items in any one temporary storage queue, up to a maximum of 32767. Source field: TSGQINH
Control interval size	The size of the VSAM unit of transmission between DASD and main storage, specified in the CONTROLINTERVALSIZE parameter in the VSAM CLUSTER definition for the temporary storage data set. In general, using large control intervals (CIs) permits more data to be transferred at one time, resulting in less system overhead. Source field: TSGCSZ
Control intervals in the DFHTEMP data set	The number of control intervals (CIs) available for auxiliary temporary storage. This is the total available space on the temporary storage data set, expressed as a number of control intervals. This is not the space remaining at termination. Source field: TSGNCI
Peak control intervals in use	The peak number of control intervals (CIs) that contain active data. Source field: TSGNCIAH
Current control intervals in use	The current number of control intervals (CIs) that contain active data. Source field: TSGNCIA

Table 250. Fields in the Temporary Storage report (continued)

Field Heading	Description
Available bytes per control interval	The number of bytes available for use in the temporary storage data set control interval. Source field: TSGNAVB
Segments per control interval	The number of segments available in each temporary storage data set control interval. Source field: TSGSPCI
Bytes per segment	The number of bytes per segment of the temporary storage data set. Source field: TSGBPSEG
Writes bigger than control interval size	The number of writes of records whose length was greater than the control interval (CI) size. If the reported value is large, increase the CI size. If the value is zero, consider reducing the CI size until a small value is reported. Source field: TSGSTABF
Largest record length written	The size, expressed in bytes, of the longest record written to the temporary storage data set. Source field: TSGLAR
Times auxiliary storage exhausted	The number of situations where one or more transactions might have been suspended because of a NOSPACE condition, or might have been forced to end abnormally (by using a HANDLE CONDITION NOSPACE command). If statistics are present for this field, increase the size of the temporary storage data set. Source field: TSGSTA8F
Number Temporary Storage compressions	The number of times that the temporary storage buffers were compressed. Source field: TSGSTA9F
Put auxiliary / compression ratio	Ratio of temporary storage put auxiliary requests to temporary storage compressions. This ratio should be as high as possible to minimize compressions. Source field: (TSGSTA7F / TSGSTA9F)
Temporary storage strings	The number of temporary storage strings specified in the TS= system initialization parameter, or in the overrides. The number of strings allocated might exceed the number requested. Source field: TSGNVCA
Peak Temporary storage strings in use	The peak number of concurrent input/output operations. If this is significantly less than the number specified in the system initialization table (SIT), consider reducing the SIT value to approach this number. Source field: TSGNVCAH
Temporary storage string waits	The number of input/output requests that were queued because no strings were available. If the number of strings is the same as the number of buffers, this number is zero. If this number is a high percentage (over 30%) of the total number of input/output requests (for this purpose, the sum of TSGTWTN, Buffer writes, and TSGTRDN, Buffer reads), consider increasing the number of strings initially allocated. Source field: TSGVWTN
Peak users waiting on string	The peak number of input/output requests that were queued at any one time because all strings were in use. Source field: TSGVUWTH

Table 250. Fields in the Temporary Storage report (continued)

Field Heading	Description
Current users waiting on string	The current number of input/output requests that are queued because all strings are in use. Source field: TSGVUWT
Temporary storage buffers	The number of temporary storage buffers specified in the TS= system initialization parameter, or in the overrides. The number of buffers allocated might exceed the number requested. Source field: TSGNBCA
Temporary storage buffer waits	The number of times a request was queued because all buffers were allocated to other tasks. A buffer wait also occurs if the required control interval is already in a locked buffer, and therefore unavailable, even if there are other buffers available. Source field: TSGBWTN
Peak users waiting on buffer	The peak number of requests queued because no buffers were available. Source field: TSGBUWTH
Current users waiting on buffer	The current number of requests queued because no buffers are available. Source field: TSGBUWT
Temporary storage buffer reads	The number of times a control interval (CI) must be read from disk. To decrease this activity, increase the buffer allocation. Source field: TSGTRDN
Temporary storage buffer writes	The number of WRITEs to the temporary storage data set. This includes both WRITEs required for recovery (see Forced writes for recovery) and WRITEs required when the buffer is needed to accommodate another control interval (CI). To minimize input/output activity caused by the second situation, increase buffer allocation. Source field: TSGTWTN
Forced buffer writes for recovery	The subset of the total number of WRITEs caused by recovery being specified for queues. This input/output activity is not affected by buffer allocation. Source field: TSGTWTNR
Format writes	The number of times a new control interval (CI) was successfully written at the end of the data set to increase the amount of available space in the data set. A formatted write is attempted only if the current number of CIs available in the auxiliary data set have all been used. Source field: TSGTWTNF
I/O errors on the DFHTEMP data set	The number of input/output errors that occurred on the temporary storage data set. Normally, this number should be zero. If it is not, inspect the CICS and VSAM messages to determine the cause. Source field: TSGSTAAF
Shared Pools defined	The number of unique shared TS queue pools defined to CICS. Source field: TSGSHPDF
Shared Pools currently connected	The number of the shared TS pools that this CICS region is connected to. Source field: TSGSHPCN

Table 250. Fields in the Temporary Storage report (continued)

Field Heading	Description
Shared temporary storage read requests	The number of TS READQs from the Shared TS Queue pool of TS queues. Source field: TSGSHRDS
Shared temporary storage write requests	The number of TS WRITEQs to the Shared TS Queue pool of TS queues. Source field: TSGSHWTS
Storage Subpool Location	Storage location of the TSBUFFRS storage subpool. Source field: SMDDSANAME
Getmain Requests	The number of getmain requests issued for this TSBUFFRS storage subpool. Source field: SMDGMREQ
Freemain Requests	The number of freemain requests issued for this TSBUFFRS storage subpool. Source field: SMDFMREQ
Current Elements	The number of elements remaining after FREEMAIN requests; that is, it is the difference between the number of GETMAIN and FREEMAIN requests for this TSBUFFRS storage subpool. Source field: SMDCELEM
Current Element Storage	The amount of storage in bytes of the current elements. Source field: SMDCES
Current Page Storage	The current amount of page storage in kilobytes for this TSBUFFRS storage subpool. Source field: SMDCPS
% of ECDSA	The current element storage of the TSBUFFRS storage subpool as a percentage of the ECDSA in which it resides. Source field: ((SMDCPS / ecdsasize) * 100)
Peak Page Storage	The peak amount of page storage in kilobytes for this TSBUFFRS storage subpool. Source field: SMDHWMPS

Temporary Storage Main - Storage Subpools report

The Temporary Storage Main - Storage Subpools report is produced using the **EXEC CICS EXTRACT STATISTICS STORAGE** command. The statistics data is mapped by the **DFHSMDDS**.

The statistics data is mapped by the DFHSMDDS DSECT.

Table 251. Fields in the Temporary Storage Main - Storage Subpools report

Field Heading	Description
Subpool Name	The name of the temporary storage main subpool. Source field: SMDSPN
Location	The abbreviated name of the CICS dynamic storage area in which the subpool resides. ???? means that there has been no temporary storage main activity for this subpool. Source field: SMDDSANAME

Table 251. Fields in the Temporary Storage Main - Storage Subpools report (continued)

Field Heading	Description
Access	The storage key of the subpool. This can be either CICS (key 8) or USER (key 9). ???? means that there has been no temporary storage main activity for this subpool. Source field: SMDACCESS
Initial Free	The total number of kilobytes of the elements that are initially allocated when the subpool is preallocated. Source field: SMDIFREE
Getmain Requests	The number of GETMAIN requests issued for this subpool. Source field: SMDGMREQ
Freemain Requests	The number of FREEMAIN requests issued for this subpool. Source field: SMDFMREQ
Current Elements	The number of elements remaining after FREEMAIN requests; that is, it is the difference between the number of GETMAIN and FREEMAIN requests. Source field: SMDCELEM
Current Element Stg	The amount of storage in bytes of the current elements. Source field: SMDCES
Current Page Stg	The current amount of page storage in megabytes for this subpool. Source field: SMDCPS
% of DSA	The current element storage of the subpool as a percentage of the DSA in which it resides. Source field: ((SMDCPS / dsasize) * 100)
Peak Page Stg	The peak amount of page storage in kilobytes for this subpool. Source field: SMDHWMPS

Temporary Storage Models report

The Temporary Storage Models report is produced using the **EXEC CICS INQUIRE TSMODEL** command.

Table 252. Fields in the Temporary Storage Models report

Field Heading	Description
TSModel Name	The name of the temporary storage model. Source field: **EXEC CICS INQUIRE TSMODEL()**
Tsmodel Prefix	The prefix for this temporary storage model. Source field: **EXEC CICS INQUIRE TSMODEL() PREFIX**
Tsmodel Location	The location where queues matching this temporary storage model are to be stored. Source field: **EXEC CICS INQUIRE TSMODEL() LOCATION**(*cvda*)
Tsmodel Poolname	The name of the shared pool for this temporary storage model. Source field: **EXEC CICS INQUIRE TSMODEL() POOLNAME**

Table 252. Fields in the Temporary Storage Models report (continued)

Field Heading	Description
Recoverable	The recovery status for this temporary storage model. Source field: **EXEC CICS INQUIRE TSMODEL() RECOVSTATUS**(*cvda*)
Expiry Interval	The expiry interval for temporary storage queues that are associated with this temporary storage model. Source field: **EXEC CICS INQUIRE TSMODEL() EXPIRYINTMIN**

Temporary Storage Queues report

The Temporary Storage Queues report is produced using the **EXEC CICS INQUIRE TSQUEUE** command.

Table 253. Fields in the Temporary Storage Queues report

Field Heading	Description
Tsqueue Name	The name of the temporary storage queue. Source field: **EXEC CICS INQUIRE TSQNAME()**
Tsqueue Location	Indicates where the temporary storage queue resides. Source field: **EXEC CICS INQUIRE TSQNAME() LOCATION**(*cvda*)
Number of Items	The number of items in the temporary storage queue. Source field: **EXEC CICS INQUIRE TSQNAME() NUMITEMS()**
Min Item Length	The length of the smallest item in the temporary storage queue. Source field: **EXEC CICS INQUIRE TSQNAME() MINITEMLEN()**
Max Item Length	The length of the largest item in the temporary storage queue. Source field: **EXEC CICS INQUIRE TSQNAME() MAXITEMLEN()**
Tsqueue Flength	The total length of all the items in the temporary storage queue. Source field: **EXEC CICS INQUIRE TSQNAME() FLENGTH()**
Tranid	The name of the transaction which created the temporary storage queue. Source field: **EXEC CICS INQUIRE TSQNAME() TRANSID()**
Lastused Interval	The time interval since the temporary storage queue was last referenced. Source field: **EXEC CICS INQUIRE TSQNAME() LASTUSEDINT()**
Recoverable	Indicates whether the temporary storage queue is recoverable. Source field: **EXEC CICS INQUIRE TSQNAME() RECOVSTATUS()**
Expiry Interval	The expiry interval for this temporary storage queue, as defined in its TSMODEL resource definition at the time that the queue was created. Source field: **EXEC CICS INQUIRE TSMODEL() EXPIRYINTMIN()**

Temporary Storage Queues by Shared TS Pool report

The Temporary Storage Queues by Shared TS Pool report shows temporary storage queues that are in shared TS Pools on the TS Pool servers. These temporary storage queues might or might not currently be in the address space of your

system. If they are not in the address space of your system, they are not shown on the other temporary storage queue reports.

The report is produced using a combination of the **EXEC CICS INQUIRE TSPOOL** and **EXEC CICS INQUIRE TSQUEUE** commands.

Table 254. Fields in the Tsqueue by Shared TS Pool report

Field Heading	Description
Shared TS Pool Name	The name of the shared temporary storage pool. Source field: **EXEC CICS INQUIRE TSPOOL()**
Connection Status	Indicates the connection status of the pool. Source field: **EXEC CICS INQUIRE TSPOOL() CONNSTATUS**(*cvda*)
TSQueue Name	The name of the temporary storage queue in this pool. Source field: **EXEC CICS INQUIRE TSQNAME()**
Number of Items	The number of items in the temporary storage queue. Source field: **EXEC CICS INQUIRE TSQNAME() NUMITEMS()**
Min Item Length	The length of the smallest item in the temporary storage queue. Source field: **EXEC CICS INQUIRE TSQNAME() MINITEMLEN()**
Max Item Length	The length of the largest item in the temporary storage queue. Source field: **EXEC CICS INQUIRE TSQNAME() MAXITEMLEN()**
Tsqueue Flength	The total length of all the items in the temporary storage queue. Source field: **EXEC CICS INQUIRE TSQNAME() FLENGTH()**
Tranid	The name of the transaction which created the temporary storage queue. Source field: **EXEC CICS INQUIRE TSQNAME() TRANSID()**
Lastused Interval	The time interval since the temporary storage queue was last referenced. Source field: **EXEC CICS INQUIRE TSQNAME() LASTUSEDINT()**

Terminal Autoinstall and z/OS Communications Server report

The Terminal Autoinstall and z/OS Communications Server Report shows information and statistics about the status of terminal autoinstall - local terminals, and terminal autoinstall - shipped terminals. The report also shows the current status of the connection between CICS and the z/OS Communications Server, storage usage, generic resource usage and persistent session statistics.

The Terminal Autoinstall and z/OS Communications Server Reports are produced using a combination of the **EXEC CICS INQUIRE AUTOINSTALL**, **INQUIRE VTAM**, and the **EXEC CICS COLLECT STATISTICS AUTOINSTALL**, and Communications Server commands. The statistics data is mapped by the DFHA03DS, and DFHA04DS DSECTs.

Note: VTAM is a previous name for z/OS Communications Server.

Table 255. Fields in the Terminal Autoinstall report

Field Heading	Description
Terminal Autoinstall Status	Indicates the current status of terminal autoinstall. Source field: **EXEC CICS INQUIRE AUTOINSTALL ENABLESTATUS**(*cvda*)
Bridge Autoinstall	Indicates the current status of autoinstall for bridge facilities. Source field: **EXEC CICS INQUIRE AUTOINSTALL AIBRIDGE**(*cvda*)
Console Autoinstall	Indicates the current status of autoinstall for consoles. Source field: **EXEC CICS INQUIRE AUTOINSTALL CONSOLES**(*cvda*)
Autoinstall Program	The name of the user-replaceable terminal autoinstall model definition program. Source field: **EXEC CICS INQUIRE AUTOINSTALL PROGRAM()**
Current Autoinstall Requests	The number of autoinstall requests currently being processed. Source field: **EXEC CICS INQUIRE AUTOINSTALL CURREQS()**
Peak Autoinstall Requests	The maximum number of autoinstall requests that can be processed concurrently. Source field: **EXEC CICS INQUIRE AUTOINSTALL MAXREQS()**
Autoinstalls Attempted	The number of terminal autoinstalls attempted. Source field: A04VADAT
Autoinstalls Rejected	The number of terminal autoinstalls rejected. Source field: A04VADRJ
Autoinstalls Deleted	The number of autoinstalled terminals deleted. Source field: A04VADLO
Peak Concurrent Autoinstalls	The peak number of autoinstall requests processed concurrently. Source field: A04VADPK
Times Peak Concurrent reached	The number of times the peak autoinstall requests was reached. Source field: A04VADPX
Times SETLOGON HOLD issued	The number of times the SETLOGON HOLD command was issued to prevent further logon requests. Source field: A04VADSH
Number of Queued Logons	The number of autoinstall attempts that were queued for logon because the delete was in progress for the same terminal. Source field: A04VADQT
Peak Number of Queued Logons	The peak number of autoinstall attempts that were queued for logon. Source field: A04VADQK
Times Peak Queued Logons reached	The number of times the peak number of autoinstall attempts that were queued for logon was reached. Source field: A04VADQX
Delete shipped definitions interval	The current delete redundant shipped terminal definitions interval. Source field: A04RDINT

Table 255. Fields in the Terminal Autoinstall report (continued)

Field Heading	Description
Delete shipped definitions Idle time	The current minimum time that an inactive shipped terminal definition must remain installed in this region before it becomes eligible for deletion. Source field: A04RDIDL
Shipped remote terminals built	The total number of shipped terminal definitions that have been installed in this region. Source field: A04SKBLT
Shipped remote terminals installed	The number of shipped terminal definitions currently installed in this region. Source field: A04SKINS
Shipped remote terminals deleted	The number of shipped terminal definitions deleted from this region. Source field: A04SKDEL
Times remote delete interval expired	The number of times the remote delete interval has expired. Source field: A04TIEXP
Remote terminal deletes received	The number of remote delete requests received by this region. Source field: A04RDREC
Remote terminal deletes issued	The number of remote delete requests issued by this region. Source field: A04RDISS
Successful remote terminal deletes	The number of shipped terminal definitions deleted in this region by remote delete requests. Source field: A04RDDEL
Current idle terminals awaiting reuse	The current number of remote terminal definitions that are idle and are awaiting reuse. Source field: A04CIDCT
Current idle time awaiting reuse	The total time that the current number of remote terminal definitions that are awaiting reuse have been idle. Source field: A04CIDLE
Current maximum idle time awaiting reuse	The current maximum time that a remote terminal definition that is awaiting reuse has been idle. Source field: A04CMAXI
Total idle terminal count awaiting reuse	The total number of remote terminal definitions that have been idle and awaited reuse. Source field: A04TIDCT
Total idle time awaiting reuse	The total time that the total number of remote terminal definitions that awaited reuse were idle. Source field: A04TIDLE
Average idle time awaiting reuse	The average time that the remote terminal definitions were idle awaiting reuse. Source field: A04TIDLE / A04TIDCT
Maximum idle time awaiting reuse	The maximum time a shipped terminal definition has been idle awaiting reuse. Source field: A04TMAXI

Table 256. Fields in the z/OS Communications Server report

Field Heading	Description
VTAM open status	The current status of the connection between CICS and the Communications Server. Source field: **EXEC CICS INQUIRE VTAM OPENSTATUS**(*cvda*)
Dynamic open count	The number of times the Communications Server ACB was dynamically opened. Source field: A03DOC
VTAM Short-on-Storage	The number of times that the Communications Server indicated that there was a temporary Communications Server storage problem. Source field: A03VTSOS
MAX RPLs	The maximum number of receive-any request parameter lists (RPLs) that were posted by the Communications Server on any one dispatch of CICS terminal control. Source field: A03RPLX
Times at MAX RPLs	The number of times the maximum number of receive-any request parameter lists (RPLs) was reached. Source field: A03RPLXT
Current LUs in session	The current number of LUs in session. Source field: A03LUNUM
Peak LUs in session	The peak number of LUs in session. Source field: A03LUHWM
Generic Resource name	The name of the generic resource group which this CICS region requested registration to the Communications Server. Source field: **EXEC CICS INQUIRE VTAM GRNAME()**
Generic Resource status	Indicates the status of generic resource registration. Source field: **EXEC CICS INQUIRE VTAM GRSTATUS**(*cvda*)
Persistent Session Type	The setting for Communications Server persistent sessions support in the CICS region, as specified by the system initialization parameter PSTYPE. The settings are as follows: • SNPS - single-node persistent sessions • MNPS - multinode persistent sessions • NOPS - persistent sessions support is not used Source field: A03PSTYP
Persistent Session Interval	The time for which persistent sessions are retained if a failure occurs, as specified by the system initialization parameter PSDINT. Source field: A03PSDIN
Persistent Session Inquire count	The number of times CICS issued VTAM INQUIRE OPTCD=PERSESS to inquire on the number of persistent sessions. Source field: A03PSIC
Persistent Session NIB count	The number of Communications Server sessions that persisted. Source field: A03PSNC

Table 256. Fields in the z/OS Communications Server report (continued)

Field Heading	Description
Persistent Session Opndst count	The number of persisting sessions that were successfully restored. Source field: A03PSOC
Persistent Session Unbind count	The number of persisting sessions that were stopped. Source field: A03PSUC
Persistent Session Error count	The number of persisting sessions that were already unbound when CICS tried to restore them. Source field: A03PSEC

Tsqueue Totals report

The Tsqueue Totals report shows totals that are calculated from data gathered using the **EXEC CICS INQUIRE TSQUEUE** command.

Table 257. Fields in the Tsqueue Totals report

Field Heading	Description
Current temporary storage queues	The total number of temporary storage queues currently in use.
Current auxiliary temporary storage queues	The total number of temporary storage queues currently in auxiliary storage. Source field: EXEC CICS INQUIRE TSQNAME() LOCATION(cvda)
Current items in auxiliary temporary storage queues	The total number of items in temporary storage queues currently in auxiliary storage. Source field: EXEC CICS INQUIRE TSQNAME() NUMITEMS()
Average items per auxiliary temporary storage queue	The average number of items in each temporary storage queue currently in auxiliary storage. Source field: Current items in auxiliary temporary storage queues / Current auxiliary temporary storage queues
Current main temporary storage queues	The total number of temporary storage queues currently in main storage. Source field: EXEC CICS INQUIRE TSQNAME() LOCATION(cvda)
Current items in main temporary storage queues	The total number of items in temporary storage queues currently in main storage. Source field: EXEC CICS INQUIRE TSQNAME() NUMITEMS()
Average items per main temporary storage queue	The average number of items in each temporary storage queue currently in main storage. Source field: Current items in main temporary storage queues / Current main temporary storage queues

Trace Settings report

The Trace Settings report is produced using the **EXEC CICS INQUIRE TRACEDEST**, **EXEC CICS INQUIRE TRACEFLAG**, **EXEC CICS INQUIRE TRACETYPE**, **EXEC CICS INQUIRE JVMPOOL**, **EXEC CICS INQUIRE TRANSACTION**, and **EXEC CICS EXTRACT STATISTICS TRANSACTION** commands.

Table 258. Fields in the Trace Settings report

Field Heading	Description
Trace Settings	
Internal Trace Status	The status of CICS internal trace (started or stopped). Source field: EXEC CICS INQUIRE TRACEDEST INTSTATUS
Internal Trace Table Size	The size of the table that holds internal trace entries. The table wraps when it is full. Source field: EXEC CICS INQUIRE TRACEDEST TABLESIZE
Auxiliary Trace Status	The status of CICS auxiliary trace (started or stopped). Source field: EXEC CICS INQUIRE TRACEDEST AUXSTATUS
Auxiliary Trace Dataset	The current auxiliary trace data set. Source field: EXEC CICS INQUIRE TRACEDEST CURAUXDS
Auxiliary Switch Status	The status of the auxiliary switch, which determines what happens when the initial data set for auxiliary trace is full. Source field: EXEC CICS INQUIRE TRACEDEST SWITCHSTATUS
GTF Trace Status	The status of CICS GTF trace (started or stopped), that is, whether CICS is directing trace entries to the MVS Generalized Trace Facility (GTF). Source field: EXEC CICS INQUIRE TRACEDEST GTFSTATUS
Master System Trace Flag	The status of the system master trace flag, which governs whether CICS makes or suppresses standard trace entries. Source field: EXEC CICS INQUIRE TRACEFLAG SYSTEMSTATUS
Master User Trace Flag	The status of the user master trace flag, which governs whether non-exception user trace entries are recorded or suppressed. Source field: EXEC CICS INQUIRE TRACEFLAG SYSTEMSTATUS
VTAM Exit override	Indicates which invocations of the CICS z/OS Communications Server exits are being traced. Source field: EXEC CICS INQUIRE TRACEFLAG TCEXITSTATUS
JVM Trace Options	
Standard	The setting for standard tracing for this trace flag. Source field: EXEC CICS INQUIRE TRACETYPE COMPID(SJ) STANDARD
Special	The setting for special tracing for this trace flag. Source field: EXEC CICS INQUIRE TRACETYPE COMPID(SJ) SPECIAL
Option String	The JVM trace options for this trace flag. Source field: EXEC CICS INQUIRE JVMPOOL JVMLEVEL0TRACE, JVMLEVEL1TRACE, JVMLEVEL2TRACE, or JVMUSERTRACE
Component Trace Options	
Component	The name of the component for tracing. Source field: EXEC CICS INQUIRE TRACETYPE COMPID
Description	The description of the component. Source field: EXEC CICS INQUIRE TRACETYPE COMPID

Table 258. Fields in the Trace Settings report (continued)

Field Heading	Description
Standard	The active level of tracing for standard tracing for this component. Source field: EXEC CICS INQUIRE TRACETYPE COMPID() STANDARD
Special	The active level of tracing for special tracing for this component. Source field: EXEC CICS INQUIRE TRACETYPE COMPID() SPECIAL
Transactions - Non-Standard Tracing	
Tran id	The name of the transaction. Source field: EXEC CICS INQUIRE TRANSACTION
Tran Class	The transaction class in which the transaction is defined. Source field: XMRTCL
Program Name	The name of the program when the transaction was defined, or spaces if a program name was not supplied. Source field: XMMRPN
Tracing	The type of tracing to be done for tasks executing this transaction. Source field: EXEC CICS INQUIRE TRANSACTION() TRACING
Attach Count	The number of times that this transaction has been attached. If a transaction definition is used to start a transaction remotely, the transaction is included in the Attach Count for the region where the transaction runs. Source field: XMRAC
Restart Count	The number of times this transaction was restarted after an abend. This field is zero if the transaction was not defined as RESTART=YES. Source field: XMRRC
Dynamic Counts - Local	The total number of times the dynamic transaction routing exit has chosen to run this transaction on the local system. This field is zero if the transaction was not defined as DYNAMIC=YES. Source field: XMRDLC
Dynamic Counts - Remote	The total number of times the dynamic transaction routing exit has chosen to run this transaction on a remote system. This field is zero if the transaction was not defined as DYNAMIC=YES. Source field: XMRDRC
Remote Starts	The number of times that this transaction definition has been used to attempt to start the transaction on a remote system. See additional information in "Transactions report" on page 485. Source field: XMRRSC

Transaction reports

There are four transaction reports, Transactions report, Transaction Classes report, Transaction Manager report, and Transaction Totals report.

Transactions report

The Transactions report is produced using a combination of the **EXEC CICS INQUIRE TRANSACTION** and **EXEC CICS EXTRACT STATISTICS TRANSACTION** commands. The statistics data is mapped by the **DFHXMRDS**.

Table 259. Fields in the Transactions Report

Field Heading	Description
Tran id	The name of the transaction. Source field: EXEC CICS INQUIRE TRANSACTION
Tran Class	The name of the transaction class in which the transaction is defined. Source field: XMRTCL
Program Name	The name of the program when the transaction was defined, or spaces if a program name was not supplied. Source field: XMMRPN
Dynamic	Indicates whether the transaction was defined as dynamic. Source field: XMRDYN
Isolate	Indicates whether the transaction's user-key task-lifetime storage is isolated from the user-key programs of other transactions. Source field: EXEC CICS INQUIRE TRANSACTION ISOLATEST
Task Data Location	Where certain CICS control blocks will be located for the transaction. Source field: EXEC CICS INQUIRE TRANSACTION TASKDATALOC
Task Data Key	The storage key in which CICS will obtain all storage for use by the transaction. Source field: EXEC CICS INQUIRE TRANSACTION TASKDATAKEY
Attach Count	The number of times that this transaction has been attached. If a transaction definition is used to start a transaction remotely, the transaction is included in the Attach Count for the region where the transaction runs. Source field: XMRAC
Restart Count	The number of times this transaction was restarted after an abend. This field is zero if the transaction was not defined as RESTART=YES. Source field: XMRRC
Dynamic Counts - Local	The total number of times the dynamic transaction routing exit has chosen to run this transaction on the local system. This field is zero if the transaction was not defined as DYNAMIC=YES. Source field: XMRDLC
Dynamic Counts - Remote	The total number of times the dynamic transaction routing exit has chosen to run this transaction on a remote system. This field is zero if the transaction was not defined as DYNAMIC=YES. Source field: XMRDRC

Table 259. Fields in the Transactions Report (continued)

Field Heading	Description
Remote Starts	The number of times that this transaction definition has been used to attempt to start the transaction on a remote system. (This might not necessarily be the same as the number of successful starts.) A Remote Start is only counted in the CICS region that initiates the process, and not in the remote system where the transaction runs. In some circumstances, the use of a transaction definition for a remote start is not counted. This includes the case where a transaction definition that specifies the local sysid or nothing as the REMOTESYSTEM value, is used to start a transaction in a remote system, with the remote system specified on the SYSID option of the START command. Source field: XMRRSC
Storage Viols	The number of times a storage violation has been detected for this transaction definition. Source field: XMRSVC

Transaction Classes report

The Transaction Classes report is produced using a combination of the **EXEC CICS INQUIRE TRANCLASS** and **EXEC CICS EXTRACT STATISTICS TRANCLASS** commands.

The statistics data is mapped by the DFHXMCDS DSECT.

Table 260. Fields in the Transaction Classes report pass 1

Field Heading	Description
Tclass Name	The name of the transaction class. Source field: EXEC CICS INQUIRE TRANCLASS()
Trans in Tclass	The number of transaction definitions that are defined to this transaction class. Source field: XMCITD
Attach in Tclass	The number of transaction attach requests for transactions in this transaction class. Source field: XMCTAT
Class Limit	The maximum number of transactions that may be concurrently active in this transaction class. Source field: XMCMXT
At Class Limit	The number of times that this transaction class has reached its transaction class limit. Source field: XMCTAMA
Current Active	The current number of transactions active in this transaction class. Source field: XMCCAT
Peak Active	The peak number of transactions active in this transaction class. Source field: XMCPAT
Current Queued	The current number of transactions that are currently queueing in this transaction class. Source field: XMCCQT

Table 260. Fields in the Transaction Classes report pass 1 (continued)

Field Heading	Description
Peak Queued	The peak number of transactions that queued waiting to get into this transaction class. Source field: XMCPQT
Accept Immediate	The number of transactions that were accepted immediately into this transaction class. Source field: XMCAI
Accept Queued	The number of transactions that were queued before being accepted into this transaction class. Source field: XMCAAQ

Table 261. Fields in the Transaction Classes report pass 2

Field Heading	Description
Tclass Name	The name of the transaction class. Source field: EXEC CICS INQUIRE TRANCLASS()
Trans in Tclass	The number of transaction definitions that are defined to this transaction class. Source field: XMCITD
Class Limit	The maximum number of transactions that may be concurrently active in this transaction class. Source field: XMCMXT
Purge Threshold	The queue limit purge threshold for this transaction class. Source field: XMCTH
At Purge Threshold	The number of times this transaction class has reached its queue limit purge threshold. Source field: XMCTAPT
Purged Immediate	The number of transactions that were purged immediately because the queue had already reached the purge threshold for this transaction class. Source field: XMCPI
Purged Queued	The number of transactions that have been purged while queueing to get into this transaction class. Source field: XMCPWQ
Total Queued	The total number of transactions that have become active but first queued to get into this transaction class. Source field: XMCTQ
Avg. Queue Time	The average queueing time for transactions that have become active but first queued to get into this transaction class. Source field: XMCTQTME / XMCTQ
Avg. Cur Queue Time	The average queueing time for those transactions that are currently queued waiting to get into this transaction class. Source field: XMCCQTME / XMCCQT

Transaction Manager report

The Transaction Manager report is produced using the **EXEC CICS EXTRACT STATISTICS TRANSACTION** command.

The statistics data is mapped by the DFHXMGDS DSECT.

Table 262. Fields in the Transaction Manager report

Field Heading	Description
Total Accumulated transactions so far	The total number of tasks that have accumulated so far. Source field: (XMGTNUM + XMGNUM)
Accumulated transactions (since reset)	The number of tasks that have accumulated since the last reset. Source field: XMGNUM
Transaction Rate per second	The number of transactions per second. Source field: (XMGNUM / Elapsed seconds since reset)
Maximum transactions allowed (MXT)	The specified maximum number of user transactions as specified in the SIT, or as an override, or changed dynamically using CEMT SET SYSTEM MAXTASKS(value) or EXEC CICS SET SYSTEM MAXTASKS(fullword binary data-value) commands. Source field: XMGMXT
Time MXT last changed	The date and time when the maximum number of user transactions (MXT) was last set or changed dynamically. Source field: XMGLSMXT
Times at MXT	The number of times that the number of active user transactions equalled the specified maximum number of user transactions (MXT). Source field: XMGTAMXT
Time MXT last reached	The date and time when the number of active user transactions last equalled the specified maximum number of user transactions (MXT). Source field: XMGLAMXT
Current Active User transactions	The current number of active user transactions. Source field: XMGCAT
Currently at MXT	Whether the CICS region is currently at the specified maximum number of user transactions (MXT). Source field: XMGATMXT
Peak Active User transactions	The peak number of active user transactions reached. Source field: XMGPAT
Total Active User transactions	The total number of user transactions that have become active. Source field: XMGTAT
Time last transaction attached	The date and time when the last user transaction was attached. If the DFH0STAT report shows the date and time as --/--/---- --:--:--:---- then that indicates that a user transaction has not been attached since the statistics were last reset. Source field: XMGLTAT
Current Running transactions	The current number of Running transactions. Source field: EXEC CICS INQUIRE TASKLIST RUNNING

Table 262. Fields in the Transaction Manager report (continued)

Field Heading	Description
Current Dispatchable transactions	The current number of Dispatchable transactions. Source field: EXEC CICS INQUIRE TASKLIST DISPATCHABLE
Current Suspended transactions	The current number of Suspended transactions. Source field: EXEC CICS INQUIRE TASKLIST SUSPENDED
Current System transactions	The current number of system transactions. Source field: ((Running + Dispatchable + Suspended) - XMGCAT)
Transactions Delayed by MXT	The number of user transactions that had to queue for MXT reasons before becoming active, excluding those still waiting. Source field: XMGTDT
Total MXT Queueing Time	The total time spent waiting by those user transactions that had to wait for MXT reasons. **Note:** This does not include those transactions still waiting. Source field: XMGTQTME
Average MXT Queueing Time	The average time spent waiting by those user transactions that had to wait for MXT reasons. Source field: (XMGTQTME / XMGTDT)
Current Queued User transactions	The current number of user transactions currently queuing for MXT reasons. **Note:** That this does not include transactions currently queued for Transaction Class. Source field: XMGCQT
Peak Queued User transactions	The peak number of user transactions queuing for MXT reasons. **Note:** That this does not include transactions queued for Transaction Class. Source field: XMGPQT
Total Queueing Time for current queued	The total time spent waiting by those user transactions currently queued for MXT reasons. **Note:** This does not include the time spent waiting by those transactions that have finished queuing. Source field: XMGCQTME
Average Queueing Time for current queued	The average time spent waiting by those user transactions currently queued for MXT reasons. Source field: (XMGCQTME / XMGCQT)

Transaction Totals report

The Transactions Totals report is produced using the **EXEC CICS EXTRACT STATISTICS STORAGE** command.

The statistics data was mapped by the DFHSMSDS DSECT.

Table 263. Fields in the Transaction Totals report

Field Heading	Description
Isolate	Indicates whether the transaction's user-key task-lifetime storage is isolated from the user-key programs of other transactions.

Table 263. Fields in the Transaction Totals report (continued)

Field Heading	Description
Task Data Location/Key	Indicates the combination of task data location and task data key for these transactions.
Subspace Usage	Indicates the type of subspace usage for these transaction definitions.
Transaction Count	The number of transaction definitions for this combination of isolate, task data location, task data key, and subspace usage.
Attach Count	The number of times that these transactions have been attached. If a transaction definition is used to start a transaction remotely, the transaction is included in the Attach Count for the region where the transaction runs.
Current Unique Subspace Users (Isolate=Yes)	The current number of tasks allocated a unique subspace. Source field: SMSUSSCUR
Peak Unique Subspace Users (Isolate=Yes)	The peak number of tasks allocated a unique subspace. Source field: SMSUSSHWM
Total Unique Subspace Users (Isolate=Yes)	The total number of tasks that have been allocated a unique subspace. Source field: SMSUSSCUM
Current Common Subspace Users (Isolate=No)	The current number of tasks allocated to the common subspace. Source field: SMSCSSCUR
Peak Common Subspace Users (Isolate=No)	The peak number of tasks allocated to the common subspace. Source field: SMSCSSHWM
Total Common Subspace Users (Isolate=No)	The total number of tasks that have been allocated to the common subspace. Source field: SMSCSSCUM

Transient data reports

There are three transient data reports, Transient Data report, Transient Data Queues report, and Transient Data Queue totals report.

Transient Data report

The Transient Data report is produced using the **EXEC CICS EXTRACT STATISTICS TDQUEUE** command. The statistics data is mapped by the **DFHTQGDS**.

Table 264. Fields in the Transient Data report

Field Heading	Description
Transient data reads	The number of times a CI has to be read from disk. Increasing the buffer allocation decreases this activity. Source field: TQGACTGT
Transient data writes	The number of WRITEs to the intrapartition transient data set. This includes both WRITEs needed for recovery and WRITEs forced by the buffer being needed to accommodate another CI. I/O activity caused by the latter reason can be minimized by increasing the buffer allocation. Source field: TQGACTPT

Table 264. Fields in the Transient Data report (continued)

Field Heading	Description
Transient data formatting writes	The number of times a new CI was written at the end of the data set in order to increase the amount of available space. Source field: TQGACTFT
Control interval size	The size of the control interval, expressed in bytes. Source field: TQGACISZ
Control intervals in the DFHINTRA data set	The current number of control intervals active within the intrapartition data set, DFHINTRA. Source field: TQGANCIS
Peak control intervals used	The peak value of the number of control intervals concurrently active in the system. Source field: TQGAMXCI
Times NOSPACE on DFHINTRA occurred	The number of times that a NOSPACE condition has occurred. Source field: TQGANOSP
Transient data strings	The number of strings currently active. Source field: TQGSTSTA
Times Transient data string in use	The number of times a string was accessed. Source field: TQGSTNAL
Peak Transient data strings in use	The peak number of strings concurrently accessed in the system. Source field: TQGSMXAL
Times string wait occurred	The number of times that tasks had to wait because no strings were available. Source field: TQGSTNWT
Peak users waiting on string	The peak number of concurrent string waits in the system. Source field: TQGSMXWT
Transient data buffers	The number of transient data buffers specified in the system initialization table (SIT) or in the SIT overrides. The number of buffers allocated may exceed the number requested. Source field: TQGANBFA
Times Transient data buffer in use	The number of times intrapartition buffers have been accessed. Source field: TQGATNAL
Peak Transient data buffers in use	The peak value of the number of concurrent intrapartition buffer accesses. Source field: TQGAMXAL
Peak buffers containing valid data	The peak number of intrapartition buffers that contain valid data. Source field: TQGAMXIU
Times buffer wait occurred	The number of times a request was queued because all buffers were allocated to other tasks. A buffer wait also occurs if the required control interval is already in a locked buffer, and therefore unavailable, even if there are other buffers available. Source field: TQGATNWT
Peak users waiting on buffer	The peak number of requests queued because no buffers were available. Source field: TQGAMXWT

Table 264. Fields in the Transient Data report (continued)

Field Heading	Description
I/O errors on the DFHINTRA data set	The number of input/output errors that have occurred on the DFHINTRA data set. Source field: TQGACTIO

Transient Data Queues report

The Transient Data Queues report is produced using a combination of the **EXEC CICS INQUIRE TDQUEUE** and **EXEC CICS EXTRACT STATISTICS TDQUEUE** commands. The statistics data is mapped by the **DFHTQRDS DSECT**.

Table 265. The Fields in the Transient Data Queue report

Field Heading	Description
Dest Id	The destination identifier (transient data queue name). Source field: **EXEC CICS INQUIRE TDQUEUE()**
Queue Type	The queue type, extrapartition, intrapartition, indirect or remote. Source field: **EXEC CICS INQUIRE TDQUEUE() TYPE(cvda)**
Tdqueue Writes	The number of requests to write to the transient data queue. Source field: TQRWRITE
Tdqueue Reads	The number of requests to read from the transient data queue. Source field: TQRREAD
Tdqueue Deletes	The number of requests to delete from the transient data queue. Source field: TQRDELET
Indirect Name	The name of the indirect queue. Source field: TQRIQID
Remote System	The remote connection name (sysid) of the system for this queue. Source field: TQRRSYS
Remote Name	The remote queue name for this queue. Source field: TQRRQID
Current Items	The current number of items in this intrapartition queue. Source field: TQRCNITM
Peak Items	The peak number of items in this intrapartition queue. Source field: TQRPNITM
No.of triggers	The number of times a trigger transaction has been attached. Source field: TQRTRIGN
Trigger Level	The number of items that must be in this queue before automatic transaction initiation (ATI) occurs. Source field: TQRTRIGL
ATI Fcty	Indicates whether this queue has a terminal or session associated with it. Source field: **EXEC CICS INQUIRE TDQUEUE() ATIFACILITY(cvda)**

Table 265. The Fields in the Transient Data Queue report (continued)

Field Heading	Description
ATI Term	The name of the terminal or session associated with this queue. Source field: **EXEC CICS INQUIRE TDQUEUE() ATITERMID()**
ATI Tran	The name of the transaction to be attached when the trigger level for this queue is reached. Source field: TQRATRAN
ATI Userid	The user identifier associated with this queue. Source field: **EXEC CICS INQUIRE TDQUEUE() ATIUSERID()**

Transient Data Queue Totals report

The Transient Data Queues Totals report is produced using a combination of the **EXEC CICS INQUIRE TDQUEUE** and **EXEC CICS EXTRACT STATISTICS TDQUEUE** commands. The statistics data is mapped by the **DFHTQRDS DSECT**.

Table 266. Fields in the Transient Data Queue Totals report

Field Heading	Description
Tdqueue Type	The queue type, extrapartition, intrapartition, indirect, or remote. Source field: **EXEC CICS INQUIRE TDQUEUE() TYPE(cvda)**
No. of Tdqueues	The number of queues defined as this type.
Tdqueue Writes	The total number of requests to write to this type of transient data queue. Source field: TQRWRITE
Tdqueue Reads	The total number of requests to read from this type of transient data queue. Source field: TQRREADS
Tdqueue Deletes	The total number of requests to delete from this type of transient data queue. Source field: TQRDELET

URIMAP reports

There are two URIMAP reports, URIMAPs Global report, and URIMAPs report.

URIMAPs Global report

The URIMAPs Global report is produced using the **EXEC CICS EXTRACT STATISTICS URIMAP** command. The statistics data is mapped by the **DFHWBGDS DSECT**.

Table 267. Fields in the URIMAPs Global report

Field Heading	Description
URIMAP reference count	Number of times a search for a matching URIMAP definition was made. Source field: WBG-URIMAP-REFERENCE-COUNT
Entry point reference count	Number of times a search for a matching URIMAP definition that is defined as an application entry point was made. Source field: WBG-URIMAP-ENTRYPOINT-REF

Table 267. Fields in the URIMAPs Global report (continued)

Field Heading	Description
Host/Path no match count	Number of times a search for a matching URIMAP definition was made, but no URIMAP definition with a matching host and path was found. Source field: WBG-URIMAP-NO-MATCH-COUNT
Host/Path match count	Number of times a search for a matching URIMAP definition was made, and a URIMAP definition with a matching host and path was found. Source field: WBG-URIMAP-MATCH-COUNT
Disabled	Number of times a URIMAP definition with a matching host and path was found, but the URIMAP definition was disabled. Source field: WBG-URIMAP-MATCH-DISABLED
Redirected	Number of times a URIMAP definition with a matching host and path was found, and the request was redirected. Source field: WBG-URIMAP-MATCH-REDIRECT
Analyzer used	Number of times a URIMAP definition with a matching host and path was found, and the analyzer program associated with the TCPIPSERVICE definition was called. Source field: WBG-URIMAP-MATCH-ANALYZER
Static content delivered	Number of times a URIMAP definition with a matching host and path was found, and static content (document template or z/OS UNIX file) was delivered as a response. Source field: WBG-URIMAP-STATIC-CONTENT
Dynamic content delivered	Number of times a URIMAP definition with a matching host and path was found, and dynamic content (produced by an application program) was delivered as a response. Source field: WBG-URIMAP-DYNAMIC-CONTENT
PIPELINE requests	Number of times a URIMAP definition with a matching host and path was found, and the request was handled by a web service. Source field: WBG-URIMAP-PIPELINE-REQS
ATOMSERVICE requests	Number of times a URIMAP definition with a matching host and path was found, and the request was handled by an Atom service. Source field: WBG-URIMAP-ATOMSERV-REQS
Scheme (HTTP) requests	Number of times a URIMAP definition with a matching host and path was found, and the scheme was HTTP. Source field: WBG-URIMAP-SCHEME-HTTP
Scheme (HTTPS) requests	Number of times a URIMAP definition with a matching host and path was found, and the scheme was HTTPS (HTTP with SSL). Source field: WBG-URIMAP-SCHEME-HTTPS
Virtual host disabled count	Number of times a URIMAP definition with a matching host and path was found, but the virtual host was disabled. Source field: WBG-HOST-DISABLED-COUNT
Direct attach count	Number of requests that are processed by directly attached user task. Source field: WBG-URIMAP-DIRECT-ATTACH

URIMAPs report

The URIMAPs report is produced using a combination of **EXEC CICS INQUIRE URIMAP** and **EXEC CICS EXTRACT STATISTICS URIMAP RESID()** commands. The statistics data is mapped by the DFHWBRDS DSECT.

Table 268. Fields in the URIMAPs Report

Field Heading	Description
URIMAP Name	The name of the URIMAP definition. Source field: **EXEC CICS INQUIRE URIMAP**
URIMAP Enable Status	Whether the URIMAP definition is enabled, disabled, or unavailable because the virtual host of which it is a part has been disabled. Source field: **EXEC CICS INQUIRE URIMAP() ENABLESTATUS**
URIMAP Usage	The intended use of this URIMAP resource: **SERVER** The URIMAP resource is used to locate the resources for CICS to produce an HTTP response to the request identified by HOST and PATH. **CLIENT** The URIMAP resource is used to specify information for making an HTTP request from CICS as an HTTP client. **PIPELINE** The URIMAP resource is used to locate the resources for CICS to produce an XML response to the request identified by HOST and PATH. **ATOM** The URIMAP resource is used for an incoming request for data that CICS makes available as an Atom feed. **JVMSERVER** The URIMAP resource is used to map an inbound request from a web client to a servlet or JSP that is running in a JVM server. Source field: **EXEC CICS INQUIRE URIMAP() USAGE**
URIMAP Scheme	The scheme for the HTTP request, HTTP with SSL (HTTPS) or without SSL (HTTP). Source field: **EXEC CICS INQUIRE URIMAP() SCHEME**
URIMAP Authenticate	For USAGE(CLIENT), whether credentials (authentication information) are sent for outbound Web requests. Source field: **EXEC CICS INQUIRE URIMAP() AUTHENTICATE**
URIMAP Port	For USAGE(CLIENT), the port number used for the client connection. For USAGE(SERVER), the port number that is being used for the communication, even if PORT(NO) is specified on the URIMAP at define time. Source field: **EXEC CICS INQUIRE URIMAP() PORT()**
URIMAP Host	For USAGE(CLIENT), the host name of the target URL to which the HTTP request is to be sent. For any other usage type, the host name on the incoming HTTP request that is used to select this URIMAP definition. Source field: **EXEC CICS INQUIRE URIMAP() HOST()**
URIMAP IP Family	The address format of the address returned in URIMAP IP Resolved Address. Source field: **EXEC CICS INQUIRE URIMAP() IPFAMILY()**
URIMAP IP Resolved Address	The IPv4 or IPv6 resolved address of the host. Source field: **EXEC CICS INQUIRE URIMAP() IPRESOLVED()**

Table 268. Fields in the URIMAPs Report (continued)

Field Heading	Description
URIMAP Path	For USAGE(CLIENT), the path of the target URL to which the HTTP request is to be sent. For any other usage type, the path on the incoming HTTP request that is used to select this URIMAP definition. The PATH might end in an asterisk, meaning that it is generic, and matches any path with characters that are the same up to but excluding the asterisk. Source field: **EXEC CICS INQUIRE URIMAP() PATH**
TCPIPSERVICE name	The TCPIPSERVICE resource to which this URIMAP definition applies. Only requests received using this TCPIPSERVICE resource are matched to this URIMAP definition. If no TCPIPSERVICE resource is specified, the URIMAP definition applies to all incoming HTTP requests. Source field: **EXEC CICS INQUIRE URIMAP() TCPIPSERVICE**
WEBSERVICE name	The name of the WEBSERVICE resource definition for the web service that handles the incoming HTTP request. Source field: **EXEC CICS INQUIRE URIMAP() WEBSERVICE**
PIPELINE name	The name of the PIPELINE resource definition for the web service that handles the incoming HTTP request. Source field: **EXEC CICS INQUIRE URIMAP() PIPELINE**
ATOMSERVICE name	The name of the ATOMSERVICE resource definition for the Atom document. Source field: **EXEC CICS INQUIRE URIMAP() ATOMSERVICE**
Templatename	The name of a CICS document template, the contents of which are returned as the HTTP response. Source field: **EXEC CICS INQUIRE URIMAP() TEMPLATENAME**
zFS File	The name of a file in the z/OS UNIX System Services file system, the contents of which are returned as the HTTP response. Source field: **EXEC CICS INQUIRE URIMAP() HFSFILE**
Analyzer	Whether or not the analyzer associated with the TCPIPSERVICE definition is called to process the request. Source field: **EXEC CICS INQUIRE URIMAP() ANALYZERSTAT**
Converter	The name of a converter program that is used to transform the HTTP request into a form suitable for the application program specified in PROGRAM. Source field: **EXEC CICS INQUIRE URIMAP() CONVERTER**
Transaction ID	The name of the alias transaction that processes the incoming HTTP request. Source field: **EXEC CICS INQUIRE URIMAP() TRANSACTION**
Program name	The name of the application program that processes the incoming HTTP request. Source field: **EXEC CICS INQUIRE URIMAP() PROGRAM**
Redirection type	Whether or not matching requests are redirected, on a temporary or permanent basis. Source field: **EXEC CICS INQUIRE URIMAP() REDIRECTTYPE**
Location for redirection	An alternative URL to which the Web client is redirected, if redirection is specified. Source field: **EXEC CICS INQUIRE URIMAP() LOCATION**

Table 268. Fields in the URIMAPs Report (continued)

Field Heading	Description
URIMAP reference count	Number of times this URIMAP definition was referenced. Source field: WBR-URIMAP-REFERENCE-COUNT
Disabled	Number of times this host and path were matched, but the URIMAP definition was disabled. Source field: WBR-URIMAP-MATCH-DISABLED
Redirected	Number of times that this host and path were matched and the number of times that the request was redirected. Source field: WBR-URIMAP-MATCH-REDIRECT
Time out for pooled sockets	The time after which CICS discards pooled client HTTP connections created using this URIMAP resource if they are not reused. Source field: WBR-URIMAP-SOCKETCLOSE
Number of pooled sockets	Current number of open client HTTP connections held in the pool for reuse. Source field: WBR-URIMAP-SOCKPOOLSIZE
Peak number of pooled sockets	Peak number of open client HTTP connections held in the pool for reuse. Source field: WBR-URIMAP-SOCKPOOLSIZE-PEAK
Number of reclaimed sockets	Number of pooled connections that were closed in the pool by CICS because the CICS region had reached the MAXSOCKETS limit. Source field: WBR-URIMAP-SOCKETS-RECLAIMED
Number of timed out sockets	Number of pooled connections that were closed in the pool by CICS because they reached their timeout value without being reused. Source field: WBR-URIMAP-SOCKETS-TIMEDOUT

User Exit Programs report

The User Exit Programs report is produced from two tables. This report is produced using the **EXEC CICS INQUIRE EXITPROGRAM** command.

Table 269. Fields in the User Exit Programs report

Field Heading	Description
Program Name	The program name of the program that is enabled as an exit program by using the EXEC CICS ENABLE command. Source field: EXEC CICS INQUIRE EXITPROGRAM()
Entry Name	The entry point name for this exit program. Source field: EXEC CICS INQUIRE EXITPROGRAM() ENTRYNAME()
Global Area Entry Name	The name of the exit program that owns the global work area associated with this exit program. Source field: EXEC CICS INQUIRE EXITPROGRAM() GAENTRYNAME()
Global Area Length	The length of the global work area associated with this exit program. Source field: EXEC CICS INQUIRE EXITPROGRAM() GALENGTH()

Table 269. Fields in the User Exit Programs report (continued)

Field Heading	Description
Global Area Use Count	The number of exit programs that are associated with the global work area owned by this exit program. Source field: EXEC CICS INQUIRE EXITPROGRAM() GAUSECOUNT()
Number of Exits	The number of global user exit points at which this exit program is enabled. Source field: EXEC CICS INQUIRE EXITPROGRAM() NUMEXITS()
Program Status	Indicates whether this exit program is available for execution. Source field: EXEC CICS INQUIRE EXITPROGRAM() STARTSTATUS(cvda)
Program Concurrency	Indicates the concurrency attribute of this exit program. Source field: EXEC CICS INQUIRE PROGRAM() CONCURRENCY(cvda)
Exit Program Use Count	The number of times this exit program has been invoked. Source field: EXEC CICS INQUIRE PROGRAM() USECOUNT(data-area)
LIBRARY Name	The name of the LIBRARY from which the program was loaded. This is blank if the program has not been loaded, or if the LPASTATUS is LPA (indicating that the program was loaded from the LPA). Source field: EXEC CICS INQUIRE PROGRAM() LIBRARY(data-area)
LIBRARY Data Set Name	The name of the data set in the LIBRARY from which the program was loaded. This is blank if the program has not been loaded, or if the LPASTATUS is LPA (indicating that the program has been loaded from the LPA). Source field: EXEC CICS INQUIRE PROGRAM() LIBRARYDSN(data-area)
Program Name	The program name of the program that is enabled as an exit program by using the EXEC CICS ENABLE command. Source field: EXEC CICS INQUIRE EXITPROGRAM()
Entry Name	The entry point name for this exit program. Source field: EXEC CICS INQUIRE EXITPROGRAM() ENTRYNAME()
API	Indicates which APIs the task-related user exit program uses. The values are as follows: **CICSAPI** The task-related user exit program is enabled as either QUASIRENT or THREADSAFE, but without the OPENAPI option. The program is restricted to the CICS permitted programming interfaces. **OPENAPI** The task-related user exit program is enabled with the OPENAPI option. The program is permitted to use non-CICS APIs, for which purpose CICS will give control to the task-related user exit under an open TCB. OPENAPI assumes that the program is written to threadsafe standards. Source field: EXEC CICS INQUIRE EXITPROGRAM() APIST(cvda)

Table 269. Fields in the User Exit Programs report (continued)

Field Heading	Description
Concurrency Status	Indicates the concurrency attribute of the exit program. The values are as follows: **QUASIRENT** The task-related user exit program is defined as being quasi-reentrant, and can run only under the CICS QR TCB when invoking CICS services through the CICS API. To use any MVS services, this task-related user exit program must switch to a privately-managed TCB. **THREADSAFE** The task-related user exit program is defined as threadsafe, and can run under an open TCB. If the APIST option returns OPENAPI, the program is always invoked under an open TCB. If the APIST option returns CICSAPI, the program is invoked under the TCB that is in use by its user task when the program is given control, which might be either an open TCB, or the CICS QR TCB. **REQUIRED** The task-related user exit program is defined to always run on an open TCB. REQUIRED was specified either on the program definition or on the **ENABLE PROGRAM** command. **Note:** When a task-related user exit is enabled REQUIRED and OPENAPI, it is treated the same as if it was enabled THREADSAFE and OPENAPI. For compatibility, an **INQUIRE EXITPROGRAM** for either combination always returns THREADSAFE, OPENAPI. For a task-related user exit enabled REQUIRED and CICSAPI, **INQUIRE EXITPROGRAM** returns REQUIRED, CICSAPI. Source field: EXEC CICS INQUIRE EXITPROGRAM() CONCURRENST(cvda)
Qualifier	The name of the qualifier specified for this exit program. Source field: EXEC CICS INQUIRE EXITPROGRAM() QUALIFIER()
Length	The length of the task local work area associated with this exit program. Source field: EXEC CICS INQUIRE EXITPROGRAM() TALENGTH()
Task Related User Exit Options - Taskstart	Indicates whether this exit program was enabled with the TASKSTART option. Source field: EXEC CICS INQUIRE EXITPROGRAM() TASKSTART(cvda)
Task Related User Exit Options - EDF	Indicates whether this exit program was enabled with the FORMATEDF option. Source field: EXEC CICS INQUIRE EXITPROGRAM() FORMATEDFST(cvda)
Task Related User Exit Options - Shutdown	Indicates whether this exit program was enabled with the SHUTDOWN option. Source field: EXEC CICS INQUIRE EXITPROGRAM() SHUTDOWNST(cvda)
Task Related User Exit Options - Indoubt	Indicates whether this exit program was enabled with the INDOUBTWAIT option. Source field: EXEC CICS INQUIRE EXITPROGRAM() INDOUBTST(cvda)
Task Related User Exit Options - SPI	Indicates whether this exit program was enabled with the SPI option. Source field: EXEC CICS INQUIRE EXITPROGRAM() SPIST(cvda)
Task Related User Exit Options - Purgeable	Indicates whether this exit program was enabled with the PURGEABLE option. Source field: EXEC CICS INQUIRE EXITPROGRAM() PURGEABLEST(cvda)

Virtual Hosts report

The Virtual Hosts report is produced using the **EXEC CICS INQUIRE HOST** command.

Table 270. Fields in the Virtual Hosts report

Field Heading	Description
Virtual Host name	The name of the virtual host. Source field: **EXEC CICS INQUIRE HOST**
TCPIPSERVICE name	The name of the TCPIPSERVICE definition that specifies the inbound port to which this virtual host relates. If this definition is not given, the virtual host relates to all TCPIPSERVICE definitions. Source field: **EXEC CICS INQUIRE HOST() TCPIPSERVICE**
Virtual Host Enable Status	Whether the virtual host is enabled or disabled, meaning that the URIMAP definitions which make up the virtual host can or cannot be accessed by applications. Source field: **EXEC CICS INQUIRE HOST() ENABLESTATUS**

Web Services report

The web services report is produced using a combination of **EXEC CICS INQUIRE WEBSERVICE** and **EXEC CICS EXTRACT STATISTICS WEBSERVICE RESID()** commands.

The statistics data is mapped by the DFHPIWDS DSECT.

Table 271. Fields in the WEBSERVICEs report

Field Heading	Description
WEBSERVICE Name	The name of the web service. Source field: **EXEC CICS INQUIRE WEBSERVICE**
WEBSERVICE Status	The state of the web service. Source field: **EXEC CICS INQUIRE WEBSERVICE() STATE**
Last modified date and time	The time, in milliseconds since 00:00 on January 1st 1900, that the deployed WSBind file on z/OS UNIX was last updated. Source field: **EXEC CICS INQUIRE WEBSERVICE() LASTMODTIME**
URIMAP name	The name of a dynamically installed URIMAP resource definition, if there is one that is associated with this web service. Source field: **EXEC CICS INQUIRE WEBSERVICE() URIMAP**
PIPELINE name	The name of the PIPELINE resource that contains this web service resource. Source field: **EXEC CICS INQUIRE WEBSERVICE() PIPELINE**
web service description (WSDL)	The file name of the web service description (WSDL) file associated with the web service resource. Source field: **EXEC CICS INQUIRE WEBSERVICE() WSDLFILE**
web service binding file	The file name of the web service binding file associated with the web service resource. Source field: **EXEC CICS INQUIRE WEBSERVICE() WSBIND**

Table 271. Fields in the WEBSERVICEs report (continued)

Field Heading	Description
web service WSDL binding	The WSDL binding represented by the web service. This binding is one of (potentially) many that appear in the WSDL file. Source field: **EXEC CICS INQUIRE WEBSERVICE() BINDING**
Endpoint	The URI specifying the location on the network (or endpoint) of the web service, as defined in the Web service description. Source field: **EXEC CICS INQUIRE WEBSERVICE() ENDPOINT**
Validation	Indicates whether full validation of SOAP messages against the corresponding schema in the web service description is specified. Source field: **EXEC CICS INQUIRE WEBSERVICE() VALIDATIONST**
Program interface	For a service provider, indicates whether CICS passes data to the target application program in a COMMAREA or a channel. Source field: **EXEC CICS INQUIRE WEBSERVICE() PGMINTERFACE**
Program name	The name of the target application program. Source field: **EXEC CICS INQUIRE WEBSERVICE() PROGRAM**
Container	When CICS passes data to the target application program in a channel, indicates the name of the container that holds the top level data. Source field: **EXEC CICS INQUIRE WEBSERVICE() CONTAINER**
WEBSERVICE use count	The number of times this web service was used to process a web service request. Source field: PIW-WEBSERVICE-USE-COUNT

IBM MQ Connection report

The IBM MQ Connection report is produced using the **EXEC CICS EXTRACT STATISTICS MQCONN** command. The statistics data is mapped by the **DFHMQGDS DSECT**.

Table 272. Fields in the IBM MQ Connection report

Field Heading	Description
MQCONN name	The name of the installed MQCONN definition for the CICS region, which defines the attributes of the connection between CICS and IBM MQ. Source field: MQG-MQCONN-NAME
IBM MQ Connection Status	The status of the connection between CICS and IBM MQ. Source field: MQG-CONNECTION-STATUS
IBM MQ connect date / time	The date and time when the most recent connection between CICS and IBM MQ was started. Source field: MQG-CONNECT-TIME-LOCAL
Mqname	The name of the IBM MQ queue manager or queue-sharing group that is specified in the MQNAME attribute of the installed MQCONN definition for the CICS region. CICS uses this as the default for the connection. Source field: MQG-MQNAME

Table 272. Fields in the IBM MQ Connection report (continued)

Field Heading	Description
IBM MQ Queue Manager Name	The name of the IBM MQ queue manager to which CICS is currently connected. If CICS is not connected to IBM MQ, this field is blank. Source field: MQG-QMGR-NAME
Resync group member	This shows whether the MQCONN definition for the CICS region specifies resynchronization if there are indoubt units of work when CICS reconnects to IBM MQ. Source field: MQG-RESYNCMEMBER
IBM MQ Release	The release of IBM MQ that is connected to CICS. Source field: MQG-MQ-RELEASE
Initiation Queue Name	The name of the default initiation queue for the connection between CICS and IBM MQ. Source field: MQG-INITIATION-QUEUE
Number of current tasks	The number of current tasks that have issued an MQI call. Source field: MQG-TTasks
Number of futile attempts	A count of the number of MQI calls made while the connection status is “not connected”. This is reset to zero when the connection is established. Source field: MQG-TFutileAtt
Total number of API calls	The total number of MQI calls since the connection was made. Source field: MQG-TApi
Number of API calls completed OK	The total number of calls that have completed successfully. Source field: MQG-TApiOk
API Crossing Exit Name	The name of the API-crossing exit, which is always CSQCAPX. Source field: not applicable
API Crossing Exit Concurrency Status	Whether the API-crossing exit is defined as QUASIRENT, THREADSAFE, or REQUIRED. Source field: EXEC CICS INQUIRE PROGRAM CONCURRENCY
Number of OPEN requests	The number of MQOPEN calls issued. Source field: MQG-TOPEN
Number of CLOSE requests	The number of MQCLOSE calls issued. Source field: MQG-TCLOSE
Number of GET requests	The number of MQGET calls issued. Source field: MQG-TGET
Number of GETWAIT requests	The number of MQGET calls issued with the MQGMO_WAIT option. Source field: MQG-TGETWAIT
Number of GETWAITs that waited	The number of MQGET calls issued with the MQGMO_WAIT option that waited for a message. Source field: MQG-TWaitMsg

Table 272. Fields in the IBM MQ Connection report (continued)

Field Heading	Description
Number of PUT requests	The number of MQPUT calls issued. Source field: MQG-TPUT
Number of PUT1 requests	The number of MQPUT1 calls issued. Source field: MQG-TPUT1
Number of INQ requests	The number of MQINQ calls issued. Source field: MQG-TINQ
Number of SET requests	The number of MQSET calls issued. Source field: MQG-TSET
Number of internal MQ calls	The number of internal MQ calls made. Source field: MQG-TCall
Number that completed synchronously	The total number of calls completed synchronously. Source field: MQG-TCallSyncComp
Number that needed I/O	The total number of calls that needed I/O. Source field: MQG-TCallIO
Number of calls with TCB switch	The number of API calls with a TCB switch. Source field: MQG-TSubtasked
Number of indoubt units of work	The number of indoubt UOWs at adapter startup. Source field: MQG-TIndoubtUOW
Number of unresolved units of work	The number of UOWs that were in doubt at adapter startup, and that have not been resolved because of a CICS cold start. Source field: MQG-TUnresolvedUOW
Number of resolved committed UOWs	The number of UOWs that were in doubt at adapter startup that have now been resolved by committing. Source field: MQG-TResolveComm
Number of resolved backout UOWs	The number of UOWs that were in doubt at adapter startup that have now been resolved by backing out. Source field: MQG-TResolveback
Number of Backout UOWs	The total number of backed out UOWs. Source field: MQG-TBackUOW
Number of Committed UOWs	The total number of committed UOWs. Source field: MQG-TCommUOW
Number of tasks	The total number of tasks. Source field: MQG-TTaskend
Number of Single Phase Commits	The total number of single-phase commits. Source field: MQG-TSPComm

Table 272. Fields in the IBM MQ Connection report (continued)

Field Heading	Description
Number of Two Phase Commits	The total number of two-phase commits. Source field: MQG-T2PComm
Number of CB requests	The number of MQCB calls issued. Source field: MQG-TCB
Number of msgs consumed	The number of messages passed to callback routines. Source field: MQG_TCONSUME
Number of CTL requests	The number of MQCTL calls issued. Source field: MQG-TCTL
Number of SUB requests	The number of MQSUB calls issued. Source field: MQG-TSUB
Number of SUBRQ requests	The number of MQSUBRQ calls issued. Source field: MQG-TSUBRQ
Number of STAT requests	The number of MQSTAT calls issued. Source field: MQG-TSTAT
Number of CRTMH requests	The number of MQCRTMH calls issued. Source field: MQG-TCRTMH
Number of DLTMH requests	The number of MQDLTMH calls issued. Source field: MQG-TDLTMH
Number of SETMP requests	The number of MQSETMP calls issued. Source field: MQG-TSETMP
Number of INQMP requests	The number of MQINQMP calls issued. Source field: MQG-TINQMP
Number of DLTMP requests	The number of MQDLTMP calls issued. Source field: MQG-TDLTMP
Number of MHBUF requests	The number of MQMHBUF calls issued. Source field: MQG-TMHBUF
Number of BUFMH requests	The number of MQBUFMH calls issued. Source field: MQG-TBUFMH

IBM MQ Monitors report

The IBM MQ Monitors report is produced using the **EXEC CICS EXTRACT STATISTICS MQMONITOR** command. The statistics data is mapped by DFHMQRDS/DFHMQRPS/DFHMQRKS.

A record is produced for each MQMONITOR resource installed in the CICS region.

Table 273. Fields in the IBM MQ Monitors report

DFHSTUP name	Description
Monitor name	The name of an installed MQMONITOR definition in the CICS region. Source field: MQR-NAME
Autostatus	The MQ monitor autostart setting indicator. **YES** The MQ monitor is started automatically when the connection to the IBM MQ queue manager is established. **NO** The MQ monitor is not started automatically. Source field: EXEC CICS INQUIRE MQMONITOR() AUTOSTART(cvda)
Enablestatus	The status of the MQMONITOR resource: **ENABLED** The MQMONITOR resource is enabled for use. **ENABLING** The MQMONITOR resource is enabling. **DISABLED** The MQMONITOR resource is disabled. **DISABLING** The MQMONITOR resource is disabling. **DISCARDING** The MQMONITOR resource is being discarded. Source field: EXEC CICS INQUIRE MQMONITOR() ENABLESTATUS(cvda)
Monitor Status	The status of the MQ monitor: **STARTED** The MQ monitor is started. **STARTING** The MQ monitor is starting. **STOPPED** The MQ monitor is stopped. **STOPPING** The MQ monitor is stopping. Source field: MQR-MONSTATUS
MQ Queue name	The name of the MQ queue monitored by the MQ monitor. Source field: MQR-QNAME

Table 273. Fields in the IBM MQ Monitors report (continued)

DFHSTUP name	Description
Monitor userid	The user ID used by the transaction monitoring the MQ queue. Source field: MQR-MONUSERID
Userid	The user ID to be used by the MQMONITOR transaction when issuing the start request for the application transaction if a suitable user ID is not available. Source field: MQR-USERID
Transaction Id	The ID of the CICS transaction used by the MQ monitor. Source field: MQR-TRANID
Task number	Task number of the transaction monitoring the MQ queue. Source field: MQR-TASKNUM
Number of OPEN requests	The number of MQOPEN calls issued. Source field: MQR-TOPEN
Number of CLOSE requests	The number of MQCLOSE calls issued. Source field: MQR-TCLOSE
Number of GET requests	The number of MQGET calls issued. Source field: MQR-TGET
Number of GETWAIT requests	The number of MQGET calls issued with the MQGMO_WAIT option. Source field: MQR-TGETWAIT
Number of PUT requests	The number of MQPUT calls issued. Source field: MQR-TPUT
Number of PUT1 requests	The number of MQPUT1 calls issued. Source field: MQR-TPUT1
Number of INQ requests	The number of MQINQ calls issued. Source field: MQR-TINQ
Number of INQL requests	The number of MQINQL calls issued. Source field: MQR-TINQL
Number of SET requests	The number of MQSET calls issued. Source field: MQR-TSET
Number of Committed UOWs	The number of UOWs that were in doubt at adapter startup that have now been resolved by committing. Source field: MQR-TCOMMUOW

Table 273. Fields in the IBM MQ Monitors report (continued)

DFHSTUP name	Description
Number of Backout UOWs	The number of UOWs that were in doubt at adapter startup that have now been resolved by backing out. Source field: MQR-TBACKUOW
Number of OTHER requests	The number of other calls. Source field: MQR-TOTHER

XMLTRANSFORMs report

The XMLTRANSFORMs report shows information and statistics about XMLTRANSFORM resources. The XMLTRANSFORM resource defines where the XML binding is located on z/OS UNIX and its status. CICS dynamically creates an XMLTRANSFORM resource when you install a BUNDLE or ATOMSERVICE resource.

This report is produced using a combination of **EXEC CICS INQUIRE XMLTRANSFORM** and **EXEC CICS EXTRACT STATISTICS** commands. The statistics data is mapped by the DFHMLRDS DSECT.

Table 274. Fields in the XMLTRANSFORMs report

Field Heading	Description
XMLTRANSFORM Name	The name of the XMLTRANSFORM resource definition. Source field: **EXEC CICS INQUIRE XMLTRANSFORM**
XMLTRANSFORM Enable Status	The status of the XMLTRANSFORM resource definition. Source field: **EXEC CICS INQUIRE XMLTRANSFORM () ENABLESTATUS**
XMLTRANSFORM XSDBIND File	The location of the xsdbind file in z/OS UNIX. Source field: **EXEC CICS INQUIRE XMLTRANSFORM () XSDBIND**
XMLTRANSFORM XML Schema File	The location of the XML schema file in z/OS UNIX. Source field: **EXEC CICS INQUIRE XMLTRANSFORM () XMLSCHEMA**
XMLTRANSFORM Msg Validation	The status of XML validation. Source field: **EXEC CICS INQUIRE XMLTRANSFORM () VALIDATIONST**
XMLTRANSFORM Use Count	The number of times that the xsdbind file has been used for data transformation. Source field: MLR-XMLTRNFM-USE-COUNT

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Programming interface information

CICS supplies some documentation that can be considered to be Programming Interfaces, and some documentation that cannot be considered to be a Programming Interface.

Programming Interfaces that allow the customer to write programs to obtain the services of CICS Transaction Server for z/OS, Version 5 Release 4 are included in the following sections of the online product documentation:

- Developing applications
- Developing system programs
- RACF security overview
- Developing for external interfaces
- Reference: application developmenth
- Reference: system programming
- Reference: connectivity

Information that is NOT intended to be used as a Programming Interface of CICS Transaction Server for z/OS, Version 5 Release 4 , but that might be misconstrued as Programming Interfaces, is included in the following sections of the online product documentation:

- Troubleshooting and support
- Reference: diagnostics

If you access the CICS documentation in manuals in PDF format, Programming Interfaces that allow the customer to write programs to obtain the services of CICS Transaction Server for z/OS, Version 5 Release 4 are included in the following manuals:

- Application Programming Guide and Application Programming Reference
- Business Transaction Services
- Customization Guide
- C++ OO Class Libraries
- Debugging Tools Interfaces Reference
- Distributed Transaction Programming Guide
- External Interfaces Guide
- Front End Programming Interface Guide
- IMS Database Control Guide
- Installation Guide
- Security Guide
- Supplied Transactions
- CICSPlex SM Managing Workloads
- CICSPlex SM Managing Resource Usage
- CICSPlex SM Application Programming Guide and Application Programming Reference
- Java Applications in CICS

If you access the CICS documentation in manuals in PDF format, information that is NOT intended to be used as a Programming Interface of CICS Transaction Server for z/OS, Version 5 Release 4 , but that might be misconstrued as Programming Interfaces, is included in the following manuals:

- Data Areas
- Diagnosis Reference
- Problem Determination Guide
- CICSPlex SM Problem Determination Guide

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