IBM Z OMEGAMON for CICS
5.5.0

User's Guide

Note

Before using this information and the product it supports, read the information in “Notices” on page 383.

Notices

This edition applies to Version 5, Release 5 of IBM® Tivoli® OMEGAMON® XE for CICS on z/OS (program number 5698-T07) and to all subsequent releases and modifications until otherwise indicated in new editions.

Contents

Figures

Tables

Chapter 1. Introducing IBM Z OMEGAMON for CICS

IBM Z OMEGAMON for CICS® is a remote monitoring agent that runs on z/OS® operating systems.

It helps you anticipate performance problems and warns you when critical events take place on your site's CICS environments by offering a central point of management for CICS Transaction Server instances and CICSplex groups.

When running under the Tivoli Enterprise Portal, IBM Z OMEGAMON for CICS offers a central point of management for CICS Transaction Server and provides a comprehensive means for gathering the information you need to detect and prevent problems within your CICS region or CICSplex.

This data enables you to perform the following tasks:

- Collect and analyze reliable, up-to-the-second data that allows you to make faster, better informed, operating decisions
- Manage all CICS regions from a single point to identify problems at any time
- Balance workloads across various regions
- Track performance against goals
- Exploit user-defined and predefined situations based on thresholds to raise different types of alerts

IBM Z OMEGAMON for CICS provides data on both individual CICS regions and logical grouping of CICS regions in a CICSplex. You can classify CICS regions into a CICSplex instances using simple rules or you can reuse definitions you might already have if you use CICSPlex® System Manager.

You can view the data provided by IBM Z OMEGAMON for CICS through various user interfaces:

- OMEGAMON enhanced 3270 user interface
- Tivoli Enterprise Portal
- OMEGAMON for CICS (3270)

The OMEGAMON enhanced 3270 user interface enables you to monitor the health and welfare of your systems and subsystems, execute deep-dive diagnosis on operational problems, and provides you with a method to diagnose and resolve problems when alternative interfaces are not accessible. The OMEGAMON enhanced 3270 user interface provides CICSplex reporting for service level and transaction analysis.

New and migrated features allow users of OMEGAMON for CICS (3270) to migrate to the XE architecture without losing significant function.

IBM Z OMEGAMON for CICS has the capability to monitor CICS Transaction Gateway for z/OS. Support is provided for CICS Transaction Gateway in the form of a monitoring component, IBM Z OMEGAMON for CICS TG, of the base IBM Z OMEGAMON for CICS product.

Used in conjunction with other OMEGAMON XE monitoring products, the data, analyses, and alerts presented by IBM Z OMEGAMON for CICS help you develop a holistic view of your entire computing enterprise from a single console.

This section explains how IBM Z OMEGAMON for CICS works, describes the resources it offers, provides examples of how it can be used to monitor, analyze, and manage operating systems, workloads, and shared resources in a sysplex environment, and describes new features in this release

How IBM Z OMEGAMON for CICS works

IBM Z OMEGAMON for CICS monitoring agents collect sysplex and LPAR-level performance data on z/OS systems.

The data can be viewed through a graphical user interface called Tivoli Enterprise Portal. A subset of data can also be viewed through the OMEGAMON enhanced 3270 user interface.

The IBM Z OMEGAMON for CICS product takes advantage of the Tivoli Management Services infrastructure. Tivoli Management Services components provide security, data transfer and storage, notification mechanisms, user interface presentation, and communication services for a number of products, including IBM Tivoli Monitoring and OMEGAMON XE monitoring agents, in an agent-server-client architecture.

For more information on the Tivoli Management Services components, see the *OMEGAMON shared documentation Version 6.3.0 Fix Pack 2.*

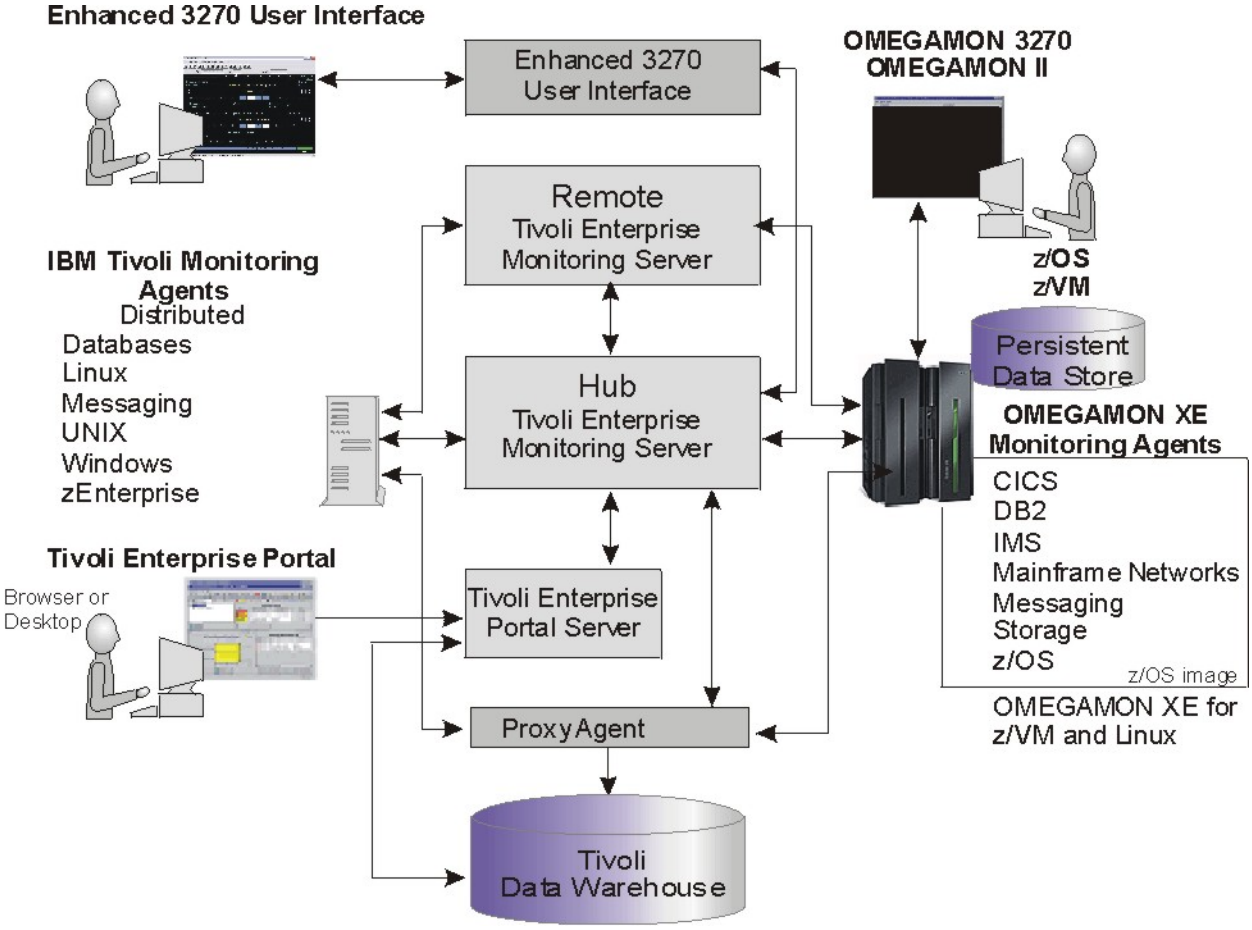


Figure 1. Tivoli Management Services

In the Tivoli Enterprise Portal, real time and historical data collected by IBM Z OMEGAMON for CICS monitoring agents is displayed in tabular and graphic *views* in a set of predefined *workspaces*. A sample workspace is shown in Figure 2 on page 3.

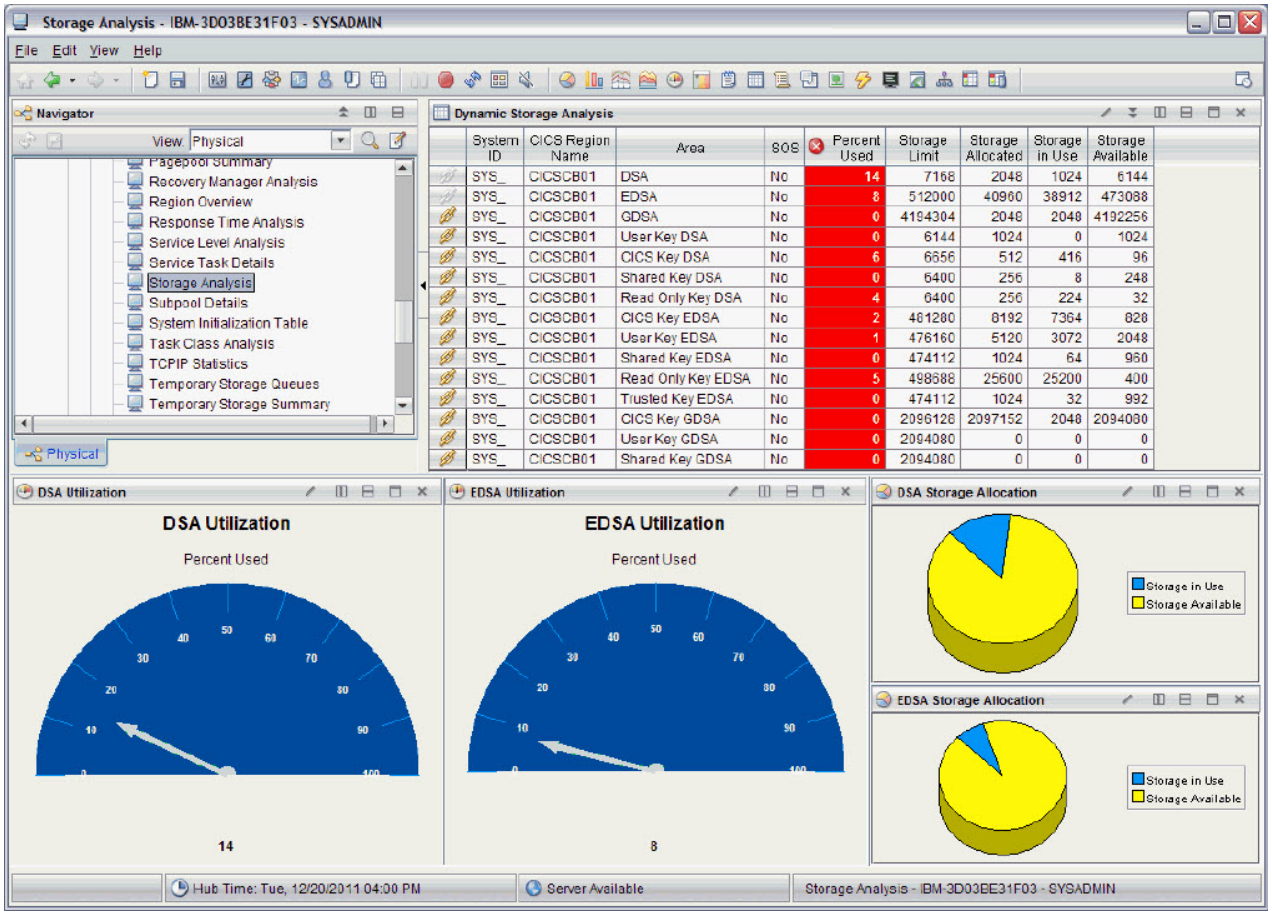


Figure 2. Sample IBM Z OMEGAMON for CICS workspace

When you open a workspace, Tivoli Enterprise Portal retrieves monitored data from the monitoring agents through the hub monitoring server and sends the results to the workspace. Chart and table views in the workspace use *queries* to specify what data the Tivoli Enterprise Portal requests.

The characteristics or properties of the logical and physical objects monitored by IBM Z OMEGAMON for CICS (for example, the amount of virtual storage allocated to a task) are known as *attributes*. These attributes are used to define the queries that specify the data to be displayed in the workspaces.

With the proper user authority, you can tailor these views to display critical or warning indicators when monitored values reach specified thresholds, and to filter incoming data so you see only the information you are interested in at any given time. You can add additional views to existing workspaces or create your own workspaces and define your own queries using OMEGAMON on z/OS attributes.

Attributes are also used to describe *situations*, or conditions, that can trigger events. When situation events occur, event indicators are displayed in the Tivoli Enterprise Portal Navigator view. Situations can also trigger automated actions.

You can link from an event indicator in the Navigator Physical view to a situation event workspace that provides information about conditions prevailing at the time the event occurred and about current conditions, as well as expert advice on how to handle the situation. IBM Z OMEGAMON for CICS provides a set of predefined situations that you can run to monitor a wide range of conditions. You can also create your own situations using the IBM Z OMEGAMON for CICS attributes.

Resources provided by IBM Z OMEGAMON for CICS

The following sections provide an overview of the resources provided by IBM Z OMEGAMON for CICS.

Attributes

Attributes are characteristics or properties of the logical and physical objects monitored by IBM Z OMEGAMON for CICS.

IBM Z OMEGAMON for CICS monitors more than 100 groups of attributes, providing a wealth of CICSplex and system-level data. You can use these attributes to tailor the information presented in workspaces, or to define situations that target specific thresholds, events, or performance problems you want to monitor.

Related attributes are organized into groups (which are referred to as *tables* in the context of historical data collection). These attributes are used to define the *queries* that collect the information displayed in tables and charts in the IBM Z OMEGAMON for CICS workspaces and to create *situations* that trigger alerts and automated actions in response to specified conditions. For example, you can create situations that monitor for conditions with a specific severity. When the values for attributes of alerts relayed to a Tivoli Monitoring Server match the values you specify in situations, the managed objects associated with the situations change appearance, alerting you to problems. When building situations, specify attributes using the following format:

```
Group_Name.Attribute_Name
```

IBM Z OMEGAMON for CICS provides a variety of default workspaces. A table view within a workspace corresponds to a group of attributes; the columns in the table view correspond to the attributes available for the creation of situations.

Managing workspaces

A workspace is the working area of the Tivoli Enterprise Portal, divided into panes to show different types of views.

Within a given workspace, information is displayed in tabular form. Tivoli Enterprise Portal refers to this tabular format for information as a table view. Information can also be displayed in the workspace as a chart, graph, or other format you can specify.

A view is a windowpane, or frame, in the workspace containing a chart or table showing data from a Tivoli agent. Non-data views, such as the browser view and terminal view, are also available. You can increase the number of views in a workspace by splitting a view into two separate views.

The data for a table or chart view is chosen by the query it uses. The query specifies the attributes to include in the view. Although each view uses one query, you can add more views to the workspace, and each can use a different query. The queries must be for the same type of agent unless you have IBM Tivoli OMEGAMON DE on z/OS. You can also include queries of global attributes, such as the Managed System attributes, and, if you have written custom SQL queries, ODBC data sources.

Every workspace has a set of properties associated with it: general properties that apply to the entire workspace and properties for each view in the workspace. Use the Properties Editor to customize the workspace characteristics and to change the style and content of each view.

You can also keep the original workspace intact and create another workspace for the same item in the Navigator, customizing it for the types of views you want and the information reported in charts and tables.

Changes you make to a workspace are available only to your user ID. System administrators can work in administration mode to create and edit workspaces that can be available to all users on the managed network.

The link feature enables you to define a link from one workspace to another. Then you can quickly jump to a related or more detailed workspace to investigate system conditions.

The simplest type of a link originates from the Navigator item. When you right-click that Navigator item, the menu shows the defined links for the item. Select one to open the linked workspace.

A more specific link originates from a table or from a pie or bar chart data, and points to another workspace. Information from one of the attributes in the selected row, bar, or pie segment is used to determine the content of the target workspace.

You can also define more complex links and use the predefined links that come with IBM Z OMEGAMON for CICS.

These are some key points about workspaces:

- As you select items in the Navigator, the workspace presents views pertinent to your selection. Each workspace has at least one view.
- Every workspace has a set of properties associated with it. You can customize the workspace by working in the Properties Editor to change the style and content of each view.
- Another way to customize the workspace is to change the type of view or to add views to the workspace.
- Always save your changes before moving to a new workspace. Otherwise, the changes you make to the workspace are lost.
- Some workspaces, such as those dedicated to tracking of metrics, are not available in selection menus and lists when metrics do not exist in the monitoring environment.

Each item in the Navigator has its own default workspace that opens when the item is selected, and has others you can access through a menu (and the View menu) or links.

As you select items, the workspace changes to the default workspace for that item, which comprises views relevant to that level of the Navigator.

Customizing workspaces

Every workspace has a set of properties associated with it. You can customize the workspace by working in the Properties Editor to change the style and content of each view. Another way to customize the workspace is to change the type of view or to add views to the workspace. Be aware that the changes you make to the workspace are lost when you switch to another workspace unless you save them first.

To customize a workspace, perform these steps:

1. Open a workspace. Click **File** > **Save as**, and give the new workspace a name. You can now modify the workspace.
2. Select one of the panes in the workspace that you want to change from, for example, a bar chart to a pie chart.
3. Click the Pie chart icon in the toolbar. The result is that a pie chart replaces the bar chart in the pane that you have selected.
4. Right-click the new chart, and click **Properties**. The new view shows the Properties Editor, where you can add a query, filters or change the style. For this example, click **Style**.
5. From the Style pane, you can change the name of the header, footer, values, legends and categories. For the header, for example, you can choose to display or hide the header, change the text, font and its font size. When you have completed the modifications, click **Apply**.
6. You can view the effects of your changes through the **Preview** pane at the top of the Properties Editor.
7. When you have finished, click **OK** to save your changes.

Note: If you enter a symbol in the header it can cause unpredictable results.

Formats of information

Tivoli Enterprise Portal information can be presented to you in any of the following views:

- Table view
- Pie chart view
- Bar chart view
- Plot chart view
- Linear gauge view
- Circular gauge view

- Notepad view
- Event console view, which shows the status of the situations associated with the system.
- Take Action view, which is used to send a command to the system.
- Terminal view, which enables you to start a 3270 or 5250 work session.
- Browser view, which permits you to open a browser to see HTML pages and Web sites.
- (OMEGAMON DE on z/OS only.) Topology view, which lets you choose a background picture or map and overlay it with icons representing Navigator items.

Associating workspaces with attributes

There is a direct relationship between attributes and workspaces. An attribute group typically corresponds to a table view within a named workspace and attribute items correspond to columns in the table view.

Each Tivoli Enterprise Portal workspace displays real time information for many of the attributes. The information is available to you, independent of whether you are using IBM Z OMEGAMON for CICS to monitor situations.

Defining workspace properties

Every workspace has a set of properties associated with it. You can customize the workspace by working in the Properties Editor to change the style and content of each view. Changes you make to workspace properties, such as adding or editing a view are only temporary. They will be lost when you exit Tivoli Enterprise Portal unless you save the workspace.

A workspace can include some or all of the following properties:

Query
Specify what data you want displayed in a chart or table.

Filters
Refine the view by filtering out unwanted data from a chart or table.

Thresholds
Establish threshold values and color indicators for a table view.

Configuration
Specify the script to run or the connection to make when you open the terminal view.

Style
Change the behavior and appearance of the view.

Using IBM Z OMEGAMON for CICS information

You can view information about each managed system that you are monitoring. Use this information to perform the following tasks:

- Monitor the performance of each managed system, helping you to identify bottlenecks and evaluate tuning decisions
- Select the most effective threshold values for situations you create
- Review status information when a change in the state of a given resource occurs, for example, from OK to Warning or Critical

Investigating a situation event

When the conditions of a situation have been met, the situation evaluates to True, causing a situation event indicator to be displayed in the Navigator. You can investigate the situation event by opening its workspace.

The situation event workspace shows two table views, one with the values of the attributes when the situation evaluated to True, and the other with the attributes' current values.

The situation event workspace can also display a text view with any expert advice written by the author of the situation, and the Take Action view so you can send a command to the application started on that system.

Filtering, sorting, adding, and deleting workspaces

Filtering

To manually set up filtering for a given table view, place the cursor on the table view, press the right mouse button, and click **Properties**. From the displayed dialog box, click the **Filters** tab. Here you can select the columns to display, as well as set up the criteria for which rows to display. To save your filtering specifications, you must save the workspace before exiting.

Sorting

Sorting is handled by clicking a column heading. Click once and the view is sorted in ascending order. Click a second time to resort the view into descending order. A third click returns you to the report's default sort.

Adding to your favorites list

When using Tivoli Enterprise Portal in browser mode, you can start it from any workstation by entering the URL for the web server where the browser mode client is installed. Each Tivoli Enterprise Portal workspace also has a URL so that you can save the workspace to your Favorites list or specify it as your home page.

Deleting your workspace

From the Tivoli Enterprise Portal, click anywhere within the workspace. From the File menu, click **Delete workspace**. This removes any workspace that you have defined. You are not allowed to delete one of the predefined workspaces.

Linking to OMEGAMON for CICS 3270 interface workspaces

Context sensitive linking is provided from an IBM Z OMEGAMON for CICS workspace to an OMEGAMON for CICS (3270) panel. This feature uses the dynamic terminal integration support that is implemented in IBM Tivoli Monitoring. Dynamic terminal integration support is an extension to the Tivoli Enterprise Portal that provides seamless access to 3270 based applications through context sensitive links.

The data that is used for the connection to the target workspaces is gathered by IBM Z OMEGAMON for CICS at runtime during the autodiscovery process. IBM Z OMEGAMON for CICS uses the updated Service Task Details query, which provides the required data, that includes the host name and port number for the terminal emulator connection.

You can override the discovery default settings during your initial configuration of IBM Z OMEGAMON for CICS using the `RTE_TN3270_DXL_HOSTADDRESS` parameter in PARMGEN or in the process of executing a link once you have defined it. See "Common parameters" in the Reference section of the *OMEGAMON shared documentation Version 6.3.0 Fix Pack 2* for more information about `RTE_TN3270_DXL_HOSTADDRESS`.

When you click a link icon in one of the eligible workspaces, and select a 3270 view, the OMEGAMON for CICS (3270) interface is displayed enabling you to examine much more historical data (from 250 to 300 historical data items) than is available in the Tivoli Enterprise Portal workspace. Each of the predefined workspace links to a 3270 session has an associated sample script. You should review these scripts prior to using them in your environment.

These are the predefined links to a 3270 session:

- From the Transaction Analysis workspace to the Transaction Details in 3270 and Online Data Viewing in 3270 views
- From the Online Data Viewing workspace to the Online Data Viewing in 3270 view
- From the File Control Analysis workspace to the File Control Analysis in 3270 view.
- From the Message Queuing Analysis workspace to the Message Queuing Analysis in 3270 view
- From the Response Time Analysis workspace to the Response Time Analysis in 3270 view
- From the VSAM Analysis workspace to the VSAM Analysis in 3270 view

- From the Transient Data Queues workspace to the Transient Data Queues in 3270 view
- From the Temporary Storage Queues workspace to the Temporary Storage Queues in 3270 view

You can use the links, workspaces, and scripts as a basis for any further creation or modification.

See the Tivoli Enterprise Portal help for more information on the dynamic terminal integration support and how to use predefined links with workspaces.

Creating or modifying links for the OMEGAMON for CICS 3270 session

You can create new links or modify the predefined links with dynamic terminal integration support. The links that are used are similar to other links in the Tivoli Enterprise Portal, and you follow the same rules and processes for their creation and modification. Any value that is passed on the link is then passed to the terminal emulator session and overrides any value that might have been sent by the query.

Use these values to create new links or modify existing links:

Table 1. The link values to create new links or modify existing links for dynamic terminal integration support

Link name	Default setting	Description
KOCCIAPPL		The APPLID of the 3270 session.
TN3270PORT	23	The port number of the 3270 session.
HOSTIPADDR		The host name of the 3270 session.
LUGROUP		The LU group that is required for the connection to the 3270 session.
KOCCIDATA		The CICS job name.
EMU_TRMTY	3270, with 24 rows, and 80 columns	The type of terminal session.
USSCHECK	VAMP (change to Application Required)	The string to identify the log on dialog; change to a value that is appropriate for your log on screen.
USERD8		The context value that is passed from the source workspace; this is up to eight characters in length.
USERD64		The context value that is passed from the source workspace; this is up to 64 characters in length.

When the terminal emulator initially connects to the host system, it is possible that the initial terminal panel is not the expected log on panel. This might occur, if you have different welcome/log on panels defined for different systems. Attempting to log on to a 3270 session with an unexpected welcome/log on panel might result in a log on failure. It is possible to include a check in the log on script for a suitable log on panel before the script attempts to log onto the 3270 session. This check uses the USSCHECK field to specify a text string to be searched for on the log on panel before the attempt is made to log on. The USSCHECK value can be specified on the link. The predefined scripts provide a commented-out example of how to use the USSCHECK field in this manner. To make use of this, the script must be modified to uncomment this block of code, and a suitable value must be specified on the link.

Using a link for the OMEGAMON for CICS 3270 session

The process to run a link once you have defined it is very similar to that for any other link between a workspace in the Tivoli Enterprise Portal, but now you must enter a user ID and password to complete the log on to a 3270 session.

To use a link for a 3270 session, follow this process:

- Select the Transaction Details in 3270 or Online Data Viewing in 3270 link from the Transaction Analysis target workspace. The query that is associated with the terminal adapter for the link runs and gets additional values for the script from IBM Z OMEGAMON for CICS. For example, the IP address and port number of the IBM Z OMEGAMON for CICS interface.

  Depending on your selection , the Transaction Details in 3270 or Online Data Viewing in 3270 terminal view opens, but is not visible at this time.
- The Terminal session user credentials dialog prompts you for the following information:
  - Host session User ID
  - Password.

  Enter your credentials and click **OK**.

  Note: If you want to connect to a *different* IBM Z OMEGAMON for CICS instance, you are prompted again for the user ID and password.

  You can optionally select the **Store these values for this target** and **Use these credentials for all targets** check boxes to avoid entering your values again. If you want override the values that are returned by the query, select **Edit default values** and enter your values in the **Host**, **Port**, and **LUGroup** fields.
- The script is run, using the values from your link and query.

  The terminal adapter connects to the Transaction Details in 3270 or Online Data Viewing in 3270 terminal view with the IP address and the task details or the historical transaction data for the linked transaction.

Using the terminal emulator query

The extended version of the CICSSER (CICS Service Task Details) query is used for dynamic XE to 3270 linking.

The query is used by the terminal emulator when it is driven by a link to request data from IBM Z OMEGAMON for CICS that cannot be provided by the link itself. This data is used either by the terminal emulator to create a connection to the OMEGAMON for CICS 3270 session, with the host name and port number, or it can be used in a script, with APPLIDs. The query is driven by the Tivoli Enterprise Portal client before the terminal emulator is connected to the host, and expects one or more values to be passed to it from the link.

The Tivoli Enterprise Portal client already contains a terminal emulator. You can configure this emulator to emulate numerous terminal types, specify the host name and port number to connect to, and specify a connection for a script. You can have some of the values read dynamically from a query, when the terminal emulator is launched, and also add new attributes.

The Properties dialog for the terminal emulator differs slightly from that of the preexisting terminal emulator. The **Connection** tab, which enables you to specify the host name, port number, and terminal type, specifies whether these fields should be enabled or the values should be used from a query (the result of a link) before the emulator is started.

When the values are used by a script, a dialog is displayed that prompts you for a user ID and password. The default setting uses the specified host, port, and terminal type. The **Query** tab in the Properties dialog, enables you to select a query that you want to associate with the terminal view. The values from this tab are used if you select the appropriate radio button in the **Connection** tab.

See the appropriate *IBM Tivoli Monitoring* documentation or Tivoli Enterprise Portal online help for further details on the Properties Editor and the corresponding tabs.

Using the terminal emulator script

IBM Z OMEGAMON for CICS provides scripts that are driven when the terminal emulator session is used by the dynamic XE to 3270 OMEGAMON linking feature.

The product provided scripts are sample scripts that you can use many times without modification, however, in some environments you might have to make small changes especially with the initial log on panel.

The scripts that you use are created by recording key presses in the **Scripts** tab of a terminal emulator, and then, editing the generated script. This script has hard coded values for user ID and passwords, but you can replace these variables, by editing the generated script, or writing a script in its entirety. Once you have created a sample script, you can edit it to read the variables from the values that are returned by your query. You can use these values in place of the hard coded values.

The following example returns the OMEGAMON for CICS (3270) APPLID.

To read a value that has been read from the query, use the *getProperty()* function:

```
CLASSIC_APPLID = getProperty(“CICS_AGT_AP”)
```

This is an example of a log on:

```
LOGONCMD = “LOGON (“ + CLASSIC_APPLID + “)”;
SetString(LOGONCMD, 1, 2);
SendKey(“ENTER”);
```

This is an example of the CICS Transaction Detail script:

```
//checkUSS = getProperty("TRM_QUERYUSSCHECK");
//ussPos = findString(checkUSS);
//if (ussPos < 0)
//{
// msgBox("Unrecognized Logon Panel");
// disconnect();
// return;
//}
// now that we have a suitable screen, check for the required parameters
//
// The APPLID of Omegamon Classic is referenced by symbol VTAMAPPLID
// and the CICS region JOBNAME is referenced by symbol CICSNAME
//
APPLID = getProperty("TRM_QUERYKOCCIAPPL");
CICSNAME = getProperty("TRM_QUERYCICSNAME");
if (APPLID == "")
{
msgBox("No classic VTAM APPLID discovered, check classic status");
disconnect();
return;
}
if (CICSNAME == "")
{
msgBox("No CICS job name discovered, check OMEGAMON status");
disconnect();
return;
//
// clear the screen before we log in
//
SendKey("Clear");
WaitForScreen(1000);
//
// Build the LOGON command and send it.
//
LOGONCMD = "LOGON APPLID(" + APPLID + ") DATA(CICS=" + CICSNAME + ")";
SetField(LOGONCMD);
SendKey("ENTER");
WaitForScreen();
//
// Retrieve userid and password
//
```

```
classicUser = getProperty("SCRIPT-USERID");
password = getProperty("SCRIPT-PASSWORD");
//
// If there is a SAF signon screen fill in the userid and password.
//
msgPos = findString("ENTER USERID ==>");
if (msgPos > 0)
{
SetField(classicUser); // The cursor is positioned at the userid field
SendKey("TAB"); // Tab to the password field
SetField(password); // Fill in the passticket
SendKey("TAB"); // Tab to the group field
SetField(safGroup); // Fill in the group
SendKey("ENTER"); // ENTER to send logon
WaitForScreen(); // Wait for result
//
// If we have a the OB0978 message from the TEP userid we need to
// retry the logon, otherwise we'll take what we have.
//
msgPos = findString("OB0978");
if (msgPos > 0 && tepUser == classicUser)
{
//
// Resend the USS LOGON command.
//
while (msgPos > 0)
{
msgPos = findString("OB0978"); // Wait for the logon panel to return
sleep(500);
}
SendKey("Clear"); // Clear
WaitForScreen(); // Wait for clear screen
SetField(LOGONCMD); // Logon command is already built
SendKey("ENTER");
WaitForScreen();
//
// Retry the SAF logon with userid.
//
classicUser = user;
password = ticket;
SetField(classicUser); // Positioned at the userid field
SendKey("TAB"); // Tab to the password field
SetField(password); // Fill in the passticket
SendKey("TAB"); // Tab to the group field
SetField(safGroup); // Fill in the group
SendKey("ENTER"); // ENTER to send logon
WaitForScreen();
}
}
else
{
//
// This is a non-SAF logon so just send ENTER to skip past the
copyright notice.
//
SendKey("ENTER");
WaitForScreen();
}
//
// If the logon was successful we should have the ZMENU panel
displayed.
//
setCursor(1);
msgPos = findString("ZMENU");
if (msgPos < 0)
{
msgBox("Logon to OMEGAMON CICS Classic Failed");
disconnect();
return;
}
//************************************************//
// //
// We are logged on to OMEGAMON CICS Classic at the
Main Menu panel. //
// //
// Navigate to the Transaction details panel for the //
// passed task number. //
// //
//************************************************//
taskNumber = getProperty("TRM_QUERYUSERD8");
if (taskNumber != " ")
{
```

```
// enter the command 'task number nnnnn' on the second line
command = " TASK NUMBER " + taskNumber + " ";
SetString(command,2,1);
SendKey("ENTER");
WaitForScreen();
}
else
{
msgBox("Missing task number");
return;
}
SetCursor(1); // Position cursor to TOP
show(); // Make window visible
```

See the appropriate *IBM Tivoli Monitoring* documentation or Tivoli Enterprise Portal online help for further details on how to record a terminal emulator script and the actual scripting language.

Linking to cross product workspaces

IBM Tivoli Monitoring provides the dynamic workspace linking feature to enable you to quickly access workspaces in multiple products. This feature aids problem determination and improves integration across the monitoring products, allowing you to quickly determine the root cause of a problem. Predefined cross-product links provided by the OMEGAMON XE products allow you to obtain additional information about systems, subsystems, resources, or network components that are being monitored by other monitoring agents.

IBM Z OMEGAMON for CICS uses this feature to provide predefined links that go to the analysis of CICS monitoring data in the Coupling Facility Structures Data for Sysplex workspace of OMEGAMON on z/OS or the DBCTL Detailed Thread Activity (Active) workspace provided by IBM Tivoli OMEGAMON for IMS on z/OS, among others.

When you right-click a link, the list of links is displayed. This list might contain links to workspaces provided by one or more monitoring products. Dynamic linking is available only for instances of OMEGAMON XE products that report to the same Tivoli Enterprise Monitoring Server as OMEGAMON for CICS on z/OS and that run in the same logical partition.

This table lists the links that are available from the workspaces of OMEGAMON for CICS on z/OS to the workspaces of related products.

Table 2. Links to workspaces of cross products

Product to which IBM Z OMEGAMON for CICS is linked	**Workspace where the link is located in IBM Z OMEGAMON for CICS**	**Cross product workspace name**
OMEGAMON for z/OS	Temporary Storage Queues	Coupling Facility Structures Data for Sysplex
OMEGAMON for z/OS	Log Stream Analysis	Coupling Facility Structures Data for Sysplex
OMEGAMON for DB2® on z/OS	Transaction Analysis	Detailed Thread Exception
OMEGAMON for DB2 on z/OS	Transaction Analysis	Single DB2 Thread Summary
OMEGAMON for DB2 on z/OS	DB2 Summary	CICS Connections
OMEGAMON for IMS on z/OS	Transaction Analysis	DBCTL Detailed Thread Activity (Active)
OMEGAMON for IMS on z/OS	DBCTL Summary	IMS Address Spaces
OMEGAMON for Networks	TCPIP Statistics	Application TCP Listeners
OMEGAMON for Messaging (WebSphere® MQ)	Message Queuing Analysis	Trans/PGM Statistics by Applid

Table 2. Links to workspaces of cross products (continued)		
Product to which IBM Z OMEGAMON for CICS is linked	**Workspace where the link is located in IBM Z OMEGAMON for CICS**	**Cross product workspace name**
ITCAM for SOA	Web Services Analysis	Performance Summary

If you choose a workspace from the list and the target workspace is not available, you receive the KFWITM081E message. Refer to the *IBM Z OMEGAMON for CICS Troubleshooting Guide* for more information. Also, the "Target Not Found" topic in the Tivoli Enterprise Portal help describes options for responding to failed links.

The following scenario describes how this problem can arise:

- You are upgrading from OMEGAMON XE version 5.1.0 or 5.3.0 products to OMEGAMON XE version 5.5.0 products, and you have a combination of the current GA version and *n*-1 or *n*-2 versioned monitoring agents installed in your environment. For example, you might have a IBM OMEGAMON for CICS on z/OS version 5.5.0 monitoring agent and an IBM OMEGAMON for z/OS version 5.1.0 or 5.3.0 monitoring agent running on the same z/OS system during the migration period.
- After this upgrade, the use of dynamic workspace linking to link from an OMEGAMON XE version 5.5.0 workspace to workspaces in an OMEGAMON XE version 5.1.0 or 5.3.0 product work correctly, as long as the target workspace exists in the prior version product. If the target workspace does not exist, you receive the KFWITM081E message.
- However, if a target workspace for version 5.5.0 has been modified (for example to accept link parameters to limit the data displayed) you might notice different behavior during the upgrade.

Note: Your Tivoli Enterprise Portal user ID must be authorized to access the target product. Otherwise links to workspaces in the targeted product are not included in the list. You can also modify the links that are provided by the product by default. See Tivoli Enterprise Portal Help for information on the Link Wizard that helps you modify the default linkages provided in the popup menus of rows in a workspace.

Navigating workspaces

This document presents the hierarchy of linked workspaces for each workspace node in OMEGAMON for CICS on z/OS. The bulleted list illustrates the standard path for navigating the workspaces. This is the standard method of navigating workspaces:

1. Right-click the link icon that is located at the left side of each row in a table view. (Most workspaces have at least one table view.)
2. Select a new workspace to go to in the menu.

   Note: Some link names in the menu do not exactly match the name that you see in the title bar of the target workspace.

Keep the following items in mind as you navigate the workspaces:

- When no link icon is displayed in the table view of a workspace, you have reached the end of the standard flow of navigation for a set of workspaces.
- Most workspace nodes in OMEGAMON for CICS on z/OS have multiple sub paths. Some sub paths end in the navigation tree structure of a different, but related, workspace node of OMEGAMON for CICS on z/OS.
- The Back button in the browser client or the Back arrow icon in the Desktop client are essential navigation tools as you traverse multiple sub paths. You move backward to leave one sub path and enter another. Alternatively, you can click the workspace node in the Physical Navigator to return to the first workspace of the node in which you are navigating.

Accessing workspaces

The Navigator Physical view of the Tivoli Enterprise Portal shows an enterprise as a mapping of all of the many platforms, systems, agents, subagents, and monitored resources.

Beneath each CICSplex name are items for the CICSplex-level resources and components and an item for every group being monitored by a IBM Z OMEGAMON for CICS agent. Under each system (or logical partition) are items for each of the CICS system level resources being monitored by a IBM Z OMEGAMON for CICS agent. Each Navigator item can be associated with one or more workspaces that provide information relevant to that level of the Navigator Physical view.

Each workspace contains a table view that provides information you can use to monitor a particular resource in your system. Column headings in the table view correspond to attributes that you can use to create situations. Each of the attributes in a specific table view belongs to a single attribute group.

Regulating access to workspaces

These security features regulate access to workspaces or access to the functionality in workspaces:

- The typical user of the Tivoli Enterprise Portal has a standard level of privileges to view and modify the portal. For example, the **sysadmin** default user can see the views and modify the portal. Note, that if you use a user account that has the **Workspace administration** level of privileges, the views that you see differ, as in these examples:
  - The title and status bars display `*ADMIN MODE*` after the user name to indicate that the user ID is in workspace administration mode.
  - Comprehensive lists of workspace links are displayed in some pop-up menus, instead of the standard menus that are nested within specific workspaces

Accessing IBM Z OMEGAMON for CICS in the Tivoli Enterprise Portal

You access IBM Z OMEGAMON for CICS in the Tivoli Enterprise Portal through the Physical Navigator, as in the following example.

1. Click the plus sign (+) beside the z/OS Systems icon to see available systems.
2. Click the plus sign (+) beside the name of the name of the z/OS system for which you want information. The available subsystems are displayed.
3. Click the plus sign (+) beside the **System ID** from which you want information, for example, **SYSA**. A list of CICS regions residing on this system is displayed
4. Click the plus sign (+) beside the **CICS** managed system from which you want information, for example, **SYS_CICSRG63**. A list of product nodes is displayed.
5. Click the node of a workspace, for example, Transaction Analysis. The portal displays the Transaction Analysis workspace.

Accessing the workspace that corresponds to a node in the Navigator Physical view

To access a workspace that corresponds to a node in the Navigator Physical view, click the node. The workspace is displayed in the portal.

Accessing workspace links from a Navigator Physical node

You access IBM Z OMEGAMON for CICS workspace links in the Tivoli Enterprise Portal through the Physical Navigator Physical view, as in the following example.

1. Double-click the **CICS** node. The node is activated and the corresponding workspace is displayed in the portal; this is the CICS Performance Summary workspace in IBM Z OMEGAMON for CICS.
2. Right-click the node to display the popup menu. Select the workspace you want from the **Workspace** submenu.

Note: Some workspace links are not always visible. The Tivoli Enterprise Portal displays some workspace links only when the target workspaces are relevant in the monitoring environment.

Accessing workspace links from views in a workspace

To access related workspaces from table views and bar charts, do the following steps:

1. In table views, right-click the link icon located at the left of a row in a table view.
2. In bar charts, right-click a bar in a bar chart view and select **Link To** in the menu to access the list of links.
3. Select the name of a workspace in the popup menu.

Accessing cross product workspace links

Managing situations

Situations are descriptions of conditions to which you want to be alerted. Situations periodically verify the values of attributes used in the situation description.

When they are distributed to systems monitored by IBM Z OMEGAMON for CICS agents, situations can, for example, issue a message when a queue count is greater than or equal to 100 messages. Situations can also trigger simple (reflex) actions, or complex automation policies.

If situations are associated with Navigator items, they can generate auditory or visual event indicators, which provide access to special event workspaces containing more information about the event and guidance for how it should be handled.

IBM Z OMEGAMON for CICS provides an extensive set of predefined situations. These situations check for conditions that are typically considered to be problematic or noteworthy. They can also serve as templates for creating customized situations of your own. All these situations include expert advice for handling these conditions should they arise.

You can use the predefined situations as-is or modify them to meet your requirements. You can also create your own situations using the attributes provided by IBM Z OMEGAMON for CICS.

Note: Do not modify the product-provided situations. If you want to modify a product-provided situation, copy the situation, modify the copy, and rename the copy.

Details on the predefined situations that are included with this product are available in Chapter 4, “Situations,” on page 263 and in the IBM Z OMEGAMON for CICS section of the Tivoli Enterprise Portal online help.

Using situations

You manage situations from the Tivoli Enterprise Portal using the Situation editor. Use the Situation editor, to complete the following tasks:

- Create a situation
- Save a situation
- Display a situation
- Edit a situation
- Start, stop, or delete a situation
- Investigate the situation event workspace for a situation

Note: The Situation editor window cannot be resized.

In the Navigator, right-click either the name or the icon of a system, agent, or attribute group. Select situations from the popup menu that is displayed.

The Situation editor opens. The left frame of the Situation editor initially lists the situations associated with the Navigator item you selected. When you click a situation name or create a new situation, the right frame opens with the following tabs:

Condition
Add to and edit the condition being tested

Distribution
The systems to which the situation is assigned and assign the situation to systems

Expert advice
Write comments or instructions to be read in the event workspace

Action
Specify a command to be sent to the system.

You can also enter take action commands by adding a take action view to a workspace, selecting Take Action from the popup menu for an item in the Navigator Physical view, or creating take action commands and saving them for later use.

Until
Reset a True situation when another situation becomes True or a specified time interval elapses

The Situation editor buttons let you **Apply** your changes by saving and starting the situation, and click **OK** to exit saving your changes or **Cancel** to exit without saving your changes. If you plan to edit multiple situations while in the Situation editor, click **Apply** to save your changes before selecting the next situation to edit or creating a new one.

You can view situations and create others in the Situation editor.

- To display a situation, click its name in the tree view on the left; or if you do not see the situation and you opened the Situation editor from the Navigator popup menu, click the **Situation Filter** icon to identify a broader range.
- To create a new situation, click the **New Situation** icon.
- To create a new situation by copying another, select the original and click the **Create Another** icon.
- To delete a situation, select it and click the **Delete Situation** icon.

For information on creating, editing, and distributing situations, see the Tivoli Enterprise Portal online help.

Activating predefined situations

Predefined situations included with IBM Z OMEGAMON for CICS are not set to autostart. You must activate these situations before they can begin monitoring.

To activate a situation you use the Situation editor of the Tivoli Enterprise Portal to distribute (assign) the situation to one or more managed systems or managed system lists and then start the situation.

You do not need to associate predefined situations with Navigator items. Each situation is already associated with an appropriate Navigator item. After you distribute a situation, you see its name listed under the name of its associated item in the Situation editor.

Some situations are set with very high or very low values, which essentially disable them. Others have values that might be inconsistent with your site's policies, goals, or monitoring requirements. Examine the predefined situations and customize them with values that are meaningful for your installation before you activate them.

Distributing situations

Distribute only the situations that you are going to autostart or plan to manually enable. If you distribute all the situations, they will be propagated to the agents when the Tivoli Enterprise Monitoring Server starts. Distributing all situations can simplify any subsequent activation procedures, but it also extends startup time. Review the situations to determine which ones you plan to use and add distribution lists for

only those situations. After the situations are distributed, their alerts will appear on the Navigator items they are associated with.

To distribute a situation perform the following steps:

- Open the Situation Editor. You can access the Situation editor from the toolbar or by right-clicking an item in the Physical Navigator and selecting **Situations** from the popup menu.
- If necessary, use the Situation Filter to view the situations available for distribution. Check **Eligible for Association** to see a list of all the situations that are written for this type of managed system (depending on where you access the Situation editor from; if you access the editor from the toolbar, you see situations for all types of managed systems). Any undistributed situations will show their icon, partially dimmed.
- Click the situation you want to distribute. The Situation editor displays the **Condition** tab for the situation.
- Select the **Distribution** tab. The available managed systems and managed systems lists are displayed.
- Select the systems and lists to which you want to distribute the situation, and then click the left arrow to assign the situations to the systems or system lists.
- Click **Apply** to save and implement the change and continue editing; click **OK** to apply and save the change and close the Situation editor.

Starting situations

You might want to run some situations for a limited time or only under specific conditions. Start and stop these situations manually. You might want other situations to run continuously. Set these situations to run at Tivoli Enterprise Monitoring Server startup, so they run across Tivoli Enterprise Monitoring Server restarts.

Initially, you might want to start situations manually to evaluate the impact of the monitoring and monitoring interval on system performance, adjust them accordingly, and then decide if you want the situation to run indefinitely, across Tivoli Enterprise Monitoring Server restarts.

To start a situation, right-click the situation name in the Situation editor tree and select **Start** from the popup menu.

To set a situation to start automatically when the Tivoli Enterprise Monitoring Server starts, perform the following steps:

- Click the name of the situation in the Situation editor tree. The settings for the situation are displayed in the right frame of the editor.
- On the **Conditions** tab, select **Run at startup**.
- Click **Apply** to save and implement the change and continue editing; click **OK** to apply and save the change and close the Situation editor.

Modifying situations

Before activating any predefined situations, examine the conditions and values they monitor and, if necessary, adjust the values to a situation better suited to your environment.

Use these steps to modify a situation:

1. Open the Situation editor from the toolbar, or right-click a Navigator entry and select **Situations** from the popup menu.

   Note: If you open the Situation editor by right-clicking a Navigator item, the situation you create is automatically associated with that item. If you open the editor from the toolbar, you must manually associate the new situation with a Navigator item to see an alert indicator when the situation evaluates as True.
2. Use the Set Situation filter criteria to view the situations.

If necessary, mark **Associated with Monitored Application** to see all situations that were written for this type of agent, regardless of where they are distributed.

3. To create a copy, right-click the situation and select **Create Another** from the popup menu.
4. Type a name for the new situation and click **OK**.
5. Modify the situation properties as required and click **OK** to save the new situation and close the Situation editor.

Take Action commands

You can interact directly with your applications and operating system through the Take Action feature.

Take Action has a text box for entering your own system command, or you can choose from a list of predefined commands. It also has a list of systems on which to effect the command.

You can start the Take Action feature from several places:

Table 3. Locations where you can start a Take Action command

Location	**Action**
Navigator	Send a Take Action command to a system associated with the current Physical Navigator item.
Table row Pie chart slice Bar chart bar	Send a Take Action command to a system associated with the selected row or data series.
Take Action view	Add a Take Action view to a workspace so you can access the feature from that workspace at any time.
Situation	Add a command that is sent to a system or add a message that is sent to the Universal Message Console that starts when the situation becomes True.
Policy	OMEGAMON DE on z/OS only: Add a `Take action or Write message` activity to a policy that issues a command to a system or generates a message that displays on the Universal Message Console.

You have the choice to select a predefined command or enter a command yourself. You can also create and save commands so you can select them from the list of defined commands.

Example: This situation determines whether a temporary storage queue is more than 24 hours old and, if so, issues a Take Action command to delete it:

```
( #CICSTSD.QUEUEINT > 1 Day )
```

`CICSTSD.QUEUEINT` refers to the Last Used Interval attribute (identifier QUEUEINT) within the CICSplex Temporary Storage Detail attribute group (identifier CICSTSD).

This is the Take Action command the situation invokes that deletes the out-of-date temporary storage queue:

```
CP:TSQD ID=&{CICSplex_Temporary_Storage_Detail.Hex_Queue_ID} Hex
```

Note: When you issue a Take Action command, your user ID must be authorized on the relevant system for the requested command. For example, to issue a TSO command, your user ID must be a valid TSO ID. It must also be defined as a valid logon ID for Tivoli Enterprise Portal.

Defining a Take Action command

You can create custom Take Action commands and start them as needed on your system; your user ID must be authorized on the relevant system for the requested command. For example, to issue a TSO

command, your user ID must be a valid TSO ID; it must also be defined as a valid logon ID for Tivoli Enterprise Portal. When entering the user ID, be sure to type it exactly as typed (with the same casing) when logging on to Tivoli Enterprise Portal.

Note:

1. If you use values outside the specified range, the action might fail.
2. Your user ID must have been given Modify permission for the Action feature.

To define a Take Action command, use the following steps:

1. Right-click a row in a table view, slice in a pie chart, or bar of a bar chart. You can also select the Physical Navigator item associated with the application or system on which you want to execute the command and right-click the Physical Navigator item.

   Note: The Take Action attribute group may not be associated with the requested action if you invoke the Take Action from the Physical Navigator.
2. Select **Edit Action** from the pop-up menu. The Edit Action and Select Action dialog boxes open.
3. Select **<Create new Action>** and click **OK**
4. In the Create New Action dialog box, enter a name and any description for the command.
5. Select the type of command. System Command is for issuing a command on the operating system associated with this Navigator item. For example, if you selected a Physical Navigator item on the CICS branch, you could enter a CICS command.

   The other types that appear are for the monitoring agents associated with this Physical Navigator item. For example, at the Enterprise level, you see all agent types on your managed enterprise, whereas at the system level, you see those for the types of agents running on that system.
6. In the text box, type the command just as you would from the command line.
7. To insert an attribute, which is replaced by its value at run time, click **Insert Attribute**, then select one from the Select Attribute dialog box. Example: `echo System: &NT_Logical_Disk.Server_Name, Disk: &NT_Logical_Disk.Disk_Name, Space Available: &NT_Logical_Disk.%_Free%|mail userID`. This command sends an email that reads, "System: MyServer, Disk: D:, Space Available: 15%."
8. When you are finished creating the action, click **OK** to save it. Your user-defined action is now selectable from the list of actions available for this agent or operating platform. The action is saved, so it is available to all users whose IDs have **View Action** permission and the application the command was written for as one of their allowed applications.

Starting a Take Action command

The Take Action feature lets you issue a command to any system in your network where IBM Z OMEGAMON for CICS is running.

You can implement Take Action commands from a workspace, from a situation, in an ad hoc mode, or by recalling a saved Take Action command.

To start a Take Action command, perform these steps:

1. Right-click an item in the Navigator.
2. From the pop up menu, select **Take Action** to display the Take Action dialog box.
3. In the Take Action dialog box's **Action** area, select a saved Take Action command. To edit the command's argument values, click **Arguments**. When you are done, click **OK**.
4. In the dialog box's Destination System(s) area, select the target system or systems to which you want to send the Take Action command and click **OK**.

   This causes the command to be sent to the system or systems where it is started.

Note: When you submit a Take Action command from the Tivoli Enterprise Portal (which always runs on a distributed system) to a z/OS system, a return code of zero displayed in the interface indicates successful

submission of the command to the z/OS system but gives no indication of the result of the command. You can check the command output in the z/OS SYSLOG.

Editing a Take Action command

To edit a Take Action command perform these steps:

1. Select a Physical Navigator item associated with the application or system on which the command can be started.
2. Right-click the Physical Navigator item. You can also right-click a row in a table view, slice in a pie chart, or bar of a bar chart.
3. Select **Edit Action** from the popup menu. The Edit Action and Select Action dialog boxes open.
4. Select a name from the list and click **OK**.
5. In the Edit Action dialog box, edit the command name, description, type, or text.
6. If you want to insert an attribute name that will be replaced by the attribute's current value when the command is started, click **Insert Attribute** and select from the list.
7. When you are finished editing the command, click **OK** to save your changes.

Take Action from IZSME Navigator, Situations and Workspaces

In IBM Z Service Management Explorer, **Take Action** lets you enter a predefined command and run it on any system in your managed network, in response to conditions monitored by the OMEGAMON products in your environment.

Some monitored applications provide predefined **Take Action** commands. You can customize those commands in Tivoli Enterprise Portal and create command definitions of your own, then invoke them on the system you choose. Customized Take Action commands cannot be created in IZSME, but any customized Take Action commands you have created in Tivoli Enterprise Portal will be accessible in IZSME.

You can access **Take Action** from the **Navigator**, the **Situation Event Console**, or a workspace view, by right-clicking an item in the **Navigator**, a situation in the **Situation Event Console**, or a task in a workspace, then selecting **Take Action**.

Choose one of the available predefined actions from the **Action to execute** field. This is the action that will be sent to the destination system(s).

The **Command** field shows the actual command this action will send to the system.

Some actions will have an **Arguments and values** section, with one or more argument fields. These allow you to enter a value, such as a process ID, to be used with the command sent to the destination system(s). For some commands, there will be several argument fields that allow you to specify values for the arguments to be entered along with the command.

In the **Destination systems** field, you can choose one or more of your managed systems, and have the command sent there.

After you submit the action, the **Action status** panel shows the progress and outcome of the action:

- **Destination**: The system(s) to which the command was sent.
- **Status**: The outcome of the command (complete, in progress, failure, etc.)
- **Return code**: The return code. A code of 0 indicates success.
- **Result**: A message describing the outcome, for non-zero (failure) return codes.

If there are no actions available, either predefined or custom created at your site, the **Take Action** panel will be empty.

Purging CICS tasks in IZSME

If you are using OMEGAMON for CICS via IBM Z Service Management Explorer, you can navigate to the Transaction Analysis workspace view and purge (including force purge) one or more CICS tasks.

From the Navigator, open a CICS region, then select **Transaction Analysis**. A list of tasks appears in the workspace view.

Using Purge selected tasks

You can select one or more tasks, right-click, then choose **Purge selected task(s)**. A confirmation box will appear, from which you can proceed with the purge (PURGE TASK) and, optionally, specify that you want to perform a force purge. Keep in mind that forcing the purge will purge the tasks even if data integrity cannot be maintained. Normally, it's best to try a PURGE, which will only purge if data integrity can be maintained, before performing a force purge.

Using Take Action to purge tasks

You can also use **Take Action** to purge CICS tasks. From **Transaction Analysis**, select a task (**Take Action** can only be used with one task), right-click, then choose **Take Action**. The **Take Action** panel will appear; in the **Action to execute** field, select **Purge Task**.

Collecting historical data

In addition to providing real-time performance and availability data, you can use IBM Z OMEGAMON for CICS to collect data over extended periods of time.

By studying the information gathered from a historical perspective, you can, for example, identify trends and determine whether current performance is typical or exceptional, or evaluate the effect of tuning decisions. Use the historical data collection function to specify the following information:

- Interval at which data is to be collected
- Interval at which data is to be warehoused (if you choose to do so)
- Location (either at the agent or at the Tivoli Enterprise Monitoring Server) at which the collected data is to be stored

You can view the historical data collected by IBM Z OMEGAMON for CICS in Tivoli Enterprise Portal workspaces or in reports that run under Tivoli Common Reporting, a reporting tool and strategy common across Tivoli products.

Using historical data collection and reporting

You can view the logged historical data in Tivoli Enterprise Portal workspaces. Table and chart views for which historical data collection has been enabled have a tool for setting a time span, which allows you to see previously collected data samples for up to 24 hours. If you have configured data warehousing, you can view samples for longer periods of time.

Note: In addition, data sets for storing historical data must have been allocated in the persistent data store and maintenance of the persistent data store must be configured as part of the configuration of the Tivoli Enterprise Monitoring Server in each address space. To store data in the Tivoli Data Warehouse (TDW), DB2 or Microsoft SQL Server must be installed and your environment must be configured to include the Warehouse Proxy agent and TDW.

You can also export the logged historical data to delimited flat files for use with third-party reporting tools to produce trend analysis reports and graphics. Data stored in the TDW, a relational database, can be used to produce customized history reports.

For information on setting up the persistent data store and configuring maintenance, see "Maintaining the persistent datastore" in the Reference section of *OMEGAMON shared documentation Version 6.3.0 Fix Pack 2* and also see the *Planning and Configuration Guide*. For information about installing and setting up the Tivoli Data Warehouse and the proxy agent, see the Tivoli Data Warehouse solution topics in the *IBM Tivoli Monitoring: Installation Guide*. For information on exporting historical data to flat files,

and warehousing historical data, see *OMEGAMON shared documentation* and the *IBM Tivoli Monitoring: Administrator's Guide*.

Configuring historical data collection and reporting

You configure historical data collection using the History Collection Configuration window in the Tivoli Enterprise Portal.

Configuration is performed on an attribute group by attribute group basis. You can configure collection for different attribute groups at different intervals so important volatile data can be collected more often while less dynamic data can be collected less frequently.

Not all attribute groups can collect historical data because collecting history data for these attribute groups is not appropriate or has a detrimental effect on performance. For example, collection might generate unmanageable amounts of data. Only those attribute groups for which data can be collected are listed in the Configuration window.

Note that for a given attribute group, the same history collection options are applied to all Tivoli Enterprise Monitoring Servers for which collection for that attribute group is currently enabled. You cannot specify different intervals for the same attribute group for different Tivoli Enterprise Monitoring Servers.

For more information, see “Historical reporting” in the *IBM Tivoli Monitoring: Tivoli Enterprise Portal User's Guide*.

Starting and stopping historical data collection and reporting

To make historical data available for reporting in your workspace views, you must configure and start historical data collection for your product and attribute groups. This is done through the History Collection Configuration window in the Tivoli Enterprise Portal.

Customization of the Tivoli Enterprise Portal is best begun with configuring historical data collection. Until then, no historical data is available for the predefined historical workspaces that your product might offer, for situation modeling, or for chart baselining, all of which enable you to perform in-depth analysis and health assessments of your managed environment.

See "Creating a historical collection," "Starting data collection," and "Stopping data collection" in the *IBM Tivoli Monitoring: Tivoli Enterprise Portal User's Guide*.

Requesting historical data from large tables

Requests for historical data from tables that collect a large amount of data will have a negative impact on the performance of the IBM Tivoli Monitoring components involved. To reduce the performance impact on your system, set a longer collection interval for attribute groups (tables) that collect a large amount of data. Begin by clicking History Configuration to open the History Collection Configuration window. The **Basic** tab has a collection interval field that enables you to set the frequency of data transmission to the short-term history file on the computer where the data is saved. The options are every 1, 5, 15, or 30 minutes, every hour, or once per day. The default interval is 15 minutes. The shorter the interval, the faster and larger the history file grows. This can overload the database, warehouse proxy, and summarization and pruning agent. For example, if you set a 1-minute collection interval for Process data, expect the summarization and pruning for that attribute group to take a long time. Such a short interval should be enabled for an attribute group only if it is critical in your work.

When you are viewing a report or a workspace for which you collect historical data, you can set the Time Span interval to obtain data for previous samplings. Selecting a long time span interval for the report time span increases the amount of data being processed, and might have a negative impact on performance. The program must dedicate more memory and CPU cycles to process a large volume of report data. To reduce the impact, use the shortest time span setting sufficient to provide the information you need, especially for tables that collect a large amount of data.

If the amount of information requested is too large, the report request might drop the task and return to the Tivoli Enterprise Portal with no data because the agent took too long to process the request. However,

the agent continues to process the report data to completion, and remains blocked, even though the report data is not viewable.

Also, historical report data from the persistent data store might not be available, which can occur because the persistent data store might be not be available while its maintenance job is running.

For more information on configuring historical data collection and reporting in Tivoli Enterprise Portal, see the Tivoli Enterprise Portal online help.

Summarizing and pruning historical data

The Tivoli Data Warehouse (TDW), the piece of the IBM Tivoli Monitoring framework where the history collector agent stores long-term history data, provides extensions that allow history data collected by IBM Z OMEGAMON for CICS to be summarized and pruned. This process can provide a more concise view of your historical data: with the summarization and pruning features, historical data can be summarized and rolled up into aggregate values while removing (pruning) detail data that is no longer needed. With aggregated data, query performance improves dramatically. In addition, when data aggregation and data pruning are used together, the required disk space can be reduced significantly: your site can retain historical data over longer periods without allocating additional warehouse space, even though the detail data itself is lost.

Initially, the agents collect historical data records based on the sampling frequency you specify, and the data are logged to the Tivoli Data Warehouse. After the data is collected in the warehouse, you can configure the aggregation and pruning policy, at the individual attribute-group level, which determines when the information is summarized (hourly, daily, weekly, monthly, quarterly, or yearly) and how often it is pruned.

For the complete list, of the attribute groups that (for which historical data are stored and retrieved) can be summarized and pruned for stored data, see the History Collection Configuration window in the Tivoli Enterprise Portal.

There are many other IBM Z OMEGAMON for CICS attribute groups for which historical data is accumulated and stored but for which the summarization and pruning features are not available.

Chapter 2. Using IBM Z OMEGAMON for CICS to monitor your systems

This section illustrates how you can use IBM Z OMEGAMON for CICS to resolve CICS performance issues and monitor your z/OS systems.

The FIND command

The FIND command lets you perform a search for active transactions and other activity of interest. You can search CICSplex-wide, or you can specify an LPAR or a custom user-defined group (USERGRP) within which to search.

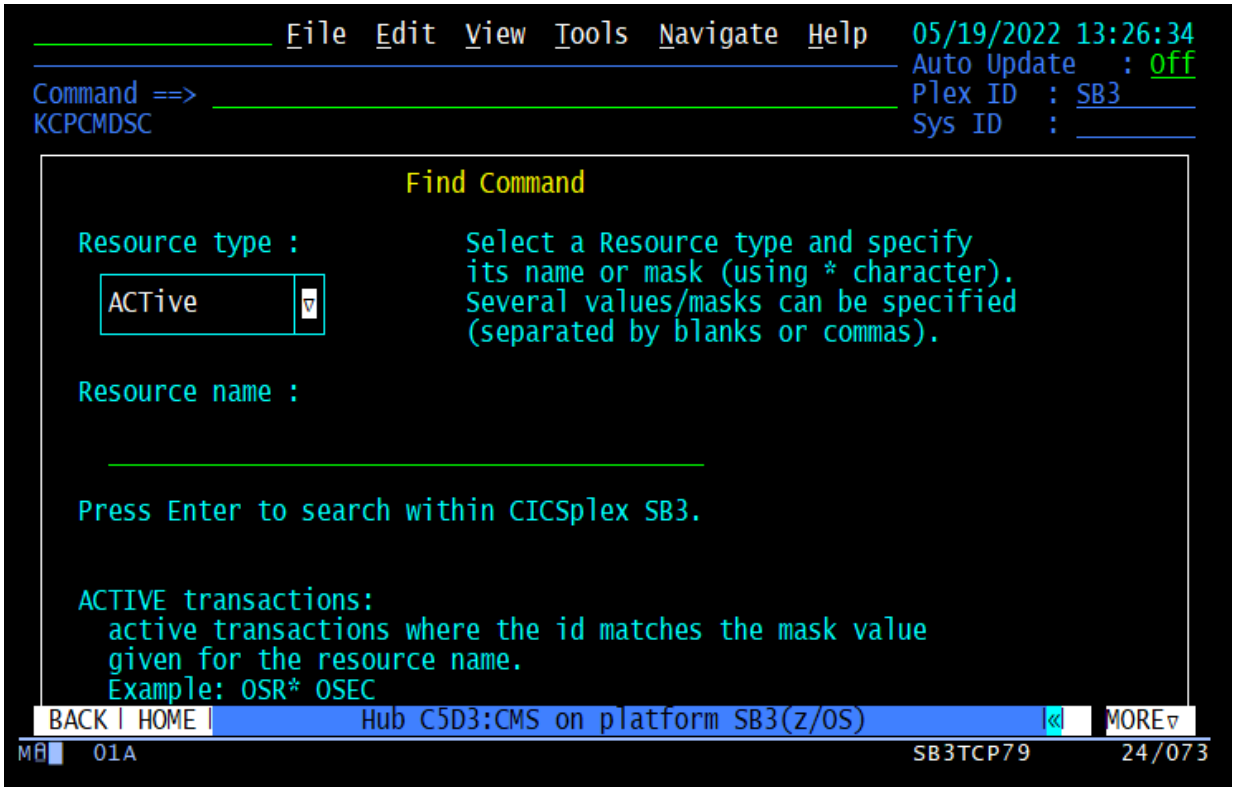
You can enter FIND at the **Command ==>** prompt near the top-left, once you have selected a CICSplex from the initial **All Active CICSplexes** panel. You can also enter F (FIND) next to the name of the CICSplex you want to choose, directly from the **All Active CICSplexes** panel.

Using FIND to search within a CICSplex

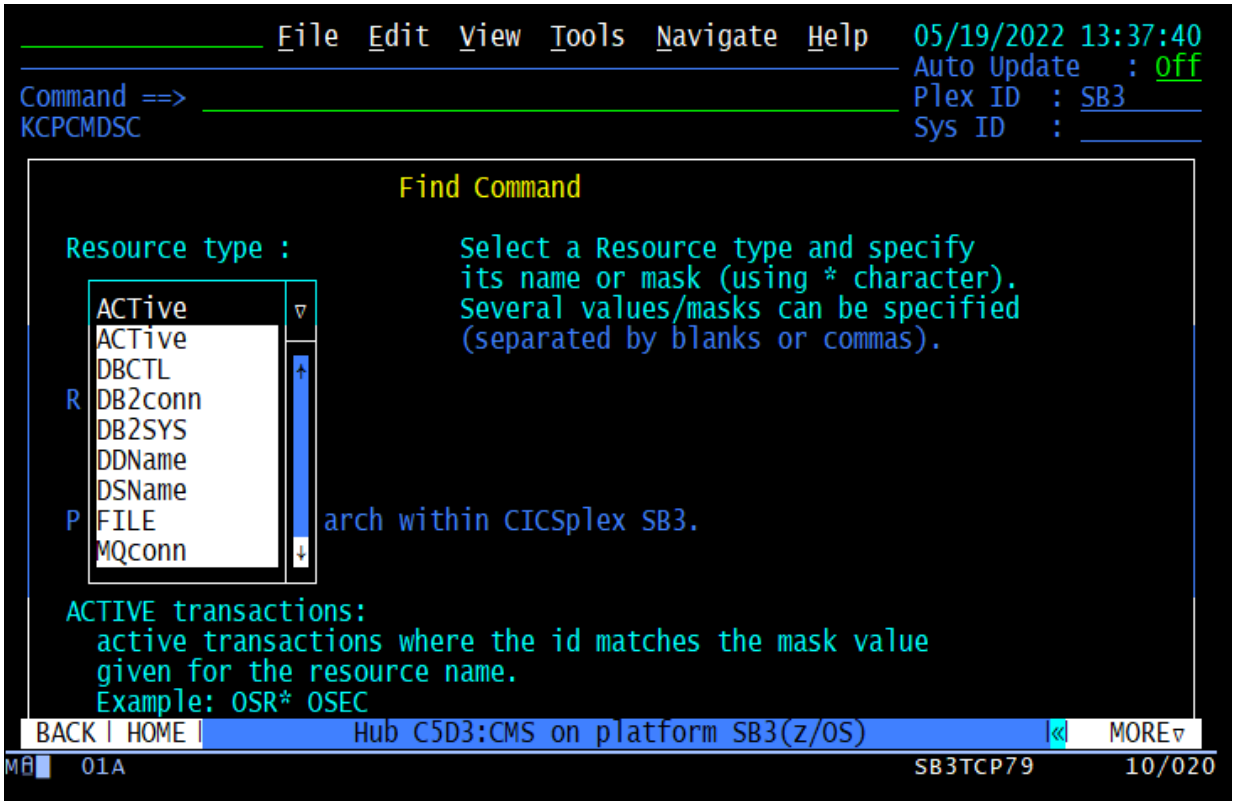
You can use FIND the **Command ==>** prompt, once you have chosen a CICSplex.

This example shows how to search for active transactions.

1. Select the **CICS** tab from the **OMEGAMON Products** panel.
2. You can enter F (FIND) next to the CICSplex name, or select another option such as S to select a CICSplex and bring up the **CICSplex Regions Summary** panel, then enter FIND at the **Command ==>** prompt. The **Find Command** panel will appear:

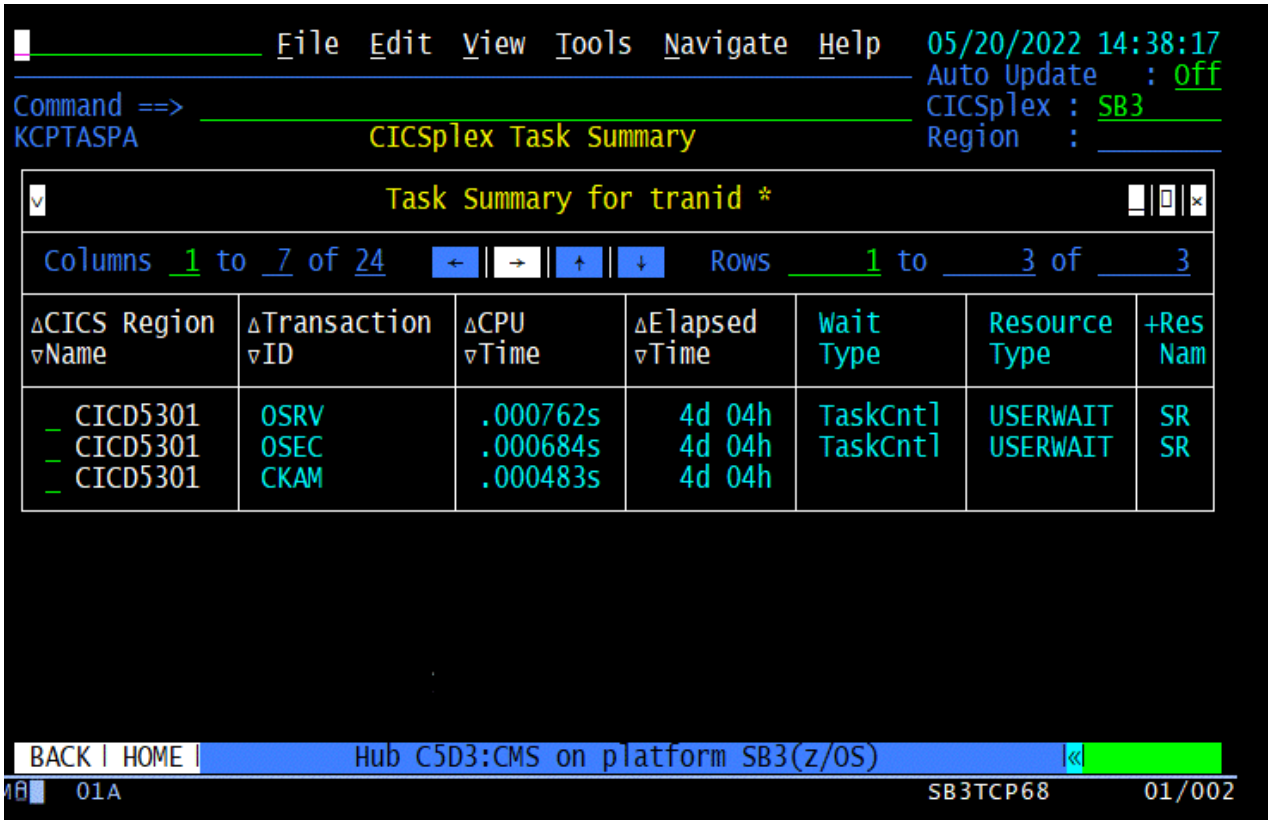


3. Double-click the arrow in the **Resource type** field to open the menu:



4. Select a resource type from the choices available in the drop-down menu.
5. In the **Resource name** field, enter one or more names or masks for the resources you want to find. Examples are given in the help, as shown in the illustration above.

Once you have entered the **Resource type** and **Resource name**, press ENTER. The Summary panel for the selected resource type will appear. In this case, the **CICSplex Task Summary** is shown:



You can also enter the FIND command directory from the **Command ==>** prompt. For example:

```
COMMAND ==> FIND TDQ *
```

or

```
COMMAND ==> FIND PROG *
```

The CONTEXT command

The CONTEXT command lets you search within groups of CICS regions other than the CICSplex you initially selected. You can specify the context as a CICSplex, an LPAR, a user defined group, or a CP/SM CICS System Group, and a FIND command will show all the monitored regions on that specific LPAR or group. Once a context is set, all subsequent FIND commands will search the context you specified, instead of the CICSplex originally selected.

Using CONTEXT to change the scope of the FIND command

The CONTEXT command lets you search within groups of CICS regions, instead of simply searching all the members of a CICSplex.

You can set the context to a CICSplex, a specific LPAR (to show all the monitored regions on that LPAR), or a user-defined group (USERGRP) or CICSPlex System Manager System Group. Once you have specified a context, subsequent FIND commands will search the context rather than the CICSplex you originally selected.

You can enter the CONTEXT command from the `Command ==>` prompt: `CONTEXT context scope` where context is the type of group (or LPAR, if you want to search within one LPAR) and scope is the name of the specific group or LPAR. For example:

```
Command ==> CONTEXT LPAR MVSA
```

to set the context to all the regions on the LPAR with SMFID MVSA.

```
Command ==> CONTEXT USERGRP MYGROUP
```

to see all the regions in the managed systems group KCP_User_MYGROUP.

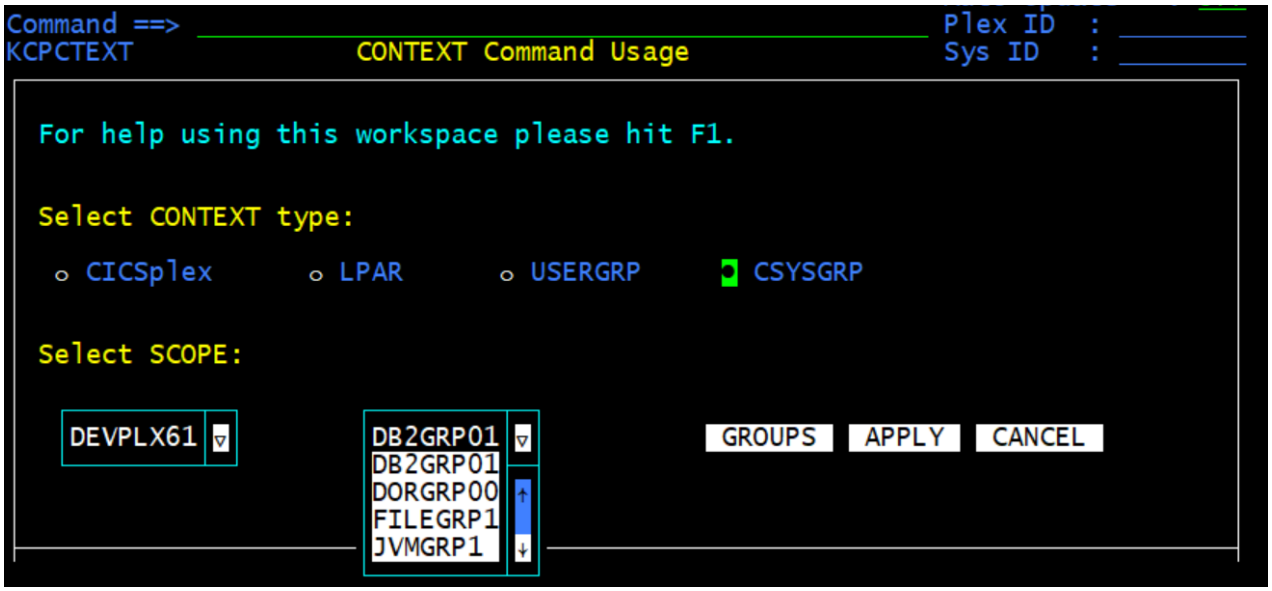
```
Command ==> CONTEXT PLEX OMEGPLEX
```

to see the regions in the OMEGPLEX CICSplex.

```
Command ==> CONTEXT CSYSGRP MYCPSMGP
```

to see the regions in a CICSPlex System Manager group called MYCPSMGP For more information on working with CICSPlex System Manager groups, see Using CP/SM CICS System Groups. To see a list of the available CP/SM System Groups, enter GROUPS at the **Command** prompt, from the **CICSplex Regions Summary** or the **CICS Region Overview** workspace. The GROUPS command brings up the **OMEGAMON CICS Groups** workspace, which has a subpanel entitled **View CP/SM CICS System Groups**.

You can also use the lower part of the **CONTEXT Command Usage** panel to select the context type (radio buttons) and scope (drop-down lists). When you just enter CONTEXT without any parameters at the **Command ==>** prompt, the **CONTEXT Command Usage** panel appears. Select **MORE** to scroll down; the panel gives you these options: CICSplex, LPAR, USERGRP (user-defined group), and CSYSGRP (CP/SM system group):



In this example, CSYSGRP is selected, and there are several CSYSGRPs available.

Once you have specified the type and scope, you can enter the FIND command, and the search results will be taken from the CICSplex, LPAR, user-defined group (USERGRP), or CSYSGRP you have specified, instead of from the CICSplex you were originally using.

If you want to "undo" the context setting, enter CONTEXT by itself at the command prompt, to bring up the **CONTEXT Command Usage** panel. From there, you can set the context to a different value, such as an entire CICSplex.

Using the GROUPS command to create user-defined groups

To create a user-defined group (USERGRP), you can enter the GROUPS command from the **CICS Regions Summary** or **CICS Region Overview** workspace. This brings up the **OMEGAMON CICS Groups** workspace (KCPCUGRP).

This workspace allows you to see both the OMEGAMON user groups and the CP/SM CICS System groups, if any have been defined. If no OMEGAMON user groups are currently defined, the workspace will let you create them.

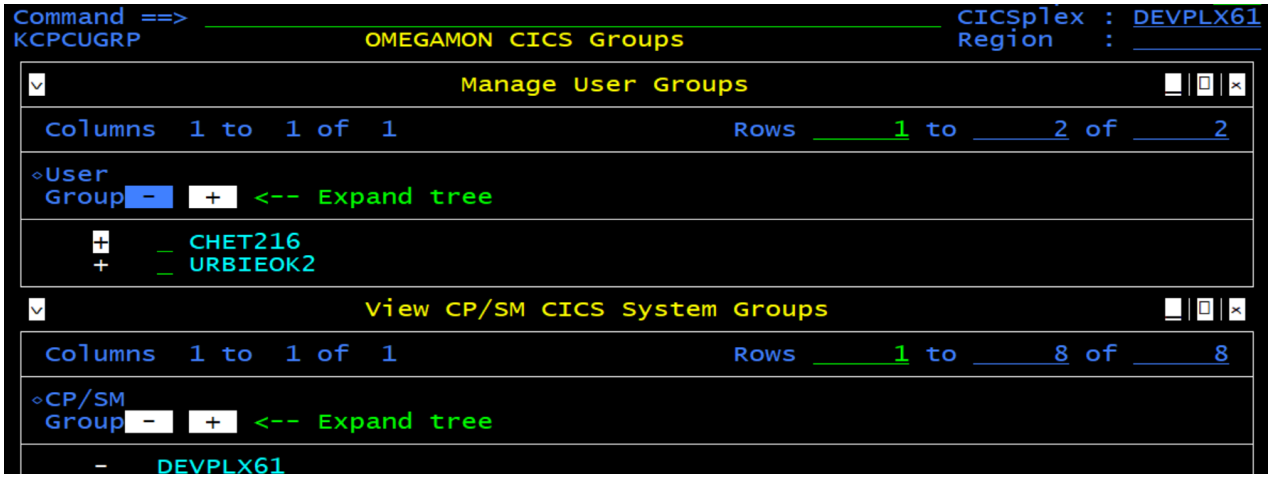


Figure 3. The OMEGAMON CICS Groups workspace

The **Manage User Groups** subpanel lets you manage OMEGAMON user-defined groups. These groups can contain CICS regions from any CICSplex. These groups are different from CP/SM CICS system groups or CSYSGRPs, which are managed by CP/SM and are a subset of a CICSplex. OMEGAMON user-defined groups allow users to quickly obtain views of any set of regions, across all accessible CICSplexes.

These groups can be used with the CONTEXT command. For example, entering `CONTEXT USER MYGROUP` shows an overview of the regions in a group called `MYGROUP`. This command also sets the scope for any subsequent find commands.

The following actions are available from the **OMEGAMON CICS Groups** workspace:

- **D** Delete a user group
- **E** Edit user group to add or remove CICS regions
- **N** Create a new user group
- **S** Select a user group to browse the members

The **View CP/SM CICS System Groups** subpanel shows the CICS regions in each CP/SM CICS system group. It does not show the group to group relationships. If one group contains another, the CICS regions from the contained group will appear as members of the container group.

The **Refresh CICS System Groups** button allows you to refresh the CP/SM CICS system group data. This will automatically occur when a CICS region is started. If changes are made to CP/SM and regions are not restarted, this action may be required.

Using the Object Group Editor to create user-defined groups

Another way to create your own user-defined group by selecting `Edit -> Objects`. The **Object Group Editor** window will appear. In the lower portion of the panel, labeled **Managed System and Situation Groups**, a tree appears. Under OMEGAMON, locate the **CICSplex** branch. It contains the existing Region groups; you can create groups within this branch. Groups with names starting with KCP_User_ are identified as user groups.

To create a new group, type N next to a CICSplex row and press ENTER. In the **Create New Managed System Group** pop-up, type a new user group name, which must start with `KCP_User_` followed by any uppercase letter or letters (for example, a descriptive name such as AR), and select OK. The **Object Group Editor** will show the available members you can add to your new group:

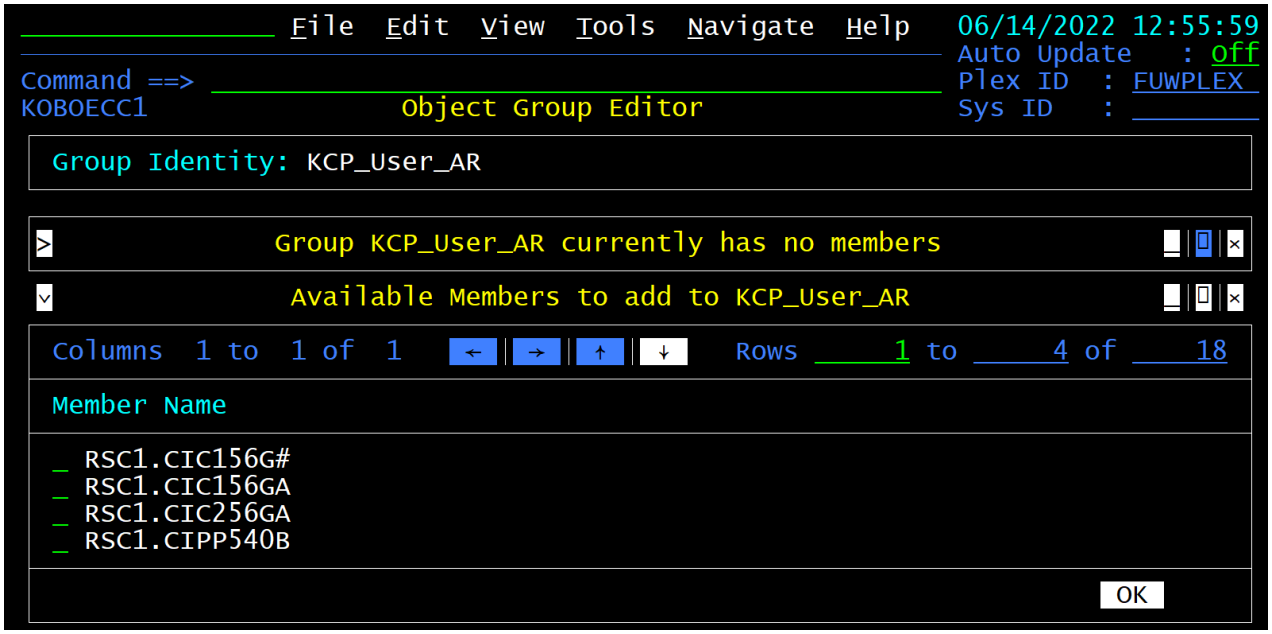
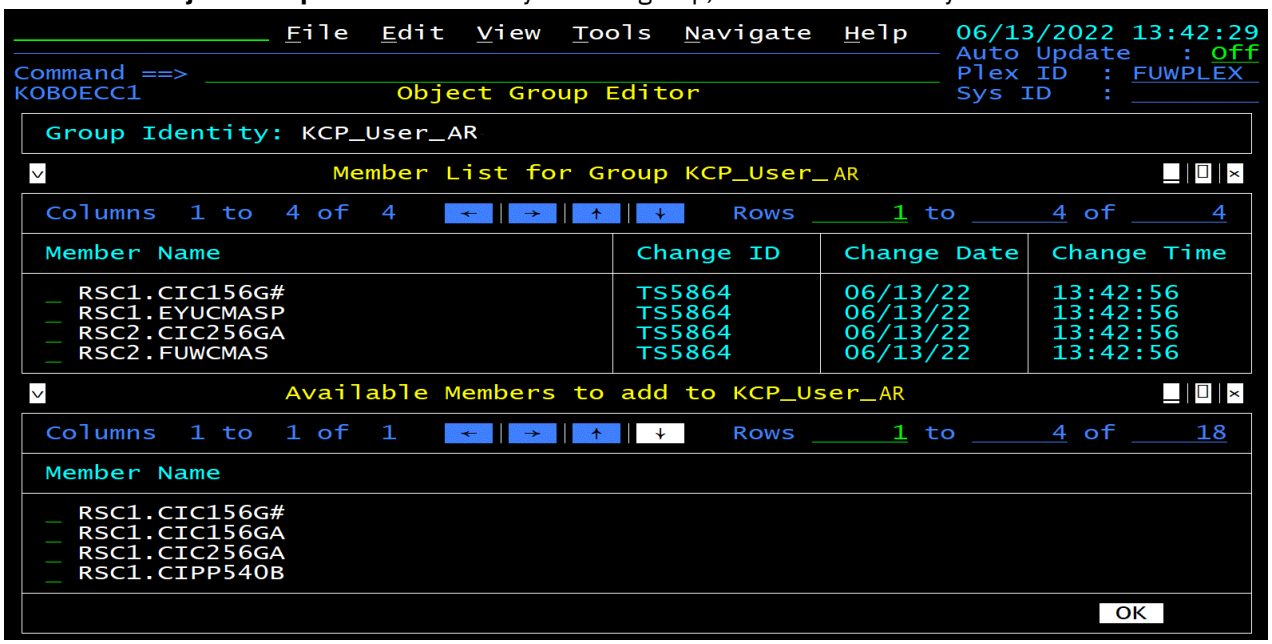


Figure 4. The Object Group Editor

Select all the regions you want to include in the user group, by typing S next to their names, then press ENTER. The **Object Group Editor** will show your new group, with the members you have selected:



The new user group will be available for use with the CONTEXT command, as described above. When you enter CONTEXT, you can choose USERGRP, and select your new group. Once you've selected that group as the context, the FIND command will show search results within that group.

Using CP/SM CICS System Groups

To monitor the performance of system groups defined in CICSPlex System Manager, use the **CP/SM CICS System Groups** workspace in IBM Z OMEGAMON for CICS.

You can specify a CP/SM group as the context for a FIND, so the FIND will search only within the CP/SM group you have specified, as if you were searching within a particular LPAR or Managed System List.

Using the CP/SM CICS System Groups Workspace

The **CP/SM CICS System Groups** workspace lets you see performance data broken down by CP/SM CICSPlex. To reach this workspace from the initial **All Active CICSplexes** workspace, select a CICSplex by entering G next to the CICSplex Name.

```
Command ==>                                                CICSplex : DEVPLX61
KCPCGRPS            CP/SM CICS System Groups               SubGroup :

 Ì                View CP/SM DEVPLX61 CICS System Groups                 _ ° ¶

  Columns  2 to  4 of 36     ¤   ±   «   »    Rows      1 to      5 of      5

 oName                          ö CPU           Transaction   Maximum Tasks
   -   +  <-- Expand tree       ö Utilization   Rate          Percent
                                 ö
    +     DB2GRP01               ö
    +     DORGRP00               ö
    +     FILEGRP1               ö
    +     JVMGRP1                ö
    +     TSQGRP1                ö
```

The **CP/SM CICS System Groups** workspace shows the CP/SM groups within the CICSplex you selected when you entered IBM Z OMEGAMON for CICS, with the trees collapsed. To expand a tree, use the plus sign (+) to the left of the group name. With a tree expanded, you can see the statistics for the region(s) in that CP/SM group:

```
KCPCGRPS            CP/SM CICS System Groups               SubGroup :

 Ì                View CP/SM DEVPLX61 CICS System Groups                 _ ° ¶

  Columns 18 to 20 of 36     ¤   ±   «   »    Rows      1 to      7 of      7

 øName                          ö ICEs       Largest          +Largest
   -   +  <-- Expand tree       ö            Contiguous LSQA   Contiguous OSCOR
                                 ö
    +     DB2GRP01               ö
    -     DORGRP00               ö
            CICD6102             ö        2             3304K             3304K
            CICD6103             ö        2             3476K             3476K
    +     FILEGRP1               ö
    +     JVMGRP1                ö
    +     TSQGRP1                ö
```

The fields displayed in this workspace are the same as those on the **Region Overview** workspace, with the addition of the Group MSL, Group Name, and Order fields. For details, see User Group List attribute group.

In the example, the **DORGRP00** group contains two CICS regions, **CICD6102** and **CICD6103**. You can scroll left and right to see statistics for each region, or you can enter G for a region, to display the **CSYSGRP Regions Summary** workspace.

For more information on context, see Using CONTEXT to change the scope of the FIND command

For more information on CICSPlex System Manager and how to create and manage groups, see CICSPlex SM system overview.

Navigating between CICS task history and Db2 thread history

To evaluate the performance of a CICS transaction that uses Db2, you may need to examine CICS Task History and Db2 thread history. To make this easier, you can navigate directly between the Task History

workspace in IBM Z OMEGAMON for CICS and the Db2 Thread History in IBM OMEGAMON for Db2 on z/OS.

Db2 threads and CICS tasks

CICS transactions can execute very quickly. Looking at Task History may be the only way to evaluate the performance of a transaction. CICS Task History often indicates that a transaction spent the bulk of its time in Db2. Or, by looking at Db2 Thread History in IBM OMEGAMON for Db2 on z/OS, you can see that a task originated in a CICS Region.

In both cases, it was often difficult to determine the exact instance of the thread in Db2 or the Task in CICS. But with IBM Z OMEGAMON for CICS version 5.6.0 and IBM OMEGAMON for Db2 on z/OS version 5.5.0, you can now easily correlate between the detailed history collected by the two products. The IBM Z OMEGAMON for CICS user can identify the thread in question and see all the attributes collected for it. The IBM OMEGAMON for Db2 on z/OS user can now rapidly determine details of the CICS task and, using the related tab, identify other CICS tasks which make up that unit-of-work.

The navigation works both ways:

- From the OMEGAMON for CICS **Task History** workspace, you can click directly to **Db2 Thread History**.
- From the IBM OMEGAMON for Db2 on z/OS **Db2 Thread History** workspace, you can click directly to **CICS Task History**.

Finding a Db2 thread from CICS Task History

To finding the Db2 thread generated by a CICS task, follow these steps:

1. From the **All Active CICSplexes** workspace, choose the CICSplex you want to examine, by typing **S** next to the CICSplex.
2. Enter **O** next to a CICS Region. This brings up the **CICSplex Task History Summary** workspace.
3. Enter **I** next to the task you want to investigate. This brings up the **I/O** tab in the **Task History Detail** workspace.

At the bottom of the workspace, the **DB2 Times** subpanel allows you to navigate to the Db2 **Thread History** workspace.

```
                              DB2 Times
Plan Name................. CICSDEMO | Connection ID............. JSKCICS1
Correlation ID............ POOLDBMO | Auth ID..................   TSS787
Elapsed Time.............. 2.383145 | In-DB2 Elapsed............ .595096s
Total Class 3 Time........ .592262s | Total Class 3 Events......       96
```

The information in this subpanel comes from IBM OMEGAMON for Db2 on z/OS. The fields with highlighted titles are "Zoom Linkage" fields; you can click on one of those to go directly to the **Db2 Thread History** workspace, showing the Db2 thread history for this CICS transaction.

Clicking on **Plan Name**, **Elapsed Time**, or **In-Db2 Elapsed** will bring you to the **Db2 Accounting** tab (“Acct”) in the **Db2 Thread History Detail Accounting** workspace. Clicking on **Total Class 3 wait time** or **Total Class 3 events** brings you to the Db2 **Class 3 Wait Time** tab (“Class 3”) in the **Db2 Thread History Detail Accounting** workspace.

```
KDPHACCT      DB2 Thread History Detail Accounting        DB2 ID   : OC1B

   Acct  |  Class3  |  BP  |  GBP  |  LWat

                           Thread Information

  Time:Start=2023-02-10 07.01.21.422863 End=2023-02-10 07.01.21.439892
  Plan Name.................  DSNUTIL   Connection ID.............  UTILITY
  Correlation ID............ PRDWOC1B   Auth ID...................   SUBJCL
  Connection Type...........  Utility   DB2 Subsystem.............     OC1B
  MVS System ID.............      SB3   Logical Unit of work ID... ROCKNET1
  Commits...................       16   Aborts....................        0
  Parallel Agents...........        0   Autonomous Count..........        0
  Parallel Tasks/Autonomous         0   Term Status...............  DEALLOC

                         CICS Task History Detail
  Transaction ID............      DEMO    CICS Region Name.......... CTSMT99C
  Task Number...............     00100    CPU Time.................. .0068485
  Response Time.............  .618106s    User ID...................   TS1234
  Program ID................  CICSDEMO    Storage HWM...............     3360
  End Time..................  19:09:47    Start Time................ 10:09:47
  End Date..................  10/03/22    Start Date................ 10/03/22
  File Requests.............         2    ABEND Code................

                            Class 1/2 Times

  Elapsed Time.............. .017029s   In-DB2 Elapsed............ .016778s
  Non Nested Class 1........ .017029s   In-DB2 Non-Nested Class 2/ .016778s
  Stored Proc Class 1....... 0.00000s   In-DB2 SP Class 2/3....... 0.00000s
```

Finding a CICS Task from Db2 Thread History

To find a CICS Task from Db2 Thread History, follow these steps:

1. From the initial **All Active DB2 Subsystems** tab when you enter IBM OMEGAMON for Db2 on z/OS, select a subsystem by entering R next to the Db2 ID.
2. Enter the thread history filters you want to use, starting with **Thread History Timespan Selection**. The **Thread History Summary** workspace appears.
3. Select a CICS thread; you can do this by entering S next to the **Stored Date** in the left column. The **Db2 Thread History Detail Accounting** workspace appears.

```
KDPHACCT      DB2 Thread History Detail Accounting        DB2 ID   : OC1B

   Acct    Class3    BP    GBP    LWat

                           Thread Information

  Time:Start=2023-02-10 07.01.21.412190 End=2023-02-10 07.01.21.422708
  Plan Name.................  DSNUTIL   Connection ID.............  UTILITY
  Correlation ID............ PRDWOC1B   Auth ID...................   SUBJCL
  Connection Type...........  Utility   DB2 Subsystem.............     OC1B
  MVS System ID.............      SB3   Logical Unit of work ID... ROCKNET1
  Commits...................       13   Aborts....................        0
  Parallel Agents...........        0   Autonomous Count..........        0
  Parallel Tasks/Autonomous         0   Term Status...............  DEALLOC

                         CICS Task History Detail
  Transaction ID............      DEMO    CICS Region Name.......... CTSMT99C
  Task Number...............     00100    CPU Time.................. .0068485
  Response Time.............  .618106s    User ID...................   TS1234
  Program ID................  CICSDEMO    Storage HWM...............     3360
  End Time..................  19:09:47    Start Time................ 10:09:47
  End Date..................  10/03/22    Start Date................ 10/03/22
  File Requests.............         2    ABEND Code................

                            Class 1/2 Times

  Elapsed Time.............. .010517s   In-DB2 Elapsed............ .010361s
  Non Nested Class 1........ .010517s   In-DB2 Non-Nested Class 2/ .010361s
  Stored Proc Class 1....... 0.00000s   In-DB2 SP Class 2/3....... 0.00000s
```

The **CICS Task History Detail** subpanel displays information from IBM Z OMEGAMON for CICS Task History. The highlighted fields are "Zoom Linkage" fields. Clicking on **Transaction ID** links to the **Task History Detail** workspace in IBM Z OMEGAMON for CICS (see below).

```
KCPTASHI              Task History Detail                Region   : CICD6102

   Details  | Statistics  | Storage  | Timings  | I/O  | Programs  | Related

                         Transaction I/O Waits

  TC I/O Wait Time..... 3.47096s   Transient Data I/O Wait... 0.00000s
  File I/O Wait Time..... 0.00000s   JC I/O Wait Time..... 0.00000s
  TC I/O Wait Time..... 3.47096s   MRO Wait Time..... 0.00000s
  LU 6.1 Terminal I/O Wait.. 0.00000s   LU 6.2 Terminal I/O Wait.. 0.00000s
  RMI Suspend Time..... 0.00000s   RLS File I/O Wait..... 0.00000s
  Shared TS I/O Wait Time... 0.00000s   Socket I/O Wait Time..... 0.00000s
  SOCKET Outbound Wait..... 0.00000s   SOCKET receive wait..... 0.00000s
  DB2 Connection Wait Time.. 0.00000s   DB2 Readyq Wait Time..... 0.00000s
  DB2 Wait Time.....      n/a   IMS Wait Time..... 0.00000s

                          Task DB2 Statistics
  Open cursors.....        0   Open cursor time..... 0.00000s
  Close cursors.....        0   Clocse cursor time..... 0.00000s
  Fetches.....        0   Fetch time..... 0.00000s
  Selects.....        0   Select time..... 0.00000s
  Inserts.....        0   Insert time..... 0.00000s
  Updates.....        1   Update time..... .003120s
  Deletes.....        0   Delete time..... 0.00000s
  Prepares.....        0   Prepare time..... 0.00000s
  Describes.....        0   Describe time..... 0.00000s
  Executes.....        0   Execute time..... 0.00000s
  Exec immediates.....        0   Exec immediate time..... 0.00000s
  Miscellaneous calls.....        1   Miscellaneous call time... .000928s
  Total requests.....        2   Elapsed time..... .004048s
  DB2Entry Name..... CICSDEMO   DB2Plan Name..... CICSDEMO
  DB2Tran Name.....  DFHDBMO

                              DB2 Times
  Plan Name..... CICSDEMO   Connection ID..... JSKCICS1
  Correlation ID..... POOLDBMO   Auth ID.....   TS1234
  Elapsed Time..... 1.81026s   In-DB2 Elapsed..... .003469s
```

Clicking on **CICS Region Name** from the **DB2 Thread History Detail Accounting** workspace displays a pop-up with several possible actions that can be taken for that CICS Region.

Configuration note

In the CICS **DB2CONN** or **DB2ENTRY** definitions, ACCOUNTREC must be set to UOW or TASK to create the correct LUWIDs that are common to Db2 and CICS. See the CICS Transaction Server for z/OS Db2 Guide for more information about how the CICS/Db2 connections are defined. This configuration creates a field in the Db2 IFCID that allows identification of the CICS Transaction that created the Db2 Thread. This option is required in order for the feature to work properly:

```
OVERTYPE TO MODIFY                                          CICS RELEASE = 0740
 CEDA  DEFine DB2Entry( CICSDEMO )
  DB2Entry       : CICSDEMO
  Group          : CICSDEMO
  DEScription  ==>
 THREAD SELECTION ATTRIBUTES
  TRansid      ==> DBMO
 THREAD OPERATION ATTRIBUTES
  ACcountrec   ==> TAsk                 None | TXid | TAsk | Uow
  AUTHId       ==>
  AUTHType     ==>                      Userid | Opid | Group | Sign | TErm
                                        | TX
  DRollback    ==> Yes                  Yes | No
  PLAN         ==> CICSDEMO
  PLANExitname ==>
  PRIority     ==> High                 High | Equal | Low
```

Enabling Task Related User Exit (TRUE) monitoring

You can monitor Task Related User Exit (TRUE) activity in the enhanced 3270 user interface. TRUE monitoring allows you to gauge the effect of applications using Task Related User Exits.

You can enable TRUE monitoring in either of two ways:

- Temporarily (until the CICS region is recycled), using the **CICS Task Program and TRUE Detail Control** (KCPCPROG) workspace; see below.
- Permanently, using the Global Data Area; see Determining the values for the monitoring options in IBM Z OMEGAMON for CICS.

The **CICS Task Program and TRUE Detail** workspace allows you to control the way OMEGAMON CICS collects task program and TRUE details. The settings for TRUE monitoring are in the lower subpanel, **Task TRUE Detail Status**.

From the initial **All Active CICSplexes** workspace, select a CICSplex by entering **S**, then select **CICS Control Functions** by entering **C** next to a CICS region, then select **T CICS Task Program/TRUE Detail Control** from the **CICS Control Functions** menu:

```
KCPCPROG    CICS Task Program and TRUE Detail Control      Region   : CICD6102

               Task Program Detail Status for CICS CICD6102

  Task Program Detail.............................................       On
  Aggregate Program Detail........................................       On
  Write to Task History...........................................       On
  Write to SMF....................................................      Off
                                 Modify          EXIT

                Task TRUE Detail Status for CICS CICD6102

  Task TRUE Detail................................................      Off
  Write to Task History...........................................       On
  Write to SMF....................................................      Off
                                 Modify          EXIT
```

- **Task TRUE Detail**: This option collects usage information about each Task Related User Exit (TRUE) program which the task has invoked via an application request or for syncpoint processing. This will collect the count and elapsed time each exit is in control.
- **Write to Task History**: This option will record the collected program data for a task to Task History. This will provide the Programs tab when looking at the details for a task. This will provide information about all programs used during the time covered by the history record.
- **Write to SMF**: This option will record the collected information to SMF. The data can then be processed offline by utilities such as IBM CICS Performance Analyzer.

Specifying background tasks to remove from active task displays

If you have tasks that are normally running in the background and do not need to appear in the workspaces used for routine monitoring, you can use the **CICS Background Tasks Summary** workspace to create a list of such background tasks, specified by Transaction ID.

These tasks will still be monitored, but they will not be shown in workspaces that show active tasks (for example, the **CICS Task Summary** workspace), output from the FIND command, and other workspaces that are used to monitor tasks and identify performance issues.

You can create and manage Background Task lists from the **CICS Background Tasks Summary** workspace.

Using the CICS Background Tasks Summary Workspace

The **CICS Background Tasks Summary** workspace lets you create, modify, copy, and delete Background Task lists. These are lists of the tasks that will be treated as background tasks in a CICSplex and region. To reach this workspace, follow these steps:

1. From the initial **All Active CICSplexes** workspace, select a CICSplex by entering S next to the CICSplex Name.
2. From the **CICSplex Regions Summary**, select a CICS region and navigate to the **CICS Control Functions** menu by entering C next to the CICS Region Name.
3. From the **CICS Control Functions** menu, select **CICS Background Tasks List**. From here, you can create and manage Background Task lists.

```
Command ==>                                                CICSplex : PIPPAPLX
KCPBGTSK           CICS Background Tasks Summary           Region   :

                            CICS Background Tasks

  Columns  1 to  3 of 3                     Rows      1 to   3 of 3

  CICSplex     CICS       Transaction
  Name         Name       List

  _ O*         CICD3*     CECI,CEDA,CEMT
  _ OM*        CICD4*     CECI
  _ CHETPLEX   CICD5401   CECI,CE?A
```

The **CICS Background Tasks Summary** workspace shows the Background Tasks lists that have been created. Each list is shown on one line and shows the CICSplex, CICS Name (region), and the tasks that are treated as background tasks for the region(s).

Creating a Background Tasks list

If there are no background tasks currently defined, select the **Add** button to add a list. Otherwise, enter A next to the CICSplex Name in one of the existing lists. This brings up the **Background Tasks List: ADD** panel.

```
                                                          Auto Update   : Off
Command ==>                                               Plex ID  : PIPPAPLX
KCPBGTSP                                                  Sys ID   :

                 Background Tasks List: ADD

   CICSplex Name:  ________     CICSplex and region name (or
                                mask with wildcard characters)
   CICS Name    :  ________     background task list applies to.

   Transaction List :           Transaction ID list identified as
                                background tasks.

   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
```

Enter the CICSplex name and CICS Name (region), then enter the IDs you want to designate as background tasks, separated by commas; for example, `CECI,CEMT,CEDM`. Press ENTER. Finally, page down to the bottom of the panel and select the **OK** button. Your new Background Tasks list will appear in the **CICS Background Tasks Summary** (KCPBGTSK) workspace.

You can use an asterisk (*) wildcard at the end of any of the three fields: CICSplex name, CICS Name (region), and the Transaction List items themselves. You can use a question mark (?) as a single-character wildcard in any of these items as well.

```
Command ==>                                                Plex ID  : OMEGPLEX
KCPBGTSM                                                   Sys ID   :

                 Background Tasks List: MODIFY

   CICSplex Name: CHETPLEX      CICSplex and region name (or
                                mask with wildcard characters)
   CICS Name    : CICD5401      background task list applies to.

   Transaction List :           Transaction ID list identified as
                                background tasks.
   CECI,CEDA_____________________________________________________
   _____________________________________________________________
   _____________________________________________________________
```

The list items must be separated by commas, as shown above. They cannot be separated by blanks, as can be done with the FIND command.

After you perform an action, the **Take Action Results** message will confirm that the action was successfully completed, or it will display an error message.

Note: If filtering has been enabled, existing Background Tasks lists might not appear, and the **CICS Background Tasks Summary** workspace will indicate, "No current Background Task Lists Match Filter Criteria." If this is the case, you can press PF4 or enter FILTER at the **Command ==>** prompt, to bring up the **Filter(s)** subpanel. You can change or clear the filters from there. See "Filtering," below, for more information on filtering your Background Tasks lists.

Modifying a list

From the **CICS Background Tasks Summary** workspace, you can modify an existing Background Task list. Enter **M** next to the **CICSplex Name** of the list you want to modify. This will display the **Background Tasks List**, from which you can edit the Transaction ID list.

Note: you cannot change the **CICSplex Name** or **CICS Name** fields here. If you want to change those, you can copy the list (see below) and specify a different **CICSplex Name** and/or **CICS Name**. This will create a new list, in addition to the existing list that was copied. The new list will have the new CICSplex name and CICS region name, but with the same list of transactions as in the list you copied.

Deleting a list

From the **CICS Background Tasks Summary** workspace, you can delete a Background Task list. Enter **D** next to the **CICSplex Name** of the list you want to delete. A confirmation panel will appear, asking you to confirm that you want to delete the list.

Copying a list

Enter **C** to copy the background task list for that CICSplex; for example, if you want to designate the same background tasks for another CICSplex or region. The **Background Tasks List** will appear. Enter the CICSplex and CICS Name (region). The new Background Task list will be created. You can also edit the list of transactions.

Filtering

From the **CICS Background Tasks Summary** workspace, press PF4 or select the filter indicator (green if filtering is not currently enabled, yellow if filtering is enabled) next to the **CICSplex Name** or **CICS Name** column label. You can also type FILTER at the **Command ==>** prompt. The **Filter(s)** panel appears.

Select **CICSplex Name** or **CICS Name**. The **Filter Detail** panel appears. This lets you specify a comparison operator, a value, and an uppercase transaction (UCTRAN) setting; when this is enabled, the comparison value will be treated as uppercase letters.

When you have specified these values, press **ENTER**, then select 0K to confirm. The **CICS Background Tasks** panel will only display the items that correspond to your filter value(s). The filter indicator will be yellow, indicating that the list is currently filtered.

To unfilter the list, press PF4 or select the filter indicator, then select **Clear all filters**, then press PF3 to return to the **CICS Background Tasks Summary** panel.

Service Level Batch utility

The following scenarios use the kcp_slabatch utility to enable a large number of updates to the CICS service level analysis definitions stored at the hub Tivoli Enterprise Monitoring Server.

Service Level Batch utility

There are operations that you must perform prior to performing the scenarios or any operation with the kcp_slabatch utility. The environment used in these scenarios are a hub Tivoli Enterprise Monitoring Server, Tivoli Enterprise Portal Server and Tivoli Enterprise Portal desktop client installed on a Windows system. These instructions can be applied to IBM Tivoli Monitoring components installed on other supported operating systems.

These are the operations:

- The IBM Tivoli Monitoring infrastructure must be fully installed and include IBM Z OMEGAMON for CICS application support for Tivoli Enterprise Monitoring Server, Tivoli Enterprise Portal Server and Tivoli Enterprise Portal desktop client.
- The user ID that is performing the SLA updates must have access to the CICS SLA view within the Tivoli Enterprise Portal client.

  Alternatively, the CICS SLA view can be assigned to the appropriate user ID though a command line using the **tacmd** command.
- The Tivoli Enterprise Portal Server and hub Tivoli Enterprise Monitoring Server must be online.

These are the scenarios:

- The existing CICS SLA definitions are exported from one hub Tivoli Enterprise Monitoring Server for backup purposes and imported directly to a second Hub Tivoli Enterprise Monitoring Server to handle the responsibility for the CICS SLA definition management should a problem occur with the original server.
- The existing CICS SLA definitions are exported from the hub Tivoli Enterprise Monitoring Server and modified to change the properties of various workload, service class and service policy definitions. The active service policy element and the choice of workload management are also updated. The updated definitions are imported back into the hub Tivoli Enterprise Monitoring Server. This scenario demonstrates the ability to change a large number of service classes automatically or update these definitions on a regular basis through a command line interface.

For more information on the kcp_slabatch utility, see the *Planning and Configuration Guide*.

Making a backup copy of the existing CICS SLA definitions

The CICS SLA definitions are stored within a database that is contained at the hub Tivoli Enterprise Monitoring Server; there is just one copy of these definitions available.

A common configuration can have a backup Tivoli Enterprise Monitoring Server available in the event the original hub Tivoli Enterprise Monitoring Server must be taken offline. In this case, you want to have the latest data installed and available on the backup Tivoli Enterprise Monitoring Server so it can be brought online as quickly as possible. If you have made extensive changes to the CICS SLA definitions from those originally installed, it is advantageous to keep the definitions the same on the backup Tivoli Enterprise Monitoring Server as with your current values. In this scenario, we export the current CICS SLA definitions from the hub Tivoli Enterprise Monitoring Server to create a backup copy, and then import these definitions into the second Tivoli Enterprise Monitoring Server.

Exporting the current CICS SLA definitions into the XML file

The first part of this scenario is to export the current CICS SLA definitions from the hub Tivoli Enterprise Monitoring Server into the XML file.

Use these steps to export your CICS SLA definitions:

1. Navigate to the folder where you installed the kcp_slabatch utility. This location is in the Tivoli Enterprise Portal desktop client folder. For Windows, `C:\IBM\ITM\CNP\`
2. Issue a command similar to the following to export the current CICS SLA definitions:

```
C:\IBM\ITM\CNP> kcp_slabatch export –s localhost –u sysadmin –o
C:\temp\myCicsSlaDefintions.xml  --listAsCreate
```

The first argument (export) indicates what operation we want to perform while the following arguments define the additional connection values. This argument connects to a Tivoli Enterprise Portal Server running at the *localhost* using the user ID, *sysadmin*. The resulting output XML file is written to `C:\temp\myCicsSlaDefinitions.xml`. The username (*-u*) and output file (*-o*) arguments are required. We also added the *--listAsCreate* flag, which signifies all elements that are exported have the *create* attribute. All other arguments are optional and have default values.

Once you issue the command, the following output is displayed on the console:

```
IBM OMEGAMON forCICS on z/OS - SLA Command Line Utility
(C) Copyright IBM Corporation 2012. All rights reserved.
07/08/09 15:23:49.562 KCPSB1001I: Starting export of existing SLA definitions.
EXPORT INPUT PARAMETERS
Hostname: localhost
Port: 1920
Output file: C:\temp\myCicsSlaDefinitions.xml
List as create: true
Verbose: false
No console output: false

07/08/09 15:23:49.562 KCPSB1003I: Attempting to make connection to TEPS.
07/08/09 15:23:49.593 KCPSB1050I: Attempting to establish connection to TEPS at
hostname: localhost, port: 1,920.
07/08/09 15:23:53.984 KCPSB1068I: User has permission to view or modify SLA definitions.
07/08/09 15:23:54.140 KCPSB1005I: Writing XML document out to file:
                                  C:\temp\myCicsSlaDefinitions.xml
07/08/09 15:23:54.171 KCPSB1007I: Disconnecting from TEPS.
07/08/09 15:23:54.171 KCPSB1016I: Log file written to:
                                  C:\IBM\ITM\CNP\kcp_slabatch_200907081523.log
07/08/09 15:23:54.171 KCPSB1008I: SLA Batch work completed. Return code: 0.
```

If the command has run correctly there should be a return code of 0.

If a problem occurred, check the log file. The log file provides detailed information as to the problem that has occurred. Once you have corrected the issue, run the command again.

Removing the existing CICS SLA definitions from the new Tivoli Enterprise Monitoring Server

Before you import the CICS SLA definitions, remove the existing definitions from the Tivoli Enterprise Monitoring Server so you can import the new definitions. You can do this in several ways including running the kcp_slabatch utility with the elements you want to delete as marked. In this scenario, the Tivoli Enterprise Portal client is used to delete the entries that are not needed.

Use these steps to remove the CICS SLA definitions from the new Tivoli Enterprise Monitoring Server.

1. Sign on to the Tivoli Enterprise Portal desktop client and switch to the CICS SLA view.
2. For all Workload, Service Class and Service Policy elements that are no longer needed, select them and delete. There must always be an active Service Policy element at any given time so you cannot delete all the Service Policy elements; keep one Service Policy element active.
3. When you are done with your modification, save your changes, and exit the Tivoli Enterprise Portal desktop client.

Importing the CICS SLA definitions from the XML file into the new Tivoli Enterprise Monitoring Server

The final step is to take the CICS SLA definitions you have previously exported from the original hub Tivoli Enterprise Monitoring Server and import them into the new Tivoli Enterprise Monitoring Server using the XML file as the source.

To import your CICS SLA definitions into your new Tivoli Enterprise Monitoring Server, follow these steps:

1. Open your generated XML file from the `C:\temp\myCicsSlaDefinitions.xml` folder location.

   You can see that underneath the preamble, the file is structured into groups of CICS SLA definitions for Workload, Service Class and Service Policy elements. Each element has an optional *action* attribute; this describes what operation you want the SLA Batch utility to perform. The available actions are *create*, *edit*, or *delete* to match the operations available in the CICS SLA view in the Tivoli Enterprise Portal desktop client. If you do not specify an action, then no action is performed and the element is ignored. The following entry is for a Workload element:

   ```
   <Workload action="create">
         <Name>DFLTWORK</Name>
         <Description>DEFAULT WORKLOAD</Description>
   </Workload>
   ```

   This example, creates a new Workload element with the name, *DFLTWORK* and the description, *DEFAULT WORKLOAD*. Depending on the element and action attribute you assign, certain elements are required and some are optional. All elements in the example file have *action="create"* attribute because the **export** command was issued with the *--listAsCreate* flag.
2. After you review the XML file, close the file.
3. Navigate to the folder where you installed the kcp_slabatch utility. This location is in the Tivoli Enterprise Portal desktop client folder. For Windows, `C:\IBM\ITM\CNP\`
4. Issue a command similar to the following to import the CICS SLA definitions from the XML file:

   ```
   C:\IBM\ITM\CNP> kcp_slabatch import –s myserver.ibm.com –u sysadmin –i
   C:\temp\myCicsSlaDefintions.xml --failOnFirstError
   ```

   The first argument (import) indicates the operation you want to perform while the following arguments define additional connection values. This argument connects to a Tivoli Enterprise Portal running at *myserver.ibm.com* using the user ID (-u), *sysadmin*. The input XML file that was generated earlier is used (`C:\temp\myCicsSlaDefinitions.xml`) and the *--failOnFirstError* flag, which means that the kcp_slabatch utility stops processing at the occurrence of the first error while still importing the file.

   Once you issue this command, the following output is displayed on the console:

   ```
   IBM OMEGAMON forCICS on z/OS - SLA Command Line Utility
   (C) Copyright IBM Corporation 2012. All rights reserved.
   07/08/09 16:59:32.125 KCPSB1002I: Starting import of SLA definitions.
   IMPORT INPUT PARAMETERS
   Hostname: myserver.ibm.com
   Port: 1920
   Input file:  C:\temp\myCicsSlaDefintions.xml
   Fail on first error: true
   Verbose: false
   No console output: false

   07/08/09 16:59:32.140 KCPSB1003I: Attempting to make connection to TEPS.
   07/08/09 16:59:32.156 KCPSB1050I: Attempting to establish connection to TEPS at
    hostname: myserver.ibm.com, port: 1,920.
   07/08/09 16:59:35.593 KCPSB1051I: Connection to TEPS successful.
   07/08/09 16:59:36.656 KCPSB1068I: User has permission to view or modify SLA definitions.
   07/08/09 16:59:36.656 KCPSB1004I: Using input file:  C:\temp\myCicsSlaDefintions.xml
   07/08/09 16:59:36.734 KCPSB1025I: Update of WORKLOAD definitions starting.
   07/08/09 16:59:36.734 KCPSB1082I: Request [1] - Request is to create a new Workload.
   ...
   07/08/09 16:59:37.468 KCPSB1026I: Update of SERVICE POLICY definitions completed.
   07/08/09 16:59:37.468 KCPSB1025I: Update of CONTROL INTERVAL definitions starting.
   07/08/09 16:59:37.484 KCPSB1072I: Request [32] - Request completed successfully.
   07/08/09 16:59:37.484 KCPSB1026I: Update of CONTROL INTERVAL definitions completed.
   07/08/09 16:59:37.484 KCPSB1025I: Update of ACTIVE POLICY definitions starting.
   ```

```
07/08/09 16:59:37.562 KCPSB1072I: Request [33] - Request completed successfully.
07/08/09 16:59:37.562 KCPSB1026I: Update of ACTIVE POLICY definitions completed.
SUMMARY OF UPDATES
==================
Total number of CREATE requests: 33
Total number of EDIT requests: 0
Total number of DELETE requests: 0
Total number of requests with NO ACTION specified: 0
----------
Total number of SUCCESSFUL requests : 33
Total number of FAILED requests: 0
----------
TOTAL REQUESTS PROCESSED: 33
07/08/09 16:59:37.562 KCPSB1007I: Disconnecting from TEPS.
07/08/09 16:59:37.562 KCPSB1016I: Log file written to:
                                  C:\IBM\ITM\logs\kcp_slabatch_200907081659.log
07/08/09 16:59:37.562 KCPSB1008I: SLA Batch Utility has completed. Return code: 0.
```

Note that this example output has been edited.

5. If the command has run correctly there should be a return code of 0. If a problem occurred, check the log file at your location.

   The log file provides detailed information as to when the problem occurred. Once you have corrected the issue, run the command again. Notice towards the end of the log file, there is a summary of updates that have been made as a result of running these requests. Verify that all CICS SLA definitions have been updated as expected.

6. Sign on to the Tivoli Enterprise Portal desktop client.

   You should now see all the imported CICS SLA definitions displayed that match the definitions defined on the original hub Tivoli Enterprise Monitoring Server.

What to do next

This might be a process you will want to perform on a regular basis; maybe once a week or even more often, if your CICS SLA definitions are regularly updated. If this is the case, you might want to automate this process even further by creating a script or batch file that performs the export and import processes in order from a single invocation.

You could also generate an XML file with the requisite delete actions needed to remove your old CICS SLA definitions prior to the import process.

Create a script with the following calls to kcp_slabatch utility:

- Export the existing CICS SLA definitions from the source hub Tivoli Enterprise Monitoring Server.
- Delete your old CICS SLA definitions manually using an edited XML file.
- Import your new CICS SLA definitions using the generated XML file.

Updating multiple CICS SLA definitions

Using this approach allows you to update only a single resource such as a Workload element or Service Class goal at a time. If you have many updates to make, or have to make changes frequently in your environment, this can be a slow process.

Using the current CICS SLA view, you sign on to the Tivoli Enterprise Portal client and make your changes directly. By using the kcp_slabatch utility, you can define all the changes you need in a single XML file and update the CICS SLA definitions with an automated batch process.

In this scenario, you export your existing CICS SLA definitions and make changes to the values you want to update. Then, you call the kcp_slabatch utility to apply your changes to the CICS SLA definitions stored at your hub Tivoli Enterprise Monitoring Server.

Exporting the current CICS SLA definitions into the XML file

The first part of this scenario is to export the current CICS SLA definitions from the hub Tivoli Enterprise Monitoring Server into the XML file

Use these steps to export your CICS SLA definitions:

1. Navigate to the folder where you installed the kcp_slabatch utility. This location is in the Tivoli Enterprise Portal desktop client folder. For Windows, `C:\IBM\ITM\CNP\`
2. Issue a command similar to the following to export the current CICS SLA definitions:

```
C:\IBM\ITM\CNP> kcp_slabatch export –s localhost –u sysadmin –o
C:\temp\MyNewSLADefintions.xml
```

Editing the CICS SLA definitions

You need to create an input XML file that defines the changes you want to make to your current CICS SLA definitions.

Use the XML file you had previously exported as your template for your new input file. Advanced users might want to integrate this process with their existing tools enabling an XML file to be automatically generated based on the results from trending analysis or changes in business priorities. In this scenario, you need to manually edit the file and make several changes.

Use these steps to manually edit the XML file:

1. Open the generated XML file using a text editor.

   Note this line near the upper left of the file:

   ```
   <!DOCTYPE CicsSlaDefinitions SYSTEM "kcp_slabatch.dtd">
   ```

   This line specifies the Document Type Definition (DTD) that is used to define the structure of the XML document. This line should be displayed within any XML document created for the kcp_slabatch utility. If the structure of your document does not match the rules defined in the DTD, it does not parse correctly and is rejected by the kcp_slabatch utility. The DTD file (`kcp_slabatch.dtd`) is found along with the kcp_slabatch utility in the Tivoli Enterprise Portal client installation folder. For Windows, this is typically `C:\IBM\ITM\CNP` or `C:\IBM\ITM\CNB\classes`. If you are integrating the creation of XML files for SLA into your existing tools, use the DTD file to ensure that the XML file is generated in the proper form.
2. The first edit to make is to create a new Workload element. Amend one of your Workload elements similar to this definition:

   ```
   <Workload action="create">
       <Name>NEWWORK</Name>
       <Description>A new workload</Description>
   </Workload>
   ```

   This is the only change you make to the Workload elements. You can delete the other entries.
3. Edit the Service Classes (*ATRANS*), in order to use your new Workload element. For example:

   ```
   <ServiceClass action="edit">
       <Name>ATRANS</Name>
       <WorkloadName>NEWWORK</WorkloadName>
   </ServiceClass>
   ```

   The action attribute signifies *“edit”*, which instructs the kcp_slabatch utility to update the existing entry. The new Workload Name element is also signified. The Rule and Base Goal entries are not changing so they do not need to be specified in the line. You are changing the Service Class element only, so the other entries are deleted.

4. Change the existing Service Policy element to include an Override Goal for the (*ATRANS*) Service Class element. Edit the *DFLTSPOL* entry:

```
<ServicePolicy action="edit">
    <Name>DFLTSPOL</Name>
    <OverrideGoal action="create">
        <ServiceClassName>ATRANS</ServiceClassName>
        <ResponseTime>3600000</ResponseTime>
        <PercentOfGoal>45</PercentOfGoal>
    </OverrideGoal>
</ServicePolicy>
```

   The *DFLTSPOL* Service Policy entry is edited while the associated Override Goal entry is being created. The required fields for creating an Override Goal are the Service Class Name, a new Response Time (a value is milliseconds) and the percent of goal (use 0 for average).

5. You can edit the Collection Interval time, Workload Management rules, and the Active Service Policy entries. In this scenario, make a change to set the interval to five minutes (*0005*) for the *OMEGAMON* Workload Management rules to ensure that the *DFLTSPOL* Service Policy entry is the active Service Policy. For example:

```
<Control>
    <CollectionInterval>0005</CollectionInterval>
    <WLMType>OMEGAMON</WLMType>
</Control>
<ActivePolicy>DFLTSPOL</ActivePolicy>
```

6. Save your XML file and close the file.

Importing the edited CICS SLA definitions from the XML file into the hub Tivoli Enterprise Monitoring Server

The final part for this scenario is to take the updated CICS SLA definitions in your XML file and import the definitions again to the hub Tivoli Enterprise Monitoring Server.

Use these steps to import your updated CICS SLA definitions into your hub Tivoli Enterprise Monitoring Server:

1. Navigate to the folder where you installed the kcp_slabatch utility. This location is in the Tivoli Enterprise Portal desktop client folder. For Windows, `C:\IBM\ITM\CNP\`
2. Issue a command similar to the following to import the updated CICS SLA definitions:

```
C:\IBM\ITM\CNP> kcp_slabatch import –s localhost –u sysadmin –i
C:\temp\MyNewSLADefintions.xml -FailOnFirstError
```

   Once you issue the command, the following output is displayed on the console:

```
IBM OMEGAMON forCICS on z/OS - SLA Command Line Utility
(C) Copyright IBM Corporation 2012. All rights reserved.
07/09/10 14:24:56.500 KCPSB1002I: Starting import of SLA defintions.
IMPORT INPUT PARAMETERS
Hostname: localhost
Port: 1920
Input file:  C:\temp\MyNewSLADefintions.xml
Fail on first error: true
Verbose: false
No console output: false

07/09/10 14:24:56.515 KCPSB1003I: Attempting to make connection to TEPS.
07/09/10 14:24:56.531 KCPSB1050I: Attempting to establish connection to TEPS at
hostname: localhost, port: 1,920.
07/09/10 14:24:59.578 KCPSB1051I: Connection to TEPS successful.
07/09/10 14:25:00.515 KCPSB1068I: User has permission to view or modify SLA definitions.
07/09/10 14:25:00.515 KCPSB1004I: Using input file:  C:\temp\MyNewSLADefintions.xml
07/09/10 14:25:00.578 KCPSB1025I: Update of WORKLOAD definitions starting.
07/09/10 14:25:00.578 KCPSB1082I: Request [1] - Request is to create a new Workload.
07/09/10 14:25:00.640 KCPSB1072I: Request [1] - Request completed successfully.
07/09/10 14:25:00.640 KCPSB1026I: Update of WORKLOAD definitions completed.
07/09/10 14:25:00.640 KCPSB1025I: Update of SERVICE CLASS definitions starting.
07/09/10 14:25:00.640 KCPSB1093I: Request [2] - Request is to edit an existing Service Class.
07/09/10 14:25:00.687 KCPSB1071I: Request [2] - Calling EDIT on SERVICE CLASS (Name: ATRANS).
```

```
07/09/10 14:25:00.718 KCPSB1072I: Request [2] - Request completed successfully.
07/09/10 14:25:00.718 KCPSB1026I: Update of SERVICE CLASS definitions completed.
07/09/10 14:25:00.718 KCPSB1025I: Update of SERVICE POLICY definitions starting.
07/09/10 14:25:00.718 KCPSB2008I: Request [3] - Request is to edit an existing Service
Policy.
07/09/10 14:25:00.750 KCPSB2020I: Request [3] - Request is to create a new Override Goal.
07/09/10     14:25:00.750 KCPSB1072I: Request [3] - Request completed successfully.
07/09/10 14:25:00.750 KCPSB1026I: Update of SERVICE POLICY definitions completed.
07/09/10 14:25:00.750 KCPSB1025I: Update of CONTROL INTERVAL definitions starting.
07/09/10 14:25:00.765 KCPSB1072I: Request [4] - Request completed successfully.
07/09/10 14:25:00.765 KCPSB1026I: Update of CONTROL INTERVAL definitions completed.
07/09/10 14:25:00.765 KCPSB1025I: Update of ACTIVE POLICY definitions starting.
07/09/10 14:25:00.828 KCPSB1072I: Request [5] - Request completed successfully.
07/09/10 14:25:00.828 KCPSB1026I: Update of ACTIVE POLICY definitions completed.
SUMMARY OF UPDATES
==================
Total number of CREATE requests: 1
Total number of EDIT requests: 3
Total number of DELETE requests: 0
Total number of requests with NO ACTION specified: 0
----------
Total number of SUCCESSFUL requests : 5
Total number of FAILED requests: 0
----------
TOTAL REQUESTS PROCESSED: 5
07/09/10 14:25:00.828 KCPSB1007I: Disconnecting from TEPS.
07/09/10 14:25:00.828 KCPSB1016I: Log file written to:
                                  C:\IBM\ITM\logs\kcp_slabatch_200907091424.log
07/09/10 14:25:00.828 KCPSB1008I: SLA Batch Utility has completed. Return code: 0.
```

3. If the command has run correctly there should be a return code of 0. If a problem occurred, check the log file at your location.

   The log file provides detailed information as to when the problem occurred. Once you have corrected the issue, run the command again. Notice towards the end of the log file, there is a summary of updates that have been made as a result of running these requests. Verify that all CICS SLA definitions have been updated as expected.

4. Sign on to the Tivoli Enterprise Portal desktop client.

   You should now see all the modified CICS SLA definitions.

What to do next

The ability to import updated CICS SLA definitions in a batch process using a single source XML file helps in keeping your definitions updated quickly and easily.

Although in this scenario you manually edited the XML file, the real benefit is derived when you integrate the generation of the file with your other tools. Use the supplied DTD file to ensure that the XML you created is well formed. You can completely automate the process of analyzing your current trends and business requirements through to the update of the CICS SLA definitions that you currently use; this negates the need to sign on to the Tivoli Enterprise Portal to make your updates manually.

Real time application trace

The real time application trace feature of IBM Z OMEGAMON for CICS enables you to see the CICS requests made by an application program.

This information is very useful in identifying what application program is experiencing an error. This feature is excellent for use in the application development environment. Application errors are often not discovered until an application is already running in a production environment. IBM Z OMEGAMON for CICS provides a solution to this problem by enabling you to view the trace for transactions that are currently active.

The following scenarios use real time application trace to solve problems with active tasks.

Using application trace on looping tasks

For this scenario the assumption is that you are running the Tivoli Enterprise Portal from your computer and a transaction (FTRN) has been running for several minutes.

The task seems to be in an interval control wait situation, but the task is using some central processing unit (CPU) in a particular CICS Region (*CICSR32L*).

This transaction has previously been known to use more than normal CPU consumption across a couple of CICS regions and transactions during an observation session. Using the Tivoli Enterprise Portal and the Transaction Analysis workspace you can first identify the region with a problem and then you can locate the task that is using the consumption.

These are the stages involved in this procedure:

- Using the Transaction Analysis workspace to monitor the transaction for the (*CICSR32L*) region.
- Using a Take Action command to enable Application Trace for the task.
- Refreshing the workspace to use the Application Trace dynamic workspace link to see what the task is doing
- Viewing the Application Trace workspace to determine a course of action

Use these steps, to identify looping tasks:

1. On your computer, open the Tivoli Enterprise Portal and access the Transaction Analysis workspace in the Navigator view.

   From the Transaction Analysis workspace, you identify that the FTRN transaction in the **Transaction ID** column for the CICSR32L region in the **CICS Region Name** column has been running for several minutes, but is in a wait period, but still using CPU consumption. The **Resource Type** column signifies ICWAIT. See "Transaction Analysis workspace" on page 361.
2. In the Transaction Analysis table view, select and right-click the *FTRN* transaction.
3. Click **Take Action** from the menu.

   The Take Action window opens.
4. From the Take Action window, select the **Sample Trace Task** command from the **Name** column. See "Sample Trace Task command" on page 311.
5. Select the CICSR32L CICS region from the Destination Systems area, and click **OK**.

   The Action Status window opens showing a return code of zero. The application trace for the FTRN transaction is enabled.
6. Refresh your workspace (F5). Select the FTRN transaction and right-click and select **Application Trace** from the dynamic link menu.

   The Application Trace workspace opens.
7. From the Application Trace workspace, you can observe what the task is doing. See "Application Trace workspace" on page 325.

In this case, you see that the transaction is constantly reading a file that is not open. You see that all the reads are originating from the same offset in the application program. At this point, you determine, if opening the file, or canceling the task, is the appropriate course of action. You can also correct the logic in your application program given the information provided by the application trace for the transaction.

You can also use the application trace feature from your OMEGAMON for CICS (3270) interface.

To use the OMEGAMON for CICS (3270) for application trace use these steps:

1. From the OMEGAMON for CICS (3270) interface, on the Task Details session for the *CICSR32L* CICS region, zoom on the **Application Trace - Inactive** line, for the *FTRN* transaction on the **Transaction ID** line to activate application trace.

   The Task Application Trace Status session opens.

2. From the Task Application Trace Status session, you see that the status is inactive. Overtype the **Inactive** line, with **ACT**.

   The Task Details session opens.

3. The Task Details session indicates that Application Trace is Active. Zoom on the **Application Trace - Active** line to see the details for the application trace for the *FTRN* transaction.

   The Transaction Detail for FTRN session opens listing the transaction details in the Application Trace Facility grouping.

Using Resource Limiting to enable application trace for looping tasks

Resource Limiting is a feature in IBM Z OMEGAMON for CICS that allows you to set limits for resource usage by transactions. It allows you to set two limits for a transaction. A value at which a warning limit message is issued and another that causes the transaction to abend.

If the warning limit is reached, it either drives the issuing of a warning message or it enables application tracing for the task reaching the warning limit. If RESOURCE_LIMITING_TRACE_WARNED=NO is used, and a warning limit is reached, a warning message is issued. If RESOURCE_LIMITING_TRACE_WARNED=YES is used, and a warning limit is reached, then tracing is enabled for the transaction reaching the warning limit. In order for Resource Limiting to turn tracing on for a particular application, the Application Trace Facility must be enabled as described in “Enabling trace facilities” on page 47.

The action to kill the task can be taken before the task becomes a bottleneck on your system. However, if you abend the task, you have to print the CICS transaction dump data set to determine what the sequence of events was in the transaction. If the CICS internal trace was not active this might be difficult.

IBM Z OMEGAMON for CICS enables you to specify that a task, which has exceeded its warning threshold, for a resource, can have Application Trace turned on and active. The OMEGAMON GLOBAL statement is used to control this feature.

Follow these steps to set a warning threshold and an abend (KILL) threshold for the transaction using the Resource Limiting feature.

Specify the following statement in the <STARTUP_CONTROL> section of the Global Data Area to ensure any transaction that is warned by resource limiting will have application trace made active:

```
RESOURCE_LIMITING_TRACE_WARNED=YES
```

Suppose you want to turn application trace on for transactions that begin with the characters FT* when they exceed 100 VSAM requests. You want to abend the transactions once they reach 150 VSAM requests. You would need to code the following GLOBAL statements:

```
*
*
  <RESOURCE_LIMITING>
*
  <<VSAM>>
  INCLUDED_TRANS=(FT*)
  KILL_LIMIT=150
  WARN_LIMIT=100
*
```

Using the previous example, once the Global Data Area is loaded for the CICSR32L CICS region, and, if the FTRN transaction generates more than 150 VSAM requests, it would automatically be abended by OMEGAMON.

From the OMEGAMON for CICS (3270) interface, the Historical Transaction Overview session is confirmed because of the RLCP abend code in the **Abend Code** column. If you zoom on the FTRN transaction task, you see that application trace is available for this task. If you zoom on the **Application Trace - Active** line, the Traced Transaction Summary for Selected Task session enables you to see the logic flow that lead to the task looping.

In this scenario, the application has a problem; this is because the file is closed. This information was obtained without the overhead of having trace active for every task. It is only used for the tasks which are performing outside their expected parameters when you want to investigate the logic flow of your programs.

Enabling trace facilities

IBM Z OMEGAMON for CICS has dynamic enablement for Application Trace for active tasks; this occurs as a result of Resource Limiting being implemented with a specific CICS Global user exit.

The Application Trace feature is enabled automatically through the following parameter in the <STARTUP_CONTROL> section of the OMEGAMON Global Data Area:

```
ENABLE_APPLICATION_TRACE=AUTO
```

When you specify the AUTO parameter, resource limiting or a user activates the trace for a specific transaction; it does not mean that a trace is collected for all transactions.

If you want application trace activated for the life of a CICS region, use the Application Trace Facility Status panel in the Control menu of the OMEGAMON for CICS (3270) interface. In OMEGAMON for CICS on z/OS, the “Sample Trace Transaction command” on page 311 can be used to automatically enable trace for the life of the CICS region until you decide to explicitly disable it at a later date.

Creating application trace filters using the enhanced 3270UI

You can create Application Trace filters using the enhanced 3270 user interface (e3270UI). Application Trace filters can filter for a specific Transaction ID, User ID or Terminal ID, and specify the maximum size to be recorded for a transaction that matches the filter. You can set up a filter to repeat hourly, daily, or weekly. If you specify a repeat, the filter will become active upon the start of the next interval.

Follow these steps to define application trace filtering.

1. Select the CICSplex you want to work with, from the **All Active CICSplexes** panel.
2. In the CICSplex Regions Summary panel, enter **C** next to any CICS region to display the CICS Control Functions panel.
3. From the CICS Control Functions panel, enter **1** or **A**. The **CICS Application Trace Information** panel is displayed.
4. To add a filter:
   a. If **Application Trace Status** is shown as inactive, activate Application Trace by overtyping INACTIVE with ACTIVE, then pressing **Enter**.
   b. Place the cursor in the first line under **Tran ID**, then press **Enter**.
   c. Provide the filter criteria by completing this panel, using the following information:

      Tran ID
      The transaction ID mask that this filter applies to. The format is four-character string; for example, CEDA.

      Owner
      The user ID of the person who created the trace filter. The format is an eight-character string.

      Duration time
      The length of time that this filter is active. The format is a five-digit number.

      Userid
      The user ID mask that this filter applies to. The format is an eight-character string.

      Term ID
      The terminal ID mask that this filter applies to. The format is a two-digit integer.

      Size
      The maximum size, in kilobytes, of trace data that will be collected for tasks matching this filter.

      Note: In the Global Data Area, you can specify the default Maximum trace size.

Call type
The types of calls or events to be traced. Valid values are:

- **ALL**: All call types will be traced
- **EXEC**: Entry to and exit from an EXEC CICS command
- **PCABEND**: Entry to the CICS abend exit XPCABND
- **RMI**: Entry to and exit from the CICS Resource Manager Interface (RMI)
- **MQ**: Entry to and exit from the Message Queue (MQ) service request
- **UMBRELLA**: completion of an OMEGAMON umbrella service request
- **TPPS**: Entry to and exit from OMEGAMON third party product support (TPPS) services

Exec call
Specifies which EXEC CICS calls are traced. Valid values are:

- **ALL**: All CICS exec calls executed by the CICS transaction are traced
- **NONE**: No CICS Exec calls will be traced
- **FILE**: File control EXEC CICS commands traced
- **PROGRAM**: Program control EXEC CICS commands traced
- **STORAGE**: Storage control EXEC CICS commands traced
- **TERM**: Terminal control EXEC CICS commands traced
- **TS**: Temporary storage EXEC CICS commands traced.

Note: You can enter more than one exec call type, separated by commas.

Start date
The date on which the filter will become or became enabled.

Start time
The time at which the filter will become or became enabled.

Repeat
Displays whether the Trace filter will repeat. Valid values are No, Hourly, Daily or Weekly followed by a day of the week.

5. Fill in all the fields, then press **Enter**. The filter will be created.

Viewing CICS Task Application Trace information

Once you have created an application trace filter, the **CICS Task Application Trace** panel, KCPTASTR, will show application trace information reflecting the filter(s) currently active.

1. Select the CICSplex.
2. From the **CICSplex Regions Summary**, enter letter **O** next to the CICS region you want to work with.
3. From the **CICS Task History Summary**. Select a task from the **Transaction ID** column to bring up Task History Detail.
4. Then, double-click on **Trace active**, in the **Details** tab, to bring up **CICS Task Application Trace** panel. This panel displays trace data for the task you have selected.

Creating filters from the CICS Task Application Trace panel

From the **CICS Task Application Trace** panel, you can narrow down the application trace data further, by creating filters within this panel. Press PF4 to bring up the **Filter(s)** subpanel. This subpanel lets you select from the following filter types:

1. **Type**: The event type that produced this trace entry. This parameter is an alphanumeric string, with a maximum of eight characters.

2. **Program**: The name of the program that is in control when the request was initiated. This parameter is an alphanumeric string, with a maximum of eight characters.
3. **Interval**: The filter interval, in seconds.
4. **Function**: The function invoked by the transaction. This parameter is an alphanumeric string, with a maximum of 16 characters.
5. **Resource**: The name of the CICS resource that is being acted on. This parameter is an alphanumeric string, with a maximum of 16 characters.
6. **Response**: The type of response that is returned from the request that produced this entry. This parameter is an alphanumeric string, with a maximum of 12 characters
7. **Time**: The time of day when the traced event occurred. This timestamp has a maximum of 19 characters.
8. **TCB Name**: The MVS TCB name under which the CICS task was running when the traced event occurred. This parameter is an alphanumeric string, with a maximum of eight characters.

This specifies which column of trace data you want to filter on and displays the **Filter Detail** subpanel, which has four fields:

- **Column**: the Filter Type you selected in the **Filter(s)** subpanel.
- **Compare**: the comparison operator. The choices are:
  - equal to
  - not equal to
  - greater than
  - less than
  - greater than or equal to
  - less than or equal to
- **Value**: The comparison value or string. A string can be used, for example, to filter for a program name. You can use the equal to and not equal to operators to search for strings containing (or not containing) specified characters. For example, if you set the **Type** to `Function`, the**Compare** field to <> (not equal to), and specify `*NAL` in the **Value** field; this filter would show records that do not contain a trailing string of `NAL` in the **Function** column.
- **UCTRAN**: Whether or not to use automatic uppercase translation. A value of Yes forces uppercase, No leaves the fields in mixed case.

You can create multiple filters, so that the trace data are filtered on more than one column. When you do this, the filters will be shown in the **Filter(s)** subpanel of the **CICS Task Application Trace** panel.

```
  Filter(s)
1. Type.......................... n/a
2. Program....................... =   DFHEDA*
3. Interval...................... n/a
4. Function...................... n/a
5. Resource...................... n/a
6. Response...................... =   NORMAL
7. Time.......................... n/a
8. TCB Name...................... n/a
```

In this example, two filters are set:

- `Program = DFHEDA*`
- `Response = NORMAL`

The **Clear All Filters** button lets you remove the filters, so the **CICS Task Application Trace** panel will display all of the trace data.

Setting WARN and KILL in the e3270 user interface

You can specify resource limiting rules in the enhanced 3270 user interface.

1. Select a CICSplex from the **All Active CICSplexes** panel in the CICS tab.
2. Enter **C** (Control Functions) for a CICS region from the **CICSplex Regions Summary** panel.
3. From the **CICS Control Functions** panel, enter **R** for CICS Resource Limiting Information.
4. If **Resource Limiting Status** is shown as Inactive, use the **Enable** button to enable it.
5. Select a resource type from the **Resource** field, or accept the default, which is CPU (seconds). Other choices will have different units; for example, CONTAINER will be a number of bytes; ADABAS or DB2 will be a number of requests.
6. If you want to exclude a transaction ID from being resource-limited, you can specify it in the **Resource Limiting Excluded Tranids for resource type** field.
7. Page down to the **Resource Limiting details for resource type** panel, move the cursor underneath **Transaction ID**, and either double-click the field or enter a slash (/) and press **ENTER**, then enter **A** at the **Options** menu. This brings up the **Add Resource Limiting Rule** panel.
8. Enter a transaction ID.
9. For **Warn Limit**, enter the value you want to use as a warning threshold for this type of resource. For example, enter 10 to set the limit at 10 seconds of CPU.
10. For **Kill Limit**, enter the value you want to use as a kill threshold.

    Note: You can set a warn limit only, a kill limit only, or both.
11. Press **ENTER**. The resource limiting rule will be created, and a KCPAC4300I informational message will be displayed, indicating that the command was successfully processed.

You can copy, modify, or delete existing resource limiting rules from the **Options** menu.

Short on storage and communication problems

The following scenarios assume that you have worked through the Tivoli Enterprise Portal tutorial that accompanies these topics. These scenarios start from the point where you need to monitor a number of common situations that might occur in a CICS system.

Each scenario follows basically the same pattern:

- Define a condition to trigger an alert.
- Create a link from the workspace where the alert has been triggered
- Take appropriate action in the targeted workspace.
- Return to the original workspace to ensure that the alert has stopped.

For example, the first scenario is based on a CICS region going short-on-storage. The alert is recorded in the Storage Analysis workspace. A link is created to the Transaction Analysis workspace where the transaction that is causing the problem is identified. Using the Take Action function, a system command is created to purge the transaction that caused the CICS region to go short on storage.

Application setup

This is an outline of the applications that have been used to demonstrate a number of user scenarios.

The environment that we have described throughout this user guide is based on a simple system involving three CICS regions.

One of the applications that we are using has been installed and the transactions associated with them can be run from any of the three regions. The transaction, DT01, allows you to view and update data from a VSAM file. However, the VSAM file is defined only to the region CICSHTC1 so it is local for that region and remote to the other two regions.

Scenario 1

The scenario used in "Monitoring short-on-storage problems" on page 51 is to run the transaction DT01 from region CICSHAC1 so that it accesses the VSAM file remotely. A second user starts a transaction in the file-owning region CICSHTC1 that causes region EDSA to go short-on-storage (SOS). This means that the first user can no longer access the necessary data. In this example, the system administrator also cannot access the region and uses the CEKL transaction to purge the transaction that is using all the storage.

Scenario 2

The second scenario used in "Monitoring communication problems" on page 54 assumes that one of your links, in this case an MRO IRC link, has gone out of service. The scenario demonstrates how to use a situation to have OMEGAMON for CICS on z/OS reinstate your link automatically.

Monitoring short-on-storage problems

This user scenario shows how you can monitor your regions when they go short on storage and how you can rectify the problem.

For this scenario the assumption is that you are running Tivoli Enterprise Portal from your workstation.

In this case, a transaction, that is well known for using up storage, is running in one of your CICS regions. Using Tivoli Enterprise Portal, you can first identify the CICS region with a problem and then you can locate the task that is using the storage and finally you can use the CEKL transaction to purge, force purge or kill the transaction from the system.

There are three stages involved in this procedure:

- Modify the thresholds
- Create a link from one workspace to another
- Create and use an action.

Before you start save a workspace where you can customize the view.

1. Open Tivoli Enterprise Portal, and expand the navigator window so that you can view the **Storage Analysis** workspace.
2. Save a new workspace **File > Save Workspace As** and in the dialog panel, enter a name and description for your new workspace. Click **OK**.

   Also check the **Assign as default for this Navigator item** box so that you do not have to continually check that you are using the correct workspace at each step.

This example uses the threshold definitions that are provided and modifies them; it creates a link between the Storage Analysis workspace and the Transaction Analysis workspace. Finally it creates an action that can be used to remove transactions that might be causing a problem.

Now continue with "Modifying a threshold for short-on-storage" on page 51.

Modifying a threshold for short-on-storage

This procedure describes how to change a threshold definition using the properties editor.

Before starting this procedure, first define a workspace as described in "Monitoring short-on-storage problems" on page 51.

1. Open the navigation tree from the CICS region that you want to monitor. Expand the navigation tree and click **Storage Analysis**.

   This opens the new Storage Analysis workspace. For this example, we use the Dynamic Storage Analysis table to modify the properties of the attributes in that table. This procedure modifies the settings so that the screen only shows a red alert when the EDSA goes higher than 70%.
2. Highlight any row in the Dynamic Storage Analysis table view, right-click and from the dialog, click **Properties**.

   The Properties editor is displayed.

3. Click the **Thresholds** tab.

   The **Percent Used** column is red because the threshold is set to critical if the value falls below 15% or exceeds 70%. In this scenario, the Percent Used value does not exceed 70%, but it does fall less than 15% which triggered the alert.
4. Delete the entry LT 15 so that a red alert only occurs when the value exceeds 70%. To delete the entry, select the line in the Thresholds table and with the cursor over the beginning of the row, right-click and click **Clear contents**. Now click **Apply**.

   You can preview the effect of this change in the Dynamic Storage Analysis table as the red column changes from red to yellow. While the critical threshold is no longer triggered, another threshold has been started that is triggered if the use of a DSA falls to less than 35%. To see this threshold scroll down the Threshold pane.
5. Click **OK** to exit the **Properties Editor** screen.

   You are prompted to save the changes to your workspace. Click **Yes**.

Now continue with "Creating a link for short-on-storage" on page 52.

Creating a link for short-on-storage

The purpose of this procedure is to create a link from the Storage Analysis workspace to the Transaction Analysis workspace.

The assumption is that a possible reason for going short-on-storage is a rogue transaction. Having a link between two workspaces helps you focus on the potential problem more quickly in the future.

At this point, you notice that one of your EDSAs has gone short-on-storage. This is indicated by the red (critical) icon against the CICS region and the Storage Analysis workspace in the Navigator view.

Opening the Storage Analysis workspace shows the EDSA highlighted in red. The circular gauge in the lower left of the workspace is recording 100%.

However, before you start to create a new link, hover over **Storage Analysis** in the navigation view. A pop up window appears with some advice. Click the link within the advice, and a window appears showing the condition, some expert advice, and the situation that it relates to.

To create the link to the Transaction Analysis workspace, use this procedure:

1. Right-click **Storage Analysis** in the Navigator, and click **Link to > Link Wizard** from the pop up menu.

   The Workspace Link Wizard opens.
2. Ensure radio button **Create a New Link** is active, and click **Next**.
3. Within the Link Name window, name it `Transaction Analysis`, and describe it as `locate the cause of a short-on-storage condition`; then click **Next**.
4. Within the Link Type window, set the link type to **Absolute**, and click **Next**.
5. Within the Target Workspace window, define the target workspace: expand the Navigator view until you locate the CICS region with the Short-on-Storage condition, expand that entry, and select **Transaction Analysis** in both the Navigator view and Workspace view. Click **Next**.
6. Ignore the Parameters window, and click **Next**.
7. From the Summary window, examine the parameters of your link. If correct, click **Finish**.
8. To test your link, from the Navigation view, right-click **Storage Analysis**, and click **Link To > Transaction Analysis**.

   You may be prompted to save your workspace; if so, click **Yes**.
9. From the Transaction Analysis workspace, sort your transactions in the **Wait Type** column; click the column label.

   The **Wait Type** column is on the extreme right of the table. You can drag and drop the column so that it is alongside the task number. You are looking for a transaction that has a wait type of Storage. It is likely that this transaction is causing your CICS region to go short-on-storage.

The end result is that you are shown a transaction that is hung up waiting for additional storage.

The next step is to remove this transaction using the Take Action command. Continue with “Resolving the problem: using the Take Action command” on page 53.

Resolving the problem: using the Take Action command

This process shows how to use the Take Action feature to issue a command to remove a transaction.

This assumes that you have followed the previous two steps and can identify a transaction that may be using the storage.

It is possible that you cannot access the region because of the short-on-storage condition. For the purpose of this exercise, we will use the CEKL transaction to purge the offending transaction rather than CEMT.

Use the following steps, to create a Take Action function:

1. Highlight the transaction in the Transaction analysis table, right-click and select **Edit Action**.
   The **Create New Action** window is displayed.
2. Enter a name and description for your Take Action command.
3. Enter the `f cicsname,cekl set task(tasknumber) forcepurge` command
   You enter a command just as you would at a console. In the Tivoli Enterprise Portal, do this:
   a) Type `f` and click **Insert Attribute**.
      Inserting an attribute means that you can use this Take Action in the future. When you run the Take Action command, an attribute variable is replaced with its run time value. For this scenario, you want the first attribute to be resolved to the name of the CICS region you are monitoring.
   b) From the list of attributes, click **CICS Region name**.
      Note: When you do this the cursor moves forward one space. You have to edit the line to remove this space.
   c) Type `,CEKL SET TASK(`
   d) Click **Insert Attribute**.
   e) From the list of attributes, click **Task Number**.
      Don't forget to remove the space.
   f) Finally type `) FORCEPURGE`.
      You happen to know that this transaction is purge protected and therefore you omit the step, if issuing the PURGE option.
   g) Click **OK** to save the action.
   Now you have created your Take Action command.
4. To use this Take Action, right-click the problem transaction within the Transaction Analysis table view, click **Take Action**, and select the new command that you have just created.
   When it opens, the Take Action window, shows that the new command has resolved the CICS region name and task number correctly, for example `f CICSHTC1,CEKL SET TASK(00056) FORCEPURGE`.
5. Now select the CICS region from the **Destination Systems** area, and click **OK**.
   An Action Status window is shown showing a return code of zero.
6. Refresh your workspace (F5) and the transaction has been removed from table.
7. Return to the Storage Analysis workspace, and, if you identified the correct transaction, the **Percent Used** field should have returned to normal.

This scenario explained how to:

- Create a new workspace
- Modify an existing threshold
- Create a link between two workspaces

- Create and use a Take Action command

Monitoring communication problems

The purpose of this procedure is to show how you can have OMEGAMON for CICS on z/OS monitor your CICS regions and automatically issue a command to correct a problem. This procedure describes how to monitor the links between CICS regions.

For this scenario, the assumption is that you are running Tivoli Enterprise Portal from your workstation.

This scenario is based on a simple banking transaction that is invoked in one CICS region (CICSHAC1) and accesses a VSAM file in another region (CICSHTC1). The connection name is HTC1 and for some reason the link has broken. To monitor this we need to create a threshold that triggers any occurrence of a broken connection between CICS regions being either released or going out of service. Having identified the link, we can then create a situation where OMEGAMON for CICS on z/OS attempts to reinstate the link automatically.

There are two stages involved in this procedure:

- Modify the thresholds
- Create a situation to correct the broken link.

Before you start save a workspace so you can customize its views.

1. Open the Tivoli Enterprise Portal, and expand the navigator window so that you can view the **Connections Analysis** workspace.
2. Save a new workspace **File > Save Workspace As** and enter a name and description for your new workspace. Click **OK**.

   Check the **Assign as default for this Navigator item** box so that you do not continually have to check that you are using the correct workspace at each step.

Continue with "Creating a threshold to monitor connections" on page 54.

Creating a threshold to monitor connections

This procedure describes how to create a threshold definition using the properties editor.

1. Open the navigation tree from the CICS region that you want to monitor. Expand the navigation tree and click **Connections Analysis**.

   This opens the newly created Connections Analysis workspace and shows the Connections Analysis table.
2. Select any row of the table that corresponds to the connection name that you want to monitor (in this example the initial row of the table), right-click and select **Properties**.

   The Properties editor is displayed.
3. Click **Thresholds**.

   Move the Thresholds window to show the **Connection Status** field, click the cell. Change the operator to EQ and the value to REL_OUT.
4. Change the warning level, click the red icon in the row and select the color that you want to show when the threshold is triggered.
5. Click **Apply**.

   There should be no changes at this point in the Connections Analysis table at the beginning of the Properties editor window unless, of course, one of your links is released and out of service.
6. Click **OK** to exit the **Properties Editor** screen.
7. Save your workspace.

To test this you need to put the connection out of service, for example, issue a `CEMT SET CONN(`*`connectionName`*`) OUTSERVICE` command.

Continue with "Creating a situation to monitor broken links" on page 55.

Creating a situation to monitor broken links

This procedure demonstrates how to use a situation to monitor connections and attempt to remedy a broken link problem by, in this case, automatically putting the link back into service.

There are various ways to start the Situation editor. This example follows only one of them.

1. From the Navigation window expand the CICS region; right-click **Connections Analysis** from the pop-up menu and click **Situations**.

   The Situation editor is displayed.
2. To create a new situation, click New Situation icon at the upper left of the Situation editor.
3. In the **Create Situation** dialog, enter a name and description. Select CICSplex for the Monitored application. Click **OK**.

   You cannot have spaces in the name. The other restrictions are listed on the panel.
4. From the **Select Attribute** Group pane, click **CICSplex_Connection_Analysis**, click **OK**.
5. From the **Select Attribute** Item pane, click the condition that you want, in this case **Connection Status**, then click **OK**.
6. From the **Situation editor** window, click the **Formula** tab.
7. Click the**Connection status** cell, then click the operator **EQ** and click the value **REL_OUT** from the drop-down menu.
8. Click **Apply**, then click the **Expert Advice** tab.

   Here you can enter the information that you want to appear when a user uses this situation. There may be several ways of approaching this problem. In this case you can tell the user what you expect to happen. What you enter here depends on the approach taken at your location. To make this easier to read you can use some basic HTML tags to provide headings. Click **Preview** to see the effect of your changes.
9. Click **Apply**, then click the **Action** tab.

   The Action view of the Situation editor is displayed.
10. In the **Action** view, click **System command** for the **Action Selection** section.

    This enables you to enter the same command you might specify at a console. For this example the command to enter is:

    ```
    F CICS_Region_Name,CEMT SET CONNECTION(Connection_Status) INSERVICE
    ```

    To do this

    a) Type F and click **Insert Attribute**.

       This allows you to enter a variable so that you can use this situation with other CICS regions.

    b) From the list of attributes, click **CICS Region name**.

       Note: When you do this the cursor moves forward one space. You have to edit the line to remove this space.

    c) Type `,CEMT SET CONNECTION(` just as you would at a console

    d) Click **Insert Attribute**.

    e) From the list of attributes, click **Connection Status**.

       Don't forget to remove the space.

    f) Finally type `) INSERVICE`

    g) Set the remaining options on the **Action** panel as appropriate.

    Now that you have created the command, you have to set the time interval.
11. Click **Apply**, then click the **Until** tab.

    This allows two options

    - Another Situation is TRUE
    - Interval Expires

In this panel, click **Interval Expires** and set the time interval to the minimum allowed (30 seconds). This is just for purposes of this exercise.

12. Now click the **Distribution** tab and specify where you want the situation to run.

    To do this:

    a) Click the system and the left arrow.

       This adds the CICS region to the Assigned managed systems.

13. Click **Apply** and click **OK**.

    Because **Run at startup** was checked by default in the situation, the situation automatically starts.

The end result of this situation is that once your link goes out of service the link is restored 30 seconds later, that is, unless there is some other issue involved, for example, hardware failure.

Now go to "Testing the situation" on page 56.

Testing the situation

When you open Tivoli Enterprise Portal and expand the navigation tree you will notice an additional entry for the situation that you created in the last step.

To test the connections scenario do the following:

1. Open the navigation tree from the CICS region that you want to monitor and click **Connections Analysis** to see the new Connections Analysis workspace.
2. Log on to your CICS region, and put the connection out of service.

   In the Tivoli Enterprise Portal the connection status is now red (critical), just as you defined it.
3. Refresh Tivoli Enterprise Portal (F5) looking at the connection status.

   At the end of 30 seconds, the link is restored.

This scenario demonstrated:

- Creating a workspace.
- Creating a threshold.
- Creating and using a situation to monitor and correct a problem.

Chapter 3. Attributes

Tivoli Enterprise Portal gathers data from remote agents running on systems within your CICS network. It stores this data for OMEGAMON for CICS on z/OS in elements called *attributes*. Each attribute is a characteristic of an object. For example, CICS Region Name is an attribute for a specific CICS region.

Attribute groups

IBM Z OMEGAMON for CICS attributes are grouped into numerous attribute groups of related items. For example, the attributes in the CICS Service Class Analysis group gather information about response time, transactions, and performance data. These attributes correspond to the column names in the table views and the items in the various graphic displays for bar charts and so forth.

Attributes and workspaces

You can view the data reported for the attributes in the tables and charts displayed in the IBM Z OMEGAMON for CICS workspaces. This data enables you to:

- Manage all CICS regions from a single point to identify problems at any time
- Balance workloads across various regions
- Track performance against goals

For an understanding of how individual attribute groups relate to workspaces, see "Attribute groups used by the predefined workspaces" on page 316.

Attributes and situations

Various attributes are used in the predefined situations for the product. You can also use the CICS attributes in your own situations to monitor the performance of a single CICS region or multiple regions. These situations can monitor one aspect of your enterprise or analyze multiple conditions to alert you to problems and their causes.

Note: The following attribute groups might be displayed in the Tivoli Enterprise Portal Query Editor and Situation Editor, however, they cannot be used to create user-defined queries or situations and should be ignored:

- PCLASS (CICSplex Classification Rules)
- CICSplex TEMS LIST
- CICSplex Service Class Raw

CICSplex Agent Preferences attribute group

The CICSplex Agent Preferences attribute group holds either the OMEGAMON-provided defaults in the PAGPREFS table or the values the user specified to control which OMEGAMON for CICS on z/OS agent will monitor a CICSplex.

CICSplex Agent Defined By Whether this is an OMEGAMON-defined CICSplex or assumed to be a CPSM CICSplex. Four characters set to either OMEG or CPSM. If the preferences are entered as a result of a classification rule for a new CICSplex, then CICSplex Agent Defined By is set to OMEG.

CICSplex Agent Preferred SMF Identifier The SMF Identifier where the CICSplex agent is to be initialized. Valid input is up to four characters, a mixture of 0-9, A-Z, $, #, @. It can consist solely of numbers. It might be a single asterisk but not have asterisks otherwise (no generic specification allowed).

CICSplex Agent Preferred XM Number The number in the RKCPXM*nn* DD card to be used, if there are multiple agent address spaces started at the LPAR indicated by CICSplex Agent Preferred SMF Identifier. Valid input is 00-15.

CICSplex Agent Timeout The number of minutes that a CICS agent will wait for the CICSplex agent to initialize at the indicated LPAR. If the CICSplex agent does not start up in that period of time, any other OMEGAMON for CICS address space will initialize it. Valid input is 0-30.

CICSplex Name The name of the CICSplex whose agent preferences are being displayed.

Product The product that owns this table (always IBM Z OMEGAMON for CICS).

Table The table being processed (always PAGREFS for CICSplex Agent Preferences).

CICSplex AID Analysis attribute group

The CICSplex AID Analysis attributes report the characteristics of all the Automatic Initiate Descriptors (AIDs) in your CICS regions. It shows you the work waiting on terminals and remote systems. Use this data to monitor the expiry time and date of an AID, the transaction to be initiated, any terminal related to the AID as well as the current type and status of this AID.

AID Address Is the address, in CICS storage, of this AID.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Request ID Is a value associated with this AID at the time it was created. You can supply a request identifier in the REQID field of a START request. If a request identifier is not specified the field is blank.

Owning System ID Is the CICS region identifier of the region where this AID was created.

Reuse Status Is the name of the transaction to be executed when this AID expires.

Status Is the current status of the Automatic Initiate Descriptor. These are the values:

- Awaiting Init
- Wait for remote terminal
- Wait for remote transaction
- Shipped to remote system
- Wait for remote schedule
- Wait for remote system
- Wait for target terminal
- Wait for unresolved TCTTE

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. The z/OS System IDs are always uppercase characters.

Terminal ID Is the name of the terminal specified on a START command. If a terminal was not specified the field is blank.

Transaction ID Is the name of the transaction to be executed on completion of this AID.

Type Displays the kind of AID available. These are the values:

- TDP Scheduled
- ICP Initiated
- ICP Put/Data
- BMS Scheduled
- ISC Scheduled

- Remote Delete
- Unknown Type

User ID Is the name of the user who executed the transaction.

CICSplex Application Bundle Detail attribute group

The CICSplex Application Bundle Detail attribute group provides details about a CICS application bundle that is used for deployment of the application into CICS. You can create resources for your applications by defining each resource individually in a CICS region. Alternatively, you can deploy an application as a bundle and use this resource to create some of these resources dynamically for you. The bundle resource represents the application, so you can also manage its availability in CICS by enabling and disabling the bundle resource.

Base Scope The universal resource identifier (URI) that defines the root namespace where the contents of the bundle are created. This identifier is an alphanumeric string, with a maximum of 255 characters. A scope value is used when you want to logically group different bundles together.

Bundle Directory The name of the root directory for the resource bundle. This fully qualified name is an alphanumeric string, with a maximum of 255 characters.

Bundle Name The name of the application bundle that is used for deployment of the application into CICS. This name is an alphanumeric string, with a maximum of eight characters.

Bundle Status The current status of the resource bundle used for deployment. These are the valid values:

- ENABLED 1
- DISABLED 2
- ENABLING 3
- DISABLING 4
- DISCARDING 5

CICS Region Name The job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. The CICS region names are always uppercase characters.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

System ID The four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. The z/OS System IDs are always uppercase characters.

CICSplex Application Bundle Parts attribute group

The CICSplex Application Bundle Parts attribute group provides details about different parts of the CICS application bundle, including the resources that are dynamically created and managed as part of the bundle.

Bundle Name The name of the application bundle that is used for deployment into CICS. This name is an alphanumeric string, with a maximum of eight characters.

Bundle Part Class The class of this application bundle part. These are the valid values:

- DEFINITION 1
- IMPORT 2

- EXPORT 3

Bundle Part Metadata File The location of the application bundle part as known to the manifest. This file name is an alphanumeric string, with a maximum of 255 characters. These are the valid values:

- FILE 1
- PROGRAM 2
- TSQUEUE 3

Bundle Part Name The name of the application bundle part that is used for deployment into CICS. This name is an alphanumeric string, with a maximum of 52 characters.

Bundle Part Status The current status of the application bundle part. These are the valid values:

- ENABLED 1
- DISABLED 2
- ENABLING 3
- DISABLING 4
- DISCARDING 5
- UNUSABLE 6

Bundle Part Type The type of application bundle part used for the resource bundle. This name type is an alphanumeric string, with a maximum of 255 characters.

CICS Region Name The job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. The CICS region names are always uppercase characters.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

System ID The four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. The z/OS System IDs are always uppercase characters.

CICSplex Application Bundle Summary attribute group

The CICSplex Application Bundle Summary attribute group provides a summary of details about a CICS application resource bundle that is used for deployment in a CICS region.

Bundle Name The name of the application bundle that is used for deployment of the application into CICS. This name is an alphanumeric string, with a maximum of eight characters.

Bundle Status The current status of the application resource bundle used for deployment. These are the valid values:

- ENABLED 1
- DISABLED 2
- ENABLING 3
- DISABLING 4
- DISCARDING 5

CICS Region Name The job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. The CICS region names are always in uppercase characters.

Enabled Count The current number of resources which are enabled and installed in this CICS region. This value is an integer.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

Part Count The number of import, export, and definition statements included in the application resource bundle. This value is an integer.

System ID The four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. The z/OS System IDs are always uppercase characters.

Target Count The total number of dynamically created and enabled resources in the application resource bundle. This value is an integer.

CICSplex Application Trace attribute group

The CICSplex Application Trace attribute group provides details of events for a transaction. Use these attributes to get detail information on CICS requests that their applications have made.

These attributes provide data for the Application Trace Details table view in the Application Trace workspace.

The CICSplex Application Trace attribute group cannot be used in situations or for historical data collection.

Component Indicates the type of monitor that produced the trace event. This parameter is an alphanumeric string, with a maximum of eight characters.

Date and time Is the date and time of the job name that you are monitoring. This timestamp has a maximum of 23 characters.

Function Is the function invoked by the transaction. This parameter is an alphanumeric string, with a maximum of 16 characters.

Name Is the job name or modify ID of the CICS region that you are monitoring. This parameter is an alphanumeric string, with a maximum of eight characters.

Offset Indicates the offset (in hexadecimal) within the program where the traced event occurred. This parameter is an alphanumeric string, with a maximum of eight characters.

Origin node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

Program Is the name of the program that is in control when the request was initiated. This parameter is an alphanumeric string, with a maximum of eight characters.

Resource Is the name of the CICS resource that is being acted on. This parameter is an alphanumeric string, with a maximum of 16 characters.

Response Indicates the type of response that is returned from the request that produced this entry. This parameter is an alphanumeric string, with a maximum of 12 characters.

System ID Is the system name that uniquely identifies an active z/OS operating system within a specific CICSplex. This parameter is an alphanumeric string, with a maximum of four characters.

TCB Name Indicates the MVS TCB name under which the CICS task was running when the traced event occurred. This parameter is an alphanumeric string, with a maximum of eight characters.

Time Indicates the time of day when the traced event occurred. This timestamp has a maximum of 19 characters.

Type Indicates the event type that produced this trace entry. This parameter is an alphanumeric string, with a maximum of eight characters.

CICSplex Application Trace attribute group

The CICSplex Application Trace attributes are used by the Enhanced 3270 UI to enable application tracing. These attributes are not available from Tivoli Enterprise Portal.

Component Indicates the type of monitor that produced this trace event. The format is an eight-character string.

Function Indicates the function being invoked. The format is a sixteen-character string.

Interval The amount of time between this trace event and the one immediately preceding it. The format is a four-digit integer.

Name Indicates the job name or modify ID of the CICS region being monitored. The format is an eight-character string.

Offset Indicates the offset in hexadecimal format within the program where the traced event occurred. The format is a hexadecimal string.

Program Indicates the name of the software program about which the traced event occurred. The format is an eight-character string.

Response Indicates the response returned from the request that produced this entry. The format is a twelve-character string.

Resource Indicates the name of the resource being acted on. The format is a sixteen-character string.

TCB Name Indicates the task control block (TCB) name or address under which the CICS task was running when the traced event occurred. The format is an eight-character string.

Time Indicates the time of day when the traced event occurred.

Type Indicates the event type that produced this trace entry. The format is an eight-character string

CICSplex Application Trace Filters attribute group

The Application Trace Filters attribute group provides details on the filters that control which transactions will have trace collected.

Call Type The types of calls or events to be traced. The format is a string with a maximum of 30 characters.

CICS Region Name The name that identifies a CICS region. The format is a eight-character string.

Exec Call Specifies which EXEC CICS calls are traced. The format is a string with a maximum of 28 characters.

Duration The length of time that this filter is active. The format is a five-digit number.

Origin Node The combination of MVS System ID (SMFID) and CICS region name. The format is a string.

Owner The user ID of the person who created the trace filter. The format is an eight-character string.

Repeat Displays whether the Trace filter will repeat. Possible values are No, Hourly, Daily or Weekly followed by a day of the week: No=N, Hourly=H, Daily=D, Weekly(Sun)=W SUN, Weekly(Mon)=W MON, Weekly(Tue)=W TUE, Weekly(Wed)=W WED, Weekly(Thu)=W THU, Weekly(Fri)=W FRI, Weekly(Sat)=W SAT

Size The maximum size of trace data that will be collected for tasks matching this filter.

Start Time The time at which the filter will become or became enabled.

Status Status of defined filter.

System ID The four-character name that uniquely identifies an active MVS operating system within a given CICSplex. The format is a four-character string.

Term ID The terminal ID mask that this filter applies to. The format is a two-digit integer.

Transaction ID The transaction ID mask that this filter applies to. The format is four-character string.

User ID The user ID mask that this filter applies to. The format is an eight-character string.

CICSplex Application Trace Summary attribute group

The CICSplex Application Trace Summary attribute group provides summaries of events for a transaction. Use these attributes to get summary information on CICS requests that their applications have made.

Average Time The duration between this trace event and the one directly preceding it.

Count The number of requests of this type.

Function The function invoked by the transaction. This parameter is an alphanumeric string, with a maximum of 16 characters.

Name Is the job name or modify ID of the CICS region that you are monitoring. This parameter is an alphanumeric string, with a maximum of eight characters.

Origin node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

Percent of Total The percentage of the total time for which this function was responsible.

System ID Is the system name that uniquely identifies an active z/OS operating system within a specific CICSplex. This parameter is an alphanumeric string, with a maximum of four characters.

Total Time The total time spent on this type of request.

Type Indicates the event type that produced this trace entry. This parameter is an alphanumeric string, with a maximum of eight characters.

CICSplex Association Data Details attribute group

The CICSplex Association Data Details attribute group allows you to display the association data related to an individual transaction. The data enables you to determine the starting point for a transaction in an IPIC (IP Inter connectivity) network, and also includes any user data that has been added. For the first transaction, in a related set, the originating data fields match the current data fields. For those tasks, which were started as a result of a Distributed Program Link (DPL) request, the originating data fields represent the initial transaction.

Application Data Network Protocol Indicates the network protocol. These are the valid values: ECI, HTTP, IIOP, IPIC, and USER.

Application Data Socket Status Is the status of the socket, as determined by the socket's domain. The valid values are Inbound and Outbound.

Application Data Transaction ID Is the ID of the transaction that created the socket.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. The CICS region names are always uppercase characters.

Client IP Address Is the IP address of the client that requested this task.

Client Port Is the port used to send the request that executed this task.

Facility Name Is the CICS facility executing the current task.

Initial Program ID Is the name of the program that was initially executed by this task.

IP Connection Name Is the name of the IP connection used to route this request.

LUName Is the name of the logical unit (that is, the device name) where this transaction is executing.

MVS Image Is the name of the z/OS operating system that is associated with the TCPIPSERVICE that started the request.

Network ID Is the network ID of the originating CICS system.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Originating Client IP Is the IP address of the client which requested the original task.

Originating Client Port Is the port number of the client that requested the original task.

Originating Facility Is the facility associated with the task that started this task.

Originating LU name Is the logical unit name associated with the task that started this task.

Originating Network Is the logical unit name associated with the task that started this task (the network ID where the original transaction was executed).

Originating Network ID Is the network ID associated with the task that started this task.

Originating Task Number Is the task number associated with the task that started this task.

Originating Transaction ID Is the transaction ID associated with the task that started this task.

Originating Userid Is the user ID associated with the task that started this task.

Server IP Address Is the IP address of the server that scheduled this task.

Server Port Is the port used by the TCPIPSERVICE to receive the request that is currently processing.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. The z/OS System IDs are always uppercase characters.

Task Number Is the unique number of the currently executing task.

TCPIP Jobname Is the name of the TCP/IP job associated with the IP connection that attached this task.

TCPIP Service Name Is the name of the TCP/IP service used by this transaction.

TCPIP Zone Is the name of the TCP/IP security zone associated with the IP connection that started this task.

Transaction ID Is the name of the currently executing task.

Userid Is the Userid associated with the task that is currently executing.

XAPADMGR User Data Is the user data provided to this task by the XAPADMGR global user exit.

CICSplex Atom Feed Summary attribute group

The CICSplex Atom Feed Summary attribute group provides a summary of details about a CICS atom feed definition.

Atom Service Name The name of the atom service resource definition that is used to specify where CICS obtains the data to produce atom documents in response to a Web client request. This name is an alphanumeric string, with a maximum of eight characters.

Atom Service Status The current status of the atom service definition in the CICS region. The valid values are Enabled and Disabled.

Atom Service Type The type of atom service document that is returned for the atom service definition. These are the valid values:

- CATEGORY 1
- COLLECTION 2

- FEED 3
- SERVICE 4

CICS Region Name The job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. The CICS region names are always in uppercase characters.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

Resource Type The type of resource that provides the data for the atom feed. These are the valid values:

- FILE 1
- PROGRAM 2
- TSQUEUE 3

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. The z/OS System IDs are always uppercase characters.

CICSplex Atom Feed Detail attribute group

The CICSplex Atom Feed Detail attribute group provides details about a CICS atom feed definition. CICS supports atom feeds using the HTTP server functions of CICS Web support, and some additional functions to carry out the actions required of a server that supports the atom format and protocol.

Atom Service Bindfile The XML binding file specified for the atom service. This file name is an alphanumeric string, with a maximum of 255 characters.

Atom Service Configuration The name of the atom service configuration file that CICS uses to manage collections in a region. This file name is an alphanumeric string, with a maximum of 255 characters.

Atom Service Name The name of the atom service resource definition that is used to specify where CICS obtains the data to produce atom documents in response to a Web client request. This name is an alphanumeric string, with a maximum of eight characters.

Atom Service Status The current status of the atom service definition in the CICS region. The valid values are Enabled and Disabled.

Atom Service Type The type of atom service document that is returned for the atom service definition. These are the valid values:

- CATEGORY 1
- COLLECTION 2
- FEED 3
- SERVICE 4

CICS Region Name The job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. The CICS region names are always uppercase characters.

Delete Entry Count The number of times a DELETE value was issued for an entry. The valid format is an integer.

Get Entry Count The number of times a GET value was issued for an entry. The valid format is an integer.

Get Feed Count The number of times a GET value was issued for a feed. The valid format is an integer.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

Post Feed Count The number of times a POST value was issued for a feed. The valid format is an integer.

Put Entry Count The number of times a PUT value was issued for an entry. The valid format is an integer.

Reference Count The number of times the ATOMSERVICE resource definition was referenced for a collection. The valid format is an integer.

Reference Disabled The number of times the ATOMSERVICE resource definition was referenced, but the resource definition was disabled. The valid format is an integer.

Resource Name The name of the CICS resource that provides the data for the Atom feed or collection. This resource name is an alphanumeric string, with a maximum of eight characters.

Resource Type The type of resource that provides the data for the atom feed. These are the valid values:

- FILE 1
- PROGRAM 2
- TSQUEUE 3

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

CICSplex Auxiliary Temporary Storage Details attribute group

The CICSplex Auxiliary Temporary Storage Details attributes report on the list of the auxiliary temporary storage pools and queues that exist in the monitored CICS system.

Available Bytes per CI Is the number of bytes available for use in the TS data set control interval.

Buffers Allocated Is the number of temporary storage buffers specified in the TS= system initialization parameter or in the overrides. The number of buffers allocated can exceed the number requested.

Buffers in Use Is the current number of buffers containing active data.

CI Size Is the size of VSAM's unit of transmission between disk and main storage. It is specified in the CONTROLINTERVALSIZE parameter in the VSAM CLUSTER definition for the temporary storage data set. In general, using large CIs permits more data to be transferred at one time, resulting in less system overhead.

CI Writes from Recovery Is the number of writes to control interval from recovery.

CICS Region Name Indicates the job NAME or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique NAME. This NAME is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CIs in Use Is the current number of control intervals containing active data.

Current Buffer Waits 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.

Current String Waits Is the current number of I/O requests that are queued because all strings are in use.

Current Write Buffers Is the number of WRITE requests to the auxiliary temporary storage data set. This includes both WRITE requests necessitated by recovery requirements and WRITE requests forced because the buffer must accommodate another CI.

Formatted CI Writes Is the number of times a new 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.

HWM Buffer Waits Is the peak number of requests queued because no buffers were available.

HWM CIs in Use Is the peak number of CIs containing active data.

HWM of String Waits Is the HWM of Auxiliary Temporary Storage string waits.

HWM of Strings in Use Is the HWM of Auxiliary Temporary Storage strings in use.

Longest Aux Record Length Is the longest Auxiliary Temporary Storage record length.

Max Write Buffers Is the peak number of WRITE requests to the temporary storage data set. This includes both WRITE requests necessitated by recovery requirements and WRITE requests forced because the buffer must accommodate another CI.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region NAME. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node NAME in the attribute to the names of managed systems assigned to the item. If the origin node NAME matches the NAME of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Percent Buffers in Use Is the percentage of auxiliary temporary storage buffers in use.

Percent CIs in Use Is the percentage of auxiliary temporary storage control intervals in use.

Percent Segments in Use Is the percentage of auxiliary temporary storage segments in use.

Percent Strings in Use Is the percentage of active auxiliary temporary storage strings.

PUTs larger than CI size Is the total 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.

Segment Size Is the number of bytes per segment.

Segments in Use Is the number of segments in use.

Segments per CI Is the number of segments in each TS data set control interval.

Strings Allocated Is the number of temporary storage strings specified in the TS= system initialization parameter or in the overrides. The number of strings allocated can exceed the number requested.

Strings in Use Is the number of auxiliary temporary storage strings containing active data.

System ID Indicates the four-character NAME that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, a maximum of four characters, and is case-sensitive. z/OS System IDs are always in uppercase characters.

Total 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.

Total CI Reads Is the total number of control interval Reads.

Total CI Writes Is the total number of control interval Writes.

Total CIs Is the total number of Control Intervals.

Total I/O Error Is the total number of I/O errors.

Total Segments Is the total number of segments.

Total String Waits The HWM of Auxiliary Temporary Storage string waits.

CICSplex Background Task attribute group

The CICSplex Background Task attributes report the Transaction IDs of the current background tasks.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CICSplex Name Indicates the name assigned to the CICSplex. The value format is an alphanumeric string of maximum eight characters.

Transaction ID The list of background tasks.

CICSplex Bottleneck Analysis attribute group

The CICSplex Bottleneck Analysis attribute group shows the various wait reasons encountered by CICS tasks over a fixed time interval. Use the CICSplex Bottleneck Analysis attributes in situations to determine where bottlenecks are occurring.

These attributes provide data for the Bottleneck Analysis table view.

Note: The attributes within the CICSplex Bottleneck Analysis group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Detailed Long Term Percentage Is the percent of time transactions spent waiting on specific resources during the long-term collection interval. The value format is 0 - 100.

Detailed Short Term Percentage Is the percent of time transactions spent waiting on specific resources during the short-term collection interval. The value format is 0 - 100.

Dispatcher Call Is the specific type of wait performed by the dispatcher on behalf of a wait request. The valid format is an alphanumeric string with a maximum of nine characters.

Display Threshold Is the filter used to screen out resources that have a low wait percentage. The valid format is an integer, in the range 0-100.

Group Number Is the numeric identifier of the selected OMEGAMON group. If all groups are requested, this value is zero. The valid format is an integer, with a maximum of two digits, in the range 1-30.

Issuing Module Is the name of the CICS module that issues the wait, or MULTIPLE, if more than one CICS module can issue the wait. The valid format is an alphanumeric string with a maximum of eight characters.

Long Term Elapsed Time Is the amount of time that has passed during the long-term collection interval. The valid format is either seconds, or HH:MM:SS.

Long Term Interval Is the time span over which long-term bottleneck samples are collected. The valid format is either seconds, or HH:MM:SS.

Long Term Sample Count Is the number of transactions that have participated in the long-term collection interval sample. The valid format is an integer.

Name Type The type of resource name that transactions are waiting on. The valid format is an alphanumeric string with one character.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Resource Name Is the name of the resource on which transactions are waiting. The valid format is an alphanumeric string with a maximum of eight characters.

Resource Subtype Is the CICS designation for the variable resource type on which transactions are waiting. The valid format is an alphanumeric string with a maximum of eight characters.

Resource Type Is the CICS designation for the type of resource on which transactions are waiting. The valid format is an alphanumeric string with a maximum of eight characters.

Resource Type/Name Is the concatenation of the resource type and resource name values. The valid format is an alphanumeric string with a maximum of 17 characters.

Short Term Elapsed Time Is the amount of time that has passed during the short-term collection interval. The valid format is either seconds, or HH:MM:SS.

Short Term Interval Is the time span over which short-term bottleneck samples are collected. The valid format is either seconds, or HH:MM:SS.

Short Term Sample Count Is the number of transactions that have participated in the short-term collection interval sample. The valid format is an integer.

Summary Short Term Percentage Is the percent of time transactions spent waiting on generic resources during the short-term collection interval. The valid format is 0 - 100.

Summary Long Term Percentage Is the percent of time transactions spent waiting on generic resources during the long-term collection interval. The valid format is 0 - 100.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Task Type The category of tasks that can apply to this type of wait. Valid values are User, System, and Both.

Translated Wait Reason The brief outline of the value found in the resource type. The valid format is an alphanumeric string of four characters.

Wait Type Is the descriptive rendition of the CICS resource type. The valid format is an alphanumeric string with a maximum of eight characters.

CICSplex BTS Activity Details attribute group

The CICSplex BTS Activity Details attribute group returns the activity details of specific CICS business transaction services (BTS) objects. Other BTS details can be monitored, for example, activities, data containers, events, processes, process types, and timers.

Abend Code Indicates the abend code, if the activity terminated abnormally.

Abending Program Indicates name of the program that was in control at the time of the abend, if the activity terminated abnormally.

Activity Name Indicates the name of the current activity.

Activity Identifier Specifies the name of the activity.

Activity Tree Level Is the depth in the activity-tree at which the next activity lies.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Composite Is the Sub-Event name (if present).

Completion status Indicates the completion status of the activity. These are the values:

Unknown
No activity has been identified.

Abend
The program that implements the activity terminated. Any children of the activity have been canceled.

Forced
The activity was forced to complete, for example, it was canceled with a CANCEL ACTIVITY command.

Incomplete
The named activity is incomplete. This could mean:

- That it has not yet been run
- That it has returned from one or more activations but needs to be reattached in order to complete all its processing steps

- That it is currently active.

Normal
The named activity completed successfully.

Event Name Is the name of the completion event that is sent to the requester of this activity when the activity completes asynchronously with the requester.

Event Type Is the type of the Event associated with the Activity. These are the values:

Unknown
No event associated with this type.

Activity
Activity completion.

Composite
Composite.

Input
Input.

System
System.

Timer
Timer.

Fire Status Is the status of the event associated with the activity. These are the values:

Unknown
Not applicable.

Fired
The event has fired typically.

Not_fired
The event has not fired.

Suspend status Is the suspension status of the activity. These are the values:

Unknown
Not applicable.

Suspended
The activity has been suspended.

Not_suspended
The activity has not been suspended.

Mode Indicates the current state (mode) of the activity. These are the values:

Unknown
Not applicable.

Active
An activation of the activity is running.

Cancelling
CICS is waiting to cancel the activity. A CANCEL ACTIVITY command has been issued, but CICS cannot cancel the activity immediately because one or more of the activity's children are inaccessible. No further operations on the activity are permitted until it has been canceled.

Complete
The activity has completed, either successfully or unsuccessfully. The value returned on the COMPSTATUS option tells you how it completed.

Dormant
The activity is waiting for an event to fire its next activation.

Initial
No RUN or LINK command has yet been issued against the activity; or the activity has been reset by means of a RESET ACTIVITY command.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Predicate indicates, if the named event is composite, the Boolean operator applied to its predicate. These are the values:

Unknown
Not applicable.

AND
The Boolean operator applied to the predicate is AND.

OR
The Boolean operator applied to the predicate is OR.

Process Name Specifies the name (1-36 characters) to identify the new process (business transaction instance). The name is unique within the BTS repository data set on which details of the process are to be stored.

Process Type Is the name of the process-type. The length of the name can be 1-8 characters. Each process-type maps to a VSAM data set (the repository), on which information about processes of the named type is stored.

Program Name Returns the eight-character name of the program that executes when this activity is run.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Transaction ID Is the name of the transaction under which this activity runs.

Timer Name Is the name of the Timer associated with the current activity.

Timer Status Is the status of the event timer. These are the values:

Unknown
Not applicable.

Expired
The timer expired typically.

Forced
Expiry of the timer was forced by means of a FORCE TIMER command.

Unexpired
The timer has not yet expired.

Timer value Is the absolute time value for the timer associated with the current activity.

User Id Is the identifier of the user under whose authority this activity runs.

CICSplex BTS Container Details attribute group

The CICSplex BTS Container Details attribute group returns details of data-container of specific CICS business transaction services (BTS) objects. Other BTS details can be monitored, for example, activities, data-containers, events, processes, process-types, and timers.

Activity identifier Specifies the name (1-16 characters) of the activity that owns the container. This must be a child of the current activity.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Container Address Is the address of the associated container.

Container Length Returns the length of the data in the container.

Container Name Is the name (1-16 characters) of the container that holds the data to be retrieved.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Process Type Is the name of the process-type. The length of the name can be 1-8 characters. Each process-type maps to a VSAM data set (the repository), on which information about processes of the named type is stored.

Process Name Specifies the name (1-36 characters) to identify the new process (business transaction instance). The name is unique within the BTS repository data set on which details of the process are to be stored.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

CICSplex BTS Process Details attribute group

The CICSplex BTS Process Details attribute group returns details of specific CICS business transaction services (BTS) objects, in this case the processes. Other BTS details can be monitored, for example, activities, data-containers, events, processes, process-types, and timers.

Activity identifier Specifies the name (1-16 characters) of the activity that owns the container. This must be a child of the current activity.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Process Name Specifies the name (1-36 characters) to identify the new process (business transaction instance). The name is unique within the BTS repository data set on which details of the process are to be stored, see process type name.

Process Type Name Is the name of the process-type. The length of the name can be 1-8 characters. Each process-type maps to a VSAM data set (the repository), on which information about processes of the named type is stored.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CICSplex BTS ProcessType Details attribute group

The CICSplex BTS ProcessType Details attribute group returns details of specific CICS business transaction services (BTS) objects, in this case the process type. Other BTS details can be monitored, for example, activities, data containers, events, processes, and timers.

Audit level indicates the level of audit currently active for processes of the specified process-type. These are the values:

Unknown
The audit level cannot be determined.

Activity
Activity-level auditing. Audit records are written from:

- The process audit points
- The activity primary audit points.

Process
Process-level auditing. Audit records are written from the process audit points only.

Full
Full auditing. Audit records are written from:

- The process audit points
- The activity primary and secondary audit points.

None
No audit trail records are written.

Audit log Is the name of the audit log associated with this process-type. It is the eight-character name of the CICS journal used as the audit log for processes of the specified type.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

File Name Is the name of the CICS file associated with the process-type. It is the eight character name.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Process Type Name Is the name of the process-type. The length of the name can be 1-8 characters.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Status Indicates whether new processes of the specified type can currently be defined. These are the values:

Unknown
No processes are available.

Enabled
The installed definition of the process-type is enabled. The new processes of this type can be defined.

Disabled
The installed definition of the process-type is disabled. The new processes of this type cannot be defined.

CICSplex CICS Memory Addresses attribute group

The CICSplex CICS Memory Address attribute group reports the addresses and lengths of CICS task storage and CICS application storage. Use the CICSplex CICS Memory Addresses attributes to identify problems when CICS applications or CICS tasks work incorrectly.

Address The virtual address of the memory in the CICS region.

Address The virtual address of the memory in the CICS region in display format .

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. CICS region names are always uppercase characters.

Crumple Zone OK Indicates the type of storage.

Origin Node Indicates the combination of MVS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, and is case-sensitive.

Location Indicates the location of the storage within the CICS address space.

Length The length of the area of storage.

System ID The name that uniquely identifies an active MVS operating system. MVS System IDs are always uppercase characters.

Type Indicates the type of storage. These are the key storage types:

- CICS
- Protected CICS
- READ
- SHARED
- USER
- Program USER: CICS C, Program_CICS P, Read_Only R, Shared S, USER U, Program_USER X, n/a 0

CICSplex Classification Rules attribute group

The CICSplex Classification Rules attributes are used to classify which of your CICS regions will become part of your CICSplex environment. For example, Job Name or VTAM Applid. The CICS region is assigned to a CICSplex when the attributes match the rules definition. The CICSplexes you define are displayed on the OMEGAMON enhanced 3270 user interface and on the Tivoli Enterprise Portal. The CICSplexes are displayed as nodes on the Physical Navigator of the Tivoli Enterprise Portal and the CICSplex information is displayed on the CICSplex Summary workspace. The OMEGAMON enhanced 3270 user interface provides the CICSplex Classification Rule Definitions panel for entering your rule classifications and CICSplex summary panels and detail panels are used for various problem solving scenarios.

Note: You can only use the OMEGAMON enhanced 3270 user interface to classify CICSplex rules. This attribute group might be displayed in the Tivoli Enterprise Portal Query Editor and Situation Editor under the name PCLASS, however, it cannot be used to create user-defined queries or situations and should be ignored.

CICSplex Name The name of the CICSplex that is made of CICS regions that is being monitored.

Job Name The name of the CICS region that is being monitored and is part of the CICSplex.

SMF Identifier The active z/OS operating system within a specific CICSplex.

SYSplex Name The name of the z/OS Sysplex where the CICS region is running.

VTAM Applid The name of the unique or specific VTAM Applid within the CICS region.

VTAM Generic Applid The generic name of the VTAM Applid within the CICS region.

XCF Group The XCF Group where the CICS region belongs.

CICSplex CICS Terminal Detail attribute group

The CICSplex CICS Terminal Detail attribute group provides the detailed information for one specific terminal.

Active Transaction ID Indicates the four character string identifying the name of the transaction that is associated with this terminal.

Alternate Screen Size Indicates the alternate rows and columns of the terminal.

ATI Status Indicates whether the terminal is available for use by transactions that are automatically initiated from CICS.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. CICS region names are always uppercase characters.

Console ID Indicates the console ID.

Console Name Indicates the console name.

Extended Attributes Indicates the 3270 terminal extended features, includes Extds, Color, Pss, Hilight, Validation, and Partition.

Logon Time Date and time when terminal connected to this CICS region.

Number of AIDs Indicates the number of AIDs that are waiting for this terminal.

Number of Inputs Indicates the number of inputs on this terminal.

Number of Outputs Indicates the number of outputs on this terminal.

Number of Transactions Indicates the number of transmission errors on this terminal.

Origin Node Indicates the combination of MVS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, and is case-sensitive.

Read Timeout Value Indicates the terminal read timeout value which defines interval that CICS will wait for terminal input before terminating the task.

Screen Size Indicates the default rows and columns of the terminal.

Service Status Indicates whether the terminal is available for use.

Session Create Status Indicates whether the terminal can be acquired automatically by ATI transactions.

Session Status Indicates whether CICS is in session with this terminal.

Storage Violations Indicates the count of storage violations.

System ID Indicates the name that uniquely identifies an active MVS operating system. MVS System IDs are always uppercase characters.

Task Number Indicates the five character task number of the transaction that is currently associated with this terminal.

Terminal Features Indicates the 3270 terminal features, includes Audalarm, Uctran, Copy, Selpen, Print, Queryall, and Querycold.

Terminal ID Indicates the four character ID of the terminal.

Terminal Model Indicates the terminal model number.

Terminal Type Indicates the type of the terminal.

Transaction Errors Indicates the number of transaction errors on this terminal.

Transmission Errors Indicates the number of transmission errors on this terminal.

TTI Status Indicates whether the terminal can be used by the transactions that are initiated from this terminal.

User Area Length Indicates the length of the terminal user area.

UserId Indicates the signed on userid associated with this terminal.

User Area Address The address of the TCT user area.

VTAM Netname Indicates the eight character network name represented by the logical unit.

CICSplex CICS Terminal Summary attribute group

The CICSplex CICS Terminal Summary attribute group provides the overall information for all terminals.

Active Transaction ID Indicates the four character string identifying the name of the transaction that is associated with this terminal.

AIDs Count Indicates the number of AIDs that are waiting for this terminal.

ATI Status Indicates whether the terminal is available for use by transactions that are automatically initiated from CICS.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. CICS region names are always uppercase characters.

Origin Node Indicates the combination of MVS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, and is case-sensitive.

Paging Status Indicates whether pages after the first in a series are written to the terminal on request from the operator or automatically.

Service Status Indicates whether the terminal is available for use.

Storage Violations Indicates the count of storage violations.

System ID Indicates the name that uniquely identifies an active MVS operating system. MVS System IDs are always uppercase characters.

Task Number Indicates the 5-character task number of the transaction that is currently associated with this terminal.

Terminal ID Indicates the four character ID of the terminal.

Terminal Status Indicates whether CICS is in session with this terminal.

Terminal Type Indicates the type of the terminal.

TTI Status Indicates whether the terminal can be used by the transactions that are initiated from this terminal.

UserId Indicates the signed on userid that is associated with this terminal.

VTAM Netname Indicates the eight character network name represented by the logical unit.

CICSplex Connection Analysis attribute group

The CICSplex Connection Analysis attributes help you determine the efficiency of multiregion operation (MRO) and intersystem communication (ISC) links between regions within a selected CICS region. Use the CICSplex Connection Analysis attributes in situations to analyze the balance of work across connected Application-Owning Regions (AORs) and the routing of transactions from any Terminal-Owning Region (TOR) to connected regions.

These attributes provide data for the Connections Analysis table views.

Note: The attributes within the Connection Analysis Situations group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

AIDs Queued to this Connected System Indicates the number of automatic initiate descriptors (AID) that are queued on this connection. The queuing of AIDs against the connection Indicates that the connection is running at full capacity or can be out of service. If the connection is running at full capacity,

you can need to redefine or increase the connection capacity. The value format is an integer, maximum 2 bytes, and in the range 0-32767.

CICS Region Jobname Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique job name. This job name is used for operations initiated from the z/OS system console. The value format is an alphanumeric string, maximum eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CICS Region VTAM Applid Indicates the eight character name that specifies the VTAM applid of the CICS region. Each CICS region has a unique VTAM applid. The value format is an alphanumeric string, maximum eight characters, and case-sensitive. The VTAM applid is always in the uppercase character set.

CICS Region VTAM Generic Applid Indicates the eight character name that specifies the generic VTAM applid of the CICS region. Each CICS region has a specific and a generic VTAM applid. The value format is an alphanumeric string, maximum eight characters, and case-sensitive. The generic VTAM applid is always in the uppercase character set.

Connected System Name Indicates the eight-character name of the system connected to this CICS region. The value format is an alphanumeric string, maximum eight characters, and case-sensitive.

Connected System VTAM Applid Indicates the eight-character name that specifies the VTAM applid of the system connected to this CICS region. The value format is an alphanumeric string, maximum eight characters, and case-sensitive.

Connection Name Indicates the name that is specified for the connection in the Terminal Control Table (TCT). The value format is an alphanumeric string, maximum four characters, and case-sensitive.

Connection Status Indicates the status of the connection specified in the Terminal Control Table (TCT). These are the values:

- INS
- OUT
- REL_INS
- REL_OUT
- SIMLOGON
- OBT_INS
- FRE_INS
- AVA_INS
- ACQ_INS
- ACQ_OUT
- Pending
- Unknown

Connection Type Indicates the type of connection between the selected region and this region. The valid connection types are ISC, MRO, and cross-system coupling facility (XCF). These are the values:

- IRC EXCI
- IRC XCF
- IRC XM
- IRC SRB
- ISC LU61
- ISC LU62
- Unknown

Connection Type Prefix Specifies the prefix of the connection type between the selected region and this region. For example, to verify an ISC connection type of either LU6.1 or LU6.2, specify a connection type prefix of ISC. Values are IRC and ISC.

Link Allocate Count from Originating Region Indicates number of link allocate requests from the originating region to this region across the named connection. The value format is a positive integer, maximum four bytes.

Link Allocate Percentage on Connection Indicates the percentage of link allocates from the originating region to this region, across the named connection. The value format is a percentage in the range 0-100.

Example: If the originating region made 200 link allocate requests over four connections and the requests were split as follows, the percentage values are **40**, **10**, **50**, and **0**.

CONA
80 requests

CONB
20 requests

CONC
100 requests

COND
0 requests

Link Allocation Rate Indicates the rate (per minute) at which link allocations are occurring. This is a guide to the level of activity across the connection. The value format is a positive integer, maximum four characters.

Number of Links Defined Indicates the total number of links defined for this connection type. The value format is a positive integer, maximum four characters.

Number of Links in Use Indicates the number of links in use for this connection type. The value format is a positive integer, maximum four characters.

Number of Primary Links Defined Indicates the number of primary links defined for the connection. The value format is a positive integer, maximum four characters.

Number of Primary Links in Use Indicates the number of primary links currently in use. The value format is a positive integer, maximum four characters.

Number of Secondary Links Defined Indicates the number of secondary links defined for this connection. The value format is a positive integer, maximum four characters.

Percent of Links in Use Indicates the percent of defined links for this connection type that are in use. The value format is a percentage in the range 0-100. Example: If 10 links for this connection type are defined and 3 are in use, then the value for this item is 30 percent.

Number of Secondary Links in Use Indicates the number of secondary links currently in use. The value format is a positive integer, maximum four characters.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Percent of Primary Links in Use Indicates the percentage of primary links in use. The value format is a percentage in the range 0-100. Example: If 10 links for this connection type are defined and 3 are in use, then the value for this item is 30 percent.

Percent of Secondary Links in Use Indicates the percentage of secondary links in use. This percentage is determined by dividing the total number of links in use by the total number of links defined and multiplying that number by 100. The value format is a percentage in the range 0-100.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

XLN Status The status of Exchange Log Name flow for the LU6.2 connection.

CICSplex Collection Control Details attribute group

The CICSplex Collection Control Details attributes indicate the Collection settings for Database clocks and counts.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters. CICS region names are always in uppercase characters.

File Level Monitor Indicates if File level monitoring is on for this product. Valid values:

NO_OMEG_INIT=I On=O Off=F n/a=N

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Product Name Indicates Name of the Type of file or database the settings represent.

Remote Files For VSAM only, this indicates if remote file requests will be monitored in this region. Valid values:

NO_OMEG_INIT=I On=O Off=F n/a=N

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters. z/OS System IDs are always in uppercase characters.

Task Level Monitor Indicates if Task level monitoring is on for this product. Valid values:

NO_OMEG_INIT=I On=O Off=F

Write to SMF Indicates if data for this product will be written to SMF. Valid values:

NO_OMEG_INIT=I On=O Off=F n/a=N

Write to Task History Indicates if data for this product will be written to task history. Valid values:

NO_OMEG_INIT=I On=O Off=F n/a=N

CICSplex Connections Summary attribute group

The CICSplex Connections Summary attributes helps you analyze the efficiency of multiregion operation (MRO), intersystem communication (ISC), and IP interconnections (IPCONN) links and detect capacity constraints that could cause bottlenecks.

Allocation Count Is the total count of allocate requests for this type of connection. The maximum number of requests that originate in this region that can be queued.

Allocation Percentage Is the percentage of link allocations across connections of this type.

Allocation Rate Is the rate per minute at which link allocations are occurring across connections of this type.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters. CICS region names are always in uppercase characters.

CICS Region VTAM Applid Is the eight character name for the specific VTAM applid of the CICS region.

A CICS system's specific applid is used to distinguish between the pair of XRF systems. It is the name quoted on a VTAM APPL statement, to identify this CICS to VTAM.

CICS Region VTAM Generic Applid Is the eight character name for the generic CICS VTAM Applid of the CICS region.CICS systems that use XRF can have a generic name. The name is specified on the APPLID(=generic-applid) system initialization parameter. The active and alternate CICS systems must have the same generic applid and different specific applids. For XRF, a CICS system's generic applid is defined on the APPLID system initialization parameter and is the name by which that CICS is known in the network. It is the name quoted by remote CICS systems, on the NETNAME option of CONNECTION definitions or the APPLID option of IPCONN definitions, to identify this CICS.

Connection Type The type of connection between CICS regions; can be ISC, MRO, or IPCONN.

Maximum Receive Sessions in Use Is the peak number of receive sessions in use on this connection at any one time since CICS started or since statistics were last reset.

Maximum Send Sessions in Use Is the peak number of send sessions in use on this connection at any one time since CICS started or since statistics were last reset.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Percent of Maximum Receive Sessions in Use Is the percentage of the maximum number of receive sessions that are in use based on the negotiated receive sessions.

Percent of Maximum Send Sessions in Use Is the percentage of the maximum number of send sessions that are in use based on the negotiated send sessions.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters. z/OS System IDs are always in uppercase characters.

Total Number of Connections Is the total number of connections of the type indicated under Connection Type.

Total Receive Sessions in Use Indicates the number of sessions of this type that are currently used.

Total Send Sessions in Use Indicates the number of sessions of this type that are currently used.

CICSplex Corbaserver Details attribute group

The CICSplex Corbaserver Details attribute group returns information about specific CORBA servers.

Activate Failures Is the count of failed activates for this CORBA server.

Asserted Id Authentication Is the name of the TCPIPSERVICE resource that defines the characteristics of the port that is used for inbound IIOP with asserted identify authentication.

Autopublish to JNDI Returns a value indicating whether enterprise beans are to be automatically published to the JNDI namespace when the deployed JAR file that contains them is successfully installed in the CORBA server. These are the values:

Yes
Enterprise beans are automatically published.

No
Enterprise beans are not automatically published.

Certificate Indicates the label of the certificate within the key ring that is used as a client certificate in the SSL handshake for outbound IIOP connections. If the label is blank, the certificate nominated as the default for the key ring is used.

Ciphers Indicates the list of cipher suites used to negotiate with clients during the SSL handshake. The list is set by the ENCRYPTION system initialization parameter, you can edit the list to remove or change the order of cipher suites.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Client Cert Authentication Is the name of the TCPIPSERVICE resource that defines the characteristics of the port which is used for inbound IIOP with SSL client certificate authentication.

Corbaserver Name Specifies the name of the CORBA server.

Djar Directory Indicates the name of the deployed JAR file directory (also known as the pickup directory) on HFS. The pickup directory is the place that you put deployed JAR files that you want to be installed into the CORBA server by the CICS scanning mechanism.

Enable Status Indicates the current state of the CORBA server.

These are the values:

Disabled
The CORBA server is currently not processing any requests and is unable to accept new requests. It might have failed to initialize properly or been explicitly disabled.

Disabling
The CORBA server is quiescing before entering disabled state. It is not accepting new requests but is allowing currently-executing work to complete.

Discarding
A DISCARD request has been received for this CORBA server. The server is quiescing before being discarded. It is not accepting new requests but is allowing currently-executing work to complete.

Enabled
The CORBA server is available and is accepting requests.

Enabling
The CORBA server is being initialized. It is not yet ready to accept requests.

Host Name Is the TCP/IP host name, or a string containing the dotted decimal TCP/IP address of the Host.

IIOP no-Authorization Is the name of the TCPIPSERVICE resource used for inbound IIOP with no authentication.

JNDI Prefix Is the JNDI prefix.

Number of Ciphers Is the number of cipher suites that are specified in the CIPHERS attribute.

Object Activates Is the count of object activations for this CORBA server.

Object Stores Is the count of object stores for this CORBA server.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Outbound Privacy Indicates the level of SSL encryption used for outbound connections from this CORBA server. This level is determined by the CIPHERS attribute.

These are the values:

Notsupported
Encryption is not used. During the SSL handshake, CICS advertises only supported cipher suites that do not provide encryption.

Supported
Encryption is used. During the SSL handshake, CICS advertises only supported cipher suites that provide encryption.

Required
Encryption is used if both client and server support it. During the SSL handshake, CICS advertises all supported cipher suites.

Session Bean Timeout Indicates the elapsed time period in minutes, in the range 0 through 143999 (99 days, 23 hours, 59 minutes) of inactivity after which a session bean can be discarded. A value of zero indicates that beans are not timed out.

Shelf Is the name of the HFS shelf directory, that is, the Hierarchical File System directory where the web service binding files associated with WEBSERVICE resources are stored.

SSL no-Client Certification The name of the TCPIPSERVICE resource that defines the characteristics of the port used for inbound IIOP with SSL without client authentication

System ID Indicates the four-character name that uniquely identifies an active CICS z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. CICS z/O System IDs are always in uppercase characters.

TCPIP Service Name Is the name of the TCP/IP service used for this CORBA server.

TCPIPService Security Type Is the type of security used by this CORBA server.

These are the valid values:

- Asserted_identity_authentication
- SSL_client_certificate_authentication
- SSL_with_no_client_authentication
- No_authentication

CICSplex Corbaserver Summary attribute group

The CICSplex Corbaserver Summary attribute group summarizes information about CORBA servers.

Activate Failures Is the count of failed activates for this CORBA server.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Corbaserver Name Specifies the name of the CORBA server.

Enable Status Indicates the current state of the CORBA server. These are the values:

Disabled
The CORBA server is currently not processing any requests and is unable to accept new requests. It might have failed to initialize properly or been explicitly disabled.

Disabling
The CORBA server is quiescing before entering disabled state. It is not accepting new requests but is allowing currently-executing work to complete.

Discarding
A DISCARD request has been received for this CORBA server. The CORBA server is quiescing before being discarded. It is not accepting new requests but is allowing currently-executing work to complete.

Enabled
The CORBA server is available and is accepting requests.

Enabling
The CORBA servers is being initialized. It is not yet ready to accept requests

Object Activates Is the count of object activations for this CORBA server.

Object Stores Is the count of object stores for this CORBA server.

Origin Node Is the combination of CICS z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Session Bean Timeout Indicates the elapsed time period in minutes, in the range 0 through 143999 (99 days, 23 hours, 59 minutes) of inactivity after which a session bean can be discarded. A value of zero indicates that beans are not timed out.

System ID Indicates the four-character name that uniquely identifies an active CICS z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

CICSplex DB2ENTRY Summary attribute group

The CICSplex DB2ENTRY Summary attributes provide a summary of all DB2ENTRYs defined to the system.

Authorization ID The Db2 sign-on ID.

Authorization Type Db2 authorization types.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Count of Aborts Indicates the number of aborts.

Count of Authorizations Indicates the number of authorizations.

Count of Calls Indicates the number of calls.

Count of Commits Indicates the number of commits.

Count of RO Commits Indicates the number of READ/ONLY commits.

Count of Tasks Indicates the number of tasks.

Count of Threads Reuse Indicates the number of thread re-uses.

Count Thread Terminations The number of thread terminations.

Count of Waits Indicates the number of waits/overflow.

Current Active Threads Indicates the number of threads currently active.

Current Prot. Threads The number of current protected threads.

Db2 Accounting Db2 accounting.

Db2 Enable Status The enable status of DB2ENTRY.

Db2 Entry Name The name of the installed DB2ENTRY. The value format is an alphanumeric string, maximum eight bytes.

Db2 Entry Use Count Number of tasks using entry.

HWM of Prot. Threads The HWM of protected threads - limit.

Max Protected Threads The maximum number of protected threads - limit.

Max Threads Limit The maximum active threads.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

Plan Name Indicates the name of DB2PLAN.

Plan Exit Program Indicates the Plan exit name.

Rollback on Deadlock Deadlock ROLLBACK.

Sharelocks Specifies whether CICS will pass an XID to Db2 to allow Db2 to share locks with any other thread that passes the same XID.

System ID The four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Thread TCB Priority The priority of entry threads.

Thread Wait Setting The entry thread wait setting.

Threads Used HWM The HWM of active threads.

Transaction ID The transaction ID.

CICSplex DB2TRANs Summary attribute group

The CICSplex DB2TRANs Summary attributes provide a summary of all DB2TRANs defined to the system.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Db2Entry Name The name of the installed DB2Entry defined in DB2TRAN.

Db2TRAN Name The name of the DB2TRAN defined in the CICS Region.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

System ID The four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Transaction ID The transaction ID.

CICSplex DB2 Summary attribute group

The CICSplex DB2 Summary attributes report on the DB2 status for each monitored CICS region. Use the CICSplex DB2 Summary attributes in situations to determine if a monitored CICS region is attached to DB2. These attributes provide data for the DB2 Summary table view.

Active Tasks Using DB2 The number of active TCBs that are currently engaged with the DB2 requests. The value is an integer.

Adapter Status The status of the CICS-DB2 RMI Adapter; the status is Active or Inactive.

Attached to DB2 Indicates whether the CICS region is attached to DB2.

Attached to DB2 at Shutdown Indicates whether the CICS region is attached to DB2 at shutdown.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Connection Name The name of the DB2 connection that is known to CICS. The value is an alphanumeric string, with a maximum of eight bytes.

Connection Status The status of the CICS-DB2 connection; the status can be Connected, Unconnected, Connecting or Disconnecting.

Connection TCB Limit The maximum number of TCBs that are used to process DB2 requests. The value is an integer.

DB2 Active TCBs HWM The high water mark of active TCBs engaged with the DB2 requests.

DB2 Connect Time The timestamp when DB2 connected to the CICS. This timestamp consists of the date and time and has a maximum of 16 characters.

DB2 Group ID The group ID for the data-sharing group of DB2 subsystems. The group attach facility connects the CICS region with any active member of the DB2 data-sharing group. The value is an alphanumeric string, with a maximum of four bytes.

DB2 Release The version, release, and modification level of the DB2 product. The version, release and modification level is an alphanumeric string, with a maximum of four characters.

DB2 Subsystem Name Is the subsystem identifier associated with the DB2 product. The value is an alphanumeric string, with a maximum of four bytes.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

CICSplex DB2 Task Activity attribute group

The CICSplex DB2 Task Activity attributes report on the task activity for each monitored CICS region. Use the CICSplex DB2 Task Activity attributes in situations to determine if the percentage of waits per DB2 resource control table (RCT) entry is high. These attributes provide data for the DB2 Task Activity table view.

Note: The attributes within the CICSplex DB2 Task Activity group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

Abort Percent Indicates the percentage of DB2 transactions that ended abnormally. The value format is a percentage in the range 0-100.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

DB2 Entry Name The name of the installed DB2ENTRY that is known to CICS. The value format is an alphanumeric string, maximum eight bytes.

Maximum Active Threads Indicates the maximum active threads per DB2 resource control table (RCT) entry. This attribute does not report values in releases of CICS Transaction Server 1.2 and later. The value format is an integer, maximum 2 bytes, and in the range of 0-32767.

Number of Aborts The peak number of SQL requests that were aborted. The value is in the range of 0 - NOLIMIT.

Number of Calls The peak number of calls to the CICS-DB2 RMI adapter.

Number of Tasks The peak number of tasks to the CICS-DB2 RMI adapter.

Number of Waits The peak number of SQL requests that waited for resources. The value is in the range of 0 - NOLIMIT.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Threads in Use The peak number of threads currently in use for SQL requests. The value is in the range of 0 - NOLIMIT.

Threads in Use HWM The peak number of threads currently in use for SQL requests HWM (high-water-mark). The value is in the range of 0 - NOLIMIT.

Threads in Use Percent Indicates the percentage of DB2 threads in use per DB2 resource control table (RCT) entry. The value format is a percentage in the range 0-100.

Threads in Use Percent HWM Indicates the percentage of the peak number (high water mark) of active threads for the DB2 entry. The value format is a percentage in the range 0-100.

Transaction ID Indicates the ID of the transaction that is using the CICS-DB2 attachment facility. The value format is an alphanumeric string, maximum four characters, and case-sensitive.

Wait Percent Indicates the percentage of waits per DB2 resource control table (RCT) entry. The value format is a percentage in the range 0-100.

CICSplex DBCTL Summary attribute group

The DBCTL Summary attributes report on the status of the CICS database control (DBCTL) interface for each monitored CICS region.

Use the DBCTL Summary attributes in situations to determine if DBCTL is active. These attributes provide data for the DBCTL Summary table view.

Active Thread RMI Calls The number of active threads that are processing DBCTL Resource Manager Interface (RMI) calls.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Connection Status The status of the DBCTL connection: connected or unconnected.

Connect Time The timestamp of when CICS connected to DBCTL.

DBCTL Active Indicates whether or not the CICS Database Control facility for IMS (DBCTL) is active.

DBCTL Job name The name of the DBCTL job that is connected to CICS.

DBCTL Job number The number of the DBCTL job that is connected to CICS.

DBCTL RSE name The name of the Recoverable Service Element (RSE) DBCTL job.

DBCTL Subsystem Name The subsystem identifier associated with DBCTL. The value format is an alphanumeric string, maximum four bytes.

DLI DB Monitor Active Indicates whether or not the DL/I Database Monitor is active. The DB Monitor has high overhead and can potentially impact both DL/I and CICS performance.

DLI Percent DMB Pool Use Percentage used of the Data Management Block (DMB) storage pool. The DMB pool is acquired from the CICS dynamic storage area and should be set large enough to accommodate

all DMBs used in CICS, including shared databases. If the pool is not large enough, operating system close/open of databases can become necessary to service new database requests. The value format is a percentage in the range 0 - 100.

DLI Percent ENQ Pool Use DL/I enqueue pool usage expressed as a percentage. The maximum amount of storage that can be used is set by the ENQPL parameter of the SIT. PI enqueue pool storage is GETMAINed out of OSCOR, and a transaction that cannot be serviced because of an OSCOR shortage or because the ENQPL maximum has been reached is terminated with a U0775 abend. The value format is a percentage in the range 0 - 100.

DLI Percent PSB Pool Use Percentage used of the Program Specification Block (PSB) storage pool. The PSB pool is acquired from the CICS dynamic storage area and should be set large enough to accommodate all PSBs used in CICS, including shared databases. If the pool is not large enough, operating system close/open of databases can become necessary to service new database requests. The value format is a percentage in the range 0 - 100.

DLI Percent Thread Use Percentage of IMS DL/I threads in use. When this value reaches 100%, tasks are placed in a wait condition until threads become available. The value format is a percentage in the range 0 - 100.

Elapsed Time at Maximum Threads The elapsed time the connection was at the maximum thread level during the last session.

Maximum Threads The maximum number of threads available for DBCTL processing.

Maximum Thread Hits The peak number of times the maximum thread level was hit during the last session.

Minimum Threads The minimum number of threads available for DBCTL processing.

Minimum Thread Hits The peak number of times the minimum thread level was hit during the last session.

Origin Node The combination of CICS z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Peak Number of Threads The high water mark allocated for DBCTL processing during the session.

RMI Adapter Status The status of the DBCTL Resource Manager Interface (RMI) adapter. The status can be active (Y) or inactive (N).

Startup Table Suffix The suffix of the DBCTL startup table used for the current session.

Successful PSB Schedules The number of successful PSB schedules issued by tasks using the DBCTL connection during this session.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. CICS z/OS System IDs are always in uppercase characters.

CICSplex Dispatcher Summary attribute group

The CICSplex Dispatcher Summary attributes report TCB activity. This includes the number of TCB modes and pools associated with each CICS region, the current and peak number of tasks attached to the CICS region, the current exit interval, the runaway task time, and the terminals scan delay time.

Note: The attributes within the CICSplex Dispatcher Summary group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

Average TCBs Detached Is the average number of z/OS TCBs that have been detached by each scan of the CICS dispatcher's excess z/OS TCB management processing.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Concurrent Subtasks Is the current number of sub tasks. It is the current value of the CICS SUBTSKS parameter.

CPU Time since reset Is the accumulated CPU time since statistics were last reset. This time value is measured accurate to three decimal places. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Current Attached TCBs Is the current number of CICS TCBs attached in this region. TCBs attached in all CICS TCB Modes contribute to this count.

Current ICV Time Is the current region exit time (ICV) in milliseconds. The region exit interval is the amount of time (in milliseconds), for which CICS releases control to the operating system if no transactions are ready to resume processing. It is the current value of the CICS ICV parameter as specified in the SIT. It can be changed dynamically using CEMT SET SYSTEM TIME(value) or EXEC CICS SET SYSTEM TIME(fullword binary data-value) commands.

Current ICVR Time Is the runaway task time interval (ICVR) in milliseconds. It is the current value of the CICS ICVR parameter as specified in the SIT. It can be changed dynamically using CEMT SET SYSTEM TIME(value) or EXEC CICS SET SYSTEM TIME(fullword binary data-value) commands.

Current ICVTSD Time Is the terminal scan delay time (ICVTSD) in milliseconds. It is the current value of the CICSICVTSD parameter as specified in the SIT. It can be changed dynamically using CEMT SET SYSTEM TIME(value) or EXEC CICS SET SYSTEM TIME(fullword binary data-value) commands.

Current Number of Tasks Is the current number of tasks attached in this CICS region.

Current PRTYAGING Time Is the priority aging value (PRTYAGE) in milliseconds. It is the current value of the CICS PRTYAGING parameter.

Current Used TCBs Is the current number of CICS TCBs attached in this region which are in use. TCBs attached and in use in all CICS TCB Modes contribute to this count.

Excess TCB Scans Is the number of Excess TCB scans performed by the dispatcher.

MRO (QR) Batching value Is the MRO batching value (MROBTCH). It is the current value of the CICS MROBATCH parameter.

Number of TCB Modes Is the number of TCB Modes defined to this CICS region.

Number of TCB Pools Is the number of TCB pools defined to this CICS region.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Peak Number of Tasks Is the peak number of tasks attached in this CICS region.

SRB Time since reset Is the accumulated SRB time since statistics were last reset. This time value is measured accurate to three decimal places. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Start Time Is the time at which the dispatcher subtask was initialized.

System ID Indicates the four-character name that uniquely identifies an active CICS z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

TCB Scans with a Detach Is the number of excess TCB scans performed by the CICS dispatcher in which a TCB was detached.

TCB Scans with no Detach Is the number of excess TCB scans performed by the CICS dispatcher in which no TCBs were detached.

CICSplex Dispatcher TCB Modes attribute group

The CICSplex Dispatcher TCB Mode attributes report CICS dispatcher TCB mode information in an active system that is being managed by CICSPlex SM.

Note: The attributes within the CICSplex Dispatcher TCB Modes group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

Accumulated time spent in z/OS Waits Is the accumulated real time, accurate to three decimal places that the CICS region was in a z/OS wait. The total time used between a z/OS wait issued by the dispatcher and the return from the z/OS wait. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CPU Time for dispatcher task Is the accumulated CPU time taken for this DS task, accurate to three decimal places. The processor time used by this TCB while executing the default dispatcher task (DSTCB). The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Current TCBs Attached Is the current number of z/OS TCBs attached in this CICS dispatcher TCB mode.

Current TCBs in Use Is the current number of z/OS TCBs in use in this CICS dispatcher TCB mode.

Number of excess detaches Is the number of CICS 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.

Number of other detaches Is the number of z/OS TCBs that have been, or are in the process of being, detached from this CICS dispatcher TCB mode. This might be because, for example, the limit for the number of TCBs allowed in the TCB pool has been lowered, or there are too many TCBs attached in relation to the number of TCBs in use.

Number of stolen detaches Is the number of z/OS TCBs that have been, or are in the process of being, stolen from this CICS dispatcher TCB mode because it is required by another TCB mode.

Number of unclean detaches Is the number of z/OS TCBs that have been, or are in the process of being, detached from this CICS dispatcher TCB mode because the CICS transaction that was associated with the TCB has terminated.

Number of partition exits Is the number of partition exits that have occurred for this TCB mode.

Number of TCB mismatches Is the number of z/OS TCB mismatches that have occurred for this TCB mode.

Number of TCB steals Is the number of z/OS TCBs that have been stolen from other TCB modes.

Open Status Indicates whether the CICS dispatcher TCB mode is Open, Not open or Unknown. A CICS dispatcher TCB mode of type Unknown indicates that this TCB mode has not been activated.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Peak TCB Attached Is the peak number of z/OS TCBs attached in this CICS dispatcher TCB mode.

Peak TCBs in use Is the peak number of z/OS TCBs in use in this CICS dispatcher TCB mode.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

TCB Attach Failures Is the number of z/OS TCB attach failures that have occurred in this CICS dispatcher TCB mode.

TCB Attaches Is the number of z/OS TCBs that have been attached in this CICS dispatcher TCB mode.

TCB Mode Name Is the two-character name of the CICS Dispatcher TCB mode, either QR, RO, CO, SZ, RP, FO, SL, SO, S8, D2, JM, L8, J8 or J9.

TCB Mode Pool Is the name of the CICS TCB pool, either Open, Hot-Pooling, XPLink, JVM, SSL, Threaded or n/a.

TCBs Allocated Is the number of times that a TCB was allocated to a task.

Total CPU time used by this TCB Is the accumulated CPU time taken for this TCB, accurate to three decimal places. The total time that this TCB has been in execution. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Total time TCB has been dispatched by z/OS Is the accumulated real time that this TCB has been dispatched by the z/OS system, accurate to three decimal places. The total time used between a z/OS wait issued by the dispatcher and the subsequent wait issued by the dispatcher. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

CICSplex Dispatcher TCB Pools attribute group

The CICSplex Dispatcher TCB Pools attributes report extended CICS dispatcher TCB pool information in an active system managed by CICSPlex SM.

Note: The attributes within the CICSplex Dispatcher TCB Pools group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Current tasks waiting Is the current number of tasks waiting for this TCB.

Current TCBs Attached Is the current number of TCBs attached in the CICS dispatcher TCB modes that reside in this TCB pool.

Current TCB in Use Is the current number of CICS TCBs attached in this TCB pool and being used.

Current TCB Mismatch Waits Is the current number of TCB mismatch waits by TCB requests using this pool.

Current TCB Mismatch Wait Time Is the current wait time (accurate to three decimal places) for the current TCB mismatch waits by TCB requests using this pool. The value can be entered in the

HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Current Waiting Time Is the current delay time, accurate to three decimal places, for the TCB requests that are currently delayed because the system has reached the limit for the number of TCBs allowed in this pool. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Maximum TCBs Is the value for the maximum number of TCBs allowed in this pool. The value is specified in the system initialization parameter MAXOPENTCBS (for the open TCBs pool) or MAXJVMTCBS (for the JVM TCBs pool).

It can be changed by an override, or changed dynamically using `CEMT SET SYSTEM MAX`*xxxx*`TCBS(value)` or `EXEC CICS SET SYSTEM MAX`*xxxx*`TCBS` (fullword binary data-value) commands.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Peak Tasks Waiting Is 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.

Peak TCBs Attached Is the peak number of TCBs attached in the CICS dispatcher TCB mode that reside in this TCB pool.

Peak TCB in Use Is the peak number of CICS TCBs used that were attached in this TCB pool.

Peak TCB Mismatch Waits Is the peak number of TCB mismatch waits by TCB requests using this pool.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

TCB Mismatch Waits Is the total number of TCB mismatch waits, that is, TCB requests that waited because there was no TCB available matching the request, but there was at least one nonmatching free TCB. For J8 and J9 mode TCBs in the JVM pool, this shows the requests that waited for a TCB of the correct mode (J8 or J9) and JVM profile.

TCB Mismatch Wait Time Is the total time (accurate to three decimal places) spent in TCB mismatch waits by TCB requests using this pool. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

TCB Pool Name Is the name of the TCB pool in which this CICS dispatcher TCB mode is defined. The values can be Open, JVM, HP, SSL, Threaded and XPLink.

TCB Requests Delayed for z/OS Storage Is the total number of z/OS storage requests that have waited because no TCB was available, and none might be created because of z/OS storage constraints.

Time waiting for MVS storage Is the total time (accurate to three decimal places) spent in z/OS storage waits by TCB requests using this pool. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Times at Limit Is the number of times the system reached the limit for the number of TCBs allowed in this pool (MAXOPENTCBS or MAXJVMTCBS).

Total Number of Waits Is the total number of z/OS storage waits by TCB requests using this pool.

Total Wait Times at TCB limit Is the total wait time of TCBs that have reached the pool limit, accurate to three decimal places. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567

or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

CICSplex DJAR Details attribute group

This attribute group retrieves information about a DJAR definition.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

DJAR Name Is the file name of the current DJAR.

Corbaserver Name Is the identifier of the parent CORBA server.

HFS File Name Indicates the fully qualified HFS file name. If this DJAR definition was created by performing the SCAN function on a CORBA server definition, this fully qualified HFS file name is the one that shows in the DJARDIR parameter of that CORBA server definition.

Last Modified Time Is the timestamp of the latest updated to this DJAR on HFS, displayed in your workstation's locale. The last-modified-time can be used to determine whether CICS has refreshed itself after an update is made to a JAR in the pickup directory.

For dynamically-installed DJARs (those installed by the CICS scanning mechanism), the value of LASTMODTIME is the timestamp of the HFS file pointed to by the DJAR definition, at the time the DJAR definition was last installed or updated.

For statically-installed DJARs (those installed from a CSD or by CREATE DJAR), the value of LASTMODTIME is the timestamp of the HFS file pointed to by the DJAR definition, at the time the DJAR was installed. The value is fixed--it cannot be updated like a dynamically-installed DJAR.

If you issue an INQUIRE DJAR command before a newly installed or updated DJAR has fully initialized, the returned LASTMODTIME value is zero.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

State Is the indicator to show the state of the DJAR file. These are the values:

Discarding
A DISCARD is in progress for this deployed jar file.

Initializing
The jar file is being copied to the shelf.

Inservice
Resolution of the copy of the jar file on the shelf has succeeded, and the deployed jar file is usable.

Pending Initialization
Copying of the jar file to the shelf has not yet started.

Pending Resolving
Resolution of the copy of the jar file on the shelf has not yet started

Resolving
The copy of the jar file on the shelf is being resolved

Unresolved
Resolution of the copy of the jar file on the shelf has failed, and the deployed jar file is unusable.

Unusable
Copying the jar file to the shelf has failed, and the deployed jar file is unusable.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

CICSplex Document Template Details attribute group

This attribute group shows detailed information about a currently installed document template.

Cached Copy Deleted Is the count of how many cached copies have been deleted. The value is an integer with a maximum of four characters.

Cached Copy Used Is the number of times the cached copy of this document template has been used. The value is an integer with a maximum of four characters.

Cached Size Is the amount of storage, in bytes, used by the cached copy of the document template. The value is an integer with a maximum of four characters.

CICS Region Name Is the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CICS Version Is the version number of the CICS region. The version is an alphanumeric string, with a maximum of four characters.

CR/LF Append Indicates whether CICS is to delete trailing blanks from and append carriage-return/line-feed sequences to each logical record of the template. These are the values:

YES
Delete trailing blanks from and append carriage-return line-feed to each logical record of the template.

NO
Do not delete trailing blanks from or append carriage-return line-feed to each logical record of the template

Document Template Is the name of the current document template. It can be up to eight characters.

Extended Name Is the extended template-name by which the document template is to be known outside the resource definition function.

Format Is the format of the template contents. Values are BINARY and EBCDIC.

Newcopy Count Is the number of times a new copy of this document template has been loaded. The valid format is an integer with maximum four bytes.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Read Count Is the number of times this document template has been read. The valid format is an integer with a maximum of four bytes.

Source Name Is the name of the resource on which this template is stored. The value format is an alphanumeric string, maximum 255 bytes.

Source Type Is the type of the resource where this template is stored. These are the valid values:

EXIT
An exit program.

FILE
The CICS file name for a data set.

HFSFILE
A z/OS UNIX System Services HFS file.

PDSMEMBER
The name of the member in the PDS described in DDNAME.

PROGRAM
The name of a program.

TDQ
The name of a temporary dynamic queue.

TSQ
The name of a temporary storage queue.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Use Count Shows the number of times this document template has been used.

CICSplex Dump Analysis attribute group

The CICSplex Dump Analysis attribute group provides information on current dump activity and statistics on any dumps. These attributes do not include suppressed dumps. These attributes are reset to 0 and collection is restarted after each reset of CICS DUMP statistics.

Note: The attributes within the CICSplex Dump Analysis group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

System Dumps Indicates the number of system dumps that have been generated. The value format is an integer of maximum four bytes.

System Dumps in Last Hour Indicates the number of system dumps that have occurred within the last 60 minutes. Comprehensive systems dumps are initiated by users or can occur in the event of a major error. These dumps are written to the system dump data set, SYS1.DUMPnn. The value format is an integer of maximum four bytes.

Taking SDUMP Indicates a CICS request for a system dump. These are the valid values: Yes or No.

Total Dumps Indicates the sum of all dumps generated by the CICS address space. The value format is an integer of maximum four bytes.

Transaction Dumps Indicates the number of transaction dumps that have been generated. The value format is an integer of maximum four bytes.

Transaction Dumps in Last Hour Indicates the number of transaction dumps that have occurred within the last 60 minutes. CICS transaction dumps occur when a transaction terminates. The value format is an integer of maximum four bytes.

CICSplex Dump Details attribute group

The Dump Details attributes reports the status of both system and transaction dumps related to each CICS region.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CICS Shutdown Option Indicates whether the current CICS region shuts down after a dump of the current type. These are the values: Yes or No.

Dump Scope Indicates whether the system or transaction dump requests are to be sent to the CICS regions or performed locally. This is an alphanumeric string, with a maximum of 12 characters.

Maximum number of dumps allowed Shows the maximum number of dumps allowed by the current CICS regions. The value format is an integer of maximum four bytes. A value of 999 denotes that there is no limit to the Maximum value.

MVS DAE Option Is the z/OS system dump analysis and elimination indicator. This Indicates whether these system dump requests are to be sent to the CICS regions or performed locally. This Indicates whether these system dump codes are eligible for suppression by the z/OS dump analysis and elimination (DAE) component. These are the values: Yes, No or N/A.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

System Dump Code Is the system dump code identifier. This is the identifier of the system dump that occurred in the current CICS region. It is an alphanumeric string, with a maximum of eight characters.

System Dump Option Indicates whether system dump requests for the current code are to be executed or suppressed. These are the values: Yes or No.

System Dumps Suppressed Is the number of system dumps that have been suppressed within the current recording period. The count of system dumps suppressed by the current CICS region within the current statistics recording period. The value format is an integer of maximum four bytes.

System Dumps Taken Is the number of system dumps that have been taken within the current recording period. The count of system dumps taken by the current CICS region within the current statistics recording period. The value format is an integer of maximum four bytes.

System Dump Total Is the number of system dumps taken since CICS was started. The count of system dumps taken by the current CICS region since startup. The value format is an integer of maximum four bytes.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Transaction Dump Code Is the transaction dump code identifier. This is the identifier of the transaction dump that occurred in the current CICS region. It is an alphanumeric string, with a maximum of eight characters.

Transaction Dump Option Indicates whether transaction dump requests for the current code are to be executed or suppressed. These are the values: Yes, No, or N/A.

Transaction Dumps Suppressed Is the number of transaction dumps that have been suppressed within the current recording interval. The count of transaction dumps suppressed by the current CICS region within the current statistics recording period. The value format is an integer of maximum four bytes.

Transaction Dumps Taken Is the number of transaction dumps that have been taken within the current recording period. The count of transaction dumps taken by the current CICS region within the current statistics recording period. The value format is an integer of maximum four bytes.

Transaction Dump Total Is the number of transaction dumps taken since CICS was started. The count of transaction dumps taken by the current CICS region since startup. The value format is an integer of maximum four bytes.

CICSplex Dynamic Storage Details attribute group

The CICSplex Dynamic Storage Details attribute group reports the size, free space, number of GETMAIN and FREEMAIN requests, and the number of time Short-On-Storage that occurred for the selected Dynamic Storage Area (DSA), Extended Dynamic Storage Area (EDSA), or Grande Dynamic Storage Area (GDSA).

Note: The attributes within the CICSplex Dynamic Storage Details group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning utility.

ADD Subpool Requests Is the number of ADD_SUBPOOL requests. They are used to create a subpool (domain or task) from the CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, or ERDSA.

Area Is the name of a specific Dynamic, Extended, or Grande Dynamic Storage Area. Valid values are: CICS_Key_DSA, User_Key_DSA, Shared_Key_DSA, Read_Only_Key_DSA, Trusted_DSA, Program_CICS_Key_DSA, Program_User_Key_DSA, CICS_Key_EDSA, User_Key_EDSA, Shared_Key_EDSA, Read_Only_Key_EDSA, Trusted_EDSA, Program_CICS_Key_EDSA, Program_User_Key_EDSA, CICS_Key_GDSA, User_Key_GDSA, Shared_Key_GDSA, DSA, EDSA, GDSA

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Current Tasks Suspended Is the number of tasks currently suspended for storage.

Cushion Released Is 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 is less than the number of pages in the cushion and there are no more free extents available to increase the size of this DSA.

Cushion Size The size of the cushion, expressed in kilobytes. The value format is an integer with a maximum of four bytes. A cushion is an area of storage that can be used when there is no more space in the typical storage area. CICS reserves amounts of storage in the dynamic storage areas (DSAs) for use when processing storage stress conditions. Each reserved area, which consists of contiguous virtual storage, is called a storage cushion. The cushion forms part of the CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, or ERDSA. CICS goes short on storage (SOS) when the cushion is being used, and it is less than its originally allocated size.

Cushion Size The size of the cushion, expressed in kilobytes. The value format is an integer with a maximum of eight bytes. A cushion is an area of storage that can be used when there is no more space in the typical storage area. CICS reserves amounts of storage in the dynamic storage areas (DSAs) for use when processing storage stress conditions. Each reserved area, which consists of contiguous virtual storage, is called a storage cushion. The cushion forms part of the CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, or ERDSA. CICS goes short on storage (SOS) when the cushion is being used, and it is less than its originally allocated size.

DEL Subpool Requests Is the number of DELETE_SUBPOOL requests (domain or task) from the CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, or ERDSA.

Extents Allocated Is the number of extents currently allocated to this dynamic storage area.

Extents in Use Is the number of extents currently in use for this dynamic storage area.

FREEMAIN Requests The number of FREEMAIN requests from the dynamic storage area.

GETMAIN Failures Is the number of GETMAIN requests that have failed because of insufficient storage. The GETMAIN request is either purged or suspended depending on its definitions (SUSPEND(NO) or SUSPEND(YES)).

GETMAIN Requests Is the number of GETMAIN requests, either purged or suspended for the storage area.

HWM Free Space The high water mark of the available storage area expressed in bytes since that last time that statistics were recorded.

HWM Tasks Suspended Is the high water mark of tasks suspended.

Largest Free Area Is the length of the largest contiguous free area expressed in four kilobytes. To get an indication of the storage fragmentation in the storage area, compare this value with the Storage Available value. If the ratio is large, this storage area is fragmented.

Largest Free Area Is the length of the largest contiguous free area expressed in eight kilobytes. To get an indication of the storage fragmentation in the storage area, compare this value with the Storage Available value. If the ratio is large, this storage area is fragmented.

LWM Free Space Is the low-water mark of available storage area.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Page Size Is the size of one page of storage in kilobytes.

Percent Used Is the percentage of storage area used.

Requests Purged Is the number of requests which were purged while suspended for storage.

SOS Is the number of times CICS went short on storage (SOS), where SOS means either that the cushion is currently in use or that there is at least one task suspended for storage or both.

Statistics Last Reset Is the last time that CICS statistics were reset.

Storage Allocated Is the amount of storage currently allocated. The value format is an integer with a maximum of four bytes.

Storage Allocated Is the amount of storage currently allocated. The value format is an integer with a maximum of eight bytes.

Storage Available Is the amount of free storage space. This storage area that is the number of free pages multiplied by the page size.

Storage Available Is the amount of free storage space. This storage area that is the number of free pages multiplied by the page size.

Storage in Use Is the amount of currently used storage. The value format is an integer with a maximum of four bytes.

Storage in Use Is the amount of currently used storage. The value format is an integer with a maximum of eight bytes.

Storage Violations Is the number of storage violations recorded in the CDSA, UDSA, SDSA, RDSA or the GDSA.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within given CICS regions. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Time Last Went SOS Is the last time short-on-storage occurred.

Total Tasks Suspended The total number of times a GETMAIN request with the SUSPEND(YES) statement was suspended because of insufficient storage to satisfy the request.

Total Times SOS Is the total number of times short-on-storage occurred.

CICSplex Enqueue Analysis attribute group

The CICSplex Enqueue Analysis attribute group displays the number of tasks waiting for an enqueue and each enqueue name or address.

Note: The attributes within the CICSplex Enqueue Analysis group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Enqueue Resource Indicates the name of the enqueued resource. The value format is an alphanumeric string of maximum 255 characters.

Enqueue Resource Hex Indicates the serially reusable resource name in hexadecimal format. The value format is an alphanumeric string of maximum 510 characters.

Enqueue Scope Indicates the scope of the resource enqueue. The valid values are Local and Sysplex.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 characters, that is case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Owning Region Name Indicates the job name or modify ID of the CICS region that owns the resource. The value format is an alphanumeric string of maximum eight characters.

Owning System ID Indicates the SMF ID of the z/OS operating system which runs the CICS region that owns the resource. The value format is an alphanumeric string of maximum four characters.

Queue Element Indicates the address of the resource queue element. The value format is an integer of maximum four bytes.

Resource Length Indicates the length of the resource name. The value format is an integer of maximum four bytes.

Resource Type Indicates the format of the serially reusable resource name. These are the values: Address or Variable.

Scope Name Indicates the name assigned in the ENQSCOPE resource definition of CICS that is appended to the characters "DFHE" for the QNAME. The value format is an alphanumeric string of maximum four characters.

Sysplex Name Indicates the name assigned to the SYSPLEX configuration that owns the serially reusable resource. The value format is an alphanumeric string of maximum eight characters.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Wait Count Indicates the number of enqueue conflicts, which are tasks waiting for an available resource. The value format is an integer of maximum four bytes.

CICSplex Enqueue Analysis Tasks attribute group

The CICSplex Enqueue Analysis Tasks attribute group displays the transactions that are either holding or waiting for a particular resource.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique job name. This job name is used for operations initiated from the z/OS system console. CICS region names are always in uppercase characters. The value is an alphanumeric string, maximum eight characters and case-sensitive.

Enqueue Resource Hex Indicates the serially reusable resource name in hexadecimal format. The value format is an alphanumeric string of maximum 510 characters.

Enqueue Scope Indicates the scope of the resource enqueue. These are the values: Local and Sysplex.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 characters, that is case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Resource Length Indicates the length of the resource name. The value format is an integer of maximum four bytes.

Resource Name Indicates the name of the CICS resource upon which the task is waiting. The value format is an alphanumeric string of maximum eight characters.

Resource Type Indicates the format of the serially reusable resource name. These are the values: Address or Variable.

Scope Name Indicates the name assigned in the ENQSCOPE resource definition of CICS that is appended to the characters "DFHE" for the QNAME. The value format is an alphanumeric string of maximum four characters.

Sysplex Name Indicates the name assigned to the SYSPLEX configuration that owns the serially reusable resource. The value format is an alphanumeric string of maximum eight characters.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. This value is a concatenation z/OS System ID (SMFID) and the CICS region name. The value format is an alphanumeric string, maximum four characters, that is case-sensitive. z/OS System IDs are always in uppercase characters.

Task Number Indicates the number that was sequentially assigned by CICS to uniquely identify the task. The value format is an integer of maximum four bytes.

Task Status Indicates whether the task is holding or waiting for the serially reusable resource. Values include: Owning or Waiting.

Transaction ID Indicates the four-letter transaction identifier from the Program Control Table (PCT). The value format is an alphanumeric string of maximum four characters.

CICSplex Enqueue Pool Details attribute group

This attribute group retrieves information about enqueues. CICS uses enqueues to lock recoverable resources, such as file records or queues, to the UOW that is updating them.

Average time waited Is the average waited enqueue time accurate to three decimal places. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Average Sysplex time Is the average time of sysplex enqueues that waited accurate to three decimal places. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as

SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Average retain time Is the average time that enqueues were retained accurate to three decimal places. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Current waiting Is the current count of enqueues waiting.

Current Sysplex waiting Is the current count of sysplex enqueues waiting.

Current ENQs retained Is the current number of enqueues being retained.

Current wait time Is the current enqueue wait time accurate to three decimal places. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Current Sysplex time Is the current sysplex enqueue wait time accurate to three decimal places. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Current retain time Is the total time of the enqueues currently being retained and is accurate to three decimal places. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Current average retain time Is the average time of the enqueues currently being retained and is accurate to three decimal places. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Enqueue Pool Id Is the identifier of the current enqueue Pool.

Immediate rejected ENQBUSY Is the total immediate enqueues rejected because ENQBUSY.

Immediate rejected ENQ retained Is the total immediate enqueues rejected because ENQ retained.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Time waited Is the total waited enqueue time accurate to three decimal places. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Total issued Is the total number of enqueues issued.

Total waited Is the total number of enqueues that waited.

Total sysplex waited Is the total number of sysplex enqueues that waited.

Total enqueues retained Is the total number of enqueues that were retained.

Total sysplex time Is the total time of sysplex enqueues that waited. This is measured accurate to three decimal places. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Total retain time Is the total time that enqueues were retained accurate to three decimal places. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Waiting rejected retained Is the total waiting enqueues rejected because ENQ retained.

Waiting purged Operator Is the total waiting enqueues rejected because purged by Operator.

Waiting purged Timeout Is the total waiting enqueues rejected because purged by Timeout.

CICSplex Enterprise Java Bean Details attribute group

This attribute group displays information about an installed enterprise bean.

Note: The attributes within the CICSplex Enterprise Java Bean Details group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

Activations Is the count of activations for the bean.

Bean Name Specifies the identifier of the Enterprise bean.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Corbaserver Name Specifies the name of the associated CORBA server.

Creates Is the count of creations for the bean.

DJAR Name Specifies the name of the deployed JAR file that contains the bean.

Method calls Is the number of method calls for the bean.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Passivations Is the count of passivation for the bean.

Removes Is the count of removals for the bean.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

CICSplex Event Processing Details attribute group

The CICSplex Event Processing Details attribute group displays information about CICS event processing. CICS event processing can emit events at a number of clearly defined points, known as capture points. You can think of a capture point as an opportunity for an event to be emitted.

You can use event processing in many ways, such as to detect customer trends or to detect abnormalities in patterns of customer behavior to identify potential irregular or fraudulent situations.

Captured events The total number of captured events during event processing. This total amount is an integer with a maximum of eight characters.

Capture Point Name The name of the capture point event specification. This name is an alphanumeric string, with a maximum of 32 characters.

Capture Point Type The type of capture point event specification used during event processing. These are the valid type values:

- PRECOMMAND 1
- POSTCOMMAND 2
- PROGRAMINIT 3

Capture Specification The name of the capture specification used during event processing. The capture specification is the capture point, capture data, and predicates for filtering. The capture specification includes information describing how to obtain the emitted business information from the data available for capture. This name is an alphanumeric string, with a maximum of 32 characters.

CICS Region Name The job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Event Binding The name of the XML definition that defines one or more business events to the CICS application. Event binding consists of event specifications, capture specifications, and adapter dispatcher information. This name is an alphanumeric string, with a maximum of 32 characters.

Event Name The event processing name associated with the capture point specification. This name is an alphanumeric string, with a maximum of 32 characters.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

System ID The four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

CICSplex Event Processing Status attribute group

The CICSplex Event Processing Status attribute group displays status information about CICS event processing. These attributes provide information on whether event processing is started, draining, or stopped in the CICS region.

CICS Region Name The job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Event Processing Status The status of event processing in the CICS region. These are the valid values:

- STARTED 1
- DRAINING 2
- STOPPED 3

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

System ID The four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

CICSplex Event Processing Summary attribute group

The CICSplex Event Processing Summary attribute group displays summary data about event processing in a managed CICS region.

CICS Region Name The job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Event Binding The name of the associated event binding. Event binding consists of event specifications, capture specifications, and adapter dispatcher information. This name is an alphanumeric string, with a maximum of 32 characters.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

Status The current status of the event binding. Indicates whether the event binding is enabled or not. These are the valid values:

- ENABLED 1
- DISABLED 2

System ID The four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

CICSplex Exit Program Analysis attribute group

The CICSplex Exit Program Analysis attribute groups returns information about a global user exit or a task-related user exit. This information is retrieved using the EXEC CICS INQUIRE EXITPROGRAM command.

API Type Indicates which APIs the task related user exit program uses. These are the values:

BASE_API
CICSAPI has replaced BASEAPI. Both these values have the same meaning, and, for compatibility, BASEAPI is still accepted by the translator.

CICS_API
The task related user exit program is enabled as either QUASIRENT or THREADSAFE, but without the OPENAPI option. This means it is restricted to the CICS permitted programming interfaces. In releases before CICS Transaction Server for z/OS version 3, this CVDA was called BASEAPI.

OPEN_API
The task related user exit program is enabled with the OPENAPI option. This means it is permitted to use non CICS API, for which purpose CICS gives control to the task related user exit under an L8 mode open TCB. OPENAPI assumes that the program is written to threadsafe standards.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case sensitive. CICS region names are always in uppercase characters.

Concurrency Status Indicates the concurrency status of the task-related user exit program, as specified by the latest ENABLE command for this program. These are the values:

QUASIRENT
The task related user exit program is defined as being quasi reentrant, and is able to run only under the CICS QR TCB when invoking CICS services through the CICS API. To use any MVS, this task-related user exit program must switch to a privately managed TCB.

THREADSAFE
The program is defined as threadsafe, and is capable of running under an open TCB. If the APIST option returns OPENAPI, it is invoked under an open TCB. If the APIST option returns BASEAPI, it is invoked under whichever TCB is in use by its user task when the program is given control, which could be either an L8 mode open TCB or the CICS QR TCB.

Connection Status Indicates the state of the connection between the exit and the external resource manager that it supports. CONNECTST enables you to determine whether the specified exit has connected to its resource manager, so that CICS tasks can safely issue API requests to the resource manager. These are the values:

Connected
The task related user exit is connected to its external resource manager subsystem, and API requests can be issued.

n/a
The exit is not a task related user exit.

Not Connected
The task related user exit is not connected to its external resource manager subsystem, and therefore API requests cannot be issued.

Unknown
The task- related user exit has been enabled and started, but not enabled for SPI requests. UNKNOWN can also be returned if CICS is unable to call the task related user exit. In both of these cases, CICS cannot tell whether it is connected to its external resource manager.

EDF Format Status Indicates that the FORMATEDF option is enabled for the exit. FORMATEDF causes extra invocations of the exit for tasks executed under EDF, to format output screens and interpret input, and applies only to task related user exits. These are the values:

On
FORMATEDF processing is turned on.

Off
FORMATEDF processing is turned off.

Unknown
This is a global user exit.

Entry Point Indicates the entry address of the user exit.

Exit Program Name Is the name of the current exit program.

Exit Point Name Is the identifier of an exit point associated with the exit.

Exit Qualifier Is the Task Related User Exit SPI qualifier assigned by CICS.

Global Exit Points Is the number of global user exit points at which the exit is enabled.

Global Workarea Owner Is the exit that owns the global work area associated with the current exit.

Global Workarea Length Is the length of the global work area for the exit.

GWA Use Count Indicates the total number of user exits that are using the global work area owned by this exit. This count includes the owning exit program. A zero is returned if the exit is not the owner.

In Doubt Wait Status indicates whether the task-related user exit is enabled with the INDOUBTWAIT keyword. These are the values:

Wait
The exit is enabled with the INDOUBTWAIT keyword.

No wait
The exit is not enabled with the INDOUBTWAIT keyword.

n/a
The exit being inquired upon is a global user exit.

Newcopy Count Is the number of times that the Program has been New copied.

Location Indicates the exit location of the program. These are the values:

- Not_loaded
- CDSA
- LPA
- ECDSA
- ERDSA
- ELPA
- SDSA
- ESDSA
- RDSA

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Program Size Is the size in bytes of the Exit Program.

Purge Status Indicates whether the task related user exit is enabled with the PURGEABLE keyword. These are the values:

Purgable
Tasks are purgeable from CICS waits within the task related user exit.

Not purgable
Tasks are not purgeable from CICS waits within the task related user exit.

n/a
The exit being inquired upon is a global user exit.

RPL Offset Is the offset into the RPL DD of the owning PDS.

Shutdown Status Indicates whether the SHUTDOWN option is enabled for the exit. SHUTDOWN causes invocation during CICS shutdown, and applies only to task related user exits. These are the values:

Shutdown
The exit is invoked when a CICS shutdown occurs.

Noshutdown
The exit is not invoked when a CICS shutdown occurs.

n/a
This is a global user exit

SPI Enablement Indicates whether the task related user exit is enabled for SPI calls. These are the values:

SPI
The exit is enabled for SPI.

No SPI
The exit is not enabled for SPI.

n/a
The exit being inquired upon is a global user exit.

Start Status Identifies whether the exit is available for execution. These are the values:

Started
The exit program is available for execution; that is, the START option on an EXEC CICS ENABLE command is still in force.

Stopped
The exit program is not available for execution; that is, the START option has not been issued, or has been revoked by the STOP option on an EXEC CICS DISABLE command.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

TASKSTART Status Indicates whether the TASKSTART option is enabled for the exit. TASKSTART causes CICS to invoke the exit at the start and end of every task; it applies only to task related user exits. These are the values:

Taskstart
The exit is set for invocation at the start and end of every task.

Notaskstart
The exit is not set for invocation at the start and end of every task.

n/a
This is a global user exit.

Task Workarea Length Indicates the length of the local (task-related) work area for the exit. Local work areas apply only to task related user exits. A zero is returned if this is a global user exit.

Use Count Is the number of times the exit program has been invoked.

CICSplex File Control Analysis attribute group

The CICSplex File Control Analysis Task attribute group provides status information about the VSAM data sets allocated to the CICS region. You can use this to determine the number of tasks that are waiting to access VSAM data sets because of a shortage of either buffers or strings.

Note: The attributes within the CICSplex File Control Analysis group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Number of Tasks with Buffer Waits Indicates the number of tasks that are waiting on buffers for VSAM files. If there are multiple buffer waits, you can allocate more buffers. The value format is a positive integer of maximum four bytes.

Number of Tasks with String Waits Indicates the number of tasks that are waiting on strings for VSAM files. If there are multiple string waits, you can allocate more strings. The value format is a positive integer of maximum four bytes.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 characters, that is case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

RLS Enabled Indicates whether CICS is registered with the SMS VSAM control ACB. These are the values: Yes and No

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

CICSplex File Control Data Table Statistics attribute group

The CICSplex File Control Data Table Statistics attribute group provides data for those files that are data tables.

Adds Failed for full Is 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.

Adds Loads Rejected Is the number of records CICS attempted to add to the table which were rejected by the global user exit.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Current Entries in Use Is the current number of data table entries in use.

Current Number of Entries Is the current number of data table entries.

Data Table Available Identifies whether the data table is recoverable.

Data Table Loaded Identifies whether the data table is loaded.

Data Table Recoverable Identifies whether the data table is recoverable.

Data Table Size Is the peak number of records present in the table.

Data Table Status Is the Open/Close status of a data table.

Data Table Type Is the type of a data table.

Failing Reads Is the number of failing reads.

File Name Is the name of the file.

Highest Number of Entries Is the peak number of records present in the table.

Loads Failed for full Is the number of data table loads that failed because the table already contained the maximum number of records specified.

Lost Records Indicates if records were lost or data table incomplete.

Max Entries Allowed in Use Is the maximum number of data table entries allowed in use.

Maximum Number of Entries Is the maximum number of data table entries.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Records Added Is the number of data table records added.

Records Loaded Is the number of data table records loaded.

Successful Deletes Is the number of successful deletes.

Successful Reads Is the number of successful reads.

Successful Updates Is the number of successful updates.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

CICSplex File Control Details attribute group

The CICSplex File Control Details attribute group retrieves information about VSAM, BDAM, and remote files. It includes the number of adds, browses, updates, and deletes for each file.

If this is a heavily used file and transactions accessing it are suffering from poor response time, select the record to obtain details for the disk device. If the total number of open DCBs suggests that contention can be a problem, or the device has a high percentage busy value, consider moving this data set to an alternate volume on a less busy channel.

Active Strings Is the current number of updates against the file.

Add Request Allowed Indicates whether a file add request allowed. These are the values:

Yes
New records can be added to the file.

No
New records cannot be added to the file.

Browse Request Allowed Indicates whether a file browse request allowed. These are the values:

Yes
You can browse the records in the file.

No
You cannot browse the records in the file.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Data set Available Indicates whether a BDAM data set or VSAM object is associated with the FILE definition. These are the values: Yes or No.

Data set Name Is the 44 character name defining the physical data set to the system.

You could have specified this in:

- 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
- By 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.

Delete Request Allowed Indicates whether a file delete request allowed. These are the values:

Yes
You can delete the records from the file.

No
You cannot delete the records from the file.

Enable Status Indicates whether application programs can access the file. These are the values:

n/a

Enabled
The file is available for use by transactions. If closed, it is opened on the first request.

Unenabled
The file is not available for use by transactions except for those that are currently using it. This status is the same as Disabled except that it occurs implicitly when a SET FILE CLOSE is requested. The file is enabled implicitly by a SET FILE OPEN command.

Disabled
The file is not available for use by transactions except for those that are currently using it.

Exclusive Control Allowed Returns a value identifying whether records on this file are to be placed under exclusive control when a read for update is issued (BDAM only). These are the values:

Yes
A record on this file is placed under exclusive control of the reading task when it is read for update.

No
A record on this file is not placed under exclusive control when it is read for update.

File Access Method Returns a value identifying the access method used with this data set. These are the values:

BDAM
The access method is direct.

NOTAPPLIC
The data set has not been opened by the CICS region in which the command is issued.

VSAM
The access method is VSAM. Access to a data table (except while it is being loaded or, for a CICS-maintained data table, when the source data set is being updated or searched for a record that is not in the table), is through CICS data table services. Because this access is still based on VSAM keys, CICS returns VSAM as the access method for any kind of data table.

Data Table
This files represents a data table.

Remote
The file is defined as remote, and therefore the access method is not known to the local CICS system.

File Attributes Specifies whether the file is to be accessed in RLS or non-RLS mode. The file must be closed, and either disabled or unenabled to change the access mode between RLS and non-RLS. If the access mode is non-RLS, the value is either LSR or NSR depending on the value specified for LSRPOOLID in the file resource definition.

File Block Size Indicates the length in bytes of a block. If the blocks are of variable length or are undefined, the value returned is the maximum.

File Disposition Indicates the value of the DISPOSITION option for the file. It is defined in the DISPOSITION option in the FILE definition. Values are OLD and SHARE.

File Format Indicates the type of data set that corresponds to this file. The data set must be open to return the type of data set. These are the values:

KSDS
The data set is a key-sequenced data set or the file refers to a data table.

ESDS
The data set is an entry-sequenced data set.

RRDS
The data set is a relative record data set.

Keyed
The data set is addressed by physical keys.

File Logical Record Length Indicates the actual size of fixed-length records, or the maximum size of variable-length records.

File Name Is the name of the file.

File Record Format Is the format of the records on the file. These are the values:

FB
The records are of fixed length.

U
The format of records on the file is undefined. The Undefined value is possible for BDAM data sets only.

VB
The records are of variable length. If the file is associated with a user-maintained data table, the record format is always variable length, even if the source data set contains fixed-length records.

File Relative Key Position Indicates the starting position of the key field in each record relative to the beginning of the record. The start is made at position 0. If there is no key, or if the file is not open, CICS returns a value of zero for the key position.

Key Request Allowed Indicates whether a file key request allowed. These are the values:

Yes
A file key request is allowed.

No
A file key request is not allowed.

Local File Key Length Indicates the length of the record key for a file associated with a VSAM KSDS or a file associated with a coupling facility data table. If the file is associated with a BDAM data set, the value is the length of the logical key used for deblocking.

If the file is closed and the key length is not defined in the file definition, the value returned is 0 (zero).

If the file is closed and a key length is defined on the file definition, CICS returns the value from the file definition.

If the file is open, most files get their key length from the associated data set, in which case CICS returns the value from the data set. However, files that refer to coupling facility data tables defined with LOAD(NO) must get their keylength from the file definition, in which case CICS returns the value from the file definitions for such files. This value must also match that of the coupling facility data table if it has already been created.

Number of Data Buffers 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 hierarchical file systems (HFS) files.

Number of Index Buffers 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 hierarchical file systems (HFS) files.

Number of Strings Is 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.

Open Status Indicates whether the file is open, closed, or in a transitional state. These are the values:

- Close
- CloseInProgress
- Notapplic
- Open
- OpenInProgress

Closing a file can require dynamic deallocation of data sets and deletion of shared resources. Close processing can last a significant length of time.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Read Request Allowed Indicates whether a file read request allowed. These are the values:

Yes
You can read the records in this file.

No
You cannot read the records in this file.

Read Update Request Allowed Indicates whether a file read or update request allowed. These are the values:

Yes
You can read or update the records in this file.

No
You cannot read or update the records in this file.

Remote File Key Length Indicates the length of the record key for a remote file associated with a VSAM KSDS or a file associated with a coupling facility data table. For more details, see Local File Key length.

Remote File Name Is the name by which the file is known in the CICS region named in the REMOTESYSTEM option of its FILE definition. Blanks are returned if the file is not remote.

Remote File Record Length Is the record length of the remote file.

Remote System Name Is the name of the CICS region in which the file is defined (from the REMOTESYSTEM value in the FILE definition). Blanks are returned if the file is not remote.

Resource Security Level Indicates whether the file is defined to be opened in RLS mode. These are the values:

n/a
The file is not eligible to be accessed in RLS mode because either it is a remote file, or it refers to a BDAM data set.

Public
The file refers to a data set defined to be accessed in non-RLS mode.

RLS
The file refers to a data set defined to be accessed in RLS mode.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Time File Opened Is the time of day that the file was opened.

Update Request Allowed Indicates whether a file update request allowed. These are the values:

Yes
You can update the records in this file.

No
You cannot update the records in this file.

CICSplex File Control Journal and Logging attribute group

The CICSplex File Control Journal and Logging attribute group reports the journaling and logging options of a given VSAM file as it is defined in the File Control Table.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

File Name Is the name of the file. It is an eight character alphanumeric string.

Journal Forward Recovery Indicates the journal that corresponds to the z/OS system logger log stream that is to be used for forward recovery. This attribute is ignored for coupling facility data tables and, if

there are any recovery attributes defined in the ICF catalog for a source data set associated with the table, these also are ignored. A CFDT is not forward recoverable.

Journal ID Is the number that identifies the journal that CICS can use for the forward recovery log. CICS journal names are of the form DFHJ**nn** where**nn** is in the range 1 through 99. The after images for forward recovery are written to the z/OS log stream that corresponds to journal name DFHJ**nn**.

Journal Logging Indicates if journal logging in effect. These are the values: Yes, No, and n/a (Not Applicable).

Journal Request Types Specifies the type of operations you want recorded on the journal nominated by the JOURNAL attribute. These are the values:

All
Journal all file activity with READ asynchronous and WRITE synchronous.

Read Only (RO)
Journal READ ONLY operations.

Read Update (RU)
Journal READ UPDATE operations.

Write New (WN)
Indicates WRITE ADD options.

Write Update (WU)
Indicates WRITE UPDATE options.

Synch Read (SYN)
Specifies synchronous journal operation for READ operations. The default is No.

Asynch Write (ASY)
Specifies asynchronous journal operation for WRITE operations. The default is Yes.

Journal Logging
Specifies whether you want automatic journaling for this file. The journaled data is in the format of the VSAM record and is used for user-controlled journaling. The default is No.

LOG Options Indicates the type of logging for this data set. These are the values:

None
No logs are created for this data set.

Undo
Allows forward recovery.

All
All files are logged.

Null
Undefined or not specified.

n/a

LOG Recovery Required Indicates that automatic log recovery has been defined. Values are Yes and No.

z/OS Logstream Name Is the name of the z/OS Logstream associated with this file.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

RLS in SIT Indicates whether RLS parameter was specified in the SIT or not. These are the values: Yes and No.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

CICSplex File Control Statistics attribute group

The CICSplex File Control Statistics attribute group collects 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. Note that these file statistics can have been reset during the day; to obtain a figure of total activity against a particular file during the day. Other data pertaining to file statistics and special processing conditions are also collected.

Active Strings Is the current number of updates against the file.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Current Buffer Waits The number of attempts made to append to this file while the buffers were logically full.

Current String Waits The number of attempts made to append to this file while there were no available strings.

Dataset Name Is the 44 character name defining the physical data set to the system. You can specify this attribute in the following instances:

- 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
- By 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.

Enable Status Specifies whether application programs can access the file. These are the values:

n/a

Enabled
The file is available for use by transactions. If closed, it is opened on the first request.

Unenabled
The file is not available for use by transactions except for those that are currently using it. This status is the same as Disabled except that it occurs implicitly when a SET FILE CLOSE is requested. The file is enabled implicitly by a SET FILE OPEN command.

Disabled
The file is not available for use by transactions except for those that are currently using it.

Access Method Returns a value identifying the access method used with this data set. These are the values:

- n/a
- VSAM
- BDAM
- DataTable
- VSAM/AIX
- Remote

File Attributes Specifies whether the file is to be accessed in RLS mode. The file must be closed, and either disabled or unenabled, to change the access mode to RLS access or to non-RLS access. The non-RLS mode becomes either LSR or NSR, depending on the value specified for LSRPOOLID in the file resource definition.

File Name Is the name of the file.

File Format Is the file format for this file.

Highest Buffer Waits 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.

Highest Tasks Waited on String Is the highest number of tasks waiting for a VSAM string (such as a file name or file ID).

Key Length The length of the key in the key-sequenced data set (KSDS) file.

Number of Adds Is the number of PUT requests attempted against this file.

Number of Browses Is the number of GETNEXT and GETPREV requests attempted against this file.

Number of Data Buffers Is the number of VSAM data buffers defined for this file.

Number of Deletes Is the number of DELETE requests attempted against this file.

Number of Index Buffers Is the number of VSAM index buffers defined for this file.

Number of Read for Updates 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.

Number of Reads Is the number of Read requests for this file.

Number of Strings Is the number of VSAM strings defined for this file.

Number of Updates Is the number of PUT UPDATE requests attempted against this file.

Open Status Returns a value identifying whether the file is open, closed, or in a transitional state. These are the valid values:

- Closed
- CloseInProgress
- Open
- OpenInProgress

Closing a file can require dynamic deallocation of data sets and deletion of shared resources. Close processing can last significant length of time.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Relative Key Position The relative position of the key in a key-sequenced data set (KSDS) file. The valid values are n/a or a number in the range 0-255. The n/a value is returned if the file is not open, or not a keyed data set.

Remote File APPLID The APPLID of the CICS region in which a remote file is defined. These are the valid values, the APPLID, n/a or Unknown. The value format is an alphanumeric string, with a maximum eight characters.

Remote File Name Is the name by which the file is known in the CICS region named in the REMOTESYSTEM option of its FILE definition. The n/a value is returned if the file is not remote.

Remote System Returns the name of the CICS region in which the file is defined (from the REMOTESYSTEM value in the FILE definition). The n/a value is returned if the file is not remote.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Time File Opened Is the time of day when the file was opened. This field contains a valid time, if the following situations occur:

- The file was open at the time the statistics were taken.
- This is an unsolicited statistics request because the file is being closed.

Total Buffer Waits Is the total number of buffer waits for this file.

Total RLS Timeouts 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.

Total String Waits Is the total number of string waits.

Total VSAM Requests Is the total number of VSAM requests. The format is a four-byte integer.

CICSplex File Control Summary attribute group

The CICSplex File Control Summary attribute group provides a summary of the key attributes related to files. Using this data you can, for example, monitor the number of active strings and compare them with the number of available strings.

Note: The attributes within the CICSplex File Control Summary group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

Active Strings Is the current number of updates against the file.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Enable Status Specifies whether application programs can access the file. These are the values:

DISABLED
The file is not available for use by transactions except for those that are currently using it. If there are any such users, 'BEING DISABLED' is also displayed. The file can be re-enabled by a SET FILE ENABLED command. It is not possible to disable a remote file.

ENABLED
The file is available for use by transactions and, if closed, it is opened on the first request.

UNENABLED
The file is not available for use by transactions except for those that are currently using it. If there are any such users, 'BEING CLOSED' is also displayed. This status is the same as DISABLED except that it occurs implicitly when a SET FILE CLOSE is requested. The file is enabled implicitly by a SET FILE OPEN command.

File Access Method Returns a value identifying the access method used with this data set. These are the values:

BDAM
The access method is BDAM.

NOTAPPLIC
The data set has not been opened by the CICS region in which the command is issued.

VSAM
The access method is VSAM. Access to a data table (except while it is being loaded or, for a CICS-maintained data table, when the source data set is being updated or searched for a record that is not

in the table), is through CICS data table services. Because this access is still based on VSAM keys, CICS returns VSAM as the access method for any kind of data table.

Data Table
This files represents a data table.

Remote
The file is defined as remote, and therefore the access method is not known to the local CICS system.

File Attributes Specifies whether the file is to be accessed in RLS mode. The file must be closed, and either disabled or unenabled, to change the access mode to RLS access or to non-RLS access. The non-RLS mode becomes either LSR or NSR, depending on the value specified for LSRPOOLID in the file resource definition.

File Name Is the name of the file.

File Record Format Is the format of the records on the file. These are the values:

FB
The records are of fixed length.

U
The format of records on the file is undefined. The Undefined value is possible for BDAM data sets only.

VB
The records are of variable length. If the file is associated with a user-maintained data table, the record format is always variable length, even if the source data set contains fixed-length records.

Number of String Waits Is the total number of waits for strings against the file.

Number of Strings Indicates the number of strings (concurrent operations) specified for the file in its FILE definition.

Open Status Returns a value identifying whether the file is open, closed, or in a transitional state. These are the values:

Close
The file is closed.

Close in progress
The file is in the process of being closed. Closing a file can require dynamic deallocation of data sets and deletion of shared resources, in which case close processing can last a significant length of time.

Notapplic
The OPENSTATUS value does not apply to this type of file. For example, it does not apply to a remote file.

Open
The file is open.

Open in progress
The file is in the process of being opened.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Remote System Returns the name of the CICS region in which the file is defined (from the REMOTESYSTEM value in the FILE definition). Blanks are returned if the file is not remote.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

CICSplex Global User Exits attribute group

The CICSplex Global User Exits attribute group returns details about Global User Exit Points, locations in a CICS module where control can be transferred to a user-written global user exit program.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string of up to eight characters. CICS region names are always in uppercase characters.

Entry Name Is the name of an exit associated with the exit point. This name is an alphanumeric string of up to eight characters.

Exit Name Is the identifier of an exit point. This name is an alphanumeric string of up to eight characters.

Exit Program Name Is the name of an exit program associated with the exit point. This name is an alphanumeric string of up to eight characters.

GWA Entry Name Is the exit that owns the global work area. This name is an alphanumeric string of up to eight characters.

GWA Length Is the length of the global work area for the exit. The valid value is an integer.

GWA Use Count Is the total number of user exits that are using the global work area owned by this exit. The valid value is an integer.

Number of Exits Is the number of global user exit points at which the exit is enabled. The valid value is an integer.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string of up to 32 characters and case-sensitive.

Program Concurrency Is the concurrency status indicator. The valid values are Quasirent and Threadsafe.

Program Status Indicates whether the exit is available for execution. The valid values are Started and Stopped.

System ID Indicates the four-character name that uniquely identifies an active z/OS system within a given CICSplex. The value format is an alphanumeric string of up to four characters. z/OS System IDs are always in uppercase characters.

CICSplex ICE Analysis attribute group

The CICSplex ICE Analysis attributes allows you to identify scheduled work in the system. You can analyze Interval Control Elements (ICE) problems, display a summary list of all ICEs in the system, display detailed information about a specific ICE, or request that an ICE be removed from the system.

Interval Control Elements (ICEs) represent tasks that CICS is scheduled to start after a specified time interval or at a certain time of day. Upon expiration of this interval, CICS starts the task or creates an AID, pending the availability of some resource.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Destination ID Is the name of the system at which the specified transaction is executed upon the expiration of this ICE.

Expiry Date and Time Is the date and time at which this ICE expires.

ICE Address Is the address, in CICS storage, of this ICE.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system,

the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Request ID is a value associated with this ICE at the time it was created. You can supply a request identifier in the REQID field of a START request. If a request identifier is not specified the field is blank.

Status Is the current status of the ICE. These are the valid values:

- ICE is a DWE
- Awaiting DS Resume
- Cancelled by other task
- Expired
- Awaiting expiration

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Terminal ID Is the name of the terminal specified on a START command. If a terminal was not specified the field is blank.

Transaction ID Is the name of the transaction to be executed on completion of this ICE.

Type The kind of ICE that is displayed. These are the valid values:

- TDP Scheduled
- ICP Scheduled
- IC Initialized
- BMS Scheduled
- ISC Scheduled
- Wait
- Post

User ID Is the user identifier under which the specified transaction is executed. If a user identifier is not supplied the field is blank.

Waiting Task Number Is the task number of the task which is waiting for this ICE to expire. If no task is waiting, this appears as blanks.

CICSplex ICE Summary attribute group

The CICSplex ICE Analysis attributes group allows you to identify a summary view of CICS Interval Control Element objects.

Interval Control Elements (ICEs) represent tasks that CICS is scheduled to start after a specified time interval or at a certain time of day. Upon expiration of this interval, CICS starts the task or creates an AID, pending the availability of some resource.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

ICEs Count The number of ICEs that have the same TranId value, the same TermId value, and the same CICSName.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system,

the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Terminal ID Is the four-character name of the terminal specified on a START command. If a terminal was not specified the field is blank.

Transaction ID Is the four-character name of the transaction to be executed on completion of this ICE.

CICSplex Intercommunication Summary attribute group

The CICSplex Intercommunication Summary attribute group provides information about the connection status of the CICS regions.

Note: The attributes within the CICSplex Intercommunication Summary group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CICS SYSIDNT Indicates four character CICS system ID assigned to the CICS region. The value format is an alphanumeric string, maximum four characters, that is case-sensitive. CICS system IDs are always in uppercase characters.

Connection Count Indicates the number of connections among this region and others. This value includes MRO and ISC connections. The value format is an integer of maximum four bytes.

CPU Utilization Indicates the percentage of CPU time consumed by the CICS address space. The value is a percentage in the range of 0-999. When specifying a fractional value, include a decimal point and either zero or one decimal place; for example, 5.2.

The accumulated CPU time for the CICS address space is noted at the beginning and end of a short elapsed-time interval. The difference between these two values is the amount of CPU consumed in the CICS address space during that interval; this difference is then represented as a percentage of the elapsed-time interval. Example: If the:

- Accumulated CPU time at the start of the time interval equals 2 seconds.
- Length of the interval equals 10 seconds.
- Accumulated CPU time at the end of the time interval equals 5 seconds
- CPU consumed during the 10-second time interval equals 5-2 seconds, which equals 3.

Then percent of CPU used during the time interval equals 3/10, or 30%.

A low-to-zero value indicates the absence of a workload or non dispatch by the z/OS system. A high-to-100% (or greater) value indicates a heavy workload or a potential loop in either the application or CICS code. If the workload is running on multiple CPUs, the CPU utilization can exceed 100%.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 characters, that is case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Transaction Rate Indicates the average number of transactions executed in one minute of elapsed time. The value format is an integer of maximum four bytes.

Example: If the statistics are collected every 10 minutes and the number of transactions during the last 10 minutes is 300, the average number of transactions per minute is 30.

VTAM Applid Indicates the eight character, VTAM applid of the CICS region. Each CICS region has a unique VTAM applid. The value format is an alphanumeric string, maximum eight characters, that is case-sensitive. The VTAM applid is always in uppercase characters.

VTAM Generic Applid Indicates the generic VTAM applid of the CICS region. Each CICS region has a unique VTAM applid. The value format is an alphanumeric string, maximum eight characters, that is case-sensitive. The generic VTAM applid is always in uppercase characters.

Worst Case ISC System Indicates the name of the connection with the highest percentage of ISC links in use. The value format is an alphanumeric string of maximum four characters.

Worst Case MRO System ID Indicates the name of the connection with the highest percentage of MRO links in use. The value format is an alphanumeric string of maximum four characters.

Worst ISC Connection Number of AIDs Indicates the number of AIDs for the worst case ISC system. The value format is an integer of maximum two bytes.

Worst ISC Connection Number of Links Defined Indicates the number of links defined for the worst case ISC system. The value format is an integer of maximum four bytes.

Worst ISC Connection Percent of Links in Use Indicates the percentage of ISC links in use for the worst case ISC system. The value format is a percentage in the range of 0-100.

Worst MRO Connection Number of AIDs Indicates the number of AIDs for the worst case MRO system ID. The value format is an integer of maximum four bytes.

Worst MRO Connection Number of Links Defined Indicates the number of links defined for the worst case MRO system ID. The value format is an integer of maximum two bytes.

Worst MRO Connection Percent of Links in Use Indicates the percentage of links in use for the worst case MRO system ID. The value format is a percentage in the range of 0-100.

CICSplex Internet Status attribute group

The CICSplex Internet Status attribute group provides information about the status of the Web interface and status of the CICS TCP/IP connection.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

TCP/IP Application Waiting Indicates whether or not the TCP/IP application is waiting. These are the values: Yes and No.

TCP/IP Exit Not Enabled Indicates whether or not the TCP/IP user exit is enabled. These are the values: Yes and No.

TCP/IP Listener Failed Indicates whether or not the TCP/IP listener failed. These are the values: Yes and No.

Web Interface Status Indicates the state of the Web interface. These are the values:

- n/a
- Disabled
- Enabled
- Enabling
- Immediate disable
- Normal disable
- Not installed
- Unknown

CICSplex IPConn Session Details attribute group

The CICSplex IPConn Sessions Details table enables you to look at the sessions that are available for a given IP connection, the transactions that are using those sessions, and determine what those transactions are waiting for.

Client CCSID Value The language's Coded Character Set Identifier for the client session.

Conversation State The next action on the session. Receive indicates that the task is waiting to receive data, whereas Send indicates the session is waiting for the local task to send data. Valid values are Receive, Send, and Sending.

Current Transaction Number The task number of the transaction using this session.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Read Timeout Value The length of time this session waits for the partner to respond.

Resource Name The name of the resource the transaction is waiting to access.

Resource Type The type of category for the resource that the transaction is waiting to use.

Session Connection Name Is the name of the IP Connection that this session uses for communication.

Session Current Tranid Is the transaction ID of the transaction currently using this session.

Session Error Code Is the current error code reported against this session.

Session Region Is the job name or modify ID of the CICS region being monitored.

Session Termid Is the terminal ID assigned to this session.

Session Type The type of session that is used for the IP connection. The send sessions can only be allocated from this region whereas receive sessions are for incoming requests. The valid values are, Send and Receive.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

CICSplex IPConnection Analysis attribute group

The CICSplex IP Connections Analysis table view helps you determine the current usage of the defined IP connections and evaluate if the definitions are sufficient to support the current workload without introducing unwanted bottlenecks.

Allocation Queue Limit The maximum number of requests that originate in this region that can be queued.

CICS Region Jobname Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CICS Region VTAM Applid Specific APPLID of the local CICS region.

CICS Region VTAM Generic Applid Generic APPLID of the local CICS region.

Connected System Network ID Network ID of the connected region.

Connected System VTAM Applid APPLID of the connected system.

Connection Name Is the defined name of this connection.

Connection Status Displays whether the connection is available for use (INService) and if communications have been established (ACQuired).

High Availability Indicates if this IP connection should connect to a High Availability cluster. These are the values: Yes or No.

Number of Receive Sessions Defined Is the number of sessions defined to receive a request.

Number of Receive Sessions In Use Is the number of receive sessions currently in use.

Number of Send Sessions Defined Is the total number of send sessions that are currently defined and can be allocated from this region.

Number of Send Sessions In Use Is the number of send sessions currently in use that were allocated from this region.

Number of Sessions Defined Is the total number of sessions that are defined.

Number of Sessions In Use Is the total number of sessions that are currently active.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Partner IP Address IP Address of the Partner connection.

Partner Port Number Port number of the Partner connection.

Partner Host Name Host name of the Partner connection.

Percent of Receive Sessions In Use Percentage of available sessions that can receive a request that are currently in use.

Percent of Send Sessions In Use Percentage of available sessions for allocation within this region that are currently in use.

Percent of Sessions In Use Is the percentage of available sessions that are currently active.

Receive Session Allocate Count Is the number of received session allocations since the statistics were reset.

Receive Session Allocation Rate Is the number of receive session allocations per minute.

Send Session Allocate Count Is the number of send session allocations since the statistics were reset.

Send Session Allocation Rate Is the number of send session allocations per minute.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Tasks Queued to this Connected System Is the number of tasks that are queued waiting for a session.

TCPIP Service Name Is the name of the TCP/IP service that receives requests for this connection.

CICSplex Java Program Analysis attribute group

The CICSplex Java Program Analysis attributes report data about Java program installed in your CICS systems. Use this data to determine the characteristics that have been defined for a particular Java program.

CEDF Status Indicates the action taken by the execution diagnostic facility (EDF) transaction. It returns a value indicating the action taken by the execution diagnostic facility (EDF) transaction if this module is executed under EDF. These are the values:

CEDF
Diagnostic screens are displayed. If the program was translated with the EDF option, all EDF screens are displayed; if it was translated with NOEDF, only the program initiation and termination screens display.

NOCEDF
No EDF screens are displayed.

NOTAPPLIC
EDF is not applicable because the module is a remote program, a map set, or a partition set.

CICS Region Name Is the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Datalocation Indicates whether this module can accept data addresses higher than 16 MB. These are the values:

ANY
The program can accept an address higher than 16 MB.

BELOW
The program requires any data address returned to it from CICS to be less than 16 MB.

NOTAPPLIC
The option is not applicable because the module is a remote program, a map set, or a partition set.

Dynamic Status Indicates whether the program can be dynamically routed or not. It returns a value indicating whether, if the program is the subject of a program-link request, the request can be dynamically routed. These are the values:

DYNAMIC
If the program is the subject of a program-link request, the CICS dynamic routing program is invoked. Providing that a remote server region is not named explicitly on the SYSID option of the LINK command, the routing program can route the request to the region on which the program is to execute.

NOTDYNAMIC
If the program is the subject of a program-link request, the dynamic routing program is not invoked. For a distributed program link (DPL) request, the server region on which the program is to execute

must be specified explicitly on the REMOTESYSTEM option of the PROGRAM definition or on the SYSID option of the LINK command; otherwise it defaults to the local region.

Execution Key Is the execution key of the program. It returns a value indicating the storage key of the module, if it is an executable program. The storage key can limit the areas of storage that the program can access, depending on other variables. These are the values:

CICSEXECKEY
The program executes in CICS key.

NOTAPPLIC
The module is a remote program, a map set, or a partition set.

USEREXECKEY
The program executes in user key.

Execution Set Is the set of CICS API commands the program can execute. It returns a value indicating 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. When it is invoked remotely, that is, executing at or under the level of a program invoked by a distributed program link, a program is always restricted to this subset. These are the values:

DPLSUBSET
The program is always restricted.

FULLAPI
The program is not restricted unless invoked remotely.

NOTAPPLIC
EXECUTIONSET does not apply because the module is a remote program, a map set, or a partition set.

JVM Class Is the name, up to 255 characters, of any class specified in the program definition.

JVM Profile Is the name of the JVM profile associated with the program. It is the eight character name of the JVM profile, as used in a program definition. When you use the name of a JVM profile anywhere in CICS, you must enter it using the same combination of uppercase and lowercase characters present in the HFS file name.

Origin Node The combination of the z/OS System ID (SMFID) and the CICS region name. The value format is an alphanumeric string, maximum 32 bytes and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Program Is the name of the JVM program. it is an alphanumeric string with a maximum of eight characters.

Remote Program Name Is the name by which the program is known in the remote system. It is an eight character name by which the module is known in the CICS region named in the REMOTESYSTEM option of its PROGRAM definition. REMOTENAME applies only to programs, and only to those defined to be remote; for local programs, the value returned is blanks.

Remote System Is the name of the CICS region in which the module is defined. It is the four-character name of the CICS region in which the module is defined (from the REMOTESYSTEM value in the PROGRAM definition). It applies only to programs, and only to those defined to be remote; for local programs, the value returned is blanks.

Status Is the program status. It returns a value indicating whether the module is available for use. These are the values:

DISABLED
The module is not available for use.

ENABLED
The module is available for use.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Times Used Is the number of times the program has been executed. It returns a fullword binary field giving the total number of times the module has been used since the start of the current CICS session. A value of -1 is returned if the program is remote, or a JVM program.

Transaction ID Is the four character name of the transaction under which this module, which must be a program, executes remotely (that is, the transaction identifier that the remote region assigns to the task it creates when a task in the local region LINKs to it). This value comes from the TRANSID option value in the PROGRAM definition and applies only to programs defined as remote; for local programs, and when no TRANSID is specified for a remote program, the value returned is blanks.

CICSplex Journal Analysis attribute group

The CICSplex Journal Analysis attribute group provides information about the system log and the general logs. It includes all of the statistics and failure codes currently offered by the OMEGAMON for CICS (3270) interface.

Average Bytes Written The average number of bytes written to this journal per request. If the journal is a System Log, this field contains the n/a value; the statistics for System Logs are kept with their associated Log Stream.

Buffer Flushes The number of buffer flush requests issued for this journal. If the journal is a System Log, this field contains the n/a value; the statistics for System Logs are kept with their associated Log Stream.

Bytes Written The number of bytes written to this journal. If the journal is a System Log, this field contains the n/a value; the statistics for System Logs are kept with their associated Log Stream.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Failure Reason Provides the reason behind a log stream error when the Journal Status column indicates the journal has failed. These are the values:

- System log conflict
- Journal has failed
- Error opening log
- Unable to create
- n/a

Journal Name Indicates the eight character name of the CICS journal. The value format is an alphanumeric string of maximum eight characters.

Journal Status Indicates the connection status of the journal. These are the values:

Ena Conn
Journal is enabled and connected. It is mapped onto a z/OS log stream. Only user journals can have this status.

Ena Disc
Journal is enabled but disconnected. It is no longer mapped onto a z/OS log stream. DFHLOG, DFHSHUNT, file control forward recovery logs, and auto journals typically display with the Enabled Disconnected status, even if the stream name is in use.

Failed
Journal has experienced a log stream failure. It cannot be used until it is re-enabled.

Unknown
The status of the journal cannot be determined.

Disabled
Journal has been disabled. It cannot be used until it is re-enabled.

Journal Type Indicates the type of journal. These are the values:

Dummy
No log records are written to a z/OS log stream.

MVS
Journal records are written to a z/OS log stream.

SMF
Journal records are written in SMF format to the z/OS SMF log. Note that the SMF type is not used for the CICS system log or for forward recovery logs.

Unknown
The type of journal cannot be determined.

MVS Log Stream Name The name of the z/OS log stream to which the journal is mapped. The value format is an alphanumeric string of maximum 26 characters.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Statistics Last Reset Indicates the last time that journal statistics were reset, possibly because of interval statistics collection. If the journal is a System Log, this field contains the n/a value; the statistics for System Logs are kept with their associated Log Stream.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

System Log Indicates whether the journal is a system log. There can be only one system log in each CICS region. These are the values: Yes or No.

WTOR Wait Indicates whether or not the journal has a current status of Waiting for an Outstanding WTOR (Write-To-Operator-with-Reply). When a journal becomes full, a WTOR is sent to the system console, and the journal's status is set to waiting for an outstanding WTOR if the Switch option is set to Pause in the journal control table (JCT). In this case, respond immediately to the WTOR to confirm that an existing journal can be reused and overwritten because CICS transactions using a journal with this status cannot continue until the WTOR is resolved. This attribute only applies to CICS version 4 and earlier. These are the valid values: Yes or No.

Write Requests The number of write requests for this journal. If the journal is a System Log, this field contains the n/a value; the statistics for System Logs are kept with their associated Log Stream.

CICSplex JVM Analysis attribute group

The CICSplex JVM Analysis attributes report the characteristics of all the JVMs in your CICS regions. Use this data to monitor the age of a JVM, classcache, phasingout, and reuse status of your JVMs.

Age Is the number of seconds since the JVM was initialized.

Allocated Age Is the number of seconds the JVM has been allocated to a task. It returns a fullword binary value giving the number of seconds for which the JVM has been allocated to its task, or zero if the JVM is not currently allocated to a task.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Classcache status Indicates whether the JVM is a worker JVM or not. It returns a value indicating whether the JVM is a worker JVM dependent on the shared class cache. These are the values:

CLASSCACHE
The JVM profile for this JVM specified the use of the shared class cache.

NOCLASSCACHE
The JVM profile for this JVM did not specify the use of the shared class cache

Execution Key Is the execution key that the JVM is running in. It returns a value indicating the EXECKEY of the JVM. These are the values:

CICSEXECKEY
The program executes in CICS key.

USEREXECKEY
The program executes in user key.

Origin Node Is the combination of the z/OS System ID (SMFID) and the CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

Phasingout status Indicates if the JVM is being phased out. It returns a value indicating whether the JVM is being phased out as a result of an EXEC CICS SET JVMPOOL TERMINATE or EXEC CICS PERFORM CLASSCACHE TERMINATE command (or the equivalent CEMT commands). These are the values:

PHASEOUT
The JVM is being phased out.

NOPHASEOUT
The JVM is not being phased out. It is available for allocation, or is available for allocation when the current allocation is ended.

PROFILE Is the eight character name of the JVM profile used to initialize this JVM.

Reuse Status Is the level of reusability of this JVM. It returns a value indicating the level of reusability for this JVM. These are the values:

RESET
The JVM profile for this JVM specified that can be reset (or in the case of a worker JVM, the JVM profile for the main JVM specified that the main and worker JVMs are resettable).

REUSE
The JVM profile for this JVM specified that it is continuous (or in the case of a worker JVM, the JVM profile for the main JVM specified that the main and worker JVMs are continuous).

NOREUSE
The JVM profile for this JVM specified that it is single-use.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Task Is the task associated with the JVM. It returns a four byte packed decimal value giving the task to which the JVM is allocated, or zero if the JVM is not currently allocated to a task.

Task Number The character view of the task number associated with the JVM.

Token Returns the JVM token, a fullword binary value that identifies the JVM.

CICSplex JVM Classcache Details attribute group

The CICSplex JVM Classcache Details attributes report information about the size, amount of free space, date and time when it was started, and related profile name for the given class cache.

Autostart Indicates the current status of autostart for the shared class cache. These are the values:

ENABLED
The shared class cache is started as soon as CICS receives a request to run a Java application in a JVM whose profile requires the use of the shared class cache.

DISABLED
An explicit EXEC CICS PERFORM CLASSCACHE INITIALIZE(START) command (or the equivalent CEMT command) is required to start the shared class cache. If the status of the shared class cache is STOPPED and autostart is disabled, and CICS receives a request to run a Java application in a JVM whose profile requires the use of the shared class cache, the request fails.

Cache Free Indicates the free space in the shared class cache, in kilobytes.

Cache Size Indicates the size of the cache in kilobytes.

CICS Region Name Indicates the job name or modify ID of theCICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Number of old caches Indicates the number of old caches that are still present in the region because they are waiting for worker JVMs that are dependent on them to be phased out. If the status of the current shared class cache is STOPPED, and worker JVMs are still dependent on it, then that shared class cache is included in the number of old shared class caches.

Origin Node Is the combination of the z/OS System ID (SMFID) and the CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Phasing Out Indicates the number of JVMs that are phasing out. This is the number of working JVMs that are dependent on an old shared class cache and are being phased out. If the status of the current shared class cache is STOPPED, then any worker JVMs that are still dependent on it are included in the number of worker JVMs being phased out.

Profile Indicates the name of the JVM profile used for the main JVM. The name of the JVM profile that is to be used to start the main JVM. If the main JVM is in use, this is the name of the JVM profile for that main JVM.

Reuse Status Indicates the reuse status of the main JVM. These are the valid values: RESET, REUSE, or UNKNOWN. The RESET value indicates that the JVMs can be reused after they have been reset. The REUSE value indicates that the JVMs can be reused without being reset. The UNKNOWN value indicates that the class cache has not been started.

Start Date Indicates the date when the current class cache was started. This is an alphanumeric string, with a maximum of 10 characters.

Start Time Indicates the time when the current class cache was started. This is an alphanumeric string, with a maximum of eight characters.

Start Time and Date Indicateds the time and date when the current shared class cache was started.

Status Indicates the current status of the shared class cache. These are the values:

STARTING
The shared class cache is being initialized. If autostart is enabled, the shared class cache is starting either because CICS received a request to run a Java application in a JVM whose profile requires the use of the shared class cache, or because an explicit `EXEC CICS PERFORM CLASSCACHE INITIALIZE(START)` command (or the equivalent CEMT command) was issued. If autostart is disabled, the shared class cache is starting because an explicit `EXEC CICS PERFORM CLASSCACHE INITIALIZE(START)` command (or the equivalent CEMT command) was issued. Worker JVMs that require the use of the shared class cache must wait until the startup process is complete and the shared class cache is ready. If initialization of the shared class cache is unsuccessful, any waiting requests for worker JVMs fail.

STARTED
The shared class cache is ready, and it can be used by worker JVMs.

RELOADING
An `EXEC CICS PERFORM CLASSCACHE INITIALIZE(RELOAD)` command (or the equivalent CEMT command) has been issued, and a new shared class cache is being loaded to replace the existing shared class cache. Worker JVMs, both those that were already allocated to tasks and those that were allocated to tasks after the command was issued, continue to use the existing shared class cache until the new shared class cache is ready.

STOPPED
The shared class cache has either not been initialized on this CICS execution, or it has been stopped by an `EXEC CICS PERFORM CLASSCACHE TERMINATE` command or an `EXEC CICS SET JVMPOOL TERMINATE` command (or the equivalent CEMT commands). If autostart is disabled, requests to run a Java application in a JVM whose profile requires the use of the shared class cache (that is, requests for worker JVMs) fails. If autostart is enabled, a new shared class cache is initialized as soon as CICS receives a request to run a Java application in a JVM whose profile requires the use of the shared class cache.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Total JVMs Indicates the number of working JVMs in the CICS region that are dependent on the shared class cache.

CICSplex JVMPOOL Statistics attribute group

The CICSplex JVMPOOL Statistics attribute group returns statistics for the JVM pool, if one exists. (There is no identifier on JVMPOOL: a CICS region can have only one JVM pool.) CICS returns the address of the area of storage that contains the requested statistics. These statistics can be accessed online using the EXEC CICS COLLECT STATISTICS JVMPOOL command, and are mapped by the DFHSJGDS DSECT.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Current Classcache JVMs Is the number of JVMs currently in the pool that use the shared class cache. JVMs use the shared class cache if they were created using JVM profiles that specify CLASSCACHE=YES. This count includes both worker JVMs that are in use by a Java program, and worker JVMs that are awaiting reuse.

Current JVM Count Is the current number of JVMs.

JVM Requests for Class Cache JVMs Is the total number of Java programs that requested a JVM that uses the shared class cache.

JVMs Requests with JVM Initialized Is the number of JVM program requests where the JVM was initialized.

JVMs Requests with JVM Mismatch Is the number of JVM program requests that require a reset or continuous JVM, but for which there was no JVM already initialized with the same JVM profile.

JVMs Requests with JVM Reset Is the number of requests to run a program in a reset JVM.

JVMs Requests with JVM Reuse Is the number of requests to run a program in a continuous JVM.

JVMs Requests with JVM Terminated Is the number of JVMs that have been terminated.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system,

the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Peak Classcache JVMs Is the peak number of JVMs in the JVM pool that used the shared class cache.

Peak JVM Count Is the peak number of JVMs.

System ID Is the four-character name that uniquely identifies an active CICS z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Total JVM Requests Is the total number of JVM program requests.

CICSplex JVMProfile Analysis attribute group

The CICSplex JVMProfile Analysis attributes report the full path name of the HFS file that contains a JVM profile, and indicates whether or not a JVM with this profile uses the shared class cache. It returns only JVM profiles that have been used during the lifetime of this CICS region, for those JVMs that can run applications. It does not report either JVM profiles that have not been used or JVM profiles that have been used only for the main JVM that initializes the shared class cache.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Classcache Status Indicates whether JVMs that use this JVM profile are worker JVMs dependent on the shared class cache. These are the values:

CLASSCACHE
Indicates that the JVM profile specifies the use of the shared class cache.

NOCLASSCACHE
Indicates that the JVM profile does not specify the use of the shared class cache.

HFS file Is the full path name of the HFS file for the JVM profile.

JVM Profile Is the eight character name of the JVM profile, as used in a program definition. When you use the name of a JVM profile anywhere in CICS, you must enter it using the same combination of uppercase and lowercase characters present in the HFS file name.

Origin Node Is the combination of the z/OS System ID (SMFID) and the CICS region name. The value format is an alphanumeric string, maximum 32 bytes and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Reuse Status Is the level of reusability for JVMs that are created using this JVM profile. It returns a value indicating the level of reusability for JVMs that are created using this JVM profile. These are the values:

RESET
JVMs with this JVM profile can be reset.

REUSE
JVMs with this JVM profile are continuous.

NOREUSE
JVMs with this JVM profile are single-use.

System ID Is the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

CICSplex JVM Server Analysis attribute group

The CICSplex JVM Server Analysis attribute group reports on all the details that represent the CICS JVM server runtime environment.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Current Threads The current number of threads that are attached to T8 TCBs in the JVM server. This value is an integer.

Current Thread Waits The current number of threads that are waiting for a free T8 TCB to attach a thread. This value is an integer.

JVM Profile The eight character name of the JVM Profile that was used to initialize the JVM Server.

JVM Server Name Is the name of the JVM Server. This name is an alphanumeric string, with a maximum of eight characters.

JVM Server Status Is the current status of the JVM Server. These are the valid values:

- ENABLED 1
- ENABLING 2
- DISABLED 3
- DISABLING 4
- DISCARDING 5

Maximum Threads in Use The peak number of threads that were attached using T8 TCBs in the JVM server. This value is an integer.

Maximum Thread Waits The peak number of tasks that waited for a free T8 TCB to attach a thread. This value is an integer.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region.

Runtime Options The name of the Language Environment runtime options program that is specified on the JVMSERVER resource. The runtime option name is an alphanumeric string, with a maximum of eight characters.

System ID Is the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Thread Limit The maximum number of threads that can be attached using a T8 TCB in the JVM server. This value is an integer.

Thread Waits The number of tasks that waited for a free T8 TCB to attach a thread. This value is an integer.

Thread Wait Time The total amount of time that tasks waited for a free T8 TCB to attach a thread. This value is an integer.

CICSplex Link Analysis attribute group

The CICSplex Link Analysis attributes provide details on one or more links in a selected intersystem communication (ISC) or multiregion operation (MRO) connection. Use the CICSplex Link Analysis attributes to monitor the following conditions:

- Condition and numbers of transactions and transmissions.
- Link storage violations.

Note: These attributes are not available for situations. They provide data only for the Link Summary table view.

Count of Link Inputs Indicates the number of input requests on this link. The value format is a positive integer, a maximum of four bytes.

Count of Link Outputs Indicates the number of output requests on this link. The value format is a positive integer, a maximum of four bytes.

Count of Link Storage Violations Indicates the number of storage violations associated with this link. The value format is a positive integer, a maximum of four bytes.

Count of Link Transaction Errors Indicates the number of transaction errors on this link. The value format is a positive integer, a maximum of two bytes.

Count of Link Transactions Indicates the number of transactions run on this link. The value format is a positive integer, a maximum of four bytes.

Count of Link Transmission Errors Indicates the number transmission errors on this link. The value format is a positive integer, a maximum of two bytes.

Current Transaction Number Indicates the number of the transaction currently executing on this link. The value format is an alphanumeric string, a maximum of five characters.

Link Connection Name Indicates the name of the connection that owns this link session. The value format is an alphanumeric string, a maximum of four characters.

Link Current Tranid Indicates the name of the currently executing transaction. The value format is an alphanumeric string, a maximum of four characters.

Link Netname Indicates the name of the VTAM applid to which this link is or will be connected. The value format is an alphanumeric string, a maximum of eight characters.

Link Next Tranid Indicates the name of the next scheduled transaction on this link. The value format is an alphanumeric string, a maximum of four characters.

Link Region Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Link Session Status Indicates the status of the link. These are the valid values for ISC connections:

INS
In service

OUT
Out of service

For MRO connections, the valid values are:

REL_OUT
Released, out of service

REL_INS
Released, in service

SIMLOGON
CICS issues a VTAM logon request to start a session with a device, and the request has not completed

ACQ_OUT
Acquired, out of service

OBT_INS
Connection is being obtained

FRE_INS
Connection is being freed

AVA_INS
Acquired, no sessions bound

PENDING
The named connection is not yet available. The remote scheduler has not yet completed processing

Link System ID Indicates the SMF identifier that uniquely identifies an active z/OS operating system. The valid format is an alphanumeric string, with a maximum of four characters.

Link Termid Indicates the name, from the TCTTE, of this link. The value format is an alphanumeric string, a maximum of four characters.

Origin Node Is the combination of the z/OS System ID (SMFID) and the CICS region name. The value format is an alphanumeric string, maximum 32 bytes and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Resource Name The name of the resource the transaction is waiting to access. This name is an alphanumeric string, with a maximum of eight characters.

Resource Type The category of resource the transaction is waiting to access. This name is an alphanumeric string, with a maximum of eight characters.

CICSplex Log Stream Analysis attribute group

The CICSplex Log Stream Analysis attributes report on the configuration and performance data for every z/OS log stream that is connected to CICS. Use the CICSplex Log Stream Analysis attributes in situations to quickly analyze the performance of any connected log stream. These attributes provide data for the Log Stream Analysis table view.

Note: The attributes within the CICSplex Log Stream Analysis group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

Auto Delete The log auto delete indicator. If set to Yes, the z/OS Logger automatically deletes the data as it matures beyond the retention period, irrespective of any log stream delete calls. If set to No, the data is only deleted when a log stream delete call is issued and the data has matured beyond the retention period. These are the valid values: Yes and No.

Average Bytes Written The average number of bytes written to this log stream per request. The value format is an integer.

Browse Reads The number of browse read requests issued for this log stream. If the log stream is not part of the System Log, this field contains the value **n/a**, as it cannot be browsed. The value format is an integer.

Browse Starts The number of browse start requests issued for this log stream. If the log stream is not part of the System Log, this field contains the value **n/a**, as it cannot be browsed. The value format is an integer.

Buffer Appends The number of occasions on which a journal record was successfully appended to the current log stream buffer. The value format is an integer.

Buffer Full Waits The number of times buffer full has occurred for this log stream. The value format is an integer.

Bytes Written The number of bytes written to this log stream. The value format is an integer.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Current Waiters The current number of force waiters for this log stream. The value format is an integer.

DASD Only 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). The value format is an integer.

Force Waits The total number of force waits for this log stream. The value format is an integer.

z/OS Log Stream Name The name of the log stream. The value format is an alphanumeric string, with a maximum of 26 characters.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Max Block Length The maximum block size allowed by the z/OS System Logger for the log stream. The value format is an integer.

Peak Waiters The peak number of force waiters for this log stream. The value format is an integer.

Retention Period The log stream retention period (in days) that data must be kept before it is physically deleted by the z/OS Logger. The value format is an integer.

Retry Errors The number of requests to the z/OS System Logger that resulted in a return code indicating an error that was subsequently retried when data was being written to the log stream. The value format is an integer.

Statistics Last Reset Indicates the last time that log stream statistics were reset, possibly because of interval statistics collection. The value format is an integer.

Stream Deletes The number of delete (IXGDELET) requests issued for this log stream. If the log stream is not part of the System Log, this field contains the n/a value, as it cannot be deleted. The value format is an integer.

Stream Status The current status of the log stream. These are the valid values: Failed and OK.

Structure Name The coupling facility (CF) structure name for the log stream. The structure name is only applicable to coupling facility type log streams. The value format is an alphanumeric string, with a maximum of 16 characters.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

System Log Indicates whether the log stream forms part of the System Log. These are the valid values: Yes and No.

Use Count The current use count of the log stream. The value format is an integer.

Write Requests The number of IXGWRITE requests issued to this log stream. The value format is an integer.

CICSplex LSR Pool Details attribute group

The CICSplex LSR Pool Details attribute group provides information about a specific Local Shared Resource (LSR) pool that has been built in CICS for VSAM files and their impact on performance.

Note: The attributes within the CICSplex LSR Pool Details group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Buffer Number The number of buffers used by the local shared resource pool. The value format is an integer of maximum four bytes.

Buffer Reads The number of buffer reads, which is number of times a control interval has to be read from disk. The value format is an integer of maximum four bytes.

Buffer Reads 8 The number of buffer reads, which is number of times a control interval has to be read from disk. The value format is an integer of maximum eight bytes.

Buffer Size The local shared resource pool buffer size. The value format is an integer of maximum two bytes.

Buffer Type The type of hiperspace buffer, whether index or data, that is in use. Valid values: Data=D, Index=I

Buffer Writes The number of buffer WRITEs for the logical shared resource pool. The value format is an integer of maximum four bytes.

Hiperspace Buffers The number of hiperspace buffers used for the logical shared resource pool. The value format is an integer of maximum four bytes.

Hiperspace Reads Failed The number of hiperspace buffer reads that failed for the logical shared resource pool. The value format is an integer of maximum four bytes.

Hiperspace Writes Failed The number of hiperspace buffer WRITE requests that failed for the logical shared resource pool. The value format is an integer of maximum four bytes.

Lookaside Hits The number of look-aside hits, successful 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 Control Intervals. The value format is an integer of maximum four bytes.

Lookaside Hits 8 The number of look-aside hits, successful 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 Control Intervals. The value format is an integer of maximum eight bytes.

Lookaside Ratio Indicates the percentage of VSAM read requests that were satisfied without initiating I/O because the Control Interval (CI) was already resident in the buffer pool. The value format is a percentage in the range of 0-100.

Non User Buffer Writes The number of non user buffer WRITEs for the logical shared resource pool. The value format is an integer of maximum four bytes.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

This value is computed by dividing the number of active strings by the total number of strings.

Pool ID Identifies the LSR pool. The value format is an integer of maximum two bytes.

Successful Hiperspace Reads The number of successful hiperspace buffer reads used for the logical shared resource pool. The value format is an integer of maximum four bytes.

Successful Hiperspace Writes The number of successful hiperspace buffer WRITE requests used for the logical shared resource pool. The value format is an integer of maximum four bytes.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

CICSplex LSR Pool Status attribute group

The CICSplex LSR Pool Status attribute group provides information about the Local Shared Resource (LSR) pools that have been built in CICS for VSAM files and their impact on performance.

Note: The attributes within the CICSplex LSR Pool Status group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

Active Strings The number of currently active strings within the LSR pool. The value format is an integer of maximum four bytes.

Active Strings HWM The highest number of concurrently active strings within the LSR pool. The value format is an integer of maximum four bytes.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Create Time The time the LSR pool was created in the CICS region.

Delete Time The time the LSR pool was deleted from the CICS region.

Hiperspace Buffers The indicator of whether hiperspace buffers are being used in the CICS region. The values are Yes or No.

Lookaside Hits The number of successful 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 Control Intervals. The value format is an integer of maximum four bytes.

Lookaside Hits 8 The number of successful 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 Control Intervals. The value format is an integer of maximum eight bytes.

Lookaside Ratio Indicates the percentage of VSAM read requests that were satisfied without initiating I/O because the Control Interval (CI) was already resident in the buffer pool. The value format is a percentage in the range of 0-100.

Maximum Key Length The length of the largest key of a VSAM data set which might use this LSR pool. The value format is an integer of maximum two bytes. The range can be 0 - 255.

Open ACBs The number of open application control blocks in the CICS region. The value format is an integer of maximum four bytes.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Percent of Active Strings Indicates the percentage of strings that are currently active. The value format is a percentage in the range of 0-100.

This value is computed by dividing the number of active strings by the total number of strings.

Pool ID Identifies the LSR pool with an integer value of maximum two bytes in the 1 to 255 range.

Pool Location The location of the application control blocks and buffers.

Pool Status Indicates the status of the LSR pool. These are the values:

- Created
- Deleted
- Not built

Pool Type Indicates the type of subsystem using the LSR pool. The value is CICS.

Source of CI Size The source either computed or defined, of the control interval size for the buffer pool. The D (defined) value states that the control interval size is explicitly specified in the LSR Pool definition. The C (computed) value states that the source for the control interval size is computed by CICS.

Source of String Number The source either computed or defined, for the number of strings in the LSR pool. The D (defined) value states that the source of the number of strings is explicitly specified in the LSR

Pool definition. The C (computed) value states that the source for the number of strings is computed by CICS.

String Wait HWM The peak number of tasks concurrently waiting for strings against the file. The value format is an integer of maximum four bytes.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Tasks Waiting Indicates the number of current string waits in the system. The value format is an integer of maximum four bytes.

Total Buffers The total number of buffers. The value format is an integer of maximum four bytes.

Total Reads The total number of buffer reads, which is number of times a Control Interval has to be read from disk. Increasing the buffer allocation decreases this activity. The value format is an integer of maximum four bytes.

Total Reads 8 The total number of buffer reads, which is number of times a Control Interval has to be read from disk. Increasing the buffer allocation decreases this activity. The value format is an integer of maximum eight bytes.

Total Strings The total number of strings. The value format is an integer of maximum four bytes.

Total String Waits The total number of requests that were queued because all the strings within this LSR pool were in use. The value format is an integer of maximum four bytes

Total Writes The number of buffer WRITEs to the temporary storage data set. This includes both WRITEs necessitated by recovery requirements and WRITEs forced by the buffer being needed to accommodate another Control Interval. The value format is an integer of maximum four bytes.

CICSplex MQ Connection Details attribute group

The CICSplex MQ Connection Details attributes help identify problems across CICS regions and z/OS images that the CICSplex spans. Use the CICSplex MQ Connection Details attributes in situations to monitor message queuing (MQ) services. These attributes provide data for the Message Queuing Analysis table view.

Adapter Status Indicates the status of the CICS MQ adapter. These are the valid values: Active, Inactive, Unknown, and Not installed.

The CICS MQ adapter provides access to CICS WebSphere MQ for CICS applications, and also provides control functions that initiate and manage connections. Control functions are accessed through the CKQC transaction, or from application programs using EXEC CICS LINK.

API Calls Indicates the number of API calls logged for this MQ connection. The value format is a positive integer, maximum four characters.

Backout Requests Indicates the number of MQ calls that resulted in a backout. An application issues a backout request if it encounters an error during a series of puts or gets. The value format is a positive integer, maximum four characters.

Busy TCBs Indicates the number of busy CICS MQ task control blocks (TCBs) that are in use for this MQ connection. The value format is an integer, maximum four characters, and in the range 0-50.

CICS Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Commit Requests Indicates the number of calls issued to commit operations for MQ resources. The value format is a positive integer, maximum four characters.

Connection Status Indicates the status of the connection for MQ services. These are the values:

- Connected

- Connecting
- Force
- Inactive
- Invalid
- Not Installed
- Pending
- Quiescing
- Shutdown
- Unsupported

Inflight Tasks Indicates the number of CICS MQ tasks that are currently in the process of being completed for this MQ connection. The value format is a positive integer, maximum four characters.

Miscellaneous Requests Indicates the number of special or undocumented calls for MQ resources. The value format is a positive integer, maximum four characters.

MQClose Requests Indicates the number of MQClose calls applications issued to close the queue. The value format is a positive integer, maximum four characters, and in the range 0 to no limit.

MQGet Requests Indicates the number of MQGet calls applications issued for getting messages from the queue. The value format is a positive integer, maximum four characters.

MQInq Requests Indicates the number of MQInq calls applications issued to determine the attributes of a queue. The value format is a positive integer, maximum four characters.

MQOpen Requests Indicates the number of MQOpen calls applications issued to open the queue. The value format is a positive integer, maximum four characters.

MQPut Requests Indicates the number of MQPut calls applications issued for putting messages on the queue. The value format is a positive integer, maximum four characters.

MQPut1 Requests Indicates the number of MQPut1 calls issued by the server application. The value format is a positive integer, maximum four characters.

MQSet Requests Indicates the number of MQSet calls applications issued to a queue. The MQSet command enables an application to change some attributes of a queue. The value format is a positive integer, maximum four characters.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Queue Manager Name Indicates the four character name assigned to the CICS WebSphere MQ queue manager for message queuing services. The value format is an alphanumeric string, maximum four characters, and case-sensitive.

Run OK Count Indicates the number of MQ calls that have been successfully completed. The value format is a positive integer, maximum four characters.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

VTAM Applid Indicates the eight character name that specifies the VTAM applid of the CICS region.

CICSplex MVS TCB Global Details attribute group

The CICSplex MVS TCB Global Details attribute group reports on data related to start time, storage usage, and CPU time of the CICS Task Control Blocks (TCBs). This is retrieved using the COLLECT STATISTICS DISPATCHER command.

Address Space CPU Time Is the total CPU time (accurate to three decimal places) accumulated by this CICS address space. This is obtained from the z/OS Address Space Control Block field ASCBEJST. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Address Space SRB Time Is the total SRB time (accurate to three decimal places) accumulated by this CICS address space so far. This is obtained from the z/OS Address Space Control Block field ASCBSRBT. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

CICS Region Name Is the job name or modify ID of the CICS region that is being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CICS Start Time The time at which the CICS dispatcher started. This value is 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. This information is obtained from the DISPATCHER statistics record DFHDSGDS and the DSGSTART field.

CICS TCB Count Is the number of TCBs currently present in the CICS address space that are part of CICS, that is controlled by the CICS Dispatcher. This information is obtained from the z/OS TCB statistics record DFHDSTDS field, DSTDS_CICSTCB_COUNT.

CICS TCB CPU Time Is the amount of CPU time (accurate to three decimal places) that has been used by the TCBs currently present in the CICS address space that are controlled by the CICS Dispatcher. This information is obtained from the z/OS TCB statistics record DFHDSTDS, field DSTDS_CICSTCB_CPUTIME. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

CICS TCB Storage Above Is the amount of private storage above the 16M line currently allocated to TCBs currently present in the CICS address space that are part of CICS, that is controlled by the CICS Dispatcher. This information is obtained from the z/OS TCB statistics record DFHDSTDS field, DSTDS_CICSTCB_STG_ABOVE.

CICS TCB Storage Below Is the amount of private storage below the 16M line currently allocated to TCBs currently present in the CICS address space that are part of CICS, that is, controlled by the CICS Dispatcher. This information is obtained from the z/OS TCB statistics record DFHDSTDS, field DSTDS_CICSTCB_STG_BELOW.

CPU Time since reset Is the CPU time (accurate to three decimal places) accumulated by this CICS address space since the last statistics reset. This information is obtained from the DFHDSGDS DISPATCHER statistics record in the DSGEJST field. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Current non-CICS TCB count Is the number of TCBs currently present in the CICS address space that are not part of CICS, that is, not controlled by the CICS dispatcher. This information is obtained from the z/OS TCB statistics record DFHDSTDS field, DSTDS_NONCICSTCB_COUNT.

Non-CICS TCB CPU Time Is the amount of CPU time (accurate to three decimal places) that has been used by the TCBs currently present in the CICS address space that are NOT controlled by the CICS dispatcher. This information is obtained from the z/OS TCB statistics record DFHDSTDS, field DSTDS_NONCICSTCB_CPUTIME. The value can be entered in the HH:MM:SS.DDD format, for example,

00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Non-CICS TCB Kbytes above 16M Is the amount of private storage above the 16M line currently allocated to TCBs currently present in the CICS address space that are NOT part of CICS, that is not controlled by the CICS Dispatcher. This information is obtained from the z/OS TCB statistics record DFHDSTDS field, DSTDS_NONCICSTCB_STG_ABOVE.

Non-CICS TCB Kbytes below 16M Is the amount of private storage below the 16M line currently allocated to TCBs currently present in the CICS address space that are NOT part of CICS, that is not controlled by the CICS Dispatcher. This information is obtained from the z/OS TCB statistics record DFHDSTDS field, DSTDS_NONCICSTCB_STG_BELOW.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Non-CICS TCB Kbytes below 16M SRB Time since reset Is the SRB time (accurate to three decimal places) accumulated by this CICS address space since the last statistics reset. This information is obtained from the DFHDSGDS DISPATCHER statistics record, in the DSGSRBT field. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

CICSplex MVS TCB Resource Details attribute group

The CICSplex MVS TCB Resource Details attribute group reports addresses, storage, tasks, and transactions running on a CICS TCB.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CICS Task Number Is the CICS task number (1 to 99999) of the current task running on this TCB, if any.

CICS TCB Specifies whether this is a CICS owned TCB or not. CICS owned TCBs are the CICS job step TCB and those that were attached by CICS system code. Non CICS TCBs are those that were attached by other products in the CICS address space.

CPU Time Is the accumulated CPU time (accurate to three decimal places) for this TCB, taken from the TCBTTIME TCB field. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

CPU percent Is the percentage of the CPU time for all current TCBs of this type (CICS or non-CICS) that this TCB has taken. Note that only currently attached TCBs are listed; there might have been others that have ended.

Daughter TCB Is the address of this TCB's daughter TCB, that is, one that it attached. The range that is allotted is 0 to No limit.

Mother TCB Is the address of this TCB's mother TCB, that is, the one that attached it. The range that is allotted is 0 to No limit.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Private Storage Below 16M Is the amount of private storage below the 16 megabyte line currently allocated to this TCB. This consists of whole pages allocated to the TCB by z/OS. Each page typically contains bytes that are not in use (have not been returned in response to a GETMAIN request) and are only available to GETMAIN requests from this TCB.

Private Storage Above 16M Is the amount of private storage above the 16 megabyte line currently allocated to this TCB. This consists of whole pages allocated to the TCB by z/OS. Each page typically contains bytes that are not in use (have not been returned in response to a GETMAIN request) and are only available to GETMAIN requests from this TCB.

Sister TCB Is the address of this TCB's sister TCB, that is, the next one attached by its mother. The range that is allotted is 0 to No limit.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Task Status Is the run status of the CICS task on this TCB. These are the possible values: DISPATCHABLE, RUNNING or SUSPENDED.

TCB Address Is the address of the z/OS Task Control Block (TCB).

TCB Name Is the name of TCB, such as QR, RO, DFHTRTCB for CICS owned TCBs otherwise the value non CICS is used for TCBs running in the CICS address space but not owned by CICS.

Transaction Identifier Is the transaction ID of the CICS task currently running on this TCB.

CICSplex Online Data Viewing attribute group

The CICSplex Online Data Viewing attribute group displays response time data for all completed transactions based on the criteria you specify. This information is derived from the CICS Monitoring Facility (CMF) data. Use this attribute group to analyze transaction response time and to isolate transactions with poor response time. You can also use these attributes to determine the impact of various resources on transaction response time.

Abend Code Indicates the transaction abnormal termination code, if applicable.

Asynchronous Transaction Indicates if this task used the ASYNC API.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CICS Version Indicates the version of CICS running in the address space.

CPU Time Indicates the amount of accumulated CPU time accurate to two decimal places, for the task. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.56 or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

CPU Time Indicates the amount of accumulated CPU time (in seconds) used by this task.

DB2 LUWDS The Unit of Work for correlation with DB2. The value format is an alphanumeric string, maximum 44 characters.

End Time Indicates the time of day when the transaction completed.

File Requests Indicates the total number of all file control, DB2, DL/I, and third-party database requests.

History Token The parameter for history record selection. This attribute is used for internal use only. The value format is an alphanumeric string, maximum 16 characters.

Operation Indicates the name of the Web Service Operation. It is a 64 character field.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Originating Adapter Data 1 Origin data provided by the adapter. The content depends upon which adapter (if any) starts the transaction.

Originating Transaction Start Time of day when the originating transaction first started in CICS.

Program Active Indicates if program data has been collected for this task.

Program ID Indicates the CICS program name or the umbrella name.

Recovery Token The recovery token used for correlation with IMS. The value format is an alphanumeric string, maximum 16 characters.

Response Time ms Indicates the task response time in milliseconds. A value of -1 indicates n/a.

Response Time Indicates the task response time (in seconds) of the transaction, which is the difference between the time the performance record was created and the start of the record. This is indicated to six decimal places.

Start Time Indicates the time of day when the transaction started.

Storage HWM Indicates the high water mark for all user storage above and below the 16 megabyte line.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Terminal ID Indicates the four character ID of the terminal where the transaction originated.

Terminal I/O Indicates the character count of all input and output messages.

Task Number Indicates the number sequentially assigned by CICS to uniquely identify each task.

Trace Active Indicates if trace has been collected for the task. These are the valid values: Yes and No.

Trace Size The total amount of trace data recorded by this transaction. This may be greater than the allowed trace size, in which case the trace collected will contain the most recent data allowed.

Transaction Group Identifier Indicates transaction group identifier assigned to the task.

Transaction ID Indicates the four character name of the transaction.

Transaction Type Indicates how the transaction was started.

User ID Indicates your eight character CICS logon ID.

Unit of Work ID Indicates unit-of-work descriptor assigned to the task.

Web Service Name Indicates the WSNAME for the Web Service transactions query. It is a 32 character field.

CICSplex Overview attribute group

The CICSplex Overview attribute group displays the key metrics that identifies the health for the collection of CICS regions in your CICSplex environment.

All VTAM ACBs Open The value that indicates if all the CICS regions have VTAM ACBs that are open. The valid values are Yes and No.

Any SOS Regions The value that indicates if any CICS regions are marked Short On Storage in the CICSplex. The valid values are Yes and No.

CICSplex Agent SMFID SMFID of the agent that manages this CICSplex.

CICSplex Agent Job Name Job name of the agent that manages this CICSplex.

CICSplex Name The name of the CICSplex that is being monitored. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICSplex names are always uppercase characters.

CICSplex Version The lowest version of the CICS agents reporting to this CICSplex.

CPU Utilization The total CPU utilization percentage rate of all the CICS regions in the CICSplex. The value is a percentage in the range of 0-999.

Current Buffer Waits The current number of buffer waits for all the files in the CICSplex. The value format is a positive integer, maximum four characters in length.

Current String Waits The current number of string waits for all the files in the CICSplex. The value format is a positive integer, maximum four characters in length.

Enqueue Waits The number of enqueue waits in all the CICS regions of the CICSplex. The value format is a positive integer, maximum four characters in length.

Highest MAXT Percent The highest maximum tasks percentage of any CICS region in the CICSplex. The value is a percentage in the range of 0-999. The value format is a positive integer, maximum two characters in length.

Highest MAXT Region The CICS region with the highest maximum percentage in the CICSplex. This value is an alphanumeric string, with a maximum of eight characters.

I/O Rate The total input and output message rate per second of all the CICS regions in the CICSplex.

Number of Regions The number of CICS regions that are currently active in the CICSplex. The value format is a positive integer, maximum four characters in length.

Origin Node The unique identifier that describes the CICSplex. It consists of the CICSplex name and a string to identify it as a CICSplex. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Page Rate The total paging rate per second of all the CICS regions in the CICSplex.

SOS Region The name of the CICS region that is Short on Storage. This value is an alphanumeric string, with a maximum of eight characters. The valid values are n/a or Multiple.

Storage Violations in Last Hour The number of storage violations that occurred in the last hour for all the CICS regions in the CICSplex. The value format is a positive integer, maximum four characters in length.

Total AIDs The total number of Auto Initiate Descriptors in all the CICS regions of the CICSplex. The value format is a positive integer, maximum four characters in length.

Total ICEs The number of Interval Control Elements in all the CICS regions of the CICSplex. The value format is a positive integer, maximum four characters in length.

Transaction Rate The total transaction rate per minute of all the CICS regions in the CICSplex. The value format is a positive integer, with a maximum of four characters in length.

Worst Performance Index The worst performance index for the CICSplex. The performance index is calculated using the average response for a service class and the service class goal. The number is presented as a percentage, accurate to two decimal places.

Worst Service Class Name The name of the service class whose transaction response times are performing worst with respect to the user defined goals in the CICSplex. This value is an alphanumeric string, with a maximum of eight characters.

CICSplex Plex Service Class Analysis attribute group

The CICSplex Plex Service Class Analysis attributes report on statistical information for a service class interval in your CICSplex wide environment. Use the CICSplex Plex Service Class Analysis attributes in situations to monitor performance items such as the response time goal for the service class, the number of completed transactions for an interval, average response time, and percent-of-goal information for the service class during the interval.

50 Percent of Goal Transaction Count Indicates the number of transactions whose response time was 50% (or less) of the response time goal. The value format is a positive integer, maximum four characters.

60 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 50% and less than 60% of the response time goal. The value format is a positive integer.

70 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 60% and less than 70% of the response time goal. The value format is a positive integer.

80 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 70% and less than 80% of the response time goal. The value format is a positive integer.

90 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 80% and less than 90% of the response time goal. The value format is a positive integer.

100 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 90% and less than 100% of the response time goal. The value format is a positive integer.

110 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 100% and less than 110% of the response time goal. The value format is a positive integer.

120 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 110% and less than 120% of the response time goal. The value format is a positive integer.

130 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 120% and less than 130% of the response time goal. The value format is a positive integer.

140 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 130% and less than 140% of the response time goal. The value format is a positive integer.

150 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 140% and less than 150% of the response time goal. The value format is a positive integer.

200 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 150% and less than 200% of the response time goal. The value format is a positive integer.

400 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 200% and less than 400% of the response time goal. The value format is a positive integer.

Average 1st Dispatch Delay Indicates the average time that tasks within the service class waited to be dispatched for the first time. The wait might be due to the maximum or class maximum tasks limit being reached.

Average DB2 Time Indicates the average time that tasks within a service class spent in DB2.

Average Dispatch Time Indicates the average time that tasks within the service class spent running on a CICS TCB.

Average DSA Storage occupied Indicates the average amount of user DSA storage that was occupied by the tasks within this service class for the duration of the collection interval.

Average EDSA Storage occupied Indicates the average amount of user EDSA storage that was occupied by the tasks within this service class for the duration of the collection interval.

Average Execution Time Indicates the average time from the task's first dispatch until the end of the task for the tasks within the service class.

Average Response Time Indicates the average time (accurate to three decimal places) taken to complete all tasks during the collection interval. This average is calculated by adding the response time of each

task within a service class and dividing the sum by the total number of completed tasks during the collection interval. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567. The value format is a positive number, maximum four bytes.

Average Response Time MS Indicates the average time in seconds taken to complete all tasks during the collection interval.

Average time using CPU Indicates the average time that tasks within a service class spent using the CPU.

Average time using RLS CPU Indicates the average amount of CPU time that each RLS file request consumed on an MVS SRB on behalf of a given service class.

Average time waiting on Adabas Indicates the average time that tasks within a service class waited for ADABAS requests to complete.

Average Unidentifiable Delay Indicates the average time that tasks within a service class spent waiting on resources other than CPU, DB2, DL/I, File Control, MRO, Redispatch, Temporary Storage, Transient Data, RLS CPU, and ENQs.

Average Wait on Datacom Indicates the average time that tasks within a service class spent waiting for Datacom requests to complete.

Average Wait on DLI Indicates the average time that tasks within a service class spent waiting for DL/I requests to complete.

Average Wait on ENQ Delay Indicates the average time that tasks within the service class waited as a result of an enqueue.

Average Wait on FILEs Indicates the average time that tasks within a service class spent waiting for File requests to complete.

Average Wait on IC Delay Indicates the average time that tasks within a service class waited as a result of an interval control delay.

Average Wait on IDMS Indicates the average time that tasks within a service class spent waiting for IDMS requests to complete.

Average Wait on Journal Indicates the average time that tasks within the service class spent waiting for explicit journal I/O requests to complete.

Average Wait on MQ Indicates the average time that tasks within a service class waited for the MQ connection.

Average Wait on MRO Indicates the average time that tasks within the service class waited for all MRO operations to complete.

Average wait on Redispatch Indicates the average time that the tasks in the service class waited for redispatch.

Average Wait on SUPRA Indicates the average time that tasks within a service class waited for SUPRA requests to complete.

Average Wait on TD-IO Indicates the average time that tasks within a service class waited for VSAM transient data I/O.

Average Wait on TS IO Indicates the average time that tasks within a service class waited for VSAM temporary storage I/O.

CICSplex Name The name of the CICSplex that is being monitored. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICSplex names are always uppercase characters.

CPU Time Std Deviation Indicates the standard deviation of the CPU time for the tasks within this collection interval.

Goal Response Time Indicates the time (accurate to three decimal places) that has been set as a goal for a service class. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or

as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567. The value format is a positive number, maximum four bytes.

Goal Type Indicates the performance objective that your site defines for a service class. This objective is expressed as an average response time (A) or a percentage of transactions meeting a specified response time goal (P). These are the values: Average and Percent.

The format for an average response time goal is a response time goal specified as an average response time is formatted in Service Level Analysis views as HH:MM:SS:TTT-hours, minutes, seconds, and thousands of seconds.

Example: An average response time goal of five and one-half seconds shows as **00:00:05:500**.

The format for a percentage goal is a percentage of goal is formatted in Service Level Analysis views as HH:MM:SS:TTT-nn%. The response time goals for a service class can be overridden within a service policy. For example, **00:00:01:000-90%** specifies that at least 90 percent of the transactions in the service class should finish within one second.

Greater than 400 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 400% of the response time goal. The value format is a positive integer.

Highest Response Time Indicates the highest response time in seconds of all tasks during the collection interval.

Highest Time Using CPU Indicates the highest CPU time in seconds of all tasks during the collection interval.

Interval End Timestamp Indicates the time when the CICS Service Level Analysis collector finished accumulating service class data for the interval. The value format is CYYMMDDHHMMSSmmm, where:

C
Century (0 for 20th, 1 for 21st, and so forth)

YY
Year

MM
Month

DD
Day

HH
Hour

MM
Minutes

SS
Seconds

mmm
Milliseconds

Example: 1010521130500000 indicates the data was collected on May 21, 2001 at 1:05 p.m.

Interval Length Indicates the length of the interval in seconds at which CICS Service Level Analysis data is summarized. This interval is five minutes in length for current reports. For historical reports, this item indicates the interval set by your system administrator. The value format is a positive integer, maximum four bytes.

Interval Start Timestamp Indicates the time when the CICS Service Level Analysis collector began accumulating service class data for the interval. The value format is CYYMMDDHHMMSSmmm, where:

C
Century (0 for 20th, 1 for 21st, and so forth)

YY
Year

MM
Month

DD
Day

HH
Hour

MM
Minutes

SS
Seconds

mmm
Milliseconds

Example: 1010521130500000 indicates the data was collected on May 21, 2001 at 1:05 p.m.

Number of Abended Transactions Indicates the number of transactions within this collection interval that abnormally terminated.

Origin Node The unique identifier that describes the CICSplex. It consists of the CICSplex name and a string to identify it as a CICSplex. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Percent of Goal Indicates what percentage of transactions within a service class must meet the response time goal. It is assigned to a service class when the service class is created or when its goal is overridden for a service policy. The value format is a positive integer.

Percent of time Dispatched Indicates the percentage of the elapsed time that tasks within the service class spent running on a CICS TCB.

Percent of time using CPU Indicates the percentage of elapsed time that tasks within a service class spent using the CPU. The value format is a positive integer.

Percent of time using CPU for RLS Indicates the amount of CPU time that each RLS file request consumed on a z/OS SRB on behalf of a given service class. This time combined with the Percent of time using CPU give the total amount of CPU consumed by the service class for a given attribute. The value format is a positive integer.

Percent of time waiting for 1st Dispatch Indicates the percentage of elapsed time that tasks within the service class waited to be dispatched for the first time. The wait might be due to the maximum or class maximum tasks limit being reached.

Percent of time waiting on Adabas Indicates the percentage of elapsed time that tasks within a service class waited for ADABAS requests to complete. The total ADABAS wait time is expressed as a percentage of the total elapsed time.

Percent of time waiting on Datacom Indicates the percentage of elapsed time that tasks within a service class waited for DATACOM requests to complete.

Percent of time waiting on DB2 Indicates the percentage of elapsed time that tasks within a service class waited for DB2 requests to complete. The total DB2 wait time is expressed as a percentage of the total elapsed time.

Percent of time waiting on DLI Indicates the percentage of elapsed time that tasks within a service class waited for DL/I requests to complete. The total DL/I wait time is expressed as a percentage of the total elapsed time.

Percent of time waiting on ENQ Delay Indicates the percentage of elapsed time that tasks within a service class waited as a result of an enqueue.

Percent of time waiting on File Control Indicates the percentage of elapsed time that tasks within the service class waited for all file I/O requests to complete. A high percentage of elapsed time spent waiting for file control requests indicates inefficient local shared resources (LSR) specifications, too few strings, or lockout conditions. The value format is a positive integer.

Percent of time waiting on IDMS Indicates the percentage of elapsed time that tasks within a service class waited for IDMS requests to complete. The total IDMS wait time is expressed as a percentage of the total elapsed time.

Percent of time waiting on Interval Control Indicates the elapsed time that a service class waited as a result of an interval control delay. The value format is a positive integer.

Percent of time waiting on Journal Control Indicates the percentage of elapsed time that tasks in the service class waited for explicit journal I/O requests to complete. The value format is a positive integer.

Explicit journal I/O includes any journal switching, buffering, and intervention that occurs between the time the journal requests were issued and the time they completed. Updates to the file triggers journal operations, the elapsed time percentage for which is included under File Control Percentage. A high percentage of elapsed time spent waiting for journal I/O indicates disk contention or reserves, elongated journal switching times, excessive journal buffer sizes, or inappropriate journal options.

Note: This data is available only for CICS Transaction Server, V3.1 and higher.

Percent of time waiting on MQ Indicates the percentage of time that was spent waiting for the MQ connection. The value format is a positive integer.

Percent of time waiting on MRO Indicates the percentage of elapsed time that tasks in the service class waited for all multiregion operations (MROs) to complete. A high percentage of time spent waiting for MRO operations indicates problems in a connected CICS region within a CICSplex that caused the originating transaction to wait for an extended period of time. The value format is a positive integer.

Note: This data is available only for CICS Transaction Server, V3.1 and higher.

Percent of time waiting on Redispatch Indicates the percentage elapsed time that the tasks in the service class waited for redispatch. This is the aggregate of the wait times between each event completion and user-task redispatch, but it does not include the time spent waiting for first dispatch. A high percentage of elapsed time spent waiting for re dispatch indicates that you have looping transactions or that you have reached the CMXT limit. The value format is a positive integer.

Note: This data is available only in CICS Transaction Server, V3.1 and higher.

Percent of time waiting on SUPRA Indicates the percentage of elapsed time that tasks within a service class waited for SUPRA requests to complete. The total SUPRA wait time is expressed as a percentage of the total elapsed time.

Percent of time waiting on TD I/O Indicates the percentage elapsed time that the tasks in the service class waited for VSAM transient data I/O. A high percentage of elapsed time spent waiting for this type of I/O indicates inadequacies in the configuration of the transient data set DFHINTRA; this is caused by insufficient strings, bad VSAM control interval size and (CISZ) inefficient or conflicting disk allocation. The value format is a positive integer.

Note: This data is available only for CICS Transaction Server, V3.1 and higher.

Percent of time waiting on TS I/O Indicates the percentage of elapsed time that the tasks in a service class waited for VSAM temporary storage I/O. A high percentage of elapsed time spent waiting for this type of I/O indicates inadequacies in the configuration of the DFHTEMP temporary storage data set. Typical causes are insufficient strings that are not correctly defined for VSAM control interval size (CISZ) and inefficient or conflicting disk allocation. The value format is a positive integer.

Note: This data is available only for CICS Transaction Server, V3.1 and higher.

Percent of time waiting on unidentifiable Indicates the percentage of elapsed time spent by tasks in a service class waiting on resources other than: CPU, DB2, DL/I File Control, Journal, MRO, Redispatch, Temporary Storage, or Transient Data. This item includes waits on interval control, Basic Mapping Support Paging (BMS), and program loading. This percentage is calculated by subtracting the percentages listed above from 100. The value format is a positive integer.

Performance Index Indicates how well a service class is performing relative to its response time goal. The value format is a positive integer, maximum four digits.

This value is stored in units of 1/100; therefore, when you open an event as attributes, you must interpret a Performance Index value of 1234 as 12.34. When you see the Performance Index in a view, however, a decimal point is inserted; therefore you interpret a value of 1234 as 12.34.

Note: Average response-time goals: If you specify the response time goal of a service class as an average response time, the performance index measures how close the response time for the service class is to the response time goal. The performance index is calculated by dividing the actual average response time by the response time goal. When the average response time equals the response time goal, the performance index is displayed as 1.00.

For example, if the average response time for a service class is 1.5 seconds and the response time goal is two seconds, then the performance index is 0.75.

If you specify the response time goal as a **Percent of Goal** (also known as a percentile goal), the performance index measures whether the percentage of transactions specified in the goal meets the response time goal.

When a task completes, it is calculated in one of the following percent-of-goal buckets: 50% or less, 60%, 70%, 80%, 90%, 100%, 110%, 120%, 130%, 140%, 150%, 200%, 400%, or greater than 400%. This is based on its actual response time compared with the goal response time. The performance index is calculated by locating the percent-of-goal bucket with a cumulative total equal to or higher than the percent of goal for the service class. The cumulative total is the sum of the number of transactions for each bucket, from lowest to highest.

Example: Assume the following:

- The response time goal for a service class is 80% of all transactions completing within 3 seconds.
- 10 transactions complete within the time interval as follows: The first three transactions average 1.5 seconds (50% of goal); the second three average 2.9 seconds (90% of goal); the third three average six seconds (200% of goal); and the last transaction completes in 99 seconds (400% of goal).
- The total transaction count is 10. Eighty percent of the total transaction count is eight.

Adding from lowest to highest, the eighth transaction occurs in the 200% bucket. The performance index is, therefore, 2.00. Note that the transaction in the >400% bucket does not affect the performance index.

Performance Index Percent Indicates how well a service class is performing relative to its response time goal. The value format is a positive integer.

Response Time Std Deviation Indicates the standard deviation of the response time for the tasks within this collection interval.

Service Class Name Indicates the eight character user-defined name that identifies a service class. The value format is an alphanumeric string, maximum eight characters, and case-sensitive.

Summary Type Indicates the type of summary for the service class. The value format is an alphanumeric string, maximum four characters, and case-sensitive.

Transaction ID Indicates the four character name of the transaction for this summary. It may be null if the summary type is not transaction specific. The format is an alphanumeric string with a maximum of four characters, and is case-sensitive.

Transaction rate per minute Indicates the average number of transactions that were run in one minute of elapsed time. For example, if the statistics are collected every 10 minutes, and the total number of transactions during the last 10 minutes is 300, the average number of transactions per minute is 30. The value format is a positive integer, maximum four characters.

Transactions Total Indicates the total number of tasks in a service class that completed execution during the collection interval. The value format is a positive integer, maximum four characters.

Workload Name Indicates the eight-character work load name assigned to this service class when the service class was created. The value format is an alphanumeric string, maximum eight characters, and case-sensitive.

CICSplex Pagepool Details attribute group

The CICSplex Pagepool Details attribute group provides information on the use of z/OS and CICS virtual storage. It contains the information you need to understand your current use of virtual storage above and below the 16 MB line, and helps you to verify the size values and limits used for the various standard and extended Dynamic Storage Areas.

Access Type Is the type of access of the subpool. It is either CICS, USER, or READONLY. If storage protection is not active, all storage areas revert to CICS except those in the ERDSA.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Current Subpools Is the current number of subpools (domain and task) in the CDSA, UDSA, SDSA, or RDSA.

Current Suspensions Is the number of GETMAIN requests currently suspended for storage.

Cushion Releases Is the number of times a GETMAIN request caused the storage cushion to be released. The cushion is said to be released when the amount of free storage drops below the cushion size.

Cushion Size Is the size of the cushion, expressed in bytes. The cushion forms part of the associated DSA, and is the amount of storage that CICS holds in reserve, which is freed to try and alleviate an ongoing short-on-storage (SOS) condition.

Cushion Size (KB) Is the current DSA storage cushion size in kilobytes. The current cushion size of the DSA size in the current CICS region, rounded up to kilobytes.

Cushion Size (MB) Is the current DSA storage cushion size in megabytes. The current cushion size of the DSA size in the current CICS region, rounded up to megabytes.

DSA Index Is the numeric representation of the DSA name. These are the values:

- CDSA
- UDSA
- SDSA
- RDSA
- ECDSA
- EUDSA
- ESDSA
- ERDSA

DSA Name Is the name of the Dynamic Storage Area (DSA) that the domain subpool is allocated from. These are the values: CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, and ERDSA.

DSA Size is the size of the current DSA expressed in bytes.

DSA Size (KB) Is the current size of DSA in kilobytes. The size of the DSA in the current CICS region at the time of this query, rounded up to kilobytes.

DSA Size (MB) Is the current size of DSA in megabytes. The size of the DSA in the current CICS region at the time of this query, rounded up to megabytes.

DSA Usage Is the current portion of DSA being used. The current storage use of the Dynamic Storage Area in the current CICS region at the time of this query.

DSA Usage (KB) Is the current portion of DSA being used in kilobytes. The current storage use of the Dynamic Storage Area in the current CICS region at the time of this query, rounded up to kilobytes.

DSA Usage (MB) Is the current portion of DSA being used in megabytes. The current storage use of the Dynamic Storage Area in the current CICS region at the time of this query, rounded up to megabytes.

DSA Use Percentage of DSA Size Is the DSA use as a percentage of the DSA total. The current usage percentage for the four standard Dynamic Storage Areas in the current CICS region.

Extents Is the current number of extents allocated to this DSA.

Extents added Is the number of extents added to this DSA.

Extents removed Is the number of extents released from this DSA.

FREEMAIN Is the number of FREEMAIN requests from the current DSA.

Free Storage Is the current amount of free storage in the current Subpool expressed in bytes.

Free Storage (KB) Is the total amount of free storage in kilobytes. The current amount of free storage (including the cushion) within the current DSA in this CICS region, rounded up to kilobytes.

Free Storage (MB) Is the total amount of free storage in megabytes. The current amount of free storage (including the cushion) within the current DSA in this CICS region, rounded up to megabytes.

GETMAIN The number of GETMAIN requests from the current DSA.

High-Water Mark Is the peak size of the current DSA, expressed in bytes.

High-Water Mark (KB) Is the high water mark storage size in kilobytes. The highest value of the DSA size that has occurred since the current CICS region was started, rounded up to kilobytes.

High-Water Mark (MB) Is the high water mark storage size in megabytes. The highest value of the DSA size that has occurred since the currentCICS region was started, rounded up to megabytes.

HWM Free Storage (KB) Is the total amount of HWM free storage in kilobytes. The current amount of high water mark free storage (including the cushion) within the current DSA in this CICS region, rounded up to kilobytes.

HWM Free Storage (MB) Is the total amount of HWM free storage in megabytes. The current amount of high-water-mark free storage (including the cushion) within the current DSA in this CICS region, rounded up to megabytes.

HWM Suspensions Is the peak number of GETMAIN requests suspended for storage.

HWM Free Storage The total amount of HWM free storage. The current amount of high-water-mark free storage (including the cushion) within the current DSA in this CICS region.

Insufficient storage Is the number of times a GETMAIN request with SUSPEND(NO) returned the condition INSUFFICIENT_STORAGE.

Largest Free Area Is the length of the largest contiguous free area in the CDSA, UDSA, SDSA, or RDSA, expressed in bytes.

Largest Free Area (KB) Is the largest contiguous free storage size in kilobytes. The size of the largest continuous area of free storage within the current DSA in this CICS region, rounded up to kilobytes.

Largest Free Area (MB) Is the largest contiguous free storage size in megabytes. The size of the largest continuous area of free storage within the current DSA in this CICS region, rounded up to megabytes.

LWM Free Storage The total amount of LWM free storage. The current amount of low-water mark free storage (including the cushion) within the current DSA in this CICS region.

LWM Free Storage (KB) The total amount of LWM free storage in kilobytes. The current amount of low-water mark free storage (including the cushion) within the current DSA in this CICS region, rounded up to kilobytes.

LWM Free Storage (MB) The total amount of LWM free storage in megabytes. The current amount of low-water mark free storage (including the cushion) within the current DSA in this CICS region, rounded up to megabytes.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system,

the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

SOS Occurrences Is the number of times CICS went short on storage (SOS) in this DSA, where SOS means either that the cushion is currently in use or that there is at least one task suspended for storage or both.

Storage Violations Is the number of storage violations recorded in the associated DSA.

Subpool Additions Is the number of ADD_SUBPOOL requests to create a subpool (domain or task) for the associated DSA.

Subpool Deletions Is the number of DELETE_SUBPOOL requests (domain or task) from the associated DSA.

Subpool Location Is the storage location of this domain subpool, either ABOVE or BELOW the 16 MB addressability line.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Total SOS Time Is the accumulated time (accurate to three decimal places) that CICS has been short on storage (SOS) in this DSA. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Total Suspensions Is the number of times a GETMAIN request with SUSPEND(YES) was suspended because of insufficient storage to satisfy the request at that moment.

Unconditional Suspensions Is the number of requests which were purged while suspended for storage.

CICSplex Pagepool Summary attribute group

The CICSplex Pagepool Summary attributes report all aspects of storage management.

CICS Region Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string with a maximum of eight characters and case-sensitive. CICS region names are always in uppercase characters.

Current Common Subspace Users The current number of common subspace users in the current CICS region. The value format is an integer of maximum four bytes.

Current DSA Limit The current limit for the Dynamic Storage Area in the current CICS region. The value format is an integer of maximum four bytes.

Current DSA Limit (KB) The current limit for the Dynamic Storage Area in the current CICS region in kilobytes. The value format is an integer of maximum four bytes.

Current DSA Limit (MB) The current limit for the Dynamic Storage Area in the current CICS region in megabytes. The value format is an integer of maximum four bytes.

Current DSA Total Is the total amount of storage currently allocated to the DSAs below the bar.

Current DSA Total (KB) Is the total amount of storage currently allocated to the DSAs below the bar in kilobytes.

Current DSA Total (MB) Is the total amount of storage currently allocated to the DSAs below the bar in megabytes.

Current DSA Usage Is the total amount DSA currently in use.

Current DSA Usage (KB) Is the total amount DSA currently in use in kilobytes.

Current DSA Usage (MB) Is the total amount DSA currently in use in megabytes.

Current EDSA Limit The current limit for the Extended Dynamic Storage Area in the current CICS region. The value format is an integer of maximum four bytes.

Current EDSA Limit (KB) The current limit for the Extended Dynamic Storage Area in the current CICS region in kilobytes. The value format is an integer of maximum four bytes.

Current EDSA Limit (MB) The current limit for the Extended Dynamic Storage Area in the current CICS region in megabytes. The value format is an integer of maximum four bytes.

Current EDSA Total Is the total amount of storage currently allocated to the EDSAs above the bar.

Current EDSA Total (KB) Is the total amount of storage currently allocated to the EDSAs above the bar in kilobytes.

Current EDSA Total (MB) Is the total amount of storage currently allocated to the EDSAs above the bar in megabytes.

Current EDSA Usage Is the total amount EDSA currently in use.

Current EDSA Usage (KB) Is the total amount EDSA currently in use in kilobytes.

Current EDSA Usage (MB) Is the total amount EDSA currently in use in megabytes.

Current GDSA Total The total amount of GDSA currently in use above the bar. The value format is an integer of maximum eight bytes.

Current GDSA Total (KB) The total amount of GDSA currently in use above the bar in kilobytes. The value format is an integer of maximum eight bytes.

Current GDSA Total (MB) The total amount of GDSA currently in use above the bar in megabytes. The value format is an integer of maximum eight bytes.

Current GDSA Usage The total amount of GDSA currently in use. The value format is an integer of maximum eight bytes.

Current GDSA Usage (KB) The total amount of GDSA currently being used in kilobytes. The value format is an integer of maximum eight bytes.

Current GDSA Usage (MB) The total amount of GDSA currently being used in megabytes. The value format is an integer of maximum eight bytes.

Current Unique Subspace Users Is the current number of unique subspace users. The count of unique subspace users in the current CICS region. The value format is an integer of maximum four bytes.

DSA SOS The current status of the DSA short on storage usage. The valid values are Y and N.

DSA Use Percentage Is the current DSA usage as a percentage of the total.

EDSA SOS The current status of the EDSA short on storage usage. The valid values are Y and N.

EDSA Use Percentage The current amount of EDSA usage as a total percentage.

GDSA SOS The current status of the GDSA short on storage usage. The valid values are Y and N.

GDSA Use Percentage The current amount of GDSA usage as a total percentage.

HWM Common Subspace Users Is the high water mark of common subspace users. The high-water-mark value for the number of common subspace users in the current CICS region. The value format is an integer of maximum four bytes.

HWM DSA Total Is the high-water-mark DSA total. The current high-water-mark total for the Dynamic Storage Area in the current CICS region. The value format is an integer of maximum four bytes.

HWM DSA Total (KB) Is the high-water-mark DSA total in kilobytes. The current high-water-mark total for the Dynamic Storage Area in the current CICS region. The value format is an integer of maximum four bytes.

HWM DSA Total (MB) Is the high-water-mark DSA total in megabytes. The current high-water-mark total for the Dynamic Storage Area in the current CICS region. The value format is an integer of maximum four bytes.

HWM EDSA Total Is the high-water-mark extended DSA total. The current high-water-mark total for the Extended Dynamic Storage Area in the current CICS region. The value format is an integer of maximum four bytes.

HWM EDSA Total (KB) Is the high-water-mark extended DSA total in kilobytes. The current high-water-mark total for the Extended Dynamic Storage Area in the current CICS region. The value format is an integer of maximum four bytes.

HWM EDSA Total (MB) The high-water-mark extended DSA total in megabytes. The current high-water-mark total for the Extended Dynamic Storage Area in the current CICS region. The value format is an integer of maximum four bytes.

HWM GDSA Total The current high-water-mark total for GDSA in the current CICS region. The value format is an integer of maximum eight bytes.

HWM GDSA Total (KB) The current high-water-mark total in kilobytes for GDSA in the current CICS region. The value format is an integer of maximum eight bytes.

HWM GDSA Total (MB) The current high-water-mark total in megabytes for GDSA in the current CICS region. The value format is an integer of maximum eight bytes.

HWM Unique Subspace Users Is the high water mark of unique subspace users. The high-water-mark value for the number of unique subspace users in the current CICS region. The value format is an integer of maximum four bytes.

MEMLIMIT (MB) The maximum amount of GDSA storage in megabytes available above the bar for use by the CICS region. The value format is an integer of maximum eight bytes.

MEMLIMIT Source The source of the maximum amount of GDSA storage available above the bar for use by the CICS region.

Origin Node Is the combination of the z/OS System ID (SMFID) and the CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

Pagepool Count Is the total number of pagepools in the current CICS region. The value format is an integer of maximum four bytes.

Program Re-entrancy Is the status of the reentrant programs in the current CICS region. These are the values: ACTIVE or INACTIVE.

Storage Protection The status of the storage protection in the current CICS region. Storage protection protects CICS code and control blocks from being accidentally overwritten by user applications. These are the values: PROTECT or NOPROTECT.

Storage Violations The total amount of storage violations in the current CICS region. The value format is an integer of maximum four bytes.

Storage Violations in Last Hour The total number of storage violations in the last hour for the current CICS region. The value format is an integer of maximum four bytes.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Total Common Subspace Users Is the cumulative number of common subspace users. The total number of common subspace users in the current CICS region. The value format is an integer of maximum four bytes.

Total Unique Subspace Users Is the cumulative number of unique subspace users. The total number of unique subspace users in the current CICS region. The value format is an integer of maximum four bytes.

Transaction Isolation Is the status of the transaction isolation in the current CICS region. Transaction isolation offers protection against transaction data being accidentally overwritten by other user transactions. These are the values: ACTIVE or INACTIVE.

z/OS Wait Count The z/OS storage wait count total. The current total number of waits for z/OS storage in the current CICS region. The value format is an integer of maximum four bytes.

z/OS Wait Time The total time (accurate to three decimal places) spent in z/OS storage waits. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

CICSplex Pipeline Details attribute group

The CICSplex Pipeline Details attribute group receives information about installed pipelines.

Application Supports XOP Indicates whether the application handler for the pipeline supports the processing of XOP documents and binary attachments. These are the values: Yes and No.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CICS Version Indicates the version number of the CICS region being monitored. This number is an alphanumeric string, with a maximum of four characters, and case-sensitive.

Domain Name Is the 255 character domain name used to generate Multipurpose Internet Mail Extensions (MIME) content-ID values to identify data attachments.

Enable Status Is the pipeline status indicator. These are the values:

ENABLED
The PIPELINE is ready for use.

DISABLED
The PIPELINE is not processing requests, and is unable to accept new work. It might have failed to initialize or might have been explicitly disabled.

ENABLING
The PIPELINE is being initialized; it is not yet ready to accept work.

DISABLING
The PIPELINE is quiescing before entering DISABLED state. It is not accepting new work, but is allowing currently-executing work to complete.

DISCARDING
A DISCARD command has been issued for the PIPELINE. The PIPELINE is quiescing before being discarded. It is not accepting new work, but is allowing currently-executing work to complete.

Mode Is the operating mode for the pipeline. These are the values:

Unknown
When the operating mode for the pipeline cannot be determined.

Provider
The provider pipeline is shown.

Requester
The requester pipeline is shown.

MTOM Supported Indicates whether support for MTOM has been enabled in the pipeline. These are the values: YES or NO.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Outbound MTOM Indicates when MTOM needs to be used for outbound SOAP messages. These are the values: NEVER, ONLY IF INBOUND MTOM, and ALWAYS.

Outbound MTOM With XOP Indicates MTOM needs to be used for outbound SOAP messages when there are no binary attachments present.

Pass Through XOP Indicates whether the pipeline is currently handling the XOP documents in direct mode.

Pipeline name Is the name of the current pipeline. The name can be up to eight characters in length.

Pipeline configuration file Is the name of the configuration file associated with the pipeline. The name can be up to 255 characters in length.

Pipeline WSDIR directory Is the name of the web services binding directory (also known as the pickup directory). The name can be up to 255 characters in length.

Pipeline shelf directory Is the name of the pipeline shelf directory, a Hierarchical File System directory used to store the web service binding files associated with WEBSERVICE resources. The name can be up to 255 characters in length.

Response Wait Time Is the timeout applied when a message exchange pattern specifies an optional response message. The timeout is shown in seconds.

Soap Level Is the SOAP release level in string format.

Soap Release Is the SOAP release level in binary format.

Soap Version Is the SOAP version number in binary format.

System ID Is the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Use Count Is the number of times this pipeline was used to install a web service or to process a web service request.

CICSplex Pipeline Summary attribute group

The CICSplex Pipeline Summary attribute group retrieves information about installed pipelines.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

EnableStatus Is the pipeline status indicator. These are the values:

ENABLED
The PIPELINE is ready for use.

DISABLED
The PIPELINE is not processing requests, and is unable to accept new work. It might have failed to initialize or might have been explicitly disabled.

ENABLING
The PIPELINE is being initialized; it is not yet ready to accept work.

DISABLING
The PIPELINE is quiescing before entering DISABLED state. It is not accepting new work, but is allowing currently-executing work to complete.

DISCARDING
A DISCARD command has been issued for the PIPELINE. The PIPELINE is quiescing before being discarded. It is not accepting new work, but is allowing currently-executing work to complete.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system,

the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Pipeline name Is the name of the current pipeline. The name can be up to eight characters in length.

Pipeline status Is the status indicator for the current pipeline. These are the values: Enabled, Disabled, Enabling, Disabling, and Discarding.

System ID Is the SMF identifier of the LPAR within a given CICSplex that is running the current CICS region. The name is four characters in length and is always uppercase.

Use Count Is the number of times this pipeline was used to install a Web service or to process a Web service request.

CICSplex Policy Rule Statistics attribute group

The CICSplex Policy Rule Statistics attribute group retrieves information about rules defined in a POLICY.

Abend Code Indicates the abend code, if the Action type was set to ABEND.

Action Type Indicates the type of action defined for this rule. Valid values:

- ABEND 1
- EVENT 2
- MESSAGE 3
- REJECT 4
- WLMHEALTH 5

Bundle Name The name of the BUNDLE resource containing this POLICY. The name can be up to eight characters in length.

CICS Region Name The name that identifies a CICS region. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

Policy Name The resource name for the POLICY definition. The name can be up to 64 characters in length.

Policy Status Indicates the status of this POLICY resource. Valid values:

- Enabled 1
- Disabled 2

Rule Action Count The number of times an action was performed.

Rule Group Indicates whether the POLICY rule is a TASK or SYSTEM rule. Valid values:

- TASK 1
- SYSTEM 2

Rule Item The rule condition of a task rule.

Rule Last Action Indicates the last time an action was performed.

Rule Name Indicates the name of the Rule for this POLICY definition. The name can be up to 64 characters in length.

Rule Type The type of rule defined in this POLICY.

Rule Threshold The threshold specified in the rule. The value unit is bytes, microseconds, or number depending on the rule. Threshold is applicable only to task rules. A value of -1 indicates n/a.

System ID The four-character name that uniquely identifies an active MVS operating system within a given CICSplex.

USERTAG The user tag defined for this POLICY.

WLM Open Status Indicates the state to set to when the action of setting z/OS WLM health open status, if specified in the rule, is performed. Valid values:

- Closed 1
- Inclose 2
- Open 3
- Notapplic 4

CICSplex Program Accumulation Detail attribute group

The CICSplex Program Accumulation Detail attributes describe the details of each of the programs used by a task.

Average CPU Time The average amount of CPU time the program consumed per invocation since statistics were reset.

Average CPU Time on QR TCB The amount of CPU time the program consumed on the QR TCB per invocation since statistics were reset.

Average Dispatch Time Indicates the amount of time (in seconds) the program was dispatched per invocation since statistics were reset.

Average Elapsed Time Indicates the duration (in seconds) the program was in control per invocation since statistics were reset.

Average EXEC Calls Indicates the number of exec calls which occurred when this program was in control per invocation since statistics were reset.

Average Invoked Count The number of times this program was entered per invocation since statistics were reset.

Average Mode Switches Indicates the number of mode switches which occurred when this program was in control per invocation since statistics were reset.

CICS Region Name Identifies the name of the CICS region that is being monitored.

Invoked Count The number of times this program was entered.

Number of Abends The number of abends taken by this task.

Number of EXEC Calls Indicates the number of Exec calls which occurred when this program was in control since statistics were reset.

Number of Mode Switches Indicates the number of mode switches which occurred when this program was in control since statistics were reset.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is a case-sensitive, alphanumeric string, maximum 32 bytes

Program Name Is the name of the current activity. This name is an alphanumeric string of up to eight characters.

System ID Four-character name that uniquely identifies an active z/OS operating system within a given CICSplex.

Total CPU Time the amount of CPU time (in seconds) the program consumed for tasks completed since statistics were reset.

Total CPU Time on QR TCB Indicates the amount of CPU time (in seconds) the program consumed on the QR TCB for tasks completed since statistics were reset.

Total Dispatch Time Indicates the amount time (in seconds) the program was dispatched by CICS for tasks completed since statistics were reset.

Total Elapsed Time Indicates the duration (in seconds) the program was in control for tasks completed since statistics were reset.

Transaction Count Indicates the number transaction monitoring records where this program was in control since statistics were reset.

CICSplex Program Definition Information attribute group

The CICSplex Program Definition Information attributes report how a program is defined to CICS.

The CICSplex Program Definition attribute group cannot be used for historical data collection.

AMODE Indicates whether this program executes in AMODE 24 or 31.

API Status Is the API that the program is defined to use.

CEDF Allowed Indicates whether or not the execution diagnostic facility (EDF) initiation and termination screens are displayed.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

COBOL Offset to First BLL Cell Is the offset to the first BLL cell for a COBOL program.

COBOL TGT Address Is the address in hex of the TGT for a COBOL program.

COBOL TGT and Working Storage Size Is the sum, in hex, of the sizes of the TGT and Working Storage for a COBOL program.

COBOL TGT Size Is the size, in Hex, of the TGT for a COBOL program.

Concurrency Indicates whether the program is quasi-reentrant or threadsafe.

Current Copies Indicates the number of copies of the program currently in storage.

Current Use Count Is the sum of the number of tasks currently using this program and the number of current copies that are loaded.

Data Location Indicates the location of initially allocated storage for this program.

Deduced Language Indicates the actual language of this program as determined by CICS.

Defined Language Indicates the language for this program, as defined using the CICS Resource Definition facility.

Definition Type Is the method by which the program definition was installed on this system.

Entry Point Indicates the address of the first instruction to be executed following a LOAD/CALL or LINK or XCTL command.

Execution Key Is the execution key for this program.

EXECUTIONSET Indicates whether this program uses the full API or the DPL subset.

Hotpool Required Indicates whether the program must run in a pre-initialized language environment.

Java Class Name Is the name of the Java Class this program uses.

Java Machine Specified Indicates whether this program runs under the control of a Java machine.

JVM Debug Indicates whether JVM=DEBUG was specified.

JVM Profile Is the profile required to start the Java Virtual Machine under which this program runs.

Length The length of the program.

Library Name Is the library that a program was loaded from.

Load Point Is the address of the program.

Load Status Indicates whether this program is loaded or not.

Loaded From Indicates where from was the program loaded.

Multithread JVM Indicates whether this program requires a multithreaded JVM.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Program Attribute Indicates whether this program resides in storage when it is not being used.

Program Location Is the area of the CICS address space the program resides in.

Program Name Is the eight character name that uniquely identifies this program to CICS.

Program Status Indicates the status of the program.

Remote APPLID The APPLID of the CICS region where the remote program is defined. This APPLID is an alphanumeric string of up to eight characters in length.

Remote Program ID Is the name of this program in the remote system.

Remote System ID Is the connection name of the remote system where this program is defined to execute.

Remote Transaction ID Is the transaction name that is attached in the remote system and under which the program runs.

RMODE Indicates whether the RMODE of this program is 24 or ANY.

RPL Dataset Name Is the name of the RPL data set the program was loaded from.

Statistics Deletes by Compression Indicates the number of times the program has been deleted from virtual storage as a result of storage notify requests.

Statistics Last Reset Is the last time Interval Statistics were reset.

Statistics Refreshes Indicates the number of times a CEMT NEWCOPY has been performed for this program.

Statistics Use Count Is the use count at the time statistics were updated.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Total Load Count Indicates the total number of times a new copy of the program has been loaded since CICS was started.

Total Use Count Indicates the total number of times the program has been used since CICS was started.

CICSplex Program Definition Summary attribute group

The CICSplex Program Definition Summary attributes report key information about how a program is defined to CICS.

The CICSplex Program Definition Summary attribute group cannot be used for historical data collection.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Concurrency Indicates whether the program is quasi-reentrant or threadsafe.

Current Copies The number of copies of the program currently in storage.

Current Use Count The sum of the number of tasks currently using this program and the number of current copies that are loaded.

Language The language of the program used by CICS. If a program has been defined to use JVM then it is used, otherwise the deduced language value is used. If the deduced language has not been determined, the defined language is used.

Length The length of the program as determined by CICS.

Loaded From Indicates from where the program loaded; the CICS region or library.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Program Location The area of the CICS address space where the program resides.

Program Name The eight-character name that uniquely identifies this program to CICS.

Program Status The status of the program; this status can be enabled or disabled.

Remote APPLID The APPLID of the CICS region where the remote program is defined. This APPLID is an alphanumeric string of up to eight characters in length.

Remote Program ID Is the name of this program in the remote system.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Statistics Use Count Indicates the use count since statistics were reset. A value of -1 indicates n/a.

Total Use Count Indicates the total number of times the program has been used since CICS was started.

CICSplex Program Details attribute group

The CICSplex Program Details attribute group returns details about an executing CICS program. It provides detailed information about the program in addition to that provided by the CICSplex Exit Program Analysis attributes.

API Status Is the API status. These are the values: Unknown, CICSAPI, and OPENAPI.

CEDF Status Is the CEDF status. These are the values: Unknown, Not Applicable, CEDF, and NO CEDF.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string of up to eight characters. CICS region names are always in uppercase characters.

COBOL Type Is the COBOL compiler that generated this program.

Compression Removals Is the number of times the program was removed because of compression. The valid format is an integer.

Concurrency Is the concurrency attribute of the program. These are the values: Unknown, Quasi-reentrant, and Threadsafe.

Copy Is the copy requirement indicator. These are the values: Unknown, Required, and Not required.

Dynamic Status The program's dynamic status indicator. These are the values: Unknown, Dynamic, and Not dynamic.

Enable Status The enable status indicator. These are the values: Unknown, Enabled, and Disabled.

Entrypoint Address Is the address of the program entry point. This value is an alphanumeric string of up to eight characters.

Execution Key Is the program's execution key. These are the values: Unknown, Not applicable, CICS key, and User key.

Execution Set Is the program's execution set. These are the values: Unknown, Not applicable, Full API, and DPL.

Fetch Count Is the number of times the program has been fetched. The valid format is an integer.

Hold Status Indicates whether the program was loaded with HOLD indicator. These are the values: Unknown, Not Applicable, HOLD, and NOHOLD.

JVM Class Is the name of the JVM class associated with this program. This value is an alphanumeric string of up to 255 characters.

JVM Debug Is the JVM debugging flag. These are the values: Unknown and NODEBUG.

JVM Profile Is the name of the JVM profile associated with the program. This value is an alphanumeric string of up to 16 characters.

Language Is the programming language specified for the program. These are the values: Unknown, Not applicable, Not defined, Assembler, C, COBOL, Java, LE370, and PL/1.

Language Deduced Is the programming language deduced for the program. These are the values: Unknown, Not applicable, Not defined, Assembler, C, COBOL, Java, LE370, and PL/1.

Length Is the length of the loaded program (0 if not yet loaded). The valid format is an integer.

Loadpoint Address Is the address of the program load point. This value is an alphanumeric string of up to eight characters.

Location Is the location of the current copy. These are the values: Not_loaded 0, CDSA 1, LPA 2, ECDSA 3, ERDSA 4, ELPA 5, SDSA 6, ESDSA 7, RDSA 8, PCDSA 9, PUDSA A, EPCDSA B, EPUDSA C, Unknown Z

LPA Status Is the program's Link Pack Area eligibility. These are the valid values: Unknown, Not applicable, LPA, and Not LPA.

Newcopy Count Is the number of times the program has been newly copied. The valid format is an integer.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string of up to 32 characters and case-sensitive.

Program Name Is the name of the current activity. This name is an alphanumeric string of up to eight characters.

Program Type Is the program usage type. These are the values: Unknown, Mapset, Partitionset, and Program.

Remote APPLID The APPLID of the CICS region where the remote program is defined. This APPLID is an alphanumeric string of up to eight characters in length.

Remote Name Is the name by which the module is known in the CICS region named in its definition's REMOTESYSTEM option. This name is an alphanumeric string of up to eight characters.

Remote System Is the name of the CICS region in which the program is defined. This name is an alphanumeric string of up to four characters. CICS region names are always in uppercase characters.

Residence Count Is the number of separate uses of this program that were taking place when this information was retrieved. The valid format is an integer.

RPL Offset Is the offset into the DFHRPL DD concatenation to the PDS from which this program was loaded; this DD statement is listed in the JCL that launches CICS. The primary data set in the concatenation has offset 0, the second data set has offset 1, and so on. The valid format is an integer.

Runtime Environment Is the program's runtime environment. These are the values: Unknown, Not applicable, Non LE/370, Unknown, JVM, LE/370, and XPLINK.

Share Status Is the share status indicator. These are the values: Unknown, Not applicable, Private, and Shared.

Storage Location Is the storage residence location. These are the values: Unknown, Not applicable, Any, and Below.

System ID Indicates the four character name that uniquely identifies an active z/OS system within a given CICSplex. The value format is an alphanumeric string of up to four characters. z/OS System IDs are always in uppercase characters.

Times Used Is the number of times the program has been used since the start of the current CICS session (in other words, since the last reset). The valid format is an integer.

Transaction ID Is the name of the transaction under which this program executes remotely. This name is an alphanumeric string of up to eight characters.

Use Count Is the number of times the program has been used. The valid format is an integer.

CICSplex Recovery Manager Details attribute group

The CICSplex Recovery Manager Details attribute group includes statistics about the performance of the CICS recovery manager.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Current Indoubt shunted time Is the total time that the units of work are currently shunted for indoubt failures that have been waiting in this condition. This time value is measured accurate to three decimal places. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Current Indoubt shunted UOWs 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. A shunted UOW is one awaiting resolution of these values: an indoubt failure, a commit failure, or a backout failure.

Current RO commit fail UOWs Is the current number of units of work that have been shunted for commit or backout failure because a local resource manager was not able to perform commit or backout processing at this time on behalf of the UOW during syncpoint.

Current shunted RO commit fail time Is the total time that the units of work currently shunted for commit or backout failures have been waiting in this condition. This time value is measured to three decimal places. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Indoubt Actions Trandef Is the total number of UOWs that were forced to complete syncpoint processing because their transaction definition specified that they could not wait indoubt.

The UOWs are either committed or backed out according to the transaction definition's indoubt action attribute, regardless of the actions specified or taken by any other participating region in this distributed UOW.

Indoubt Actions Timeout Is the total number of shunted indoubt UOWs that were forced to complete syncpoint processing because their transaction definition wait for indoubt timeout value was exceeded.

The UOWs are either committed or backed out according to the transaction definition's indoubt action attribute, regardless of the actions specified or taken by any other participating region in this distributed UOW.

Indoubt Actions 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 used by the UOW was unable to wait indoubt.

The UOWs are either committed or backed out according to the transaction definition's 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.

Indoubt Actions Operator Is the total number of shunted indoubt UOWs that were forced to complete syncpoint processing when a CEMT, or EXEC CICS, SET UOW command was issued.

The UOWs are either 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.

Indoubt Actions Other Is the number of UOW forced indoubt actions that occurred because UOW uses recoverable facilities other than above (for example, terminal RDO), which invalidate the ability to support indoubt waiting.

Indoubt Actions Mismatched Is the total number of UOWs that were forced to resolve using indoubt action mismatches. This 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 above fields), 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.

No Waiting in LU61 Is the number of UOW forces that occurred because the UOW uses an LU61 intersystem link, which cannot support indoubt waiting.

No Waiting in MRO 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.

No Waiting in RMI Is the number of UOW forces that occurred because the UOW uses an RMI (TRUEs) that declared an interest in syncpoint but could not support indoubt waiting.

No Waiting in Transient data 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 for indoubt transient data.

The UOWs are either committed or backed out according to the transaction definition's 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.

No waiting in other Is the number of UOW forces that occurred because the UOW uses recoverable facilities other than above (for example, terminal RDO), which invalidate the ability to support indoubt waiting.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Resynchronizations Is the total number of resynchronization requests.

Syncpoints forward Is the total number of syncpoint requests to commit forward.

Syncpoints backward Is the total number of syncpoint requests to commit backward. For example, EXEC CICS SYNCPOINT ROLLBACK.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Total Indoubt shunted UOWs 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 Indoubt shunted UOWs time Is the total time that the UOWs shunted for indoubt failure spent waiting in this condition. This time value is measured to three decimal places. The value can be entered in the hh:mm:ss.ddd format, for example, 00:20:00.567 or as ssssss.ddd, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Total RO commit fail UOWs Is the total number of UOWs that had to be shunted for commit or backout failure because a local resource manager was not able to perform commit/backout processing at that time, but have now completed.

Total shunted RO commit fail time Is the total time that the UOWs shunted for commit or backout failures waited in this condition, but have completed. This time value is measured to three decimal places. The value can be entered in the HH:MM:SS.DD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

CICSplex Region Dataset Analysis attribute group

The CICSplex Region Dataset Analysis attributes report on the internal resources of CICS regions.

Active Strings Is the current number of updates against the data set.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Concatenation Number Is the data set concatenation number as specified in the Job JCL.

Data Set Disposition Is the Data Set Disposition.

Data Set Name Is the name of data set allocated to the CICS region.

Data Set Type Is the type of data set.

DDNAME Is the DDNAME as specified in region JCL.

File Access Returns a value identifying the access method used with this data set. These are the values:

BDAM
The access method is BDAM.

NOTAPPLIC
The data set has not been opened by the CICS region in which the command is issued.

VSAM
The access method is VSAM.

File Attributes Specifies whether the file is to be accessed in RLS mode. The file must be closed, and either disabled or unenabled, to change the access mode to RLS access or to non-RLS access. The non-RLS mode becomes either LSR or NSR, depending on the value specified for LSRPOOLID in the file resource definition.

Number of Strings Is the number of VSAM strings allocated.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Volser Is the volume serial number of the data set.

VSAM Enable status Is the enable status of a VSAM file.

VSAM Open Status Is the Open/Close status of a VSAM file.

CICSplex Region Overview attribute group

The CICSplex Region Overview attributes report on the internal resources of CICS regions. These resources include storage, files, queues, and enqueues.

Note: The attributes within the CICSplex Region Overview group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

AIDs Indicates the number of automatic initiate descriptors (AIDs) found on the AID chain within a given CICS region. The value format is a positive integer, maximum four characters. An AID is created when CICS is unable to start a task because a resource is not available. An accumulation of these descriptors can adversely affect CICS storage and CPU availability. An AID remains in CICS until the resource is available, CICS is shut down, or the AID is stopped.

Any Current WS Faults Indicates if any current Web Service requests had a timeout associated with them.

Any Current WS Timeouts Indicates if any current Web Service requests had a fault associated with them.

ASID The unique address space identifier of the address space on the LPAR; it is displayed as a four digit hexadecimal field.

CICS Region Name Indicates the job name or the modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CICS SYSIDNT Indicates the four character CICS system ID assigned to this CICS region. The value format is an alphanumeric string, maximum four characters, and case-sensitive. CICS system IDs are always in uppercase characters.

CICS TOD Clock Indicates the time of day clock setting in the CICS Common System Area (CSA). The time value is measured to two decimal places. The value can be entered in the HH:MM:SS.DD format, for example, 00:20:00.56 or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

CICS TOD Updated Indicates whether the CICS time of day clock is being updated. When a task goes into a loop and the CICS task dispatcher is unable to regain control, the CICS time of day clock field in the Common System Area is not updated by task control. These are the values: Yes and No

CICS Version Indicates the version of CICS running in the region.

CICSPlex Name Indicates the name of the CICSPlex that this CICS region is assigned to.

CPU Utilization Indicates the percentage of accumulated CPU time for the CICS region. This value is calculated at the beginning and end of a short elapsed-time interval. The difference between these two values is the amount of CPU consumed in the CICS region during that interval; this difference is then represented as a percentage of the elapsed-time interval. The value format is a percentage in the range 0-999.

Example:

- Accumulated CPU time at start of time interval = 2 sec
- Length of time interval = 10 sec
- Accumulated CPU time at end of time interval = 5 sec
- CPU consumed during the 10-second time interval = 5 - 2 sec = 3 sec

Therefore percent of CPU used during time interval = 3/10 =**30**%.

A low-to-zero value indicates the absence of a workload or non dispatch by z/OS. A high-to-100% (or greater) value indicates a heavy workload or a potential loop in either your application or CICS code. If the workload is running on multiple CPUs, the CPU utilization can exceed 100%.

If you want fractional values, you must include a decimal point and either zero or one decimal places; for example, **5.2**.

Current VSAM Buffer Waits Indicates the total number of current VSAM buffer waits for the file definitions in the current CICS region. The value format is a positive integer, maximum four characters.

Current VSAM String Waits Indicates the total number of current VSAM string waits for the file definitions in the current CICS region. The value format is a positive integer, maximum four characters.

Enqueue Waits Indicates the number of CICS enqueues exclusively controlling a resource that tasks are also waiting for. The value format is a positive integer, maximum four characters. A large number signifies that too many tasks are competing for exclusive access to the same resources at the same time, which indicates a looping task, a deadlock situation, or poor response time from a task that holds an enqueued resource.

This value is stored in units of 1/100; therefore, when you open an event as attributes, you must interpret the performance index value of 1234 as 12.34. When you see the performance index in a view, however, a decimal point is inserted; therefore you interpret a value of 1234 as 12.34.

Highest Pct Class MaxT The highest percentage of transactions with respect to the class limit for any one transaction class.

ICEs Indicates the number of interval control elements (ICEs) found on the ICE chain within a given CICS region. The value format is a positive integer, maximum four characters. An ICE is created whenever a time-dependent request for a CICS service is made. When the expiration time for the ICE is reached, the CICS service requested is initiated if the resources required for the service are available. If the requested service is task initiation, CICS creates an automatic initiate descriptor (AID) on ICE expiration. The AID either initiates the task or waits until required resources become available.

I/O Rate Indicates the rate at which I/O operations are being performed in a specified CICS region per second of elapsed time. It includes both application- and CICS-initiated I/O operations. The value format is a maximum of four characters. If you want fractional values, you must include decimal points and up to two decimal places. For example, if you want 5.2 seconds, add the decimal point.

Largest Contiguous Available LSQA Indicates the largest amount of contiguous local system queue area (LSQA) that is available. If LSQA accumulates to reach the highest level of the allocated private region, address space termination occurs. The value format is a positive integer, maximum four characters.

Largest Contiguous Available OSCOR Indicates the largest amount of contiguous free operating system core (OSCOR) that is available. If OSCOR is consumed to meet the IEALIMIT or expands to the lowest level of the local system queue area (LSQA) address space termination occurs. The value format is a positive integer, maximum four characters.

Maximum Tasks Percent Indicates the total number of tasks within a CICS region, expressed as a percentage of the MXT limit. Attaching of new tasks within the CICS region stops when the maximum task limit reaches 100%. The value format is a percentage in the range 0-100.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Page Rate Indicates the number of page-in operations in the CICS region per CPU second. The paging rate is important because CICS transactions wait until a page-in resolves. The value format is a maximum of four characters. If you want fractional values, you must include decimal points and up to two decimal places. For example, if you want 5.2 seconds, add the decimal point.

Queued Remote Requests The CICS region's total number of queued allocation requests for MRO, ISC, and IP sessions. The value format is a positive integer of maximum four bytes

Region Status Indicates CICS address space position. These are the values:

In
Indicates that the region is swapped in.

Inactive
Indicates that the CICS region is inactive.

N/S
Indicates that the CICS region is non-swappable.

Out
Indicates that the region was swapped out during data collection, perhaps for the entire sample period, and that the sample is incomplete.

RLS Status The current status of VSAM Record-Level Sharing (RLS) in this CICS region. This field can take on one of these values:

Active
CICS has registered with an SMSVSAM server, and VSAM RLS is currently active.

Inactive
CICS has registered with an SMSVSAM server, but VSAM RLS is currently inactive due to an SMSVSAM server failure. All RLS requests will fail until CICS performs dynamic VSAM RLS restart, which occurs automatically when the SMSVSAM server is restarted.

RLS NO
This CICS region does not support VSAM RLS, either because CICS was initialized with RLS=NO as a system initialization parameter or because CICS forced RLS to NO because the level of VSAM in the z/OS version under which CICS is running does not support VSAM RLS.

Unknown
OMEGAMON has not yet determined the status of VSAM RLS in this CICS region.

SOS The short-on-storage indicator. These are the values: YES and NO.

Start Time The time the CICS region was started. This may show as n/a if the OMEGAMON agent is of a prior version.

Storage Violations The number of storage violations that have occurred within the last hour. A storage violation occurs when CICS detects storage corruption for a task. The value format is a positive integer, with a maximum of four characters.

System ID The four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Total Queued Transactions The total number of transactions queued for Maximum task or transaction class limits.

Transaction Rate Indicates the average number of transactions executed in one minute of elapsed time. For example, if the statistics are collected every 10 minutes, and the total number of transactions during the last 10 minutes is 300, the average number of transactions per minute is 30. The value format is a positive integer of maximum two bytes.

VTAM ACB Open Indicates whether the VTAM Access Method Control Block (ACB) is open or closed. The VTAM ACB defines the interface between the application code (CICS) and VTAM routines enabling CICS to use the VTAM facilities. These are the values: Yes and No.

VTAM Applid Indicates the eight character name that specifies the VTAM applid of the CICS region. Each CICS region has a unique VTAM applid. The VTAM applids are always in uppercase characters. The value is an alphanumeric string, maximum eight characters and is case-sensitive.

VTAM Generic Applid Indicates the eight character name that specifies the generic VTAM applid of the CICS region. Each CICS region has a specific and a generic VTAM applid. Generic VTAM applids are always in uppercase characters. The value is an alphanumeric string, maximum eight characters and is case-sensitive.

Working Set Size Indicates the amount of central (both real and expanded) storage owned by the address space, including both address space and other storage, for example, dataspace, expressed as

kilobytes. If the working set size value is high and central storage is constrained, considerable paging activity occurs, which degrades the response time. The value format is a positive integer, maximum four characters.

Worst Region Performance Index The worst performance index value for the CICS region, which is calculated using the response time for a service class and its' response time goal. This value is a useful indicator as to which CICS region's response time might be starting to degrade. The number is presented as a percentage, accurate to two decimal places. A performance index greater than 1.00 indicates that the service class is no longer meeting its defined response time goal.

Worst Region Service Class Name The name of the service class whose transaction response times are performing the worst with respect to the user defined goals in the CICS region. The name is an alphanumeric string, with a maximum of eight characters, in length. The designation n/a is shown when there is no data to display.

XCF GROUP Indicates the eight character name of the XCF group where the CICS region belongs.

CICSplex Request Model Details attribute group

The CICSplex Request Model Details attribute group returns information about REQUESTMODELs. A REQUESTMODEL resource definition maps an inbound request that is formatted using the Internet Inter-ORB PROTOCOL (IIOP) to a CICS transaction that is to be started to process the request. The INQUIRE REQUESTMODEL command returns information about an installed REQUESTMODEL.

Bean name Is a 240 character field containing the (possibly generic) bean name that matches the name of an enterprise bean in an XML deployment descriptor. This field is blank if the TYPE attribute is CORBA.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CORBA SERVER name Is the identifier of the parent CORBA server. It is a four character field containing the (possibly generic) name of the destination CORBA server for this REQUESTMODEL.

Interface Is the (possibly generic) name of the matching IDL interface. It can be up to 255 characters. This field is blank if the TYPE attribute is EJB.

Interface Type Is the name of the JAVA Interface type. These are the values:

HOME
Specifies that this is the home interface for the bean.

REMOTE
Specifies that this is the component interface for the bean.

BOTH
Matches both the home and component interfaces for the bean.

n/a
Returned if the TYPE attribute is CORBA.

Module Is the (possibly generic) name of the matching IDL module. It can be up to 255 characters. This field is blank if the TYPE attribute is EJB.

Operation Is the (possibly generic) name of the matching IDL operation or bean method name. It is a 255 character field.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Request Model Id Is the identifier of the current Request Model.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Transaction Id Is the name of the CICS transaction to be executed when a request for the current Request Model is received.

Type Indicates the name of the Request Model type. These are the values:

EJB
Matches enterprise bean requests as specified by the EJB parameters.

CORBA
Matches CORBA requests as specified by the CORBA parameters.

GENERIC
Matches both enterprise bean and CORBA requests.

CICSplex Request Model Summary attribute group

The CICSplex Request Model Summary attribute group provides summary information about all REQUESTMODEL resource definitions, which map inbound requests formatted using the Internet Inter-ORB Protocol (IIOP) to CICS transactions to be started to process the request.

Bean Name Is the identifier of the current Enterprise Java bean.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CORBA SERVER name Is the identifier of the parent CORBA server. The value format is an alphanumeric string, maximum four bytes.

Origin Node Is the combination of the z/OS System ID (SMFID) and the CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Request Model Id Is the identifier of the current Request Model. The value format is an alphanumeric string, maximum eight bytes.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Transaction Id The name of the CICS transaction to be executed when a request for the current Request Model is received. The value format is an alphanumeric string, maximum four bytes.

Type This indicator shows the Request Model type. Valid values are EJB, CORBA, and Generic.

CICSplex Resource Limiting Definitions attribute group

The CICSplex Resource Limiting Definitions attribute group provides information about the resource limits that determine when a resource-limiting action will be initiated.

These attributes provide details of the rules that control the amount of resources a task is permitted to use before OMEGAMON takes action.

CICS Region Name The job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Kill Limit The value at which OMEGAMON will attempt to KILL the task whose use of this resource exceeds the limit.

Kill Limit Milli The value at which OMEGAMON will attempt to KILL the task whose use of this resource exceeds the limit.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Resource The type of resource that this rule applies to. The valid format is an alphanumeric string, with a maximum of eight characters.

System ID The SMF identifier that uniquely identifies an active CICS operating system within a specific CICSplex. The valid format is an alphanumeric string, with a maximum of four characters.

Transaction ID The transaction ID mask that this rule applies to. The valid format is an alphanumeric string, with a maximum of four characters.

Type Indicates whether the rule is included or excluded for the program application.

Warn Limit The limit at which OMEGAMON will take the defined warning action if the use of this resource by the task exceeds the limit.

Warn Limit Milli The limit at which OMEGAMON will take the defined warning action if the use of this resource by the task exceeds the limit.

CICSplex Resource Signature attribute group

The CICSplex Resource Signature attributes provide signature information about who last made changes to the resource and when they were made. Support for identity propagation helps to improve cross-platform accountability and the auditing of access to sensitive business information and applications.

Change Agent The agent that last changed this CICS object's definition.

Change Agent Release The release of the agent that last changed this CICS object's definition. The valid format is an alphanumeric string, with a maximum of eight characters.

Change Time The time at which this object's definition was last changed in this CICS region.

Change Userid The userid of the user who last changed this object's definition. The valid format is an alphanumeric string, with a maximum of eight characters.

CICS Region Name The job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Definition Source The source of this CICS object definition.

Define Time The time that the object was defined to this CICS region.

Install Agent The agent that installed the selected object into this CICS region. The valid format is an alphanumeric string, with a maximum of eight characters.

Install Time The time that the selected object was installed into this CICS region.

Install User ID The userid of the agent that installed the selected object into this CICS region.

Object Name The name of the selected CICS object.

Object Type The object type associated with the selected CICS object.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Original Change Agent The change agent before any override was applied.

System ID The SMF identifier that uniquely identifies an active z/OS operating system. The valid format is an alphanumeric string, with a maximum of four characters.

CICSplex Response Time Analysis attribute group

The CICSplex Response Time Analysis attributes help you determine response times for active groups defined with OMEGAMON. Data displays for only those groups that have registered activity within the last nine minutes. Use the CICSplex Response Time Analysis attributes in situations to customize the display of critical and warning lights based on specified response time thresholds.

These attributes provide data for the Response Time Analysis table views.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Exceeds RTA Threshold Indicates whether or not the response time threshold stored in the OMEGAMON group definition has been exceeded. These are the enumerated values: Yes or No.

Group Name Is the descriptive name assigned to the OMEGAMON group. The valid format is an alphanumeric string, with a maximum of 12 characters.

Group Number Is the numeric identifier of the OMEGAMON group. The valid format is an integer, with a maximum of two digits.

Group Type The element types belonging to the OMEGAMON group. These are the valid values:

- Terminal
- Logical Unit
- Program
- Transaction

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Response Time Is the average group response time for the current one-minute interval. This time value is measured to two decimal places. The value can be entered in the HH:MM:SS.DD format, for example, 00:20:00.56 or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

Response Time 1 Minute Ago Is the average group response time for the previous one-minute interval. This time value is measured to two decimal places. The value can be entered in the HH:MM:SS.DD format, for example, 00:20:00.56 or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

Response Time 2 Minutes Ago Is the average group response time for the one-minute interval that expired two minutes ago. This time value is measured to two decimal places. The value can be entered in the HH:MM:SS.DD format, for example, 00:20:00.56 or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

Response Time 3 Minutes Ago Is the average group response time for the one-minute interval that expired three minutes ago. This time value is measured to two decimal places. The value can be entered

in the HH:MM:SS.DD format, for example, 00:20:00.56 or as SSSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

Response Time 4 Minutes Ago Is the average group response time for the one-minute interval that expired four minutes ago. This time value is measured to two decimal places. The value can be entered in the HH:MM:SS.DD format, for example, 00:20:00.56 or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

Response Time 5 Minutes Ago Is the average group response time for the one-minute interval that expired five minutes ago. This time value is measured to two decimal places. The value can be entered in the HH:MM:SS.DD format, for example, 00:20:00.56 or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

Response Time 6 Minutes Ago Is the average group response time for the one-minute interval that expired six minutes ago. This time value is measured to two decimal places. The value can be entered in the HH:MM:SS.DD format, for example, 00:20:00.56 or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

Response Time 7 Minutes Ago Is the average group response time for the one-minute interval that expired seven minutes ago. This time value is measured to two decimal places. The value can be entered in the HH:MM:SS.DD, for example, 00:20:00.56 or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

Response Time 8 Minutes Ago Is the average group response time for the one-minute interval that expired eight minutes ago. This time value is measured to two decimal places. The value can be entered in the HH:MM:SS.DD format, for example, 00:20:00.56 or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

Response Time 9 Minutes Ago Is the average group response time for the one-minute interval that expired nine minutes ago. This time value is measured to two decimal places. The value can be entered in the HH:MM:SS.DD format, for example, 00:20:00.56 or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

System ID Indicates the SMF identifier that uniquely identifies an active z/OS operating system. The valid format is an alphanumeric string, with a maximum of four characters.

CICSplex Response Time Elements attribute group

The CICSplex Response Time Elements attributes help you determine response times for all members of either a single OMEGAMON group, or for all defined groups. Data displays for only those groups that have registered activity within the last nine minutes. Use the CICSplex Response Time Elements attributes in situations to customize the display of critical and warning lights based on specified response time thresholds.

These attributes provide data for the Response Time Elements table views.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Element Identifier Is the name assigned to a terminal, to a program, to a transaction, or to a logical unit. The valid format is an alphanumeric string, with a maximum of eight characters.

Element Type Is the resource associated with the element. These are the valid values:

- Terminal
- Logical Unit
- Program
- Transaction

Exceeds RTA Threshold Indicates whether or not the response time threshold stored in the OMEGAMON group definition has been exceeded. These are the enumerated values: Yes and No.

Group Number Is the numeric identifier of the OMEGAMON group. The valid format is an integer, with a maximum of two digits.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Response Component Is the type of response time measurement used for the element. Transactions, programs, and terminals display the internal CICS response time, while logical units, broken down into host and network figures, present the end-to-end response time. These are the valid values:

- CICS
- End-to-End
- Host
- Network

Response Time Is the average element response time for the current one-minute interval. The value is measured to two decimal places. The value can be entered in the HH:MM:SS.DD format, for example, 00:20:00.56 or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

Response Time 1 Minute Ago Is the average element response time for the previous one-minute interval. The value is measured to two decimal places. The value can be entered in the HH:MM:SS.DD format, for example, 00:20:00.56 or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

Response Time 2 Minutes Ago Is the average element response time for the one-minute interval that expired two minutes ago. The value is measured to two decimal places. The value can be entered in the HH:MM:SS.DD format, for example, 00:20:00.56 or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

Response Time 3 Minutes Ago Is the average element response time for the one-minute interval that expired three minutes ago. The value is measured to two decimal places. The value can be entered in the HH:MM:SS.DD format, for example, 00:20:00.56 or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

Response Time 4 Minutes Ago Is the average element response time for the one-minute interval that expired four minutes ago. The value is measured to two decimal places. The value can be entered in the HH:MM:SS.DD format, for example, 00:20:00.56 or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

Response Time 5 Minutes Ago Is the average element response time for the one-minute interval that expired five minutes ago. The value is measured to two decimal places. The value can be entered in the HH:MM:SS.DD format, for example, 00:20:00.56 or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

Response Time 6 Minutes Ago Is the average element response time for the one-minute interval that expired six minutes ago. The value is measured to two decimal places. The value can be entered in the HH:MM:SS.DD format, for example, 00:20:00.56 or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

Response Time 7 Minutes Ago Is the average element response time for the one-minute interval that expired seven minutes ago. The value is measured to two decimal places. The value can be entered in the HH:MM:SS.DD format, for example, 00:20:00.56 or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

Response Time 8 Minutes Ago Is the average element response time for the one-minute interval that expired eight minutes ago. The value is measured to two decimal places. The value can be entered in

the HH:MM:SS.DD format, for example, 00:20:00.56 or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

Response Time 9 Minutes Ago Is the average element response time for the one-minute interval that expired nine minutes ago. The value is measured to two decimal places. The value can be entered in the HH:MM:SS.DD format, for example, 00:20:00.56 or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

System ID Indicates the SMF identifier that uniquely identifies an active z/OS operating system. The valid format is an alphanumeric string, with a maximum of four characters.

CICSplex RLS Lock Analysis attribute group

The CICSplex RLS Lock Analysis attributes report on tasks waiting for a Record Level Sharing (RLS) resource and tasks holding the records. Use the CICSplex RLS Lock Analysis attributes in situations to help identify applications that are making poor use of serially reusable resources and degrading system performance.

These attributes provide data for the VSAM RLS Lock Analysis table view.

Argument or Key Indicates one of following identifiers: the complete record key for the VSAM KSDS files, the relative byte address for the VSAM RRDS files, or the record number for the VSAM ESDS files. The value format is an alphanumeric string, a maximum of 256 characters, and is case-sensitive.

CICS Region Jobname Indicates either the job name or modify ID of the CICS region being monitored or the job name of the CICS region running a transaction that is holding an RLS record being waited on by transactions running in the CICS region being monitored. Each CICS region in a z/OS operating system has a unique job name. This job name is used for operations initiated from the z/OS system console. The value format is an alphanumeric string, maximum eight characters, and is case-sensitive. CICS region names are always in uppercase characters.

Dataset Name Indicates the name of the VSAM data set allocated to the selected CICS region. The value format is an alphanumeric string, a maximum of 44 characters, and is case-sensitive.

Dataset Type Indicates the name of the type of VSAM data set. These are the valid values:

ESDS
Entry sequence data set

KSDS
Key sequence data set

RRDS
Relative record data set

VRRDS
VSAM relative record data set

Unknown

Key Length Indicates the length of the record key. The value format is an integer, maximum two bytes, and in the range 0-32767.

Origin Node Is the combination of the z/OS System ID (SMFID) and the CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

z/OS System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. z/OS System IDs are always in uppercase characters. The value is an alphanumeric string, a maximum of four characters and case-sensitive.

Task No. Is the number sequentially assigned by CICS to uniquely identify each task. The value format is an alphanumeric string, a maximum of five characters, and is case-sensitive.

Task State Indicates whether the task is waiting for a record or holding one. These are the values: Holder, Retained, and Waiter.

Time in Suspend Indicates the length of time the task has been in a waiting or holding state. The value format is an alphanumeric string, maximum 11 characters. In the example, format is hh:mm:ss:hh Indicates the amount of time is zero hours, 14 minutes, 7 seconds, and 42 hundredths of a second. Example: 00:14:07.42.

Time in Suspend Hours Indicates the hours portion of the length of time the task has been in a waiting or holding state. The value format is a numeric string with a maximum of two characters.

Time in Suspend Minutes Indicates the minutes portion of the length of time the task has been in a waiting or holding state. These are the values: 0-59.

Time in Suspend Numeric Indicates the length of time (accurate to two decimal places) the task has been in a waiting state or a holding state. This attribute allows the time to be presented graphically. The value can be entered in the hh:mm:ss.dd format, for example, 00:20:00.56 or as ssssss.dd, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

Time in Suspend Seconds Indicates the seconds portion of the length of time the task has been in a waiting or holding state. These are the values: 0-59.

Time in Suspend Hundredths of a Second Indicates the hundredths-of-a-second portion of the length of time the task has been in a waiting or holding state. The value format is a numeric string with a maximum of two characters.

Transaction ID Indicates the four character name of the transaction. The format is an alphanumeric string with a maximum of four characters, and is case-sensitive.

CICSplex Service Class Analysis attribute group

The CICSplex Service Class Analysis attributes report on statistical information for a service class interval. Use the Service Class Analysis attributes in situations to monitor performance items such as the response time goal for the service class, the number of completed transactions for an interval, average response time, and percent-of-goal information for the service class during the interval. These attributes provide data for the Service Class Analysis table view.

Note: The attributes within the CICSplex Service Class Analysis group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

50 Percent of Goal Transaction Count Indicates the number of transactions whose response time was 50% (or less) of the response time goal. The value format is a positive integer, maximum four characters.

60 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 50% and less than 60% of the response time goal. The value format is a positive integer.

70 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 60% and less than 70% of the response time goal. The value format is a positive integer.

80 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 70% and less than 80% of the response time goal. The value format is a positive integer.

90 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 80% and less than 90% of the response time goal. The value format is a positive integer.

100 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 90% and less than 100% of the response time goal. The value format is a positive integer.

110 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 100% and less than 110% of the response time goal. The value format is a positive integer.

120 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 110% and less than 120% of the response time goal. The value format is a positive integer.

130 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 120% and less than 130% of the response time goal. The value format is a positive integer.

140 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 130% and less than 140% of the response time goal. The value format is a positive integer.

150 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 140% and less than 150% of the response time goal. The value format is a positive integer.

200 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 150% and less than 200% of the response time goal. The value format is a positive integer.

400 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 200% and less than 400% of the response time goal. The value format is a positive integer.

Average 1st Dispatch Delay Indicates the average time that tasks within the service class waited to be dispatched for the first time. The wait might be due to the maximum or class maximum tasks limit being reached.

Average DB2 Time Indicates the average time that tasks within a service class spent in DB2.

Average Dispatch Time Indicates the average time that tasks within the service class spent running on a CICS TCB.

Average DSA Storage occupied Indicates the average amount of user DSA storage that was occupied by the tasks within this service class for the duration of the collection interval.

Average EDSA Storage occupied Indicates the average amount of user EDSA storage that was occupied by the tasks within this service class for the duration of the collection interval.

Average Execution Time Indicates the average time from the first dispatch of the task until the end of the task for the tasks within the service class.

Average Response Time Indicates the average time (accurate to three decimal places) taken to complete all tasks during the collection interval. This average is calculated by adding the response time of each task within a service class and dividing the sum by the total number of completed tasks during the collection interval. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567. The value format is a positive integer, maximum four bytes.

Average Response Time MS Indicates the average time in seconds taken to complete all tasks during the collection interval.

Average time using CPU Indicates the average time that tasks within a service class spent using the CPU.

Average time using RLS CPU Indicates the average amount of CPU time that each RLS file request consumed on an MVS SRB on behalf of a given service class.

Average time waiting on Adabas Indicates the average time that tasks within a service class waited for ADABAS requests to complete.

Average Unidentifiable Delay Indicates the average time that tasks within a service class spent waiting on resources other than CPU, DB2, DL/I, File Control, MRO, Redispatch, Temporary Storage, Transient Data, RLS CPU, and ENQs.

Average Wait on Datacom Indicates the average time that tasks within a service class spent waiting for Datacom requests to complete.

Average Wait on DLI Indicates the average time that tasks within a service class spent waiting for DL/I requests to complete.

Average Wait on ENQ Delay Indicates the average time that tasks within the service class waited as a result of an enqueue.

Average Wait on FILEs Indicates the average time that tasks within a service class spent waiting for File requests to complete.

Average Wait on IC Delay Indicates the average time that tasks within a service class waited as a result of an interval control delay.

Average Wait on IDMS Indicates the average time that tasks within a service class spent waiting for IDMS requests to complete.

Average Wait on Journal Indicates the average time that tasks within the service class spent waiting for explicit journal I/O requests to complete.

Average Wait on MQ Indicates the average time that tasks within a service class waited for the MQ connection.

Average Wait on MRO Indicates the average time that tasks within the service class waited for all MRO operations to complete.

Average wait on Redispatch Indicates the average time that the tasks in the service class waited for redispatch.

Average Wait on SUPRA Indicates the average time that tasks within a service class waited for SUPRA requests to complete.

Average Wait on TD-IO Indicates the average time that tasks within a service class waited for VSAM transient data I/O.

Average Wait on TS IO Indicates the average time that tasks within a service class waited for VSAM temporary storage I/O.

CPU Time Std Deviation Indicates the standard deviation of the CPU time for the tasks within this collection interval.

Goal Response Time Indicates the time (accurate to three decimal places) that has been set as a goal for a service class. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567. The value format is a positive integer, maximum four bytes.

Goal Type Indicates the performance objective that your site defines for a service class. This objective is expressed as an average response time (A) or a percentage of transactions meeting a specified response time goal (P). These are the values: Average and Percent.

The format for an average response time goal is a response time goal specified as an average response time is formatted in Service Level Analysis views as HH:MM:SS:TTT-hours, minutes, seconds, and thousands of seconds.

Example: An average response time goal of five and one-half seconds shows as `00:00:05:500`.

The format for a percentage goal is a percentage of goal is formatted in Service Level Analysis views as HH:MM:SS:TTT-nn%. The response time goals for a service class can be overridden within a service policy. Example: `00:00:01:000-90%` specifies that at least 90 percent of the transactions in the service class should finish within one second.

Greater than 400 Percent of Goal Transaction Count Indicates the number of transactions whose response time was more than 400% of the response time goal. The value format is a positive integer.

Highest Response Time Indicates the highest response time in seconds of all tasks during the collection interval.

Highest Time Using CPU Indicates the highest CPU time in seconds of all tasks during the collection interval.

Interval End Timestamp Indicates the time when the CICS Service Level Analysis collector finished accumulating service class data for the interval. After the data is accumulated, it is displayed in the CICS Service Level Analysis report or writes it to the persistent data store. The value format is CYYMMDDHHMMSSmmm, where:

C
Century (0 for 20th, 1 for 21st, and so forth)

YY
Year

MM
Month

DD
Day

HH
Hour

MM
Minutes

SS
Seconds

mmm
Milliseconds

Example: `1010521130500000` indicates the data was collected on May 21, 2001 at 1:05 pm.

Interval Length Indicates the length of the interval in seconds at which CICS Service Level Analysis data is summarized. This interval is five minutes in length for current reports. For historical reports, this item indicates the interval set by your system administrator. The value format is a positive integer, maximum four bytes.

Interval Start Timestamp Indicates the time when the CICS Service Level Analysis collector began accumulating service class data for the interval. The value format is CYYMMDDHHMMSSmmm, where:

C
Century (0 for 20th, 1 for 21st, and so forth)

YY
Year

MM
Month

DD
Day

HH
Hour

MM
Minutes

SS
Seconds

mmm
Milliseconds

Example: `1010521130500000` indicates the data was collected on May 21, 2001 at 1:05 pm.

Number of Abended Transactions Indicates the number of transactions within this collection interval that abnormally terminated.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Percent of Goal Indicates what percentage of transactions within a service class must meet the response time goal. It is assigned to a service class when the service class is created or when its goal is overridden for a service policy. The value format is a positive integer.

Percent of time Dispatched Indicates the percentage of the elapsed time that tasks within the service class spent running on a CICS TCB.

Percent of time using CPU Indicates the percentage of elapsed time that tasks within a service class spent using the CPU. In CICS, the data is collected by CMF. The value format is a positive integer.

Percent of time using CPU for RLS Indicates the amount of CPU time that each RLS file request consumed on a z/OS SRB on behalf of a given service class. This time combined with the Percent of time using CPU give the total amount of CPU consumed by the service class for a given attribute. The value format is a positive integer.

Percent of time waiting for 1st Dispatch Indicates the percentage of elapsed time that tasks within the service class waited to be dispatched for the first time. The wait might be due to the maximum or class maximum tasks limit being reached.

Percent of time waiting on Adabas Indicates the percentage of elapsed time that tasks within a service class waited for ADABAS requests to complete. The total ADABAS wait time is expressed as a percentage of the total elapsed time. The wait time accumulates at the application layer as a result of embedded KOCRMCLL or KOCGLCLL macros.

Percent of time waiting on Datacom Indicates the percentage of elapsed time that tasks within a service class waited for DATACOM requests to complete. The total DATACOM wait time is expressed as a percentage of the total elapsed time. The wait time accumulates at the application layer as a result of embedded KOCRMCLL or KOCGLCLL macros.

Percent of time waiting on DB2 Indicates the percentage of elapsed time that tasks within a service class waited for DB2 requests to complete. The total DB2 wait time is expressed as a percentage of the total elapsed time. The wait time accumulates at the CICS application layer (that is, as a result of EXEC SQL statements).

Percent of time waiting on DLI Indicates the percentage of elapsed time that tasks within a service class waited for DL/I requests to complete. The total DL/I wait time is expressed as a percentage of the total elapsed time. The wait time accumulates at the application layer (that is, as a result of EXEC DLI or CALL DLI statements).

Percent of time waiting on ENQ Delay Indicates the percentage of elapsed time that tasks within a service class waited as a result of an enqueue.

Percent of time waiting on File Control Indicates the percentage of elapsed time that tasks within the service class waited for all file I/O requests to complete. A high percentage of elapsed time spent waiting for file control requests indicates inefficient local shared resources (LSR) specifications, too few strings, or lockout conditions. The value format is a positive integer.

Note: This data is available only in CICS Transaction Server, V3.1 and higher.

Percent of time waiting on IDMS Indicates the percentage of elapsed time that tasks within a service class waited for IDMS requests to complete. The total IDMS wait time is expressed as a percentage of the total elapsed time. The wait time accumulates at the application layer as a result of embedded KOCRMCLL or KOCGLCLL macros.

Percent of time waiting on Interval Control Indicates the elapsed time that a service class waited as a result of an interval control delay. The value format is a positive integer.

Percent of time waiting on Journal Control Indicates the percentage of elapsed time that tasks in the service class waited for explicit journal I/O requests to complete. The value format is a positive integer.

Explicit journal I/O includes any journal switching, buffering, and intervention that occurs between the time the journal requests were issued and the time they completed. Implicit journaling occurs when you define a file to CICS with the logging option. Updates to the file triggers journal operations, the elapsed time percentage for which is included under File Control Percentage. A high percentage of elapsed time spent waiting for journal I/O indicates disk contention or reserves, elongated journal switching times, excessive journal buffer sizes, or inappropriate journal options.

Note: This data is available only in CICS Transaction Server, V3.1 and higher.

Percent of time waiting on MQ Indicates the percentage of time that was spent waiting for the MQ connection. The value format is a positive integer.

Percent of time waiting on MRO Indicates the percentage of elapsed time that tasks in the service class waited for all multiregion operations (MROs) to complete. A high percentage of time spent waiting for MRO operations indicates problems in a connected CICS region that caused the originating transaction to wait for an extended period of time. The value format is a positive integer.

Note: This data is available only in CICS Transaction Server, V3.1 and higher.

Percent of time waiting on Redispatch Indicates the percentage elapsed time that the tasks in the service class waited for re dispatch. This is the aggregate of the wait times between each event completion and user-task re dispatch, but it does not include the time spent waiting for first dispatch. A high percentage of elapsed time spent waiting for re dispatch indicates that you have looping transactions or that you have reached the CMXT limit. The value format is a positive integer.

Note: This data is available only in CICS Transaction Server, V3.1 and higher.

Percent of time waiting on SUPRA Indicates the percentage of elapsed time that tasks within a service class waited for SUPRA requests to complete. The total SUPRA wait time is expressed as a percentage of the total elapsed time. The wait time accumulates at the application layer (that is, as a result of embedded KOCRMCLL or KOCGLCLL macros).

Percent of time waiting on TD I/O Indicates the percentage elapsed time that the tasks in the service class waited for VSAM transient data I/O. A high percentage of elapsed time spent waiting for this type of I/O indicates inadequacies in the configuration of the transient data set DFHINTRA; this is caused by insufficient strings, bad VSAM control interval size and (CISZ) inefficient or conflicting disk allocation. The value format is a positive integer.

Note: This data is available only in CICS Transaction Server, V3.1 and higher.

Percent of time waiting on TS I/O Indicates the percentage of elapsed time that the tasks in a service class waited for VSAM temporary storage I/O. A high percentage of elapsed time spent waiting for this type of I/O indicates inadequacies in the configuration of the DFHTEMP temporary storage data set. Typical causes are insufficient strings that are not correctly defined for VSAM control interval size (CISZ) and inefficient or conflicting disk allocation. The value format is a positive integer.

Note: This data is available only in CICS Transaction Server, V3.1 and higher.

Percent of time waiting on unidentifiable Indicates the percentage of elapsed time spent by tasks in a service class waiting on resources other than: CPU, DB2, DL/I File Control, Journal, MRO, Redispatch, Temporary Storage, or Transient Data. This item includes waits on interval control, Basic Mapping Support Paging (BMS), and program loading. This percentage is calculated by subtracting the percentages listed that are the highest from 100. The value format is a positive integer.

Performance Index Indicates how well a service class is performing relative to its response time goal. The value format is a positive integer, maximum 4 digits.

This value is stored in units of 1/100; therefore, when you open an event as attributes, you must interpret a Performance Index value of 1234 as 12.34. When you see the Performance Index in a view, however, a decimal point is inserted; therefore you interpret a value of 1234 as 12.34.

Note: Average response-time goals: If you specify the response time goal of a service class as an average response time, the performance index measures how close the response time for the service class is to the response time goal. The performance index is calculated by dividing the actual average response time by the response time goal. When the average response time equals the response time goal, the performance index is displayed as 1.00.

For example, if the average response time for a service class is 1.5 seconds and the response time goal is two seconds, then the performance index is 0.75.

If you specify the response time goal as a **Percent of Goal** (also known as a percentile goal), the performance index measures whether the percentage of transactions specified in the goal meets the response time goal.

When a task completes, it is calculated in one of the following percent-of-goal buckets: 50% or less, 60%, 70%, 80%, 90%, 100%, 110%, 120%, 130%, 140%, 150%, 200%, 400%, or greater than 400%. This is based on its actual response time compared with the goal response time. The performance index

is calculated by locating the percent-of-goal bucket with a cumulative total equal to or higher than the percent of goal for the service class. The cumulative total is the sum of the number of transactions for each bucket, from lowest to highest.

Example: Assume the following:

- The response time goal for a service class is 80% of all transactions completing within 3 seconds.
- Ten transactions complete within the time interval as follows: The first three transactions average 1.5 seconds (50% of goal); the second three average 2.9 seconds (90% of goal); the third three average six seconds (200% of goal); and the last transaction completes in 99 seconds (400% of goal).
- The total transaction count is 10. Eighty percent of the total transaction count is eight.

Adding from lowest to highest, the eighth transaction occurs in the 200% bucket. The performance index is, therefore, 2.00. Note that the transaction in the >400% bucket does not affect the performance index.

Performance Index Percent Indicates how well a service class is performing relative to its response time goal. The value format is a positive integer.

Region Name Indicates the eight character name that identifies a CICS region. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, maximum eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Response Time Std Deviation Indicates the standard deviation of the response time for the tasks within this collection interval.

Service Class Name Indicates the eight character user-defined name that identifies a service class. The value format is an alphanumeric string, maximum eight characters, and case-sensitive.

Summary Type Indicates the type of summary for the service class. These are the types:

CICS
for a CICS region

REGN
for all the transactions for a particular CICS region

SUMM
for the z/OS instance

TRAN
for a single transaction

The value format is an alphanumeric string, maximum four characters, and case-sensitive.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Transaction ID Indicates the four character name of the transaction for this summary. It may be null if the summary type is not transaction specific. The format is an alphanumeric string with a maximum of four characters, and is case-sensitive.

Transaction rate per minute Indicates the average number of transactions that were run in one minute of elapsed time. For example, if the statistics are collected every 10 minutes, and the total number of transactions during the last 10 minutes is 300, the average number of transactions per minute is 30. The value format is a positive integer, maximum four characters.

Transactions Total Indicates the total number of tasks in a service class that completed execution during the collection interval. The value format is a positive integer, maximum four characters.

Workload Name Indicates the eight-character work load name assigned to this service class when the service class was created. The value format is an alphanumeric string, maximum eight characters, and case-sensitive.

CICSplex Service Level Analysis attribute group

The CICSplex Service Level Analysis attributes are used by the enhanced 3270 UI to enable service level configuration. These attributes are not available from Tivoli Enterprise Portal.

GOAL Indicates the CICSplex Service Level Analysis Goal, which provides a summary of response time goal. It is shown in hh:mm:ss.nnn format, where hh (hours) is a 2-digit number from 00 through 24, mm (minutes) is a 2-digit number from 00 -through 59, ss (seconds) is a 2-digit number from 00 though 59, and nnn (milliseconds) is 3-digit number from 000 through 999.

Percent of Goal Indicates what percentage of transactions within a service class must meet the response time goal. It is assigned to a service class when the service class is created or when its goal is overridden for a service policy. The value range is 0-99, and 0 is average.

Service Class Name Indicates the eight-character service name of the service class.

Workload Name Indicates the eight-character workload name assigned to this service class when the service class was created.

CICSplex Service Task Details attribute group

The CICSplex Service Task Details attribute group reports the state of the OMEG INIT transaction. The OMEG INIT transaction must be running, if you want OMEGAMON for CICS on z/OS to report the information listed for the Service Task Details workspace, among others.

Application Trace Status The status of application trace in the CICS region. The application trace facility status can be active, inactive, or unknown.

ASID Address space ID in hex.

CICS Monitoring Status Indicates the status of the CICS Monitoring Facility (CMF) for the CICS region.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case sensitive. CICS region names are always in uppercase characters.

CICS SMF Data Indicates if CICS performance data will be recorded to SMF or suppressed by OMEGAMON. Valid values: NO_OMEG_INIT=I, On=O, Off=F, n/a=N

CICSPlex Name The name of the CICSPlex that the CICS region is assigned to. This name is an alphanumeric string, with a maximum of eight characters.

Common Interface Applid The VTAM applid of the common interface that is used to monitor the CICS region.

Common Interface Domain Name The fully qualified IP domain name of the system on which the common interface is monitoring the CICS region that is running. This value is provided in the KC5ENV member of RKANPARU library or auto discovered by the IBM Z OMEGAMON for CICS agent code.

Common Interface Logon Data The data that is passed to the common interface as VTAM logon data. The data might include logon variables such as the LROWS parameter.

Common Interface LU Group The LU Group used to log on to the selected VTAM application.

Common Interface STC name Supplies the modify ID of the IBM Z OMEGAMON for CICS common interface job that is monitoring the target CICS region.

Common Interface TN3270 Port The port used to log on to a TN3270 session.

Common Interface Terminal Type The type of terminal used for this 3270 session.

Compress OMEGAMON SMF Indicates whether OMEGAMON will compress the SMF data it produces in the region. Valid values: NO_OMEG_INIT=I, On=O, Off=F, n/a=N

DEXAN Status The status of DEXAN in the CICS region. The DEXAN status can be active (A), inactive (I), abended (X), in error (E), and unknown (U).

OMEGAMON Global Data Area The name of the OMEGAMON Global Data Area module being used to monitor the target CICS region.

OMEGAMON Initialization Status Indicates whether OMEGAMON code has been successfully installed in the CICS address space, using either PLTPI or an OMEG INIT transaction. The values are shutdown, complete and inactive.

OMEGAMON Monitoring Status Indicates whether OMEGAMON Monitoring is enabled in the CICS region.

OMEGAMON XMIT DD name Shows the optional RKC2XMnn statement used to associate CICS with a specific common interface address space.

ONDV Status The status of online data viewing (ONDV) in the CICS region. The ONDV status can initializing, active, quiescing, abended, inactive, waiting for WTOR reply, and unknown.

Origin Node Is the combination of the z/OS System ID (SMFID) and the CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Panel Check The eight character login panel check string that is used for 3270 linking.

RLIM Status The status of resource limiting (RLIM) in the CICS region. The RLIM status can be active, inactive, OMEGAMON inactive, unknown and unavailable.

Service Task Execution Result The response received after IBM Z OMEGAMON for CICS attempts to communicate with its service task running in CICS. The value is an alphanumeric string, with a maximum 64 characters.

Service Level Analysis Data Indicates Whether transactions from this region will be included in OMEGAMON Service Level Analysis reporting. Valid values: NO_OMEG_INIT=I, On=O, Off=F, n/a=N

SIT SUFFIX Indicates the suffix of the System Initialization Table (SIT) being used in this CICS region.

Source of the CICSPlex Name The source of the CICSPlex name that the CICS region is assigned to. These are the values: CPSM, Default, OMEGAMON

Sysplex The name of the sysplex the LPAR belongs to.

System ID The four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters and case sensitive. z/OS System IDs are always in uppercase characters.

Trace All Program Calls Indicates that Application Trace Facility was (Y) or was not (N) enabled to trace CICS EXEC CALLs of type Program Control for all user tasks, which do not have an existing trace filter set.

Translated Execution Result The response received after OMEGAMON for CICS attempts to communicate with its service task running in CICS. The value is an alphanumeric string.

User Data 8 The eight character user data field.

User Data 64 The 64 character user data field.

WLM Blocks The number of WLM blocks that were requested for storage to be used by the WLM component. The value format is a positive integer, maximum four bytes.

WLM Transaction Data Current Percent The current percentage of WLM storage that is reserved for the transaction records that are being used. The value format is a positive integer, maximum two bytes. The range is 0 to 100 percent.

WLM Transaction Data Peak Percent The maximum percentage of WLM storage that is reserved for the transaction records that are being used. The value format is a positive integer, maximum two bytes. The range is 0 to 100 percent.

WLM Accumulation Data Current Percent The current percentage of WLM storage that is reserved for the summary records that are being used. The value format is a positive integer, maximum two bytes. The range is 0 to 100 percent.

WLM Accumulation Data Peak Percent The maximum percentage of WLM storage that is reserved for the summary records that are being used. The value format is a positive integer, maximum two bytes. The range is 0 to 100 percent.

CICSplex Storage Analysis attribute group

The CICSplex Storage Analysis attributes report on usage of the Dynamic Storage Area (DSA), Extended Dynamic Storage Area (EDSA) and Grande Dynamic Storage Area (GDSA) for a CICS region. Use the CICSplex Storage Analysis attributes in situations to determine if there are any storage-related problems, such as a short-on-storage (SOS) condition.

These attributes provide data for the Storage Analysis table view.

Area Indicates the value of the Dynamic Storage Area (DSA), Extended Dynamic Storage Area (EDSA) or Grande Dynamic Storage Area (GDSA) name. The value format is an integer. Valid values are:

- DSA 1
- EDSA A
- GDSA J
- CICS_Key_DSA 2
- User_Key_DSA 3
- Shared_Key_DSA 4
- Read_Only_Key_DSA 5
- Program_CICS_Key_DSA 7
- Program_User_Key_DSA 8
- CICS_Key_EDSA B
- User_Key_EDSA C
- Shared_Key_EDSA D
- Read_Only_Key_EDSA E
- Trusted_Key_EDSA F
- Program_CICS_Key_EDSA G
- Program_User_Key_EDSA H
- CICS_Key_GDSA K
- User_Key_GDSA L
- Shared_Key_GDSA M

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case sensitive. CICS region names are always in uppercase characters.

Largest Contiguous Available The largest contiguous size of OS storage.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Page Pool Area Indicates whether the area represents a Page Pool Area.

Percent Used Indicates the percentage of storage in use for the specified dynamic storage area. The value format is a percentage in the range 0-100.

Region Size Indicates the region size limit for the specified dynamic storage area.

SOS Indicates whether a short-on-storage (SOS) condition exists for a given dynamic storage area. These are the values: Yes and No.

Storage Allocated Indicates the amount of storage allocated for the specified dynamic storage area. The value format is a positive integer, maximum four bytes.

Storage Allocated Indicates the amount of storage allocated for the specified dynamic storage area. The value format is a positive integer, maximum eight bytes.

Storage Available Indicates the amount of storage currently available within the specified dynamic storage area. This value represents storage within one or more extents that has not been allocated to a subpool. It is calculated by subtracting the storage in use from the amount of storage allocated. The value format is a positive integer of maximum four bytes.

Storage Available 8 Indicates the amount of storage currently available within the specified dynamic storage area. This value represents storage within one or more extents that has not been allocated to a subpool. It is calculated by subtracting the storage in use from the amount of storage allocated. The value format is a positive integer of maximum eight bytes.

Storage Limit Indicates the total amount of storage that you are allowed to request from CICS for the specified dynamic storage area. The value format is a positive integer, maximum four bytes.

Storage Limit 8 Indicates the total amount of storage that you are allowed to request from CICS for the specified dynamic storage area. The value format is a positive integer, maximum eight bytes.

Storage in Use Indicates the amount of storage that has been CICS GETMAINed from the dynamic storage area. The value format is a positive integer, maximum four bytes.

Storage in Use 8 Indicates the amount of storage that has been CICS GETMAINed from the dynamic storage area. The value format is a positive integer, maximum eight bytes.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case sensitive. z/OS System IDs are always in uppercase characters.

z/OS Storage Free The amount of OS storage unallocated.

CICSplex Subpool Details attribute group

The CICSplex Subpool Details attribute group shows statistics about the various CICS storage subpool allocations and their current usage.

Access Type The storage key of the subpool. This is either CICS , USER, or READONLY.

Area The name of a specific Dynamic Storage Area, Extended Dynamic Storage Area or Grande Dynamic Storage Area for the subpool. This name is an alphanumeric string, with one character. Valid values: CICS_Key_DSA, User_Key_DSA, Shared_Key_DSA, Read_Only_Key_DSA, Program_CICS_Key_DSA, Program_User_Key_DSA, CICS_Key_EDSA, User_Key_EDSA, Shared_Key_EDSA, Read_Only_Key_EDSA, Trusted_Key_EDSA,Program_CICS_Key_EDSA, Program_User_Key_EDSA, CICS_Key_GDSA, User_Key_GDSA, Shared_Key_GDSA, DSA, EDSA, GDSA

Accumulated Element Length Is the total size of all element lengths in the current subpool in the current CICS region. The value format is an integer of maximum four bytes.

Accumulated Element Length (KB) Is the sum of all element lengths in kilobytes. The total size of all element lengths for the current subpool of the current CICS region rounded up to the nearest kilobyte. The value format is an integer of maximum four bytes.

Accumulated Element Length (KB) Is the sum of all element lengths in kilobytes. The total size of all element lengths for the current subpool of the current CICS region rounded up to the nearest kilobyte. The value format is an integer of maximum eight bytes.

Accumulated Element Length (MB) The sum of all element lengths in megabytes. The total size of all element lengths for the current subpool of the current CICS region rounded up to the nearest megabyte. The value format is an integer of maximum four bytes.

Boundary The value of the storage boundary for the current subpool in the current CICS region. The value format is an integer of maximum four bytes.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case sensitive. CICS region names are always in uppercase characters.

Current Element Length Is the count of elements associated with the current subpool in the current CICS region. The value format is an integer of maximum four bytes.

Current Page Storage Is the size of the current page storage for the current subpool in the current CICS region. The value format is an integer of maximum four bytes.

Current Page Storage (KB) Is the size of the current page storage allocation in kilobytes. The size of the current page allocation for the current subpool in the current CICS region rounded up to the nearest kilobyte. The value format is an integer of maximum four bytes.

Current Page Storage (KB) Is the size of the current page storage allocation in kilobytes. The size of the current page allocation for the current subpool in the current CICS region rounded up to the nearest kilobyte. The value format is an integer of maximum eight bytes.

Current Page Storage (MB) Is the size of the current page storage allocation in megabytes. The size of the current page allocation for the current subpool in the current CICS region rounded up to the nearest megabyte. The value format is an integer of maximum four bytes.

DSA name The name of the Dynamic Storage Area (DSA) that the domain subpool is allocated from. These are the valid values: CDSA, UDSA, SDSA, RDSA, ECDSA, EUDSA, ESDSA, and ERDSA.

DSA Index The DSA Index number. These are the valid values:

- CICS_Key_DSA 2
- User_Key_DSA 3
- Shared_Key_DSA 4
- Read_Only_Key_DSA 5
- Program_CICS_Key_DSA 7
- Program_User_Key_DSA 8
- CICS_Key_EDSA B
- User_Key_EDSA C
- Shared_Key_EDSA D
- Read_Only_Key_EDSA E
- Trusted_Key_EDSA F
- Program_CICS_Key_EDSA G
- Program_User_Key_EDSA H
- CICS_Key_GDSA K
- User_Key_GDSA L
- Shared_Key_GDSA M
- DSA 1
- EDSA A

DSA Use Percentage The current usage percentage of the subpool in its parent dynamic storage area in the current CICS region.

Fixed Size Length The length of the current subpool in the current CICS region. The value format is an integer of maximum four bytes.

FREEMAIN The number of storage FREEMAIN requests issued in this subpool in the current CICS region. The value format is an integer of maximum four bytes.

GETMAIN The number of storage GETMAIN requests issued in this subpool in the current CICS region. The value format is an integer of maximum four bytes.

High-Water Mark Is the highest value of the subpool size that has occurred since the current CICS region was started. The high-water mark is the peak amount of storage actually used by a particular resource. The value format is an integer of maximum four bytes.

High-Water Mark (KB) Is the high water mark storage size in kilobytes. The highest value of the subpool size that has occurred since the current CICS region was started rounded up to the nearest kilobyte. The value format is an integer of maximum four bytes.

High-Water Mark (KB) Is the high water mark storage size in kilobytes. The highest value of the subpool size that has occurred since the current CICS region was started rounded up to the nearest kilobyte. The value format is an integer of maximum eight bytes.

High-Water Mark (MB) Is the high water mark storage size in megabytes. The highest value of the subpool size that has occurred since the current CICS region was started rounded up to the nearest megabyte. The value format is an integer of maximum four bytes.

Initial Free Space Is the total number of bytes of the elements that are initially allocated when the domain subpool is pre-allocated. The value format is an integer of maximum four bytes.

Initial Free Space (KB) Is the initial free space in kilobytes. The size of the free space area for the current subpool in the current CICS region rounded up to kilobytes. The value format is an integer of maximum four bytes.

Initial Free Space (KB) Is the initial free space in kilobytes. The size of the free space area for the current subpool in the current CICS region rounded up to kilobytes. The value format is an integer of maximum eight bytes.

Initial Free Space (MB) Is the initial free space in megabytes. The size of the free space area for the current subpool in the current CICS region rounded up to megabytes. The value format is an integer of maximum four bytes.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Subpool Type The subpool is identified as either a domain or task subpool. This value is an alphanumeric string, with one character.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case sensitive. z/OS System IDs are always in uppercase characters.

Subpool Location Is an indicator that designates whether the subpool exists above or below the 16 MB line in the current CICS region. These are the values: BELOW or ABOVE.

Subpool Name Is the name of the current subpool in the current CICS region. This name is an alphanumeric string, with a maximum of eight characters.

Task Number The number sequentially assigned by CICS to uniquely identify each task in a CICS region. This value is an alphanumeric string, with a maximum of five characters.

CICSplex System Initialization Table attribute group

The CICSplex System Initialization Table attributes report on keyword settings that are used to control the operation of CICS. System Initialization Table keywords, their descriptions, and associated values are

displayed. Use the CICSplex System Initialization Table attributes in situations to quickly verify that all of your SIT definitions are properly set.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case sensitive. CICS region names are always in uppercase characters.

Description Is a thumbnail sketch of the function performed by the associated keyword. The value format is an alphanumeric string, with a maximum of 47 characters.

Keyword System Initialization control supported by the current version of CICS. The value format is an alphanumeric string, with a maximum of 12 characters.

Origin Node Is the combination of the z/OS System ID (SMFID) and the CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system. The value format is an alphanumeric string, maximum four characters, and case sensitive. z/OS System IDs are always in uppercase characters.

Translated Description Is a thumbnail sketch of the function performed by the associated keyword. The value format is an alphanumeric string.

Value Is a setting that has been assigned to the associated keyword of the SIT loaded during CICS initialization. The value format is an alphanumeric string, with a maximum of 16 characters.

CICSplex Task Class Analysis attribute group

The CICSplex Task Class Analysis attributes provide details about the transaction classes defined to CICS. They enable you to see how close your CICS systems are to the limits set for the number of tasks in a given class. Use the Task Class Analysis attributes in situations to monitor activity for a specific transaction class. If the percentage for a class consistently runs at 100%, it indicates that tasks defined in a class are not initiated because the maximum number of tasks in a class has been reached. If CICS is under utilizing the processor resources, you might want to consider an increase in the class limits to allow more work to flow through the system.

These attributes provide data for the Task Class Analysis table view.

Note: The attributes within the CICSplex Task Class Analysis group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features. There might be an attribute group that is displayed in the Tivoli Enterprise Portal Query Editor and Situation Editor under the name, CICSplex Service Class Raw; however, it cannot be used to create user-defined queries or situations and should be ignored.

Attach Requests The total number of tasks that had executed and are currently executing in this class. The value format is a positive integer.

Average Queuing Time Indicates the average time spent waiting by those tasks that were queued. This metric does not include the wait time for tasks that are currently queuing. The value format is a number of seconds, to three decimal places.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case sensitive. CICS region names are always in uppercase characters.

Class Limit Indicates the maximum number of tasks allowed to run in the transaction class. The value format is a positive integer, maximum four bytes.

Class Name Indicates the transaction class name. The value format is an alphanumeric string, maximum eight characters.

Current Tasks Indicates the current task count in the transaction class. The value format is a positive integer, maximum four bytes.

Number Queued Indicates the number of transactions that are queued. The value format is a positive integer, maximum four bytes.

Oldest Task Queuing Duration Indicates the average time spent waiting by the oldest task that is currently queued. The value format is a number of seconds, to three decimal places.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the system changes the status of the item accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Peak Tasks Indicates the highest number of active and queued transactions. The value format is a positive integer, maximum four bytes.

Percent of Limit Indicates the number of active tasks in a class divided by the class limit. The value format is a percentage in the range 0-100.

Percent of Queue Limit Indicates the number of queued tasks in a class divided by the queue limit. The value format is a percentage in the range 0-100.

Purged Immediately Indicates the number of tasks which were immediately purged due to purge threshold being reached. The value format is a positive integer.

Queue Limit Indicates the maximum number of tasks that are queued. The value format is a positive integer, maximum four bytes.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system. The value format is an alphanumeric string, maximum four characters, and case sensitive. z/OS System IDs are always in uppercase characters.

Tasks Purged while Queuing Indicates the number of tasks which were purged while queuing. The value format is a positive integer.

Times at Limit Indicates the number of times the transaction class limit has been reached. The value format is a positive integer, maximum four bytes.

Times at Purge Threshold Limit Indicates the number of times at purge threshold limit. The value format is a positive integer.

Total Queued Indicates the total number of tasks that were queued. This metric does not include tasks that are currently queuing. The value format is a positive integer.

Total Queuing Time Indicates the time spent waiting by those tasks that were queued. This metric does not include the wait time for tasks that are currently queuing. The value format is a number of seconds, to three decimal places.

CICSplex Task DB2 Statistics attribute group

The CICSplex Task DB2 Statistics attributes report on the DB2 activity carried out by the transaction. The attributes provide counts and elapsed times by SQL command.

CICS Name Identifies the name of the CICS region that is being monitored.

Close cursor time Indicates the total amount of time (in seconds) used by this task for close cursor SQL commands.

Close cursors Indicates the number of times that the close cursor SQL command was issued by this task.

Db2Entry Name Indicates the name of DB2ENTRY used by the task.

Db2Plan Name Indicates the name of DB2PLAN used by the task.

Db2Tran Name Indicates the name of DB2TRAN used by the task.

Delete time Indicates the total amount of time (in seconds) used by this task for delete SQL commands.

Deletes Indicates the number of times that the delete SQL command was issued by this task.

Describe time Indicates the total amount of time (in seconds) used by this task for describe SQL commands.

Describes Indicates the number of times that the describe SQL command was issued by this task.

Elapsed time Indicates the total amount of time (in seconds) used by this task for SQL commands.

Exec immediate time Indicates the total amount of time (in seconds) used by this task for exec immediate SQL commands.

Exec immediates Indicates the number of times that the exec immediate SQL command was issued by this task.

Execute time Indicates the total amount of time (in seconds) used by this task for execute SQL commands.

Executes Indicates the number of times that the execute SQL command was issued by this task.

Fetch time Indicates the total amount of time (in seconds) used by this task for fetch SQL commands.

Fetches Indicates the number of times that the fetch SQL command was issued by this task.

Insert time Indicates the total amount of time (in seconds) used by this task for insert SQL commands.

Inserts Indicates the number of times that the insert SQL command was issued by this task.

Miscellaneous call time Indicates the total amount of time (in seconds) used by this task for misc call SQL commands.

Miscellaneous calls Indicates the number of times that the misc call SQL command was issued by this task.

Open cursor time Indicates the total amount of time (in seconds) used by this task for open cursor SQL commands.

Open cursors Indicates the number of times that the open cursor SQL command was issued by this task.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is a case-sensitive, alphanumeric string, maximum 32 bytes

Prepare time Indicates the total amount of time (in seconds) used by this task for prepare SQL commands.

Prepares Indicates the number of times that the prepare SQL command was issued by this task.

Select time Indicates the total amount of time (in seconds) used by this task for select SQL commands.

Selects Indicates the number of times that the select SQL command was issued by this task.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex.

Task Number Indicates the number that was sequentially assigned by CICS to uniquely identify the task.

Total requests Indicates the total number of SQL commands that were issued by this task.

Transaction ID Indicates the four-character name of the transaction.

Update time Indicates the total amount of time (in seconds) used by this task for update SQL commands.

Updates Indicates the number of times that the update SQL command was issued by this task.

CICSplex Task History Status attribute group

The CICSplex Task History Status attributes provide information about the status of the Task History collector.

Boundary Adjustments Number of times the index allocation has changed since the task history collector was started.

CICS Region Name Identifies the name of the CICS region that is being monitored.

Cross Memory Posts Number of times the CICS region has detected that the Cross Memory Buffer is becoming full and prompted the task history collector to catch up. This value is accumulated since task history was started. A high value may indicate the XM_BUFFER_RECORDS value is too small.

Current Index Allocation Indicates the current percentage of Data Store index allocation. An initial value of 40.0% indicates that the datastore has not yet wrapped. This value automatically adjusts to maximize the utilization of the data store.

Cycle Time Cycle time in seconds.

Data First Logical The first logical address of Data record.

Data First Physical The first physical address of Data record.

Data Last Logical The last logical address of Data record.

Data Span The span of Data.

Data Store Records Indicates the the current number of transactions contained in the datastore.

Data Store Size Physical size of Task History Data Store.

Data Store Type Type of Data Store used by Task History collector. Valid values: DataSpace=D, File=F

Data Store Wraparound Number of times Data portion has wrapped since the task history collector was started.

Display Requests Number of user display requests.

Index First Logical The first logical address of Index record.

Index Last Logical The last logical address of Index record.

Index Wraparounds Number of times index portion has wrapped since the task history collector was started.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is a case-sensitive, alphanumeric string, maximum 32 bytes

Primary Records Number of transaction records in the Data Store.

Reserved Size (Dataspace Only) Specifies the portion of the data space (from 0 to 50 percent) reserved for file, database clock and counter statistics, and Application Trace records. You must specify a number greater than 0 or statistics by filename and or Application Trace records will not be available from the task history collector.

Secondary Records Number of segments of data used for statistics for file or database requests or application trace data in the data store.

System ID Four-character name that uniquely identifies an active z/OS operating system within a given CICSplex.

Start Date and time when Task History collector started.

Status Current status of Task History collector. A value of Unknown may indicate that either the OMEGAMON component in the CICS region is not initialized or the OMEGAMON CICS classic address space is not active.

Time Newest Transaction Date and time of newest transaction in the Data Store.

Time Oldest Transaction Date and time of oldest transaction in the Data Store.

Time Span Time between the oldest and newest records in Data Store.

Transaction Records Received Total number of transaction records received since the task history collector was started.

VSAM Dataset Data set name of the VSAM file.

CICSplex Task Program Details attribute group

The CICSplex Task Program Details attributes describe the details of each of the programs used by a task.

CICS Region Name Identifies the name of the CICS region that is being monitored.

CPU Time The amount of accumulated CPU time for this transaction.

CPU Time on QR TCB Indicates the amount of CPU time (in seconds) the program consumed on the QR TCB for tasks completed since statistics were reset.

Dispatch Time Indicates the amount time (in seconds) the program was dispatched by CICS.

Elapsed Time Indicates the duration (in seconds) the program was in control for tasks completed since statistics were reset.

Invoked Count The number of times this program was entered.

Number of Abends The number of abends which have occurred when this program was in control

Number of EXEC Calls Indicates the number of Exec calls which occurred when this program was in control since statistics were reset.

Number of Mode Switches Indicates the number of mode switches which occurred when this program was in control since statistics were reset.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is a case-sensitive, alphanumeric string, maximum 32 bytes

Program Name Is the name of the current activity. This name is an alphanumeric string of up to eight characters.

System ID Four-character name that uniquely identifies an active z/OS operating system within a given CICSplex.

CICSplex TCPIP Service Statistics attribute group

The CICSplex TCPIP Service Statistics attribute group provides information about the TCP/IP services including the port number, protocol, and the activity of each TCP/IP service. This data is accessed online using the EXEC CICS COLLECT STATISTICS TCPIPSERVICE and the EXEC CICS INQUIRE TCPIPSERVICE CICS Transaction Server commands.

Note: The attributes within the CICSplex TCPIP Service Statistics group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

Attach-time Security Indicates, for ECI over TCP/IP services, the level of attach-time security used by connections to CICS clients. These are the values: LOCAL, VERIFY, and IDENTIFY.

Backlog Is the port backlog for this TCP/IP service. It shows the number of requests that TCP/IP queues for this port before it starts to reject incoming requests. The value format is an integer of maximum four bytes.

Bytes Sent Long The total number of bytes sent by all sockets from the TCP/IP service. The value format is an integer of maximum eight bytes.

Bytes Received Long The total number of bytes received by all sockets from the TCP/IP service. The value format is an integer of maximum eight bytes.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case sensitive. CICS region names are always in uppercase characters.

Client Authentication Is the scheme used to authenticate clients. These are the values:

Asserted
Asserted identity authentication is used. This value is returned only when PROTOCOL has a value of IIOP.

Automatic
If the client does not send a certificate, then HTTP basic authentication is used to obtain a user ID and password from the client.

Basic
HTTP basic authentication is used to obtain a user ID and password from the client.

Certificate
SSL client certificate authentication is used to authenticate and identify the client.

Noauthenticate
The client is not required to send authentication or identification information.

Register
SSL client certificate authentication is used to authenticate the client. If the client's certificate is not associated with a user ID, then HTTP basic authentication is used to obtain the client's user ID. The value is returned only when PROTOCOL has a value of HTTP.

Current number of connections Is the current number of connections for the TCP/IP service. The value format is an integer of maximum four bytes.

DNS Status Is the current state of WLM/DNS registration of this TCPIPSERVICE. The parameter DNSSTATUS returns the current state of WLM/DNS registration of this TCPIPSERVICE. These are the values:

NOTAPPLICABLE
This service is not using DNS connection optimization. No DNSGROUP attribute was specified when the resource was installed.

UNAVAILABLE
Registration is not supported by z/OS.

UNREGISTERED
Registration has not yet occurred (this is the initial state of any service).

REGISTERED
Registration has completed successfully.

REGERROR
Registration has failed with an error.

DEREGISTERED
Deregistration has completed successfully.

DEREGERROR
Deregistration has failed with an error.

Group Critical Specifies whether or not this TCPIPSERVICE is a critical member of the DNS group. The parameter GRPCRITICAL returns value specifying whether or not this TCPIPSERVICE is a critical member of the DNS group. These are the values:

Critical
If this TCPIPSERVICE is closed, or abnormally stops listening for any reason, the group name specified in the DNSGROUP attribute is deregistered from WLM.

Noncritical
If this TCPIPSERVICE is closed, or abnormally stops listening for any reason, the group name specified in the DNSGROUP attribute is not deregistered from WLM, unless this is the last service in a set with the same group name.

Number of Bytes Received Is the number of bytes received by all sockets from the TCP/IP service. The value is an alphanumeric string, with a maximum of 42 characters.

Number of Bytes Received 64 bit Is the number of bytes received by all sockets from the TCP/IP service. The value is an alphanumeric string, with a maximum of 32 characters.

Number of Bytes Sent Is the number of bytes sent by all sockets to the TCP/IP service. The value is an alphanumeric string, with a maximum of 42 characters.

Number of Bytes Sent 64 bit Is the number of bytes sent by all sockets to the TCP/IP service. The value is an alphanumeric string, with a maximum of 32 characters.

Number of Receives Is the number of receive requests issued for the TCP/IP Service on all sockets. The value format is an integer of maximum four bytes.

Number of Sends Is the number of send requests issued for the TCP/IP Service on all sockets. The value format is an integer of maximum four bytes.

Number of Transactions Attached Is the number of transactions attached by this TCP/IP Service. The value format is an integer of maximum four bytes.

Open Status Indicates the status of the TCP/IP service. These are the values: OPEN, CLOSED, CLOSING, and IMMCLOSING.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Peak Number of Connections Is the peak number of connections for the TCP/IP service. The value format is an integer of maximum four bytes.

Port Number Is the port number being used for this TCP/IP service where CICS is monitoring. The value format is an integer of maximum five bytes.

Protocol Specifies the application level protocol used on the TCP/IP port. These are the values:

ECI
CICS ECI protocol is used.

HTTP
HTTP protocol is used.

IIOP
IIOP protocol is used.

USER
The user-defined protocol is used. Messages are processed as non-HTTP messages.

IPIC
The IPIC protocol is used.

Service Open Time (GMT) Is the GMT time at which this TCP/IP service was opened. The field is blank if the TCP/IP service is closed.

Service Open Time (Local) Is the local time at which this TCP/IP service was opened. The field is blank if the TCP/IP service is closed.

SSL Type Is the level of SSL support. These are the valid values: No_SSL, Client_Authentication, and SSL.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case sensitive z/OS System IDs are always in uppercase characters.

TCP/IP Service Name Is the name of the TCP/IP service. This name is an alphanumeric string, with a maximum of eight characters.

TCP/IP Server SSL Support Is the level of SSL support defined for this TCP/IP service. These are the values: No SSL, SSL and Client Authentication

TCP/IP Service Address Is the IP address defined for the TCP/IP stack used for this TCP/IP service. This can be version 4 or version 6 bit format. The value format is an alphanumeric string, maximum 39 characters.

TCP/IP Service IP Address Is the IP address defined for the TCP/IP stack used for this TCP/IP service. The value is an alphanumeric string, with a maximum of 15 characters.

TCP/IP Service Max Data Length Is the maximum data length for a TCP/IP service. The value format is an integer of maximum four bytes.

TCP/IP Service Privacy Is the level of TCP/IP service privacy. These are the values: NOT_SUPPORTED, SUPPORTED, REQUIRED.

TCP/IP Service TSQ Prefix Is the name of the temporary storage queue prefix used to store inbound data and Web documents created by applications. The value is an alphanumeric string, with a maximum of six characters.

TCP/IP Service WLM DNS Group Is the DNS group name that this TCPIPSERVICE registers with the z/OS Workload Manager (WLM). The value is an alphanumeric string, with a maximum of 18 characters.

Transaction ID Is the transaction ID used to process a new request. The value format is an integer of maximum four bytes.

URM Is the name of the service user-replaceable module (URM) to be invoked by the attached task. This name is an alphanumeric string, with a maximum of eight characters.

CICSplex TCPIP Statistics attribute group

The data returned by the CICSplex TCPIP Statistics attribute group monitors the activity of your TCP/IP services. It includes the current and peak numbers for individual sockets and indicates when the limit set by MAXSOCKETS has been reached. Most of this data is accessed online using the EXEC CICS COLLECT STATISTICS TCPIP CICS Transaction Server command.

Note: The attributes within the CICSplex TCPIP Statistics group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

Average MAXSOCKETS delay time Is the average length of time (in seconds accurate to thousandths of a second) that current requests have been waiting because the CICS regions has reached the MAXSOCKETS limit. The valid format is a floating-point number, accurate to three decimal places.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case sensitive. CICS region names are always in uppercase characters.

Current Active IP SOCKETS Is the current number of active IP sockets managed by the CICS sockets domain. The value format is an integer of maximum four bytes.

Current Active SSL SOCKETS Is the current number of SSL sockets. The value format is an integer of maximum four bytes.

Current Delayed at MAXSOCKETS Is the current number of create socket requests delayed because the system is at the MAXSOCKETS limit. The value format is an integer of maximum four bytes.

Current Delay Time at MAXSOCKETS Is the delay time (accurate to three decimal places) for the current create socket request that was delayed because the system is at the MAXSOCKETS limit. The value can be entered in the hh:mm:ss.ddd format, for example, 00:20:00.567 or as sssssss.ddd, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Current Inbound Sockets Is the current number of inbound sockets. The value format is an integer of maximum four bytes.

Current MAXSOCKETS delay time Is the current length of time (accurate to three decimal places) that create socket requests are waiting because the CICS regions has reached the MAXSOCKETS limit. The value can be entered in the hh:mm:ss.ddd format, for example, 00:20:00.567 or as ssssss.ddd, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Current Outbound Sockets Is the current number of outbound sockets. The value format is an integer of maximum four bytes.

Current Persistent Sockets Outbound Is the current number of persistent outbound sockets. The value format is an integer of maximum four bytes.

Maximum Sockets Limit Is the maximum number of TCP/IP sockets. The maximum number of IP sockets is managed by the CICS sockets domain. The value format is an integer of maximum four bytes.

Maximum SSL TCBs Is the maximum number of TCP/IP SSL sockets. The maximum number of SSL sockets is managed by the CICS sockets domain. The value format is an integer of maximum four bytes.

Number Inbound Sockets Created Is the total number of inbound sockets created. The value format is an integer of maximum four bytes.

Number Outbound Sockets Created Is the total number of outbound sockets created. The value format is an integer of maximum four bytes.

Number Outbound Sockets Closed Is the total number of outbound sockets closed. The value format is an integer of maximum four bytes.

Number Times at MAXSOCKETS Is the number of times the maximum number of IP sockets limit (MAXSOCKETS) was reached. The value format is an integer of maximum four bytes.

Open Status Indicates the status of the TCP/IP service. These are the values: Open, Closed, Closing, ImmClosing.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Peak Delayed at MAXSOCKETS Is the peak number of create socket requests delayed because the system has reached the MAXSOCKETS limit. The value format is an integer of maximum four bytes.

Peak Inbound Sockets Is the peak number of inbound sockets. The value format is an integer of maximum four bytes.

Peak Outbound Sockets Is the peak number of outbound sockets. The value format is an integer of maximum four bytes.

Peak Persistent Sockets Outbound Is the peak number of persistent outbound sockets. The value format is an integer of maximum four bytes.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case sensitive. z/OS System IDs are always in uppercase characters.

Timeouts while at MAXSOCKETS Is the total number of create socket requests that were timed out while delayed because the system had reached the MAXSOCKETS limit. The value format is an integer of maximum four bytes.

Total Delayed at MAXSOCKETS Is the total number of create socket requests that were delayed because the system had reached the MAXSOCKETS limit. The value format is an integer of maximum four bytes.

Total Delay Time at MAXSOCKETS Is the total delay time (accurate to three decimal places) for the create socket requests that were delayed because the system is at the MAXSOCKETS limit. The value

can be entered in the hh:mm:ss.ddd format, for example, 00:20:00.567 or as ssssss.ddd, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Total Sockets Created Is the total number of inbound and outbound sockets created. The value format is an integer of maximum four bytes.

SSLcache setting Specifies whether SSL is to use the local or sysplex caching of session IDs. Sysplex caching is only allowed if multiple CICS socket-owning regions accept SSL connections at the same IP address. These are the values: CICS or SYSPLEX. The default value is CICS.

CICSplex Temporary Storage Detail attribute group

The CICSplex Temporary Storage Detail attributes report on the temporary storage pools and queues that exist in the monitored CICS system. Use the CICSplex Temporary Storage Detail attributes in situations to monitor temporary storage pools and queues and provide data in regards to the number, size, model name and prefix, and if the shared temporary storage queue is accessible from the CICS region. These attributes provide data for the Temporary Storage Queues table view.

Note: The attributes within the CICSplex Temporary Storage Detail group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case sensitive. CICS region names are always in uppercase characters.

Hex Queue ID Indicates the name of the temporary storage queue in hexadecimal format. The value format is an alphanumeric string with a maximum of 32 characters.

Items in Queue Indicates the number of items in the temporary storage queue. The value format is an integer with a maximum of two bytes, and in the range 0-32767.

Last Used Interval Indicates the length of the interval in binary seconds since the temporary storage queue was last referenced. The value format is a positive integer with a maximum of four bytes.

Maximum Length Indicates the length in bytes of the largest item in a temporary storage queue. The value format is an integer with a maximum of two bytes, and in the range 0-32767.

Minimum Length Indicates the length in bytes of the smallest item in a temporary storage queue. The value format is an integer with a maximum of two bytes, and in the range 0-32767.

Model Name The temporary storage model name used to control access to the temporary storage queue. The value format is an alphanumeric string with a maximum of eight characters.

Model Prefix The temporary storage model prefix string that best matches the temporary storage queue ID. The value format is an alphanumeric string with a maximum of 16 characters.

Model Pool Name The pool name that is extracted from the currently selected TS model for the queue. If the pool name is different from the pool name that was used when it was created, then the queue is not accessible; the n/a value is displayed when no model is found for the queue. The value format is an alphanumeric string with a maximum of eight characters.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Queue Accessible Indicates if the shared temporary storage queue is accessible from the CICS region. The value format is an alphanumeric string with one character. The displayed values are n/a, Yes, Pool Mismatch and No Model. The n/a value is displayed for queues that are *not* shared, for example, main and auxiliary. The Pool Mismatch value indicates the pool that the queue was found in *is not* the same as the

queue name from the model. The No Model value indicates that *no* matching model was found for the queue.

Queue ID Indicates the name of the temporary storage queue. The value format is an alphanumeric string with a maximum of 16 characters, and is case sensitive.

Queue Type Indicates whether the temporary storage queue is kept in main storage, auxiliary storage, or temporary storage harbored in a coupling facility structure. Valid values are Auxiliary, Main, and Shared.

Shared Pool Name Indicates the name of the temporary storage pool in the coupling facility that contains the queues. The value format is an alphanumeric string with a maximum of eight characters, and is case sensitive.

Structure Name The coupling facility (CF) structure name for the temporary storage queue. The structure name is only applicable to shared TS queues. The value format is an alphanumeric string with a maximum of 16 characters.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string with a maximum of four characters, and is case sensitive. z/OS System IDs are always in uppercase characters.

Tasks Waiting Indicates the number of tasks that are suspended pending access to the temporary storage queue. The value format is a positive integer with a maximum of four bytes.

Total Length Indicates the length in bytes of all the items in the temporary storage queue. The value format is a positive integer with a maximum of four bytes.

Transaction ID Indicates the ID of the transaction that created the temporary storage queue. The value format is an alphanumeric string with a maximum of four characters, and is case sensitive.

CICSplex Temporary Storage Details attribute group

The CICSplex Temporary Storage Details attributes report the CICS use of temporary main storage.

Note: The attributes within the CICSplex Temporary Storage Details group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case sensitive. CICS region names are always in uppercase characters.

Current Queues Is the current number of temporary storage queues created.

HWM Main Storage Used Is the HWM of virtual storage used.

HWM Queues Is the HWM of temporary storage queues created.

Items In Largest Queue Is the number of items in largest queue.

Main Storage Used Is the amount of virtual storage used.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Records GET From Aux Is the number of records GET from Auxiliary Temporary Storage.

Records GET From Main Is the number of records GET from Main Temporary Storage.

Records PUTQ To Aux Is the number of records PUTQ to Auxiliary Temporary Storage.

Records PUTQ To Main Is the number of records PUTQ to Main Temporary Storage.

Request Suspended Is the request suspended indicator.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, a maximum of four characters, and is case sensitive. z/OS System IDs are always in uppercase characters.

Total Queues Is the total number of temporary storage queues created.

Total Records PUT Is the total number of records PUT to Main and Auxiliary Temporary Storage.

Total Records PUTQ Is the total number of records PUTQ to Main and Auxiliary Temporary Storage.

Total Requests Suspended Is the total number of requests suspended.

Unit Table-Compression Is the number of Unit Table compressions.

CICSplex Temporary Storage Extended attribute group

The CICSplex Temporary Storage Extended attributes report the CICS use of temporary auxiliary storage and temporary main storage.

Note: The attributes within the CICSplex Temporary Storage Extended group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

Aux Storage PUTs Is the number of records that application programs wrote to auxiliary temporary storage.

Aux Storage GETs Is the number of records that application programs obtained from auxiliary temporary storage.

Buffer count Is 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 reads Is the number of times a CI has to be read from disk. Increasing the buffer allocation decreases this activity.

Buffer writes Is the total number of WRITEs to the temporary storage data set. This includes both WRITEs necessitated by recovery requirements (see next item) and WRITEs forced by the buffer being needed to accommodate another CI.

Bytes per CI The number of bytes available for use in a DFHTEMP data set control interval (CI).

Bytes per Segment The number of bytes per segment of the DFHTEMP data set.

CI Size Is the size of the control interval in the auxiliary temporary storage queue data set. The size of VSAM's unit of transmission between disk and virtual storage, specified in the CONTROLINTERVALSIZE parameter in the VSAM CLUSTER definition for the temporary storage data set. In general, using large CIs permits more data to be transferred at one time, resulting in less system overhead.

CI Writes Is the count of writes to more than one Control Interval.

CIs in Data Set Is the number of control intervals (CIs) available for auxiliary 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.

CIs in use Is the current number of control intervals (CIs) containing active data.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case sensitive. CICS region names are always in uppercase characters.

Current Buffer waits 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.

Current String waits Is the number of I/O requests that were queued because no strings were available. This is zero if the number of strings is the same as the number of buffers. If this is a high percentage (over 30%) of the number of I/O requests, consider increasing the number of strings initially allocated.

Current TS Queue names Is the current number of TS Queue names.

Current Storage Use (B) Is the current value, expressed in bytes, of the amount of virtual storage used for temporary storage records.

Current Storage Use (K) Is the current value, expressed in kilobytes, of the amount of virtual storage used for temporary storage records.

Current Storage Use (M) Is the current value, expressed in megabytes, of the amount of virtual storage used for temporary storage records.

Exhausted count Is the number of times that auxiliary temporary storage data set was exhausted. This is the number of situations where one or more transactions might have been suspended because of a NOSPACE condition or (using a HANDLE CONDITION NOSPACE command) might have been forced to terminate.

Format writes Is 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 temporary storage data set. A formatted write is attempted only if the current number of control intervals (CIs) available in the auxiliary data set have all been used.

I/O Errors Is the number of unique Shared TS Queue Pools defined either in the TST with DFHTST TYPE=SHARED, or by using TSMODEL.

Longest record Is the size, expressed in bytes, of the longest record written to the auxiliary temporary storage data set.

Longest queue count Is the number of entries in the longest TS Queue.

Main Storage PUTs Is the number of records that application programs wrote to main temporary storage.

Main Storage GETs Is the number of records that application programs obtained from main temporary storage.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Peak Buffer waits Is the peak number of requests queued because no buffers were available.

Peak CIs Is the current number of control intervals (CIs) containing active data.

Peak Storage Use (B) Is the peak value, expressed in bytes, of the amount of virtual storage used for temporary storage records.

Peak Storage Use (KB) Is the peak value, expressed in kilobytes, of the amount of virtual storage used for temporary storage records.

Peak Storage Use (MB) Is the peak value, expressed in megabytes, of the amount of virtual storage used for temporary storage records.

Peak strings The peak number of strings in use. If this is significantly less than the number specified in the SIT, consider reducing the SIT value to approach this number.

Peak TS names Is the peak number of temporary storage queue names in use at any one time.

Peak waits Is the peak number of I/O requests that were queued at any one time because all strings were in use.

Queue creation count Is the number of TS Queues created.

Recovery buffer writes Is the number of TS Queue buffers written for recovery. This is the subset of the total number of WRITEs caused by recovery being specified for queues. This I/O activity is not affected by buffer allocation.

Segment per CI The number of segments available in a DFHTEMP data set control interval (CI).

Shared Pools defined Is the number of unique Shared TS Queue Pools defined either in the TST with DFHTST TYPE=SHARED, or by using TSMODEL.

Shared Pools connected Is the number of the TS pools that are actually connected to by this CICS region.

Shared Pool Reads The number of TS READQs from the Shared TS Queue pool of Queueids.

Shared Pool Writes Is the number of TS WRITEQs to the Shared TS Queue pool of Queueids.

String count 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.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case sensitive. z/OS System IDs are always in uppercase characters.

Total Buffer waits 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.

Total String waits Is the number of I/O requests that were queued because no strings were available. This is zero if the number of strings is the same as the number of buffers. If this is a high percentage (over 30%) of the number of I/O requests, consider increasing the number of strings initially allocated.

TS Compressions Is the number of times that the temporary storage buffers were compressed.

CICSplex Temporary Storage Summary attribute group

The CICSplex Temporary Storage Summary attributes provide status information about the current use of temporary storage for each monitored CICS region. Use these attributes in situations to monitor pool connections and read and write requests for all managed regions. These attributes provide data for the Temporary Storage Summary table view.

Note: The attributes within the CICSplex Temporary Storage Summary group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

Aux Buffer Waits Indicates the number of requests that are currently suspended pending the availability of an auxiliary temporary storage buffer. The value format is an integer of maximum four bytes.

Aux Current String Waits Indicates the current number of queued requests for an available string against DFHTEMP. The value format is an integer of maximum four bytes.

Aux Total String Waits Indicates the total number of queued requests for an available string against DFHTEMP. The value format is an integer of maximum four bytes.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case sensitive. CICS region names are always in uppercase characters.

Main Storage The number of bytes of main storage currently in use by temporary storage queues. The value format is an integer.

Main Storage Limit The total amount of TSMAINLIMIT temporary storage. The value format is an integer.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system,

the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Percent Aux Active Strings Indicates the percentage of VSAM strings currently being used by auxiliary temporary storage. This value is calculated by dividing the current string count by the total number of strings. The value format is a percentage in the range of 0-100.

Percent Aux Buffers in Use Indicates the percentage of auxiliary temporary storage buffers in use. This value is calculated by dividing the current buffers in use by the total number of buffers. The value format is a percentage in the range of 0-100.

Percent Aux CIs in Use Indicates the percentage used of the auxiliary temporary storage VSAM data set Control Intervals (CI). If auxiliary storage is exhausted, severe degradation of CICS performance occurs. The value format is a percentage in the range of 0-100.

Percent Main Storage Used The percent of TSMAINLIMIT in use. The value format is a percentage in the range of 0-100.

Pools Connected Indicates the number of shared temporary storage pools that are connected. The value format is an integer, maximum four bytes.

Pools Defined Indicates the number of shared temporary storage pools that are defined. The value format is an integer, maximum four bytes.

Read Requests Indicates the number of shared read requests for shared temporary storage. The value format is an integer, maximum four bytes.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case sensitive. z/OS System IDs are always in uppercase characters.

Total Tasks Suspended The maximum number of tasks that have been suspended because of waits from temporary storage resources. The value format is an integer.

Write Requests Indicates the number of shared write requests for shared temporary storage. The value format is an integer, maximum four bytes.

CICSplex Terminal Storage Violations attribute group

The CICSplex Terminal Storage Violations attribute group reports on the total number of violations for each terminal that has experienced a storage violation in CICS.

Note: After a storage violation has occurred, collection for this attribute group involves scanning the Terminal Control Table (TCT), which might carry considerable overhead. Exercise caution when using this table for either workspaces or situations.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case sensitive. CICS region names are always in uppercase characters.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Storage Violations Indicates the number of storage violations associated with the terminal. The value format is an integer of maximum four bytes.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case sensitive. z/OS System IDs are always in uppercase characters.

Terminal ID Indicates the four character terminal identifier from the Terminal Control Table (TCT). The value format is an alphanumeric string of maximum four characters.

CICSplex Transaction Analysis attribute group

The CICSplex Transaction Analysis attributes supply data about CICS transaction IDs, the amount of time a transaction has been running, inclusion or exclusion of system transactions, and the type of wait for the transaction. Use the CICSplex Transaction Analysis attributes in situations to help identify applications that are making poor use of serially reusable resources and degrading system performance.

These attributes provide data for the Transaction Analysis table view.

Asynchronous Transaction Indicates if this task used the ASYNC API.

CICS Name Indicates the name that identifies a CICS region. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case sensitive. CICS region names are always in uppercase characters.

CICS SYSIDNT Indicates the four character CICS system ID assigned to this CICS region. CICS system IDs are always in uppercase characters. The value is an alphanumeric string, maximum four characters and case-sensitive.

CICS Transaction ID Indicates the four character name of the transaction as defined to CICS. The value is an alphanumeric string, maximum four characters and case-sensitive.

CPU Time Indicates the amount of accumulated CPU time (in seconds accurate to hundredths of a second) for this task.

CPU Time Indicates the amount of accumulated CPU time (in seconds) used by this task.

Current Program ID Is the currently executing program for this transaction. The value is an alphanumeric string, maximum eight characters.

DB2 Correlation Identifier Provides a link to the DB2 Thread Exceptions workspace supplied with the OMEGAMON for DB2 on z/OS product. The value format is an alphanumeric string, maximum 12 characters. Format is *eeeetttnnnn*, where:

eeee
Is COMD (command), POOL (pool), or ENTR (DB2ENTRY thread).

tttt
Is the CICS transaction identifier.

nnnn
Is a unique number.

Duration of Suspend Indicates the amount of time the transaction had been suspended at the time this information was collected (current time minus transaction suspend time).

Duration of Suspend Indicates the amount of time (in seconds) the transaction had been suspended at the time this information was collected (current time minus transaction suspend time).

Elapsed Time Indicates the time elapsed, accurate to two decimal places, since the start of the monitoring of this transaction from the monitoring perspective. The value can be entered in the hh:mm:ss.dd format, for example, 00:20:00.56, or as ssssss.dd, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056. See the online help for more details on variable substitution or inputting values in situations and filters.

Elapsed Time Indicates the amount of time (in seconds) the transaction had been executing at the time this information was collected (current time minus transaction start time).

Exceeds MAXR Threshold Indicates whether the task is over the global resource threshold for CPU consumption. These are the values: Yes and No.

First Program ID The first program executed when the transaction is invoked. The value is an alphanumeric string, maximum eight characters.

Origin Node The combination of the z/OS System ID (SMFID) and the CICS region name. This is the value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

PSB Name The Program Specification Block identifier scheduled to access an IMS database. The value format is an alphanumeric string, maximum eight characters.

Program Active This item indicates if program data has been collected for this task.

Program ID This item Indicates the CICS program name or the umbrella name. The value format is an alphanumeric string, maximum eight characters.

Recovery Token The unique hexadecimal identifier used to correlate work done between CICS and DBCTL. The value format is an alphanumeric string, maximum 16 characters.

Resource Name The name of the resource the transaction is waiting to access.

Resource Type The category of resource for which the transaction is waiting.

Status Indicates whether the transaction is active or inactive. The status is not displayed in CICS workspaces. Use this value only for creating situations. These are the values: Active or Inactive

Storage Allocated Above 16 MB Indicates the number of kilobytes of storage currently allocated to the transaction above the 16 megabyte line.

Storage Allocated Below 16 MB Indicates the number of kilobytes of storage currently allocated to the transaction below the 16 megabyte line.

Storage Used Above 16 MB Is the number of kilobytes of storage above the 16 megabyte line currently in use by the transaction.

Storage Used Below 16 MB Is the number of kilobytes of storage below the 16 megabyte line currently in use by the transaction.

System Task Indicates whether the task is designated by CICS as a system task or non system task. These are the valid values:

- Yes
- No

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case sensitive. z/OS System IDs are always in uppercase characters.

Task Number Indicates the number sequentially assigned by CICS to uniquely identify each task. The value format is an alphanumeric string, maximum five characters, and case sensitive.

Task State Indicates whether the transaction is currently running or not. These are the values:

- Non-Exe (not executable)
- Dispatabl (dispatchable, that is, the task is waiting to be dispatched by CICS)
- New
- Running
- R_Early
- Purged
- Resumed
- Suspend
- Unused
- Reset

- OK
- Unknown

Termid Indicates the four character ID of the terminal where the transaction originated. The value format is an alphanumeric string, maximum four characters, and case sensitive.

Trace Active Indicates if trace has been collected for the task. These are the valid values:

- Yes
- No

Transaction ID Indicates the four character name of the transaction. The value format is an alphanumeric string, with a maximum of four characters, and case sensitive.

Transaction Group Identifier Indicates transaction group identifier assigned to the task.

Unit of Work Used internally to provide information in unit of work reports. The value format is an alphanumeric string, maximum 52 characters.

User ID Indicates your eight character CICS logon ID. The value format is an alphanumeric string, maximum eight characters, and case sensitive.

User Excluded Indicates that this task was specified in the user excluded list. The list is specified in the OMEGAMON CICS Global Data Area. The possible values are:

- **No**: The transaction was not included in the user excluded list.
- **Yes**: The transaction is included in the user excluded list.
- **No KOCCI**: The status could not be determined, because the OMEGAMON CICS Classic component was not active.
- **No GLOBAL**: The status could not be determined, because the OMEGAMON GLOBAL is not available. This could be because the OMEGAMON code in CICS has not been initialized.

The user excluded list is intended to simplify situations. By adding a condition of `User Excluded ==` No you can be certain that the situation will only be true for transactions which are not in the user excluded list.

Wait Type Indicates the type of wait for the transaction. These are the valid values:

- CPU
- Database
- DatXface
- DBCntl
- DL/I
- Dump
- Enqueue
- Events
- FEPI
- File
- Interval
- JES
- Journal
- Loader
- Lock
- LogMgr
- MQSeries
- MRO

- MRO/ISC
- z/OS
- Other
- Recovery
- Security
- Storage
- Systasks
- TaskCntl
- TaskLims
- TempStor
- Terminal
- TPPS
- TranData
- Unknown
- User
- XRF

CICSplex Transaction Application Program attribute group

The CICSplex Transaction Application Program attributes report detailed information about the application program that issued the current or last EXEC CICS command request. Use the CICSplex Transaction Application Programs attributes to identify a looping transaction, to see the attributes of the currently running program, for example, the length, or to find the location of items in storage pertinent to the program such as its save area or return address.

Addressing Mode Is the AMODE of the application program at the time the CICS EXEC interface program was invoked.

CEDF Allowed Indicates whether or not the execution diagnostic facility (EDF) initiation and termination screens are displayed.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case sensitive. CICS region names are always in uppercase characters.

Commarea Address Is the address of the communication area associated with this transaction.

EI Structure Address Is the address of the EXEC Interface system Structure (EIS) created by CICS.

EI User Structure Address Is the address of the EXEC Interface User Structure (EIUS) created by CICS.

EIB Address Is the address of the EXEC Interface Block (EIB).

Execution Key Indicates the execution key of the application program at the time the CICS EXEC interface program was invoked.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Program Length Is the length of the application program that issued the EXEC CICS command.

Program Mask Is the application program's mask at the time the CICS EXEC interface program was invoked.

Program Name Is the name of the application program that issued the EXEC CICS command.

Program Offset Indicates the hexadecimal offset within the program whence the EXEC CICS command was issued.

Program Return Address Is the application program's return address or register 14 based on the program's savearea address.

Program Save Area Address Is the application program's register savearea address at the time the EXEC CICS command was issued.

Resource Manager ID Is the resource manager ID (EIDRMID).

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Task Number Is the number sequentially assigned by CICS to uniquely identify each task.

Transaction ID Is the four character name of the transaction.

CICSplex Transaction DPL Details attribute group

The CICSplex Transaction DPL Details attribute group provides detailed resource information about the Distributed Program Links made by the transaction.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Number of DPL Requests The number of distributed program link requests issued by the transaction for this program and remote system combination.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

Program Name The name of the distributed program being linked to.

Remote System Name The name of the remote system to which this program link was routed.

System ID The four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Task Number The number sequentially assigned by CICS to uniquely identify each task.

Transaction ID The transaction ID that made the distributed program link requests.

CICSplex Transaction Definition Information attribute group

The CICSplex Transaction Definition Information attributes show the attributes used to define the transaction to CICS. Use these attributes to confirm the definition of a transaction if you are experiencing incorrect output or abnormal task termination. If the storage violation field is not zero, you might want to disable this transaction through CEMT until the cause is determined.

Bridge Exit Is the default bridge exit associated with this transaction.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Class Name Is the name of the transaction class associated with this transaction.

Data Key Is the storage key of the storage allocated during initialization for this transaction.

Data Location Indicates the key of the storage allocated for this transaction.

Deadlock timeout Is the length of time (in seconds) after which this transaction is considered deadlocked and terminated by CICS.

Dump Indicates whether a dump must be produced should this transaction terminate.

Dynamic Routing Indicates whether this transaction is eligible for dynamic routing.

Facilitylike Is the name of a real terminal that is used as a template for the bridge facility.

Isolate Indicates whether the user key storage allocated for this transaction is protected from other transactions using user key storage.

Local Dynamic Route Count Is the number of times the dynamic routing program was invoked and a local transaction subsequently attached.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. This is the value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Partition Dataset Name Is the name of the PARTITIONSET this transaction uses.

Priority Indicates the priority of the transaction, used to affect the dispatching order of tasks.

Profile Name Indicates the name of the profile with processing options for this transaction.

Program Name Is the name of the program that is executed when this transaction is first attached.

Read Time out Is the time interval, in seconds, after which the transaction is terminated if no input is received from the terminal.

Remote Dynamic Route Count Is the number of times the dynamic routing program was started and a remote transaction subsequently attached.

Remote Name Is the identifier of this transaction in the remote system.

Remote System Is the four character identifier of the CICS system where the attach request for this transaction is sent.

Remote System Applid The eight character identifier of the APPLID for the remote CICS system where the attach request for this transaction is sent.

Restart Count The number of times this transaction was restarted after terminating abnormally and being backed out.

Restart Indicates whether this transaction is automatically restarted after an abend and subsequent backout.

Runaway Limit Is the amount of time, in seconds, that this transaction has control of the processor before it is assumed to be in a loop and terminated by CICS.

Screen Selection Indicates whether the PRIMARY (DEFAULT) or ALTERNATE buffer size for a 3270 screen or printer is used whenever a terminal output request is issued with the ERASE option.

Stall Purge Indicates whether this transaction is purged by CICS during a system stall.

Storage Clear Indicates whether storage released by this transaction should be cleared by CICS.

Storage Violations Is the total number of storage violations that CICS has detected in storage areas owned by this transaction. The corruption might not have been caused by this transaction.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Terminal Purge Indicates whether this transaction, if it is associated with a non VTAM terminal, can or cannot be purged because of a terminal error.

Trace Indicates whether the activity of this transaction should be traced.

Transaction ID Is the four character name of the transaction.

Transaction Status Indicates whether this transaction is enabled or disabled.

TWA Size Is the size, in bytes, of the work area required by this transaction at initialization time.

Use Count Is the total number of times this transaction has been invoked since CICS was initialized.

CICSplex Transaction Details attribute group

The CICSplex Transaction Details attributes provide detailed information about a running transaction. Use the CICSplex Transaction Details attributes to see how much CPU and storage the task is using, and to determine its current state. High CPU and storage consumption are indicators of a looping task which can seriously degrade performance. A looping task can lock up the entire CICS region, or exhaust available CICS storage causing a short on storage condition.

If you want to view how the task has spent its time so far, select the Transaction Timings link in the Transaction Analysis workspace. If you want to see details about the amount of storage a task is currently using or statistics about the storage it has used throughout its life, select the Transaction Storage Analysis link in Transaction Analysis workspace.

Attach Time Indicates the date and time when the transaction was attached.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CPU Time Indicates the amount of CPU time (in thousandths of a second) used by the transaction.

CPU Time Indicates the amount of accumulated CPU time (in seconds) used by this task.

Current Program ID Indicates the program currently being executed by this transaction.

Dispatcher Queue Indicates in which of the dispatcher queues this transaction is found.

Elapsed Time Indicates the time elapsed, accurate to three decimal places, since the transaction was attached. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567, or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567. See the online help for more details on variable substitution or inputting values in situations and filters.

Elapsed Time Indicates the amount of time (in seconds) the transaction had been executing at the time this information was collected (current time minus transaction start time).

EXEC CICS Command Is the function code of the current or last EXEC CICS command issued by the running application program.

Facility ID Indicates the unique identifier of the facility to which the transaction is attached.

Facility Type Indicates the type of facility to which the transaction is attached.

First Program ID Is the program first invoked when the transaction started.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Originating Transaction ID Is the transaction ID used to originate this transaction.

Purge Status Indicates whether the transaction is purged.

Purgeable Suspend Indicates whether or not the suspended transaction is purged.

Resource Name Indicates the name of the resource the transaction is waiting to access.

Resource Type Is the category of resource for which the transaction is waiting.

Storage Used Above 16 MB Indicates the amount of storage (in kilobytes) above the 16 megabyte line used by the transaction.

Storage Used Below 16 MB Indicates the amount of storage (in kilobytes) below the 16 megabyte line used by the transaction.

Suspend Timeout Due Indicates the time and date this transaction is because of be purged if the suspend does not end.

Suspend Type Indicates the type of request that is causing this transaction to wait.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Task Number Is the number sequentially assigned by CICS to uniquely identify each task.

Task State Indicates whether the transaction is currently running and if not, why.

Time in Suspend Indicates the amount of time (accurate to three decimal places) the transaction has spent waiting. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Time in Suspend Indicates the amount of time (in seconds) the transaction has spent waiting.

Time of Suspend Is the time at which this transaction started the current wait.

Trace Active Indicates if trace has been collected for the task.

Trace Size The total amount of trace data recorded by this transaction. This may be greater than the allowed trace size, in which case the trace collected will contain the most recent data allowed.

Transaction ID Is the four character name of the transaction.

Umbrella Transaction ID Indicates the transaction ID assigned to the transaction by the application that is calling the umbrella transaction services.

UOW State The state of the unit of work.

User ID Indicates the one to eight character identifier of the CICS user.

CICSplex Transaction EIB Detail attribute group

The attributes within the CICSplex Transaction EIB Detail attribute group report the contents of the EXEC Interface Block (EIB) fields, created by CICS to satisfy the application program's EXEC CICS command request.

Further information about the EIB fields, is found in the application programming reference for the release of CICS Transaction Server that you are currently using.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

EIBAID Is the attention identifier associated with the last terminal control or BMS input operation from a display device.

EIBATT Indicates that the RU contains attach header data.

EIBCALEN Indicates the length of the communication area that was passed to the application program from the previous program, using the COMMAREA and LENGTH options.

EIBCOMPL Indicates that the data is complete on a terminal control RECEIVE command.

EIBCONF Is the request that has been received for an APPC conversation.

EIBCPOSN Indicates the cursor position associated with the last terminal control or BMS input operation from a display device.

EIB Date and Time Indicates the date and time on which the current or last EXEC CICS command was issued from the application program.

EIBDS Is the identifier of the last data set referred to in a file control request.

EIBEOC Indicates that an end-of-chain indicator is part of the RU just received.

EIBERRCD Contains the error code that has been received.

EIBERR Indicates that an error has been received on an APPC conversation.

EIBFMH Indicates that the user data just received contained an FMH.

EIBFN Is the function code of the current or last EXEC CICS command issued by the transaction.

EIBFREE Indicates that the application program cannot continue using the facility.

EIBNODAT Indicates that no data has been sent by the remote application (restricted to application programs holding conversations across APPC links).

EIBRCODE Is the CICS response code returned by the last EXEC CICS command executed by the task.

EIBRECV Indicates that the application program is to continue to receive data from the facility by executing RECEIVE commands.

EIBREQID Is the request identifier assigned to an interval control request. It is not used when the application program specifies the REQID option.

EIBRESP2 Indicates, together with the EIBRESP attribute, the resulting condition of the last executed command by the transaction.

EIBRESP Indicates, together with the EIBRESP2 attribute, the resulting condition of the last executed command by the transaction.

EIBRLDBK Indicates rollback.

EIBRSRCE Is the symbolic identifier of the resource being accessed by the current or last EXEC CICS command.

EIBSIG Indicates that a SIGNAL has been received.

EIBSYNC Indicates that the application program must take a syncpoint or terminate.

EIBSYNRB Indicates that an application program should issue a SYNCPOINT ROLLBACK command (set only in application programs holding a conversation on an APPC or MRO link).

EIBTASKN Is the number sequentially assigned by CICS to uniquely identify each task.

EIBTRMID Is the terminal ID of the principal facility (terminal or logical unit) associated with the transaction.

EIBTRNID Is the four character name of the transaction.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Task Number Is the number sequentially assigned by CICS to uniquely identify each task.

Transaction ID Is the four character name of the transaction.

CICSplex Transaction EIB Summary attribute group

The CICSplex Transaction EIB Summary attributes report on the information stored in the EXEC Interface Block created by CICS to satisfy the application program's EXEC CICS command. Use the CICSplex Transaction EIB Summary attributes to help identify a looping transaction. For example, a constant program name and offset combination for a single EXEC CICS command signifies a looping transaction.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

EIB Date and Time Indicates the date and time at which the current or last EXEC CICS command was issued from the application program.

EIBRESP Description Indicates the meaning of the value in the EIBRESP attribute.

EIBRESP Value Indicates, together with the EIBRESP2 attribute, the resulting condition of the last executed command by the transaction.

EIBRESP2 Value Indicates, together with the EIBRESP attribute, the resulting condition of the last executed command by the transaction.

EXEC CICS Command Is the EXEC CICS command currently in use.

Function Code Is the function code of the current or last EXEC CICS command issued by the transaction.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Program Name Is the name of the application program from which the EXEC CICS command was issued.

Program Offset Indicates the hexadecimal offset within the program where the EXEC CICS command was issued.

Resource Name The symbolic identifier of the resource being accessed by the current or last EXEC CICS command.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Task Number Is the number sequentially assigned by CICS to uniquely identify each task.

Terminal ID Indicates the terminal ID of the principal facility (terminal or logical unit) associated with the transaction.

Transaction ID Is the four character name of the transaction.

CICSplex Transaction File Details attribute group

The CICSplex Transaction File Details report attributes provide detailed resource information about the files a transaction has accessed. Use the CICSplex Transaction File Details attributes to determine whether the transaction is issuing too many file requests, which might indicate an error in the transaction or a transaction waiting too long to get requests serviced.

Access Method Count Is the file access method request count.

Add Requests Is the number of PUT (that is, ADD) requests issued by this transaction. The valid format is a floating-point number, accurate to three decimal places.

Add Total Time Is the total time (accurate to three decimal places) of file ADD requests issued by this transaction. The value can be entered in the hh:mm:ss.ddd format, for example, 00:20:00.567 or as sssssss.ddd, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Browse Requests Is the number of GETNEXT and GETPREV requests issued by this transaction.

Browse Total Time Is the total time (accurate to three decimal places) of file BROWSE requests issued by this transaction. The value can be entered in the hh:mm:ss.ddd format, for example, 00:20:00.567 or as sssssss.ddd, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

CFDT I/O Wait Time Is the total time (accurate to three decimal places) that this transaction has been waiting for access to the Coupling Facility Data Table (CFDT). The value can be entered in the hh:mm:ss.ddd format, for example, 00:20:00.567 or as sssssss.ddd, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

CFDT I/O Waits Is the number of times that this transaction has been waiting for access to the Coupling Facility data table (CFDT).

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Del Requests Is the number of file DELETE requests issued by this transaction.

Del Total Time Is the total time (accurate to three decimal places) of file DELETE requests issued by this transaction. The value can be entered in the hh:mm:ss.ddd format, for example, 00:20:00.567 or as sssssss.ddd, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

File Name Is the file name or data set name.

Get Requests Is the number of file GET requests issued by this transaction.

Get Total Time Is the total time (accurate to three decimal places) of file GET requests issued by this transaction. The value can be entered in the hh:mm:ss.ddd format, for example, 00:20:00.567 or as sssssss.ddd, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Put Requests Is the number of file PUT requests issued by this transaction.

Put Total Time Is the total time (accurate to three decimal places) of file PUT requests issued by this transaction. The value can be entered in the hh:mm:ss.ddd format, for example, 00:20:00.567 or as sssssss.ddd, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

RLS Mode Wait Time Is the amount of time (accurate to three decimal places) that this transaction has waited for access to a RLS Mode file. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

RLS Mode Waits Is the number of time that this transaction has waited for access to a RLS Mode file.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Task Number Is the number sequentially assigned by CICS to uniquely identify each task.

Total File I/O Wait Count Is the total number of times that this transaction has waited for access to a file.

Total File I/O Wait Time Is the total time (accurate to three decimal places) that this transaction has waited to access a file. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Total File Requests Is the total number of requests that this transaction has made for access to all files.

Total Request Time Is the total time (accurate to three decimal places) that this transaction has been waiting to have access to all files. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Transaction ID Is the four-character name of the transaction.

CICSplex Transaction I/O Waits Analysis attribute group

The CICSplex Transaction I/O Waits Analysis attributes report a breakdown of the time the transaction waited as a result of I/O operations. Use the CICSplex Transaction I/O Waits Analysis attributes to determine which activity is contributing excessively to the transaction's suspend time or overall elapsed time.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

FEPI I/O Wait Indicates the amount of time, (accurate to three decimal places) that the transaction waited for all FEPI I/O services. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

File I/O Wait Indicates the amount of time, (accurate to three decimal places) that the transaction waited for file I/O to complete. The value can be entered in the HH:MM:SS:DDD format, for example, 00:20:00.567 or as sssssss.ddd, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Inter-Region (MRO) Indicates the amount of time, (accurate to three decimal places) that the transaction waited for MRO requests to another CICS region to complete. The value can be entered in the HH:MM:SS:DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Journal (z/OS Logger) Indicates the amount of time, (accurate to three decimal places) that the transaction waited for journal or z/OS logger I/O requests to complete. The value can be entered in the HH:MM:SS:DDD format, for example, 00:20:00.567 or as sssssss.ddd, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

LU 6.1 Terminal I/O Wait Indicates the amount of time, (accurate to three decimal places) that the transaction waited for control at this end of an LU 6.<1 link. The value can be entered in the HH:MM:SS:DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

LU 6.2 Terminal I/O Wait Indicates the amount of time, (accurate to three decimal places) that the transaction waited for control at this end of an LU 6.<2 link. The value can be entered in the HH:MM:SS:DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

RLS File I/O Wait Indicates the amount of time, (accurate to three decimal places) that the transaction waited for RLS file I/O to complete. The value can be entered in the HH:MM:SS:DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Shared TS I/O Wait Indicates the amount of time, (accurate to three decimal places) that the transaction waited for asynchronous shared temporary storage requests to complete. The value can be entered in the HH:MM:SS:DDD format, for example, 00:20:00.567 or as ssssss.ddd, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Socket I/O Wait Indicates the amount of time, (accurate to three decimal places) that the transaction waited for socket I/O activities to complete. The value can be entered in the HH:MM:SS:DDDformat, for example, 00:20:00.567 or as ssssss.ddd, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Task Number Is the number sequentially assigned by CICS to uniquely identify each task.

Temporary Storage I/O Wait Indicates the amount of time, (accurate to three decimal places) that the transaction waited for VSAM temporary storage I/O activities to complete. The value can be entered in the HH:MM:SS:DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Terminal I/O Wait Indicates the amount of time, (accurate to three decimal places) that the transaction waited for user input from the terminal. The value can be entered in the HH:MM:SS:DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Transaction ID Is the four character name of the transaction.

Transient Data I/O Wait Indicates the amount of time, (accurate to three decimal places) that the transaction waited for VSAM transient data I/O activities to complete. The value can be entered in the HH:MM:SS:DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

CICSplex Transaction Manager Statistics attribute group

The CICSplex Transaction Manager Statistics attribute group returns information about the transaction activity in your CICS system (such as the total number of transactions attached). You can also specify a single transaction that you are interested in (for example, CEMT).

Note: The attributes within the CICSplex Transaction Manager Statistics group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

Active User Transactions Is the current number of active user transactions. The value format is an integer of maximum four bytes.

Average Current queuing time Is the average time (accurate to three decimal places) spent waiting by those currently queued transactions and the time that they have been waiting for MAXTASK reasons. The value can be entered in the HH:MM:SS:DDD format, for example, 00:20:00.567 or as SSSSSSS.DD , for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Average MAXTASK queuing time Is the average time (accurate to three decimal places) spent waiting by those user transactions that had to wait for MAXTASK reasons. It is the total time spent at MAXTASK divided by the total number of transactions that have been delayed because of MAXTASK. The value can be entered in the HH:MM:SS:DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Current MAXTASK Is the current MAXTASK (MXT) value. 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.

Current MAXTASK Time Is the current queued transaction interval: the total time (accurate to three decimal places) spent waiting by those user transactions currently queued for MAXTASK (MXT) reasons. The value can be entered in the HH:MM:SS:DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD , for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Note: This does not include the time spent waiting by those transactions that have finished queuing.

Dispatchable Transaction Count Is the current number of dispatchable transactions. The value format is an integer of maximum four bytes.

MAXTASK Count Is the MAXTASK occurrence count. The number of times that the number of active user transactions equalled the specified maximum number of user transactions. The value format is an integer of maximum four bytes.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Peak Active User Transactions Is the peak number of active user transactions reached. The value format is an integer of maximum four bytes.

Peak Queued User Transactions Is the peak number of user transactions queuing for MAXTASK (MXT) reasons.

Note: This does not include transactions queued for Transaction Class. The value format is an integer of maximum four bytes.

Queued User Transactions Is the current number of user transactions currently queuing for MAXTASK (MXT) reasons.

Note: This does not include transactions currently queued for Transaction Class. The value format is an integer of maximum four bytes.

Running Transaction Count Is the current number of running transactions. The value format is an integer of maximum four bytes.

Suspended Transaction Count Is the current number of suspended transactions. The value format is an integer of maximum four bytes.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

System Transaction Count Is the current number of system transactions. The value format is an integer of maximum four bytes.

Total Active User Transactions Is the total number of user transactions that have become active. The value format is an integer of maximum four bytes.

Total Attached Transactions Is the total number of attached CICS transactions. The total number of tasks that have accumulated so far.

Total MAXTASK Time Is the accumulated queued transaction interval: the total time (accurate to three decimal places) spent waiting by those user transactions that had to wait for MAXTASK (MXT) reasons.

The value can be entered in the HH:MM:SS:DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD , for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Note: This does not include those transactions still waiting.

Total Queued User Transactions Is the total Queued User Transaction Count. The number of user transactions that had to queue for MAXTASK (MXT) reasons before becoming active, excluding those still waiting. The value format is an integer of maximum four bytes.

Total Transactions so far Is the total number of tasks that have accumulated so far. The value format is an integer of maximum four bytes.

Total Transactions so far Long Is the total number of tasks that have accumulated so far. The value format is an integer of maximum four bytes.

Total Transactions so far 64 bit Is the total number of tasks that have accumulated so far. The value format is an integer of maximum four bytes.

Transaction rate Is the number of transactions per second.

Transactions since reset Is the number of tasks that have accumulated since the last statistics reset. The value format is an integer of maximum four bytes.

CICSplex Transaction Rate Summary attribute group

The Transaction Rate Summary attributes provide information about transaction activity for transactions that have active counts.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Duration Indicates the number of seconds over which the rate is calculated.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

Rate Per Minute The number of transactions per minute for the transaction ID.

Rate Per Second The number of transactions per second for the transaction ID.

System ID The four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Transaction ID The four-character name of the transaction.

CICSplex Transaction Remote Information attribute group

The CICSplex Transaction Remote Information attributes report information relevant to a transaction's interaction with other CICS systems. Use these attributes to find out the remote CICS systems the transaction is interacting with. Performance problems in the remote CICS system might contribute to the overall elapsed time of the local transaction.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CICS SYSIDNT Is the four character ID assigned to the local CICS region.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system,

the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Remote Facility ID Is the identifier of the facility used by the local transaction to communicate with the remote CICS.

Remote Facility Type Indicates the type of facility used by the local transaction to communicate with the remote CICS.

Remote Session I/O Indicates whether a task is in RECEIVE mode (waiting for a session to respond) or SEND mode (initiating the next request).

Remote Session ID Indicates the actual terminal ID for this session.

Remote Session Side Indicates whether a task is in the Frontend or Backend of a conversation. Session side displays n/a for DTP sessions.

Remote System Is the four character ID assigned to the remote CICS region in the Terminal Control Table (TCT).

Remote Transaction Is the four character name of the transaction in the remote CICS.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Task Number Is the number sequentially assigned by CICS to uniquely identify each task.

Transaction ID Is the four-character name of the transaction defined to CICS.

CICSplex Transaction Statistics attribute group

The CICSplex Transaction Statistics attributes report the number of requests by a transaction for CICS services such as program control, journal control, temporary storage, transient data and non 3270 requests.

Use the CICSplex Transaction Statistics attributes to determine whether requests that imply I/O activity such as journal control, transient data or temporary storage, are a major factor in response time degradation.

Abends The number of abends taken by this task.

Browse Channel Requests The number of browse requests for channel containers issued by this task.

CICS Logger Writes The number of CICS logger write requests issued by this transaction.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CICS TCBs Attached Is the number of CICS TCBs attached by or on behalf of this transaction.

Client Address The IP address of the WEB client that the transaction was attached for. This can be version 4 or version 6 bit format. The value format is an alphanumeric string, maximum 40 characters.

Client IP Address Is the IP address of the WEB client which this transaction was attached for.

Client Port The port number which the client used to connect to CICS.

CPU Time Indicates the amount of accumulated CPU time (in thousandths of a second) used by this task.

DB2 Requests Is the number of DB2 (EXEC SQL and IFI) requests issued by this transaction.

DPL Requests Is the number of DPL (Distributed Program Link) requests issued by this transaction.

Elapsed Time Indicates the time elapsed, accurate to two decimal places, since the transaction was attached. The value can be entered in the HH:MM:SS.DD format, for example, 00:20:00.56, or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would

display as 120056. See the online help for more details on variable substitution or inputting values in situations and filters.

Get Channel Requests The number of Get requests for channel containers issued by this task.

IC Requests Is the sum of interval control START, CANCEL, DELAY and RETRIEVE requests issued by this transaction.

IC Starts Is the number of interval control START requests issued by this transaction.

IMS/DBCTL Requests Is the number of IMS (DBCTL) requests issued by this transaction.

Journal Writes Is the number of journal output requests issued by this transaction.

Last DBCTL Request The category type of the last DBCTL request issued by the transaction.

Move Channel Requests The number of Move requests for channel containers issued by this task.

Number of TCB Mode Switches Is the number of CICS TCB Mode Switches performed on behalf of this transaction.

OO Class Requests Is the number of CICS Object Oriented foundation class requests, including the Java API for CICS (JCICS) classes, issued by this transaction.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Program Link URMs Is the number of program LINK URM (User-Replaceable Modules) requests issued by, or on behalf of, this transaction.

Program Links Is the number of program LINK requests issued by this transaction.

Program Loads Is the number of program LOAD requests issued by this transaction.

Program XCTLs Is the number of program XCTL requests issued by this transaction.

Put Channel Requests The number of Put requests for channel containers issued by this task.

Resource Name Indicates the name of the resource the transaction is waiting to access.

Resource Type The category of resource for which the transaction is waiting.

SSL Bytes Decrypted Is the number of bytes decrypted by the secure sockets layer for this transaction.

SSL Bytes Encrypted Is the number of bytes encrypted by the secure sockets layer for this transaction.

Syncpoints Is the number of SYNCPOINT requests issued by this transaction.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Task Number Is the number sequentially assigned by CICS to uniquely identify each task.

TD GETs Is the number of Transient Data GET requests issued by this transaction.

TD Purges Is the number of Transient Data PURGE requests issued by this transaction.

TD PUTs Is the number of Transient Data PUT requests issued by this transaction.

Total Bytes for Gets The total length, in bytes, of the data in the containers of all the Get requests for channel containers issued by this task.

Total Bytes for Puts The total length, in bytes, of the data in the containers of all the Put requests for channel containers issued by this task.

Total Channel Requests The total number of requests for channel containers issued by this task.

Transaction Group ID hex Is the hex representation of the identifier CICS creates to correlate transactions attached to service the same incoming work request originated through the CICS Web, IIOP, or 3270 Bridge interface.

Transaction Group ID Is the identifier CICS creates to correlate transactions attached to service the same incoming work request originated through the CICS Web, IIOP, or 3270 Bridge interface.

Transaction ID Is the four character name of the transaction.

TS GETs Is the number of temporary storage GET requests issued by this transaction.

TS PUTs to Auxiliary Storage Is the number of PUT to auxiliary temporary storage requests issued by this transaction.

TS PUTs to Main Is the number of PUT to main temporary storage requests issued by this transaction.

TS Total Requests Is the sum of all temporary storage requests (GET, PUT to main, PUT to auxiliary and TS DELETE) issued by this transaction.

Web Chars Received Is the number of characters received by the CICS Web interface RECEIVE requests issued by this transaction.

Web Chars Sent Is the number of characters sent by the CICS Web interface SEND requests issued by this transaction.

Web Receive Requests Is the number of CICS Web interface RECEIVE requests issued by this transaction.

Web Repository Reads Is the number of reads from the repository in shared temporary storage issued by this transaction.

Web Repository Writes Is the number of writes to the repository in shared temporary storage issued by this transaction.

Web Send Requests Is the number of CICS Web interface SEND requests issued by this transaction.

Web Total Requests Is the sum of all CICS Web interface requests issued by this transaction.

CICSplex Transaction Storage Analysis attribute group

The CICSplex Transaction Storage Analysis report attributes consist of statistics for a transaction collected by the Storage Manager and the CICS monitoring facility. Use the CICSplex Transaction Storage Analysis attributes to examine whether the transaction might be issuing an excessive number of storage requests.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

GETMAIN Above 16 MB Indicates the number of GETMAIN requests for storage above the 16 megabyte line issued by the transaction.

GETMAIN Below 16 MB Indicates the number of GETMAIN requests for storage below the 16 megabyte line issued by the transaction.

HWM of Total Program Storage Indicates, in kilobytes, the maximum amount of program storage in use by the transaction.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Program Storage HWM Above 16 MB Indicates, in kilobytes, the maximum amount (high water mark) of program storage in use by the transaction above the 16 MB line.

Program Storage HWM Below 16 MB Indicates, in kilobytes, the maximum amount (high water mark) of program storage in use by the transaction below the 16 MB line.

Program Storage HWM in CDSA Is the maximum amount (high water mark) of program storage in the CDSA, in kilobytes, for the transaction.

Program Storage HWM in ECDSA Is the maximum amount (high water mark) of program storage in the ECDSA, in kilobytes, for the transaction.

Program Storage HWM in ERDSA Is the maximum amount (high water mark) of program storage in the ERDSA, in kilobytes, for the transaction.

Program Storage HWM in ESDSA Is the maximum amount (high water mark) of program storage in the ESDSA, in kilobytes, for the transaction.

Program Storage HWM in RDSA Is the maximum amount (high water mark) of program storage in the RDSA, in kilobytes, for the transaction.

Program Storage HWM in SDSA Is the maximum amount (high water mark) of program storage in the SDSA, in kilobytes, for the transaction.

Storage Allocated Above 16 MB Indicates the number of kilobytes of storage currently allocated to the transaction above the 16 megabyte line.

Storage Allocated Below 16 MB Indicates the number of kilobytes of storage currently allocated to the transaction below the 16 megabyte line.

Storage Elements Above 16 MB Is the number of pieces of storage above the 16 megabyte line currently allocated to the transaction.

Storage Elements Below 16 MB Is the number of pieces of storage below the 16 megabyte line currently allocated to the transaction.

Storage HWM Above 16 MB Is the maximum number (high water mark) of kilobytes allocated to the transaction above the 16 megabyte line.

Storage HWM Below 16 MB Is the maximum number (high water mark) of kilobytes allocated to the transaction below the 16 megabyte line.

Storage Occupancy Above 16 MB Indicates the storage occupancy above the 16 megabyte line, in kilobytes, for the transaction.

Storage Occupancy Above 16 MB Long Indicates the storage occupancy above the 16 megabyte line, in kilobytes, for the transaction.

Storage Occupancy Below 16 MB Indicates the storage occupancy below the 16 megabyte line, in kilobytes, for the transaction.

Storage Occupancy Below 16 MB Long Indicates the storage occupancy below the 16 megabyte line, in kilobytes, for the transaction.

Storage Used Above 16 MB Is the number of kilobytes of storage above the 16 megabyte line currently in use by the transaction.

Storage Used Below 16 MB Is the number of kilobytes of storage below the 16 megabyte line currently in use by the transaction.

System ID Indicates the four character name that uniquely identifies an active CICS z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Task Number Is the number sequentially assigned by CICS to uniquely identify each task.

Transaction ID Is the four character name of the transaction.

CICSplex Transaction Storage Violations attribute group

The CICSplex Transaction Storage Violations attribute group reports on the total number of violations for each transaction that has experienced a storage violation in CICS.

Note:

1. When a storage violation occurs, the collection for this attribute group involves scanning the Program Control Table (PCT), which carries considerable overhead. Exercise caution when using this table for either views or situations.
2. The attributes within the Transaction Storage Violations group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 characters, that is case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Storage Violations Indicates the number of storage violations associated with the transaction. The value format is an integer of maximum four bytes.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Transaction ID Indicates the four character transaction identifier from the Program Control Table (PCT). The value format is an alphanumeric string with a maximum of four characters.

CICSplex Transaction Times for Task attribute group

The CICSplex Transaction Times for Task attributes report where the time was spent during the life of this transaction, based on data collected by the CICS Monitoring Facility.

1st Dispatch Delay Is the total time (in seconds) that this transaction waited prior to first dispatch.

3270 Partner Wait Time Indicates the amount of elapsed time (in seconds) for which this transaction waited for the 3270 bridge partner transaction to complete.

CICS Region Name Is the name that identifies a CICS region. The format is an eight-character string.

CPU Time Indicates the amount of accumulated CPU time (in seconds) used by this task.

DB2 Connection Wait Time Is the amount of time (in seconds) that this transaction waited for a DB2 connection.

DB2 Readyq Wait Time Is the amount of time (in seconds) that this transaction waited for a DB2 thread to become available.

DB2 Wait Time Indicates the amount of time (in seconds) for DB2 to service the requests issued by this transaction.

Dispatch Time Indicates the amount of time (in seconds) that this transaction spent dispatched on a CICS TCB. The value includes QR TCB Elapsed Time and Other TCBs Elapsed Time.

Dispatchable Wait Time Indicates the amount of time (in seconds) that this transaction waited as a result of giving up control to another task.

Elapsed Time Indicates the amount of time (in seconds) this transaction had been executing at the time this information was collected (current time minus transaction start time).

Exception Wait Time Is the accumulated time (in seconds) that this transaction waited on exception conditions.

File I/O Wait Time Is the accumulated time (in seconds) that this transaction waited for file I/O.

Global ENQ Delay Indicates the amount of time (in seconds) that this transaction waited for a CICS Task Control global ENQ.

IMS Wait Time Indicates the amount of time (in seconds) for DBCTL to service the IMS requests issued by this transaction.

Interval Control Wait Indicates the amount of time (in seconds) that this transaction waited as a result of using the EXEC CICS DELAY command (for a time interval or a specific time of day) or the EXEC CICS RETRIEVE command with the WAIT option.

J9 TCB CPU Time Is the processor time (in seconds) during which this transaction was dispatched by the CICS dispatcher domain on a CICS J9 mode TCB.

JC I/O Wait Time Indicates the amount of time (in seconds) that this transaction waited for journal or MVS logger I/O requests to complete.

JVM Elapsed Time Is the amount of time (in seconds) that this transaction spent in a Java Virtual Machine.

JVM Initialization Time Indicates the elapsed time (in seconds) spent initializing the JVM environment.

JVM Reset Time Indicates the elapsed time (in seconds) spent in JVM cleanup between uses of the JVM by Java programs.

JVM Server Thread Wait Indicates the elapsed time (in seconds) that this transaction waited to obtain a JVM server thread because the CICS system had reached the thread limit for a JVM server in the CICS region.

JVM Suspend Time Indicates the elapsed time (in seconds) for which this transaction was suspended by the CICS dispatcher while running in the JVM.

JVM(J8) TCB CPU Time Indicates the processor time (in seconds) during which this transaction was dispatched by the CICS dispatcher domain on a CICS J8 mode TCB.

Key 8 TCB CPU Time Indicates the processor time (in seconds) during which this transaction was dispatched by the CICS dispatcher on a CICS Key 8 mode TCB.

Key 8 TCB Elapsed Time Indicates the total elapsed time (in seconds) during which this transaction was dispatched by the CICS dispatcher on a CICS Key 8 mode TCB.

Key 9 TCB CPU Time Indicates the processor time (in seconds) during which this transaction was dispatched by the CICS dispatcher on a CICS Key 9 mode TCB.

Key 9 TCB Elapsed Time Indicates the total elapsed time (in seconds) during which this transaction was dispatched by the CICS dispatcher on a CICS Key 9 mode TCB.

LE(L8) TCB CPU Time Indicates the processor time (in seconds) during which this transaction was dispatched by the CICS dispatcher domain on a CICS L8 mode TCB.

Local ENQ Delay Indicates the amount of time (in seconds) that this transaction waited for a CICS Task Control ENQ.

Lock Manager Delay Indicates the amount of time (in seconds) that this transaction waited to acquire a lock on a resource.

LU 6.1 Terminal I/O Wait Indicates the amount of time (in seconds) that this transaction waited for control at this end of an LU 6.1 link.

LU 6.2 Terminal I/O Wait Indicates the amount of time (in seconds) that this transaction waited for control at this end of an LU 6.2 link.

Max tasks delay Indicates the amount of elapsed time (in seconds) waiting for the first dispatch, which was delayed because of the limits set by the the system parameter, MXT, being reached.

MAXOPENTCBS Delay Time Indicates the amount of time (in seconds) that this transaction waited to obtain a CICS TCB, because the region had reached the limit set by the system parameter.

MRO Wait Time Indicates the amount of elapsed time (in seconds) that this transaction waited for control at this end of an MRO link.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The format is a string.

Other TCBs CPU Time Indicates the amount of processor time (in seconds) that this transaction was dispatched on each CICS TCB.

Other TCBs Elapsed Time Is the amount of time (in seconds) that this transaction spent dispatched on CICS TCBs other than the QR TCB.

Program fetches wait Indicates the amount of elapsed time (in seconds) in which this transaction waited for fetches from DFHRPL or dynamic LIBRARY concatenations.

QR TCB CPU Time Indicates the amount of processor time (in seconds) that this transaction was dispatched on the CICS QR TCB.

QR TCB Elapsed Time Is the elapsed time (in seconds) that this transaction spent dispatched on the CICS QR TCB.

QR TCB wait-for-dispatch Indicates the amount of elapsed time (in seconds) that this transaction waited for redispatch on the CICS QR TCB.

Re-Dispatch Wait Time Is the amount of time (in seconds) that this transaction waited between the completion of a request and being redispatched by CICS.

RLS CPU Time Is the amount of SRB CPU time (in seconds) that this transaction spent processing VSAM Record Level Sharing file requests.

RLS File I/O Wait Indicates the amount of time (in seconds) that this transaction waited for RLS file I/O to complete.

RMI Elapsed Time Is the total amount of time (in seconds) that this transaction spent in all task-related user exits (TRUEs) invoked by this transaction using the Resource Manager Interface (RMI).

RMI Suspend Time Indicates the total elasped time (in seconds) that this transaction was suspended by the CICS dispatcher while in the CICS Resource Manager Interface (RMI).

RO TCB CPU Time Is the processor time (in seconds) during which this transaction was dispatched by the CICS dispatcher on the CICS RO mode TCB. The CICS RO mode TCB is used for opening and closing CICS data sets, loading programs, issuing RACF calls, and other functions. This field is a component of the task CPU time field and the task miscellaneous TCB CPU time field.

RO TCB Elapsed Time Indicates the amount of elapsed time (in seconds) during which this transaction was dispatched by the CICS dispatcher on the CICS RO mode TCB.

RRMS/MVS Wait Time Indicates the amount of elapsed time (in seconds) in which this transaction waited indoubt using resource recovery services for EXCI.

Shared TS I/O Wait Time Indicates the amount of time (in seconds) that this transaction waited for asynchronous shared temporary storage requests to complete.

Socket I/O Wait Time Indicates the amount of time (in seconds) that this transaction waited for socket I/O activities to complete.

SOCKET Outbound Wait Indicates the amount of time (in seconds) that this transaction waited on outbound sockets.

SOCKET receive wait Indicates the amount of elapsed time (in seconds) that this transaction waited for control at this end of an IPIC connection.

SS(S8) TCB CPU Time Indicates the processor time (in seconds) during which this transaction was dispatched by the CICS dispatcher domain on a CICS S8 mode TCB.

Syncpoint elapsed time Indicates the amount of elapsed time (in seconds) that this transaction was dispatched and was processing syncpoint requests.

System ID The four-character name that uniquely identifies an active MVS operating system within a given CICSplex.

T8 TCB CPU time Indicates the amount of processor time (in seconds) that this transaction was dispatched by the CICS dispatcher domain on a CICS T8 mode TCB.

T8 TCB obtain delay Indicates the amount of elapsed time (in seconds) that this transaction waited to obtain a T8 TCB, because the CICS system reached the limit of available threads.

Task Number Is the number sequentially assigned by CICS to uniquely identify each task.

TC I/O Wait Time Indicates the elapsed time in seconds) for which this transaction waited for input from the terminal operator, after issuing a RECEIVE request.

TCB Change Mode Delay Indicates the elapsed time (in seconds) that this transaction waited for redispatch after a CICS Dispatcher change-TCB mode request was issued by or on behalf of this transaction.

TCB create delay Indicates the amount of elapsed time (in seconds) that this transaction spent waiting because no TCB was available and a TCB was not created because of MVS storage constraints.

TCB Mismatch Time Indicates the elapsed time (in seconds) that this transaction spent in TCB mismatch waits.

Total Wait Time Is the total amount of time (in seconds) that this transaction spent waiting (suspended). It includes the times reported in the attributes: 1st Dispatch Delay, Re-Dispatch Wait Time, Total I/O Wait Times, and Total Other Wait Times.

Transaction class delay Indicates the amount of elapsed time (in seconds) waiting for first dispatch, which was delayed because of the limits set for the transaction class of this transaction, TCLSNAME (166), being reached.

Transaction ID Is the four-character name of the transaction.

Transient Data I/O Wait Indicates the amount of time (in seconds) that this transaction waited for VSAM transient data I/O activities to complete.

TS VSAM I/O wait time Indicates the amount of elapsed time (in seconds) that this transaction waited for VSAM temporary storage I/O.

WAIT EXTERNAL Wait Time Indicates the amount of time (in seconds) that this transaction waited for one or more ECBs as a result of using the EXEC CICS WAIT EXTERNAL ECBLIST command.

Wait for a JVM TCB Indicates the amount of elapsed time (in seconds) that this transaction waited to obtain a CICS JVM TCB (J8 or J9 mode), because the CICS system reached the limit set by the system parameter, MAXJVMTCBS.

WAITCICS and WAIT EVENT Indicates the amount of time (in seconds) that this transaction waited for one or more ECBs (as a result of using the EXEC CICS WAITCICS ECBLIST command) or for the completion of an event by the same or another task (usually as a result of using the EXEC CICS WAIT EVENT command).

CICSplex Transaction Timings attribute group

The CICSplex Transaction Timings attributes report where the time was spent during the life of this transaction, based on data collected by the CICS Monitoring Facility. Use the CICSplex Transaction Timings attributes to find which timing is a large percent of the transaction response time, then determine which conditions might cause the timing to be excessive.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CPU Time Indicates the amount of CPU time (accurate to two decimal, places) used by the transaction. The value can be entered in the HH:MM:SS.DD format, for example, 00:20:00.56 or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

Dispatch Time Indicates the amount of time (in thousandths of a second) that this transaction spent dispatched on a CICS TCB. It includes QR TCB Elapsed Time and Other TCBs Elapsed Time attributes.

Elapsed Time Indicates the time elapsed, accurate to three decimal places, since the transaction was attached. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567. See the online help for more details on variable substitution or inputting values in situations and filters.

Exception Wait Time Is the accumulated time (in thousandths of a second) that this transaction waited on exception conditions.

First Dispatch Delay Is the total time (accurate to three decimal places) that this transaction waited prior to first dispatch. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

JVM Elapsed Time Is the amount of time (accurate to three decimal places) that the transaction spent in a Java Virtual Machine. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Other TCBs Elapsed Time Is the amount of time (accurate to three decimal places) that this transaction spent dispatched on CICS TCBs other than the QR TCB. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Program Load Elapsed Time Indicates the time (accurate to three decimal places) that this transaction waited for program library fetches from DFHRPL. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

QR TCB Elapsed Time Is the elapsed time (accurate to three decimal places) that this transaction spent dispatched on the CICS QR TCB. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Re-Dispatch Wait Is the amount of time (accurate to three decimal places) that this transaction waited between the completion of a request and being re dispatched by CICS. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

RLS CPU Time Is the amount of SRB CPU time (accurate to three decimal places) that this transaction spent processing VSAM Record Level Sharing file requests. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

RMI Elapsed Time Is the total amount of time (accurate to three decimal places) that this transaction spent in all task-related user exits (TRUEs) invoked by the transaction using the Resource Manager Interface (RMI). The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or

as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Syncpoint Elapsed Time Indicates the amount of time (accurate to three decimal places) that this transaction spent processing syncpoint requests. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Task Number Is the number sequentially assigned by CICS to uniquely identify each task.

Time in Suspend Is the total amount of time (accurate to three decimal places) that this transaction spent waiting (suspended). It includes the times reported in the attributes: 1st Dispatch Delay, Re-Dispatch Wait, Total I/O Wait Times, and Total Other Wait Times. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Total I/O Wait Times Is the total amount of time (accurate to three decimal places) this transaction waited as a result of I/O operations. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Total Other Wait Times Is the total amount of time (accurate to three decimal places) that this transaction waited other than what is reported in the attributes Total I/O Wait Times and Exception Wait Time. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Transaction ID Is the four character name of the transaction.

CICSplex Transaction TSQUEUE Details attribute group

The CICSplex Transaction TSQUEUE Details attributes provide detailed resource information about the Temporary Storage queues accessed by the transaction. Use the CICSplex Transaction TSQUEUE Details attributes to determine whether the transaction is issuing too many Temporary Storage requests, which might indicate an error in the transaction, or waiting too long to get the requests serviced.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Get Requests Is the number of temporary storage queue GET requests.

Get Total Time Is the total time (accurate to three decimal places) of temporary storage queue GET requests. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Hex TSQueue ID Is the Temporary Storage Queue ID in hexadecimal format.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Put To AUX Requests Is the number of temporary storage queue PUT requests to auxiliary temporary storage.

Put To Aux Total Time Is the total time (accurate to three decimal places) of temporary storage queue PUT requests to auxiliary temporary storage. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Put To Main Requests Is the number of temporary storage queue PUT requests to main temporary storage.

Put To Main Total Time Is the total time (accurate to three decimal places) of temporary storage queue PUT requests to main temporary storage. The value can be entered in the HH:MM:.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Shared TSQ I/O Wait Count Is the shared temporary storage I/O wait count.

Shared TSQ I/O Wait Time Is the shared temporary storage I/O wait time (accurate to three decimal places). The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Task Number Is the number sequentially assigned by CICS to uniquely identify each task.

Total Length Of Items Obtained Is the total length of ALL the items obtained from temporary storage.

Total Length Of Items Written To Aux Is the total length of ALL the items written to auxiliary temporary storage.

Total Length Of Items Written To Main Is the total length of ALL the items written to main temporary storage.

Total TSQ I/O Wait Count Is the temporary storage I/O wait count.

Total TSQ I/O Wait Time Is the temporary storage I/O wait time (accurate to three decimal places). The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Total TSQ Request Time Is the total time (accurate to three decimal places) of all requests against the temporary storage queue. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Total TSQ Requests Is the total number of all requests against the temporary storage queue.

Transaction ID Is the transaction ID.

TSQueue Name Is the temporary storage queue name.

CICSplex Transaction Umbrella Data attribute group

The CICSplex Transaction Umbrella Data attributes report the contents of the three OMEGAMON Umbrella fields that can be updated from within an application. Use the CICSplex Transaction Umbrella Data attributes to view the contents of the OMEGAMON Umbrella fields.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Task Number Is the number sequentially assigned by CICS to uniquely identify each task.

Transaction ID Is the four-character name of the transaction.

Umbrella Program ID Indicates the program ID assigned to this transaction by the application calling OMEGAMON's Umbrella transaction services.

Umbrella Transaction ID Indicates the transaction ID assigned to this transaction by the application calling OMEGAMON's Umbrella transaction services.

User Work Area (Hex) Is the contents of the 32 byte Umbrella user data work area in hexadecimal format, which might be used by the application for general storage purposes; the contents are not used by OMEGAMON.

User Work Area Is the contents of the 32 byte Umbrella user data work area, which might be used by the application for general storage purposes; the contents are not used by OMEGAMON.

CICSplex Transaction Wait Other Analysis attribute group

The CICSplex Transaction Wait Other Analysis attributes report a breakdown of the total amount of time the transaction waited as a result of other wait types. Use the CICSplex Transaction Wait Other Analysis attributes to find which timing is a large percent of the transaction response time, then determine which conditions might cause the timing to be excessive.

First Dispatch Delay Indicates the amount of time, (accurate to three decimal places) that the transaction waited prior to first dispatch. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

CICS MAXOPENTCBS Delay Indicates the amount of time, (accurate to three decimal places) that the transaction waited to obtain a CICS TCB, because the region had reached the limit set by the system parameter MAXOPENTCBS. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Dispatchable Wait Time Indicates the amount of time, (accurate to three decimal places) that the transaction waited as a result of giving up control to another task. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

External Wait Time Indicates the amount of time, (accurate to three decimal places) that the transaction waited for one or more ECBs as a result of using the EXEC CICS WAIT EXTERNAL ECBLIST command. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Global ENQ Delay Indicates the amount of time, (accurate to three decimal places) that the transaction waited for a CICS Task Control global ENQ. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Interval Control Delay Indicates the amount of time, (accurate to three decimal places) that the transaction waited as a result of using the EXEC CICS DELAY command (for a time interval or a specific time of day) or the EXEC CICS RETRIEVE command with the WAIT option. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

JVM Suspend Time Indicates the amount of time, (accurate to three decimal places) that the transaction was suspended by the CICS dispatcher while running in the CICS Java Virtual Machine. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Local ENQ Delay Indicates the amount of time, (accurate to three decimal places) that the transaction waited for a CICS Task Control ENQ. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Lock Manager Delay Indicates the amount of time, (accurate to three decimal places) that the transaction waited to acquire a lock on a resource. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Origin Node Is the combination of the z/OS System ID (SMFID) and the CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Re-Dispatch Wait Indicates the amount of time, in thousandths of a second, that the transaction waited to be re-dispatched by CICS after completing a request.

RRMS/MVS Wait Time Indicates the amount of time, (accurate to three decimal places) that the transaction waited indoubt using resource recovery services for EXCI. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Task Number Is the number sequentially assigned by CICS to uniquely identify each task.

Transaction ID Is the four character name of the transaction.

WAIT CICS and WAIT EVENT wait Indicates the amount of time, in thousandths of a second, that the transaction waited for one or more ECBs (as a result of using the EXEC CICS WAITCICS ECBLIST command) or for the completion of an event by the same or another task (usually as a result of using the EXEC CICS WAIT EVENT command).

CICSplex Transient Data Queues attribute group

The CICSplex Transient Data Queues attributes report on the status of transient data queues for each monitored CICS region. Use these attributes in situations to determine if the length of a transient data queue or number of data records in a transient data queue exceed a threshold. These attributes provide data for the Transient Data Queues table view.

Note: The attributes within the CICSplex Transient Data Queues group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

ATI Facility Indicates the facility associated with this destination. This name is an alphanumeric string of eight characters.

ATI Term ID Indicates the terminal associated with this destination. This name is an alphanumeric string of four characters.

ATI Tran ID Indicates the transaction ID associated with this destination. This name is an alphanumeric string, four characters, and case-sensitive.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Dest ID Indicates the intrapartition identifier. The value format is alphanumeric, maximum four characters, and case-sensitive.

Destination Status Indicates the current status of this destination. These are the valid values:

- Enabled
- Disabled
- Open
- Closed
- Open_in_progress
- Close_in_progress
- FEOV_in_progress
- n/a

Destination Type Indicates the type of destination. These are the values:

- Intrapartition
- Extrapartition
- Remote
- Indirect
- n/a

Enable Status Indicates whether the status has been enabled or disabled for the destination.

Indirect Queue Name Indicates the name of the indirect queue that is associated with this queue. The value format is alphanumeric, maximum four characters, and case-sensitive.

Open Status Indicates whether the status is open or closed for the destination.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Queue Length Indicates the queue length of the intrapartition destination. The value format is a positive integer, maximum four bytes.

Queue Over Trigger Indicates the number of records by which the queue length exceeds the trigger level. The value format is a positive integer, maximum four bytes.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Trigger Level Indicates the intrapartition trigger level. The value format is an integer, maximum two bytes, and in the range 0-32767.

Use Count Indicates the number of times this destination has been used. The value format is either a nonnegative integer, maximum four bytes, or n/a.

CICSplex Transient Data Summary attribute group

The CICSplex Transient Data Summary attribute group provides statistics on the current use of intrapartition resources. Use the CICSplex Transient Data Summary attributes to review data about the number of buffer waits, string waits, and the percentage of buffers and control intervals in use.

Note: The attributes within the CICSplex Transient Data Summary group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

Buffer Waits Indicates the number of requests that are currently suspended pending the availability of a transient data buffer. The value format is an integer of maximum four bytes.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Current String Waits Indicates the current number of tasks that require the physical reading or writing of a CI and are suspended because of the lack of an available string. The value format is an integer of maximum four bytes.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 characters, that is case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Percent Active Strings Indicates the percentage of available strings currently being used for I/O to the intrapartition data set. This value is calculated by dividing the current string count by the total number of strings. The value format is a percentage in the range of 0-100.

Percent Buffers in Use Indicates the percentage of transient data buffers in use. This value is calculated by dividing the current buffers in use by the total number of buffers. The value format is a percentage in the range of 0-100.

Percent CIs in Use Indicates the percentage used of the transient data VSAM data set Control Intervals (CI). When this value reaches 100%, if additional extents cannot be taken, because of lack of space on eligible volumes or because secondaries have not been defined, tasks issuing transient data write requests are terminated abnormally for NOSPACE reasons unless the NOSPACE condition is explicitly handled by the application. The value format is a percentage in the range of 0-100.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Total String Waits Indicates the total number of tasks that have been suspended because of the lack of an available string since CICS initialization. The value format is an integer of maximum four bytes.

CICSplex TS Models Summary attribute group

The CICSplex TS Models Summary attributes provide a summary of all TS Models defined to the system.

CICS Name Identifies the name of the CICS region that is being monitored.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is a case-sensitive, alphanumeric string, maximum 32 bytes

Model Name The name of the temporary storage model.

TS Queue Prefix The prefix used for evaluating the temporary storage queues to which this model is to be applied.

Queue Location Location of temporary storage queues matching this model as AUXILIARY (the CICS temporary storage VSAM data set, DFHTEMP) or MAIN (Main storage).

Recovery Status Defines the recovery characteristics for temporary storage queues matching this model. Has a value of RECOVERABLE or NOTRECOVABLE.

Remote Queue Prefix The prefix of the queues on the remote system that this model is applied to.

Remote System ID The name of the Remote CICS System on which the queues matching this model is defined.

Security Status The security characteristics for temporary storage queues matching this model. as a value of EXTSECURITY (EXT) or NOSECURITY.

Shared Pool Name The name of the shared temporary storage pool to be used by this TS Model.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex.

Expiry Interval in Minutes Specifies the last used interval limit time, in minutes, which is used to determine whether a temporary storage queue based on this TSMODEL has expired and is eligible to be automatically deleted.

CICSplex Unit-of-work DSN Failure Details attribute group

The CICSplex Unit-of-work DSN Failure Details attribute group enables you to inquire on the reasons why UOWs were shunted because of a failure during syncpoint associated with a specified data set. Failures during syncpoint processing result in locks held by the UOW against the data set (or data sets) which suffered the failure being retained. Thus, when a failure is reported by this command, it also indicates the presence of retained locks.

Cause Indicates which failed component has caused the UOW to have retained locks for this data set. These are the values:

CACHE
A VSAM RLS cache structure, or connection to it, has failed.

CONNECTION
An intersystem connection error has caused the UOW to fail while indoubt. The name of the system to which connectivity was lost is returned on the SYSID parameter and its netname is returned on the NETNAME parameter. CICS returns additional information in the REASON parameter about the connection failure.

DATASET
The backout of a UOW has failed for this data set. The reason for the data set failure is returned in the REASON parameter.

RLSSERVER
The SMSVSAM server has failed. The reason for the data set failure is returned in the REASON parameter.

UNDEFINED
The UOW is probably being retried. This occurs following a SET DSN RETRY command, or automatically when the failed resource returns. It also occurs following an emergency restart.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Dataset name Is the name of the data set that has suffered a backout failure in the current UOW. It is a 44 character value.

Connected System ID Is the ID of the connected CICS region.

Network name Is the network name of the remote system to which connectivity has been lost. It is an eight character netname.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Reason Is the specific failure reason indicator. These are the values:

BACKUPNONBWO
Backout of the updates made to the data set by the UOW failed because a non-BWO backup of the data set was in progress while the UOW was being backed out. When the backup completes, CICS automatically retries the UOW.

COMMITFAIL
An error occurred at some point when RLS locks were in the process of being released. This is an error that is typically be resolved by recycling the SMSVSAM server (which should happen automatically). The locks were acquired as a result of recoverable requests having been issued against the data set.

DATASETFULL
No space is available on the direct access device for adding records to a data set. You need to reallocate the data set with more space and then retry the backout using the SET DSNAME RETRY command.

DEADLOCK
(For non-RLS data sets only.) A deadlock was detected during backout. This is a transient condition that goes away if the backout is retried.

DELEXITERROR
Backout of a write to an ESDS failed because a logical delete global user exit program was not enabled, or a logical delete global user exit program decided not to execute the logical delete.

FAILEDBKOUT
This occurs as a result of a severe error being identified during backout, and is possibly an error in either CICS or VSAM. The problem might go away if the backout is retried. Note that CICS performs some first-failure data capture (FFDC) at the point where the error is first detected.

INDEXRECFULL
A larger alternate index record size needs to be defined for the data set. This error occurs when a unique alternate index key, for a non-RLS data set, has been reused and CICS is now backing out the request which had removed that key value.

INDOUBT
The unit of work had issued recoverable requests against the data set, and has now failed indoubt. The connection to the coordinating system needs to be reestablished.

IOERROR
A hard I/O error occurred during backout. To correct this error, restore a full backup copy of the data set and perform forward recovery. If you use CICSVR as your forward recovery utility, the backout is automatically retried for an RLS data set. For a non-RLS data set, use the SET DSNAME (...) RETRY command to drive the backout retry.

LCKSTRUCFULL
An attempt to acquire a lock during backout of an update to this data set failed because the RLS lock structure was full. You must allocate a larger lock structure in an available coupling facility and rebuild the existing lock structure into it, then use the SET DSNAME (...) RETRY command to drive the backout retry.

NOTAPPLIC
The CVDA for CAUSE is not CONNECTION, RLSSERVER, or DATASET.

OPENERROR
Error on opening the file for backout. A console message notifies you of the reason for the open error. One likely reason could be that the data set was quiesced.

RLSGONE
An error occurred when backing out of the UOW because the SMSVSAM RLS server was inactive. This might also be the reason why the UOW went into backout originally. This is an error is resolved by recycling the server (which should happen automatically). Generally, when the server recovers, the units of work are retried automatically. In very exceptional circumstances, it might be necessary to issue a SET DSNAME(...) RETRY command to retry the units of work that were not retried when the server returned.

RRCOMMITFAIL
An error occurred while RLS locks for the unit of work were being released. For this data set, the locks being released were all repeatable read locks, so if the failure was because of the RLS server being unavailable, the locks are released. If the failure was because of some other error from the SMSVSAM server, the locks might still be held.

RRINDOUBT
The unit of work had issued repeatable read requests against the data set, and has now failed with an indoubt condition. The locks are released, so this failure does not prevent you from running a batch job against the data set. However, if you want to open the data set in non-RLS mode from CICS, you need to resolve the indoubt failure before you define the file as having RLSACCESS(NO). If the unit of work has updated any other data sets, or any other resources, try to resolve the indoubt failure correctly. If the unit of work has only performed repeatable reads against VSAM data sets and has made no updates to other resources, it is safe to force the unit of work using the SET DSNAME or SET UOW commands.

RLS Access Is the RLS indicator for the connection. These are the values:

NOTRLS
The last open in this CICS region was in non-RLS mode.

RLS
The last open in this CICS region was in RLS mode.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Unit-of-work ID Is the identifier token for the current unit-of-work.

CICSplex Unit-of-work Link Details attribute group

The CICSplex Unit-of-work Link Details attribute group displays information about a connection involved in a unit of work. The connection can be to a remote system, to a task-related user exit, or to a CFDT server.

Connection Type Is the type of connection associated with the unit-of-work link. These are the values:

CFTABLE
A connection to a CFDT server.

CONNECTION
A connection defined in a CONNECTION resource definition.

OTS
An OTS link.

RMI
A connection to an external resource manager using the resource manager interface (RMI).

Connected System ID Is the ID of the connected CICS region.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Host ID Is the TCP/IP host name, or the TCP/IP address for the participant in the OTS transaction. This is a string containing the dotted decimal TCP/IP address, used to refer to the participant in the OTS

transaction. This is useful for identifying the participant, especially when problems occur. This is a 255 character data area. Strings of fewer than 255 characters are padded with blanks. Note that the unit of work and the participant can belong to the same CORBA server.

Link token Is the identifier token for the current Unit-of-work Link.

Link ID Is the netname of the remote system for CONNECTION types, or the entry name of the task-related user exit for RMI types, or the name of the coupling facility data table pool for CFTABLE type, or blanks for an IIOP type.

Network Unit-of-work identifier Is the network-wide LU62 ID of the current unit of work.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Protocol Indicates the communication protocol used by the connection. These are the values:

APPC
Advanced Program to Program Communication.

IRC
Interregion Communication. This is an MRO connection.

LU61
LUTYPE 6.1.

IIOP
OTS.

RRMS
The UOW is coordinated by RRS/MVS.

n/a
This is a connection of type CFTABLE or RMI.

Resync. status Indicates the resynchronization status of the connection. These are the values:

COLD
The connection has been cold started by the partner system. The partner no longer coordinates any indoubt conditions for this system; nor can this system pass to the partner any decisions remembered for it.

NOTAPPLIC
The connection was not created using recovery protocols. It could be an RMI, an APPC single-session, an APPC synclevel 1 connection, or a CFDT server.

OK
The connection is operating normally. If there has been a failure of the partner system, the partner has been restarted and the connection is able to resynchronize the associated UOW.

STARTING
The connection is being acquired, but the exchange lognames process has not yet completed.

UNAVAILABLE
The connection is not currently acquired.

UNCONNECTED
There is no associated connection.

RMI Qualifier Is the RMI qualifier of the task-related user exit. It is the eight character entry qualifier of the task-related user exit. For a TYPE of CONNECTION, CFTABLE or IIOP, RMIQFY returns blanks.

Role Indicates the role for the connection. These are the values:

COORDINATOR
This connection is to the syncpoint coordinator for the UOW.

SUBORDINATE
This connection is to a syncpoint that is subordinate to the UOW.

UNKNOWN
The syncpoint role of this connection cannot be determined.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Unit-of-work identifier Is the identifier of the current unit-of-work.

Unit-of-recovery ID Is the RRMS unit-of-recovery indicator.

CICSplex Units of Work attribute group

The CICSplex Units of Work attributes report on active or completed transactions in a given CICS region for a particular unit of work. They report the total amount of time transactions spend in various processing states for each region and the transactions that run in a particular CICS region.

Note: These attributes are not available for situations. They provide data only for the Unit of Work by Region and Unit of Work by Transaction table views within the Units of Work workspace.

Asynchronous Transaction Indicates if this task used the ASYNC API.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case sensitive. CICS region names are always in uppercase characters.

CICS Version Indicates the version of CICS running in the address space.

CPU Time Indicates the amount of accumulated CPU time (accurate to three decimal places) for this task. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567. The value format is a positive integer, maximum four bytes.

CPU Time Indicates the amount of accumulated CPU time (in microseconds) used by this task.

DB2 LUWDS The Unit of Work for correlation with DB2. The value format is an alphanumeric string, maximum 44 characters.

Dispatch Time Indicates the amount of time (accurate to three decimal places) that the tasks in the unit-of-work spent dispatched. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567. The value format is a positive integer, maximum four bytes.

Exception Wait Indicates the amount of elapsed time (accurate to three decimal places) that the task spent waiting for exceptions. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567. The value format is a positive integer, maximum four bytes.

FEPI Suspend Indicates the amount of elapsed time (accurate to three decimal places) that the task waited for all FEPI (front end programming interface) services. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567. The value format is a positive integer with a maximum of four bytes. This data is available in CICS version 4.0 and higher.

File Wait Indicates the amount of time (accurate to three decimal places) that the task waited for file I/O to complete. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567. The value format is a positive integer with a maximum of four bytes.

A high percentage of elapsed time spent waiting for file control requests indicates inefficient local shared resource (LSR) specifications, too few strings, or lockout conditions.

First Dispatch Delay Indicates the amount of time (accurate to three decimal places) that the task spent waiting for the first dispatch. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567. The value format is a positive integer with a maximum of four bytes.

First Dispatch Delay MXT Indicates the amount of elapsed time (accurate to three decimal places) that the task waited for the first dispatch because the number of executing tasks reached the MAXTASK limit. The value format is a positive integer with a maximum of four bytes. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

First Dispatch Delay Other Indicates the amount of elapsed time (accurate to three decimal places) that the task was delayed before the first dispatch because of conditions other than MAXTASK or CMXT. For example, this item indicates a delay caused by CPU contention. The value format is a positive integer with a maximum of four bytes. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

First Dispatch Delay TCLASS Indicates the amount of elapsed time (accurate to three decimal places) that the task was delayed before the first dispatch because the TCLASS limit was exceeded. The value format is a positive integer with a maximum of four bytes. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

History Token The parameter for history record selection. This attribute is used for internal use only. The value format is an alphanumeric string, maximum 16 characters.

Journal Wait Indicates the amount of time (accurate to three decimal places) the task waited for journal requests to complete. Journal waits occur as a task waits for Journal I/O to complete. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

Explicit journal I/O includes any journal switching, buffering, and intervention that occurs between the time the journal requests were issued and the time they completed. Implicit journaling occurs when you define a file to CICS with the logging option. Updates to the file trigger journal operations, the elapsed time percentage for which is included under File Control Percentage.

A high percentage of elapsed time spent waiting for journal I/O indicates disk contention or reserves, elongated journal switching times, excessive journal buffer sizes, or inappropriate journal options.

KC ENQ Delay Indicates the amount of elapsed time (accurate to three decimal places) that the task waited for a CICS task control enqueue. The value format is a positive integer with a maximum of four bytes. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

LU6.1 I/O Wait Indicates the amount of elapsed time (accurate to three decimal places) that the task waited for control at this end of an LU6.1 link. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567. The value format is a positive integer with a maximum of four bytes.

LU6.2 I/O Wait Indicates the amount of elapsed time (accurate to three decimal places) that the task waited for control at this end of an LU6.2 link. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example, 1200.567. If you are using variable substitution, the value in this example would display as 1200567. The value format is a positive integer with a maximum of four bytes.

MRO Wait Indicates the amount of time (accurate to three decimal places) that the task waited for an MRO request to another region to complete. The value format is a positive integer with a maximum of

four bytes. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

A high percentage of time spent waiting for MRO operations indicates problems in a connected CICS region that caused the originating transaction to wait for an extended period of time.

Number of Transactions Indicates the total number of tasks that executed in a CICS region on behalf of the unit of work. The value format is a positive integer with a maximum of four bytes.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Overall Elapsed Time Indicates the total elapsed time (accurate to three decimal places) between a task being attached and the current time for every transaction that makes up the unit-of-work. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567. The value format is a positive integer with a maximum of four bytes.

Long running transactions produce performance records at regular intervals, if you have specified the MNFREQ parameter with the SIT. If you have specified this parameter, this item indicates the elapsed time from the start of the interval.

Overall Elapsed Time MS Indicates the total elapsed time (in microseconds) between a task being attached and the current time for every transaction that makes up the unit-of-work.

Recovery Token The recovery token used for correlation with IMS. The value format is an alphanumeric string, maximum 16 characters.

Redispatch Wait Indicates the amount of time (accurate to three decimal places) that the task waited between a request completing and the task being re dispatched by CICS. The value format is a positive integer with a maximum of four bytes. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

This is the aggregate of the wait times between each event completion and user task re dispatch, but it does not include the time spent waiting for the first dispatch. A high percentage of elapsed time spent waiting for re dispatch indicates that you have looping transactions or that you have reached the CMXT limit.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string with a maximum of four characters, and is case sensitive. z/OS System IDs are always in uppercase characters.

Task Number Indicates the number sequentially assigned by CICS to uniquely identify each task. The value format is an alphanumeric string with a maximum of four characters, and case sensitive.

Task Status Indicates whether the task is running or complete. These are the values:

ACTIVE
The task is currently running.

DONE
The task is complete.

Temporary Storage Wait Indicates the amount of time (accurate to three decimal places) that the task waited for VSAM temporary storage I/O. The value format is a positive integer, maximum four bytes. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

A high percentage of elapsed time spent waiting for this type of I/O indicates inadequacies in the configuration of the temporary storage data set DFHTEMP. These are the typical causes:

- Insufficient strings
- Incorrectly defined VSAM control interval size (CISZ)
- Inefficient or conflicting disk allocation

Terminal I/O Wait Indicates the amount of elapsed time (accurate to three decimal places) that the task waited for user input from the terminal. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567. The value format is a positive integer, maximum four bytes. This time value does not include the first dispatch wait time.

Total RMI Elapsed Indicates the amount of elapsed time (accurate to three decimal places) that the task spent in task related user exits (TRUE). The value format is a positive integer, maximum four bytes. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567. This includes the RMI (resource manager interface) calls to DBCTL and DB2.

Total RMI Suspend Indicates the amount of elapsed time (accurate to three decimal places) that the task was suspended while within the task related user exits (TRUE). The value format is a positive integer, maximum four bytes. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567. This includes the RMI (resource manager interface) calls to DBCTL and DB2.

Total Wait Time Indicates the amount of elapsed time (accurate to three decimal places) the tasks in the unit of work spent waiting for various operations to complete. The time does not include the first dispatch wait time. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567. The value format is a positive integer with a maximum of four bytes.

Trace Active Indicates if trace has been collected for the task. These are the valid values: Yes and No.

Transaction ID Indicates the four character identifier for the task. The value format is an alphanumeric string with a maximum four characters, and is case sensitive. If OMEGAMON II for CICS umbrella transaction IDs are defined, the umbrella transaction ID is displayed here.

Transient Data Wait Indicates the amount of time (accurate to three decimal places) that the task waited for VSAM transient data I/O. The value can be entered in the HH:MM:SS.DDD format, for example, 00:20:00.567 or as SSSSSSS.DDD, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567.

A high percentage of elapsed time spent waiting for this type of I/O indicates inadequacies in the configuration of the transient data set DFHINTRA. These are the causes:

- Insufficient strings
- Bad VSAM control interval size (CISZ)
- Inefficient or conflicting disk allocation

Unit of Work Identifier Indicates the CICS logical unit of work identifier. The value format is an alphanumeric string, maximum 52 characters.

CICSplex UOW Analysis attribute group

The CICSplex UOW Analysis attribute group provides a summary of the recovery manager domain.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Forced Decisions Indicates the number of forced heuristic decisions. A forced decision occurs after an indoubt unit of work remains unresolved for a user-defined time period. CICS unconditionally backs out or commits the changes made by the unit of work to release the resources held by the indoubt unit of work. The value format is an integer of maximum four bytes.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 characters, that is case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Shunted UOWs Indicates the number of shunted UOWs that currently exist in the CICS region. The value format is an integer of maximum four bytes.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Total Time Shunted Indicates the accumulated time, expressed in minutes, that all shunted UOWs have been shunted. The value format is an integer of maximum four bytes.

CICSplex UOW Enqueue Analysis attribute group

The CICSplex UOW Enqueue Analysis attribute group provides a summary of the current units of work in a CICS region.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Enqueue Failures Indicates the total number of enqueue failures that have occurred against this UOW. The value format is an integer of maximum four bytes.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 characters, that is case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Time Shunted Indicates the total time, (accurate to three decimal places) that each UOW has been shunted, pending resolution. The value can be entered in the hh:mm:ss.ddd format, for example, 00:20:00.567 or as sssssss.ddd, for example 1200.567. If you are using variable substitution, the value in this example would display as 1200567. The value format is an integer of maximum four bytes.

Transaction ID Indicates the Transaction ID that started this unit-of-work. The value format is an alphanumeric string of maximum four characters.

UOW ID Indicates the unit-of-work identifier. The value format is an alphanumeric string of maximum 16 characters.

UOW State Indicates the state of the unit-of-work. These are the values:

Forward
Indicates a decision to commit the UOW has been made, but the UOW is waiting or has been shunted. Look at the wait state of the UOW

Backward
Indicates that the UOW is being backed out, or has failed to back out one or more recoverable resources involved in the UOW

Indoubt
Indicates UOW is in the indoubt phase of 2-phase commit processing

Inflight
Indicates UOW is running normally

Heur_Fwd
Indicates the UOW has been forcibly committed

Heur_Bwd
Indicates the UOW has been forcibly backed out

Unknown
Indicates the UOW state is unrecognized

Wait State Indicates the wait state of the unit-of-work. These are the values:

Active
Indicates the UOW is running normally.

Shunted
Indicates syncpoint processing for the UOW has been deferred and the UOW has been shunted. The task and related storage have been freed but the locks associated with the UOW have been retained.

Unknown
Indicates the UOW wait state is unrecognized.

Waiting
Indicates that syncpoint processing has completed on this local CICS system, but not on all systems involved in the distributed UOW.

CICSplex URIMAP Detail attribute group

The CICSplex URIMAP Detail attribute group provide resource definitions that match the URIs of HTTP or Web service requests, and provide information on how to process the requests. The URIMAP definitions are used to provide these different Web-related facilities in CICS:

- Requests from a Web client, to CICS as an HTTP server.
- Requests to a server, from CICS as an HTTP client.
- Web service requests.

Analyzer Specifies whether an analyzer program is to be used in processing the HTTP request. The analyzer using this attribute is the analyzer associated with the TCPIPSERVICE definition or definitions to which this URIMAP definition relates. An analyzer program must be in the local CICS region. These are the values:

NO
Means that the analyzer is not used.

YES
Runs the analyzer.

Atom Service The resource definition that is used to specify where CICS obtains the data to produce Atom documents in response to a HTTP request. This name is an alphanumeric string, with a maximum of eight characters.

Certificate Is the label of the certificate that is to be used as the SSL client certificate for the HTTP request by CICS as an HTTP client. It specifies the label of the X'509' certificate that is to be used as the SSL client certificate during the SSL handshake. Certificate labels are up to 32 characters in length. This attribute is only used when the URI specified by the URIMAP definition is to be used for an HTTPS request made by CICS as a client. It is up to the server to request a SSL client certificate, and if this happens, CICS supplies the certificate label which is specified in the URIMAP definition. If this attribute is omitted,

the default certificate defined in the key ring for the CICS region user ID is used. The certificate must be stored in a key ring in the database of the external security manager.

Ciphers Is the list of cipher suite codes specified for the URIMAP. It specifies a string of up to 56 hexadecimal digits that is interpreted as a list of up to 28 two digit cipher suite codes. When you use CEDA to define the resource, CICS automatically initializes the attribute with a default list of acceptable codes, depending on the level of encryption that is specified by the ENCRYPTION system initialization parameter.

Character Set Is the name of the character set to be used for the static response. It specifies the 1 to 40 character name of the character set into which CICS converts the entity body of the response that is sent to the Web client. CICS does not support all the character sets named by IANA. HTML coded character sets list the IANA character sets that are supported by CICS.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Converter program Is the name of the URIMAP converter program. It specifies the one thru eight character name of a converter program that is to be run to perform conversion or other processing on the request and response. Typically, a converter program transforms the HTTP request into a COMMAREA that is used by an application program, and transforms the output into an HTTP response. The converter program is any converter program that is available in the local CICS region.

Disable count Is the number of times the URIMAP host or path match has been disabled.

Enable status Specifies whether the URIMAP definition is to be installed in an enabled or disabled state. The default value is Enabled. These are the valid values: Enabled, Disabled, and Disabled host.

HFS File name Is the name of the HFS file associated with this URIMAP. It specifies the fully qualified (absolute) or relative name of a z/OS UNIX System Services HFS file that forms the body of the static response which is sent to the HTTP request from the Web client.

Host Codepage Is the 1 to 10 character name of the IBM code page (EBCDIC) in which the text document that forms the static response is encoded.

Host name Is the name of the host component of the URI to which the URIMAP definition applies. It is up to 116 characters in length.

Location Specifies a URL of up to 255 characters to which the client's request must be redirected. This must be a complete URL, including scheme, host, and path components, and appropriate de limiters. CICS does not check that the URL is valid, so you must ensure that the destination exists and that the URL is specified correctly.

Media Type Specifies the media type (data content) of the static response that CICS provides to the HTTP request.

For example, `image/jpg`, `text/html` or `text/xml`. This attribute is up to 56 characters in length.

Number of Ciphers Is the number of cipher codes in the CIPHERS list.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Path name Specifies the path component of the URI that the URIMAP definition applies.

It is up to 255 characters. This is an example of the path: `software/htp/cics/index.html`.

Pipeline name Specifies the one thru eight character name of the PIPELINE resource definition for the Web service. The PIPELINE resource definition provides information about the message handlers which act on the service request from the client.

Program name Specifies the one thru eight character name of the user application program that composes the HTTP response. For CICS as an HTTP server, this attribute is required unless an analyzer or converter program is specified, or a template name or HFS file is specified, or redirection is specified.

Redirect count Is the number of times the URIMAP's host or path was redirected.

Redirection Specifies the type of redirection for requests that match this URIMAP definition. The URL specified by the LOCATION attribute is used for redirection when required. These are the values:

None
Means that requests are not redirected. Any URL specified by the LOCATION attribute is ignored.

Temporary
Means that requests are redirected on a temporary basis. The URL specified by the LOCATION attribute is used for redirection, and the status code used for the response is 302 (Found).

Permanent
Means that requests are redirected permanently. The URL specified by the LOCATION attribute is used for redirection, and the status code used for the response is 301 (Moved Permanently).

Reference count Is the number of times a search for a matching URIMAP definition was made.

Scheme Specifies the scheme component of the URI to which the URIMAP definition applies. These are the values:

HTTP
without SSL

HTTPS
with SSL

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case sensitive. z/OS System IDs are always in uppercase characters.

TCP/IP Service Is the name of the TCPIPSERVICE resource definition. It is a 1-8 character name in length, of a TCPIPSERVICE resource definition, with PROTOCOL(HTTP), that defines an inbound port to which this URIMAP definition relates. If this attribute is not specified, the URIMAP definition applies to a request on any inbound ports.

Template name Specifies the 1-48 character name of a CICS document template that forms the body of the static response that is sent to the HTTP request from the Web client.

Trans Id Specifies the 1-4 character name of an alias transaction that is to be used to run the user application that composes the HTTP response, or to start the pipeline.

URIMAP Name Specifies the name of this URIMAP definition. The name is up to eight characters in length. The attribute is specified in mixed case, and the case is preserved in the URIMAP definition.

Usage Specifies whether this URIMAP definition is for CICS, HTTP server, HTTP client, Pipeline, Atom service, or JVM Server.

User Name Is the user ID under which the alias transaction is attached. It is a 1 to 8 character name in length. A user ID that you specify in the URIMAP definition is overridden by any user ID that is obtained directly from the client, using authentication procedures which are specified by the AUTHENTICATE attribute of the TCPIPSERVICE definition for the connection.

Webservice name Specifies the 1 to 8 character name of a WEBSERVICE resource definition. It can also be a name up to 32 characters (in mixed case) in length representing a Web service generated by the CICS Web services assistant.

CICSplex URIMAP Global attribute group

The CICSplex URIMAP Global attribute group returns information about global URIMAP definitions. URIMAP definitions are resource definitions that match the URIs of HTTP or Web service requests; they provide information on how to process the requests.

Analyzer count Is the number of times URIMAP host or path has been analyzed.

Atom service requests Is the number of Atom service requests processed by the URIMAP host or path. This value is an integer.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Disabled count Is the number of times the URIMAP host or path match has been disabled.

Dynamic count Is the number of URIMAPs that have dynamic content.

HTTP count Is the number of HTTP scheme requests.

HTTPS count Is the number of HTTPS scheme requests.

Hosts disabled Is the number of hosts that are disabled.

Matched count Is the number of times URIMAP host or path has been matched.

Redirect count Is the number of times URIMAP host or path has been redirected.

Reference count Is the number of times a search for a matching URIMAP definition was made.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Pipeline count Is the number of URIMAP pipeline requests.

Static count Is the number of URIMAPs with static content.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Unmatched count Is the number of times URIMAP host or path is unmatched.

CICSplex URIMAP Summary attribute group

The CICSplex URIMAP Summary attributes summarize URIMAP definitions, which are resource definitions that match the URIs of HTTP or Web service requests; they provide information on how to process the requests.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Disabled count Is the number of times the URIMAP host or path match has been disabled.

Enable status Specifies whether the URIMAP definition is to be installed in an enabled or disabled state. The default is enabled. These are the valid values: Enabled, Disabled, and Disabled host.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Redirect count Is the number of times the URIMAP's host or path has been redirected.

Reference count Is the number of times a search for a matching URIMAP definition was made.

Scheme Specifies the scheme component of the URI to which the URIMAP definition applies. These are the values:

HTTP
Without SSL

HTTPS
With SSL

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

TCP/IP Service Is the name of the TCPIPSERVICE resource definition. It is a 1- to 8 character name in length, of a TCPIPSERVICE resource definition, with PROTOCOL(HTTP), that defines an inbound port to which this URIMAP definition relates. If this attribute is not specified, the URIMAP definition applies to a request on any inbound ports.

URIMAP Name Specifies the name of this URIMAP definition. The name is up to eight characters in length. The attribute is specified in mixed case, and the case is preserved in the URIMAP definition.

Usage Specifies whether this URIMAP definition is for CICS, HTTP server, HTTP client, Pipeline, Atom service, or JVM Server.

CICSplex Virtual Host Detail attribute group

This attribute group enables you to retrieve information about a particular virtual host in the local CICS region. Virtual hosts are based on the URIMAP resource definition object. CICS automatically creates virtual hosts for you, by grouping together into a single data structure all the URIMAP definitions in a CICS region that specify the same host name and the same TCPIPSERVICE. URIMAP definitions that specify no TCPIPSERVICE, and therefore apply to all of them, are added to all the data structures that specify a matching host name, so these URIMAP definitions might be part of more than one data structure.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Host name Is the name of the current host.

The name of each virtual host is taken from the host name specified in the URIMAP definitions that make up the virtual host. For example, if your CICS region contained URIMAP definitions that specified a host name of `www.example.com`, CICS creates a virtual host with the name `www.example.com`. A host name in a URIMAP definition is up to 120 characters in length.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Status Is the virtual host status indicator. These are the values:

ENABLED
The virtual host is enabled.

DISABLED
The virtual host is disabled. The URIMAP definitions that make up the virtual host cannot be accessed by applications.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

TCPIP Service Is the name of the TCP/IP Service associated with the host name. It is the one thru eight character 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.

CICSplex VSAM Analysis attribute group

The CICSplex VSAM Analysis attribute group reports on VSAM data sets allocated to CICS regions. Use the CICSplex VSAM Analysis attributes to review data about data files for VSAM applications and CICS dumps, traces, transient data, and auxiliary temporary storage. This data resides in VSAM data sets. VSAM data sets experiencing string waits or excessive control interval (CI) or control area (CA) splits can adversely affect CICS performance.

These attributes provide data for the VSAM Analysis table view.

Note: The attributes within the CICSplex VSAM Analysis group are stored for historical retrieval within the Tivoli Data Warehouse. Selected attributes within this group are candidates for the Tivoli Data Warehouse summarization and pruning features.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Data CA Split Total Indicates the total number of data control area splits for this data set. Excessive control area splits adversely affect CICS performance. The value format is a positive integer, maximum four bytes.

Data CA Splits in Last Hour Indicates the number of control area splits incurred by the data component of the file over the past hour. The value format is a positive integer of maximum four bytes.

Data CI Size The Control Interval size for the data component of this file. The value format is a positive integer, maximum four bytes.

Data CI Split Total The total number of Control Interval splits for this data set. Excessive Control Interval splits adversely affect CICS performance. The value format is a positive integer, maximum four bytes.

Data CI Splits in Last Hour The number of Control Interval splits incurred by the data component of the file over the past hour. The value format is a positive integer of maximum four bytes.

Data Extents in Last Hour Indicates the number of additional extents allocated for the data component of the file over the past hour. The value format is a positive integer of maximum four bytes.

Data Extents Total Indicates the total number of new data extents taken by this VSAM file. The value format is a positive integer, maximum four bytes.

Data LSR Buffer Size The local shared resource buffer size used for the data component of the file. The value can be n/a. The value format is a positive integer, maximum four bytes.

Dataset Name Indicates the name of the VSAM data set allocated to the selected CICS region. The value format is an alphanumeric string, maximum 44 characters, and case-sensitive.

DDNAME Indicates the data definition name associated with this VSAM file. The value format is an alphanumeric string, maximum eight characters, and case-sensitive.

File Access Indicates the mode of access that CICS uses to open this VSAM data set. CICS accesses a VSAM file in these different modes: non shared resources mode, local shared resources mode, and record-level sharing mode. These are the values: LSR, NSR, and RLS. CICS does not support VSAM global shared resources mode.

File Type Indicates the type of VSAM file. These are the values:

ESDS
Entry-sequenced data set

IAM
Indexed access method

KSDS
Key-sequenced data set

LDS
Linear data set

RRDS
Relative record data set

Index CA Split Total Indicates the total number of index control area splits for this data set. Excessive control area splits adversely affect CICS performance. The value format is a positive integer, maximum four bytes.

Index CA Splits in Last Hour Indicates the number of control area splits incurred by the index component of the KSDS file over the past hour. The value format is a positive integer of maximum four bytes.

Index CI Size The control interval size for the index component of this file. The value format is a positive integer, maximum four bytes.

Index CI Split Total Indicates the total number of index control interval splits for this data set. Excessive control interval splits adversely affect CICS performance. The value format is a positive integer, maximum four bytes.

Index CI Splits in Last Hour Indicates the number of control interval splits incurred by the index component of the KSDS file over the past hour. The value format is a positive integer of maximum four bytes.

Index Extents in Last Hour Indicates the number of additional extents allocated for the index component of the KSDS file over the past hour. The value format is a positive integer maximum four bytes.

Index Extents Total The total number of new index extents taken by this VSAM file. The value format is a positive integer, maximum four bytes.

Index LSR Buffer Size The local shared resource buffer size used for the index component of this file. This value can be n/a. The value format is a positive integer, maximum four bytes.

LSR Pool ID The ID of the local shared resources pool associated with the file in the CICS region; it has a range of 1-255 for CICS Transaction Server, V4.2.0 and higher.A value of n/a means the file is not a VSAM local shared resources pool file.

Number of Data Deletes The delete count of the data component of this VSAM file.

Number of Data Inserts The insert count of the data component of this VSAM file.

Number of Data Records The record count of the data component of this VSAM file.

Number of Data Retrieves The retrieve count of the data component of this VSAM file.

Number of Data Updates The update count of the data component of this VSAM file.

Number of Index Deletes The delete count of the index component of this VSAM file.

Number of Index Inserts The insert count of the index component of this VSAM file.

Number of Index Records The record count of the index component of this VSAM file.

Number of Index Retrieves The retrieve count of the index component of this VSAM file.

Number of Index Updates The update count of the index component of this VSAM file.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Percent Waits Versus I/O Indicates the percentage of I/O requests issued for a file that is waiting for strings to be available. This value is calculated by dividing the number of tasks that have waited for a string by the total number of I/O operations on the file. The value format is a percentage in the range of 0 - 100.

RLS Timeouts in Last Hour Indicates the number of Record Level Sharing (RLS) time-outs that have occurred over the past hour. The value format is a positive integer of maximum four bytes.

RLS Timeout Total Indicates the total number of time-outs from VSAM files in record-level sharing (RLS) mode. An RLS timeout occurs when a task issues a request for a record that is being held by another task. You specify the RLS timeout interval in the DTIMEOUT task or the system FTIMEOUT parameters of CICS. The value format is a positive integer, maximum four bytes.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Total String Waits Indicates the total number of string waits for the file. When all strings for a file are in use, new requests against it are queued until a string is released. String waits by many concurrent tasks eventually lead to new tasks being forced to wait on the active max task limit. Some string waits for a file are inevitable, but they should be monitored so as not to cause extreme situations in CICS. The value format is a positive integer of maximum four bytes.

VSAM Enable Status Indicates whether this VSAM file is enabled or disabled. These are the values: Disabled, Enabled, and Unenabled.

VSAM High Water Strings in Use Indicates the highest number of strings in use concurrently to process I/O requests to this VSAM file since the file was opened. The value format is an integer, maximum two bytes, and in the range 0-32767.

VSAM Open Status Indicates the status of this VSAM file. These are the values: Closed, Open, and No_FCT.

VSAM String Waits Indicates the number of string waits for each VSAM file. When all strings in a file are in use, new requests against it are queued until a string is released. String waits by many concurrent tasks eventually lead to new tasks being forced to wait on the active max task limit. Too many string waits degrade response time. The value format is an integer, maximum two bytes, and in the range 0-32767.

VSAM Strings Defined Indicates the number of strings defined to process I/O requests to this VSAM file. The value format is an integer, maximum two bytes, and in the range 0-32767.

VSAM Strings in Use Indicates the number of strings that are being used to process I/O requested to this VSAM file. The value format is an integer, maximum two bytes, and in the range 0-32767.

VSAM Strings Percent in Use Indicates the percentage of strings that are being used to process I/O requests to this VSAM file. The value format is a percentage in the range 0-100.

CICSplex Web Service Details attribute group

The CICSplex Web Service Details attribute group retrieves information about an installed WEBSERVICE resource.

Average Request Body Length The current average request body length for the Web Service requests. The value format is a positive integer, maximum four bytes.

Average Response Body Length The current average response body length for the Web Service requests. The value format is a positive integer, maximum four bytes.

Average Response Time The current average response time for the Web Service requests in milliseconds. The value format is a positive integer, maximum four bytes.

Average Total Body Length The current average total request and response body lengths for the Web Service requests. The value format is a positive integer, maximum four bytes.

Binding Is the WSDL binding string represented by the WEBSERVICE attribute. This binding is one of (potentially) many listed in the WSDL file. The name is up to 255 characters in length.

CCSID Is the Coded Character Set Identifier used to encode data between the application program and the web service binding file shown at runtime. The value is an integer with a maximum of four characters.

CICS Region Name Is the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CICS Version Is the version number of the CICS region. This number is an alphanumeric string, with a maximum of four characters.

Current Fault Percent The percentage of the current requests that had a fault associated with them. The value format is an integer with a maximum of two characters.

Current Request Rate The number of requests per minute in the last one to two minute span. The value format is an integer with a maximum of two characters.

Current Timeout Percent The percentage of the current requests that had a timeout associated with them. The value format is an integer with a maximum of two characters.

Container Name Is the name of the container used if PGMINTERFACE resource returns a value of CHANNEL. The name is up to 16 characters in length.

Direct XOP Supported Shows if the web service can handle Direct XML-binary Optimized Packaging (XOP) Supported documents. These are the values:

YES
Direct XOP supported.

NO
Direct XOP not supported.

Endpoint Is the endpoint URI of a remote WEBSERVICE. This endpoint is specified in the WSDL file for a remote web service. If a CICS application program is the service provider, then the ENDPOINT is empty. The URI is up to 255 characters in length.

HWM of Request Body Length The high water mark of the current request body length for a Web Service request. The value format is a positive integer, maximum four bytes.

HWM of Response Body Length The high water mark of the current response body length for a Web Service request. The value format is a positive integer, maximum four bytes.

HWM of Response Time The high water mark of the current response time for a Web Service request in milliseconds. The value format is a positive integer, maximum four bytes.

HWM of Total Body Length The high water mark of the current total request and response body lengths for a Web Service request. The value format is a positive integer, maximum four bytes.

Last Modified Is the timestamp of the latest modification. This is defined in milliseconds since 00:00 on January 1st 1900, that the deployed WSBind file on HFS was last updated. This is a read only value that CICS updates when the WEBSERVICE resource is installed or updated. The last-modified-time can be used to determine whether CICS has refreshed itself after an update is made to a WSBind file in the pickup directory.

Mapping Level Is used to convert data between language structures and the Web Services Description Language (WSDL) documents. This name is up to eight characters in length.

Mapping Level Release Is the release number for the mapping level used to convert data between language structures and Web Services Description Language (WSDL) documents. The release number is an integer with a maximum of four characters.

Mapping Level Version Is the version number for the mapping level that is used to convert data between language structures and the web service description language documents. The version number is an integer with a maximum of four characters.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Pipeline Name Is the name of the PIPELINE in which the WEBSERVICE is installed. That is, the name of the PIPELINE resource that contains this WEBSERVICE resource. The name is up to eight characters in length.

Program Interface Indicates whether the CICS program that implements the web service expects input in a channel or in a COMMAREA. These are the values:

CHANNEL
The program expects input in a channel.

COMMAREA
The program expects input in a CICS common area.

n/a
The program does not expect input.

Program Name Is the name of a CICS program that implements the web service. If this WEBSERVICE represents a remote web service (for example, CICS is not the service provider), the PROGRAM is empty. The name can be up to eight characters in length.

Required Runtime Level Is the minimum runtime level required to run the web service in CICS. This name can be up to eight characters in length.

Required Runtime Release Is the release number for the minimum runtime level required to run the web service in CICS. The value is an integer up to four characters in length.

Required Runtime Version Is the version number for the minimum runtime level required to run the web service in CICS. The value is an integer up to four characters in length.

Status Is the one-character name that shows the current web status. These are the values:

DISCARDING
A DISCARD command has been issued for the WEBSERVICE. The WEBSERVICE is quiescing before being discarded. It is not accepting new work, but is allowing currently-executing work to complete.

INITING
The web service binding file, and the WSDL file, are being copied to the shelf.

INSERVICE
Resolution of the copy of the WSBIND file on the shelf has succeeded, and the WEBSERBICE is usable.

UNUSABLE
Copying of the WSBIND file on the shelf has failed, and the WEBSERVICE is unusable.

System ID Is the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Total Number of Faults The total number of requests with an associated fault since the statistics were reset. The value format is a positive integer, maximum four bytes.

Total Number of Timeouts The total number of requests which have timed out since the statistics were reset. The value format is a positive integer, maximum four bytes.

Type Indicates whether CICS is the provider of the web service or the requester of the web service. The value is a single character that can either be P for provider or R for requestor.

Use Count Is the usage count for the current web Service. The value format is an integer, maximum four characters.

URIMAP Name Is the name of a dynamically installed URIMAP. The value format is an alphanumeric string, maximum eight characters. A URIMAP is used to define the URL formats used to access your CICS system with CICS web support. They allow you to mask the CICS resources being used from the end users. They also allow both dynamic and static content to easily be returned.

Validation Indicator Shows whether full validation of SOAP messages is currently enabled for this WEBSERVICE. These are the values:

YES
Full validation is enabled.

NO
Full validation is disabled.

Web Service Name The name of the WEBSERVICE resource. The value format is an alphanumeric string, maximum 32 characters.

WS Bind File The name of the web service binding file. The name can be up to 255 characters in length.

WS Description File The name of the web service description file associated with the WEBSERVICE resource. The name can be up to 255 characters in length.

XOP Supported Shows whether or not the web service implementation can handle XOP documents and binary attachments in direct mode. These are the values:

YES
XOP supported

NO
XOP not supported

CICSplex Web Service Summary attribute group

The CICSplex Web Service Summary attribute group summarizes information about an installed WEBSERVICE resource.

Average Request Body Length The current average request body length for the Web Service requests. The value format is a positive integer, maximum four bytes.

Average Response Body Length The current average response body length for the Web Service requests. The value format is a positive integer, maximum four bytes.

Average Response Time The current average response time for the Web Service requests in milliseconds. The value format is a positive integer, maximum four bytes.

Average Total Body Length The current average total request and response body lengths for the Web Service requests. The value format is a positive integer, maximum four bytes.

Container Name Is the name of the container used if PGMINTERFACE resource returns a value of CHANNEL. The name can be up to 16 characters in length.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Current Fault Percent The percentage of the current requests that had a fault associated with them. The value format is an integer with a maximum of two characters.

Current Request Rate The number of requests per minute in the last one to two minute span. The value format is an integer with a maximum of two characters.

Current Timeout Percent The percentage of the current requests that had a timeout associated with them. The value format is an integer with a maximum of two characters.

HWM of Request Body Length The high water mark of the current request body length for a Web Service request. The value format is a positive integer, maximum four bytes.

HWM of Response Body Length The high water mark of the current response body length for a Web Service request. The value format is a positive integer, maximum four bytes.

HWM of Response Time The high water mark of the current response time for a Web Service request in milliseconds. The value format is a positive integer, maximum four bytes.

HWM of Total Body Length The high water mark of the current total request and response body lengths for a Web Service request. The value format is a positive integer, maximum four bytes.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Pipeline Name The name of the PIPELINE in which the WEBSERVICE resource is installed. For example, the name of the PIPELINE resource that contains this WEBSERVICE resource. The name can be up to eight characters in length.

Program Interface Indicates whether the CICS program that implements the Web Service resource expects an input in a channel or in a COMMAREA. These are the values:

CHANNEL
The program expects input in a channel.

COMMAREA
The program expects input in a CICS common area.

Program Name Is the name of a CICS program that implements the Web Service resource. If this WEBSERVICE represents a remote Web Service (for example, CICS is not the service provider), the PROGRAM is empty. The name can be up to eight characters in length.

Status The current Web service resource status. These are the valid values: Discarding, Initiating, Inservice, and Unusable.

System ID Indicates the four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. The z/OS System IDs are always in uppercase characters.

Total Number of Faults The total number of requests with an associated fault since the statistics were reset. The value format is a positive integer, maximum four bytes.

Total Number of Timeouts The total number of requests which have timed out since the statistics were reset. The value format is a positive integer, maximum four bytes.

Type Indicates whether CICS is the provider of the Web service or the requestor of the Web service. The values are:

- Provider
- Requestor

URIMAP Name The name of a dynamically installed URIMAP.

Use Count The usage count for the current Web service resource.

Web Service Name The name of the WEBSERVICE resource. The name can be up to 32 characters in length.

CICSplex Workrequest Details attribute group

The CICSplex Workrequest Details attribute group allows you to track the various EJB tasks that are started as a result of action by a request receiver.

CICS Region Name Indicates the job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Client Address Is the TCP/IP address of the client that originated the request and can be in the version 4 or version 6 bit format. It is a 39 character value.

Client IP Address Is the TCP/IP address of the client that originated the request. It is a 15 character value.

Corbaserver Name Is the identifier of the associated CORBA server. It is a four character value

Listener Port Is the host port that received the request.

Originating Applid Is the application ID of the originating task. It is an eight character field.

Originating Task Is the number of the task (RequestReceiver) that received the request.

Originating Transaction Is the transaction associated with the original request. It is an four character field.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Request Id Is the current request number. A client can send more than one request at a time.

System ID Indicates the four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Stack Level Is the stack level of the current call.

Task Is the number of the local task (RequestProcessor).

Transaction Id Is the local transaction identifier.

Target System Specifies the applid of the target CICS system as a 21-byte field. This field contains one of the following values:

- The dotted decimal TCP/IP address and port number of the target system
- Up to eight characters followed by blanks. In this case these eight characters, or less, are the VTAM applid of the target system
- If the field contains only a string of blank characters (spaces), the target is not CICS over MRO
- Another value; CICS does not know about any other possibilities. Any other value must be meaningful to other software at your installation which expects to work with the value obtained from this parameter of this CICS command

Target System Address The address of the Target System. It is a 39 character value.

Work request Is the identifier token of the work request.

Work Type Is the indicator to show the work request type. These are the values:

IIOP
Specifies that the work is being executed for an IIOP request.

SOAP
Specifies that the work is being executed for a Web service request.

CICSplex XML Transforms Detail attribute group

The CICSplex XML Transforms Detail attribute group displays detailed information about a specified XML transform object definition.

Bundle Name The name of the bundle that was used to install the XML transform object. This name is an alphanumeric string, with a maximum of eight characters.

CICS Region Name The job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Coded Character Set ID The coded character set identifier that is used to encode the character data in the application data structure at runtime. The coded character set identifier is a value of up to eight characters.

Mapping Level Is the level of mapping that was used when generating the binding file. The data area is a maximum of eight characters in length.

Minimum Runtime Level Is the minimum runtime level that is required to install XML transform object in CICS. The data area is a maximum of eight characters in length.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Validation Status Specifies whether the validation is enabled for the XML transform definition or not. These are the values:

- VALIDATION 1
- NOVALIDATION 2

System ID The four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

XML Bind The name of the XML Bind file associated with the XML transform object. The XML Bind file has a value of up to 255 characters in length.

XML Schema The name of the XML Schema file associated with the XML transform object. The XML Schema file has a value of up to 255 characters in length.

XML Transforms Name The 32 character name of the XML transform object that CICS uses to transform the data to XML. This name defines the XML binding and the XML schema.

XML Transforms Status The current status of the XML transform object. These are the values:

- ENABLED 1
- DISABLED 2
- ENABLING 3
- DISABLING 4
- DISCARDING 5

XML Transforms Use Count The current use count of the XML transform object. This value is an integer.

CICSplex XML Transforms Object Summary attribute group

The CICSplex XML Transforms Object Summary attribute group displays summary data about a specified XML transform object definition.

Bundle Name The name of the bundle that was used to install the XML transform object. This name is an alphanumeric string, with a maximum of eight characters.

CICS Region Name The job name or modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Validation Status Specifies whether the validation is enabled for the XML transform object definition or not. These are the values:

- VALIDATION 1
- NOVALIDATION 2

System ID The four-character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

XML Transforms Name The 32 character name of the XML transform object that CICS uses to transform the data to XML. This name defines the XML binding and the XML schema.

XML Transforms Status The current status of the XML transform object. These are the values:

- ENABLED 1
- DISABLED 2
- ENABLING 3
- DISABLING 4
- DISCARDING 5

XML Transforms Use Count The current use count of the XML transform object. This value is an integer.

CICSplex Service Level Analysis SVPOL attribute group

The CICSplex Service Level Analysis SVPOL attributes are used by the enhanced 3270 UI to provide a summary of service policy. These attributes are not available from Tivoli Enterprise Portal.

SPNAME Indicates the eight-character service policy name of the service policy.

STATUS The status of the service policy. Indicates the service policy status: Active, or Inactive.

DESCRIPTIndicates the description of the service policy.

CICSplex Service Level Analysis WORKLOAD attribute group

The CICSplex Service Level Analysis WORKLOAD attributes are used by the enhanced 3270 UI to provide a summary of workload. These attributes are not available from Tivoli Enterprise Portal.

WLNAME Indicates the eight-character name of workload.

WLDESCRIPT Indicates the description of workload name.

User Group List attribute group

The User Group List attributes show information on the CP/SM groups being used as User Groups in IBM Z OMEGAMON for CICS.

AIDs Indicates the number of automatic initiate descriptors (AIDs) found on the AID chain within a given CICS region. The value format is a positive integer, maximum four characters. An AID is created when CICS is unable to start a task because a resource is not available. An accumulation of these descriptors can adversely affect CICS storage and CPU availability. An AID remains in CICS until the resource is available, CICS is shut down, or the AID is stopped.

Any Current WS Faults Indicates if any current Web Service requests had a timeout associated with them.

Any Current WS Timeouts Indicates if any current Web Service requests had a fault associated with them.

ASID The unique address space identifier of the address space on the LPAR; it is displayed as a four digit hexadecimal field.

CICS Region Name Indicates the job name or the modify ID of the CICS region being monitored. Each CICS region in a z/OS operating system has a unique name. This name is an alphanumeric string, with a maximum of eight characters, and case-sensitive. CICS region names are always in uppercase characters.

CICS SYSIDNT Indicates the four character CICS system ID assigned to this CICS region. The value format is an alphanumeric string, maximum four characters, and case-sensitive. CICS system IDs are always in uppercase characters.

CICS TOD Clock Indicates the time of day clock setting in the CICS Common System Area (CSA). The time value is measured to two decimal places. The value can be entered in the HH:MM:SS.DD format, for example, 00:20:00.56 or as SSSSSSS.DD, for example, 1200.56. If you are using variable substitution, the value in this example would display as 120056.

CICS TOD Updated Indicates whether the CICS time of day clock is being updated. When a task goes into a loop and the CICS task dispatcher is unable to regain control, the CICS time of day clock field in the Common System Area is not updated by task control. These are the values: Yes and No

CICS Version Indicates the version of CICS running in the region.

CICSPlex Name Indicates the name of the CICSPlex that this CICS region is assigned to.

CPU Utilization Indicates the percentage of accumulated CPU time for the CICS region. This value is calculated at the beginning and end of a short elapsed-time interval. The difference between these two values is the amount of CPU consumed in the CICS region during that interval; this difference is then represented as a percentage of the elapsed-time interval. The value format is a percentage in the range 0-999.

Example:

- Accumulated CPU time at start of time interval = 2 sec
- Length of time interval = 10 sec
- Accumulated CPU time at end of time interval = 5 sec
- CPU consumed during the 10-second time interval = 5 - 2 sec = 3 sec

Therefore percent of CPU used during time interval = 3/10 =**30**%.

A low-to-zero value indicates the absence of a workload or non dispatch by z/OS. A high-to-100% (or greater) value indicates a heavy workload or a potential loop in either your application or CICS code. If the workload is running on multiple CPUs, the CPU utilization can exceed 100%.

If you want fractional values, you must include a decimal point and either zero or one decimal places; for example, **5.2**.

Current VSAM Buffer Waits Indicates the total number of current VSAM buffer waits for the file definitions in the current CICS region. The value format is a positive integer, maximum four characters.

Current VSAM String Waits Indicates the total number of current VSAM string waits for the file definitions in the current CICS region. The value format is a positive integer, maximum four characters.

Enqueue Waits Indicates the number of CICS enqueues exclusively controlling a resource that tasks are also waiting for. The value format is a positive integer, maximum four characters. A large number signifies

that too many tasks are competing for exclusive access to the same resources at the same time, which indicates a looping task, a deadlock situation, or poor response time from a task that holds an enqueued resource.

This value is stored in units of 1/100; therefore, when you open an event as attributes, you must interpret the performance index value of 1234 as 12.34. When you see the performance index in a view, however, a decimal point is inserted; therefore you interpret a value of 1234 as 12.34.

Group MSL Indicates the drop down box list for display.

Group Name Indicates the entry in the tree display.

Highest Pct Class MaxT The highest percentage of transactions with respect to the class limit for any one transaction class.

ICEs Indicates the number of interval control elements (ICEs) found on the ICE chain within a given CICS region. The value format is a positive integer, maximum four characters. An ICE is created whenever a time-dependent request for a CICS service is made. When the expiration time for the ICE is reached, the CICS service requested is initiated if the resources required for the service are available. If the requested service is task initiation, CICS creates an automatic initiate descriptor (AID) on ICE expiration. The AID either initiates the task or waits until required resources become available.

I/O Rate Indicates the rate at which I/O operations are being performed in a specified CICS region per second of elapsed time. It includes both application- and CICS-initiated I/O operations. The value format is a maximum of four characters. If you want fractional values, you must include decimal points and up to two decimal places. For example, if you want 5.2 seconds, add the decimal point.

Largest Contiguous Available LSQA Indicates the largest amount of contiguous local system queue area (LSQA) that is available. If LSQA accumulates to reach the highest level of the allocated private region, address space termination occurs. The value format is a positive integer, maximum four characters.

Largest Contiguous Available OSCOR Indicates the largest amount of contiguous free operating system core (OSCOR) that is available. If OSCOR is consumed to meet the IEALIMIT or expands to the lowest level of the local system queue area (LSQA) address space termination occurs. The value format is a positive integer, maximum four characters.

Maximum Tasks Percent Indicates the total number of tasks within a CICS region, expressed as a percentage of the MXT limit. Attaching of new tasks within the CICS region stops when the maximum task limit reaches 100%. The value format is a percentage in the range 0-100.

Origin Node Is the combination of z/OS System ID (SMFID) and CICS region name. The value format is an alphanumeric string, maximum 32 bytes, and case-sensitive.

When a situation is true, the system compares the origin node name in the attribute to the names of managed systems assigned to the item. If the origin node name matches the name of a managed system, the status of the item changes accordingly. If the names of the origin node and the managed systems do not match, the status of the item remains unchanged.

Order Indicates the order of the entry.

Page Rate Indicates the number of page-in operations in the CICS region per CPU second. The paging rate is important because CICS transactions wait until a page-in resolves. The value format is a maximum of four characters. If you want fractional values, you must include decimal points and up to two decimal places. For example, if you want 5.2 seconds, add the decimal point.

Queued Remote Requests The CICS region's total number of queued allocation requests for MRO, ISC, and IP sessions. The value format is a positive integer of maximum four bytes

Region Status Indicates CICS address space position. These are the values:

In
Indicates that the region is swapped in.

Inactive
Indicates that the CICS region is inactive.

N/S
Indicates that the CICS region is non-swappable.

Out
Indicates that the region was swapped out during data collection, perhaps for the entire sample period, and that the sample is incomplete.

RLS Status The current status of VSAM Record-Level Sharing (RLS) in this CICS region. This field can take on one of these values:

Active
CICS has registered with an SMSVSAM server, and VSAM RLS is currently active.

Inactive
CICS has registered with an SMSVSAM server, but VSAM RLS is currently inactive due to an SMSVSAM server failure. All RLS requests will fail until CICS performs dynamic VSAM RLS restart, which occurs automatically when the SMSVSAM server is restarted.

RLS NO
This CICS region does not support VSAM RLS, either because CICS was initialized with RLS=NO as a system initialization parameter or because CICS forced RLS to NO because the level of VSAM in the z/OS version under which CICS is running does not support VSAM RLS.

Unknown
OMEGAMON has not yet determined the status of VSAM RLS in this CICS region.

SOS The short-on-storage indicator. These are the values: YES and NO.

Start Time The time the CICS region was started. This may show as n/a if the OMEGAMON agent is of a prior version.

Storage Violations The number of storage violations that have occurred within the last hour. A storage violation occurs when CICS detects storage corruption for a task. The value format is a positive integer, with a maximum of four characters.

System ID The four character name that uniquely identifies an active z/OS operating system within a given CICSplex. The value format is an alphanumeric string, maximum four characters, and case-sensitive. z/OS System IDs are always in uppercase characters.

Total Queued Transactions The total number of transactions queued for Maximum task or transaction class limits.

Transaction Rate Indicates the average number of transactions executed in one minute of elapsed time. For example, if the statistics are collected every 10 minutes, and the total number of transactions during the last 10 minutes is 300, the average number of transactions per minute is 30. The value format is a positive integer of maximum two bytes.

VTAM ACB Open Indicates whether the VTAM Access Method Control Block (ACB) is open or closed. The VTAM ACB defines the interface between the application code (CICS) and VTAM routines enabling CICS to use the VTAM facilities. These are the values: Yes and No.

VTAM Applid Indicates the eight character name that specifies the VTAM applid of the CICS region. Each CICS region has a unique VTAM applid. The VTAM applids are always in uppercase characters. The value is an alphanumeric string, maximum eight characters and is case-sensitive.

VTAM Generic Applid Indicates the eight character name that specifies the generic VTAM applid of the CICS region. Each CICS region has a specific and a generic VTAM applid. Generic VTAM applids are always in uppercase characters. The value is an alphanumeric string, maximum eight characters and is case-sensitive.

Working Set Size Indicates the amount of central (both real and expanded) storage owned by the address space, including both address space and other storage, for example, dataspace, expressed as kilobytes. If the working set size value is high and central storage is constrained, considerable paging activity occurs, which degrades the response time. The value format is a positive integer, maximum four characters.

Worst Region Performance Index The worst performance index value for the CICS region, which is calculated using the response time for a service class and its' response time goal. This value is a useful indicator as to which CICS region's response time might be starting to degrade. The number is presented as a percentage, accurate to two decimal places. A performance index greater than 1.00 indicates that the service class is no longer meeting its defined response time goal.

Worst Region Service Class Name The name of the service class whose transaction response times are performing the worst with respect to the user defined goals in the CICS region. The name is an alphanumeric string, with a maximum of eight characters, in length. The designation n/a is shown when there is no data to display.

XCF GROUP Indicates the eight character name of the XCF group where the CICS region belongs.

Chapter 4. Situations

IBM Z OMEGAMON for CICS provides numerous predefined situations to issue alerts that help you monitor activity in your CICS regions. These situations check for conditions that are typically considered to be problematic or noteworthy.

They can also serve as templates for creating customized situations of your own. All these situations include expert advice for handling these conditions should they arise. These are the situations:

To obtain information about each predefined situation, see the Tivoli Enterprise Portal expert advice given for each situation.

Each predefined situation addresses a specific problem. You can use these situations:

- To immediately monitor your CICS regions
- As models for creating your own situations
- To monitor and manage, through localized automation, widely dispersed resources

Most of the predefined situations have an alert status of either Critical or Warning. You can view which managed objects in Tivoli Enterprise Portal have triggered alerts by selecting the **Business** tab of Tivoli Enterprise Portal.

Using the Tivoli Enterprise Portal, you can change conditions, relational operators, and compare values in these predefined situations to ones more appropriate to your environment. You can also modify the predefined situations provided for use with Tivoli Enterprise Portal. If you choose to change a predefined situation, change a copy, and preserve the original situation in the form in which it was shipped.

For more information about creating and using situations, see the Tivoli Enterprise Portal online help. For information about the various attributes used in predefined situations, see Chapter 3, “Attributes,” on page 57.

Situations are expressions of system conditions you want to monitor embedded in IF-TRUE statements. This means that if the specified condition exists, then this situation is true. Most of the predefined situations are set to issue an alert whenever a threshold reaches either critical or warning limit.

You can use these situations to monitor particular conditions for your CICS regions. For example, you might want to monitor for total disk space available less than 25%, an excessive number of unsuccessful logon attempts, or a printer out of paper.

Note:

1. In situations, an individual attribute is denoted by *attrg.attrn*, where *attrg* is the name of the attribute group and *attrn* is the attribute within that group.
2. When referenced in a situation, spaces in both the group name, the attribute name itself, and the situation name are replaced with underscores.
3. Note that predefined situations shipped with this version of this product are *not* set to autostart. The autostart status of existing situations (situations from V4.1.0 or previous versions of this product that you are migrating from) is not affected.

Application Bundle situation

The single predefined situation in this category alerts you to the efficiency status of Application Bundle resources in your CICS regions.

CICSplex_Bundle_Warning
The Application Bundle status activity.

The Application Bundle status activity identified in the alert is in a DISABLED state, indicating that the Application Bundle that has been installed in your target CICS region is not active.

Formula: If the value of CICSplex_Application_Bundle_Status is equal to Disabled then situation CICSplex_Bundle_Warning is true.

See also the “CICSplex Application Bundle Summary attribute group” on page 60.

Application Bundle Part situation

The single predefined situation in this category alerts you to the efficiency status of Application Bundle Part resources in your CICS regions.

CICSplex_Bundle_Parts_Warning
The Application Bundle Part status activity.

The Application Bundle Part status activity identified in the alert is in a DISABLED state, indicating that the Application Bundle Part definition that has been installed in your target CICS region is not active.

If the installed Application Bundle Part definition is incorrect, you can discard the definition, and install the correct definition again using CEDA.

Formula: If the value of CICSplex_Application_Bundle_Part_Status is equal to Disabled then situation CICSplex_Bundle_Parts_Warning is true.

See also the "CICSplex Application Bundle Parts attribute group" on page 59.

Atom Feed situation

The single predefined situation in this category alerts you to the efficiency status of Atom Feed resources in your CICS regions.

CICSplex_Atom_Feed_Warning
The Atom Feed status activity.

The Atom Feed status activity identified in the alert is in a DISABLED state, indicating that the Atom Feed definitions that have been installed in your target CICS region are not active.

Formula: If the value of Atom_Service_Status is equal to Disabled then situation CICSplex_Atom_Feed_Warning is true.

See also the "CICSplex Atom Feed Summary attribute group" on page 64.

Business Transaction Services Analysis situations

The situations in this category alert you to error conditions related to Business Transaction Services (BTS) activities or processes.

CICSplex_Activity_Warning
BTS activity has terminated or has been forced.

The Business Transaction Services activity identified in the alert is in an ABENDED or FORCED state, indicating that it has not completed normally. Check the application associated with this activity to ensure that the data it processes is valid.

Formula: If the value of CICSplex_BTS_Activity_Details.Completion_status does not equal Normal and the value of CICSplex_BTS_Activity_Details.Completion_status does not equal Incomplete then situation CICSplex_Activity_Warning is true.

CICSplex_ProcessType_Warning
ProcessType is not enabled.

The ProcessType in the alert is not enabled. Business Transaction Services do not allow new processes of this type to be defined until its state is reset to enabled.

Formula: If the value of CICSplex_Web_Service_Details.Status does not equal Inservice then situation CICSplex_ProcessType_Warning is true.

Connection Analysis situations

The predefined situations in this category monitor the efficiency of MRO and ISC links between regions of a CICSplex and resources of CICS regions. These resources include storage, files, queues, and enqueues.

CICSplex_Sympathy_Sickness
Sympathy sickness occurs when the performance of one CICS region is affected as a result of problems in an adjoining CICS region.

Use the Connections analysis workspace to examine the status of the connection between CICS and its remote regions. Check that the remote systems are available with connections that are in service.

Formula: If the value of Transaction_Rate is less than 10 and ((the value of Worst_ISC_Connection_Percent_of_Links_in_Use equals 100 and the value of Worst_ISC_Connection_Number_of_AIDs is greater than 0)or (the value of Worst_MRO_Connection_Percent_of_Links_in_Use is greater than 99 and the value of Worst_MRO_Connection_Number_of_AIDs is greater than 0)) then situation CICSplex_Sympathy_Sickness is true.

CICSplex_MROPctLink_Warning
Warning threshold exceeded for MRO connection percent.

If the link usage regularly reaches 100% and there are one or more tasks waiting, the configuration for that connection can need to be altered, with an increase in the number of links defined. Effectively, there is an MRO bottleneck caused by a lack of paths available for work to be scheduled cross-system.

Formula: If the value of Worst_MRO_Connection_Percent_of_Links_in_Use is greater than 80 and the value of Worst_MRO_Connection_Percent_of_Links_in_Use is less than or equal to 90 then situation CICSplex_MROPctLink_Warning is true.

CICSplex_MROPctLink_Critical
If the link usage is regularly reaches 100% and there are one or more tasks waiting, the configuration for that connection can need to be altered, with an increase in the number of links defined. Effectively, there is an MRO bottleneck caused by a lack of paths available for work to be scheduled cross-system.

Formula: If the value of Worst_MRO_Connection_Percent_of_Links_in_Use is greater than 90 then situation CICSplex_MROPctLink_Critical is true.

CICSplex_MROAIDs_Warning
Warning threshold exceeded for MRO AID count.

If the link usage is regularly reaches 100% and there are one or more tasks waiting, the configuration for that connection can need to be altered, with an increase in the number of links defined. Effectively, there is an MRO bottleneck caused by a lack of paths available for work to be scheduled cross-system. Check that the remote system is available and that the connections are in service.

Formula: If the value of Worst_MRO_Connection_Number_of_AIDs is greater than 5 and the value of Worst_MRO_Connection_Number_of_AIDs is less than or equal to 10 then situation CICSplex_MROAIDs_Warning is true.

CICSplex_MROAIDs_Critical
Critical threshold exceeded for MRO AID count.

If the link usage is regularly hitting 100% and there are one or more tasks waiting, the configuration for that connection can need to be altered, with an increase in the number of links defined. Effectively, there is an MRO bottleneck caused by a lack of paths available for work to be scheduled cross-system. Check that the remote system is available and that the connections are in service.

Formula: If the value of Worst_MRO_Connection_Number_of_AIDs is greater than 10 then situation CICSplex_MROAIDs_Critical is true.

See also the "CICSplex Connection Analysis attribute group" on page 76.

Database Analysis situations

The predefined situations in this category monitor DB2 task activity.

Note: All the attribute names in this group are prefixed with CICSplex_DB2_Task_Activity except where stated.

CICSplex_DB2MaxThreads_Warning
Warning threshold exceeded for DB2 maximum threads.

It is not detrimental to reach a high percentage of the maximum active thread limit. However, when the ratio frequently nears 100%, increase the value specified in the THRDA keyword of the DSNCRCT macro used to define the CICS DB2 Resource Control Table for the transaction. You can also increase

it dynamically using the MODIFY option of the DSNC transaction. Increasing the number of threads increases the overhead of the z/OS dispatcher scanning the TCB chain.

Formula: If the value of Maximum_Active_Threads is greater than 20 and the value of Maximum_Active_Threads is less than or equal to 54 then situation CICSplex_DB2MaxThreads_Warning is true.

CICSplex_DB2MaxThreads_Critical
Critical threshold exceeded for DB2 maximum threads.

It is not detrimental to reach a high percentage of the maximum active thread limit. However, when the ratio frequently nears 100%, increase the value specified in the THRDA keyword of the DSNCRCT macro used to define the CICS DB2 Resource Control for the transaction. You can also increase it dynamically using the MODIFY option of the DSNC transaction. Increasing the number of threads increases the overhead of the z/OS dispatcher scanning the TCB chain.

Formula: If the value of Maximum_Active_Threads is greater than 54 then situation CICSplex_DB2MaxThreads_Critical is true.

CICSplex_DB2Abort_Warning
Warning threshold exceeded for DB2 abort percent.

Consider changing the WAIT parameter in the DSNCRCT table to specify WAIT=YES or WAIT=POOL for this transaction. WAIT=YES allows a task to be queued when no threads are available; WAIT=POOL allows a task to use a pool thread. Increase the value specified in the THRDA keyword of the DSNCRCT macro used to define the CICS DB2 Resource Control for the transaction, or increase it dynamically using the MODIFY option of the DSNC transaction. Increasing the number of threads increases the overhead of the z/OS dispatcher scanning the TCB chain.

Formula: If the value of Abort_Percent is greater than 40 and the value of Abort_Percent is less than or equal to 65 then situation CICSplex_DB2Abort_Warning is true.

CICSplex_DB2Abort_Critical
Critical threshold exceeded for DB2 abort percent.

Consider changing the TWAIT parameter in the DSNCRCT table to specify WAIT=YES or WAIT=POOL for this transaction. WAIT=YES allows a task to be queued when no threads are available; WAIT=POOL allows a task to use a pool thread. Increase the value specified in the THRDA keyword of the DSNCRCT macro used to define the CICS DB2 Resource Control for the transaction, or increase it dynamically using the MODIFY option of the DSNC transaction. Increasing the number of threads increases the overhead of the z/OS dispatcher scanning the TCB chain.

Formula: If the value of Abort_Percent is greater than 65 then situation CICSplex_DB2Abort_Critical is true.

CICSplex_DB2Wait_Warning
Warning threshold exceeded for DB2 wait percent.

To reduce the percentage of waits, you can increase the maximum number of active threads for this transaction temporarily using either the MODIFY option of the DSNC transaction, or permanently by changing the THRDA parameter in the DSNCRCT. Increasing the number of threads, however, increases the overhead of the z/OS dispatcher scanning the TCB chain.

Formula: If the value of Wait_Percent is greater than 40 and the value of Wait_Percent is less than or equal to 65 then situation CICSplex_DB2Wait_Warning is true.

CICSplex_DB2Wait_Critical
Critical threshold exceeded for DB2 wait percentage.

To reduce the percentage of waits, increase the maximum number of active threads for this transaction temporarily using either the MODIFY option of the DSNC transaction, or permanently by changing the THRDA parameter in the DSNCRCT. Increasing the number of threads, however, increases the overhead of the z/OS dispatcher scanning the TCB chain.

Formula: If the value of Wait_Percent is greater than 65 then situation CICSplex_DB2Wait_Critical is true.

CICSplex_DB2ThreadHWM_Warning
Warning threshold exceeded for DB2 thread HWM.

If the problem is intermittent, increase the maximum number of active tasks for this transaction temporarily with the MODIFY option of the DSNC transaction. If the threshold is exceeded frequently, consider raising the maximum number of active threads by changing the THRDA parameter in the DSNCRCT. Increasing the number of threads, however, increases the overhead of the z/OS dispatcher scanning the TCB chain.

Formula: If the value of Threads_in_Use_Percent_HWM is greater than 70 and the value of Threads_in_Use_Percent_HWM is less than or equal to 90 then situation CICSplex_DB2ThreadHWM_Warning is true.

CICSplex_DB2ThreadHWM_Critical
Critical threshold exceeded for DB2 thread HWM.

If the problem is intermittent, increase the maximum number of active tasks for this transaction temporarily with the MODIFY option of the DSNC transaction. If the threshold is exceeded frequently, consider raising the maximum number of active threads by changing the THRDA parameter in the DSNCRCT. Increasing the number of threads, however, increases the overhead of the z/OS dispatcher scanning the TCB chain.

Formula: If the value of Threads_in_Use_Percent_HWM is greater than 90 then situation CICSplex_DB2ThreadHWM_Critical is true.

CICSplex_DB2ThreadUse_Warning
Warning threshold exceeded for DB2 thread use.

If the problem is intermittent, increase the maximum number of active tasks for this transaction temporarily with the MODIFY option of the DSNC transaction. If the threshold is exceeded frequently, consider raising the maximum number of active threads by changing the THRDA parameter in the DSNCRCT. Increasing the number of threads, however, increases the overhead of the z/OS dispatcher scanning the TCB chain.

Formula: If the value of Threads_in_Use_Percent is greater than 70 and the value of Threads_in_Use_Percent is less than or equal to 90 then situation CICSplex_DB2ThreadUse_Warning is true.

CICSplex_DB2ThreadUse_Critical
Critical threshold exceeded for DB2 thread use.

If the problem is intermittent, increase the maximum number of active tasks for this transaction temporarily with the MODIFY option of the DSNC transaction. If the threshold is exceeded frequently, consider raising the maximum number of active threads by changing the THRDA parameter in the DSNCRCT. Increasing the number of threads, however, increases the overhead of the z/OS dispatcher scanning the TCB chain.

Formula: If the value of Threads_in_Use_Percent is greater than 90 then situation CICSplex_DB2ThreadUse_Critical is true.

CICSplex_DB2Attached_Warning
Warning threshold exceeded for DB2 attach status.

Verify that DB2 is required for this CICS region. If DB2 is needed, attach DB2 for this region using DSNC STRT*c*, where*c* is the appropriate RCT suffix. Include the DB2 startup program in the CICS startup PLT.

Formula: If the value of CICSplex_DB2_Summary.Attached_to_DB2 equals No then situation CICSplex_DB2Attached_Warning is true.

CICSplex_DB2Attached_Critical
Critical threshold exceeded for DB2 attach status.

Verify that DB2 is required for this CICS region. If DB2 is needed, attach DB2 for this region using DSNC STRT*c*, where*c* is the appropriate RCT suffix. Include the DB2 startup program in the CICS startup PLT.

Formula: If the value of CICSplex_DB2_Summary.Attached_to_DB2 equals No then situation CICSplex_DB2Attached_Critical is true.

CICSplex_DBCTLAct_Warning
Warning threshold exceeded for DBCTL active status.

Use the CICS transaction CDBC to connect CICS to DBCTL.

Formula: If the value of CICSplex_DBCTL_Summary.DBCTL_Active equals No then situation CICSplex_DBCTLAct_Warning is true.

CICSplex_DBCTLAct_Critical
Critical threshold exceeded for DBCTL active status.

Use the CICS transaction CDBC to connect CICS to DBCTL.

Formula: If the value of CICSplex_DBCTL_Summary.DBCTL_Active equals No then situation CICSplex_DBCTLAct_Critical is true.

See also the:

- "CICSplex DB2 Summary attribute group" on page 84
- "CICSplex DB2 Task Activity attribute group" on page 85

Dispatcher situation

The single predefined situation in this category monitors CICS attempts to dispatch tasks.

Note: All the attribute names in this group are prefixed with CICSplex_Dispatcher_TCB_Pools, except where stated.

CICSplex_AtMaxTCB_Critical
Critical threshold exceeded for currently attached TCBs in the named dispatcher pool.

This situation compares the number of currently attached TCBs within a dispatcher pool against the defined maximum value. If the situation is true, consider increasing the number of TCBs that can be attached in the pool (check CICS parameters MAXOPENTCBs, MAXSSLTCBs, MAXXPTCBs and MAXJVMTCBs). Also, check the transaction analysis views to ensure that transactions are completing in a timely manner and therefore freeing their allocated TCBs.

Note: Increasing the number of TCBs that can be attached within a dispatcher pool might have implications for CICS storage use, which can be monitored using the storage analysis views.

Formula: If the value of Current_TCBs_Attached is greater than or equal to Maximum_TCBs then situation CICSplex_AtMaxTCB_Critical is true.

See also the "CICSplex Dispatcher Summary attribute group" on page 87.

Dump Analysis situations

The predefined situations in this category monitor dumps.

Note: All the attribute names in this group are prefixed with CICSplex_Dump_Analysis, except where stated.

CICSplex_TranDumps_Warning
Warning threshold exceeded for transaction dumps.

Use the transaction history component of IBM Z OMEGAMON for CICS to determine which transactions have abnormally terminated. To check for storage violations, select the Region Overview workspace from the Navigator Physical view.

Formula: If the value of Transaction_Dumps is greater than 1 and the value of Transaction_Dumps is less than or equal to 2 then situation CICSplex_TranDumps_Warning is true.

CICSplex_TranDumps_Critical
Critical threshold exceeded for transaction dumps.

Use the transaction history component of IBM Z OMEGAMON for CICS to determine which transactions have abnormally terminated. To check for storage violations, select the Region Overview workspace from the Navigator Physical view.

Formula: If the value of Transaction_Dumps is greater than 2 then situation CICSplex_TranDumps_Critical is true.

CICSplex_SysDumps_Warning
Warning threshold exceeded for system dumps.

Inspect the operator's console for error messages which indicates the cause of the problem. Format the dump data set to determine what caused the abnormal termination. Ensure the predicate in this situation specifies a value less than the number of SYS1.DUMP*nn* data sets to ensure that dumps are not lost.

Formula: If the value of System_Dumps is greater than 0 and the value of System_Dumps is less than or equal to 1 then situation CICSplex_SysDumps_Warning is true.

CICSplex_SysDumps_Critical
Critical threshold exceeded for system dumps.

Inspect the operator's console for error messages which indicates the cause of the problem. Format the dump data set to determine what caused the abnormal termination. Ensure the predicate in this situation specifies a value less than the number of SYS1.DUMP*nn* data sets to ensure that dumps are not lost.

Formula: If the value of System_Dumps is greater than 1 then situation CICSplex_SysDumps_Critical is true.

CICSplex_TakingSDUMP_Warning
Warning threshold exceeded for taking system dump.

Inspect the operator's console for error messages which indicates the cause of the problem. Format the contents of the dump data set to diagnose the CICS abnormal termination.

Formula: If the value of Taking_SDUMP equals Yes then situation CICSplex_TakingSDUMP_Warning is true.

CICSplex_TakingSDUMP_Critical
Critical threshold exceeded for taking system dump.

Inspect the operator's console for error messages which indicates the cause of the problem. Format the contents of the dump data set to diagnose the CICS abnormal termination.

Formula: If the value of Taking_SDUMP equals Yes then situation CICSplex_TakingSDUMP_Critical is true.

CICSplex_TranDumpsHr_Warning
Warning threshold exceeded for transaction dumps per hour.

Use the transaction history component of IBM Z OMEGAMON for CICS to determine which transactions have abnormally terminated. To check for storage violations, select the Region Overview view from the Navigator Physical view of the Tivoli Enterprise Portal.

Formula: If the value of Transaction_Dumps_in_Last_Hour is greater than 0 and the value of Transaction_Dumps_in_Last_Hour is less than or equal to 1 then situation CICSplex_TranDumpsHr_Warning is true.

CICSplex_TranDumpsHr_Critical
Critical threshold exceeded for transaction dumps per hour.

Use the transaction history component of IBM Z OMEGAMON for CICS to determine which transactions have abnormally terminated. To check for storage violations, select the Region Overview view from the Navigator Physical view of the Tivoli Enterprise Portal.

Formula: If the value of Transaction_Dumps_in_Last_Hour is greater than 1 then situation CICSplex_TranDumpsHr_Critical is true.

CICSplex_SysDumpsHr_Warning
Warning threshold exceeded for system dumps per hour.

Inspect the operator's console for error messages which indicates the cause of the problem. Format the dump data set to determine what caused the abnormal termination. Ensure the predicate in this situation specifies a value less than the number of SYS1.DUMP*nn* data sets to ensure that dumps are not lost.

Formula: If the value of System_Dumps_in_Last_Hour is greater than 0 and the value of System_Dumps_in_Last_Hour is less than or equal to 1 then situation CICSplex_SysDumpsHr_Warning is true.

CICSplex_SysDumpsHr_Critical
Critical threshold exceeded for system dumps per hour.

Inspect the operator's console for error messages which indicates the cause of the problem. Format the dump data set to determine what caused the abnormal termination. Ensure the predicate in this situation specifies a value less than the number of SYS1.DUMP*nn* data sets to ensure that dumps are not lost.

Formula: If the value of System_Dumps_in_Last_Hour is greater than 1 then situation CICSplex_SysDumpsHr_Critical is true.

See also the "CICSplex Dump Analysis attribute group" on page 94.

Enqueue Analysis situations

The predefined situations in this category monitor enqueues.

Note: All the attribute names in this group are prefixed with CICSplex_Enqueue_Analysis. except where stated.

CICSplex_TotENQWaits_Warning
Warning threshold exceeded for CICS enqueue waits.

Select the Enqueue Analysis view to find all tasks waiting on enqueues and the owners of the serially reusable resources. If an enqueue is not being released, examine the owning task's resource type to determine whether it is looping, waiting on a resource, or deadlocked with another task. You can use the KILL command of IBM Z OMEGAMON for CICS to free the enqueue and allow the waiting tasks to continue. To limit the number of tasks suspended because of enqueue conflicts, consider transaction classes.

Formula: If the value of CICSplex_Region_Overview.Enqueue_Waits is greater than 5 and the value of CICSplex_Region_Overview.Enqueue_Waits is less than or equal to 10 then situation CICSplex_TotENQWaits_Warning is true.

CICSplex_TotENQWaits_Critical
This is the critical threshold exceeded for CICS enqueue waits.

Select the Enqueue Analysis view to find all tasks waiting on enqueues and the owners of the serially reusable resources. If an enqueue is not being released, examine the owning task's resource type to determine whether it is looping, waiting on a resource, or deadlocked with another task. You can use the KILL command of IBM Z OMEGAMON for CICS to free the enqueue and allow the waiting tasks to continue. To limit the number of tasks suspended because of enqueue conflicts, consider transaction classes.

Formula: If the value of CICSplex_Region_Overview.Enqueue_Waits is greater than 10 then situation CICSplex_TotENQWaits_Critical is true.

CICSplex_ENQWaitCount_Warning
Warning threshold exceeded for enqueue task waits.

Select the Enqueue Analysis workspace to find all tasks waiting on enqueues and the owners of the serially reusable resources. If an enqueue is not being released, examine the owning task's resource type to determine whether it is looping, waiting on a resource, or deadlocked with another task. You can use the KILL command of IBM Z OMEGAMON for CICS to free the enqueue and allow the waiting tasks to continue. To limit the number of tasks suspended because of enqueue conflicts, consider transaction classes.

Formula: If the value of Wait_Count is greater than 1 and the value of Wait_Count is less than or equal to 5 then situation CICSplex_ENQWaitCount_Warning is true.

CICSplex_ENQWaitCount_Critical
This is the critical threshold exceeded for enqueue task waits.

Select the Enqueue Analysis view to find all tasks waiting on enqueues and the owners of the serially reusable resources. If an enqueue is not being released, examine the owning task's resource type to determine whether it is looping, waiting on a resource, or deadlocked with another task. You can use the KILL command of IBM Z OMEGAMON for CICS to free the enqueue and allow the waiting tasks to continue. To limit the number of tasks suspended because of enqueue conflicts, consider transaction classes.

Formula: If the value of Wait_Count is greater than 5 then situation CICSplex_ENQWaitCount_Critical is true.

CICSplex_SysplexEnq_Warning
Sysplex enqueues warning.

The current number of waiting Sysplex enqueues has exceeded 20. Use the "Transaction Analysis workspace" on page 361 to determine which transactions are enqueuing resources for excessive time periods. Investigate the applications to determine why they are serially accessing resources across the Sysplex.

Formula: If the value of CICSplex_Enqueue_Pool_Details.Current_Sysplex_waiting is greater than 20 then situation CICSplex_SysplexEnq_Warning is true.

CICSplex_SysplexEnq_Critical
Sysplex enqueues critical.

The current number of waiting Sysplex enqueues has exceeded 50, and the situation can now be considered critical. Use the "Transaction Analysis workspace" on page 361 to determine which transactions are enqueuing on resources for excessive time periods. Investigate the applications to determine why they are serially accessing resources across the Sysplex.

Formula: If the value of CICSplex_Enqueue_Pool_Details.Current_Sysplex_waiting is greater than 50 then situation CICSplex_SysplexEnq_Critical is true.

See also the "CICSplex Enqueue Analysis attribute group" on page 98.

Enterprise Java Analysis situations

The situations in this category alert you to possible errors relating to Java resources.

Note: All the attribute names in this group are prefixed with CICSplex_DJAR_Details.

CICSplex_Corbaserver_Warning
Warning threshold exceeded; CORBA server not enabled.

The CORBA server identified in the alert is not enabled. Determine why the CORBA server is not enabled, and take the appropriate action.

Formula: If the value of State does not equal Discarding then situation CICSplex_Corbaserver_Warning is true.

CICSplex_DJAR_Warning
Warning threshold exceeded; deployed JAR being discarded.

The deployed JAR identified in the alert is being discarded. Determine why the DJAR is being discarded, and take the appropriate action.

Formula: If the value of State equals Discarding then situation CICSplex_DJAR_Warning is true.

CICSplex_DJAR_Critical
Critical threshold exceeded; DJAR not usable or resolved.

The deployed JAR identified in the alert is either UNRESOLVED or UNUSABLE. Determine why the DJAR is in this state, and take the appropriate action. Verify that the DJAR is present in the directory specified in the HFS file parameter and that it has been correctly built. Examine the output from the DJAR resolution process in the CICS job log for full details of the error.

Formula: If the value of State equals Unresolved or the value of State equals Unusable then situation CICSplex_DJAR_Critical is true.

Event Processing situation

The single predefined situation in this category alerts you to the efficiency status of Event Binding resources in your target CICS regions.

CICSplex_Event_Processing_Warning
The Event Binding object status activity.

The Event Binding object activity identified in the alert is in a DISABLED state, indicating that the Event Binding object definitions that have been installed in your target CICS region are not active.

Formula: If the value of Event_Processing_Status is equal to Disabled then situation CICSplex_Event_Processing_Warning is true.

See also the "CICSplex Event Processing Summary attribute group" on page 103.

Exit Program Analysis situations

The situations in this group inform you if your site's exit programs are not available to your applications.

Note: All the attribute names in this group are prefixed with CICSplex_Exit_Program_Analysis.

CICSplex_ExitConn_Warning
Exit program not connected.

The exit program associated with this alert is showing a connection status other than CONNECTED. Check your exit program's connection status to determine what is wrong. If needed, refer to the *IBM CICS Transaction Server: System Programming Reference* for guidance.

Formula: If the value of Connection_Status does not equal Connected then situation CICSplex_ExitConn_Warning is true.

CICSplex_ExitStart_Warning
Exit program is stopped.

The exit program associated with this alert is showing a Start Status other than STARTED. A STOPPED status means the exit program is not available for execution; that is, either an EXEC CICS ENABLE command with the START option has not been issued or it has been revoked by the STOP option. Issue an EXEC CICS ENABLE command to start your exit program.

Formula: If the value of Start_Status does not equal Started then situation CICSplex_ExitStart_Warning is true

Java Program Analysis situation

The single predefined situation in this category monitors Java programs.

Note: All the attribute names in this group are prefixed with CICSplex_JVMPROGRAM.

CICSplex_JVMProgram_Warning
This situation reports all Java programs that are not enabled.

You need to determine why the program has become disabled and re-enable if appropriate.

Formula: If the value of Status does not equal Enabled then situation CICSplex_JVMProgram_Warning is true.

See also the "CICSplex Java Program Analysis attribute group" on page 123.

Journal Analysis situations

The predefined situations in this category monitor journals.

Note: All the attribute names in this group are prefixed with CICSplex_Journal_Analysis. except where stated.

CICSplex_JournalDis_Warning
Warning threshold exceeded for disabled journal.

A disabled journal cannot be used until it is re-enabled. Either IBM Z OMEGAMON for CICS or the CICS CEMT transaction can be used to enable a disabled journal.

Formula: If the value of Journal_Status equals Disabled then situation CICSplex_JournalDis_Warning is true.

CICSplex_JournalDis_Critical
This is the critical threshold exceeded for disabled journal.

A disabled journal cannot be used until it is re-enabled. Either IBM Z OMEGAMON for CICS or the CICS CEMT transaction can be used to enable a disabled journal.

Formula: If the value of Journal_Status equals Disabled then situation CICSplex_JournalDis_Critical is true.

CICSplex_JournalFail_Warning
Warning threshold exceeded for journal failure.

A journal that has experienced a log stream failure cannot be used until it is re-enabled, or until CICS is restarted. The cause of the failure can be determined using the journal views. Either IBM Z OMEGAMON for CICS or the CICS CEMT transaction can be used to enable a journal that has a status of 'failed'.

Formula: If the value of Journal_Status equals Failed then situation CICSplex_JournalFail_Warning is true.

CICSplex_JournalFail_Critical
This is the critical threshold exceeded for journal failure.

A journal that has experienced a log stream failure cannot be used until it is re-enabled, or until CICS is restarted. The cause of the failure can be determined using the journal views. Either IBM Z OMEGAMON for CICS or the CICS CEMT transaction can be used to enable a journal that has a status of 'failed'.

Formula: If the value of Journal_Status equals Failed then situation CICSplex_JournalFail_Critical is true.

See also the "CICSplex Journal Analysis attribute group" on page 125.

JVM Analysis situation

The single predefined situation in this category monitors Java Virtual Machine (JVM) services.

Note: All the attribute names in this group are prefixed with CICSplex_JVM_Analysis. except where stated.

CICSplex_JVMClasscache_Warning
This situation gives a warning if Classcache is too low.

You can increase the CLASSCACHE size that is defined using SIT option JVMCCSIZE.

Formula: If the value of Open_Status is less than CICSplex_JVM_Classcache_Details.Cache_Size then situation CICSplex_JVMClasscache_Warning is true.

See also the "CICSplex JVM Analysis attribute group" on page 126.

JVM Server Analysis situation

The single predefined situation in this category monitors the JVM server runtime environment and, in particular, the T8 TCBs, and the name of the program defined to CICS that contains the LE Runopts variables, which are used to start the JVM servers.

CICSplex_JVM_Server_Status_Warning
This situation provides a warning if the JVM Server Status is not enabled.

Formula: If the value of JVM_Server_Status is not equal to Enabled then situation CICSplex_JVM_Server_Status_Warning is true.

See also the "CICSplex JVM Server Analysis attribute group" on page 131.

LSR Pool Analysis situations

The predefined situations in this category monitor the LSR Pool status.

Use the Situation editor in the Tivoli Enterprise Portal for viewing or editing any other LSR Poll situations. When you click the Situation editor icon on the toolbar to open the Situation editor instead of through the Navigator item menu, the situation is not associated with any Navigator item. Keyboard shortcut: Ctrl + E.

CICSplex_LSRPool1Str_Warning
Warning threshold exceeded for LSR pool 1 string usage.

If all strings are in use, response time is degraded. Use the LSR Pool Status workspace to analyze string and LSR pool use. Additionally, the Bottleneck Analysis workspace can be used to determine the amount of degradation caused by waiting for strings. If there is no evident problem, increase the number of strings in the LSRPOOL Resource Definition.

Formula: If the value of Percent_of_Active_Strings is greater than 80 and the value of Percent_of_Active_Strings is less than or equal to 90 and the value of Pool_ID equals 1 then situation CICSplex_LSRPool1Str_Warning is true.

CICSplex_LSRPool1Str_Critical
This is the critical threshold exceeded for LSR pool 1 string usage.

If all strings are in use, response time is degraded. Use the LSR Pool Status workspace to analyze string and LSR pool use. Additionally, the Bottleneck Analysis workspace can be used to determine the amount of degradation caused by waiting for strings. If there is no evident problem, increase the number of strings in the LSRPOOL Resource Definition.

Formula: If the value of Percent_of_Active_Strings is greater than 90 and the value of Pool_ID equals 1 then situation CICSplex_LSRPool1Str_Critical is true.

CICSplex_LSRPool1Wait_Warning
Warning threshold exceeded for LSR pool 1 task waits.

File activity is being delayed. Use the LSR Pool Status workspace to analyze string and LSR pool use. Additionally, the Bottleneck Analysis workspace and the Impact Analysis function can be used to determine if either string waits are a problem, or if CICS is competing with other tasks for the same resources. If there is no evident problem, increase the number of strings in the LSRPOOL Resource Definition.

Formula: If the value of Tasks_Waiting is greater than 1 and the value of Tasks_Waiting is less than or equal to 5 and the value of Pool_ID equals 1 then situation CICSplex_LSRPool1Wait_Warning is true.

CICSplex_LSRPool1Wait_Critical
This is the critical threshold exceeded for LSR pool 1 task waits.

File activity is being delayed. Use the LSR Pool Status workspace to analyze string and LSR pool use. Additionally, the Bottleneck Analysis workspace and Impact Analysis function in IBM Z OMEGAMON for CICS can be used to determine if either string waits are a problem, or if CICS is competing with other tasks for the same resources. If there is no evident problem, increase the number of strings in the LSRPOOL Resource Definition.

Formula: If the value of Tasks_Waiting is greater than 5 and the value of Pool_ID equals 1 then situation CICSplex_LSRPool1Wait_Critical is true.

CICSplex_LSRPool1Look_Warning
Warning threshold exceeded for LSR pool 1 lookaside.

A successful lookaside is a VSAM read request that was satisfied from a CI currently in an LSR buffer, without incurring the overhead of a physical I/O to a disk device. You can achieve a greater success ratio by increasing the number of buffers defined for the LSR pool. Increasing the number of buffers, however, increases the virtual storage requirement of your CICS region.

Formula: If the value of Lookaside_Ratio is less than 30 and the value of Lookaside_Ratio is greater than or equal to 10 and the value of Pool_ID equals 1 then situation CICSplex_LSRPool1Look_Warning is true.

CICSplex_LSRPool1Look_Critical
This is the critical threshold exceeded for LSR pool 1 lookaside.

A successful lookaside is a VSAM read request that was satisfied from a CI currently in an LSR buffer, without incurring the overhead of a physical I/O to a disk device. You can achieve a greater success ratio by increasing the number of buffers defined for the LSR pool. Increasing the number of buffers, however, increases the virtual storage requirement of your CICS region.

Formula: If the value of Lookaside_Ratio is less than 10 and the value of Pool_ID equals 1 then situation CICSplex_LSRPool1Look_Critical is true.

See also the "CICSplex LSR Pool Status attribute group" on page 135.

MQ Connection situations

The single predefined situation in this category monitors an MQ connection.

Note: All the attribute names in this group are prefixed with CICSplex_MQ_Connection_Details. except where stated.

CICSplex_MQInactive_Warning
Warning threshold exceeded for MQ connection status.

The CICS adapter can be automatically connected during CICS initialization by adding program CSQCCODF to the PLTPI. If CICS has been configured for use, the connection can have failed because of CICS authorization errors or an incorrect queue manager specification.

Formula: If the value of Connection_Status equals Inactive then situation CICSplex_MQInactive_Warning is true.

CICSplex_MQInactive_Critical
This is the critical threshold exceeded for MQ connection status.

The CICS adapter can be automatically connected during CICS initialization by adding program CSQCCODF to the PLTPI. If CICS has been configured for MQ use, the connection can have failed because of CICS authorization errors or an incorrect queue manager specification.

Formula: If the value of Connection_Status equals Inactive then situation CICSplex_MQInactive_Critical is true.

CICSplex_MQBusyTCBs_Warning
Warning threshold exceeded for MQ busy TCB count.

There are eight subtask TCBs available for MQM requests. If all TCBs are busy, transactions can have to wait for their message queuing requests to be processed. A high number of busy TCBs does not necessarily result in CICS performance problems.

Note: It is not possible to modify the number of TCBs CICS uses for MQM connections.

Formula: If the value of Busy_TCBs is greater than 6 and the value of Busy_TCBs is less than or equal to 8 then situation CICSplex_MQBusyTCBs_Warning is true.

CICSplex_MQBusyTCBs_Critical
This is the critical threshold exceeded for MQ busy TCB count.

There are eight subtask TCBs available for MQM requests. If all TCBs are busy, transactions can have to wait for their message queuing requests to be processed. A high number of busy TCBs does not necessarily result in CICS performance problems.

Note: It is not possible to modify the number of TCBs CICS uses for MQM connections.

Formula: If the value of Busy_TCBs is greater than 8 then situation CICSplex_MQBusyTCBs_Critical is true.

See also the "CICSplex MQ Connection Details attribute group" on page 137.

Pagepool Summary situations

The predefined situations in this category monitor storage analysis.

Note: All the attribute names in this group are prefixed with CICSplex_Pagepool. except where stated.

CICSplex_DSAHigh_Warning
Warning threshold exceeded for high DSA usage.

Consider increasing the size of the CICS region and make the DSA larger. Increase the region size only, if the Region Overview workspace shows adequate LSQA to support the change. It is also worth checking the current OSCOR usage. If the DSA size cannot be increased, consider reducing the CICS MAXTASK value.

Formula: If the value of Percent_Used is greater than 70 and the value of Percent_Used is less than or equal to 90 and the value of Area equals DSA then situation CICSplex_DSAHigh_Warning is true.

CICSplex_DSAHigh_Critical
This is the critical threshold exceeded for high DSA usage.

Consider increasing the size of the CICS region and make the DSA larger. Increase the region size only if the Region Overview workspace shows adequate LSQA to support the change. It is also worth checking the current OSCOR usage. If the DSA size cannot be increased, consider reducing the CICS MAXTASK (MXT) value.

Formula: If the value of Percent_Used is greater than 90 and the value of Area equals DSA then situation CICSplex_DSAHigh_Critical is true.

CICSplex_EDSAHigh_Warning
Warning threshold exceeded for high EDSA usage.

Increase EDSALIM in the CICS System Initialization Table. The Storage Analysis workspace provides an overview of storage availability with in each constituent EDSA. For task and CICS component storage usage, consult the storage views.

Formula: If the value of Percent_Used is greater than 70 and the value of Percent_Used is less than or equal to 90 and the value of Area equals EDSA then situation CICSplex_EDSAHigh_Warning is true.

CICSplex_EDSAHigh_Critical
This is the critical threshold exceeded for high EDSA usage.

Increase EDSALIM in the CICS System Initialization Table. The Storage Analysis workspace provides an overview of storage availability with in each constituent EDSA. For task and CICS component storage usage, consult the storage views.

Formula: If the value of Percent_Used is greater than 90 and the value of Area equals EDSA then situation CICSplex_EDSAHigh_Critical is true.

CICSplex_PagepoolSOS_Critical
This is the critical threshold exceeded for Pagepool details.

The reported pagepool has experienced more than one Short-On-Storage condition. Use the storage views to locate tasks using a large amount of DSA. Verify that their storage requests are reasonable. To determine, if a given task is hung in a storage control request, go to the "Transaction Analysis workspace" on page 361, and look at the Wait Type column. Consider using the CICS CEMT transaction or the IBM Z OMEGAMON for CICS KILL option to purge the offending task.

Formula: If the value of CICSplex_Pagepool_Details.SOS_occurrences is greater than 1 then situation CICSplex_PagepoolSOS_Critical is true.

See also:

- "CICSplex Pagepool Summary attribute group" on page 152
- "CICSplex Pagepool Details attribute group" on page 150

Recovery Manager Analysis situations

The situations in this category warn you of possible unit-of-work problems, as raised by the CICS Recovery Manager.

CICSplex_RecMgr_Warning
Current Shunted UOW Count greater than 10.

The CICS Recovery Manager is reporting that there are currently more than 10 units of work shunted for Indoubt. This indicates that the CICS region performance starts degrading unless remedial action is taken relating to the reason for the shunted units of work. Use the unit-of-work queries available within IBM Z OMEGAMON for CICS to verify whether the cause of failing transactions is related and the related Take Action commands to restore system and application integrity.

Formula: If the value of CICSplex_Recovery_Manager_Details.Current_Indoubt_shunted_UOWs is greater than 10 then situation CICSplex_RecMgr_Warning is true.

CICSplex_UOW_DSNFail_Warning
Data set associated with this UOW has been shunted.

The unit of work associated with this alert has been shunted because of a syncpoint failure associated with the specified data set. Note that failures during syncpoint processing may result in locks being retained by the UOW. This may result in system degradation if action is not taken to release the locked resources.

Formula: If the value of CICSplex_Unit-of-work_DSN_Failure_Details.Dataset_name equals blank then situation CICSplex_UOW_DSNFail_Warning is true.

CICSplex_UOW_Link_Warning
Resynchronization status is UNAVAILABLE or UNCONNECTED.

A distributed unit of work cannot resynchronize itself because the connection to its link partner is either unconnected or unavailable. To allow resynchronization to complete successfully, you must set the connection to the remote system to Acquired.

Formula: If the value of CICSplex_Unit-of-work_Link_Details.Resync_status equals Unavailable or the value of CICSplex_Unit-of-work_Link_Details.Resync_status equals Unconnected then situation CICSplex_UOW_Link_Warning is true.

Region Overview situations

The predefined situations in this category monitor the internal resources of CICS regions. These resources include storage, files, queues, and enqueues.

Note: All the attribute names in this group are prefixed with CICSplex_Region_Overview. except where stated.

CICSplex_AIDs_Warning
Warning threshold exceeded for AIDs.

If many AIDs have accumulated, response time can be adversely affected because CICS attempts to start each AID on every dispatch of the Terminal Control Program. If a required terminal is unavailable because a task currently running on the terminal is not completing, you can kill the task with IBM Z OMEGAMON for CICS and allow the scheduled AID to execute. If the AID is waiting on a remote system, check that the remote system is available and that the connections are in service.

Formula: If the value of AIDs is greater than 100 and the value of AIDs is less than or equal to 300 then situation CICSplex_AIDs_Warning is true.

CICSplex_AIDs_Critical
This is the critical threshold exceeded for AIDs.

If many AIDs have accumulated, response time can be adversely affected because CICS attempts to start each AID on every dispatch of the Terminal Control Program. If a required terminal is unavailable because a task currently running on the terminal is not completing, you can kill the task with IBM Z OMEGAMON for CICS and allow the scheduled AID to execute. If the AID is waiting on a remote system, check that the remote system is available and that the connections are in service.

Formula: If the value of AIDs is greater than 300 then situation CICSplex_AIDs_Critical is true.

CICSplex_ICEs_Warning
Warning threshold exceeded for ICEs.

An excessive number of ICEs for the same transaction ID can indicate that the issuing task is looping. When ICEs are scheduled for a task which you do not want to run or are associated with a terminal that is not available, IBM Z OMEGAMON for CICS allows you to view and kill these ICEs. Check whether the expiry time and date for the ICE has passed. If so, CICS can be in a stress situation such as short-on-storage or at the maximum task limit. Remedying that problem allows the ICEs to be processed.

Formula: If the value of ICEs is greater than 50 and the value of ICEs is less than or equal to 100 then situation CICSplex_ICEs_Warning is true.

CICSplex_ICEs_Critical
This is the critical threshold exceeded for ICEs.

An excessive number of ICEs for the same transaction ID can indicate that the issuing task is looping. When ICEs are scheduled for a task which you do not to run or are associated with a terminal that is not available, IBM Z OMEGAMON for CICS allows you to view and kill these ICEs. Check whether the expiry time and date for the ICE has passed. If so, CICS can be in a stress situation such as short-on-storage or at the maximum task limit. Remedying that problem allows the ICEs to be processed.

Formula: If the value of ICEs is greater than 100 then situation CICSplex_ICEs_Critical is true.

CICSplex_MaxTask_Warning
Warning threshold exceeded for Max Task percent.

When CICS is at the MXT limit, no new tasks are dispatched. Use the Transaction Analysis workspace to determine whether there is a problem that is preventing tasks from completing in a timely manner. For example, tasks can be waiting for an enqueue, or CICS can be short-on-storage. To alleviate a bottleneck, you can use IBM Z OMEGAMON for CICS to kill the task causing degradation. The initial MXT limit is defined in the SIT and can be changed dynamically using the CEMT transaction.

Formula: If the value of Maximum_Tasks_Percent is greater than 80 and the value of Maximum_Tasks_Percent is less than or equal to 90 then situation CICSplex_MaxTask_Warning is true.

CICSplex_MaxTask_Critical
This is the critical threshold exceeded for Max Task percent.

When CICS is at the MXT limit, no new tasks are dispatched. Use the Transaction Analysis workspace to determine whether there is a problem that is preventing tasks from completing in a timely manner. For example, tasks can be waiting for an enqueue, or CICS can be short-on-storage. To alleviate a bottleneck, you can use IBM Z OMEGAMON for CICS to kill the task causing degradation. The initial MXT limit is defined in the SIT and can be changed dynamically using the CEMT transaction.

Formula: If the value of Maximum_Tasks_Percent is greater than 90 then situation CICSplex_MaxTask_Critical is true.

CICSplex_AtMaxTask_Warning
Warning threshold exceeded for Max Task limit.

When CICS is at the MXT limit, no new tasks are dispatched. Use the Transaction Analysis workspace to determine whether there is a problem that is preventing tasks from completing in a timely manner. For example, tasks can be waiting for an enqueue, or CICS can be short-on-storage. To alleviate a bottleneck, you can use IBM Z OMEGAMON for CICS to kill the task causing degradation. The initial MXT limit is defined in the SIT and can be changed dynamically using the CEMT transaction.

Formula: If the value of Maximum_Tasks_Percent is greater than or equal to 100 then situation CICSplex_AtMaxTask_Warning is true.

CICSplex_AtMaxTask_Critical
This is the critical threshold exceeded for Max Task limit.

When CICS is at the MXT limit, no new tasks are dispatched. Use the Transaction Analysis workspace to determine whether there is a problem that is preventing tasks from completing in a timely manner. For example, tasks can be waiting for an enqueue, or CICS can be short-on-storage. To alleviate a bottleneck, you can use IBM Z OMEGAMON for CICS to kill the task causing degradation. The initial MXT limit is defined in the SIT and can be changed dynamically using the CEMT transaction.

Formula: If the value of Maximum_Tasks_Percent is greater than or equal to 100 then situation CICSplex_AtMaxTask_Critical is true.

CICSplex_TranRateHigh_Warning
Warning threshold exceeded for high transaction rate.

If the total transaction rate is high and the rate for transactions completing is low, check the navigation tree for situations that can identify other problems preventing tasks from completing.

Formula: If the value of Transaction_Rate is greater than 100 and the value of Transaction_Rate is less than or equal to 200 then situation CICSplex_TranRateHigh_Warning is true.

CICSplex_TranRateHigh_Critical
This is the critical threshold exceeded for high transaction rate.

If the total transaction rate is high and the rate for transactions completing is low, check the navigation tree for situations that can identify other problems preventing tasks from completing.

Formula: If the value of Transaction_Rate is greater than 200 then situation CICSplex_TranRateHigh_Critical is true.

CICSplex_TranRateLow_Warning
Warning threshold exceeded for low transaction rate.

If the total transaction rate is low, check the navigation tree for situations that can identify other problems preventing tasks from being attached. For example, CICS can be short-on-storage or in a stall condition.

Formula: If the value of Transaction_Rate is less than 10 and the value of Transaction_Rate is greater than or equal to 5 then situation CICSplex_TranRateLow_Warning is true.

CICSplex_TranRateLow_Critical
This is the critical threshold exceeded for low transaction rate.

If the total transaction rate is low, check the navigation tree for situations that can identify other problems preventing tasks from being attached. For example, CICS can be short-on-storage or in a stall condition.

Formula: If the value of Transaction_Rate is less than 5 then situation CICSplex_TranRateLow_Critical is true.

CICSplex_CICSCPUHigh_Warning
Warning threshold exceeded for CICS high CPU usage.

CICS can be using more CPU than normal. You can obtain additional diagnostics by generating a Region Overview workspace and checking whether the CICS time-of-day clock is being updated. The Transaction Analysis workspace can be used to locate looping tasks, or those that have exceeded their Global CPU usage limit, (MAXR).

Formula: If the value of CPU_Utilization is greater than 70 and the value of CPU_Utilization is less than or equal to 90 then situation CICSplex_CICSCPUHigh_Warning is true.

CICSplex_CICSCPUHigh_Critical
This is the critical threshold exceeded for CICS high CPU usage.

CICS can be using more CPU than normal. You can obtain additional diagnostics by generating a Region Overview workspace and checking whether the CICS time-of-day clock is being updated. The Transaction Analysis workspace can be used to locate looping tasks, or those that have exceeded their Global CPU usage limit (MAXR).

Formula: If the value of CPU_Utilization is greater than 90 then situation CICSplex_CICSCPUHigh_Critical is true.

CICSplex_CICSCPULow_Warning
Warning threshold exceeded for CICS low CPU usage.

CICS can be requiring fewer CPU cycles than normal for the expected transaction rate. If response time is unacceptable, check the transaction rate display in the Region Overview workspace to see if the rate is less than normal. Next, see if the Transaction Analysis workspace is showing active task activity, and if so, use the Impact Analysis function of IBM Z OMEGAMON for CICS to determine why CICS is not being dispatched. If there is no contention, check the network to see if terminals are active.

Formula: If the value of CPU_Utilization is less than 10 and the value of CPU_Utilization is greater than or equal to 5 then situation CICSplex_CICSCPULow_Warning is true.

CICSplex_CICSCPULow_Critical
This is the critical threshold exceeded for CICS low CPU usage.

CICS can be requiring fewer CPU cycles than normal for the expected transaction rate. If response time is unacceptable, check the transaction rate display in the Region Overview workspace to see if the rate is less than normal. Next, see if the Transaction Analysis workspace is showing active task activity, and if so, use the Impact Analysis function of OMEGAMON for CICS to determine why CICS is not being dispatched. If there is no contention, check the network to see if terminals are active.

Formula: If the value of CPU_Utilization is less than 5 then situation CICSplex_CICSCPULow_Critical is true.

CICSplex_PageRate_Warning
Warning threshold exceeded for CICS paging rate.

A page-in can cause the CICS job to wait for the page fault to resolve. Any delay during this process, regardless of the cause, degrades response time for all CICS tasks. Use the Region Overview workspace to view the CICS page-in rate and working set size. Consider the use of storage isolation. For multiple CICS regions, use the LPA option for CICS nucleus modules.

Formula: If the value of Page_Rate is greater than 3 and the value of Page_Rate is less than or equal to 5 then situation CICSplex_PageRate_Warning is true.

CICSplex_PageRate_Critical
This is the critical threshold exceeded for CICS paging rate.

A page-in can cause the CICS job to wait for the page fault to resolve. Any delay during this process, regardless of the cause, degrades response time for all CICS tasks. Use the Region Overview workspace to view the CICS page-in rate and working set size. Consider the use of storage isolation. For multiple CICS regions, use the LPA option for CICS nucleus modules.

Formula: If the value of Page_Rate is greater than 5 then situation CICSplex_PageRate_Critical is true.

CICSplex_WorkSetHigh_Warning
Warning threshold exceeded for high CICS working set.

Storage isolation values can be examined with the system summary display provided by IBM Z OMEGAMON for CICS. If the working set size must be reduced, consider lowering the MXT value for CICS, using shared libraries, LPA residency options, VSAM LSR pools, or Max class limits.

Formula: If the value of Working_Set_Size is greater than 6000 and the value of Working_Set_Size is less than or equal to 7500 then situation CICSplex_WorkSetHigh_Warning is true.

CICSplex_WorkSetHigh_Critical
This is the critical threshold exceeded for high CICS working set.

Storage isolation values can be examined with the system summary display provided by IBM Z OMEGAMON for CICS. If the working set size must be reduced, consider lowering the MXT value for CICS, using shared libraries, LPA residency options, VSAM LSR pools, or class max limits.

Formula: If the value of Working_Set_Size is greater than 7500 then situation CICSplex_WorkSetHigh_Critical is true.

CICSplex_WorkSetLow_Warning
Warning threshold exceeded for low CICS working set.

Use the Transaction Analysis workspace to check whether there are any active transactions. If there is task activity, monitor the page-in rate with the Region Overview workspace. A low working set can be caused by frequent variations in the number of page-ins that CICS is doing. Consider storage isolation (set in the z/OS IPS to control the average CICS working set size.

Formula: If the value of Working_Set_Size is less than 256 and the value of Working_Set_Size is greater than or equal to 128 then situation CICSplex_WorkSetLow_Warning is true.

CICSplex_WorkSetLow_Critical
This is the critical threshold exceeded for low CICS working set.

Use the Transaction Analysis workspace to check whether there are any active transactions. If there is task activity, monitor the page-in rate with the Region Overview workspace. A low working set can be caused by frequent variations in the number of page-ins that CICS is doing. Consider storage isolation (set in the z/OS IPS to control the average CICS working set size).

Formula: If the value of Working_Set_Size is less than 128 then situation CICSplex_WorkSetLow_Critical is true.

CICSplex_OSCORHigh_Warning
Warning threshold exceeded for high contiguous OSCOR.

If the OSCOR value remains consistently large, consider increasing the size of the CICS Dynamic Storage Area for your expected transaction rate.

Formula: If the value of Largest_Contiguous_Available_OSCOR is greater than 500 and the value of Largest_Contiguous_Available_OSCOR is less than or equal to 1000 then situation CICSplex_OSCORHigh_Warning is true.

CICSplex_OSCORHigh_Critical
This is the critical threshold exceeded for high contiguous OSCOR.

If the OSCOR value remains consistently large, consider increasing the size of the CICS Dynamic Storage Area for your expected transaction rate.

Formula: If the value of Largest_Contiguous_Available_OSCOR is greater than 1000 then situation CICSplex_OSCORHigh_Critical is true.

CICSplex_OSCORLow_Warning
Warning threshold exceeded for low contiguous OSCOR.

Shortages of OSCOR causes S80A abends. Also, CICS applications should not execute functions that bypass CICS to make operating system calls. Review the region size of CICS, and consider reducing the size of the DSA to ensure enough OSCOR is available for z/OS operating system functions.

Formula: If the value of Largest_Contiguous_Available_OSCOR is less than 48 and the value of Largest_Contiguous_Available_OSCOR is greater than or equal to 24 then situation CICSplex_OSCORLow_Warning is true.

CICSplex_OSCORLow_Critical
This is the critical threshold exceeded for low contiguous OSCOR.

Shortages of OSCOR causes S80A abends. Also, CICS applications should not execute functions that bypass CICS to make operating system calls. Review the region size of CICS, and consider reducing the size of the DSA to ensure enough OSCOR is available for z/OS operating system functions.

Formula: If the value of Largest_Contiguous_Available_OSCOR is less than 24 then situation CICSplex_OSCORLow_Critical is true.

CICSplex_LSQA_Warning
Warning threshold exceeded for low contiguous LSQA.

Allocation of private storage within CICS can be viewed with the IBM Z OMEGAMON for CICS CSYS command. If a request for Local System Queue Area (LSQA is made and cannot be satisfied, an S40D abend might result. Consider lowering the region size of CICS to increase available LSQA.

Formula: If the value of Largest_Contiguous_Available_LSQA is less than 48 and the value of Largest_Contiguous_Available_LSQA is greater than or equal to 24 then situation CICSplex_LSQA_Warning is true.

CICSplex_LSQA_Critical
This is the critical threshold exceeded for low contiguous LSQA.

Allocation of private storage within CICS can be viewed with the IBM Z OMEGAMON for CICS CSYS command. If a request for Local System Queue Area (LSQA is made and cannot be satisfied, an S40D abend might result. Consider lowering the region size of CICS to increase available LSQA).

Formula: If the value of Largest_Contiguous_Available_LSQA is less than 24 then situation CICSplex_LSQA_Critical is true.

CICSplex_StorViol_Warning
Warning threshold exceeded for CICS storage violations.

Use the Transaction Storage Violations workspace to determine which tasks are responsible for corrupting memory in CICS; consider disabling the transactions until the problem is resolved.

Formula: If the value of Storage_Violations is greater than 0 and the value of Storage_Violations is less than or equal to 1 then situation CICSplex_StorViol_Warning is true.

CICSplex_StorViol_Critical
This is the critical threshold exceeded for CICS storage violations.

Use the Transaction Storage Violations workspace to determine which tasks are responsible for corrupting memory in CICS; consider disabling the transactions until the problem is resolved.

Formula: If the value of Storage_Violations is greater than 1 then situation CICSplex_StorViol_Critical is true.

CICSplex_TODUpdate_Warning
Warning threshold exceeded for CICS time-of-day update.

Inspect the Transaction Analysis workspace for any possibility of a looping transaction. The Bottleneck Analysis workspace can be used to check whether CICS is waiting for CPU cycles or page data set activity.

Formula: If the value of CICS_TOD_Updated equals No then situation CICSplex_TODUpdate_Warning is true.

CICSplex_TODUpdate_Critical
This is the critical threshold exceeded for CICS time-of-day update.

Inspect the Transaction Analysis workspace for any possibility of a looping transaction. The Bottleneck Analysis workspace can be used to check whether CICS is waiting for CPU cycles or page data set activity.

Formula: If the value of CICS_TOD_Updated equals No then situation CICSplex_TODUpdate_Critical is true.

CICSplex_IORateHigh_Warning
Warning threshold exceeded for high CICS I/O rate.

Use the CDEV command in IBM Z OMEGAMON for CICS to determine whether a particular volume is causing the high I/O rate. Bottleneck Analysis, VSAM displays, and current and historical transaction displays in IBM Z OMEGAMON for CICS can all be used to decide if there is contention for a particular file, as well as identifying the transaction responsible for the I/O activity.

Formula: If the value of I/O_Rate is greater than 90 and the value of I/O_Rate is less than or equal to 100 then situation CICSplex_IORateHigh_Warning is true.

CICSplex_IORateHigh_Critical
This is the critical threshold exceeded for high CICS I/O rate.

Use the CDEV command in IBM Z OMEGAMON for CICS to determine whether a particular volume is causing the high I/O rate. Bottleneck Analysis, VSAM displays, and current and historical transaction displays in IBM Z OMEGAMON for CICS can all be used to decide if there is contention for a particular file, a s well as identifying the transaction responsible for the I/O activity.

Formula: If the value of I/O_Rate is greater than 100 then situation CICSplex_IORateHigh_Critical is true.

CICSplex_VTAMOpen_Warning
Warning threshold exceeded for VTAM® ACB open.

Check the startup messages in the CICS job log for an explanation of why the VTAM ACB failed to open. Check to make sure that the CICS VTAM ACB is active. If it is not, vary the ACB active with the VTAM vary command and issue the CEMT SET,VTAM,OPEN transaction in CICS to establish VTAM communications. If you are still having difficulty, contact the staff responsible for VTAM at your installation.

Formula: If the value of VTAM_ACB_Open equals No then situation CICSplex_VTAMOpen_Warning is true.

CICSplex_VTAMOpen_Critical
Critical threshold exceeded for VTAM ACB open.

Check the startup messages in the CICS job log for an explanation of why the VTAM ACB failed to open. Check to make sure that the CICS VTAM ACB is active. If it is not, vary the ACB active with the VTAM vary command and issue the CEMT SET,VTAM,OPEN transaction in CICS to establish VTAM communications. If you are still having difficulty, contact the staff responsible for VTAM at your installation.

Formula: If the value of VTAM_ACB_Open equals No then situation CICSplex_VTAMOpen_Critical is true.

See also the "CICSplex Region Overview attribute group" on page 166.

Response Time Analysis situation

The single predefined situation in this category monitors the response time for an active group defined with OMEGAMON.

Note: All the attribute names in this group are prefixed with CICSplex_Storage_Analysis. except where stated.

CICSplex_RTAGroup_Warning
Warning threshold exceeded for group response time.

Monitors for whether or not the response time threshold stored in the OMEGAMON group definition has been exceeded. It alerts the user whenever the response time threshold has been exceeded. This situation uses an attribute from the Response Time Analysis group. This situation is distributed automatically to the hub server; distribute it to all servers where IBM Z OMEGAMON for CICS CICSplex is running.

Use the historical transaction display function of IBM Z OMEGAMON for CICS to locate the transactions that have caused an RTA threshold to be exceeded. The Bottleneck Analysis workspace can further assist you in locating the wait reasons responsible for slow response times. If CPU bound transactions are unable to get the processor resources they need, consider increasing the priority of either the transaction or the CICS region.

Formula: If the value of CICSplex_Response_Time_Analysis.Exceeds_RTA_Threshold equals Yes then situation Exceeds_RTA_Threshold is true.

See also the "CICSplex Response Time Analysis attribute group" on page 172.

RLS Lock Analysis situation

The single predefined situation in this category monitors RLS resources to identify problems that can degrade performance.

Note: All the attribute names in this group are prefixed with CICSplex_RLS_Lock_Analysis. except where stated.

CICSplex_Held_RLS_Locks
Monitors the existence of locks on RLS resources. It issues an alert whenever it detects a task that is holding an RLS resource. This situation uses attributes from the CICSplex RLS Lock Analysis group. This situation is distributed automatically to the *hub Tivoli Enterprise Monitoring Server; distribute it to all Tivoli Enterprise Monitoring Servers where IBM Z OMEGAMON for CICS is running.

Use the RLS Lock Analysis workspace to find any tasks that can be waiting for an RLS lock to become available. If a lock is not being released, use the Transaction Analysis workspace to display the owning task's wait type to determine whether it is looping, waiting on a resource, or deadlocked with another task. You can invoke the CEKL command using the Take Action feature to free the lock and allow waiting tasks to continue. To limit the number of lock conflicts, consider transaction classes.

Formula: If the value of Task_State equals H and the value of Time_in_Suspend_Numeric is greater than or equal to 60 then situation CICSRegion_Held_RLS_Locks is true.

See also the "CICSplex RLS Lock Analysis attribute group" on page 175.

Service Level Analysis situations

The predefined situations in this category monitor performance, response time, and transaction for potential trouble spots.

Note: All the attribute names in this group are prefixed with CICSplex_Service_Class_Analysis. except where stated.

CICSplex_delay_in_Database
Service Level failure with excessive time spent in database.

Monitors for excessive transaction response time that is attributed to database performance. There are multiple database types (DB2, Adabas, DLI, Datacom, and so forth) that can potentially cause CICSplex delays. CICSplex_delay_in_Database monitors all database types. This situation uses attributes from the CICSplex Service Class_Analysis group. This situation is distributed automatically to the hub server; distribute it to all servers where an OMEGAMONfor CICSplex is running.

Use the historical transaction display function of IBM Z OMEGAMON for CICS to locate the transactions that are responsible for the service level failure. Determine whether the large amount of time spent waiting on database activity is a consequence of either application changes or alterations in the database configuration. If the transaction behavior is found to be normal, consider updating the service class definitions so that they accurately reflect anticipated response times.

Formula: If the value of Performance_Index is greater than 1 and the value of Percent_of_time_waiting_on_Adabas is greater than 90 or the value of Percent_of_time_waiting_on_Datacom is greater than 90 or the value of Percent_of_time_waiting_on_DB2 is greater than 90 or the value of Percent_of_time_waiting_on_DLI is greater than 90 or the value of Percent_of_time_waiting_on_IDMS is greater than 90 or the value of Percent_of_time_waiting_on_SUPRA is greater than 90 then situation CICSplex_delay_in_Database is true.

CICSplex_delay_in_MQSeries
Service Level failure with excessive time spent in WebSphere MQ.

Monitors the effect of an MQ connection on a service class. This situation evaluates the percentage of time spent waiting for an MQ connection in relation to the performance index for a service class. It alerts the user if the performance index for a service class exceeds 1.0 and the percentage of time spent waiting for an MQ connection exceeds 90%. This situation uses attributes from the CICSplex Service Class_Analysis group. All situations for Service Level Analysis attributes need to be distributed to *hub server. Do not distribute these situations to CICS nodes.

Use the historical transaction display function of IBM Z OMEGAMON for CICS to locate the transactions that are responsible for the service level failure. Determine whether the large amount of time spent waiting on message-queuing activity is a consequence of either application changes or alterations to the WebSphere MQ system. If the transaction behavior is found to be normal, consider updating the service class definitions so that they accurately reflect anticipated response times.

Formula: If the value of Performance_Index is greater than 1 and the value of Percent_of_time_waiting_on_MQ is greater than 90 then situation CICSplex_delay_in_MQSeries is true.

CICSplex_delay_within_CICS
Monitors service-level failures within internal CICS components attributed to time waiting for CICSplex resources. Initially, this situation acknowledges when performance goals have been exceeded. It then looks for time waiting on CICSplex resources including:

- CPU usage
- Redispatch
- Unidentifiable resources, such as program loads, interval control, Basic Mapping support, and other ancillary items that contribute to CICSplex degradation

Use the historical transaction display function of IBM Z OMEGAMON for CICS to locate the transactions that are responsible for the service level failure. The Bottleneck Analysis workspace can further assist in locating the wait reasons responsible for slow response time. If CPU bound transactions are unable to get the processor resources they need, consider increasing the priority of either the transaction or the CICS region.

This situation uses attributes from the CICSplex Service Class_Analysis group. This situation is distributed automatically to the hub server; distribute it to all servers where an IBM Z OMEGAMON for CICS plex is running.

Formula: If the value of Performance_Index is greater than 1 and the value of Percent_of_time_waiting_on_Redispatch is greater than 50 or the value

of Percent_of_time_waiting_on_unidentifiable is greater than 50 or the value of Percent_of_time_using_CPU is greater than 50 then situation CICSplex_delay_within_CICS is true.

See CICSplex_CSM5_delay_in_DLI, CICSplex_CSMI_delay_in_FCP, or CICSplex_delay_in_Database for predefined situations that monitor response time delays in database processing.

CICSplex_CSMI_delay_in_FCP
Service Level failure in the CSMI service class with excessive time in file control.

Use the historical transaction display function of IBM Z OMEGAMON for CICS to locate the mirror transactions that are responsible for the service level failure. Determine whether the large amount of time waiting on File Control is a consequence of either application changes or alterations in the CICS file configuration. If the transaction behavior is found to be normal, consider updating the service class definitions so that they accurately reflect anticipated response times.

Formula: If the value of Service_Class_Name equals CSMI and the value of 200_%_of_Goal_Transaction_Count is greater than 1 or the value of Performance_Index is greater than 1 or the value of Greater_than_400_%_of_Goal_Transaction_Count is greater than 0 or the value of 400_%_of_Goal_Transaction_Count is greater than 1 and the value of Percent_of_time_waiting_on_File_Control is greater than or equal to 50 then situation CICSplex_CSMI_delay_in_FCP is true.

CICSplex_Function_Ship_delays
Service-level failure in the CSM* service classes in any function-shipping request.

Use the historical transaction display function of IBM Z OMEGAMON for CICS to locate the mirror transactions that are responsible for the service level failure. The Bottleneck Analysis workspace can further assist you in locating the wait reasons responsible for slow response time. If CPU limitations are found to be the root cause, consider increasing the priority of the region to prevent File Owning Regions from adversely affecting Application Owning Regions that use function shipping.

Formula: If the value of Service_Class_Name equals "1,CSM" and the value of Performance_Index is greater than 1 and the value of Percent_of_time_using_CPU is greater than 50 or the value of Percent_of_time_waiting_on_TS_IO is greater than 50 or the value of Percent_of_time_waiting_on_Redispatch is greater than 50 or the value of Percent_of_time_waiting_on_DLI is greater than 50 or the value of Percent_of_time_waiting_on_Journal_Control is greater than 50 then situation CICSplex_Function_Ship_delays is true.

CICSplex_Func_Ship_delay_CPU
Service-level failure in the CSM* service classes for any function-shipping request of CPU limitations.

Use the historical transaction display function of IBM Z OMEGAMON for CICS to locate the mirror transactions that are responsible for the service level failure. The Bottleneck Analysis workspace can further assist you in locating the wait reasons responsible for slow response time. Consider increasing the priority of the region to prevent File Owning Regions from adversely affecting Application Owning Regions that use function shipping.

Formula: If the value of Service_Class_Name equals "1,CSM" and the value of Performance_Index is greater than 1 and the value of Percent_of_time_using_CPU is greater than 50 then situation CICSplex_Func_Ship_delay_CPU is true.

CICSplex_Func_Ship_delay_DLI
Service-level failure in the CSM* service classes for any function-shipping request of DLI.

Use the historical transaction display function of IBM Z OMEGAMON for CICS to locate the mirror transactions that are responsible for the service level failure. The Bottleneck Analysis workspace can further assist you in locating the wait reasons responsible for slow response time. An issue with high waits on DLI indicates a potential problem with IMS subsystems connected to the CICS region. Use OMEGAMON for IMS to check the condition of the connected IMS subsystems.

Formula: If the value of Service_Class_Name equals "1,CSM" and the value of Performance_Index is greater than 1 and the value of Percent_of_time_using_DLI is greater than 50 then situation CICSplex_Func_Ship_delay_DLI is true.

CICSplex_Func_Ship_delay_JNL
Service-level failure in the CSM* service classes for any function-shipping request of the defined journals.

Use the historical transaction display function of IBM Z OMEGAMON for CICS to locate the mirror transactions that are responsible for the service level failure. The Bottleneck Analysis workspace can further assist you in locating the wait reasons responsible for slow response time. Ensure the defined journals have sufficient capacity for this workload and use the Transaction Analysis workspace to check the number of tasks attempting to use the same journal.

Formula: If the value of Service_Class_Name equals "1,CSM" and the value of Performance_Index is greater than 1 and the value of Percent_of_time_using_JNL is greater than 50 then situation CICSplex_Func_Ship_delay_JNL is true.

CICSplex_Func_Ship_delay_RDIS
Service-level failure in the CSM* service classes for any function-shipping request of RDIS.

Use the historical transaction display function of IBM Z OMEGAMON for CICS to locate the mirror transactions that are responsible for the service level failure. The Bottleneck Analysis workspace can further assist you in locating the wait reasons responsible for slow response time. If CPU limitations are found to be the root cause, consider increasing the priority of the CICS region to prevent File Owning Regions from adversely affecting Application Owning Regions that use function shipping. Check the maximum task setting for the CICS region and consider increasing, if the situation persists.

Formula: If the value of Service_Class_Name equals "1,CSM" and the value of Performance_Index is greater than 1 and the value of Percent_of_time_using_RDIS is greater than 50 then situation CICSplex_Func_Ship_delay_RDIS is true.

CICSplex_Func_Ship_delay_TS
Service-level failure in the CSM* service classes for any function-shipping request of TS.

Use the historical transaction display function of IBM Z OMEGAMON for CICS to locate the mirror transactions that are responsible for the service level failure. The Bottleneck Analysis workspace can further assist you in locating the wait reasons responsible for slow response time. Use the Temporary Storage Queues workspace and the Temporary Storage Summary workspace to identify any queues that are being used excessively by tasks.

Formula: If the value of Service_Class_Name equals "1,CSM" and the value of Performance_Index is greater than 1 and the value of Percent_of_time_using_TS is greater than 50 then situation CICSplex_Func_Ship_delay_TS is true.

CICSplex_Performance_Index
Service Level failure: Monitors a CICSplex to see whether it meets current service levels as measured by the performance index. This situation evaluates true for monitored CICSplexes that fail to meet their specified service levels. This situation uses attributes from the CICSplex Service Class_Analysis group. This situation is distributed automatically to the hub server; distribute it to all servers where a IBM Z OMEGAMON for CICS agent is running.

Use the historical transaction display function of IBM Z OMEGAMON for CICS to locate the transactions that are responsible for the service level failure. The breakdown of time statistics in the historical transaction detail can identify the component that is causing the response time to be excessive. If the transaction behavior is found to be normal, consider updating the service class definitions so that they accurately reflect anticipated response times.

Formula: If the value of Performance_Index is greater than 1 then situation CICSplex_Performance_Index is true.

Note: This situation is started automatically as part of Tivoli Enterprise Monitoring Server startup. If you do not want this situation to start automatically, open the Settings notebook for this situation in the Properties notebook. Unmark the Activate at Start Up box, then click **OK**.

CICSplex_Sympathy_Degradation
Service Level failure: excessive time spent in MRO or ISC: Alerts you before service-class throughput degradation escalates to a more serious problem. However, if degradation continues, then the

CICSRegion_Sympathy_Sickness predefined situation alerts you to a CICS failure or reduction in performance because of symptoms in an adjacent region. This situation uses attributes from the CICSplex Service Class_Analysis attribute group. This situation is distributed automatically to the hub server; distribute it to all servers where a IBM Z OMEGAMON for CICS is running.

Use the historical transaction display function of IBM Z OMEGAMON for CICS to locate the transactions that are responsible for the service level failure. Determine whether the large amount of time spent waiting on MRO is a consequence of a poorly performing remote region or a problem with the connections displayed in the Intercommunication Summary workspace. If the transaction behavior is found to be normal, consider updating the service class definitions so that they accurately reflect expected response times.

Formula: If the value of Average_Response_Time is greater than 5 or the value of Bucket_G400 is greater than 0 or the value of Bucket_200 is greater than 1 or the value of Performance_Index is greater than 1 or the value of Bucket_400 is greater than 1 and the value of Percent_of_time_waiting_on_MRO is greater than or equal to 50 then situation CICSplex_Sympathy_Degradation is true.

CICSplex_Service_Class_Deleted
z/OS or IBM Z OMEGAMON for CICS service-class definition not available.

Formula: If the value of Status equals DELETED then situation CICSplex_Service_Class_Deleted is true.

CICSplex_CSM5_delay_in_DLI
Monitors the performance of function-shipped remote DL/I (CSM5) requests. It distinguishes between DL/I and non-DL/I problems and alerts the user if more than 50% of the transaction response is attributed to DLI processing.

If service levels for the CSM5 transaction group are not met or response time spikes are detected, CICSplex_CSM5_delay_in_DLI rolls issues an alert.

This situation is distributed automatically to the hub server; distribute it to all servers where an IBM Z OMEGAMON for CICS is running. This situation uses attributes from the CICSplex Service Class Analysis group.

Formula: If the value of Service_Class_Name equals "CSM5" and (the value of Bucket_200 is greater than 1 or the value of Performance_Index is greater than 1 or the value of Bucket_G400 is greater than 0 or the value of Bucket_400is greater than 1) and the value of Percent_of_time_waiting_on_DLI is greater than 50 then situation CICSplex_CSM5_delay_in_DLI is true.

Note: CICSplex_CSMI_delay_in_FCP addresses a similar condition with CSMI File Control Processing.

CICSplex_CSMI_Delay_in_FCP
Monitors the performance of function-shipped remote FCP or File Control (CSMI) requests. It distinguishes between FCP and non-FCP problems and alerts the user if more than 50% of the transaction response is attributed to FCP processing.

If service levels for the CSMI transaction group are not met or response time spikes are detected, CICSplex_CSMI_delay_in_FCP issues an alert. This situation uses attributes from the CICSplex Service Class_Analysis group. This situation is distributed automatically to the hub server; distribute it to all servers where an IBM Z OMEGAMON for CICSplex is running.

Note: CICSplex_CSM5_delay_in_DLI addresses a similar condition with CSM5 DL/I database access.

Formula: If the value of Service_Class_Name equals "CSMI" and the value of Bucket_G400 is greater than 0 or the value of Bucket_400 is greater than 1 or the value of Performance_Index is greater than 1 or the value of Bucket_200 is greater than 1) and the value of Percent_of_time_waiting_on_File_Control is greater than or equal to 50 then situation CICSplex_CSMI_delay_in_FCP is true.

CICSplex_Function_Ship_Delays
Monitors function shipping performance for CSMI, CSM1, CSM2, CSM3 and CSM5 function shipping types. This situation uses attributes from the CICSplex Service Class_Analysis group.

Note: See CICSplex_CSM5_delay_in_DLI and CICSplex_CSMI_delay_in_FCP for similar predefined situations. This situation is distributed automatically to the hub server.

Formula: If the value of Service_Class_Name is greater than "1,CSM" and the value of Performance_Index is greater than 1 and the value of Percent_of_time_using_CPU is greater than 50 or the value of Percent_of_time_waiting_on_TS_IO is greater than 50 or the value of Percent_of_time_waiting_on_Redispatch is greater than 50 or the value of Percent_of_time_waiting_on_DLI is greater than 50 or the value of Percent_of_time_waiting_on_Journal_Control is greater than 50) then situation CICSplex_Function_Ship_delays is true.

See also the "CICSplex Service Class Analysis attribute group" on page 176.

Service Task Details situation

The single predefined situation in this category monitors that OMEGAMON is correctly configured to provide the required monitoring functions.

Note: All attribute names in this group are prefixed with CICSplex_Service_Task_Details.

CICSplex_WLM_Blocks_Usage_High
WLM blocks usage is approaching the maximum configured level.

Use the OMEGAMON WLM Blocks Usage view on the Service Task Details workspace or the F *agentname*,OC STATUS,WLMBLOCKS diagnostic command to determine the peak usage that the system has experienced for accumulation records. Use the KC5_WLM_BLOCKS parameter in PARMGEN to adjust the WLM Blocks parameter so the peak value of no more that 80% is ever experienced.

Accumulation records are used to hold summaries for service classes. There is an accumulation record for each combination of service class, CICS region, CICSplex, and transaction ID received, as well as one extra record for each CICS region. The volume depends upon the number of service classes defined, transactions that are categorized in those service classes, and CICS regions. When this situation fires, the number of accumulations being collected is more than the defined space allows, probably because the number of regions and the number of different types of transactions being collected have been increased.

There is a direct relationship between the WLM Blocks parameter and the maximum number of accumulation records. For example, if 500 blocks results in a consistent usage of 80%, changing the value to 1000 blocks results in a usage of 40%.

Formula: If the value of the attribute WLM_Accumulation_Data_Current_percent is greater than 70 or the value of the attribute WLM_Accumulation_Data_Peak_percent is greater than 80 then situation CICSplex_WLM_Blocks_Usage_High is true

User response: Increase the CICS OMEGAMON agent's WLM BLOCKS parameter. WLM blocks can be increased dynamically (and thereby avoid recycling the OMEGAMON for CICS agent) by using OMEGAMON CICS WLM Modify commands to stop the WLM subtask and then restart it with new parameter values:

```
/F jobname,OC STOP ID=WLM
/F jobname,OC START ID=WLM,BLOCKS=2560
```

Note: If you specify only the BLOCKS parameter, WLM will be restarted using defaults for RESP and GOAL. If your CICS agent is running in its own address space, look at the KC5AGST member in the RKANCMDU library to determine what your WLM startup options are:

```
OC START ID=WLM,BLOCKS=2560,RESP=2.00,GOAL=A
```

If you are using something other than the default startup options for RESP and GOAL, you will also need to include those on the START ID=WLM Modify command.

See also the "CICSplex Service Task Details attribute group" on page 183.

Storage Analysis situations

The predefined situations in this category monitor storage analysis.

Note: All the attribute names in this group are prefixed with CICSplex_Storage_Analysis. except where stated.

CICSplex_DSAHigh_Warning
Warning threshold exceeded for high DSA usage.

Consider increasing the size of the CICS region and make the DSA larger. Increase the region size only, if the Region Overview workspace shows adequate LSQA to support the change. It is also worth checking the current OSCOR usage. If the DSA size cannot be increased, consider reducing the CICS MAXTASK value.

Formula: If the value of Percent_Used is greater than 70 and the value of Percent_Used is less than or equal to 90 and the value of Area equals DSA then situation CICSplex_DSAHigh_Warning is true.

CICSplex_DSAHigh_Critical
Critical threshold exceeded for high DSA usage.

Consider increasing the size of the CICS region and make the DSA larger. Increase the region size only, if the Region Overview workspace shows adequate LSQA to support the change. It is also worth checking the current OSCOR usage. If the DSA size cannot be increased, consider reducing the CICS MAXTASK (MXT) value.

Formula: If the value of Percent_Used is greater than 90 and the value of Area equals DSA then situation CICSplex_DSAHigh_Critical is true.

CICSplex_DSALow_Warning
Warning threshold exceeded for low DSA usage.

If this situation fires consistently, it can indicate an excessive DSA size. Decrease the size of the DSA for the CICS region. If there are very few tasks, there might be very little DSA in use. Consider increasing the maximum number of tasks (MXT CICS can process at one time).

Formula: If the value of Percent_Used is less than 35 and the value of Percent_Used is greater than or equalto 15 and the value of Area equals DSA then situation CICSplex_DSALow_Warning is true.

CICSplex_DSALow_Critical
Critical threshold exceeded for low DSA usage.

If this situation fires consistently, it can indicate an excessive DSA size. Decrease the size of the DSA for the CICS region. If there are very few tasks, there might be very little DSA in use. Consider increasing the maximum number of tasks (MXT CICS can process at one time.

Formula: If the value of Percent_Used is less than 15 and the value of Area equals DSA then situation CICSplex_DSALow_Critical is true.

CICSplex_DSAAvail_Warning
Warning threshold exceeded for low DSA availability.

Ensure that the predicates in this situation are set to trip only when available storage before SOS is critically small. DSA extents are al located in units of 256KB. The exception to this is the user DSA which is 1MB when storage isolation is active. Change the DSALIM parameter for the CICS address space to increase the storage available to CICS.

Formula: If the value of Storage_Available is less than 768 and the value of Storage_Available is greater than or equal to 256 and the value of Area equals DSA then situation CICSplex_DSAAvail_Warning is true.

CICSplex_DSAAvail_Critical
Critical threshold exceeded for low DSA availability.

Ensure that the predicates in this situation are set to trip only when available storage before SOS is critically small. DSA extents are allocated in units of 256 kilobytes. The exception to this is the user

DSA, which is 1 megabyte when storage isolation is active. Change the DSALIM parameter for the CICS address space to increase the storage available to CICS.

Formula: If the value of Storage_Available is less than 256 and the value of Area equals DSA then situation CICSplex_DSAAvail_Critical is true.

CICSplex_EDSAHigh_Warning
Warning threshold exceeded for high EDSA usage.

Increase EDSALIM in the CICS System Initialization Table. The Storage Analysis workspace provides an overview of storage availability with in each constituent EDSA. For task and CICS component storage usage, consult the storage displays offered by OMEGAMON for CICS on z/OS.

Formula: If the value of Percent_Used is greater than 70 and the value of Percent_Used is less than or equal to 90 and the value of Area equals EDSA then situation CICSplex_EDSAHigh_Warning is true.

CICSplex_EDSAHigh_Critical
Critical threshold exceeded for high EDSA usage.

Increase EDSALIM in the CICS System Initialization Table. The Storage Analysis workspace provides an overview of storage availability with in each constituent EDSA. For task and CICS component storage usage, consult the storage views.

Formula: If the value of Percent_Used is greater than 90 and the value of Area equals EDSA then situation CICSplex_EDSAHigh_Critical is true.

CICSplex_EDSALow_Warning
Warning threshold exceeded for low EDSA usage.

If this situation trips consistently, it indicates an excessive EDSA size. Decrease EDSALIM in the SIT. For current task storage, use the storage display functions found in IBM Z OMEGAMON for CICS. If there are very few tasks, as shown in the Transaction Analysis workspace, there might be little EDSA in use.

Formula: If the value of Percent_Used is less than 35 and the value of Percent_Used is greater than or equal to 15 and the value of Area equals EDSA then situation CICSplex_EDSALow_Warning is true.

CICSplex_EDSALow_Critical
Critical threshold exceeded for low EDSA usage.

If this situation trips consistently, it indicates an excessive EDSA size. Decrease EDSALIM in the SIT. For current task storage, use the storage display functions found in IBM Z OMEGAMON for CICS. If there are very few tasks, as shown in the Transaction Analysis workspace, there might be little EDSA in use.

Formula: If the value of Percent_Used is less than 15 and the value of Area equals EDSA then situation CICSplex_EDSALow_Critical is true.

CICSplex_DSASOS_Warning
Warning threshold exceeded for DSA short-on-storage.

Use the storage views to locate tasks that are using a large amount of DSA. Verify that their storage requests are for a reasonable amount of memory. To determine if a given task is hung in a storage control request, go to the Transaction Analysis workspace and look at the **Wait Type** column; consider using the CICS CEMT transaction or the KILL option of IBM Z OMEGAMON for CICS to purge the offending task.

Formula: If the value of SOS equals Yes and the value of Area equals DSA then situation CICSplex_DSASOS_Warning is true.

CICSplex_DSASOS_Critical
Critical threshold exceeded for DSA short-on-storage.

Use the storage views to locate tasks that are u sing a large amount of DSA. Verify that their storage requests are for a reasonable amount of memory. To determine if a given task is hung in a storage control request, go to the Transaction Analysis workspace and look at the Wait Type field; consider

using the CICS CEMT transaction or the KILL option of IBM Z OMEGAMON for CICS to purge the offending task.

Formula: If the value of SOS equals Yes and the value of Area equals DSA then situation CICSplex_DSASOS_Critical is true.

CICSplex_EDSASOS_Warning
Warning threshold exceeded for EDSA short-on-storage.

Use the storage views to locate tasks that are using a large amount of DSA. Verify that their storage requests are for a reasonable amount of memory. To determine if a given task is hung in a storage control request, go to the Transaction Analysis workspace and look at the Wait Type field; consider using the CICS CEMT transaction or the KILL option of IBM Z OMEGAMON for CICS to purge the offending task.

Formula: If the value of SOS equals Yes and the value of Area equals EDSA then situation CICSplex_EDSASOS_Warning is true.

CICSplex_EDSASOS_Critical
Critical threshold exceeded for EDSA short-on-storage.

Use the storage views to locate tasks that are using a large amount of DSA. Verify that their storage requests are for a reasonable amount of memory. To determine if a given task is hung in a storage control request, go to the Transaction Analysis workspace and look at the **Wait Type** column. Consider using the CICS CEMT transaction or the KILL option of IBM Z OMEGAMON for CICS to purge the offending task.

Formula: If the value of SOS equals Yes and the value of Area equals EDSA then situation CICSplex_EDSASOS_Critical is true.

CICSplex_EDSAAvail_Warning
Warning threshold exceeded for low EDSA availability.

Ensure that the predicates in this situation are set to trip only when available storage before SOS is critically small. EDSA extents are allocated in units of 1MB. Change the EDSALIM parameter for the CICS address space to increase the storage available to CICS.

Formula: If the value of Storage_Available is less than 3072 and the value of Storage_Available is greater than or equal to 1024 and the value of Area equals EDSA then situation CICSplex_EDSAAvail_Warning is true.

CICSplex_EDSAAvail_Critical
Critical threshold exceeded for low EDSA availability.

Ensure that the predicates in this situation are set to trip only when available storage before SOS is critically small. EDSA extents are allocated in units of 1MB. Change the EDSALIM parameter for the CICS address space to increase the storage available to CICS.

Formula: If the value of Storage_Available is less than 1024 and the value of Area equals EDSA then situation CICSplex_EDSAAvail_Critical is true.

See also the "CICSplex Storage Analysis attribute group" on page 185.

Task Class Analysis situations

The predefined situations in this category monitor the Task Class Analysis attributes.

Note: All the attribute names in this group are prefixed with CICSplex_Task_Class_Analysis except where stated.

CICSplex_ClassMax_Warning
Warning threshold exceeded for class MAXTASK.

Generally, your application must add transactions to a transaction class to restrict access to resources in CICS. If response time is not acceptable, it can be necessary to reevaluate why the task has been

placed in a transaction class. If you determine that the class MAXTASK value is too low, you can change it with either IBM Z OMEGAMON for CICS or the CICS CEMT transaction.

Formula: If the value of Percent_of_Limit is greater than 80 and the value of Percent_of_Limit is less than or equal to 90 then situation CICSplex_ClassMax_Warning is true.

CICSplex_ClassMax_Critical
Critical threshold exceeded for class MAXTASK.

Generally, your application must add transactions to a transaction class to restrict access to resources in CICS. If response time is not acceptable, it can be necessary to reevaluate why the task has been placed in a transaction class. If you determine that the class MAXTASK value is too low, you can change it with either IBM Z OMEGAMON for CICS or the CICS CEMT transaction.

Formula: If the value of Percent_of_Limit is greater than 90 then situation CICSplex_ClassMax_Critical is true.

CICSplex_AtClassMax_Warning
Warning threshold exceeded for class MAXTASK limit.

When the limit is reached for a class, a new task belonging to the same class cannot be run until an old task has terminated. Use the Transaction Analysis workspace to determine whether a problem is preventing tasks within the specified class from completing in a timely manner. For example, tasks can be waiting for an enqueue, or CICS itself can be short-on-storage. If you find that the class MAXTASK value is too low, you might change it with either IBM Z OMEGAMON for CICS or the CICS CEMT transaction.

Formula: If the value of Percent_of_Limit is greater than or equal to 100 then situation CICSplex_AtClassMax_Warning is true.

CICSplex_AtClassMax_Critical
Critical threshold exceeded for class MAXTASK limit.

When the limit is reached for a class, a new task belonging to the same class cannot be run until an old task has terminated. Use the Transaction Analysis table view to determine whether a problem is preventing tasks within the specified class from completing in a timely manner. For example, tasks can be waiting for an enqueue, or CICS itself can be short on storage. If you find that the class max task value is too low, you might change it with either IBM Z OMEGAMON for CICS or the CICS CEMT transaction.

Formula: If the value of Percent_of_Limit is greater than or equal to 100 then situation CICSplex_AtClassMax_Critical is true.

See also the "CICSplex Task Class Analysis attribute group" on page 189.

TCP/IP Analysis situations

The predefined situations in this category monitor CICS's use of TCP/IP services.

Note: All the attribute names in this group are prefixed with CICSplex_Internet_Status. except where stated

CICSplex_TCPIP_Critical
Critical threshold exceeded for the TCP/IP services.

CICS internal sockets support has not been activated or has been terminated. If CICS internal socket support is required, set the System Initialization Table TCP parameter to YES.

Formula: If the value of CICSplex_TCPIP_Statistics.Open_Status does not equal Open then situation CICSplex_TCPIP_Critical is true.

CICSplex_TCPIPDis_Warning
Warning threshold exceeded for the TCP/IP service: exit not enabled.

Issue the EZAO,START,CICS transaction to start the CICS Sockets Interface (CSI) and enable the Task Related User Exit. If the interface successfully initializes, consider placing EZACIC20 into the PLT

so that the Sockets Interface automatically initialize when CICS is started. If the interface does not initialize, check the CICS message logs for diagnostic information.

Formula: If the value of TCP/IP_Exit_Not_Enabled equals Yes then situation CICSplex_TCPIPDis_Warning is true.

CICSplex_TCPIPDis_Critical
Critical threshold exceeded for TCP/IP service: exit not enabled.

Issue the EZAO,START,CICS transaction to start the CICS Sockets Interface and enable the Task Related User Exit. If the interface successfully initializes, consider placing EZACIC20 into the PLT so that the Sockets Interface automatically initialize when CICS is started. If the interface does not initialize, check the CICS message logs for diagnostic information.

Formula: If the value of TCP/IP_Exit_Not_Enabled equals Yes then situation CICSplex_TCPIPDis_Critical is true.

CICSplex_TCPIPFail_Warning
Warning threshold exceeded for TCP/IP service: listener failure.

Examine the CICS message logs for an explanation of why one or more listener tasks have failed. The EZAC transaction of CICS can be used to verify the configuration of each defined listener. Specific information concerning tasks associated with failed listeners can be obtained using the TCP/IP display of the IBM Z OMEGAMON for CICS product.

Formula: If the value of TCP/IP_Listener_Failed equals Yes then situation CICSplex_TCPIPFail_Warning is true.

CICSplex_TCPIPFail_Critical
Critical threshold exceeded for TCP/IP service: listener failure.

Examine the CICS message logs for an explanation of why one or more listener tasks have failed. The EZAC transaction of CICS can be used to verify the configuration of each defined listener. Specific information concerning tasks associated with failed listeners can be obtained using the TCP/IP display of IBM Z OMEGAMON for CICS.

Formula: If the value of TCP/IP_Listener_Failed equals Yes then situation CICSplex_TCPIPFail_Critical is true.

CICSplex_TCPIPService_Warning
Warning threshold exceeded for TCP/IP service.

CICS internal sockets support has not yet been activated or has been terminated for this service. If CICS internal sockets support is required, verify that the System Initialization Table parameter TCP has been set to YES and that the service has been defined to open when CICS is started.

Formula: If the value of CICSplex_TCPIP_Service_Statistics.Open_Status does not equal Open then situation CICSplex_TCPIPService_Warning is true.

CICSplex_TCPIPWait_Warning
Warning threshold exceeded for TCP/IP: application wait.

Use the TCP/IP Sockets Activity view of IBM Z OMEGAMON for CICS to locate the tasks that are waiting for a socket request. If the application is waiting for a READ command to complete, consider issuing a SELECT command prior to the READ request. The SELECT command indicates whether sockets are ready to be read. Additional information on application status can be obtained using the TSO command NETSTAT SOCKET.

Formula: If the value of TCP/IP_Application_Waiting equals Yes then situation CICSplex_TCPIPWait_Warning is true.

CICSplex_TCPIPWait_Critical
Critical threshold exceeded for TCP/IP service: application wait.

Use the TCP/IP Sockets Activity view of IBM Z OMEGAMON for CICS to locate the tasks that are waiting for a socket request. If the application is waiting for a READ command to complete, consider issuing a SELECT command prior to the READ request. The SELECT command indicates whether

sockets are ready to be read. Additional information on application status can be obtained using the TSO command NETSTAT SOCKET.

Formula: If the value of TCP/IP_Application_Waiting equals Yes then situation CICSplex_TCPIPWait_Critical is true.

See also the "CICSplex TCPIP Statistics attribute group" on page 196.

Temporary Storage Analysis situations

The predefined situations in this category monitor temporary storage, including transient data queues and temporary storage queues.

Note: All the attribute names in this group are prefixed with CICSplex_Temporary_Storage_Summary. except where stated.

CICSplex_TSAuxBuf_Warning
Warning threshold exceeded for TS Auxiliary buffer usage.

Consider raising the number of temporary storage buffers to prevent response times from degrading. The Temporary Storage Summary can be used to monitor the status of auxiliary TS strings and buffers.

Formula: If the value of Percent_Aux_Buffers_in_Use is greater than 80 and the value of Percent_Aux_Buffers_in_Use is less than or equal to 90 then situation CICSplex_TSAuxBuf_Warning is true.

CICSplex_TSAuxBuf_Critical
Critical threshold exceeded for TS Auxiliary buffer usage.

Consider raising the number of temporary storage buffers to prevent response times from degrading. The Temporary Storage Summary can be used to monitor the status of auxiliary TS strings and buffers.

Formula: If the value of Percent_Aux_Buffers_in_Use is greater than 90 then situation CICSplex_TSAuxBuf_Critical is true.

CICSplex_TSAuxCI_Warning
Warning threshold exceeded for TS Auxiliary CI usage.

Allocate a data set large enough for your temporary storage needs. If 100% use is reached, either too little storage was allocated or some (or all temporary storage records are not being deleted when no longer useful. For temporary storage data set statistics, see the Temporary Storage Summary workspace. Transactions that can be looping and doing too many TS puts can be located using the transaction history function available with IBM Z OMEGAMON for CICS.

Formula: If the value of Percent_Aux_CIs_in_Use is greater than 80 and the value of Percent_Aux_CIs_in_Use is less than or equal to 90 then situation CICSplex_TSAuxCI_Warning is true.

CICSplex_TSAuxCI_Critical
Critical threshold exceeded for TS Auxiliary CI usage.

Allocate a data set large enough for your temporary storage needs. If 100% use is reached, either too little storage was allocated or some (or all temporary storage records are not being deleted when no longer useful. For temporary storage data set statistics, see the Temporary Storage Summary workspace. Transactions that can be looping and doing too many TS puts can be located using the transaction history function available with OMEGAMON for CICS on z/OS.

Formula: If the value of Percent_Aux_CIs_in_Use is greater than 90 then situation CICSplex_TSAuxCI_Critical is true.

CICSplex_TSAuxStr_Warning
Warning threshold exceeded for TS Auxiliary active strings.

Increase the number of strings as needed. Occasional peaks are not a problem, but should be kept to a minimum. The Temporary Storage Summary workspace can be used to monitor the status of auxiliary TS strings and buffers.

Formula: If the value of Percent_Aux_Active_Strings is greater than 80 and the value of Percent_Aux_Active_Strings is less than or equal to 90 then situation CICSplex_TSAuxStr_Warning is true.

CICSplex_TSAuxStr_Critical
Critical threshold exceeded for TS Auxiliary active strings.

Increase the number of strings as needed. Occasional peaks are not a problem, but should be kept to a minimum. The Temporary Storage Summary workspace can be used to monitor the status of auxiliary TS strings and buffers.

Formula: If the value of Percent_Aux_Active_Strings is greater than 90 then situation CICSplex_TSAuxStr_Critical is true.

CICSplex_TSAuxBufWait_Warning
Warning threshold exceeded for TS Auxiliary buffer waits.

The Bottleneck Analysis workspace can be used to decide whether temporary storage buffer waits are degrading response times. If you determine that a shortage of temporary storage buffers is the primary cause of degradation in your system, consider changing the value in the SIT and recycle your region. Increasing the number of temporary storage buffers increases your overall virtual storage requirements.

Formula: If the value of Aux_Buffer_Waits is greater than 1 and the value of Aux_Buffer_Waits is less than or equal to 2 then situation CICSplex_TSAuxBufWait_Warning is true.

CICSplex_TSAuxBufWait_Critical
Critical threshold exceeded for TS Auxiliary buffer waits.

The Bottleneck Analysis workspace can be used to decide whether temporary storage buffer waits are degrading response times. If you determine that a shortage of temporary storage buffers is the primary cause of degradation in your system, consider changing the value in the SIT and recycle your region. Increasing the number of temporary storage buffers increases your overall virtual storage requirements.

Formula: If the value of Aux_Buffer_Waits is greater than 2 then situation CICSplex_TSAuxBufWait_Critical is true.

CICSplex_TSAuxStrWait_Warning
Warning threshold exceeded for TS Auxiliary string waits.

Increase the number of strings as needed. Occasional peaks are not a problem, but should be kept to a minimum to avoid response time degradation. The Temporary Storage Summary can be used to monitor the status of auxiliary TS strings and buffers.

Formula: If the value of Aux_Current_String_Waits is greater than 1 and the value of Aux_Current_String_Waits is less than or equal to 2 then situation CICSplex_TSAuxStrWait_Warning is true.

CICSplex_TSAuxStrWait_Critical
Critical threshold exceeded for TS Auxiliary string waits.

Increase the number of strings as needed. Occasional peaks are not a problem, but should be kept to a minimum to avoid response time degradation. The Temporary Storage Summary can be used to monitor the status of auxiliary TS strings and buffers.

Formula: If the value of Aux_Current_String_Waits is greater than 2 then situation CICSplex_TSAuxStrWait_Critical is true.

CICSplex_TSAuxExhaust_Critical
Auxiliary temporary storage exhausted.

The auxiliary temporary storage data set has been exhausted more than once. Use the temporary-storage functions of IBM Z OMEGAMON for CICS to determine if temporary storage is being excessively used. Consider increasing the amount of space allocated to the DFHTEMP file in the JCL that started this CICS region.

Formula: If the value of CICSplex_Temporary_Storage_Extended.Exhausted_count is greater than 0 then situation CICSplex_TSAuxExhaust_Critical is true.

CICSplex_TSAuxIO_Critical
Temporary storage I/O errors critical.

The auxiliary temporary storage data set has encountered at least one input/output error. Investigate the cause of these errors; recreate the DFHTEMP data set if these errors continue.

Formula: If the value of CICSplex_Temporary_Storage_Extended.I/O_Errors is greater than 0 then situation CICSplex_TSAuxIO_Critical is true.

See also:

- "CICSplex Temporary Storage Extended attribute group" on page 200
- "CICSplex Temporary Storage Summary attribute group" on page 202

Transaction Analysis situations

The predefined situations in this category monitor transactions across CICS regions and the z/OS images that the CICSplex spans.

Note: All the attribute names in this group are prefixed with CICSplex_Transaction_Analysis. except where stated.

CICSplex_TranCPUTime_Warning
Warning threshold exceeded for transaction CPU time.

A CICS transaction can be using more CPU than normal. If the Transaction Analysis workspace indicates that the processor time associated with a transaction is rising rapidly, the task can be in a loop. Looping transactions can be stopped automatically using one of the following actions:

- A situation with a CEKL action to end a transaction that exceeds a CPU threshold
- The Resource Limiting function of IBM Z OMEGAMON for CICS or manually using the KILL command.

Formula: If the value of CPU_Time is greater than 0.500 and the value of CPU_Time is less than or equal to 1.000 then situation CICSplex_TranCPUTime_Warning is true.

CICSplex_TranCPUTime_Critical
Critical threshold exceeded for transaction CPU time.

A CICS transaction can be using more CPU than normal. If the Transaction Analysis workspace indicates that the processor time associated with a transaction is rising rapidly, the task can be in a loop. Looping transactions can be stopped automatically using one of the following actions:

- A situation with a CEKL action to terminate a transaction that exceeds a CPU threshold
- The Resource Limiting function of IBM Z OMEGAMON for CICS or manually using the KILL command.

Formula: If the value of CPU_Time is greater than 1.000 then situation CICSplex_TranCPUTime_Critical is true.

The predefined situations in this category monitor transactions across CICS regions and the z/OS images that the CICS spans. These are the descriptions and formulas for each of these situations:

CICSRegion_Tran_DSNC_Inactive
Tests whether the DSNC interface between CICS and DB2 is still active and rolls up to the enterprise when the interface is found inactive. This situation uses attributes from the CICS Transaction Analysis group. This situation is distributed automatically to all CICS regions being monitored by OMEGAMON for CICS on z/OS.

Formula: If the value of Transaction_ID equals DSNC and the value of Status equals inactive then situation CICSRegion_Tran_DSNC_Inactive is true.

CICSRegion_Tran_Elapsed_CPU
Tests whether the amount of CPU taken by a given transaction has passed a specified threshold. This situation uses an attribute from the CICS Transaction Analysis group. This situation is distributed automatically to all CICS regions being monitored by OMEGAMON for CICS on z/OS.

Note: If fractional values are desired, you must manually modify this product-provided situation to include decimal points and up to two decimal places. For example, if you want 5.2 seconds, add the decimal point.

Formula: If the value of CPU_Time is greater than 1 then situation CICSRegion_Tran_Elapsed_CPU is true.

See also the "CICSplex Transaction Analysis attribute group" on page 204.

Transient Data Analysis situations

These predefined situations in this category monitors transient data.

Note: All the attribute names in this group are prefixed with CICSplex_Transient_Data_Summary. except where stated.

CICSplex_TDBuffer_Warning
Warning threshold exceeded for TD buffer usage.

Select the Transient Data Summary workspace to determine if transient data buffer waits are a persistent problem. If you find that a shortage of transient data buffers is the primary cause of degradation in your system, consider changing the value in the SIT and recycle your region. Increasing the number of transient data buffers increases your overall virtual storage requirements.

Formula: If the value of Percent_Buffers_in_Use is greater than 80 and the value of Percent_Buffers_in_Use is less than or equal to 90 then situation CICSplex_TDBuffer_Warning is true.

CICSplex_TDBuffer_Critical
Critical threshold exceeded for TD buffer usage.

Select the "Transient Data Summary workspace" on page 371 to determine if transient data buffer waits are a persistent problem. If you find that a shortage of transient data buffers is the primary cause of degradation in your system, consider changing the value in the SIT and recycle your region. Increasing the number of transient data buffers increases your overall virtual storage requirements.

Formula: If the value of Percent_Buffers_in_Use is greater than 90 then situation CICSplex_TDBuffer_Critical is true.

CICSplex_TDCIs_Warning
Warning threshold exceeded for TD CI usage.

Consider reallocating the DFHINTRA data set with more space to accommodate your peak transaction rate. Unlike temporary storage, each CI of the intrapartition data set only contains records belonging to the same queue. Specifying REUSE for a destination allows a different queue to use the CI when all records in the CI have been read. This significantly improves performance because tasks have to incur the overhead of handling NOSPACE conditions less often.

Formula: If the value of Percent_CIs_in_Use is greater than 80 and the value of Percent_CIs_in_Use is less than or equal to 90 then situation CICSplex_TDCIs_Warning is true.

CICSplex_TDCIs_Critical
Critical threshold exceeded for TD CI usage.

Consider reallocating the DFHINTRA data set with more space to accommodate your peak transaction rate. Unlike temporary storage, each CI of the intrapartition data set only contains records belonging to the same queue. Specifying REUSE for a destination allows a different queue to use the CI when all records in the CI have been read.This significantly improves performance because tasks have to incur the overhead of handling NOSPACE conditions less often.

Formula: If the value of Percent_CIs_in_Use is greater than 90 then situation CICSplex_TDCIs_Critical is true.

CICSplex_TDActStr_Warning
Warning threshold exceeded for TD active strings.

Increase the number of strings as needed. Occasional peaks are not a problem, but should be kept to a minimum to avoid response time degradation. The Transient Data Summary workspace is used to monitor the status of TD strings and buffers.

Formula: If the value of Percent_Active_Strings is greater than 80 and the value of Percent_Active_Strings is less than or equal to 90 then situation CICSplex_TDActStr_Warning is true.

CICSplex_TDActStr_Critical
Critical threshold exceeded for TD active strings.

Increase the number of strings as needed. Occasional peaks are not a problem, but should be kept to a minimum to avoid response time degradation. The Transient Data Summary workspace is used to monitor the status of TD strings and buffers.

Formula: If the value of Percent_Active_Strings is greater than 90 then situation CICSplex_TDActStr_Critical is true.

CICSplex_TDBufWait_Warning
Warning threshold exceeded for TD buffer waits.

Select the Transient Data Summary workspace to determine if transient data buffer waits are a persistent problem. If you find that a shortage of transient data buffers is the primary cause of degradation in your system, consider changing the value in the SIT and recycle your region. Increasing the number of transient data buffers increases your overall virtual storage requirements.

Formula: If the value of Buffer_Waits is greater than 1 and the value of Buffer_Waits is less than or equal to 2 then situation CICSplex_TDBufWait_Warning is true.

CICSplex_TDBufWait_Critical
Critical threshold exceeded for TD buffer waits.

Select the Transient Data Summary workspace to determine if transient data buffer waits are a persistent problem. If you find that a shortage of transient data buffers is the primary cause of degradation in your system, consider changing the value in the SIT and recycle your region. Increasing the number of transient data buffers increases your overall virtual storage requirements.

Formula: If the value of Buffer_Waits is greater than 2 then situation CICSplex_TDBufWait_Critical is true.

CICSplex_TDStrWait_Warning
Warning threshold exceeded for TD string waits.

Increase the number of strings as needed. Occasional peaks are not a problem, but should be kept to a minimum to avoid response time degradation. The Transient Data Summary workspace is used to monitor the status of TD strings and buffers.

Formula: If the value of Current_String_Waits is greater than 1 and the value of Current_String_Waits is less than or equal to 2 then situation CICSplex_TDStrWait_Warning is true.

CICSplex_TDStrWait_Critical
Critical threshold exceeded for TD string waits.

Increase the number of strings as needed. Occasional peaks are not a problem, but should be kept to a minimum to avoid response time degradation. The Transient Data Summary workspace is used to monitor the status of TD strings and buffers.

Formula: If the value of Current_String_Waits is greater than 2 then situation CICSplex_TDStrWait_Critical is true.

CICSplex_TDTrigger_Warning
Warning threshold exceeded for TD queue over trigger.

It is necessary to raise the priority of the task that removes the transient data records in order to avoid exceeding the trigger level. If the destination is associated with a terminal, check the terminal printer to make sure that it is available.

Formula: If the value of CICSplex_Transient_Data_Queues.Queue_Over_Trigger is greater than 0 and the value of CICSplex_Transient_Data_Queues.Queue_Over_Trigger less than or equal to 1 then situation CICSplex_TDTrigger_Warning is true.

CICSplex_TDTrigger_Critical
Critical threshold exceeded for TD queue over trigger.

It is necessary to raise the priority of the task that removes the transient data records in order to avoid exceeding the trigger level. If the destination is associated with a terminal, check the terminal printer to make sure that it is available.

Formula: If the value of CICSplex_Transient_Data_Queues.Queue_Over_Trigger is greater than 1 then situation CICSplex_TDTrigger_Critical is true.

CICSplex_TDQueueLen_Warning
Warning threshold exceeded for TD queue length.

Ensure that the predicate in this situation specifies the highest trigger level or the number of queues that can fill DFHINTRA. CICS abnormally terminates if the data set overflows. Use the transaction history component of IBM Z OMEGAMON for CICS to verify that the task that reads and deletes the queue is not being terminated with an abend.

Formula: If the value of CICSplex_Transient_Data_Queues.Queue_Length is greater than 100 and the value of CICSplex_Transient_Data_Queues.Queue_Length is less than or equal to 300 then situation CICSplex_TDQueueLen_Warning is true.

CICSplex_TDQueueLen_Critical
Critical threshold exceeded for TD queue length.

Ensure that the predicate in this situation specifies the highest trigger level or the number of queues that can fill DFHINTRA. CICS abnormally terminates if the data set overflows. Use the transaction history component of IBM Z OMEGAMON for CICS to verify that the task that reads and deletes the queue is not being terminated with an abend.

Formula: If the value of CICSplex_Transient_Data_Queues.Queue_Length is greater than 300 then situation CICSplex_TDQueueLen_Critical is true.

See also the "CICSplex Transient Data Summary attribute group" on page 233.

UOW Analysis situations

The predefined situations in this category monitor transactions, that is, units of work.

Note: All the attribute names in this group are prefixed with CICSplex_UOW_Analysis. except where stated.

CICSplex_ShuntedUOWs_Warning
Warning threshold exceeded for shunted UOWs.

If shunted UOWs are causing problems, for example, holding locks that result in enqueue failures, consider forcing a decision. The UOW Enqueue Analysis workspace provides a list of all UOW IDs, including those that are shunted. Using either IBM Z OMEGAMON for CICS or the CICS CEMT transaction, perform the following actions against a shunted UOW: force backout, force commit, or force defined action.

Formula: If the value of Shunted_UOWs is greater than 0 and the value of Shunted_UOWs is less than or equal to 1 then situation CICSplex_ShuntedUOWs_Warning is true.

CICSplex_ShuntedUOWs_Critical
Critical threshold exceeded for shunted UOWs.

If shunted UOWs are causing problems, for example, holding locks that result in enqueue failures, consider forcing a decision. The UOW Enqueue Analysis workspace provides a list of all UOW IDs, including those that are shunted. Using either IBM Z OMEGAMON for CICS or the CICS CEMT transaction, perform the following actions against a shunted UOW: force backout, force commit, or force defined action.

Formula: If the value of Shunted_UOWs is greater than 1 then situation CICSplex_ShuntedUOWs_Critical is true.

CICSplex_UOWShuntTime_Warning
Warning threshold exceeded for total shunt time.

If shunted UOWs are causing problems, for example, holding locks that result in enqueue failures, consider forcing a decision. The UOW Enqueue Analysis workspace is used to obtain a list of all UOW IDs and their associated shunt times. Using either IBM Z OMEGAMON for CICS or the CICS CEMT transaction, perform the following actions against a shunted UOW: force backout, force commit, or force defined action.

Formula: If the value of Total_Time_Shunted is greater than 0 and the value of Total_Time_Shunted is less than or equal to 1 then situation CICSplex_UOWShuntTime_Warning is true.

CICSplex_UOWShuntTime_Critical
Critical threshold exceeded for total shunt time.

If shunted UOWs are causing problems, for example, holding locks that result in enqueue failures, consider forcing a decision. The UOW Enqueue Analysis workspace is used to obtain a list of all UOW IDs and their associated shunt times. Using either IBM Z OMEGAMON for CICS or the CICS CEMT transaction, perform the following actions against a shunted UOW: force backout, force commit, or force defined action.

Formula: If the value of Total_Time_Shunted is greater than 1 then situation CICSplex_UOWShuntTime_Critical is true.

CICSplex_UOWForce_Warning
Warning threshold exceeded for UOW forced decisions.

A forced decision occurs after an indoubt UOW remains unresolved for a user-defined time period. CICS unconditionally backs out or commits the changes made by the UOW to release the resources held by the indoubt UOW.

Formula: If the value of Forced_Decisions is greater than 0 and the value of Forced_Decisions is less than or equal to 1 then situation CICSplex_UOWForce_Warning is true.

CICSplex_UOWForce_Critical
Critical threshold exceeded for UOW forced decisions.

A forced decision occurs after an indoubt UOW remains unresolved for a user-defined time period. CICS unconditionally backs out or commits the changes made by the UOW to release the resources held by the indoubt UOW.

Formula: If the value of Forced_Decisions is greater than 1 then situation CICSplex_UOWForce_Critical is true.

CICSplex_UOWENQFail_Warning
Warning threshold exceeded for UOW enqueue failures.

If shunted UOWs are causing problems, for example, holding locks that result in enqueue failures, consider forcing a decision. The UOW Enqueue Analysis workspace provides a list of all UOW IDs, including those that are shunted. Using either IBM Z OMEGAMON for CICS or the CICS CEMT transaction, perform the following actions against a shunted UOW:

- force backout
- force commit
- force defined action

Formula: If the value of CICSplex_UOW_Enqueue_Analysis.Enqueue_Failures is greater than 0 and the value of CICSplex_UOW_Enqueue_Analysis.Enqueue_Failures is less than or equal to 1 then situation CICSplex_UOWENQFail_Warning is true.

CICSplex_UOWENQFail_Critical
Critical threshold exceeded for UOW enqueue failures.

If shunted UOWs are causing problems, for example, holding locks that result in enqueue failures, consider forcing a decision. The UOW Enqueue Analysis workspace provides a list of all UOW IDs, including those that are shunted. Using either IBM Z OMEGAMON for CICS or the CICS CEMT transaction, perform the following actions against a shunted UOW:

- force backout
- force commit
- force defined action

Formula: If the value of CICSplex_UOW_Enqueue_Analysis.Enqueue_Failures is greater than 1 then situation CICSplex_UOWENQFail_Critical is true.

See also the "CICSplex UOW Analysis attribute group" on page 241.

URIMAP Analysis situations

The situations in this category notify you if your site's URIMAP destinations are unreachable and why.

CICSplex_HostStatus_Warning
Virtual host definition is disabled.

The virtual host associated with this alert is showing a status other than ENABLED. A disabled status means that the URIMAP definitions that make up the virtual host cannot be accessed by applications. Check your virtual host definitions to ensure that the virtual host is enabled, and either enable it or redefine your URIMAP as necessary.

Formula: If the value of CICSplex_Virtual_Host_Detail.Status does not equal Enabled then situation CICSplex_HostStatus_Warning is true.

CICSplex_URIMAPDisCnt_Warning
URIMAP definition disabled during request.

The URIMAP associated with this alert is showing a disabled count greater than zero. One or more requests against the host and path associated with this URIMAP were made while the URIMAP was disabled. Check your URIMAP definitions to ensure the URIMAP is enabled; consider enabling or redefining your URIMAP if necessary.

Formula: If the value of CICSplex_URIMAP_Summary.Disable_count is greater than 0 then situation CICSplex_URIMAPDisCnt_Warning is true.

CICSplex_URIMAPHostDis_Warning
The URIMAP's associated virtual hosts are disabled.

The URIMAP associated with this alert is showing a Virtual Host Disabled count greater than zero. This means that at least one search was made for a host and path for which the URIMAP definition was found, but the virtual host associated with the URIMAP was disabled. Check your virtual host definitions to ensure that the virtual host exists and that it is enabled. If necessary, consider redefining your URIMAP.

Formula: If the value of CICSplex_URIMAP_Global.Hosts_disabled is greater than 0 then situation CICSplex_URIMAPHostDis_Warning is true.

CICSplex_URIMAPStatus_Warning
URIMAP definition is disabled or unavailable.

The URIMAP associated with this alert is showing a status other than ENABLED. The URIMAP definition may be disabled or unavailable because its virtual host has been disabled. Check your

URIMAP and Virtual Host definitions to ensure that the URIMAP and its associated virtual host are enabled. If necessary, enable or redefine the definitions.

Formula: If the value of CICSplex_URIMAP_Summary.Enable_status does not equal Enabled then situation CICSplex_URIMAPStatus_Warning is true.

CICSplex_URIMAPUnmatch_Warning
URIMAP HOST/PATH search has failed.

The URIMAP associated with this alert is showing an unmatched count greater than zero. This means that at least one search was made for a matching URIMAP definition for which no host and path could be found. Review your current URIMAP definitions to ensure the host and path specifications are correct.

Formula: If the value of CICSplex_URIMAP_Global.Unmatched_count is greater than 0 then situation CICSplex_URIMAPUnmatch_Warning is true.

VSAM Analysis situations

The predefined situations in this category monitor the status of VSAM data sets.

CICSplex_VSAMStrUse_Warning
Warning threshold exceeded for VSAM string usage.

Use LSR pools so that strings and buffers are shared for all files. LSR greatly reduces the total I/O and CPU usage in your system. If there are no evident problems, increase the number of strings in the FCT.

Formula: If the value of VSAM_Strings_Percent_in_Use is greater than 85 and the value of VSAM_Strings_Percent_in_Use is less than or equal to 100 then situation CICSplex_VSAMStrUse_Warning is true.

CICSplex_VSAMStrUse_Critical
Critical threshold exceeded for VSAM string usage.

Use LSR pools so that strings and buffers are shared for all files. LSR greatly reduces the total I/O and CPU usage in your system. If there are no evident problems, increase the number of strings in the FCT.

Formula: If the value of VSAM_Strings_Percent_in_Use is greater than 100 then situation CICSplex_VSAMStrUse_Critical is true.

CICSplex_VSAMStrWait_Warning
Warning threshold exceeded for VSAM string waits.

Consider using LSR pools so that strings and buffers are shared by files. LSR greatly reduces the total I/O and CPU usage in your CICS region. Use the Transaction Analysis workspace to determine whether there is a problem that is preventing tasks from completing in a timely manner. For example, tasks can be waiting for an enqueue or CICS can be short-on-storage. If you determine that there is no bottleneck and the problem persists, increase the number of VSAM strings.

Formula: If the value of VSAM_String_Waits is greater than 3 and the value of VSAM_String_Waits is less than or equal to 7 then situation CICSplex_VSAMStrWait_Warning is true.

CICSplex_VSAMStrWait_Critical
Critical threshold exceeded for VSAM string waits.

Consider using LSR pools so that strings and buffers are shared by files. LSR greatly reduces the total I/O and CPU usage in your CICS region. Use the Transaction Analysis workspace to determine whether there is a problem that is preventing tasks from completing in a timely manner. For example, tasks can be waiting for an enqueue or CICS can be short- on-storage. If you determine that there is no bottleneck and the problem persists, consider increasing the number of VSAM strings.

Formula: If the value of VSAM_String_Waits is greater than 7 then situation CICSplex_VSAMStrWait_Critical is true.

CICSplex_VSAMWaitvIO_Warning
Warning threshold exceeded for VSAM waits versus I/O.

If a higher level of activity against the data set has increased string waits, increase the number of strings that are defined for the named data set. Use LSR pools so that files share buffers and strings. LSR reduces the total I/O and CPU usage in your CICS system. If a data set is defined in an LSR pool, the demand for strings can be reduced as a result of a successful buffer lookaside.

Formula: If the value of Percent_Waits_Versus_I/O is greater than 3 and the value of Percent_Waits_Versus_I/O is less than or equal to 5 then situation CICSplex_VSAMWaitvIO_Warning is true.

CICSplex_VSAMWaitvIO_Critical
Critical threshold exceeded for VSAM waits versus I/O.

If a higher level of activity against the data set has increased string waits, increase the number of strings that are defined for the named data set. Use LSR pools so that files share buffers and strings. LSR reduces the total I/O and CPU usage in your CICS system. If a data set is defined in an LSR pool, demand for strings can be reduced as a result of a successful buffer lookaside.

Formula: If the value of Percent_Waits_Versus_I/O is greater than 5 then situation CICSplex_VSAMWaitvIO_Critical is true.

CICSplex_VSAMDataCA_Warning
Warning threshold exceeded for VSAM data CA splits.

Reorganize the file as soon as possible. If splits continue to occur at a frequent rate, redefine the FREESPACE options to reduce split activity.

Formula: If the value of Data_CA_Splits_in_Last_Hour is greater than 1 and the value of Data_CA_Splits_in_Last_Hour is less than or equal to 2 then situation CICSplex_VSAMDataCA_Warning is true.

CICSplex_VSAMDataCA_Critical
Critical threshold exceeded for VSAM data CA splits.

Reorganize the file as soon as possible. If splits continue to occur at a frequent rate, redefine the FREESPACE options to reduce split activity.

Formula: If the value of Data_CA_Splits_in_Last_Hour is greater than 2 then situation CICSplex_VSAMDataCA_Critical is true.

CICSplex_VSAMDataCI_Warning
Warning threshold exceeded for VSAM data CI splits.

Continuing CI splits indicate that a CA split can occur soon. CA splits can take a long time to complete; reorganize the file before the CA split occurs. Large numbers of CI splits indicate that FREESPACE option might have to be adjusted.

Formula: If the value of Data_CI_Splits_in_Last_Hour is greater than 4 and the value of Data_CI_Splits_in_Last_Hour is less than or equal to 10 then situation CICSplex_VSAMDataCA_Critical is true.

CICSplex_VSAMDataCI_Critical
Critical threshold exceeded for VSAM data CI splits.

Continuing CI splits indicate that a CA split can occur soon. CA splits can take a long time to complete; reorganize the file before the CA split occurs. Large numbers of CI splits can indicate that FREESPACE option might have to be adjusted.

Formula: If the value of Data_CI_Splits_in_Last_Hour is greater than 10 then situation CICSplex_VSAMDataCI_Critical is true.

CICSplex_VSAMDataExt_Warning
Warning threshold exceeded for VSAM data extents.

Increase the primary allocation for the data component of the file.

Formula: If the value of Data_Extents_in_Last_Hour is greater than 1 and the value of Data_Extents_in_Last_Hour is less than or equal to 2 then situation CICSplex_VSAMDataExt_Warning is true.

CICSplex_VSAMDataExt_Critical
Critical threshold exceeded for VSAM data extents.

Increase the primary allocation for the data component of the file.

Formula: If the value of Data_Extents_in_Last_Hour is greater than 2 then situation CICSplex_VSAMDataExt_Critical is true.

CICSplex_VSAMNdxCA_Warning
Warning threshold exceeded for VSAM index CA splits.

Reorganize the file as soon as possible. If splits continue to occur at a frequent rate, redefine the FREESPACE options to reduce split activity.

Formula: If the value of Index_CA_Splits_in_Last_Hour is greater than or equal to 1 then situation CICSplex_VSAMNdxCA_Warning is true.

CICSplex_VSAMNdxCA_Critical
Critical threshold exceeded for VSAM index CA splits.

Reorganize the file as soon as possible. If splits continue to occur at a frequent rate, redefine the FREESPACE options to reduce split activity.

Formula: If the value of Index_CA_Splits_in_Last_Hour is greater than or equal to 1 then situation CICSplex_VSAMNdxCA_Critical is true.

CICSplex_VSAMNdxCI_Warning
Warning threshold exceeded for VSAM index CI splits.

Continued CI splits indicate that a CA split can occur soon. CA splits can take a long time to complete, so try to reorganize the file before the CA split occurs. Large numbers of CI splits indicates that the FREESPACE option might have to be adjusted.

Formula: If the value of Index_CI_Splits_in_Last_Hour is greater than or equal to 1 then situation CICSplex_VSAMNdxCI_Warning is true.

CICSplex_VSAMNdxCI_Critical
Critical threshold exceeded for VSAM index CI splits.

Continued CI splits indicate that a CA split can occur soon. CA splits can take a long time to complete, so try to reorganize the file before the CA split occurs. Large numbers of CI splits indicates that the FREESPACE option might have to be adjusted.

Formula: If the value of Index_CI_Splits_in_Last_Hour is greater than or equal to 1 then situation CICSplex_VSAMNdxCI_Critical is true.

CICSplex_VSAMNdxExt_Warning
Warning threshold exceeded for VSAM index extents.

Consider increasing the primary allocation for the index component of the file.

Formula: If the value of Index_Extents_in_Last_Hour is greater than or equal to 1 then situation CICSplex_VSAMNdxExt_Warning is true.

CICSplex_VSAMNdxExt_Critical
Critical threshold exceeded for VSAM index extents.

Consider increasing the primary allocation for the index component of the file.

Formula: If the value of Index_Extents_in_Last_Hour is greater than or equal to 1 then situation CICSplex_VSAMNdxExt_Critical is true.

CICSplex_VSAMRLSTimeout_Warning
Warning threshold exceeded for VSAM RLS timeouts.

Investigate tasks that hold an RLS lock for an excessive a mount of time. The online history component of IBM Z OMEGAMON for CICS is used to identify transactions that have been abnormally terminated by CICS because of VSAM timeout conditions (abend code AFCV). If the lock activity is determined to be normal, consider increasing the DTIMOUT value for transactions that use the file, or the FTIMEOUT value defined to CICS.

Formula: If the value of RLS_Timeouts_in_Last_Hour is greater than 1 and the value of RLS_Timeouts_in_Last_Hour is less than or equal to 20 then situation CICSplex_VSAMRLSTimeout_Warning is true.

CICSplex_VSAMRLSTimeout_Critical
Critical threshold exceeded for VSAM RLS timeouts.

Investigate tasks that hold an RLS lock for an excessive a mount of time. The online history component of IBM Z OMEGAMON for CICS is used to identify transactions that have been abnormally terminated by CICS because of VSAM timeout conditions (abend code AFCV). If the lock activity is determined to be normal, consider increasing the DTIMOUT value for transactions that use the file, or the FTIMEOUT value defined to CICS.

Formula: If the value of RLS_Timeouts_in_Last_Hour is greater than 20 then situation CICSplex_VSAMRLSTimeout_Critical is true.

See also the "CICSplex VSAM Analysis attribute group" on page 248.

Web Services Analysis situations

The situations in this category inform you of problems either in accessing a specific Web service or in making a Web interface available to CICS applications.

Note: All the attribute names in this group are prefixed with CICSplex_Internet_Status. except where stated.

CICSplex_Web_Service_Warning
Warning threshold exceeded; Web service not in service.

The WEBSERVICE identified in the alert is not INSERVICE. Determine why the WEBSERVICE is in this state, and take the appropriate action.

This could be because the Web service binding file could not be installed in the CICS region. Examine the CICS log, and look for a DFHPI0914 WEB SERVICE message that says the Web service is unusable because the WSBIND file is corrupt. This could be caused if you transferred the file using FTP mode ASCII instead of BINARY. To correct this error, re transfer the file using BINARY mode; then discard and reinstall the WEBSERVICE.

Formula: If the value of CICSplex_Web_Service_Details.Status does not equal Inservice then situation CICSplex_Web_Service_Warning is true.

CICSplex_WebEnabled_Warning
Warning threshold exceeded for Web interface: disabled.

Specify TCPIP=YES in the CICS System Initialization Table to enable CICS Web support.

Formula: If the value of Web_Interface_Status does not equal Enabled then situation CICSplex_WebEnabled_Warning is true.

CICSplex_WebEnabled_Critical
Critical threshold exceeded for Web interface: disabled.

Specify TCPIP=YES in the CICS System Initialization Table to enable CICS Web support.

Formula: If the value of Web_Interface_Status does not equal Enabled then situation CICSplex_WebEnabled_Critical is true.

CICSplex_WebInstall_Warning
Warning threshold exceeded for Web interface: install.

To support operation of the CICS Web Interface, specify WEB=YES in the CICS System Initialization Table.

Formula: If the value of Web_Interface_Status equals Not_installed then situation CICSplex_WebInstall_Warning is true.

CICSplex_WebInstall_Critical
Critical threshold exceeded for Web interface: install.

To support operation of the CICS Web Interface, specify WEB=YES in the CICS System Initialization Table.

Formula: If the value of Web_Interface_Status equals Not_installed then situation CICSplex_WebInstall_Critical is true.

XML Transforms situation

The single predefined situation in this category alerts you to the efficiency status of the XML Transform resources in your CICS regions.

CICSplex_XML_Transforms_Status_Warning
The XML Transforms object status activity.

The XML Transforms object activity identified in the alert is not in a ENABLED state, indicating that the XML Transforms object definitions that have been installed in your target CICS region are not active.

Formula: If the value of CICSplex_XML_Transforms_Status_Warning is not equal to Enabled then situation CICSplex_XML_Transform_Warning is true.

See also the "CICSplex XML Transforms Object Summary attribute group" on page 256.

Chapter 5. Take Action commands

The Take Action command feature enables you to enter a command or stop or start a process at any CICS region in your network where one or more Tivoli Enterprise Monitoring Agents are running.

IBM Z OMEGAMON for CICS provides several predefined Take Actions that you can invoke to respond to unusual situations occurring within your CICS regions or to pass commands to CICS. All of these commands can be used in the Take Action response when a situation fires. For example, you might write a situation that checks whether a temporary storage queue contains more then 32500 entries and, if it does, deletes it. In that case the situation passes a CP:TSQD command to the Take Action command.

For more information about creating and using Take Action commands, see the Tivoli Enterprise Portal online help.

This section covers these predefined IBM Z OMEGAMON for CICS Take Action commands:

Note: Security for the native IBM Z OMEGAMON for CICS commands (those prefixed by *CP:*) is determined by its own set of security profiles; for detailed information, including implementation instructions and guidelines, see the *Planning and Configuration Guide*. However, security for z/OS console commands (for example, the CEKL command passed to CICS through the Modify command) is controlled by the general Take Action command security your site implements with NetView.

AID Purge

The **AID Purge** predefined Take Action command stops one or more CICS Automatic Initiate Descriptors (AIDs).

Formula:

```
CP:AIDK ADDRESS=&CICSplex_AID_Analysis.AID_Address KILL
```

This command kills the AID using the AID address attribute from the "CICSplex AID Analysis attribute group" on page 58.

Security considerations

Your ability to use the AID purge command is determined by a separate set of security profiles that apply only to the IBM Z OMEGAMON for CICS Take Action commands.

CEKL Purge

The **CEKL Purge** predefined Take Action command requests the cancellation of a user task.

Formula:

```
F &CICSplex_Transaction_Analysis.CICS_Name,CEKL
 SET TASK(&CICSplex_Transaction_Analysis.Task_Number) PURGE
```

This command issues a z/OS CEKL console command to purge the task identified by the Task Number attribute from the CICS region identified by the CICS Name attribute; both attributes are from the “CICSplex Transaction Analysis attribute group” on page 204.

Security considerations

Your ability to use the CEKL purge command is determined by the general Take Action security environment your site set up through the NetView® product.

ICE Cancel

The **ICE Cancel** predefined Take Action command stops one or more CICS Interval Control Elements (ICEs).

Formula:

```
CP:ICEK ADDRESS=&CICSplex_ICE_Analysis.ICE_Address KILL
```

This command kills the ICE identified by the ICE Address attribute from the “CICSplex AID Analysis attribute group” on page 58.

Security considerations

Your ability to use the ICE cancel command is determined by a separate set of security profiles that apply only to the IBM Z OMEGAMON for CICS Take Action commands.

Sample CEMT SET command

The **Sample CEMT SET** predefined Take Action command illustrates how to pass commands to CICS regions using the CEMT SET command.

In the following example, the Take Action command uses the CEMT interface to open a VSAM file.

Formula:

```
CP:SET FILE(&CICSplex_VSAM_Analysis.DDNAME) OPEN
```

This command issues the CEMT SET command to open a VSAM file identified by the DDNAME attribute from the “CICSplex VSAM Analysis attribute group” on page 248.

Note: Use this command to issue any CEMT SET command by over typing the `FILE(filename) OPEN` clause with the command you want to run. For example:

```
CP:SET TD(JTD1) ENABLE
```

Security considerations

Your ability to start this command is determined by a separate set of security profiles that apply only to the IBM Z OMEGAMON for CICS Take Action commands.

Sample TD queue purge command

The **Sample TD queue purge** predefined Take Action command illustrates how to use the TDDL commands to manipulate your CICS transient data queues.

In the following example, the Take Action command deletes all entries on a particular transient data queue.

Formula:

```
CP:TDDL ID=&CICSPlex_Transient_Data_Queues.Dest_ID
```

This command starts the clearing of the transient data queue identified by the Destination ID attribute from the “CICSplex Transient Data Queues attribute group” on page 231.

Security considerations

Your ability to start the sample TD queue purge command is determined by a separate set of security profiles that apply only to the IBM Z OMEGAMON for CICS Take Action commands.

Sample Trace Task command

The **Sample Trace Task** predefined Take Action command is for use in the Transactions Analysis workspace and activates a trace for a specific transaction.

Formula:

```
CP TRAC TASK=&CICSplex_Transaction_Analysis.Task_Number
```

This command starts the activation of a trace for a specific transaction by the Trace Active attribute from the “CICSplex Transaction Analysis attribute group” on page 204.

Security considerations

Your ability to start the Sample Trace Task command is determined by a separate set of security profiles that apply only to the IBM Z OMEGAMON for CICS Take Action commands.

Sample Trace Transaction command

The **Sample Trace Transaction** predefined Take Action command is for use in the Transactions Analysis workspace and activates a trace for a transaction ID in the default setting of 30 minutes.

Formula:

```
CP TRAC TRAN=&CICSplex_Transaction_Analysis.CICS_Transaction_ID DURATION=30D
```

This command starts the activation of a trace for a transaction ID identified by the Trace Active attribute from the “CICSplex Transaction Analysis attribute group” on page 204.

Security considerations

Your ability to start the Sample Trace Transaction command is determined by a separate set of security profiles that apply only to the IBM Z OMEGAMON for CICS Take Action commands.

Sample TS queue delete command

The **Sample TS queue delete** predefined Take Action command illustrates how to run TSQD commands to manipulate your CICS transient storage queues; in this particular case, the Take Action command deletes a named temporary storage queue.

Formula:

```
CP:TSQD ID=&CICSPlex_Temporary_Storage_Detail.Queue_ID
```

This command starts the deletion of the transient storage queue identified by the Queue ID attribute from the “CICSplex Transaction TSQUEUE Details attribute group” on page 228.

Security considerations

Your ability to start the sample TS queue delete command is determined by a separate set of security profiles that apply only to the IBM Z OMEGAMON for CICS Take Action commands.

Sample TS queue delete command using the hex queue ID

The **Sample TS queue delete using the hex queue ID** predefined Take Action command illustrates how to run TSQD commands to manipulate your CICS transient storage queues.

In the following example, the Take Action command deletes a named temporary storage queue using the hexadecimal form of the queue name. (Some temporary storage queues have hexadecimal characters in their names; these do not display correctly in Tivoli Enterprise Portal.)

Formula:

```
CP:TSQD ID=&CICSPlex_Temporary_Storage_Detail.Hex_Queue_ID HEX
```

This command starts the deletion of the transient storage queue identified by the Hex Queue ID attribute from the "CICSplex Transaction TSQUEUE Details attribute group" on page 228.

Security considerations

Your ability to start the sample TS queue delete command using the hex queue ID is determined by a separate set of security profiles that apply only to the IBM Z OMEGAMON for CICS Take Action commands.

Sample WTO message issued by a command or situation

The **Sample WTO message issued by a command or situation** predefined Take Action command allows you to send mixed-case WTO commands to the z/OS operator console.

Formula:

```
CP:WTO can be issued by a command or a TRUE situation
```

This command starts the WTO command to display a console message; it can be started either directly or from a situation that has evaluated as TRUE. The text string passed is any valid WTO string, in both uppercase and lowercase letters and up to 62 characters in length. A message whose length exceeds the 62 character limit is truncated.

Your message text can include variables from a IBM Z OMEGAMON for CICS table view, in this format: `&{attribute_group.attribute_name}`. Thus your text can include any supported attribute name provided the 62 character limit is not exceeded when the attribute value is substituted.

Security considerations

Your ability to start the sample WTO message command is determined by a separate set of security profiles that apply only to the IBM Z OMEGAMON for CICS Take Action commands.

Chapter 6. Workspaces

IBM Z OMEGAMON for CICS provides workspaces for viewing information about each CICS region you are monitoring. The table views, graphs, and charts within each workspace report attribute information about each CICS region you are monitoring.

You can use the table views, graphs, and charts within each workspace to perform the following tasks:

- Investigate attribute information relating to a change in state
- Monitor the performance of each CICS region, helping you to identify system bottlenecks and evaluate tuning decisions
- Select the most effective threshold values for situations you create

The workspaces deliver detailed, current data that enable you to analyze CICS regions, connections, service class performance, transactions, tasks waiting on RLS resources, and temporary storage queues. For an overview of available workspaces, see "Organization of the predefined workspaces" on page 313.

In addition to table views and graphs, a workspace contains other views, for example, a 3270 terminal session, a text view, a browser session, an event console, or a Take Action pane that gives you the ability to send commands to the operator console. Certain workspace views provide links to subsidiary (secondary) workspaces, and dynamic, runtime links to other OMEGAMON monitoring products, for example, OMEGAMON on z/OS and OMEGAMON for Mainframe Networks.

Organization of the predefined workspaces

IBM Z OMEGAMON for CICS provides predefined workspaces that are displayed in the Navigator Physical view of the Tivoli Enterprise Portal.

The following list is an alphabetical grouping of these primary workspaces.

Some workspaces are accessible only as links from other workspaces. These are called either secondary or subsidiary workspaces and are shown in the table list associated with their parent, primary workspace. For example, if you right-click either a row or the link icon, in the Atom Feed Summary table view, and choose **Link To**, you can link to the Atom Feed Details workspace.

You can also access the subsidiary workspaces using the **View** menu option: Use the Navigator to display the primary CICS workspace; then choose **View > workspace** from the menu to access its secondary workspaces.

- "Application Bundle Summary workspace" on page 325
  - "Application Bundle Details workspace" on page 324
    - "XML Transforms Details workspace" on page 376
- "Atom Feed Summary workspace" on page 326
  - "Atom Feed Details workspace" on page 326
  - "XML Transforms Details workspace" on page 376
- "Automatic Initiate Descriptor workspace" on page 327
- "Bottleneck Analysis workspace" on page 328
- "Business Transaction Services Analysis workspace" on page 329
- "CICS Capacity Tracking workspace" on page 329 (CICS region level node)
- "CICS Performance Summary workspace" on page 329 (CICS group node level)
  - "Region Service Level Analysis workspace" on page 353 (a link at the CICS group node level)
    - "Service Class Summary workspace" on page 354
- "CICSplex Summary workspace" on page 330 (CICSplex node level)

- “Connections Analysis workspace” on page 331
  - “Link Summary workspace” on page 346
- “Connections Summary workspace” on page 331
  - “IP Connections Analysis workspace” on page 344
    - “IP Connection Session Details workspace” on page 343
  - “ISC Connections Analysis workspace” on page 344
  - “MRO Connections Analysis workspace” on page 348
- “DB2 Summary workspace” on page 332
- “DB2 Task Activity workspace” on page 332
- “DBCTL Summary workspace” on page 333
- “Dispatcher Summary workspace” on page 333
- “Dump Analysis workspace” on page 333
- “Enqueue Analysis workspace” on page 334
  - “Enqueue Conflicts workspace” on page 335
- “Enterprise Java Analysis workspace” on page 335
  - “Corbaserver Details workspace” on page 332
  - “Request Model Details workspace” on page 353
- “Event Processing Summary workspace” on page 336
  - “Event Processing Details workspace” on page 336
- “Exit Program Analysis workspace” on page 336
  - “Exit Program Detail workspace” on page 337
  - “Global User Exit Details workspace” on page 341
- “File Control Analysis workspace” on page 338
  - “File Control Summary workspace” on page 340
    - “File Control Details workspace” on page 339
    - “File Control Statistics workspace” on page 340
    - “File Control Journal and Logging workspace” on page 340
    - “File Control Data Table Statistics workspace” on page 339
  - “Region Datasets workspace” on page 352
- “Intercommunication Summary workspace” on page 342
- “Internet Status workspace” on page 342
- “IP Connection Session Details workspace” on page 343
- “IP Connections Analysis workspace” on page 344
- “Interval Control Elements workspace” on page 343
- “Java Program Analysis workspace” on page 344
- “Journal Analysis workspace” on page 345
- “JVM Analysis workspace” on page 345
- “Log Stream Analysis workspace” on page 346
- “LSR Pool Status workspace” on page 347
- “Message Queuing Analysis workspace” on page 348
- “MVS TCB Summary workspace” on page 349
- “Pagepool Summary workspace” on page 350

- "Recovery Manager Analysis workspace" on page 351
- "Region Overview workspace" on page 352
  - "Region Datasets workspace" on page 352
  - "Automatic Initiate Descriptor workspace" on page 327
  - "Interval Control Elements workspace" on page 343
  - "Storage Analysis workspace" on page 357
  - "Region Datasets workspace" on page 352
- "Response Time Analysis workspace" on page 353
  - "Response Time Details workspace" on page 354
- "Service Level Analysis workspace" on page 355
- "Service Task Details workspace" on page 356
- "Storage Analysis workspace" on page 357
  - "Dynamic Storage Detail workspace" on page 334
- "Subpool Details workspace" on page 357
- "System Initialization Table workspace" on page 357
- "Task Class Analysis workspace" on page 358
- "TCPIP Statistics workspace" on page 358
- "Temporary Storage Queues workspace" on page 360
- "Temporary Storage Summary workspace" on page 360
  - "Temporary Storage Details workspace" on page 359
  - "Auxiliary Temporary Storage Details workspace" on page 327
  - "Extended Temporary Storage Summary workspace" on page 338
- "Terminal Storage Violations workspace" on page 361
- "Transaction Analysis workspace" on page 361
  - "Association Data Details workspace" on page 326
  - "Online Data Viewing workspace" on page 349
    - "Application Trace workspace" on page 325
  - "Transaction Details workspace" on page 363
  - "Transaction Storage Analysis workspace" on page 367
  - "Transaction Timings workspace" on page 368
  - "Transaction Statistics workspace" on page 367
  - "Transaction and Program Definitions workspace" on page 363
  - "Transaction Umbrella Information workspace" on page 369
  - "Transaction File Details workspace" on page 364
  - "Transaction TSQueue Details workspace" on page 369
  - "Units of Work workspace" on page 372
    - "Application Trace workspace" on page 325
- "Transaction Storage Violations workspace" on page 368
- "Transient Data Queues workspace" on page 371
- "Transient Data Summary workspace" on page 371
- "Transaction Manager Statistics workspace" on page 365
- "UOW Analysis workspace" on page 372

- "UOW Enqueue Analysis workspace" on page 373
- "URIMAP Analysis workspace" on page 373
  - "URIMAP Detail workspace" on page 373
- "VSAM Analysis workspace" on page 374
- "VSAM RLS Lock Analysis workspace" on page 374
- "Web Services Analysis workspace" on page 375
  - "Web Services Details workspace" on page 375
  - "Web Services Transactions workspace" on page 376
  - "Pipeline Details workspace" on page 351
  - "Exit Details workspace" on page 337
  - "File Details workspace" on page 341
  - "Program Details workspace" on page 351
  - "Temporary Storage Queue Details workspace" on page 359
  - "Transient Data Details workspace" on page 370
- "Web Services Transactions workspace" on page 376
  - "Application Trace workspace" on page 325
- "Workrequest Analysis workspace" on page 376
- "XML Transforms Details workspace" on page 376

For information about the attribute groups whose contents populate these workspaces, see "Attribute groups used by the predefined workspaces" on page 316.

Attribute groups used by the predefined workspaces

In most cases, there is a one to one correspondence between a workspace and an attribute group; in other words, a workspace contains data or columns whose contents are extracted from the attributes in a single attribute group (although there is no such requirement, it is certainly possible for a single workspace to be built from multiple attribute groups and for a single group's attributes to populate more than one workspace). Table 4 on page 316 shows the relationships between the predefined workspaces and the attribute groups. The workspaces are listed in alphabetical order.

Table 4. The predefined workspaces and the attribute groups that are used to populate them

Workspace name	Related attribute groups
"Application Bundle Details workspace" on page 324	• "CICSplex Application Bundle Summary attribute group" on page 60 • "CICSplex Application Bundle Detail attribute group" on page 59 • "CICSplex Application Bundle Parts attribute group" on page 59
"Application Bundle Summary workspace" on page 325	"CICSplex Application Bundle Summary attribute group" on page 60
"Application Trace workspace" on page 325	"CICSplex Application Trace attribute group" on page 61
"Atom Feed Details workspace" on page 326	• "CICSplex Atom Feed Detail attribute group" on page 65 • "CICSplex Atom Feed Summary attribute group" on page 64

Table 4. The predefined workspaces and the attribute groups that are used to populate them (continued)	
Workspace name	**Related attribute groups**
"Atom Feed Summary workspace" on page 326	"CICSplex Atom Feed Summary attribute group" on page 64
"Automatic Initiate Descriptor workspace" on page 327	"CICSplex AID Analysis attribute group" on page 58
"Auxiliary Temporary Storage Details workspace" on page 327	"CICSplex Auxiliary Temporary Storage Details attribute group" on page 66
"Bottleneck Analysis workspace" on page 328	"CICSplex Bottleneck Analysis attribute group" on page 68
"Business Transaction Services Analysis workspace" on page 329	• "CICSplex BTS Container Details attribute group" on page 71 • "CICSplex BTS Activity Details attribute group" on page 69 • "CICSplex BTS Process Details attribute group" on page 72 • "CICSplex BTS ProcessType Details attribute group" on page 73
"CICS Capacity Tracking workspace" on page 329	• "CICSplex Region Overview attribute group" on page 166 • "CICSplex Transaction Analysis attribute group" on page 204
"CICS Performance Summary workspace" on page 329	• "CICSplex Region Overview attribute group" on page 166 • "CICSplex Service Class Analysis attribute group" on page 176
"CICSplex Summary workspace" on page 330	"CICSplex Overview attribute group" on page 142
"CICS Region Name workspace" on page 330	"CICSplex Region Overview attribute group" on page 166
"Connections Analysis workspace" on page 331	"CICSplex Connection Analysis attribute group" on page 76
"Connections Summary workspace" on page 331	"CICSplex Connections Summary attribute group" on page 79
"Corbaserver Details workspace" on page 332	"CICSplex Corbaserver Details attribute group" on page 80
"DB2 Summary workspace" on page 332	"CICSplex DB2 Summary attribute group" on page 84
"DB2 Task Activity workspace" on page 332	"CICSplex DB2 Task Activity attribute group" on page 85
"DBCTL Summary workspace" on page 333	"CICSplex DBCTL Summary attribute group" on page 86

Table 4. The predefined workspaces and the attribute groups that are used to populate them (continued)	
Workspace name	**Related attribute groups**
"Dispatcher Summary workspace" on page 333	• "CICSplex Dispatcher Summary attribute group" on page 87 • "CICSplex Dispatcher TCB Modes attribute group" on page 89 • "CICSplex Dispatcher TCB Pools attribute group" on page 90
"Dump Analysis workspace" on page 333	• "CICSplex Dump Analysis attribute group" on page 94 • "CICSplex Dump Details attribute group" on page 95
"Dynamic Storage Detail workspace" on page 334	"CICSplex Dynamic Storage Details attribute group" on page 96
"Enqueue Analysis workspace" on page 334	• "CICSplex Enqueue Analysis attribute group" on page 98 • "CICSplex Enqueue Pool Details attribute group" on page 99
"Enqueue Conflicts workspace" on page 335	• "CICSplex Enqueue Analysis attribute group" on page 98 • "CICSplex Enqueue Analysis Tasks attribute group" on page 99
"Enterprise Java Analysis workspace" on page 335	• "CICSplex Corbaserver Summary attribute group" on page 82 • "CICSplex DJAR Details attribute group" on page 92 • "CICSplex Enterprise Java Bean Details attribute group" on page 101 • "CICSplex Request Model Summary attribute group" on page 170
"Event Processing Details workspace" on page 336	• "CICSplex Event Processing Details attribute group" on page 101 • "CICSplex Event Processing Summary attribute group" on page 103
"Event Processing Summary workspace" on page 336	"CICSplex Event Processing Summary attribute group" on page 103
"Exit Details workspace" on page 337	• "CICSplex Document Template Details attribute group" on page 93 • "CICSplex Exit Program Analysis attribute group" on page 103

Table 4. The predefined workspaces and the attribute groups that are used to populate them (continued)	
Workspace name	**Related attribute groups**
"Exit Program Analysis workspace" on page 336	• "CICSplex Exit Program Analysis attribute group" on page 103 • "CICSplex Global User Exits attribute group" on page 117
"Exit Program Detail workspace" on page 337	• "CICSplex Exit Program Analysis attribute group" on page 103 • "CICSplex Program Details attribute group" on page 161
"Extended Temporary Storage Summary workspace" on page 338	"CICSplex Temporary Storage Extended attribute group" on page 200
"File Control Analysis workspace" on page 338	"CICSplex File Control Analysis attribute group" on page 106 • "CICSplex File Control Details attribute group" on page 108 • "CICSplex File Control Statistics attribute group" on page 113 • "CICSplex File Control Journal and Logging attribute group" on page 111 • "CICSplex File Control Data Table Statistics attribute group" on page 107
"File Control Data Table Statistics workspace" on page 339	"CICSplex File Control Data Table Statistics attribute group" on page 107
"File Control Details workspace" on page 339	"CICSplex File Control Details attribute group" on page 108
"File Control Journal and Logging workspace" on page 340	"CICSplex File Control Journal and Logging attribute group" on page 111
"File Control Statistics workspace" on page 340	"CICSplex File Control Statistics attribute group" on page 113
"File Control Summary workspace" on page 340	"CICSplex File Control Summary attribute group" on page 115
"File Details workspace" on page 341	• "CICSplex Document Template Details attribute group" on page 93 • "CICSplex File Control Details attribute group" on page 108
"Global User Exit Details workspace" on page 341	• "CICSplex Global User Exits attribute group" on page 117 • "CICSplex Program Details attribute group" on page 161
"Intercommunication Summary workspace" on page 342	"CICSplex Intercommunication Summary attribute group" on page 119 (not available for situations)

Table 4. The predefined workspaces and the attribute groups that are used to populate them (continued)	
Workspace name	**Related attribute groups**
"Internet Status workspace" on page 342	"CICSplex Internet Status attribute group" on page 120
"Interval Control Elements workspace" on page 343	"CICSplex ICE Analysis attribute group" on page 117
"IP Connection Session Details workspace" on page 343	"CICSplex IPConn Session Details attribute group" on page 121
"IP Connections Analysis workspace" on page 344	"CICSplex IPConnection Analysis attribute group" on page 122
"ISC Connections Analysis workspace" on page 344	"CICSplex Connection Analysis attribute group" on page 76
"Java Program Analysis workspace" on page 344	"CICSplex Java Program Analysis attribute group" on page 123
"Journal Analysis workspace" on page 345	"CICSplex Journal Analysis attribute group" on page 125
"JVM Analysis workspace" on page 345	• "CICSplex JVM Analysis attribute group" on page 126 • "CICSplex JVM Classcache Details attribute group" on page 127 • "CICSplex JVMPOOL Statistics attribute group" on page 129 • "CICSplex JVMProfile Analysis attribute group" on page 130 • "CICSplex JVM Server Analysis attribute group" on page 131
"LSR Pool Status workspace" on page 347	• "CICSplex LSR Pool Status attribute group" on page 135 • "CICSplex LSR Pool Details attribute group" on page 134
"Link Summary workspace" on page 346	"CICSplex Link Analysis attribute group" on page 131 (not available for situations)
"Log Stream Analysis workspace" on page 346	"CICSplex Log Stream Analysis attribute group" on page 133
"MRO Connections Analysis workspace" on page 348	"CICSplex Connection Analysis attribute group" on page 76
"Message Queuing Analysis workspace" on page 348	"CICSplex MQ Connection Details attribute group" on page 137
"MRO Connections Analysis workspace" on page 348	"CICSplex Connection Analysis attribute group" on page 76
"MVS TCB Summary workspace" on page 349	• "CICSplex MVS TCB Global Details attribute group" on page 139 • "CICSplex MVS TCB Resource Details attribute group" on page 140

Table 4. The predefined workspaces and the attribute groups that are used to populate them (continued)	
Workspace name	**Related attribute groups**
"Online Data Viewing workspace" on page 349	"CICSplex Online Data Viewing attribute group" on page 141
"Pagepool Summary workspace" on page 350	• "CICSplex Pagepool Summary attribute group" on page 152 • "CICSplex Pagepool Details attribute group" on page 150
"Pipeline Details workspace" on page 351	"CICSplex Pipeline Details attribute group" on page 155
"Program Details workspace" on page 351	• "CICSplex Document Template Details attribute group" on page 93 • "CICSplex Program Details attribute group" on page 161
"Recovery Manager Analysis workspace" on page 351	• "CICSplex Recovery Manager Details attribute group" on page 163 • "CICSplex Unit-of-work Link Details attribute group" on page 236 • "CICSplex Unit-of-work DSN Failure Details attribute group" on page 234
"Region Datasets workspace" on page 352	"CICSplex Region Dataset Analysis attribute group" on page 165
"Region Overview workspace" on page 352	"CICSplex Region Overview attribute group" on page 166
"Region Service Level Analysis workspace" on page 353	"CICSplex Service Class Analysis attribute group" on page 176
"Request Model Details workspace" on page 353	"CICSplex Request Model Details attribute group" on page 169
"Response Time Analysis workspace" on page 353	"CICSplex Response Time Analysis attribute group" on page 172
"Response Time Details workspace" on page 354	"CICSplex Response Time Elements attribute group" on page 173
"Service Class Summary workspace" on page 354	"CICSplex Service Class Analysis attribute group" on page 176
"Service Level Analysis workspace" on page 355	"CICSplex Service Class Analysis attribute group" on page 176
"Service Task Details workspace" on page 356	"CICSplex Service Task Details attribute group" on page 183
"Storage Analysis workspace" on page 357	"CICSplex Storage Analysis attribute group" on page 185
"Subpool Details workspace" on page 357	"CICSplex Subpool Details attribute group" on page 186
"System Initialization Table workspace" on page 357	"CICSplex System Initialization Table attribute group" on page 188

Table 4. The predefined workspaces and the attribute groups that are used to populate them (continued)	
Workspace name	**Related attribute groups**
"Task Class Analysis workspace" on page 358	"CICSplex Task Class Analysis attribute group" on page 189
"TCPIP Statistics workspace" on page 358	• "CICSplex TCPIP Statistics attribute group" on page 196 • "CICSplex TCPIP Service Statistics attribute group" on page 193
"Temporary Storage Details workspace" on page 359	"CICSplex Temporary Storage Details attribute group" on page 199
"Temporary Storage Queue Details workspace" on page 359	• "CICSplex Document Template Details attribute group" on page 93 • "CICSplex Temporary Storage Detail attribute group" on page 198
"Temporary Storage Queues workspace" on page 360	"CICSplex Temporary Storage Detail attribute group" on page 198
"Temporary Storage Summary workspace" on page 360	"CICSplex Temporary Storage Summary attribute group" on page 202
"Terminal Storage Violations workspace" on page 361	"CICSplex Terminal Storage Violations attribute group" on page 203
"Transaction Analysis workspace" on page 361	"CICSplex Transaction Analysis attribute group" on page 204
"Transaction and Program Definitions workspace" on page 363	• "CICSplex Transaction Definition Information attribute group" on page 208 • "CICSplex Program Definition Information attribute group" on page 159
"Transaction Details workspace" on page 363	• "CICSplex Association Data Details attribute group" on page 63 • "CICSplex Transaction Details attribute group" on page 210 • "CICSplex Transaction EIB Summary attribute group" on page 213 • "CICSplex Transaction Application Program attribute group" on page 207
"Transaction EIB Details workspace" on page 364	"CICSplex Transaction EIB Detail attribute group" on page 211
"Transaction File Details workspace" on page 364	• "CICSplex Transaction File Details attribute group" on page 213 • "CICSplex Transaction Application Program attribute group" on page 207

Table 4. The predefined workspaces and the attribute groups that are used to populate them (continued)	
Workspace name	**Related attribute groups**
"Transaction I/O Waits Analysis workspace" on page 365	• "CICSplex Transaction I/O Waits Analysis attribute group" on page 215 • "CICSplex Transaction Wait Other Analysis attribute group" on page 230
"Transaction Manager Statistics workspace" on page 365	"CICSplex Transaction Manager Statistics attribute group" on page 216
"Transaction Remote Summary workspace" on page 366	"CICSplex Transaction Remote Information attribute group" on page 218
"Transaction Statistics workspace" on page 367	"CICSplex Transaction Statistics attribute group" on page 219
"Transaction Storage Analysis workspace" on page 367	"CICSplex Transaction Storage Analysis attribute group" on page 221
"Transaction Storage Violations workspace" on page 368	"CICSplex Transaction Storage Violations attribute group" on page 223
"Transaction Timings workspace" on page 368	"CICSplex Transaction Timings attribute group" on page 226
"Transaction Umbrella Information workspace" on page 369	"CICSplex Transaction Umbrella Data attribute group" on page 229
"Transaction TSQueue Details workspace" on page 369	"CICSplex Transaction TSQUEUE Details attribute group" on page 228
"Transient Data Details workspace" on page 370	• "CICSplex Document Template Details attribute group" on page 93 • "CICSplex Transient Data Queues attribute group" on page 231
"Transient Data Queues workspace" on page 371	"CICSplex Transient Data Queues attribute group" on page 231
"Transient Data Summary workspace" on page 371	"CICSplex Transient Data Summary attribute group" on page 233
"Units of Work workspace" on page 372	"CICSplex Units of Work attribute group" on page 238
"UOW Analysis workspace" on page 372	"CICSplex UOW Analysis attribute group" on page 241
"UOW Enqueue Analysis workspace" on page 373	"CICSplex UOW Enqueue Analysis attribute group" on page 242
"URIMAP Analysis workspace" on page 373	• "CICSplex URIMAP Summary attribute group" on page 246 • "CICSplex URIMAP Global attribute group" on page 245
"URIMAP Detail workspace" on page 373	"CICSplex URIMAP Detail attribute group" on page 243

Table 4. The predefined workspaces and the attribute groups that are used to populate them (continued)	
Workspace name	**Related attribute groups**
"VSAM Analysis workspace" on page 374	"CICSplex VSAM Analysis attribute group" on page 248
"VSAM RLS Lock Analysis workspace" on page 374	"CICSplex RLS Lock Analysis attribute group" on page 175
"Web Services Analysis workspace" on page 375	• "CICSplex Web Service Summary attribute group" on page 253 • "CICSplex Pipeline Summary attribute group" on page 156 • "CICSplex Virtual Host Detail attribute group" on page 247 • "CICSplex Document Template Details attribute group" on page 93
"Web Services Details workspace" on page 375	"CICSplex Web Service Details attribute group" on page 250
"Web Services Transactions workspace" on page 376	"CICSplex Online Data Viewing attribute group" on page 141
"Workrequest Analysis workspace" on page 376	"CICSplex Workrequest Details attribute group" on page 254
"XML Transforms Details workspace" on page 376	• "CICSplex XML Transforms Detail attribute group" on page 256 • "CICSplex XML Transforms Object Summary attribute group" on page 256

Application Bundle Details workspace

The Application Bundle Details workspace provides data for a specific CICS bundle resource and bundle part that is deployed in a CICS region.

The Application Bundle Details workspace contains the following views:

- Application Bundle Details table view
- Application Bundle Summary table view, which provides summary data for CICS bundle resources. Use the links to refresh the view for a different bundle resource.
- Application Bundle Parts table view, which provides the bundle part name, including the resources that are dynamically created and managed as part of the bundle in a CICS region.

This workspace is accessed using a dynamic workspace link from the Application Bundle Summary workspace.

To inquire about different parts of the resource bundle type (EVENTBINDING or XMLTRANSFORM), use the dynamic workspace link in the Application Bundle Parts table view to access the Event Processing Details workspace or XML Transforms Details workspace.

The Application Bundle Details workspace is populated with data from the CICSplex Application Bundle Detail, CICSplex Application Bundle Summary and CICSplex Application Bundle Parts attribute groups.

See also:

- "CICSplex Application Bundle Detail attribute group" on page 59
- "CICSplex Application Bundle Parts attribute group" on page 59

- “CICSplex Application Bundle Summary attribute group” on page 60
- “Application Bundle Summary workspace” on page 325
- “Event Processing Details workspace” on page 336
- “XML Transforms Details workspace” on page 376
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Application Bundle Summary workspace

The predefined Application Bundle Summary workspace provides summary data and usage counts of CICS bundle resources that are deployed in a CICS region to represent an application.

Some of the information this workspace provides is the name of the resource bundle, the status of the application bundle for a specific CICS region and the current number of resources that are enabled and installed in the resource bundle.

The Application Bundle Summary workspace has the following views:

- Application Bundle Usage Counts bar graph, which displays the usage counts for the bundle resources in a CICS region.
- Application Bundle Summary table view, which has summary data for the bundle resources in a CICS region.

The Application Bundle Summary workspace is populated with data from the CICSplex Application Bundle Summary attribute group.

Use the dynamic workspace link in the table view to filter on a specific application bundle and access the Application Bundle Details workspace, which contains details for the specific application bundle in a managed CICS region.

See also:

- “CICSplex Application Bundle Summary attribute group” on page 60
- “Application Bundle Details workspace” on page 324
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Application Trace workspace

The Application Trace workspace displays the application trace data for a specific transaction.

This workspace uses the CICSplex Application Trace attribute group to populate the views. You can use this workspace to diagnose a performance problem when it is turned on for a short period of time, diagnose overall problems within an application development environment, and aid in the debugging, by capturing the current TCB name of a task in the application trace records.

The long (a five character name that was assigned to the MVS™ TCB) name is displayed in the TCB Name column of the OMEGAMON for CICS (3270) interface and in the Application Trace Details table view.

The predefined Application Trace workspace contains the following table views:

- The Application Trace view displays the details of the application trace calls made by a transaction.
- The Task Details view displays the details from the transaction history record.

This workspace can be linked to from the following workspaces:

- “Online Data Viewing workspace” on page 349
- “Units of Work workspace” on page 372
- “Web Services Transactions workspace” on page 376

- “Transaction Analysis workspace” on page 361

See also:

- “CICSplex Application Trace attribute group” on page 61
- “CICSplex Online Data Viewing attribute group” on page 141
- “CICSplex Units of Work attribute group” on page 238
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Association Data Details workspace

The Association Data Details workspace provides a detailed look at details related to individual transactions.

The Association Data Details workspace is linked to from the “Transaction Details workspace” on page 363.

See also:

- “CICSplex Association Data Details attribute group” on page 63
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Atom Feed Details workspace

The Atom Feed Details workspace provides detailed information for a specific CICS Atom Service definition.

The CICS resource types that are available for Atom Feed details are File, Program and TS Queue.

After you select a specific Atom Feed object definition from the Atom Feed Summary table view, you can use the dynamic workspace link to drill down for more specific details in the Atom Feed Details table view. For example, you can examine the XML binding file that is specified for the File resource type in the **Atom Service Bindfile** column and the Atom service configuration file in the **Atom Service Configuration** column.

This workspace is populated from the attributes of the CICSplex Atom Feed Detail attribute group.

See also:

- “Atom Feed Summary workspace” on page 326
- “CICSplex Atom Feed Detail attribute group” on page 65
- “CICSplex Atom Feed Summary attribute group” on page 64
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Atom Feed Summary workspace

The Atom Feed Summary workspace provides all the summary data for a CICS Atom Feed definition.

The Atom Feed object definition contains a name and resource type. Depending on what type of CICS resource holds the data for this Atom Feed object in the **Resource Type** column of the Atom Feed Summary table view, you can link to the Atom Feed Details workspace for more specific details.

These are the available types of CICS resources:

FILE
A CICS file; a single record in the file provides the data for a single Atom entry.

PROGRAM
A service routine, which is a CICS application program written to supply content for Atom entries.

TSQUEUE
A temporary storage queue. A single record in the temporary storage queue provides the data for a single Atom entry.

The Atom Feed Summary workspace is populated from the attributes of the CICSplex Atom Feed Summary group.

See also:

- "CICSplex Atom Feed Summary attribute group" on page 64
- "CICSplex Atom Feed Detail attribute group" on page 65
- "Atom Feed Details workspace" on page 326
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Automatic Initiate Descriptor workspace

The Automatic Initiate Descriptors workspace displays summary information on all the Automatic Initiate Descriptors in the CICS region. It shows you the work waiting on terminals and remote systems.

This workspace allows bottlenecks involving terminals or printers to be identified. For example, a request to start a task connected to a printer shows as an Automatic Initiate Descriptor when the target printer is not available. If many Automatic Initiate Descriptors have accumulated, response time can be adversely affected because CICS attempts to start each Automatic Initiate Descriptor on every dispatch of the terminal control program.

The predefined Automatic Initiate Descriptor workspace contains the following views:

- The Take Action view allows you to purge an Automatic Initiate Descriptor either directly or using the CICS-supplied transaction CEKL. Selecting either of these options prompts you for the Automatic Initiate Descriptor address. Alternatively you can select the Automatic Initiate Descriptor from the table view, right-click, and a popup window shows the Take Action options.
- The Table view shows all the attributes. From the table view you can select one of the definitions, right-click and a popup window shows all the options listed in the Take Action window. The information allows you to purge an Automatic Initiate Descriptor using the OMEGAMON XE agent.

You can end Automatic Initiate Descriptors in your CICS region when they accumulate because of a printer, terminal, or remote connection error. You can do this by using the Take Action view to purge the Automatic Initiate Descriptor or by using the CEKL transaction. Alternatively, you can select one of the definitions, right-click and a popup window lists all the options displayed in the Take Action window.

See also:

- "CICSplex AID Analysis attribute group" on page 58
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Auxiliary Temporary Storage Details workspace

The predefined Auxiliary Temporary Storage Details workspace is accessed from the Temporary Storage Summary workspace.

The Auxiliary Temporary Storage Details workspace contains the following views:

- Auxiliary Resource Utilization bar chart. This compares the percent control intervals (CIs) in use, with the percent strings in use, the percent buffers in use and the percent segments in use.
- Auxiliary Temporary Storage details table view. This view displays the following information:

- The Number of CIs in use, the total number of CIs, their size, the number of HWM CIs in use, the PUTs larger than the CI size, the total CIS Reads and Writes, the formatted writes and the formatted writes from recovery.
- The number of buffers allocated, buffers in use, the maximum, current and total write buffers, and the HWM of buffer waits.
- The number of strings in use, strings allocated, HWM of strings in use, the current number of string waits, and the HWM of string waits.
- The number of segments in use, segment size, segments per CI, and the total number of segments in use since the last restart.
- The percentages of the CIs, strings, buffers and segments in use is supplied.

There is a link to the Temporary Storage workspace.

See also:

- “CICSplex Auxiliary Temporary Storage Details attribute group” on page 66
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Bottleneck Analysis workspace

The Bottleneck Analysis workspace displays information for all eligible CICS transactions.

This predefined workspace contains the following views:

- CICS Wait Reason Distribution bar chart that shows wait reason descriptions along the Y axis when a display threshold of 10 percent is reached.
- Bottleneck Analysis table view that identifies the various wait reasons over a 10% threshold encountered by CICS tasks over a fixed time interval

The workspace displays are provided by the “CICSplex Bottleneck Analysis attribute group” on page 68.

By default, the Bottleneck Analysis table view displays information for all eligible CICS transactions. You can limit the display to a single group by adding a " GROUPNUM EQ " predicate to the bottleneck query. The Tivoli Enterprise Portal Properties page lets you add the Group Number attribute, provided only one group is specified in the predicate.

It is not possible to ask for several groups at one time, while omitting others. For instance, if ten groups have been defined to OMEGAMON, a query cannot ask for groups 3, 5, and 9. Thus, if the Bottleneck Analysis query asks for more than one group (using multiple predicates or use of something other than an EQ logical operator), an error message is written to the RKLVLOG and the query is ignored. A display of all transactions is obtained by omitting the Group Number predicate from the Bottleneck Analysis query.

In the CICS Wait Reason Distribution bar chart, to replace the wait reason description with a shorthand version of the resource type and name, add the Resource Type/Name attribute to your query using the Tivoli Enterprise Portal Properties page.

This tactic, for example, replaces "`FC:Wait for user`" with "`FCCFQS /(none)`" for those accustomed to the OMEGAMON for CICS (3270 Classic) interface. The display threshold is controlled using the Display Threshold attribute supplied in the default query and can be changed to any value you want. Omitting the attribute, or setting its value to zero, results in the display of all defined wait reasons. Users of the OMEGAMON for CICS (3270 Classic) interface and Tivoli Enterprise Portal monitors can set any value they choose.

See also:

- “CICSplex Bottleneck Analysis attribute group” on page 68
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Business Transaction Services Analysis workspace

You can use this workspace to determine the status of your applications that use the ACID (atomicity, consistency, isolation, and durability) properties of Business Transaction Services. These processes can be extended over time. If these processes seem to be stalled or not executing in the correct sequence, the details available in this workspace can help you determine the cause.

The predefined Business Transaction Services Analysis workspace contains these table views:

- Business Transaction Services: Container Details
- Business Transaction Services: Activity Details
- Business Transaction Services: Process Type Details
- Business Transaction Services: Process Details

See also:

- “CICSplex BTS Container Details attribute group” on page 71
- “CICSplex BTS Activity Details attribute group” on page 69
- “CICSplex BTS Process Details attribute group” on page 72
- “CICSplex BTS ProcessType Details attribute group” on page 73
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

CICS Capacity Tracking workspace

The predefined CICS Capacity Tracking workspace is located at the CICS region level and provides key performance and utilization information for active transactions in the CICS address space as well as the CPU time consumed by each transaction. Use this workspace as a tracking system to project future workloads in terms of transaction rates, to analyze trends and variations and to identify times when capacity is exceeded.

This workspace is populated from the CICSplex Region Overview and CICSplex Transaction Analysis attribute groups.

This workspace contains the following views:

- Capacity Tracking plot chart, which plots active tasks as a percentage of the AMXT system initialization parameter and CPU time consumed in the CICS address space during the current interval.
- Transaction Activity bar chart, which shows the CPU time consumed by each transaction.

See also:

- “CICSplex Region Overview attribute group” on page 166
- “CICSplex Transaction Analysis attribute group” on page 204
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

CICS Performance Summary workspace

The predefined CICS Performance Summary workspace is located at the CICS node level and provides key summary information for each monitored CICS region and displays an overview of the maximum tasks percentage, transaction rate, and the amount of CPU usage. This workspace is populated from the CICSplex Region Overview and CICSplex Service Class Analysis attribute groups.

This predefined workspace contains the following views:

- CICS Performance Summary

- Service Level Summary table view shows the performance of all service classes for all CICS regions in the LPAR and has a link to the "Service Class Summary workspace" on page 354

See also:

- "CICSplex Region Overview attribute group" on page 166
- "CICSplex Service Class Analysis attribute group" on page 176
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

CICSplex Summary workspace

The predefined CICSplex Summary workspace is located at the CICSplex level and provides key summary information for the internal resources of each monitored CICSplex within the CICS region or regions. This workspace displays the key metrics with regard to storage, files, maximum task percentage, and CPU usage and transaction rate for all CICS regions within a CICSplex.

This workspace is populated from the CICSplex Overview attribute group.

The CICSplex Summary workspace contains the following views:

- CPU Utilization Over Time plot chart, which shows the CPU usage and transaction rate for the CICS regions in the CICSplex over a time interval.
- CPU Utilization circular gauge, which shows the total amount of CPU utilized at a percentage rate of 0-999 for the CICS regions within the CICSplex.
- Transaction Rate circular gauge, which shows the total transaction rate per one minute of elapsed time for the CICS regions within the CICSplex.
- CICSplex Overview table view, which shows the key metrics that identifies the health of the collection of CICS regions in your CICSplex environment.

See also:

- "CICSplex Overview attribute group" on page 142
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

CICS Region Name workspace

The CICS Region Name workspace displays data provided by the CICSplex Region Overview attribute group including capacity tracking and transaction activity information.

The predefined CICS Region Name workspace contains the following views:

- Capacity Tracking plot chart, which plots active tasks as a percentage of the AMXT system initialization parameter and CPU time consumed in the CICS address space during the current interval
- Transaction Activity bar chart, which shows the CPU time consumed by each transaction

This workspace also provides access to the Databases workspace.

See also:

- "CICSplex Region Overview attribute group" on page 166
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Connections Analysis workspace

The predefined Connections Analysis workspace contains information on link utilization activity and workloads across terminal owning regions (TORs).

This workspace contains the following views:

- Link Utilization bar chart, which shows the percentages of total, secondary, and primary links in use
- Connections Analysis table view, which shows activity and workloads across terminal owning regions (TORs)

The Connections Analysis table view helps you analyze the efficiency of multiregion operation (MRO) and intersystem communication (ISC) links and detect capacity constraints that might cause bottlenecks. For example, you can readily determine the following items:

- The number of connections between a selected region and other regions
- The number of transactions per minute
- The number of active LU2 connections
- CPU usage
- Link usage
- The balance of work across Terminal Owning Regions (TORs)
- The number of automatic initiate descriptors (AIDs) associated with the worst performing MRO and ISC connections

The table view also provides a link to the "Link Summary workspace" on page 346.

See also:

- "CICSplex Connection Analysis attribute group" on page 76
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Connections Summary workspace

The Connections Summary workspace provides a detailed look at connections and send sessions. with it you can view overall status of your connections.

The views within the Connections Summary workspace help you analyze the efficiency of multiregion operation (MRO), intersystem communication (ISC), and IP (IPIC) links, and detect capacity constraints that might cause bottlenecks. These are the views:

- The Connections Summary bar chart, which displays the number of MRO, ISC, and IPCONN connections allocated versus the total number of available connections.
- The Connections Summary table view returns a summary row listing all connections in the region for each of the following items:
  - MRO/EXCI connections

    From this row you can link to the "MRO Connections Analysis workspace" on page 348.
  - ISC connections

    From this row you can link to the "ISC Connections Analysis workspace" on page 344.
  - IPIC connections (IPCONNs)

    From this row you can link to the "IP Connections Analysis workspace" on page 344.

These views are built using attributes from the "CICSplex Connections Summary attribute group" on page 79.

See also:

- “CICSplex Connections Summary attribute group” on page 79
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Corbaserver Details workspace

The Corbaserver Details workspace provides a detailed look at a selected CORBA server resource.

The Corbaserver Details workspace is linked to from the “Enterprise Java Analysis workspace” on page 335's Corbaserver Summary view.

See also:

- “CICSplex Corbaserver Details attribute group” on page 80
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

DB2 Summary workspace

The predefined DB2 Summary workspace contains the DB2 Summary table view, which shows whether or not a CICS region is attached to DB2.

This table view displays data provided by the CICSplex DB2 Summary attribute group.

This workspace also contains a Take Action view that lets you enter console commands and a 3270 terminal session.

You can link to the CICS Connections workspace provided by the OMEGAMON for DB2 on z/OS product, so you can see at a glance all CICS/DB2 thread activity in the CICS region, filtered by the CICS ID.

See also:

- “CICSplex DB2 Summary attribute group” on page 84
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

DB2 Task Activity workspace

The predefined DB2 Task Activity workspace shows task activity for each monitored CICS region and information on threads.

This predefined workspace contains the following views:

- DB2 Task Activity table view, which shows task activity for each monitored CICS region and provides information on threads, waits, and abended DB2 transactions
- DB2 Thread Activity bar chart, which compares percentages of threads in use, threads in wait, and threads in abort states

See also:

- “CICSplex DB2 Task Activity attribute group” on page 85
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

DBCTL Summary workspace

The predefined DBCTL Summary workspace shows the status of the CICS database control (DBCTL) interface for the monitored CICS region.

This predefined workspace also contains the Database Control for IMS table view. This table view displays data provided by the "CICSplex DBCTL Summary attribute group" on page 86. The bar chart shows the DL/I Control Block status.

You can link to the IMS Address Spaces workspace provided by the OMEGAMON for IMS on z/OS product for the selected CICS region, with which you can see at a glance all CICS/DBCTL activity.

See also:

- "CICSplex DBCTL Summary attribute group" on page 86
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Dispatcher Summary workspace

The predefined Dispatcher Summary workspace shows the level of activity across the TCBs that CICS runs.

It shows the start and stop time of given tasks, the peak and current number of tasks, and the current number of TCBs that are in use by the CICS region.

This predefined workspace contains the following views:

- Dispatcher Summary table view showing the attributes of the task and transaction activity within each TCB. It shows the runaway task intervals, and number of tasks active.
- Dispatcher TCB Modes table view showing the all the TCB statistics associated with each of the modes. There are several clocks that give you the amount of real time used by either z/OS waits or dispatches and also CPU time used by either a task or a TCB.
- Dispatcher TCB Pools table view. This shows the number of TCBs that are allocated to a particular pool (JVM, OPEN, or HP), whether they are attached or in use, as well as both the total and the current waiting time associated with that pool. This groups the TCBs in a logical way: it shows the number of current tasks that are waiting and the peak number of tasks that have been waiting for each TCB.

See also:

- "CICSplex Dispatcher Summary attribute group" on page 87
- "CICSplex Dispatcher TCB Modes attribute group" on page 89
- "CICSplex Dispatcher TCB Pools attribute group" on page 90
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Dump Analysis workspace

The predefined Dump Analysis workspace shows information on dump activity within CICS regions.

The predefined Dump Analysis workspace contains the following views:

- The CICS Dump Analysis table view that shows data on current dump activity and statistics on any dumps.
- The Recent CICS Dump Activity bar chart that shows the number of dumps for a CICS region and that gives data for system dumps and transaction dumps in the last hour.
- The Total CICS Dumps bar chart that shows the total number of dumps for a CICS region and that gives data for both system and transaction dumps.

- The CICS Dump Details table view that shows a list of the abends that have occurred in a CICS region and divides them into system and transaction abends. This information comes through the IBM Z OMEGAMON for CICS service task that runs within CICS (OMEG INIT). If you do not have the service task running, this view is empty. The service task is activated either through OMEG INIT or through the PLT. Verify that the service task is running and refer to the "Service Task Details workspace" on page 356.

See also:

- "CICSplex Dump Analysis attribute group" on page 94
- "CICSplex Dump Details attribute group" on page 95
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Dynamic Storage Detail workspace

The predefined Dynamic Storage Detail workspace allows you to investigate any of the DSAs that can be heavily loaded.

You access this workspace from the link in the Storage Analysis workspace.

The predefined Dynamic Storage Detail workspace contains the following views:

- The Storage Utilization circular gauge that shows the percentages of dynamic storage being used for the DSA that you selected from the "Storage Analysis workspace" on page 357.
- The Extent Allocation bar chart that shows the extents in use and compares them with those allocated.
- The CICS Key DSA Detailed Analysis Table. For the selected DSA this view shows the following information:
  - The subpool requests (ADD and DEL) and the number of requests purged.
  - The cushion size and cushions released.
  - The GETMAIN and FREEMAIN requests and the number of GETMAIN failures.
  - The Extents in use and the Extents allocated.
  - The current, total and HWM tasks suspended.
  - The short-on-storage state, the total times the DSA went SOS and the last time that the DSA went SOS.
  - Storage violations.
  - The storage available, allocated, and in use.
  - The page usage.
  - The last time the statistics were reset.

See also:

- "CICSplex Dynamic Storage Details attribute group" on page 96
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Enqueue Analysis workspace

The predefined Enqueue Analysis workspace enables you to monitor problems with application throughput where the applications are known to link to other system components.

The predefined Enqueue Analysis workspace contains the following views:

- The CICS Enqueue Analysis table view shows such data as the number of tasks waiting for an enqueue, each enqueue name or address, and the ID of the CICS region that owns the resource.

- The CICS Enqueue Pool Details table view shows the detailed information about all current enqueue pools.
- The Resource Wait Counts bar chart shows the number of tasks waiting for an available resource, by resource name.

From the CICS Enqueue Analysis table view, you can link to the "Enqueue Conflicts workspace" on page 335.

See also:

- "CICSplex Enqueue Analysis attribute group" on page 98
- "CICSplex Enqueue Pool Details attribute group" on page 99
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Enqueue Conflicts workspace

The Enqueue Conflicts workspace shows the tasks waiting on the enqueued resource.

The Enqueue Conflicts workspace is linked to from the "Enqueue Analysis workspace" on page 334.

The predefined Enqueue Conflicts workspace contains the following views:

- The Tasks Queued to Resource: *resourcename* table view, which lists all the tasks associated with the enqueued resource, whether owning or waiting.
- The CICS Enqueue Analysis table view, which shows such data as the number of tasks waiting for an enqueue, each enqueue name or address, and the ID of the CICS region that owns the resource. This is the same view displayed in the "Enqueue Analysis workspace" on page 334.

See also:

- "CICSplex Enqueue Analysis attribute group" on page 98
- "CICSplex Enqueue Analysis Tasks attribute group" on page 99
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Enterprise Java Analysis workspace

The Enterprise Java Analysis workspace displays the resources needed to invoke Java beans from a CICS-specific Enterprise Java environment.

The predefined Enterprise Java Analysis workspace contains these table views:

- The Corbaserver Summary view summarizes all your CICS CORBA server resources. From the Corbaserver Summary workspace, you can link to the "Corbaserver Details workspace" on page 332.
- The DJAR Analysis view provides detailed information about the CICS-deployed Java archive files (DJARs) within your environment.
- The Enterprise Java Bean Details view provides detailed information about the Java Beans active in your CICS regions.
- The Request Model Summary view summarizes all the request models defined for your CICS environment. From the Request Model Summary workspace, you can link to the "Request Model Details workspace" on page 353.

See also:

- "CICSplex Corbaserver Summary attribute group" on page 82
- "CICSplex DJAR Details attribute group" on page 92
- "CICSplex Enterprise Java Bean Details attribute group" on page 101
- "CICSplex Request Model Summary attribute group" on page 170

- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Event Processing Details workspace

The Event Processing Details workspace displays the detailed data for a specific installed event processing resource of a managed CICS region.

This workspace is accessed from a dynamic workspace link from the Event Processing Summary workspace and the Application Bundle Parts table view of the Application Bundle Details workspace, if the resource bundle type is an EVENTBINDING object.

The Event Processing Details workspace contains the following views:

- Event Processing Summary table view, which has summary data for the installed event binding resources of a managed CICS region. Use the links to refresh the view for a different event binding.
- Event Processing Details table view, which displays the details for the specific event binding value in a managed CICS region.

The Event Processing Details workspace is populated from the attributes of the CICSplex Event Processing Details and CICSplex Event Processing Summary attribute groups.

See also:

- “CICSplex Event Processing Details attribute group” on page 101
- “CICSplex Event Processing Summary attribute group” on page 103
- “Event Processing Summary workspace” on page 336
- “Application Bundle Details workspace” on page 324
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Event Processing Summary workspace

The Event Processing Summary workspace displays the summary data and the status for the installed event binding resources of a managed CICS region.

The predefined Event Processing Summary workspace contains the Event Processing Summary and Event Processing Status table views. These table views are populated from the attributes of the CICSplex Event Processing Summary and CICSplex Event Processing Status groups.

There is a dynamic workspace link to the Event Processing Details workspace, which contains a table view of the details for the specific event binding value in a managed CICS region.

See also:

- “CICSplex Event Processing Summary attribute group” on page 103
- “CICSplex Event Processing Details attribute group” on page 101
- “Event Processing Details workspace” on page 336
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Exit Program Analysis workspace

The predefined Exit Program Analysis workspace is used to determine the status of your CICS Global User Exit (GLUE) and Task-Related User Exit (TRUE) applications. Using this workspace you can also check the status of the CICS User Exit services.

The predefined Exit Program Analysis workspace contains these views:

- Exit Program GWA Use Count, that displays the use count, global area use count, and task area use counts
- Exit Program Analysis table view
- Global User Exits table view

From this workspace, you can link to these workspaces:

- "Exit Program Detail workspace" on page 337
- "Global User Exit Details workspace" on page 341

See also:

- "CICSplex Exit Program Analysis attribute group" on page 103
- "CICSplex Global User Exits attribute group" on page 117
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Exit Program Detail workspace

The Exit Program Detail workspace provides a detailed look at a selected exit program.

The Exit Program Detail workspace is linked to from the "Exit Program Analysis workspace" on page 336.

The predefined Exit Program Detail workspace contains the following views:

- The Exit Program Analysis graph shows the use count, Global Workarea length, GWA use count, global exit points and task work area length
- The Exit Program Analysis table view, which includes a link back to itself for analysis of individual exit programs through the Exit Program Details table
- The single-line Exit Program Details table, which shows detailed information about the exit program selected in the Exit Program Analysis table

See also:

- "CICSplex Exit Program Analysis attribute group" on page 103
- "CICSplex Program Details attribute group" on page 161
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Exit Details workspace

The Exit Details workspace provides detailed information about the exit program started by a selected document template.

The Exit Details workspace is linked to from the "Web Services Analysis workspace" on page 375's Document Template Details view.

The predefined Exit Details workspace contains the following views:

- The Document Template Details table view is a repeat of the same view shown in the "Web Services Analysis workspace" on page 375; it is included here so you can easily link to another workspace, including the Exit Details workspace.

  From this view, depending on the Source Type for the table view row you select when linking, you can link to the following workspaces:

  - Back to the Exit Details workspace, if the Source Type is EXIT, for display of a different exit program
  - The "File Details workspace" on page 341, if the Source Type is FILE
  - The "Program Details workspace" on page 351, if the Source Type is PROGRAM
  - The "Temporary Storage Queue Details workspace" on page 359, if the Source Type is TSQ

  - The "Transient Data Details workspace" on page 370, if the Source Type is TDQ
- The Exit Details table view provides detailed information about an exit program associated with a specific document template.

See also:

- "CICSplex Document Template Details attribute group" on page 93
- "CICSplex Exit Program Analysis attribute group" on page 103
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Extended Temporary Storage Summary workspace

The Extended Temporary Storage Summary workspace monitors the CICS response to temporary-storage constraints, such as when applications are failing due to TS-related errors.

The Extended Temporary Storage Summary workspace is linked to from the "Temporary Storage Summary workspace" on page 360.

This workspace includes these views:

- The Share Pool Status bar chart shows defined and connected shared pools.
- The Auxiliary Resource Use bar chart shows the percentage of shared control intervals, I/O counts, and TS statistics.

See also:

- "CICSplex Temporary Storage Extended attribute group" on page 200
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

File Control Analysis workspace

The predefined File Control Analysis workspace shows the number of tasks with string waits and the number of tasks with buffer waits.

The predefined File Control Analysis workspace contains the following views:

- File Control Analysis table view that displays the number of tasks with string waits and the number of tasks with buffer waits.
- File Resource Contention bar chart that compares the number of tasks with string waits and the number of tasks with buffer waits.

It also provides a link to the File Control Analysis in 3270 view of the OMEGAMON for CICS (3270) interface. When you right-click a link icon in the File Control Analysis table view and select File Control Analysis in OMEGAMON for CICS (3270), you must enter your terminal session user credentials in the dialog and click **OK**. A terminal view is displayed within the workspace, with the appropriate details.

Note that this predefined workspace link to a 3270 session has an associated sample script. You should review the script prior to using it in your environment.

From the File Control Analysis workspace, you can link to the"Region Datasets workspace" on page 352 and the "File Control Summary workspace" on page 340.

From the File Control Summary workspace, you can link to the following workspaces:

- "File Control Details workspace" on page 339
- "File Control Statistics workspace" on page 340
- "File Control Journal and Logging workspace" on page 340
- "File Control Data Table Statistics workspace" on page 339

- “Region Datasets workspace” on page 352

These workspaces provide all the information that you need to monitor CICS file control and use the Take Action commands to change the properties of the files in your CICS system.

See also:

- “CICSplex File Control Analysis attribute group” on page 106
- “CICSplex File Control Details attribute group” on page 108
- “CICSplex File Control Statistics attribute group” on page 113
- “CICSplex File Control Journal and Logging attribute group” on page 111
- “CICSplex File Control Data Table Statistics attribute group” on page 107
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

File Control Data Table Statistics workspace

The predefined File Control Data Table Statistics workspace shows those files that are defined as data tables and provides details related to the file associated with each data table.

The predefined File Control Data Table Statistics workspace contains the following views:

- Data Table Statistics bar chart: For each file this compares the number of Successful reads, Successful updates, Deletes, Records loaded, Records added, Failing reads, Loads failed for full, Adds loads rejected, and Adds failed for full.
- Data Tables entries in use bar chart. This compares the current entries in use with the maximum entries allowed in use.
- File control data tables statistics table view. For each file that is a data table, this shows the data table type, status, whether is it loaded, recoverable or available. It shows the number of lost records, the current number of records, the maximum number of records, and the number that are in use. In addition it shows Successful reads, Updates, Deletes, Records loaded, Records added, Failing reads, Leads failed for full, adds Loads rejected, and add failed for full for each file.

See also:

- “CICSplex File Control Data Table Statistics attribute group” on page 107
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

File Control Details workspace

You access the File Control Details workspace through the File Control Analysis workspace; this adds more detail about each file.

The predefined File Control Details workspace contains the following views:

- File String Utilization bar chart. This compares the active strings with the number of strings for each file.
- File Control Details table view displays the access method, status (open and enable), type of file, record file format, remote system (if the file is remote), the number of active strings, the total number of strings defined for each file, the number of string waits per file. It also provides details of remote files.

There is also a link to the “File Control Statistics workspace” on page 340.

See also:

- “CICSplex File Control Details attribute group” on page 108
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

File Control Journal and Logging workspace

The predefined File Control Journal and Logging workspace shows information on file control journals and logging. For example, the number of journal requests, forward recovery log requests and log options.

You access this workspace through the File Control Analysis workspace.

The predefined File Control Journal and Logging workspace contains the following views:

- File Control Journal information table view: For each file it shows the number of journal requests and forward recovery log requests.
- File Control Log Information table view: For each file it shows the z/OS Logstream name, the log options, the Log backout option and whether the file is defined as RLS in the SIT.

There is also a link to the "File Control Details workspace" on page 339.

See also:

- "CICSplex File Control Journal and Logging attribute group" on page 111
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

File Control Statistics workspace

The predefined File Control Statistics workspace provides data about the detailed activity for each file.

You access this workspace through the File Control Analysis workspace.

The predefined File Control Statistics workspace contains these views:

- File Request bar chart: For each file it shows the number of adds, browses, deletes, number of reads, number of read updates, and the number of updates,
- Current File Waits bar chart: This compares the number of buffer waits with the number of string waits for each file.
- File Control Statistics table view: For each file it shows the number of adds, browses, deletes and updates to a file, current files waits, and the time the file was opened.

There is a link to the File Control Details workspace.

See also:

- "CICSplex File Control Statistics attribute group" on page 113
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

File Control Summary workspace

The File Control Summary workspace provides a summary of activity and the properties of the files in your CICS regions.

From this workspace you can compare the number of active strings with the number of available strings. You can set a threshold to provide an alert when the number of active strings approaches the number of available strings. You can then increase the number of strings using the Take Action feature to issue a CEMT SET FILE command.

You can use the links to examine more details of each file. Select the row in the File Control Summary table, right-click, and select one of four workspace links.

The predefined File Control Summary workspace contains the following views:

- File String Utilization bar chart. This compares the active strings with the number of strings for each file.

- File Control Summary table view displays the access method, status (open and enable), type of file, record file format, remote system (if the file is remote), the number of active strings, the total number of strings defined for each file and the number of string waits per file.

From this workspace you can link to the following workspaces:

- "File Control Details workspace" on page 339
- "File Control Statistics workspace" on page 340
- "File Control Journal and Logging workspace" on page 340
- "File Control Data Table Statistics workspace" on page 339

See also:

- "CICSplex File Control Summary attribute group" on page 115
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

File Details workspace

The File Details workspace provides detailed information about a specific file referenced by a selected document template.

The File Details workspace is linked to from the "Web Services Analysis workspace" on page 375's Document Template Details view.

The predefined File Details workspace contains the following views:

- The Document Template Details table view is a repeat of the same view shown in the "Web Services Analysis workspace" on page 375; it is included here so you can easily link to another workspace, including the File Details workspace.

  From this view, depending on the Source Type for the table view row you select when linking, you can link to the following workspaces:

  - The "Exit Details workspace" on page 337, if the Source Type is EXIT
  - Back to the File Details workspace, if the Source Type is FILE, for display of information about a different file
  - The "Program Details workspace" on page 351, if the Source Type is PROGRAM
  - The "Temporary Storage Queue Details workspace" on page 359, if the Source Type is TSQ
  - The "Transient Data Details workspace" on page 370, if the Source Type is TDQ
- The single-line File Control Details table view provides detailed information about a file referenced by a specific document template.

See also:

- "CICSplex Document Template Details attribute group" on page 93
- "CICSplex File Control Details attribute group" on page 108
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Global User Exit Details workspace

The predefined Global User Exits workspace displays detailed information about the GLUEs referenced by your CICS transactions.

The Global User Exits workspace is linked to from the "Exit Program Analysis workspace" on page 336.

The Global User Exits workspace contains these views:

- The Global User Exits graph showing GWA Length, GWA Use Count and Number of Exits for each Exit Name
- The Global User Exits table showing detailed information about the referenced GLUEs, which includes a link back to itself for analysis of individual exit programs through the Exit Program Details table
- The single-line Exit Program Details table showing detailed information about the exit program selected in the Global User Exits table

See also:

- "CICSplex Global User Exits attribute group" on page 117
- "CICSplex Program Details attribute group" on page 161
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Intercommunication Summary workspace

The predefined Intercommunication Summary workspace shows such data as the number of connections among the CICS region and the status.

The predefined Intercommunication Summary workspace contains these views:

- CICS Intercommunication Summary table view that shows such data as the number of connections among this region and others, the average number of transactions executed in 1 minute of elapsed time, and the name of the connection with the highest percentage of ISC links in use.
- Connection Utilization bar chart shows data for the connection status of a specific CICS region and provides data about the following connection details:
  - Worst MRO Connection Number of Links Defined
  - Worst MRO Connection Number of AIDs Defined
  - Worst ISC Connection Number of Links Defined
  - Worst ISC Connection Number of AIDs Defined
- Worst MRO Connection Percent of Links in Use circular gauge
- Worst ISC Connection Percent of Links in Use circular gauge

This workspace displays data provided by the "CICSplex Intercommunication Summary attribute group" on page 119.

See also:

- "CICSplex Intercommunication Summary attribute group" on page 119
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Internet Status workspace

The predefined Internet Status workspace shows the status of the Web interface and the URL of the Web site being viewed.

The predefined Internet Status workspace contains the following views:

- CICS Internet Status table view that shows such data as the state of the Web interface and whether or not the TCP/IP application is waiting
- Web browser view, shows the URL address of the Web site being viewed.

See also:

- "CICSplex Internet Status attribute group" on page 120
- "Attribute groups used by the predefined workspaces" on page 316

- “Organization of the predefined workspaces” on page 313

Interval Control Elements workspace

The predefined Interval Control Elements (ICE) workspace allows you to identify scheduled work in your system. This workspace allows you to analyze ICE problems, displays a summary list of all ICEs in the system, displays detailed information about a specific ICE, and allows you to request that an ICE address be removed from the system.

The predefined Interval Control Elements (ICE) workspace contains the following views:

- Take Action view. This allows you to purge an ICE address either directly or using the CICS supplied transaction, CEKL. Selecting either of these options prompts you for the ICE address. Alternatively you can select the ICE from the table view, right-click, and a popup window shows the Take Action options.
- Table view showing all the attributes. From the table view you can select one of the definitions, right-click and a popup window lists all the options that show in the Take Action window. The information allows you to purge an ICE through OMEGAMON and onto CICS.

Interval control elements (ICE) represent tasks that CICS is scheduled to start after a specified time interval or at a certain time of day. Upon expiration of this interval, CICS starts the task or creates an AID, pending the availability of some resource.

You can terminate ICEs in your CICS region when they accumulate because of a printer, terminal, or remote connection error. You can do this by using the Take Action view to purge an ICE or by using the CEKL transaction. Alternatively you can select one of the definitions from the table view, right-click, and a popup window lists all the options that show in the Take Action window.

See also:

- “CICSplex ICE Analysis attribute group” on page 117
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

IP Connection Session Details workspace

The IP Connection Session Details workspace provides a detailed look at a particular IP connection (IPCONN).

The IP Connection Session Details workspace is linked to from the “IP Connections Analysis workspace” on page 344.

The IP Connection Session Details workspace has three table views:

- The Connections Summary view is a repeat of the same view from the “Connections Summary workspace” on page 331; from this view you can link to either the “ISC Connections Analysis workspace” on page 344 or the “MRO Connections Analysis workspace” on page 348.
- The IP Connections Analysis view is a repeat of the same view from the “IP Connections Analysis workspace” on page 344. To obtain detail information about another IPCONN, right-click that row's link icon, and from the popup menu, link to the “IP Connection Session Details workspace” on page 343.
- The IP Connection Session Details table view shows such IPCONN data as the session connection name, type, current transaction ID, and resource type. This view is populated using attributes from the “CICSplex IPConn Session Details attribute group” on page 121.

See also:

- “CICSplex IPConn Session Details attribute group” on page 121
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

IP Connections Analysis workspace

The IP Connection Session Details workspace shows such IPCONN data as the connected network ID of a connected region, number of defined sessions, and connection status.

The IP Connection Analysis workspace is linked to from the “Connections Summary workspace” on page 331.

The IP Connection Analysis workspace is comprised of the following table views:

- The Connections Summary view is a repeat of the same view from the “Connections Summary workspace” on page 331; using this view you can link to either the “ISC Connections Analysis workspace” on page 344 or the “MRO Connections Analysis workspace” on page 348.
- The IP Connections Analysis view summarizes the information about each of the IP connections in your CICS region. For detailed information about a particular IP connection, right-click that row's link icon, and from the popup menu, link to the “IP Connection Session Details workspace” on page 343.

  This view is populated using attributes from the “CICSplex IPConnection Analysis attribute group” on page 122.

See also:

- “CICSplex IPConnection Analysis attribute group” on page 122
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

ISC Connections Analysis workspace

The ISC Connection Analysis workspace shows such intersystem communication (ISC) connection data as the connection name and type, the connection status, and the applid of the connected CICS region.

The ISC Connection Analysis workspace is linked to from the “Connections Summary workspace” on page 331.

The ISC Connection Analysis workspace is comprised of two table views:

- The Connections Summary view is a repeat of the same view from the “Connections Summary workspace” on page 331; from this view you can link to either the “IP Connections Analysis workspace” on page 344 or the “MRO Connections Analysis workspace” on page 348.
- The ISC Connections Analysis view provides detailed information about each of the ISC connections in your CICS region. This view is populated using attributes from the “CICSplex Connection Analysis attribute group” on page 76.

See also:

- “CICSplex Connection Analysis attribute group” on page 76
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Java Program Analysis workspace

The Java Program Analysis workspace monitors the Java programs in your CICS regions. For example, it can show you that a particular program is being very heavily used and that you should take action to reduce the dependency on that program.

The predefined Java Program Analysis workspace contains the following views:

- A TN3270 panel for TSO access. This can be used to directly access your z/OS system from the Tivoli Enterprise Portal.
- Java Program Analysis table view allows you to monitor the status of each Java program, region by region. It reports the name of the profile that the program belongs to, the status of the program, the

number of times that the program is used, the transaction that is invoking the program, the execution state, the remote name if applicable, the execution key, the data location, and the JVM class.

It is also possible to view this data using the table views within the "JVM Analysis workspace" on page 345.

See also:

- "CICSplex Java Program Analysis attribute group" on page 123
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Journal Analysis workspace

The predefined Journal Analysis workspace shows write requests per journal and shows such data as the connection status of the CICS journal and whether or not the journal has a current status of Waiting for an Outstanding WTOR (Write-To-Operator-with-Reply).

The predefined Journal Analysis workspace contains the following views:

- Non-System Log Activity bar chart
- Journal Analysis table view

See also:

- "CICSplex Journal Analysis attribute group" on page 125
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

JVM Analysis workspace

The JVM Analysis workspace allows you to monitor the number of Java Virtual Machine (JVM) tokens that are used in your system, the status of your JVM servers and the threads in use.

You might set a threshold to indicate when the number of JVM tokens approaches the allocated number. Through this workspace you might then increase the allocated number using the Take Action function.

The predefined JVM Analysis workspace contains the following views:

- The Java Virtual Machine Analysis table view, which displays the following information:
  - JVM token used, and the allocated age of that token for each CICS region.
  - The task and the profile that is using the JVM is reported together with the Phasing out status, the execution key, class cache status, and the reuse status.
- The JVM Servers Analysis table view, which displays details on thread use, the current status of the JVM server and the runtime options that are associated with the JVM server in the managed CICS region.

  The **Runtime Options** column contains the name of a program defined to CICS, which contains the LE Runopts variables that are used to start the JVM Server. A dynamic workspace link is available to the "Program Details workspace" on page 351, filtered on this program name. The Thread Limit and Current Threads columns refer to T8 TCBs, and links to the "Dispatcher Summary workspace" on page 333, with the **Dispatcher Pools** column filtered on the Threaded TCB Pool Name, and the Dispatcher TCB Modes filtered on T8 TCB Mode.
- The JVMPOOL Statistics table view, which displays the total number of JVM requests, the current JVM request count, and the peak number of JVM requests. In addition, it shows the current, peak, and total class cache requests.

  The JVM Pool Statistics allows you to monitor the level of activity in your JVM by reporting the total number of JVM requests, the current, peak and total number of requests. If you think that the number is excessive then you can use the statistics to analyze the type of request that can be causing the heavy load on your system.

- The JVMProfile Analysis table view reports the JVM profile name, classcache status, reuse status, and the HFS file name for each CICS region.
- The JVM Classcache Details table view displays the status, the classcache size, the cache free, the start date and time and the total JVMs. Other details include the Reuse status, whether autostart is enabled or not, the associated profile name, the number of old caches, and the phasing out JVMs.

  The JVM Classcache allows you to monitor the size of the JVM Classcache that is used in your system. You might set a threshold to indicate when the amount of cache that is free approaches the cache size for your CICS region. Through this workspace you might increase the cache size using the Take Action function.

See also:

- "CICSplex JVM Analysis attribute group" on page 126
- "CICSplex JVM Classcache Details attribute group" on page 127
- "CICSplex JVMPOOL Statistics attribute group" on page 129
- "CICSplex JVMProfile Analysis attribute group" on page 130
- "CICSplex JVM Server Analysis attribute group" on page 131
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Link Summary workspace

The predefined Link Summary workspace shows such data as the number of link transactions for each link terminal identifier and detailed information about each link within a selected connection.

The predefined Link Summary workspace contains the following views:

- The Link Utilization bar chart
- The Link Summary for Connection *name* table view

The Link Summary for Connection *name* table view enables you to detect system problems before they can have a negative impact on applications. For example, you can obtains statistics on link usage that can alert you to a capacity problem. For each link, you can determine the following statistics:

- Session status of the link
- Number of inputs and outputs
- Number of transaction and transmission errors
- Number of storage violations
- Various names and IDs associated with the link
- Name of the connection that owns the link session

To access the Link Summary workspace, select a table row in the Connections Analysis workspace. Right-click and select **Link To > Link Summary** from the menu.

See also:

- "CICSplex Link Analysis attribute group" on page 131
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Log Stream Analysis workspace

The predefined Log Stream Analysis workspace shows such data as the SIT parameters that affect log stream operation; this table view helps you analyze the configuration of connected logs and log stream configuration and performance data.

The predefined Log Stream Analysis workspace contains the following views:

- Log Stream Control Settings table view
- Log Stream Analysis table view

The workspace displays are populated by the "CICSplex Log Stream Analysis attribute group" on page 133 and the "CICSplex System Initialization Table attribute group" on page 188.

You can link to the Coupling Facility Structures Data for Sysplex workspace provided by the OMEGAMON on z/OS product for the analysis of critical CICS log records.

See also:

- "CICSplex Log Stream Analysis attribute group" on page 133
- "CICSplex System Initialization Table attribute group" on page 188
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

LSR Pool Status workspace

The LSR Pool Status predefined workspace enables you to view the general state of the Local Shared Resource (LSR) pools and provides information related to their impact on performance. For example, the Lookaside Ratio information indicates what percentage of records are being retrieved from buffers rather than disks. A low Lookaside Ratio is a negative performance indicator because the disk retrievals are causing I/O. This workspace also provides statistical data regarding the numbers of strings being used and the amount of string waits.

The predefined LSR Pool Status workspace contains the following views:

- The Local Shared Resource Pools table view provides information about the LSR pools that have been built in CICS for VSAM files
- The LSR Pool Performance bar chart provides the following data for each LSR pool:
  - Percent of Active Strings
  - Lookaside Ratio

The Local Shared Resource Pools table view provides the following information:

- The percentage of VSAM read requests that were satisfied without initiating I/O because the Control Interval (CI) was already resident in the buffer pool
- The status of the LSR pool
- The number of current string waits

You can use the CICSPlex LSR Pool Details attribute group to customize your workspace by adding a table view to the existing LSR Pool Status workspace that provides details on a specific LSR pool, with regard to buffer type, and size within a CICS region. For example, if you had users that were reporting degraded performance and poor response times, you would check in the Local Shared Resource Pools table view and see what CICS region LSR pool has a high number of buffer reads and a low lookaside ratio. Then, using your newly created details view, you see all the details for that specific LSR pool. You notice that one file is using many more strings than the other files. You investigate the file and find that the control interval size index was increased causing a shortage of buffers. You resolve the problem by adjusting the LSR pool buffer distribution accordingly.

See the Tivoli Enterprise Portal on line help or the *IBM Tivoli Enterprise Portal User's Guide* for instructions on how to add a view to a workspace.

See also:

- "CICSplex LSR Pool Status attribute group" on page 135
- "CICSplex LSR Pool Details attribute group" on page 134
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Message Queuing Analysis workspace

The predefined Message Queuing Analysis workspace shows such data as 10 different types of request activity, busy TCBs and how the WebSphere MQ connection for message queuing can affect operations in your CICS environment.

The predefined Message Queuing Analysis workspace contains the following views:

- Message Queuing Requests bar chart
- Busy TCBs linear gauge
- Message Queuing Analysis table view

This workspace displays data provided by the "CICSplex MQ Connection Details attribute group" on page 137.

The Message Queuing Analysis table view provides information about the following items:

- The status of the MQ connection
- Busy task control blocks (TCBs)
- API calls logged for an MQ connection
- The number of MQ calls that resulted in commits and backouts
- The number of MQ calls that were successfully completed
- The counts for specific types of MQ requests, for example, the number of calls applications issued for getting messages from the queue

It also provides a link to the Message Queuing Analysis in 3270 view of the OMEGAMON for CICS (3270) interface. When you right-click a link icon in the Message Queuing Analysis table view and select Message Queuing Analysis in 3270, you must enter your terminal session user credentials in the dialog and click **OK**. A terminal view is displayed within the workspace, with the appropriate details.

Note that this predefined workspace link to a 3270 session has an associated sample script. You should review the script prior to using it in your environment.

You can link to its to the Trans/PGM Statistics by Applid workspace provided by the OMEGAMONfor Messaging product's WebSphere MQ monitoring agent, with which you can obtain detailed information about the CICS usage of a queue manager, filtered by the CICS Appl Type and Appl ID columns.

See also:

- "CICSplex MQ Connection Details attribute group" on page 137
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

MRO Connections Analysis workspace

The MRO Connection Analysis workspace and shows such multiregion operation (MRO) connection data as the connection name and type, the connection status, and the applid of the connected CICS region.

The MRO Connection Analysis workspace is linked to from the "Connections Summary workspace" on page 331.

The MRO Connection Analysis workspace has the following views:

- The Connections Summary table view is a repeat of the same view from the "Connections Summary workspace" on page 331; from this view you can link to either the "IP Connections Analysis workspace" on page 344 or the "ISC Connections Analysis workspace" on page 344.
- The MRO Connections Analysis table view provides detailed information about each of the MRO connections in your CICS region. This view is populated using attributes from the "CICSplex Connection Analysis attribute group" on page 76.

See also:

- “CICSplex Connection Analysis attribute group” on page 76
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

MVS TCB Summary workspace

The MVS TCB Summary workspace compares the CICS and non-CICS use of the TCBs in your system. If your z/OS system is running slowly, this can be caused by heavy use of a non-CICS resource.

The predefined z/OS TCB Summary workspace contains the following views:

- Address Space Memory Allocation bar chart provides a comparison between the CICS and non-CICS TCB both above and below the 16 MB line.
- Address Space CPU Utilization pie chart compares the CPU usage of CICS TCBs with non-CICS TCBs.
- MVS Task Control Block Summary table view shows the name, address space CPU time, address space SRB time of each TCB. It includes the amount of CPU time and SRB time since reset. The remainder of the table allows you to compare CICS and non-CICS TCB usage.
- MVS TCB Details table view: shows the name and the address of each TCB, whether it is a CICS TCB, below or above the 16-megabyte line, the transactions being run in the TCB, the current task number and the CPU time. In addition it shows the relationships between the TCBs.

See also:

- “CICSplex MVS TCB Global Details attribute group” on page 139
- “CICSplex MVS TCB Resource Details attribute group” on page 140
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Online Data Viewing workspace

The Online Data Viewing workspace displays the information collected from the historical data analysis that has been set for each CICS region.

The predefined Online Data Viewing workspace contains the following views:

- Historical Transaction Processor Utilization bar chart. This compares the amount of CPU (in seconds) used by each task.
- Historical Transaction Overview table. This shows the start and end time that was set for the collection of historical data.

  For each task, it shows the transaction, terminal ID, transaction type, user ID, program ID, CPU time, response time, storage high water mark (HWM), file requests, terminal I/O, and abend code for that task. It also shows the operation and Web service name for transaction tracking.

Using the query editor, you can filter the data that has been collected and stored by historical data collection.

The transaction tracking enhancement provides you with the ability to monitor all the components that consist of a CICS application. OMEGAMON for CICS on z/OS interfaces with IBM Tivoli Composite Application Manager (ITCAM) for CICS v7.1.0 and ITCAM for Transactions v7.1.0 to correlate these transactions.

ITCAM for CICS v7.1.0 is used to track Dynamic Program Link (DPL) requests to or from a CICS program; it can track requests through CICS Transaction Gateway. ITCAM for CICS v7.1.0 provides a correlation for Service-oriented architecture (SOA) and WebSphere MQ traffic into CICS. ITCAM for CICS also provides the capability to track CICS transaction routing and function shipping requests.

This workspace has a link to the “Application Trace workspace” on page 325, if trace details exist for a specific transaction.

It also provides a link to the Online Data Viewing panel of the OMEGAMON for CICS (3270) interface. When you right-click a link icon in the Historical Transaction Overview table view and select Online Data Viewing in 3270, you must enter your terminal session user credentials in the dialog and click **OK**. A terminal view is displayed within the workspace, with the appropriate details.

Note that this predefined workspace link to a 3270 session has an associated sample script. You should review the script prior to using it in your environment.

See also:

- "CICSplex Online Data Viewing attribute group" on page 141
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Pagepool Summary workspace

The Pagepool Summary workspace reports the status of storage areas in your CICS regions. There are a large number of attributes associated with the views and they all provide good tuning opportunities. If you need more information about specific details, use the Pagepool Details table view.

Because of the large number of attributes in this group you might want to regroup them, and, in some cases, delete them from your view. As with all the table views, you can either unmark the columns by right-clicking or slide them to the upper left or upper right within the table.

The predefined Pagepool Summary workspace contains the following views:

- The DSA Storage Utilization bar chart shows the current usage, current limit, current total and the current high water mark.
- The EDSA Storage Utilization bar chart shows the current usage, current limit, current total and the current high water mark.
- The Pagepool Summary table view shows an overview of the Unique and Common subspace users (current, total, HWM) for each CICS region. It also includes current storage area Usage, Limit and Total size, in both kilobytes and megabytes.

  You can regroup these attributes and in some cases delete them from your view. As with all the table views, you can either unmark the columns by right-clicking or slide them to the upper left or upper right within the table.
- The Pagepool Details table view shows a large number of attributes relating to the storage areas of your CICS regions. Using this table you monitor the number of short-on-storage (SOS) occurrences and the total SOS time, the DSA Use percentage, DSA usage, HWM, LWM, amount of free space, cushion size, and the number of GETMAIN and FREEMAIN requests for each region.

  The Pagepool details table reports the status of storage areas in your CICS regions; it extends the information collected in the Storage Analysis workspace. There are a large number of attributes associated with the views and they all provide good tuning opportunities.

  It is through this table that you monitor the total number of storage violations in the last hour and the number of times that your CICS regions went short on storage. You can set up a threshold to sound an alert if the storage areas use percentage is reaching a critical level. Alternatively you might want to set up a situation that automatically increases the size of the storage area while you investigate the cause of the problem.

  You can use this table to investigate the causes of the problem as it gives details about the number of suspensions, cushions, extents, GETMAIN, and FREEMAIN requests for each region.

See also:

- "CICSplex Pagepool Summary attribute group" on page 152
- "CICSplex Pagepool Details attribute group" on page 150
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Pipeline Details workspace

The Pipeline Details workspace provides a detailed look at a selected pipeline.

The Pipeline Details workspace is linked to from the “Web Services Analysis workspace” on page 375's Pipeline Summary view.

See also:

- “CICSplex Pipeline Details attribute group” on page 155
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Program Details workspace

The Program Details workspace provides detailed information about the program started by a selected document template.

The Program Details workspace is linked to from the “Web Services Analysis workspace” on page 375's Document Template Details view.

The predefined Program Details workspace contains the following views:

- The Document Template Details table view is a repeat of the same view shown in the “Web Services Analysis workspace” on page 375; it is included here so you can easily link to another workspace, including the Program Details workspace.

  From this view, depending on the Source Type for the view row you select when linking, you can link to the following workspaces:

  - The “Exit Details workspace” on page 337, if the Source Type is EXIT
  - The “File Details workspace” on page 341, if the Source Type is FILE
  - Back to the Program Details workspace, if the Source Type is PROGRAM, for display of a different Web Services program
  - The “Temporary Storage Queue Details workspace” on page 359, if the Source Type is TSQ
  - The “Transient Data Details workspace” on page 370, if the Source Type is TDQ
- The single-line Program Details table view provides detailed information about a program associated with a specific document template.

See also:

- “CICSplex Document Template Details attribute group” on page 93
- “CICSplex Program Details attribute group” on page 161
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Recovery Manager Analysis workspace

The predefined Recovery Manager Analysis workspace to monitor application performance tuning; it reports primarily on the status of system wide units-of-work (UOW).

The predefined Recovery Manager Analysis workspace contains these table views:

- Recovery Manager Detail
- Unit-of-work Dataset Name Failure Details
- Unit-of-work Link Details

This workspace links to the following workspaces:

- “Exit Program Analysis workspace” on page 336

- “Temporary Storage Details workspace” on page 359
- “Transient Data Queues workspace” on page 371

See also:

- “CICSplex Recovery Manager Details attribute group” on page 163
- “CICSplex Unit-of-work Link Details attribute group” on page 236
- “CICSplex Unit-of-work DSN Failure Details attribute group” on page 234
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Region Datasets workspace

The Region Datasets workspace shows all the information about your CICS data sets. The more important RPL data sets are shown in their own table.

The Region Datasets workspace is accessed from the “File Control Analysis workspace” on page 338 and the “Region Overview workspace” on page 352.

The predefined CICS Region Datasets workspace contains these views:

- CICS RPL Datasets table view: This includes the DDNAME (for example, DFHRPL), The concatenation number, the data set name, the data set type (in this case, RPL), the file access, and the file attributes.
- CICS Region Datasets: This includes the DDNAME (for example, STEPLIB), the concatenation number, the data set name, the data set type, the file access, the file attributes, data set disposition, and the VSAM open status.

See also:

- “CICSplex Region Dataset Analysis attribute group” on page 165
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Region Overview workspace

The Region Overview workspace lets you review operations for every region of a CICSplex. You can analyze this data to detect system problems before they have a negative impact on your operations. For example, you can use the current number of VSAM buffer and string waits to determine if the file definitions in your CICS region are causing delays.

The predefined Region Overview workspace contains the following views:

- Transaction Rate plot chart
- Minimum Tasks Percent circular gauge
- CICS CPU Utilization circular gauge
- CICS Region Overview table view

  The CICS Region Overview table view provides data on more than 30 items for evaluation. For example, it provides the following information:

  - The number of enqueues for a resource that also has tasks waiting for it
  - The number of total tasks within a region expressed as a percentage of their defined limits
  - The percent of CPU being used by CICS
  - The number of AIDs and ICEs
  - The maximum contiguous free space in the local system queue area (LSQA) and operating system core (OSCOR)
  - Storage violations

- I/O rate and page rate per second
- VTAM access method control block (ACB)
- The number of current VSAM file waits
- The number of current VSAM buffer waits
- The worst CICS region performance index value
- The worst CICS region service class name

This workspace contains links to the following workspaces:

- “Automatic Initiate Descriptor workspace” on page 327
- “Interval Control Elements workspace” on page 343
- “Storage Analysis workspace” on page 357
- “Region Datasets workspace” on page 352

See also:

- “CICSplex Region Overview attribute group” on page 166
- “CICSplex Region Dataset Analysis attribute group” on page 165
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Region Service Level Analysis workspace

The Region Service Level Analysis workspace lets you see the service level analysis data summaries and the response time for particular CICS regions; it uses the CICSplex Service Class Analysis attribute group to populate the views.

The predefined Region Service Level Analysis workspace contains the following views:

- The Region Average Response Time bar chart displays the average response time for the CICS regions from the last workload analysis time period.
- The Region Service Level Performance table view provides a service level analysis summary of the CICS regions.

See also:

- “CICSplex Service Class Analysis attribute group” on page 176
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Request Model Details workspace

The Request Model Details workspace provides a detailed look at a selected request model.

The Request Model Details workspace is linked to from the “Enterprise Java Analysis workspace” on page 335's Request Model Summary view.

See also:

- “CICSplex Request Model Details attribute group” on page 169
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Response Time Analysis workspace

The predefined Response Time Analysis workspace shows such data as response times for the active groups that have registered activity within the current minute and response times for active groups

defined with OMEGAMON. Data is displayed for only those groups that have registered activity within the last nine minutes.

The predefined Response Time Analysis workspace contains the following views:

- Current Response Profile bar chart
- Response Time Analysis table view

Right-click a row in the Response Time Analysis table view and select Response Time Elements to view information concerning the elements of an active group.

It also provides a link to the Response Time Analysis in 3270 view of the OMEGAMON for CICS (3270) interface. When you right-click a link icon in the Response Time Analysis table view and select Response Time Analysis in 3270, you must enter your terminal session user credentials in the dialog and click **OK**. A terminal view is displayed within the workspace, with the appropriate details.

Note that this predefined workspace link to a 3270 session has an associated sample script. You should review the script prior to using it in your environment.

See also:

- “CICSplex Response Time Analysis attribute group” on page 172
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Response Time Details workspace

The predefined Response Time Details workspace provides the previous nine minutes of response time data for the active group selected from the Response Time Analysis workspace and response time data for the selected active group that has registered activity within the current minute.

The predefined Response Time Details workspace displays data from the CICSplex Response Time Elements attribute group and contains the following views:

- Response Time Details table view
- Current Response bar chart

Transactions, programs, and terminals all present a single row of response time information for each group element. However, when the elements for a logical unit are displayed, three rows of data are provided for each logical unit that show the end-to-end, network, and host times.

The end-to-end value represents the overall response time of the logical unit and is the sum of the network and host times. The bar chart delivered shows only the end-to-end value. You can easily change this chart, using the Tivoli Enterprise Portal Properties page, to track the network and host components that comprise the end-to-end response time. For example, a stacking bar chart might be used to present network and host time in a way that quickly shows where a logical unit is encountering problems.

To view all active elements in a single display, remove the GROUPNUM attribute from the default query shown in the Tivoli Enterprise Portal Properties page. The query can ask for elements in a single group or for all groups. When the GROUPNUM attribute is removed, the query signals the agent to collect and return data for every active response time element.

See also:

- “CICSplex Response Time Elements attribute group” on page 173
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Service Class Summary workspace

The predefined Service Class Summary workspace has the Service Class by Region Summary table view populated by the Service Class by Region query and the Service Class by Transaction Summary table view

that is populated by the Service Class by Transaction query; both views use the information from the CICSplex Service Class Analysis attribute group.

This workspace contains the following table views:

- Service Class by Region Summary identifies the CICS regions in which tasks within a service class completed in the reported time span.
- Service Class by Transaction Summary summarizes performance data for tasks within a service class that completed in the reported time span. Each table row contains CICS Service Level Analysis data for one service class.

This workspace is accessed from a link on the "Region Service Level Analysis workspace" on page 353 .

See also:

- "CICSplex Service Class Analysis attribute group" on page 176
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Service Level Analysis workspace

The predefined Service Level Analysis workspace shows the overall performance of each service class defined within a workload. A high percentage of time spent for different types of waits can indicate potential problem areas. It also shows the response times for each service class.

The predefined Service Level Analysis workspace contains the following views:

- The Service Level Analysis table view
- The CICS Service Class Response Time bar chart

Each table row in the Service Level Analysis table view contains summary information about a service class for the collection interval that falls within the reported time span. If the reported time span includes multiple collection intervals for a service class, each interval is reported separately. For each service class entry, the default analysis includes this data:

- Service class name
- Collection interval end date and time
- Response time goal, including the percent of goal, where appropriate
- The number of completed transactions
- Performance data, such as average response time, performance index, and percent-of-goal information

The Service Level Analysis workspace normally classifies a transaction into a single service class. You also have the ability to classify a CICS transaction into multiple service classes.

When you specify the `SCLASS=ALL` parameter on the Workload Manager start command, each transaction is matched against *all* of the available classification rules. The `KC5_WLM_CLASSIFY` parameter in PARMGEN or Configuration Manager is used to set this value.

Attempting to classify transactions into multiple service classes results in extra CPU consumption. The amount of CPU usage is heavily dependent upon the number of service classes, the number and complexity of classification rules defined, and the number of CICS transactions to be classified.

The Service Level Analysis table view displays data provided by the "CICSplex Service Class Analysis attribute group" on page 176.

See also:

- "CICSplex Service Class Analysis attribute group" on page 176
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Service Task Details workspace

The Service Task Details workspace monitors the service task within the OMEGAMON agent that must be running for IBM Z OMEGAMON for CICS to provide information about several CICS components.

This workspace includes some of the following information:

- Common Interface information
- OMEGAMON initialization status
- Application trace status
- DEXAN status
- RLIM status
- ONDV status
- Web services
- Work requests
- WLM blocks usage
- CICSPlex defined name and source

The predefined Service Task Details workspace contains the following views:

- The Message Log table view shows the status, the ID, the name, the display item, Origin node, Global Time stamp and the Local times for each message.
- The OMEGAMON Service Task Diagnostics table view returns data relating to the status of the OMEGAMON agent. It displays the CICS region name, the defined CICSPlex name, the source of the defined CICSPlex name, agent's initialization status, Global Data Area, XMIT DD name, and name of the common interface started task. The service task execution result tells you if the last request serviced completed successfully. If this workspace tells you the service task is not running, you need to check your agent installation and configuration.

  The CICS region name, which is being monitored by OMEGAMON CICS, can be classified into a CICSPlex. The CICSPlex definition is obtained from CPSM, and the OMEGAMON value. If these sources are not available, the OMEGPLEX default value is used. The CICSPlex name can be the OMEGPLEX default value or the eight character CICSPLEX_NAME=*aaaaaaaa* that you defined in your global data parameter. The source of the defined CICSPlex name can be one of the following values:

  – CPSM
  – Default
  – OMEGAMON
- The OMEGAMON WLM Blocks Usage view displays data on the number of WLM blocks requested, the current percentage in use for transaction records, the peak percentage of usage for transaction records, the current percentage of WLM storage in use for the accumulated summary records, and the peak percentage of WLM storage in use for the accumulated summary records.

  The attributes current percentage values have their thresholds set to turn Red for values greater or equal to 70% and the peak percentage is set to turn Red for values greater or equal to 80%.

See also:

- “CICSplex Service Task Details attribute group” on page 183
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Storage Analysis workspace

The predefined Storage Analysis workspace shows an overview of the dynamic storage area being used for a single CICS region, the percentages of dynamic storage and the extended dynamic storage areas being used and a comparison of how much storage is in use for DSA and EDSA.

The predefined Storage Analysis workspace contains the following views:

- Dynamic Storage Analysis table view
- DSA Utilization and EDSA Utilization circular gauges
- CICS Storage Allocation pie charts

The Dynamic Storage Analysis table view helps you determine if there are any storage-related problems, such as a short-on-storage (SOS) condition. The table view shows the following information:

- The limit set for storage in kilobytes
- The amount of allocated storage in use in kilobytes
- The amount of storage in use in kilobytes
- The percentage of storage being used
- Short-on-storage conditions for the DSA and EDSA
- The number of tasks waiting for buffers and strings

See also:

- “CICSplex Storage Analysis attribute group” on page 185
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Subpool Details workspace

The Subpool Details workspace is provided to aid you in all aspects of storage management.

Use the Subpool Details workspace in conjunction with the “Storage Analysis workspace” on page 357, the “Dynamic Storage Detail workspace” on page 334, and the “Pagepool Summary workspace” on page 350.

The predefined Subpool Details workspace contains the following views:

- The Subpool allocation request stacked bar chart compares the GETMAIN with the FREEMAIN requests for each subpool.
- The Subpools Details table view contains the DSA name, index, fixed length, boundary, access type, and location of each subpool. In addition, the number of GETMAIN and FREEMAIN requests for each subpool is reported. Also, the current page storage, the name of a specific DSA, EDSA, or GDSA, subpool type (domain or task), the unique number of the task, element count, and high water mark (in both KB and MB).

See also:

- “CICSplex Subpool Details attribute group” on page 186
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

System Initialization Table workspace

The predefined System Initialization Table workspace contains data on all of the keyword settings that are used to control the operation of your CICSplex. SIT keywords, their descriptions, and associated values

are displayed. You can use this workspace to quickly verify that all of your SIT keywords are properly defined.

See also:

- “CICSplex System Initialization Table attribute group” on page 188
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Task Class Analysis workspace

The predefined Task Class Analysis workspace shows what percentages of the class limits are being used by active and queued tasks and the activity limits reached within a transaction class or within a queue for a transaction class.

The predefined Task Class Analysis workspace contains the following views:

- The Task Class Distribution bar chart
- The Task Class Analysis table view

The table view lets you view information about peak activity and the following details:

- Number of times a transaction class limit has been reached
- Current task count in each transaction class
- Number of tasks that can be queued

See also:

- “CICSplex Task Class Analysis attribute group” on page 189
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

TCPIP Statistics workspace

The TCPIP Statistics workspace is used to monitor the activity of your CICS regions' TCP/IP connections. The statistics report the volume of inbound and outbound activity. These statistics can be accessed online using the EXEC CICS COLLECT STATISTICS TCPIP command.

You can use this workspace to warn you when the MAXSOCKETS value is being reached by comparing the Maximum sockets limit with the Current inbound and outbound sockets. Alternatively you can set a threshold to warn you when the number of times that MAXSOCKETS has been reached or if any time outs have occurred while at MAXSOCKETS.

The predefined TCPIP Statistics workspace contains the following views:

- The Inbound Socket Activity bar chart compares the current inbound sockets, the number of inbound sockets created, and the peak number of inbound sockets.
- The Outbound Socket Activity bar chart compares the current outbound sockets, current persistent sockets outbound, the number of outbound sockets closed, the number of outbound sockets created, the peak number of outbound sockets, and the peak number of persistent sockets outbound.
- The TCP/IP Statistics table view displays maximum number of sockets available and reports current and peak number of sockets in use for both inbound and outbound activity. It also reports current and peak number of persistent sockets in use for both inbound and outbound activity. To help monitor the performance of your system it reports the number of times at MAXSOCKETS, the total, current and peak number delayed at MAXSOCKETS, and the total and current delay time at MAXSOCKETS. The SLSCache setting, and the current active SSL sockets and the maximum number of SSL TCBs is displayed. The average and current MAXSOCKETS delay time is calculated.
- The TCP/IP Service Statistics table view lists the status, the service open, TCP/IP service IP address, the port number in use, the protocol, the backlog, the attach time security, SSL type, client authentication,

TCP/IP Service privacy, TCP/IP Service WLM DNS group, TCP/IP service prefix, transaction ID, URM, number of transactions, current and peak number of transactions, the number of sends and receives, and the number of bytes sent and received for each TCP/IP service.

You can link to the Application TCP Listeners workspace provided by the OMEGAMON for Mainframe Networks product to investigate the TCP/IP stack, filtered by the CICS Application Name.

See also:

- "CICSplex TCPIP Statistics attribute group" on page 196
- "CICSplex TCPIP Service Statistics attribute group" on page 193
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Temporary Storage Details workspace

The Temporary Storage Details workspace allows you to monitor the number of times temporary-storage limits have been reached and their potential performance impact on your CICS regions.

You can set thresholds to alert you when the number of queues rises beyond an acceptable value.

The predefined Temporary Storage Details workspace contains the following views:

- The Main Temporary Storage Details table view shows the number of records that have been PUTQ and GET to and from main storage. Also shows the amount of main storage used and the high water mark (HWM) of main storage used.
- The Temporary Storage Details table view shows the following information:
  - The number of the current, total and HWM queues.
  - The total requests suspended.
  - The total number of records PUT, PUTQ to main and to auxiliary temporary storage.
  - The number of records that have been retrieved (GET) from auxiliary storage.
  - The number of items in the largest queue and the unit table compression.

The predefined Temporary Storage Details workspace also contains a link to the "Auxiliary Temporary Storage Details workspace" on page 327.

See also:

- "CICSplex Temporary Storage Detail attribute group" on page 198
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Temporary Storage Queue Details workspace

The Temporary Storage Queue Details workspace provides detailed information about the temporary storage queues referenced by a selected document template.

The Temporary Storage Queue Details workspace is linked to from the "Web Services Analysis workspace" on page 375's Document Template Details view.

The predefined Temporary Storage Queue Details workspace contains the following views:

- The Document Template Details table view is a repeat of the same view shown in the "Web Services Analysis workspace" on page 375; it is included here so you can easily link to another workspace, including the Temporary Storage Queue Details workspace.

  From this view, depending on the Source Type for the table view row you select when linking, you can link to the following workspaces:

  - The "Exit Details workspace" on page 337, if the Source Type is EXIT

  - The “File Details workspace” on page 341, if the Source Type is FILE
  - The “Program Details workspace” on page 351, if the Source Type is PROGRAM
  - Back to the Temporary Storage Details, if the Source Type is TSQ, for display of information about the temporary storage queues referenced by another document template
  - The “Transient Data Details workspace” on page 370, if the Source Type is TDQ
- The Temporary Storage Queue Details table view provides detailed information about the temporary storage queues referenced by a specific document template.

See also:

- “CICSplex Document Template Details attribute group” on page 93
- “CICSplex Temporary Storage Detail attribute group” on page 198
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Temporary Storage Queues workspace

The predefined Temporary Storage Queues workspace provides data on the number of items in the temporary storage queue, by queue identifier and lists the temporary storage pools and queues that exist in the monitored CICS system.

The predefined Temporary Storage Queues workspace contains the following views:

- The Temporary Storage Queue Distribution bar chart
- The Temporary Storage Queue table view

The table view shows the size of the items, the temporary storage model name, prefix string, and, if the shared temporary storage queue is accessible from the CICS region; it also identifies the transaction that created the queue.

You can link to the Coupling Facility Structures Data for Sysplex workspace provided by the OMEGAMON on z/OS product.

It also provides a link to the Temporary Storage Queues in 3270 view of the 3270 OMEGAMON interface. When you right-click a link icon in the Temporary Storage Queues table view and select Temporary Storage Queues in 3270, you must enter your terminal session user credentials in the dialog and click **OK**. A 3270 view is displayed within the workspace, with the appropriate details.

Note that this predefined workspace link to a 3270 session has an associated sample script. You should review the script prior to using it in your environment.

See also:

- “CICSplex Temporary Storage Detail attribute group” on page 198
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Temporary Storage Summary workspace

The Temporary Storage Summary workspace allows you to monitor the number of times that temporary-storage limits have been reached and therefore their potential performance impact on your CICS regions.

This predefined workspace contains the following views:

- The Shared Pool Status bar chart compares the number of defined and connected pools
- The Auxiliary Resource Use bar chart diagrams your transactions' use of auxiliary VSAM data sets
- The Temporary Storage Summary table view provides information about shared and auxiliary temporary storage queues

The table view of the storage queues that can be accessed by multiple CICS jobs includes these details:

- Shows you how many shared pools are defined and connected
- Provides information on read and write activity
- Displays the number of control intervals (CIs), transient data strings, and temporary storage strings being used by the transient (DFHINTRA) and the auxiliary temporary storage (DFHTEMP) data sets

These are the links from this workspace:

- “Temporary Storage Details workspace” on page 359
- “Auxiliary Temporary Storage Details workspace” on page 327
- “Extended Temporary Storage Summary workspace” on page 338

See also:

- “CICSplex Temporary Storage Summary attribute group” on page 202
- “CICSplex Temporary Storage Extended attribute group” on page 200
- “CICSplex Temporary Storage Details attribute group” on page 199
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Terminal Storage Violations workspace

The predefined Terminal Storage Violations shows data on the total number of storage violations that have occurred for each terminal and the number of storage violations for specific terminals.

The predefined Terminal Storage Violations workspace contains the following views:

- The Terminal Storage Violations table view
- The Storage Violations Distribution bar chart

Note: When a storage violation has occurred, collection for this attribute group involves scanning the Terminal Control Table (TCT), which can carry considerable overhead. Exercise caution when using this attribute table for either workspaces or situations.

See also:

- “CICSplex Terminal Storage Violations attribute group” on page 203
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Transaction Analysis workspace

The Transaction Analysis workspace shows a comprehensive view of transactions, which enables you to identify problem transactions across CICS regions and z/OS images for the CICSplex.

This workspace displays data provided by the “CICSplex Transaction Analysis attribute group” on page 204.

The predefined Transaction Analysis workspace contains the following views:

- The Transaction Processor Utilization bar chart shows the amount of CPU time being used by each task.
- The Transaction Analysis table view provides a system-wide view of executing transactions.

  You can add the **System Task** filtering column to the table view to identify CICS system tasks and non CICS system tasks. You modify the query for the Transaction Analysis workspace to include the appropriate setting (Yes or No) for the **System Task** column.

The Transaction Analysis table view provides links to these workspaces:

- “Units of Work workspace” on page 372
- “Application Trace workspace” on page 325

- “Online Data Viewing workspace” on page 349
- “Temporary Storage Details workspace” on page 359
- “Transaction Details workspace” on page 363, showing:
  - EIB Summary, with a link to the “Transaction EIB Details workspace” on page 364
  - Transaction Applications
- “Transaction Storage Analysis workspace” on page 367
- “Transaction Timings workspace” on page 368, showing I/O and Others Waits Details
- “Transaction Statistics workspace” on page 367
- “Transaction and Program Definitions workspace” on page 363
- “Transaction Umbrella Information workspace” on page 369
- “Transaction Remote Summary workspace” on page 366
- “Transaction File Details workspace” on page 364
- “Transaction TSQueue Details workspace” on page 369

It also provides links to the Transaction Details in 3270 and Online Data Viewing in 3270 views of the OMEGAMON 3270 interface. When you right-click a link icon in the Transaction Analysis table view and select Transaction Details in 3270 or Online Data Viewing in 3270, you must enter your terminal session user credentials in the dialog and click **OK**. A terminal view is displayed within the workspace, with the appropriate details. Using this panel, you can examine much more historical data than is available in the Tivoli Enterprise Portal workspace.

Note that each of these predefined workspace links to a 3270 session has an associated sample script. You should review these scripts prior to using them in your environment.

You can link to the Detailed Thread Exception workspace provided by the OMEGAMON for DB2 on z/OS product for the selected DB2 Correlation identifier, which allows you to track a transaction and the activity as it moves between the CICS and DB2 products.

Likewise, you can link to its Single DB2 Thread Summary workspace, of the OMEGAMON for DB2 on z/OS product filtered by the DB2 Correlation identifier. With this feature, you retrieve detail data about the running transaction.

If the OMEGAMON for IMS on z/OS product is also installed and running, you can link to its DBCTL Detailed Thread Activity (Active) workspace, filtered by the CICS Jobname and CICS Task Number columns. With this feature, you track a transaction and the activity as it moves between the CICS and IMS products.

See also:

- “CICSplex Transaction Analysis attribute group” on page 204
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Multiple-row purge using a single Take Action command

You can purge multiple executing transactions in a single invocation of the Take Action command with the multiple-line-kill function.

You can highlight multiple rows in the Transaction Analysis workspace; the right-click action menu now includes a **Purge selected tasks** option. A confirmation dialog is displayed allowing you to change the requested action to include a Force Purge.

To use the feature, navigate to the Transaction Analysis workspace for the appropriate CICS region.

1. Highlight all tasks to be purged, and right-click to bring up the action menu.
2. Select **Purge selected tasks**

If you selected only one task, this option is not available. You must purge a single task using the existing "AID Purge" on page 309 Take Action command.

3. When the dialog is displayed listing all tasks selected for purging, review the list.
   a) Click **OK** to purge the selected tasks.
   b) Click **Cancel** if you decide to not purge all the tasks listed.
      There is a check box on the panel so you can issue a Force Purge command.
4. If you click **OK**, the command is issued to CICS. When all commands have been issued, the results dialog displays the status of each command submitted. Note that the results indicate whether the command was successfully issued to CICS but does not show if the task was purged.
5. Click **OK** to refresh the display and return to the workspace.

Transaction and Program Definitions workspace

The Transaction and Program Definitions workspace is accessed from a link in the Transaction Analysis workspace and shows the transaction and program definitions for the transaction that you have selected.

The predefined Transaction and Program Definitions workspace contains the following views:

- The Transaction and Program Definition for **tranid** table view. This displays the transaction ID and the program name for the selected transaction, along with detailed information about each.
- The Program Definition Details table view. This displays the program name associated with the transaction, along with detailed information about each

See also:

- "CICSplex Transaction Definition Information attribute group" on page 208
- "CICSplex Program Definition Information attribute group" on page 159
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Transaction Details workspace

The Transaction Details workspace is accessed from the Transaction Analysis workspace. The EXEC interface block (EIB) summary table accesses all the fields in the EIB by name. The EIB contains information that is useful during the execution of an application program, such as the transaction identifier, the time and date (initially when the task is started, and subsequently, if updated by the application program using ASKTIME), and the cursor position on a display device. The EIB also contains information that is helpful when a dump is used to debug a program.

The predefined Transaction Details workspace contains the following table views:

- The Details for Transaction **tranid**. This provides details of the transaction ID that you selected from the transaction analysis panel. These are the details:
  - task number resource name and type
  - time in suspend
  - CPU used by this task.
- The EIB Summary view displays the details of the EXEC interface block (EIB). The following information is provided for each transaction number and task ID:
  - The EXEC CICS command, the function code, the EIBRESP description and value, EIBRESP2 value, resource name, EIB date and time.
  - The program name, program offset, and terminal ID.
- The Association Data view displays details related to individual transactions. The data enables you to determine the starting point for a transaction in an IPIC (IP Interconnectivity) network, and also includes any user data that has been added.

From the Transaction Details table, you can link the “Transaction EIB Details workspace” on page 364 to further investigate the details related to a transaction. The EIB details workspace also shows the Application Program table.

See also:

- “CICSplex Transaction Details attribute group” on page 210
- “CICSplex Association Data Details attribute group” on page 63
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Transaction EIB Details workspace

The predefined Transaction EIB Details workspace displays detailed information about each EIB and application program details.

The Transaction EIB Details workspace is accessed from a link in the Transaction Details workspace. From the EIB Summary table, select the transaction that you want to investigate further, right-click and select **Link to EIB Details**.

The predefined Transaction EIB Details workspace contains the following views:

- The EIB Details for **tranid** table view displays detailed information about each EIB.
- The Application Program Details table view. For each transaction and task ID, this table shows the program name, length, offset, program return address, program savearea address, and EIB Address, along with other details about the referenced EIBs.

See also:

- “CICSplex Transaction EIB Summary attribute group” on page 213
- “CICSplex Transaction Application Program attribute group” on page 207
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Transaction File Details workspace

The Transaction File Details workspace compares the total number of file requests with the total file request time for the transaction and compares the total file I//O wait time with the RLS-mode wait time and the Coupling Facility Data Table (CFDT) wait time for the transaction that you selected; it also shows other file detail information.

The Transaction File Details workspace is accessed from a link in the Transaction Analysis workspace. From the Transaction Analysis table view, select the transaction that you want to investigate further, right-click and select Link to Transaction File Details.

The predefined Transaction File Details workspace contains the following views:

- The File Requests bar chart
- The File Wait Times view
- The File Details table view shows the following details for the selected transaction:
  - The task number and the file name.
  - The total file requests, file request time, file I/O wait time.
  - Shared TSQ I/O wait count and wait time.
  - The GET requests and total GET requests wait time.
  - The PUT requests and PUT total time.
  - The browse requests and browse total time.
  - The add requests and add total time.

- The delete requests and delete total time.
- RLS-mode wait time.
- CFDT I/O wait time.
- Access method count.
- The system ID and the Transaction ID.

See also:

- “CICSplex Transaction File Details attribute group” on page 213
- “CICSplex Transaction Application Program attribute group” on page 207
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Transaction I/O Waits Analysis workspace

The Transaction I/O Waits Analysis workspace is accessed as a link from the Transaction Timings workspace. This information is derived from two attributes groups: The Transaction I/O Waits attribute group and the Transaction I/O Other Waits attribute group; it allows you to examine in more detail the causes for a long wait by a particular task.

The predefined Transaction I/O Waits Analysis workspace contains the following views:

- The I/O Waits Distribution pie chart displays the I/O waits for the following resources: temporary storage, transient data, files, journals, terminals, interregion (MRO), LU 6.1 and 6.2, FEPI, RLS files, shared temporary storage, and socket I/O.
- The Other Waits Distribution pie chart displays waits for Re-dispatch, First dispatch, Local ENQ delays, local manager dispatch, WAIT EXTERNAL, WAIT CICS, Interval Control elements, dispatchable, Global ENQ, RRMS/z/OS waits, CICS MAXOPEN, and JVM suspend time.
- The I/O Waits Details for transaction **tranid** table displays the I/O wait times for temporary storage, transient data, files, journals, terminals, interregion (MRO), LU 6.1 and 6.2, FEPI, RLS files, shared temporary storage, and socket I/O.
- The Other Waits Details table view displays the wait times for Re-Dispatch, 1st Dispatch Delay, Local ENQ Delay, Lock Manager Delay, WAIT EXTERNAL Time, WAITCICS and WAIT EVENT, Interval Control Delay, Dispatchable Wait Time, Global ENQ Delay, RRMS/z/OS, CICS MAXOPENTCBS Delay and JVM Suspend.

See also:

- “CICSplex Transaction I/O Waits Analysis attribute group” on page 215
- “CICSplex Transaction Wait Other Analysis attribute group” on page 230
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Transaction Manager Statistics workspace

The Transaction Manager Statistics workspace monitors the number of tasks in your CICS regions. By using this data you can monitor the number of tasks compared with the MAXTASK value.

Use this workspace to do the following tasks:

- Set a Threshold to warn when the MAXTASK value is being reached.
- Define a situation that increases the MAXTASK value when the number of Tasks is close to the MAXTASK limit.

The predefined Transaction Manager Statistics workspace contains these views:

- The CICS Backlog Monitor graph shows the Current MAXTASK value, active user transactions, queued transactions and the peak user transactions. Using this graph you can see the relationship between the number of active transactions and when that number approaches the MAXTASK value.
- The Transaction Manager Statistics table view shows the following information:
  - The current MAXTASK value and the number of active, queued transactions for each region.
  - Peak and total active user transactions
  - Peak and total queued user transactions
  - The suspended transaction and system transaction count.
  - The average MAXTASK queuing time, the average current queuing time, the total MAXTASK time, and the current MAXTASK time.

See also:

- "CICSplex Transaction Manager Statistics attribute group" on page 216
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Transaction Remote Summary workspace

The Transaction Remote workspace is accessed as a link from the Transaction Analysis workspace. If the transaction that you selected is communicating with or accessing resources at a remote CICS region, its details are shown here.

The predefined Transaction Remote Summary workspace contains the following views:

- The Remote information for each transaction table view displays the following information about the transaction that you have selected if it is a remote transaction:
  - System ID
  - CICS Name
  - CICS SYSIDNT
  - Transaction ID
  - Task Number
  - Remote System
  - Remote Transaction
  - Remote Facility Type
  - Remote Facility ID
  - Remote Session Side
  - Remote Session ID
  - Remote Session I/O
- The Links in use by the transaction table view displays the following details for the links used by the remote transaction:
  - The current link transaction ID, current transaction ID, the link netname, the link connection name, the link terminal ID, and the Link session status.
  - The number of transactions using the link, and the number of link inputs and outputs.
  - The number of storage violations, transmissions errors, and transaction errors.
  - The next Link transaction ID.

See also:

- "CICSplex Transaction Remote Information attribute group" on page 218
- "Attribute groups used by the predefined workspaces" on page 316

- “Organization of the predefined workspaces” on page 313

Transaction Statistics workspace

The Transaction Statistics workspace provides statistics on transactions including among others, transient data PUTs, GETs and purges, intercommunication (IC) starts (table only) and requests as well as attached TCBs and the number of TCB mode switches.

The Transaction Statistics workspace is accessed from a link in the Transaction Analysis workspace.

The predefined Transaction Statistics workspace contains these views:

- Transaction Statistics bar chart.
- Statistics table.

The table and the bar chart views contain the following data:

- Transient data PUTs, GETs and purges.
- Temporary storage PUTs to main and PUTS to Auxiliary, GETs and the total number of TS requests.
- Syncpoints, Journal and CICS logger writes.
- Intercommunication (IC) starts (table only) and requests.
- Requests for these resources: IMS/DBCTL, DPL, DB2, and OO class.
- Web receive, send, and total requests; web chars received; Web repository reads and writes
- Program links, XCTLs, loads, and link URMs.
- SSL bytes encrypted and decrypted.
- TCBs attached and the number of TCB mode switches.
- The client address and the Transaction group ID.

See also:

- “CICSplex Transaction Statistics attribute group” on page 219
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Transaction Storage Analysis workspace

The Transaction Storage Analysis workspace displays the amount of storage used by the transaction that you selected from the Transaction Analysis workspace, including program storage HWM in CDSA, ECDSA, RDSA, ERDSA, SDSA and ESDSA; it also shows storage above and below the 16 MB line.

The Transaction Storage Analysis workspace is accessed as a link from the Transaction Analysis workspace.

The predefined Transaction Storage Analysis workspace contains these views:

- Storage Below the 16 MB line bar chart.
- Storage Above the 16 MB line bar chart.
- Storage use by **tranid** table view displays the amount of storage used by the transaction that you selected from the Transaction Analysis workspace. It includes the following details:
  - Storage elements below and above 16 megabytes
  - Storage used below and above 16 megabytes
  - Storage allocated below and above 16 megabytes
  - GETMAINs below and above 16 megabytes
  - Storage high water mark (HWM) below and above 16 megabytes
  - Storage occupancy below and above 16 megabytes

- HWM of total program storage
- Program storage HWM below and above 16 megabytes
- Program storage HWM in CDSA
- Program storage HWM in ECDSA
- Program storage HWM in RDSA
- Program storage HWM in ERDSA
- Program storage HWM in SDSA
- Program storage HWM in ESDSA

See also:

- “CICSplex Transaction Storage Analysis attribute group” on page 221
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Transaction Storage Violations workspace

The predefined Transaction Storage Violations workspace shows data on the total number of storage violations that have occurred for each transaction and the number of storage violations per transaction.

The predefined Transaction Storage Violations workspace contains the following views:

- The Transaction Storage Violations table view
- The Storage Violation Distribution bar chart

Note: When a storage violation has occurred, collection for this attribute group involves scanning the Program Control Table (PCT), which can carry considerable overhead. Exercise caution when using this attribute table for either workspaces or situations.

See also:

- “CICSplex Transaction Storage Violations attribute group” on page 223
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Transaction Timings workspace

The Transaction Timings workspace compares the current CPU time with the time in suspend for your selected CICS region, the Total I/O wait time, the Total Other wait time, first dispatch delay, Re-dispatch delay, and the Exception Wait time; it also shows the time spent by the transaction you selected from the Transaction Analysis workspace.

The Transaction Timings workspace is accessed as a link from the Transaction Analysis workspace.

The predefined Transaction Timings workspace contains the following views:

- The CPU against suspend time pie chart
- The Wait Time Distribution pie chart
- The Timings for Transaction **tranid** table includes the following details:
  - Elapsed time
  - Dispatch time
  - QR TCB elapsed time
  - Other TCB elapsed time
  - CPU time
  - RLS CPU time

  - RMI elapsed time
  - JVM elapsed time
  - Ttime in suspend
  - Total I/O suspend time
  - First dispatch time
  - Re-dispatch time
  - Exception wait time
  - Program load elapsed time
  - Syncpoint elapsed time.

From the Transaction Timings table, you can link to the I/O and Other Waits Details workspace to investigate the causes of long wait times for a given task.

See also:

- “CICSplex Transaction Timings attribute group” on page 226
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Transaction TSQueue Details workspace

The Transaction TSQueue Details workspace displays the tasks that have had significant wait time for Temporary Storage queues.

The Transaction TSQueue Details workspace is accessed from the Transaction Analysis workspace.

The predefined Transaction TSQueue Details workspace contains the following views:

- The TSQ Request bar chart compares the total number of TSQ requests with the Total TSQ request time for the transaction that you have selected.
- The TSQ I/O Waits view compares the total TSQ I//O wait time with the shared TSQ I/O wait time for the transaction that you have selected.
- The TSQueue Details table view shows the following details for the transaction:
  - The task number and the TSQueue name.
  - The total TSQ requests, TSQ request time, TSQ I/O wait time.
  - Shared TSQ I/O wait count and wait time.
  - The GET requests and wait time.
  - The PUT to Auxiliary requests and wait time.
  - The PUT to main request, wait time and total time.
  - The total length of items obtained, written to Auxiliary, and written to main.
  - The system ID and the transaction ID.

See also:

- “CICSplex Transaction TSQUEUE Details attribute group” on page 228
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Transaction Umbrella Information workspace

The Transaction Umbrella Information workspace allows you to view details of a transaction that uses IBM Z OMEGAMON for CICS umbrella services; these services are useful when tracking either long-running tasks that perform multiple functions or tasks where many programs might be invoked through a single transaction ID (a characteristic of many fourth-generation language packages). The umbrella user

data is a work area available for use by an application for reading and storing information. It is displayed in this workspace in both character and hexadecimal formats.

The Transaction Umbrella Information workspace is accessed as a link from the "Transaction Analysis workspace" on page 361.

The predefined Transaction Umbrella Data workspace contains the following views:

- The Umbrella Information for Transaction **tranid** table view displays the following information about the transaction that you have selected if it is an umbrella transaction:
  - The transaction ID, umbrella transaction ID, the task number, and the umbrella program ID.
  - User Work Area, and User Work Area (Hex) for the selected transaction.
- The Transactions Using Umbrella Services table view displays the following details for all umbrella transactions in the selected CICS region:
  - The transaction ID, umbrella transaction ID, the task number, and the umbrella program ID.
  - The resource type and name.
  - The suspended time, CPU time, and elapsed time.
  - The storage above and below the 16-megabyte line.
  - The attach time, the time of the suspend, and the Suspend timeout due.
  - The Facility ID and type.
  - The originating Transaction ID, task state, and dispatcher queue.
  - The first program ID, the current program ID.
  - The user ID.
  - The EXEC CICS command.
  - The purge status, whether it is purged or not.
  - The suspend state and the UOW state.

See also:

- "CICSplex Transaction Umbrella Data attribute group" on page 229
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Transient Data Details workspace

The Transient Data Details workspace provides detailed information about the transient data queues referenced by a selected document template.

The Transient Data Details workspace is linked to from the "Web Services Analysis workspace" on page 375's Document Template Details view.

The predefined Transient Data Details workspace contains the following views:

- The Document Template Details table view is a repeat of the same view shown in the "Web Services Analysis workspace" on page 375; it is included here so you can easily link to another workspace, including the Transient Data Details workspace.

  From this view, depending on the Source Type for the table view row you select when linking, you can link to the following workspaces:

  - The "Exit Details workspace" on page 337, if the Source Type is EXIT
  - The "File Details workspace" on page 341, if the Source Type is FILE
  - The "Program Details workspace" on page 351, if the Source Type is PROGRAM
  - The "Temporary Storage Queue Details workspace" on page 359, if the Source Type is TSQ

  - Back to the Transient Data Details workspace, if the Source Type is TDQ, for display of information about the transient data queues referenced by another document template
- The Transient Data Details table view provides detailed information about the transient data queues referenced by a specific document template.

See also:

- “CICSplex Document Template Details attribute group” on page 93
- “CICSplex Transient Data Queues attribute group” on page 231
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Transient Data Queues workspace

The Transient Data Queues workspace provides information about trigger level settings for transient data queues and the length of transient data queues and the queue level of the intrapartition destination and number of records by which the queue exceeds the trigger level.

The predefined Transient Data Queues workspace contains the following views:

- The Transient Data Queues table view
- The Transient Data Pool Utilization bar chart

It also provides a link to the Transient Data Queues in 3270 view of the 3270 OMEGAMON interface. When you right-click a link icon in the Transient Data Queues table view and select Transient Data Queues in 3270, you must enter your terminal session user credentials in the dialog and click **OK**. A terminal view is displayed within the workspace, with the appropriate details.

Note that this predefined workspace link to a 3270 session has an associated sample script. You should review the script prior to using it in your environment.

See also:

- “CICSplex Transient Data Queues attribute group” on page 231
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Transient Data Summary workspace

The predefined Transient Data Summary workspace shows data on the current use of intrapartition resources, transient data VSAM data for a specific CICS region as well as wait count data.

The predefined Transient Data Summary workspace contains these views:

- The Transient Data Summary table view provides the following information:
  - The number of requests that are currently suspended pending the availability of a transient data buffer
  - The current number of tasks that require the physical reading or writing of a CI and are suspended because of the lack of an available string
  - The percentage of available strings currently being used for I/O to the intrapartition data set
  - The number of control intervals (CIs), transient data strings, and temporary storage strings being used by the transient (DFHINTRA) and the auxiliary temporary storage (DFHTEMP) data sets
- The Transient Data VSAM Usage bar chart shows these details for a specific CICS region:
  - Percent Active Strings
  - Percent Buffers in Use
  - Percent CIs in Use
- The Transient Data Waits bar chart shows the wait count data for specific CICS regions:

- Buffer Waits
- Current String Waits
- Total String Waits

See also:

- “CICSplex Transient Data Summary attribute group” on page 233
- “CICSplex Transient Data Queues attribute group” on page 231
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Units of Work workspace

The predefined Units of Work workspace lists the units of work running in the CICS region for the selected transaction.

This workspace contains the following views:

- The Unit of Work by Region view summarizes the activity within the CICS region for the selected unit of work, including the number of active and completed transactions associated with it.
- The Unit of Work by Transaction view provides detail information about each associated transaction, such as CPU time and wait times.

These views are populated with attribute values from the “CICSplex Units of Work attribute group” on page 238.

If trace details exist for a specific transaction, this workspace can have a link to the Application Trace secondary workspace.

See also:

- “Application Trace workspace” on page 325
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

UOW Analysis workspace

The UOW Analysis workspace shows the data about the forced decisions, the shunted UOWs that currently exist in the CICS region, and the accumulated time that all shunted UOWs have been shunted. It also displays data on the number of forced heuristic decisions and the number of minutes that all shunted UOWs have been shunted.

A forced decision can occur after an indoubt UOW remains unresolved for a user-defined time period. CICS unconditionally backs out or commits the changes made by the UOW in order to release the resources held by the indoubt UOW.

The predefined UOW Analysis workspace contains these views:

- The UOW Analysis table view
- The Unit-of-Work Disposition bar chart
- The Minutes Shunted graph

The Unit-of-Work Disposition bar chart also indicates the number of shunted UOWs that currently exist in the CICS region.

See also:

- “CICSplex UOW Analysis attribute group” on page 241
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

UOW Enqueue Analysis workspace

The UOW Enqueue Analysis workspace provides data, for example, the total number of enqueue failures that have occurred against a UOW, the current state of the UOW, and the total time that each UOW has been shunted. It also displays the total time, in seconds, that a specific UOW has been shunted pending resolution and the number of enqueue failures that have occurred against a particular UOW.

The predefined UOW Enqueue Analysis workspace contains these views:

- The Unit-of-Work Enqueue Analysis table view
- The Time Shunted bar chart
- The Enqueue Failures bar chart

See also:

- "CICSplex UOW Enqueue Analysis attribute group" on page 242
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

URIMAP Analysis workspace

The URIMAP Analysis workspace displays information about Universal Resource Identifier (URI) mappings within your CICS environment. A URI identifies and locates resources on the World Wide Web.

The predefined URIMAP workspace contains the following views:

- The URIMAP Summary view summarizes information about all your site's URIMAP definitions. From the URIMAP Summary workspace you can link to the "URIMAP Detail workspace" on page 373.
- The URIMAP Global view provides a global view of all your URIMAP definitions.
- The URIMAP Global Counts bar chart shows matched and unmatched values, as well as HTTP and HTTPS requests
- The URIMAP Summary Reference Counts bar chart shows the number of times each URIMAP was referenced

See also:

- "CICSplex URIMAP Summary attribute group" on page 246
- "CICSplex URIMAP Global attribute group" on page 245
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

URIMAP Detail workspace

The URIMAP Detail workspace provides detailed information about a selected URIMAP definition.

The URIMAP Detail workspace is linked to from the "URIMAP Analysis workspace" on page 373's URIMAP Summary view.

See also:

- "CICSplex URIMAP Detail attribute group" on page 243
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

VSAM Analysis workspace

The predefined VSAM Analysis workspace shows the percentage of strings being used to process I/O requests to this VSAM file and details about the VSAM data sets allocated to a selected CICS region.

The predefined VSAM Analysis workspace contains the following views:

- The VSAM String Utilization bar chart
- The VSAM Analysis table view

Because CICS dumps, traces, transient data, and auxiliary temporary storage reside in VSAM data sets, you can use the VSAM Analysis table view to locate a VSAM data set experiencing string waits or excessive control interval (CI) or control area (CA) splits. Such conditions can adversely affect CICS performance. You can view current data collected on demand for these items:

- The number of data CA and data CI splits for the VSAM data set
- The number of index CA and index CI splits for the VSAM data set
- The numbers of new data and index extents taken by the VSAM data set
- Mode of access CICS uses to open the data set
- Type of VSAM data set
- Total time outs from VSAM data sets in record-level sharing (RLS) mode
- The status of the VSAM data set
- Statistics for the number of strings defined, the strings being used, and the strings with requests queued against them
- The local shared resources pool (LSR) pool ID of the LSR file for a selected CICS region

It also provides a link to the VSAM Analysis in 3270 view of the OMEGAMON 3270 interface. When you right-click a link icon in the VSAM Analysis table view and select VSAM Analysis in 3270, you must enter your terminal session user credentials in the dialog and click **OK**. A terminal view is displayed within the workspace, with the appropriate details.

Note that this predefined workspace link to a 3270 session has an associated sample script. You should review the script prior to using it in your environment.

See also:

- “CICSplex VSAM Analysis attribute group” on page 248
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

VSAM RLS Lock Analysis workspace

The predefined VSAM RLS Lock Analysis workspace contains the VSAM Record Level Sharing Lock Analysis table view; it provides information about tasks that are waiting for a locked VSAM record.

This information includes both suspended CICS tasks that are waiting for this lock to be released as well as the CICS task that is holding the record, whether or not the holding task runs within the current CICS region. This data enables you to identify applications that are making poor use of resources and possibly degrading system performance by holding records for an excessive time.

See also:

- “CICSplex RLS Lock Analysis attribute group” on page 175
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Web Services Analysis workspace

The Web Services Analysis workspace determines the status of the various aspects of the connectivity between your CICS regions and your Web services (software systems designed to support interoperable, machine-to-machine interaction over a network).

With Web services, your CICS applications can communicate with heterogeneous Web applications as a Web services requester, a Web services provider, or both. If you are experiencing problems integrating your CICS applications with other business applications using the Worldwide Web, use this workspace to quickly verify that all the Web service components are defined and available.

The predefined Web Services Analysis workspace contains the following table views:

- The Web Services Summary table view provides a summary of all the Web services currently available. From the Web Services Summary table view you can link to the following workspaces:
  - "Web Services Details workspace" on page 375
  - "Web Services Transactions workspace" on page 376 (All Web Services Transactions depending on your filtering)

  If the latest version of the ITCAM for SOA product is also installed and running, you can link to the Performance Summary workspace, that is filtered by the Web Service name and Operation attributes. With this feature, you can track a transaction's activity as it moves between the CICS and ITCAM for SOA products.
- The Pipeline Summary view summarizes information about pipelines referenced by your Web services. From the Pipeline Summary workspace, you can link to the "Pipeline Details workspace" on page 351.
- The Virtual Host Detail view provides a summary of all your currently defined virtual hosts.
- The Document Template Details view provides detailed information about all document templates defined for your Web services. From the Document Template Details view, depending on the Source Type for the view row you select when linking, you can link to the following workspaces:
  - "Exit Details workspace" on page 337, if the Source Type is EXIT
  - "File Details workspace" on page 341, if the Source Type is FILE
  - "Program Details workspace" on page 351, if the Source Type is PROGRAM
  - "Temporary Storage Queue Details workspace" on page 359, if the Source Type is TSQ
  - "Transient Data Details workspace" on page 370, if the Source Type is TDQ

See also:

- "CICSplex Web Service Summary attribute group" on page 253
- "CICSplex Pipeline Summary attribute group" on page 156
- "CICSplex Online Data Viewing attribute group" on page 141
- "CICSplex Virtual Host Detail attribute group" on page 247
- "CICSplex Document Template Details attribute group" on page 93
- "Attribute groups used by the predefined workspaces" on page 316
- "Organization of the predefined workspaces" on page 313

Web Services Details workspace

The Web Services Details workspace provides a detailed look at a selected Web service.

The Web Services Details workspace is linked to from the "Web Services Analysis workspace" on page 375's Web Services Summary view.

See also:

- "CICSplex Web Service Details attribute group" on page 250
- "Attribute groups used by the predefined workspaces" on page 316

- “Organization of the predefined workspaces” on page 313

Web Services Transactions workspace

Depending on your link filtering (Web Services Transactions or All Web Services Transactions), you can use the Web Services Transactions workspace to view Web service and transaction details for a *specific* Web service or for *all* Web services and transactions.

The Web Service Transactions workspace is accessed from links within the “Web Services Analysis workspace” on page 375.

The Web Services Transactions workspace contains these table views:

- The Web Service Transactions view provides information that is derived from the Web service transactions query. From the Web Service Transactions table view you can link to the “Application Trace workspace” on page 325.
- The Web Service Details view provides a detailed look at a selected Web service.

By using the Operation and Web Service Name attributes for the Web Service transaction that were added to the CICSplex Online Data Viewing attribute group, OMEGAMON for CICS on z/OS provides an interface for providing extra information about a transaction; this is known as *umbrella services* and they are implemented through the KOCRMCLL and KOCGLCLL call programs. The details on how to use these interfaces are located in the KOCAPITX member of the TKANSAM library.

See also:

- “CICSplex Online Data Viewing attribute group” on page 141
- “CICSplex Application Trace attribute group” on page 61
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Workrequest Analysis workspace

The Workrequest Analysis workspace is used to determine where an EJB or SOAP request originated and the system with which it is communicating. Typically it is used to determine the identity of the system that a request is waiting on for a reply.

The predefined Workrequest Analysis workspace contains the following views:

- Workrequest Analysis table view
- Terminal view

See also:

- “CICSplex Workrequest Details attribute group” on page 254
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

XML Transforms Details workspace

The XML Transforms Details workspace provides summary and detailed information about CICS XML transform resources.

The XML Transforms Details workspace contains the following views:

- XML Transforms Summary table view, which has summary data for an XML transform resource. Use the links to refresh for a different XML transform resource.
- XML Transforms Details table view, which contains filtered detailed information on the XML transform resource name.

This workspace is available as a link from the Atom Feeds Summary workspace when you use the Atom Service Name as search criteria and the Atom Service Name from the Atom Feeds Summary workspace matches the **Bundle Name** column in the XML Transforms Summary table view. You can use this name to filter for more details in the XML Transforms Details workspace.

Another link is available for this workspace from the Application Bundle Parts table view of the Application Bundle Details workspace, when the resource bundle type is XMLTRANSFORM.

This workspace uses attributes from the CICSplex XML Transforms Details and CICSplex XML Transforms Summary attribute groups.

See also:

- “CICSplex XML Transforms Detail attribute group” on page 256
- “CICSplex XML Transforms Object Summary attribute group” on page 256
- “Atom Feed Summary workspace” on page 326
- “Attribute groups used by the predefined workspaces” on page 316
- “Organization of the predefined workspaces” on page 313

Chapter 7. Accessing a Tivoli Management Services host session

When researching the cause of an alert, you might want to go directly to the problem host so you can review conditions raised by a Tivoli Management Services product.

To access a Tivoli Management Services host session, access the terminal emulator adapter of the Tivoli Enterprise Portal.

The terminal emulator adapter turns a workspace view into a TN3270 or TN5250 session so you can connect to any 3270 or 5250-based host system (for example, z/OS or i5/OS) using TCP/IP. The terminal emulator adaptor provides simple terminal emulation; with it, you can access terminal-based applications like the OMEGAMON for CICS (3270) interface. It also provides a scripting language interface that enables you to do the following tasks:

- Permits you to record (capture) a host session. As you interact with a host session, the session is recorded as a set of script commands that can be saved under a name you specify and played back at a later time. This allows you to automate navigation to a specific set of screens.
- Permits you to author complex scripts containing custom functions for manipulating host sessions.

See the Tivoli Enterprise Portal online help for instructions on using the terminal emulator adapter and dynamic terminal integration support.

Support information

If you have a problem with your IBM software, you want to resolve it quickly. IBM provides the following ways for you to obtain the support you need:

Online

The following sites contain troubleshooting information:

- Go to the IBM Software Support site at http://www.ibm.com/software/support/probsub.html and follow the instructions.

IBM Support Assistant

The IBM Support Assistant (ISA) is a free local software serviceability workbench that helps you resolve questions and problems with IBM software products. The ISA provides quick access to support-related information and serviceability tools for problem determination. To install the ISA software, go to http://www.ibm.com/software/support/isa.

Troubleshooting Guide

For more information about resolving problems, see the product's Troubleshooting Guide.

Notices

This information was developed for products and services offered in the U.S.A.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785 U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

Intellectual Property Licensing
Legal and Intellectual Property Law
IBM Japan, Ltd.
19-21, Nihonbashi-Hakozakicho, Chuo-ku
Tokyo 103-8510, Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law: INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement might not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation
2Z4A/101
11400 Burnet Road
Austin, TX 78758 U.S.A.

Such information may be available, subject to appropriate terms and conditions, including in some cases payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurement may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

This information is for planning purposes only. The information herein is subject to change before the products described become available.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs. The sample programs are provided "AS IS", without warranty of any kind. IBM shall not be liable for any damages arising out of your use of the sample programs.

Each copy or any portion of these sample programs or any derivative work, must include a copyright notice as follows:

© (your company name) (year). Portions of this code are derived from IBM Corp. Sample Programs. © Copyright IBM Corp. 2022. All rights reserved.

If you are viewing this information in softcopy form, the photographs and color illustrations might not display.

Privacy policy considerations

IBM Software products, including software as a service solutions, (“Software Offerings”) may use cookies or other technologies to collect product usage information, to help improve the end user experience, to tailor interactions with the end user or for other purposes. In many cases no personally identifiable information is collected by the Software Offerings. Some of our Software Offerings can help enable you to collect personally identifiable information. If this Software Offering uses cookies to collect personally identifiable information, specific information about this offering’s use of cookies is set forth below.

Depending upon the configurations deployed, this Software Offering may use session cookies that collect each user’s user name for purposes of session management, authentication, and single sign-on configuration. These cookies cannot be disabled.

If the configurations deployed for this Software Offering provide you as customer the ability to collect personally identifiable information from end users via cookies and other technologies, you should seek

your own legal advice about any laws applicable to such data collection, including any requirements for notice and consent.

For more information about the use of various technologies, including cookies, for these purposes, See IBM's Privacy Policy at http://www.ibm.com/privacy and IBM's Online Privacy Statement at http://www.ibm.com/privacy/details the section entitled "Cookies, Web Beacons and Other Technologies" and the "IBM Software Products and Software-as-a-Service Privacy Statement" at http://www.ibm.com/software/info/product-privacy.

Trademarks

IBM, the IBM logo, and ibm.com® are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at "Copyright and trademark information" at www.ibm.com/legal/copytrade.shtml.

Intel, Intel logo, and Intel Xeon, are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

Linux® is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Microsoft and Windows are trademarks of Microsoft Corporation in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

Index

A

T

U

V

W

X

Product Number: 5698-T07