



**Interim Features Supplement: Dynamic XE to 3270 (Classic) linking,
Application trace data, Transaction tracking support, Web service monitoring,
Classification of CICS transactions into multiple service classes**

Version 4.1.0



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Classification of CICS transactions into multiple service classes**

Note

Before using this information and the product it supports, read the information in “Notices” on page 35.

This edition applies to version 4.1.0 of OMEGAMON XE for CICS on z/OS (program number 5698-A32) and to all subsequent releases and modifications until otherwise indicated in new editions. Make sure you are using the correct edition for the level of the product.

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Chapter 1. Introduction

This document describes the following interim features that were added to IBM® Tivoli® OMEGAMON® XE for CICS® on z/OS® v4.1.0 with **APAR OA27039** and **OA27042** and fix pack **4.1.0–TIV-KC5–FP0004**.

APAR OA27039 and **OA27042** with fix pack **4.1.0–TIV-KC5–FP0004** contain these new enhancements:

- Dynamic OMEGAMON XE for CICS on z/OS to 3270 (Classic) linking.
This enhancement requires IBM Tivoli Monitoring, v6.2.1.
- The display of application trace data in the new Application Trace workspace.
- Transaction tracking support by integrating OMEGAMON XE for CICS on z/OS v4.1.0 and ITCAM for Transactions v7.1.0 and displaying all the components that comprise a transaction.
This enhancement requires IBM Tivoli Monitoring, v6.2.0 fix pack 2 be installed on Tivoli Enterprise Server.
- Web service monitoring that provides details of CICS transactions that have run in a CICS region or a Web service request to a CICS region.
- The classification of a CICS transaction into multiple service classes, which are reported by the Service Level Analysis workspace.

Note: To upgrade your environment from IBM Tivoli Monitoring v6.1.0, see *IBM Tivoli Monitoring: Installation and Setup Guide, GC32–9407* and for more information on all OMEGAMON XE products see the *Upgrade Guide, SC23–9745*.

Chapter 2. Dynamic XE to 3270 (Classic) linking

This enhancement provides context sensitive linking from an OMEGAMON XE for CICS on z/OS workspace to a 3270 (classic) interface panel and uses the dynamic terminal integration support that is implemented in IBM Tivoli Monitoring, v6.2.1. Dynamic terminal integration support is an extension to the Tivoli Enterprise Portal that provides seamless access to 3270 based applications through context sensitive links.

A Tivoli Enterprise Portal terminal view enables you to connect to any TN3270, TN5250, or VT100 host system with a TCP/IP address from inside a Tivoli Enterprise Portal workspace. For 3270 or 5250 terminal views, you have scripting capability that contains record, playback, and authoring of entire scripts. When you associate a terminal view with a connection script and a query that returns the appropriate values, you can configure a view that opens to a specific panel on a 3270 session.

The data that is used for the connection to the target workspace is gathered by OMEGAMON XE for CICS on z/OS at runtime. This enhancement uses the new version of the Service Task Details query. This query provides the required data, which includes the host and port for the terminal emulator connection. The host name and common interface name can either be from the parameters specified at agent initialization, or the values gathered by OMEGAMON XE for CICS on z/OS at runtime during the auto discovery process. The port number and LU group (if used) are not gathered by the auto discovery process and are acquired from the CICS agent parameters specified at agent initialization.

See the IBM Tivoli Monitoring v6.2.1 documentation for more details on the dynamic terminal integration support and the Tivoli Enterprise Portal help for instructions on using predefined links for workspaces.

Configuring dynamic XE to 3270 linking

This feature provides the following 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
- Temporary Storage Queues workspace to the Temporary Storage Queues in 3270 view

Note that each of the predefined workspace links has an associated sample script. You should review these scripts prior to using them in your environment.

Using the Configuration Tool to specify data overrides

While OMEGAMON XE for CICS on z/OS uses a query to automatically detect almost all of the required connection data (host and port and LU group), you might want to override these values in your environment. You can use the Configuration Tool to override these values during your initial configuration of OMEGAMON XE for CICS on z/OS. The generated environmental variables are contained in the KC5ENV or the KDSENV members of the RKANPARU library.

1. Access the Configuration Tool and from the main menu, enter **3** (Configure products) > **2** (Select product to configure) > **S** IBM Tivoli OMEGAMON XE for CICS on z/OS V4.1.0.

This displays the **Runtime Environments** panel

2. From the **Runtime Environments** panel, enter **U** in the action column adjacent to the runtime definition.

3. For a TN3270 session, select the **Update Runtime Environment (3 of 3)** panel.
4. From the **Update Runtime Environment (3 of 3)** panel, change the following values as shown in Figure 1.

This Update Runtime Environment panel is displayed after you install the OMEGAMON XE for CICS on z/OS PTF:

```

. ----- UPDATE RUNTIME ENVIRONMENT (3 of 3) -----
. COMMAND ==>
.
. If you require TN3270E Telnet session link support override, complete these
. values:
.
.   Hostname      ==>
.   Port number   ==>
.   LUGROUP       ==>
.
.   Enter=Next  F1=Help  F3=Back

```

Figure 1. Update Runtime Environment (3 of 3) panel

Use these parameters for the Dynamic XE to 3270 (classic) linking support enhancement:

Table 1. The parameters used by Dynamic terminal support

Name	Size	Default value	Description
KCI_DXL_HOSTADDRESS=	44	Null	<p>The IP address or URL of the host that the TN3270 session connects to. This network address must have an active TN3270 listener.</p> <p>To get this value, issue the TSO HOMETEST command on the LPAR of the TN3270 listener.</p> <p>The value can be overridden when the link is executed.</p>
KCI_DXL_TN3270PORT=	5	23	<p>The port number that the TN3270 server uses as the TN3270 listener.</p> <p>To override this value, specify the port number of the Telnet listener.</p>

Table 1. The parameters used by Dynamic terminal support (continued)

Name	Size	Default value	Description
KCI_DXL_LUGROUP=	8	Null	<p>The LU group that is required when the VTAM Unformatted System Services (USS) screen accepts a LOGON APPLID() DATA() command. If the default USS screen does not accept this command, supply the name of the LU group that does accept it; the 3270 session will be joined to that LU group.</p> <p>The value can be overridden when the link is executed.</p>
Kpp_DXL_APPLID=	8	None	<p>The VTAM® Application ID of the application that the TN3270 session is connected to.</p> <p>CICS auto discovers this value, and ignores the value that is provided.</p>

This is an example of the KC5ENV (agent in its own address space) member that is generated out of the *C5#3&rte* job after you specify the overrides in your initial configuration for the hostname of the TN3270 Server, the TN3270 port number and the LUGROUP:

```
&ihilev.INSTJOBS(C5#3&rte)
//STEP5 EXEC PGM=IEBUPDTE,PARM=NEW
//SYSPRINT DD SYSOUT=*
//SYSUT2 DD DISP=SHR,
//          DSN=&rhilev.&rtename.RKANPARU
//SYSIN DD DATA,DLM=$$
./ ADD NAME=KC5ENV
KDE_TRANSPORT=\
  SNA.PIPE PORT:135 USE:N\
  IP6.PIPE PORT:1918 USE:N\
  IP6.UDP PORT:1918 USE:N\
  IP.SPIPE PORT:3660 USE:N\
  IP6.SPIPE PORT:3660 USE:N\
  IP.PIPE PORT:1918\
  IP.UDP PORT:1918
KBB_RAS1=ERROR
CTIRA_STANDALONE=N
KC5_FTA_SECURITY=NO
KCI_DXL_HOSTADDRESS=\
MY_HOST_NAME.COM
KCI_DXL_TN3270PORT=23
KCI_DXL_LUGROUP=LUGROUP1
CTIRA_IP_PORT=0
LANG=en_US.ibm-037
$$
/*
```

Creating or modifying links

You can create new links or modify the predefined links with this enhancement. 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 2. Link values to create new links or modify existing links

Link name	Default setting	Description
KOCCIAPPL	This value is auto discovered by the agent.	The APPLID of the 3270 session.
TN3270PORT	23	The port number of the 3270 session.
HOSTIPADDR	If this value is not provided by the KppENV member, it is discovered by the agent.	The fully qualified host name of the 3270 session.
LUGROUP		The LU group that is required for the connection to the 3270 session.
KOCCIDATA	CICS=cicsname	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.

For example, see Figure 6 on page 11.

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 classic 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 classic 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 with this feature 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.

Creating a link from the Transaction Analysis workspace

When you right-click a link icon in Transaction Analysis table view and select the Transaction Details in 3270 link, the classic interface is displayed enabling you to examine much more historical data about a specific transaction than is available in the Tivoli Enterprise Portal workspace.

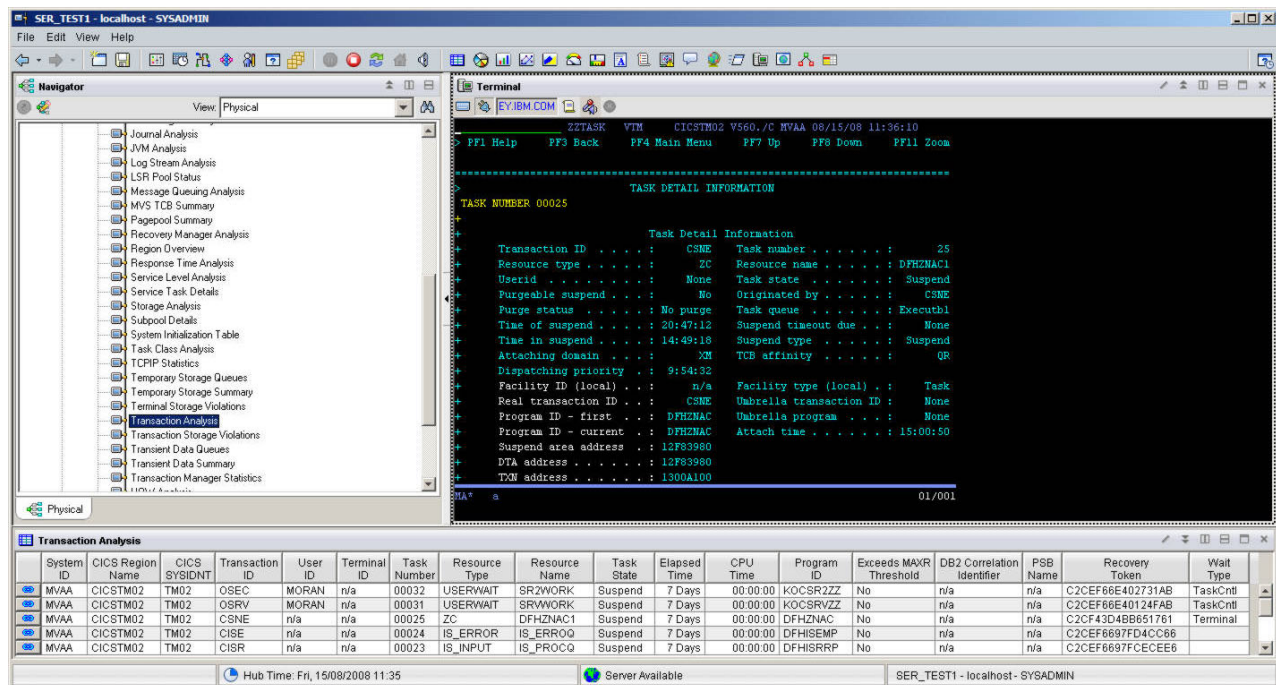


Figure 2. The Transaction Details in 3270 terminal view.

The process to create a workspace that contains a terminal view that you can link to is similar to that for any other workspace in the Tivoli Enterprise Portal environment.

This is a summary of the process:

- Create a new workspace, for example, *Transaction Details in Classic* and drop a 3270 panel onto the workspace.
- Open the Properties dialog. In the **Connection** grouping, you now have the option to have the host name, port number and terminal type values acquired by a query. Click the new **Fetch values from the query** radio button and click **Apply** and **OK**. The values in the original fields are ignored.

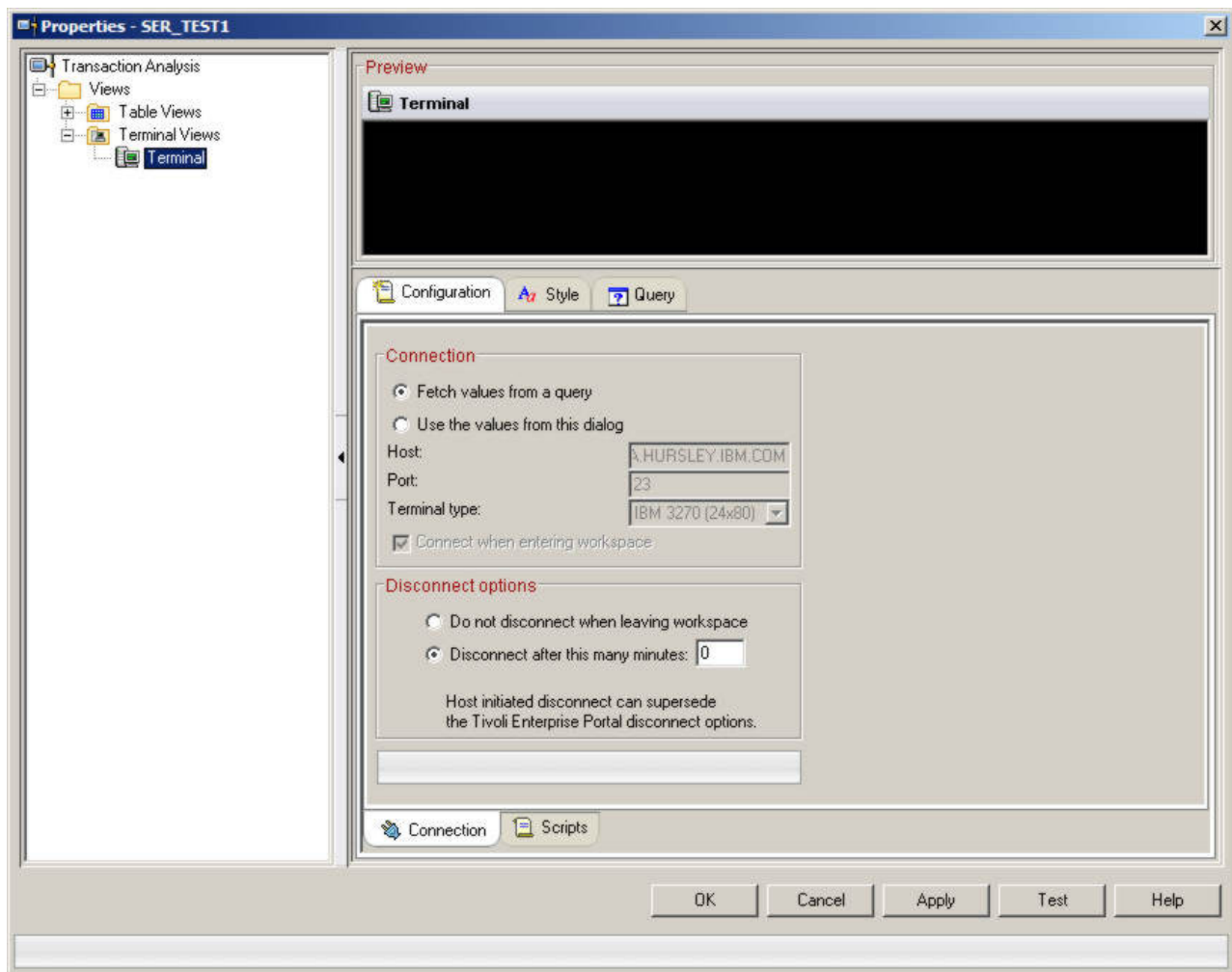


Figure 3. In the Properties dialog, the Connection grouping identifies the values acquired by a query.

- Create a new script, for example, *CICS Transaction Details in Classic* and save it locally on your computer. See “Terminal emulator script” on page 15 for more information and the online help for the Tivoli Enterprise Portal on how to use scripts.

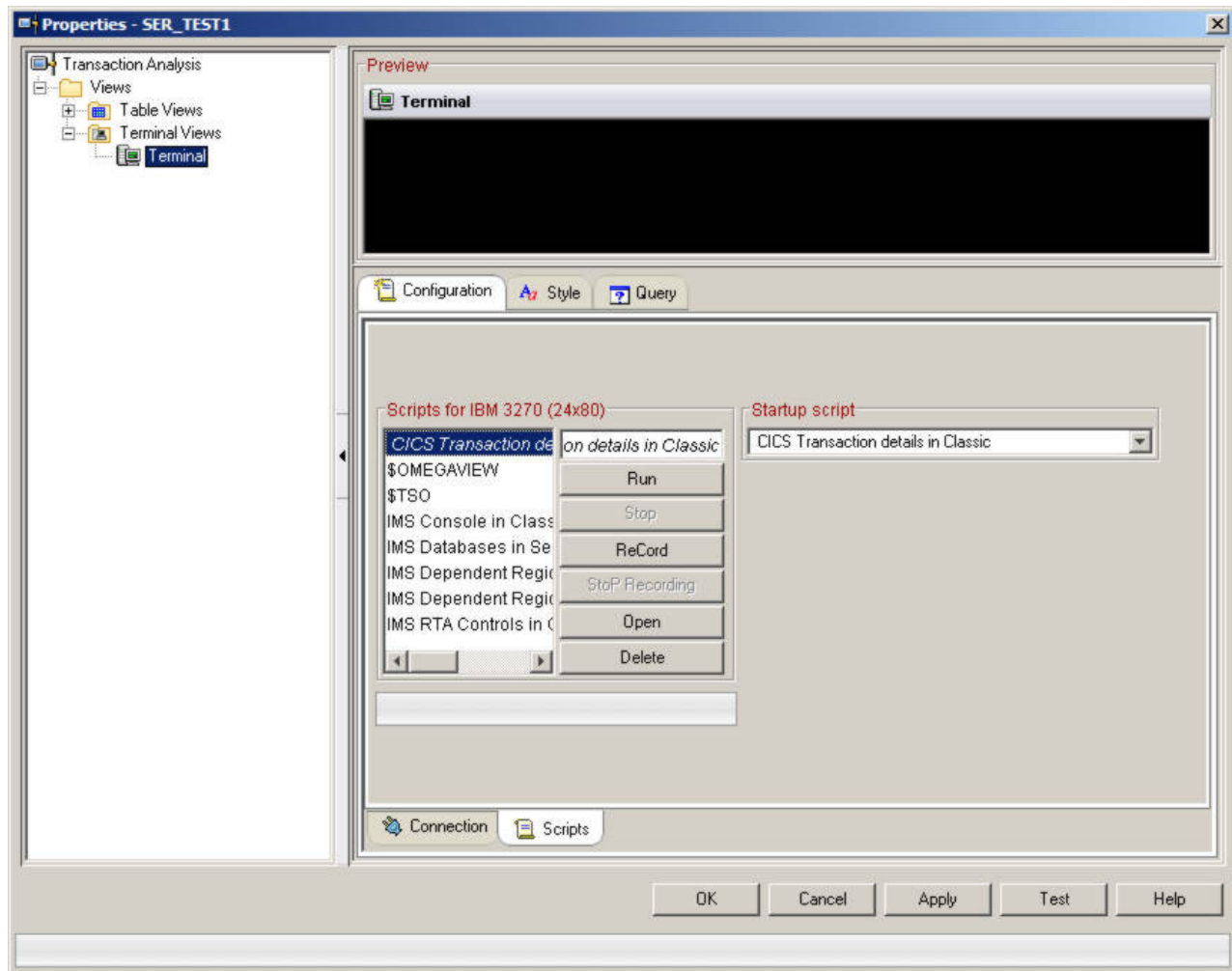


Figure 4. The Scripts tab of the Configuration grouping enables you to create a script.

- Because you selected the new option, a dialog prompts you to specify a query. This dialog is different from the existing terminal emulator processing, but it matches the process for other adapters that use queries (for example, tables and graphs). Click **Yes**.
- The **Query** tab is displayed. Select the query that you have created for this terminal emulator. For example, *Service Task Details*. Click **Apply** and **OK**.

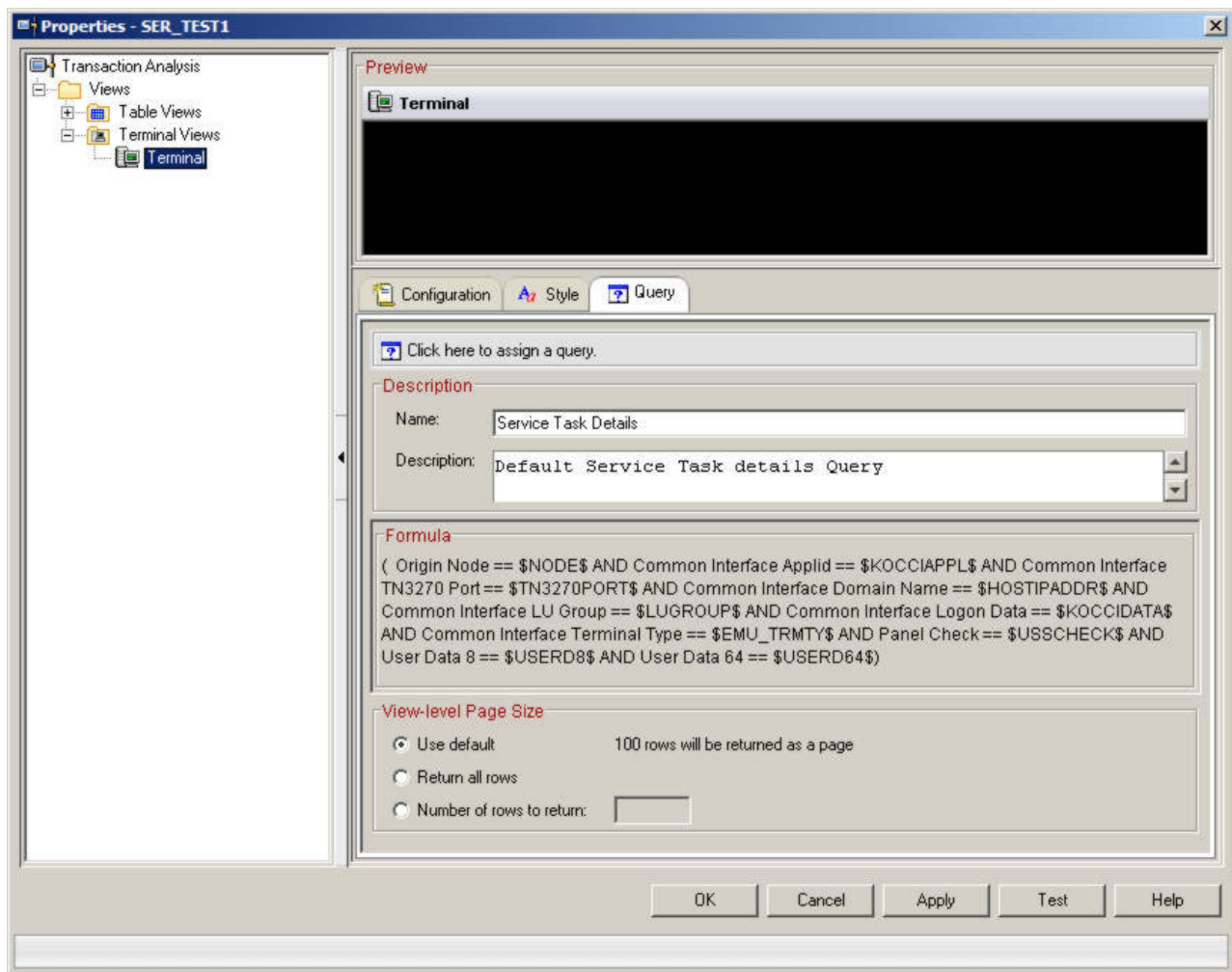


Figure 5. Use the Query tab to select the query that you have created for the terminal view.

- Define a link, for example, *CICS Transaction details in Classic* from the Transaction Analysis table view to your new workspace, *Transaction Details in Classic*, using the Workspace Link Wizard. See the online help for the Tivoli Enterprise Portal on how to define a link.

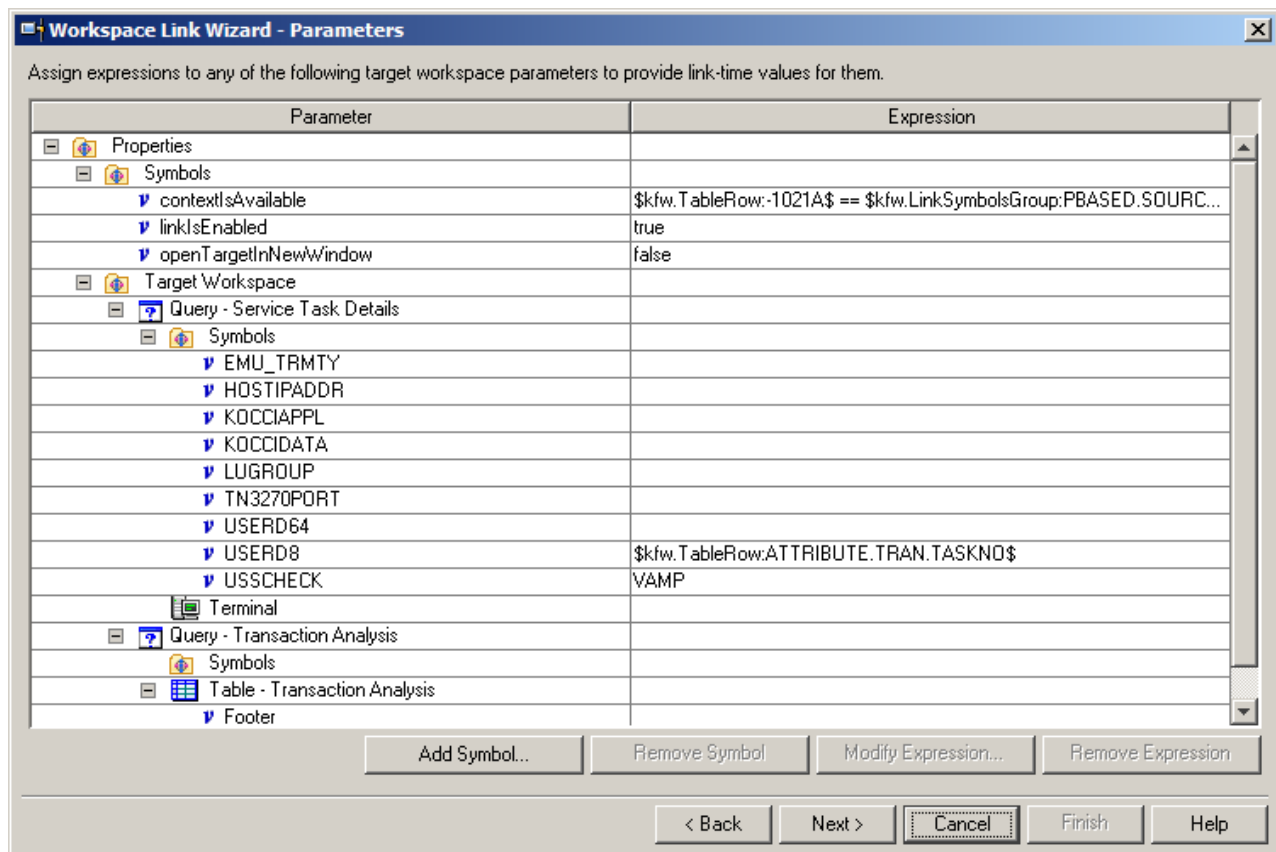


Figure 6. The Workspace Link Wizard - Parameters dialog.

See Table 2 on page 6 for the link symbol values.

- Save your workspace and verify that the workspace is defined as a target link.

If you did not click **Yes**, when you were asked to specify a query, or, if you want to change the query, then right-click the adapter and select **Properties**. Use the Properties dialog to change the adapter back to the standard (non-linked) terminal emulator with just the host name, port number and terminal type fields specified.

You can follow this same general process to create a link from the Online Data Viewing workspace to the Online Data Viewing in 3270 view as shown in Figure 7 on page 12.

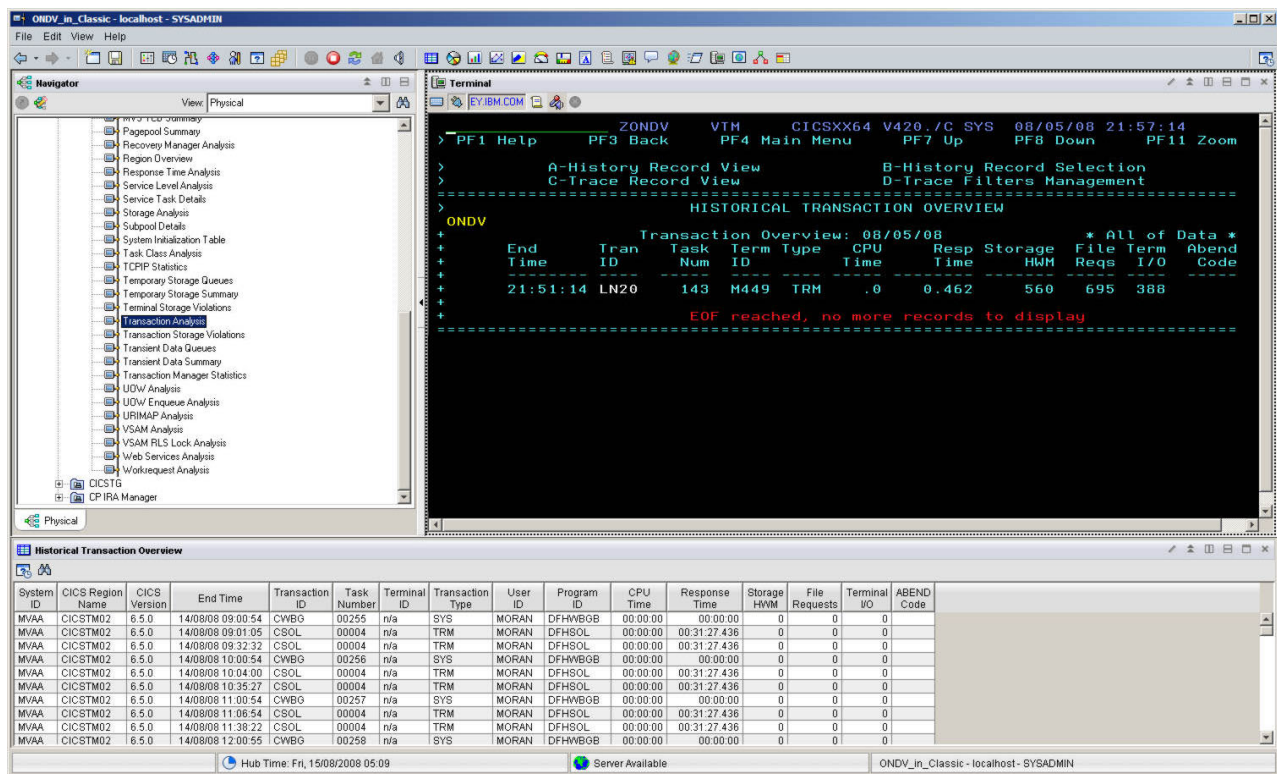


Figure 7. The Online Data Viewing in 3270 view.

The Online Data Viewing workspace contains the following new links:

- Application Trace
- Online Data Viewing in 3270

Using a link for an OMEGAMON for CICS 3270 session

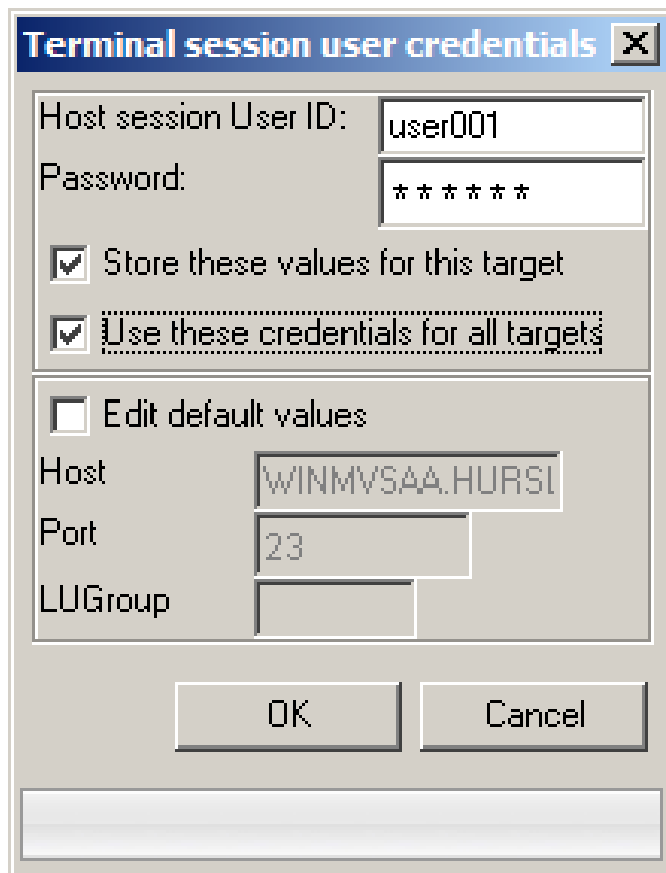
The process to run a link once you have defined it is very similar to that for any other link between a workspace in the Tivoli Enterprise Portal, but now you must enter a user ID and password to complete the log on to a 3270 session.

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

- For example, select the Transaction Details in 3270 or Online Data Viewing in 3270 link from the Transaction Analysis source workspace. The query that is associated with the terminal adapter for the link runs and gets additional values for the script from OMEGAMON XE for CICS on z/OS. For example, the IP address and port number of the OMEGAMON for CICS interface.

Depending on your selection, the new 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.



The dialog box is titled "Terminal session user credentials" with a close button (X) in the top right corner. It contains the following fields and options:

- Host session User ID:** A text field containing "user001".
- Password:** A text field containing six asterisks "*****".
- ☒ **Store these values for this target**
- ☒ **Use these credentials for all targets**
- ☐ **Edit default values**
- Host:** A text field containing "WINMVSAA.HURSI".
- Port:** A text field containing "23".
- LUGroup:** An empty text field.
- Buttons:** "OK" and "Cancel" buttons at the bottom.

Figure 8. The Terminal session user credentials dialog.

Enter your credentials and click **OK**.

Note: If you want to connect to a *different* 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. Note the data on the terminal emulator is not visible at this time.

- 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 are displayed in the terminal view.

Terminal emulator query

OMEGAMON XE for CICS on z/OS v4.1.0 uses an extended version of the CICSSER (CICS Service Task Details) query that is in fix pack **4.1.0-TIV-KC5-FP0004**, for the dynamic XE to 3270 linking feature.

The query is used by the terminal emulator when it is driven by a link to request data from OMEGAMON XE for CICS on z/OS 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 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 new terminal emulator differs slightly from that of the existing terminal emulator. The **Connection** tab, which enables you to specify the host name, port number, and terminal type, has new function that 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. See Figure 3 on page 8.

When the values are used by a script, a new dialog is displayed that prompts you for a user ID and password. See Figure 8 on page 13.

The default setting for this function 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 Figure 5 on page 10.

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

This is an example of the values for a typical query in OMEGAMON XE for CICS on z/OS:

Table 3. Example of values for a query

Attribute name	Display name	Type/size	Description
ORIGINNODE	Origin_Node	String, 32	The origin node.
HOSTIPADDR	KFW_EMU_Host	String, 256	The IP address (dotted decimal) or host name of the host to which the terminal emulator should connect.
TN3270PORT	KFW_EMU_Port	Integer, 4	The port number is the port to which the terminal emulator should connect; it's the host port.
LUGROUP	KFW_LU_Group	String, 8	The LU group.
EMU_TRMTY	KFW_EMU_Term_Type	String, 16	If the terminal type field is not set, or does not have a meaningful value, then a default of 3270 (24x80) is used.
CICS_AGTAP	CICS_EMU_Agent_Applid	String, 8	The OMEGAMON for CICS (3270) APPLID.
CICS_RGNAP	CICS_EMU_Region_Applid	String, 8	The CICS region APPLID.

The **Origin_Node**, **KFW_EMU_Host**, **KFW_EMU_Port**, **KFW_LU_Group**, and **KFW_EMU_Term_Type** fields are required for the query. If the query you selected for a terminal emulator session does not implement any of the required fields in the query, or the query fails to return suitable values for these fields, then an error message is displayed and the terminal emulator does connect to the host.

Terminal emulator script

OMEGAMON XE for CICS on z/OS v4.1.0 provides scripts that are driven when the terminal emulator session is used by the Dynamic XE to 3270 linking feature.

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 recording can be done using either the existing terminal emulator, or the new linked terminal emulator. 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. See Figure 4 on page 9.

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.

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 (classic) 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_QUERYKOCCHIAPPL");
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

```


Chapter 3. Application trace data

This interim feature provides the new Application Trace workspace, which displays the application trace data in the Tivoli Enterprise Portal for a specific transaction. You can use this workspace to diagnose a performance problem when it is turned on for a short period of time or to diagnose overall problems within an application development environment.

This workspace uses the new CICSplex Application Trace attribute group to populate the views.

Application Trace workspace

This workspace displays the application trace data for a specific transaction. The Application Trace workspace contains the following views:

- Application Trace Details table view
- Task Details table view

The Application Trace Details table view displays the application trace calls made by a transaction.

The Task Details table view displays details from the transaction history record.

The Application Trace workspace is shown in Figure 9.

Application Trace - IBM-0220AA087D2 - SYSADMIN

File Edit View Help

Navigator View: Physical

- System Initialization Table
- Task Class Analysis
- TCPIP Statistics
- Temporary Storage Queues
- Temporary Storage Summary
- Terminal Storage Violations
- Transaction Analysis
- Transaction Storage Violations
- Transient Data Queues
- UOW Enqueue Analysis
- UOW Summary
- Transaction Manager Statistics
- UOW Analysis
- UOW Enqueue Analysis
- UOW Summary
- UOW Analysis
- UOW Enqueue Analysis
- UOW Summary

Application Trace Details Page: 1 of 2

Time	Type	Function	Program	Offset	Resource	Response
08:42:21.8485971608	TSKSTRT	1ST DISPATCH	DFHPIDSH	+0		
08:42:21.8587084443	EXECIN	HANDLE CONDITION	KD4HAND	+1EA		
08:42:21.8587297880	EXECOUT	HANDLE CONDITION	KD4HAND	+1EA		NORMAL
08:42:21.8587330380	EXECIN	HANDLE ABEND	KD4HAND	+210	1591E2D4	
08:42:21.8587361318	EXECOUT	HANDLE ABEND	KD4HAND	+210	1591E2D4	NORMAL
08:42:21.8587379130	EXECIN	PUSH HANDLE	KD4HAND	+1258		
08:42:21.8669074130	EXECOUT	PUSH HANDLE	KD4HAND	+1258		NORMAL
08:42:21.8669143193	EXECIN	HANDLE CONDITION	KD4HAND	+127E		
08:42:21.8669183193	EXECOUT	HANDLE CONDITION	KD4HAND	+127E		NORMAL
08:42:21.8669195380	EXECIN	HANDLE ABEND	KD4HAND	+12A4	1591F734	
08:42:21.8669216318	EXECOUT	HANDLE ABEND	KD4HAND	+12A4	1591F734	NORMAL
08:42:21.8669232880	EXECIN	GET CONTAINER	KD4HAND	+12F4		
08:42:21.8669456005	EXECOUT	GET CONTAINER	KD4HAND	+12F4		NORMAL
08:42:21.8669462255	EXECIN	GET CONTAINER	KD4HAND	+13AA		
08:42:21.8676586623	EXECOUT	GET CONTAINER	KD4HAND	+13AA		NORMAL
08:42:21.8676613186	EXECIN	HANDLE CONDITION	KD4HAND	+13E2		
08:42:21.8676649748	EXECOUT	HANDLE CONDITION	KD4HAND	+13E2		NORMAL
08:42:21.8676655998	EXECIN	READQ TS	KD4HAND	+141A	KD4TSPL	
08:42:21.8676877873	EXECOUT	READQ TS	KD4HAND	+141A	KD4TSPL	NORMAL
08:42:21.8676885061	EXECIN	HANDLE CONDITION	KD4HAND	+1440		
08:42:21.8676897248	EXECOUT	HANDLE CONDITION	KD4HAND	+1440		NORMAL
08:42:21.8676912248	EXECIN	POP HANDLE	KD4HAND	+171E		
08:42:21.8676925061	EXECOUT	POP HANDLE	KD4HAND	+171E		NORMAL
08:42:21.8676942561	EXECIN	PUSH HANDLE	KD4HAND	+5B8		
08:42:21.8676962248	EXECOUT	PUSH HANDLE	KD4HAND	+5B8		NORMAL
08:42:21.8676968186	EXECIN	HANDLE CONDITION	KD4HAND	+5DE		
08:42:21.8676981936	EXECOUT	HANDLE CONDITION	KD4HAND	+5DE		NORMAL
08:42:21.8676989748	EXECIN	HANDLE ABEND	KD4HAND	+604	1591EBD4	
08:42:21.8682589748	EXECOUT	HANDLE ABEND	KD4HAND	+604	1591EBD4	NORMAL
08:42:21.8682600998	EXECIN	DELETE CONTAINER	KD4HAND	+B7E		
08:42:21.8682653811	EXECOUT	DELETE CONTAINER	KD4HAND	+B7E		NORMAL
08:42:21.8682663186	EXECIN	RETURN	KD4HAND	+2D0		
08:42:21.8692788481	EXECIN	GET CONTAINER	KOCSOAP	+AC		

Task Details

Transaction ID	CICS Region Name	CICS Version	CPU Time
CPIH	CICSR37L	6.5.0	00:00:00.004

Task Details continued

First Dispatch Delay	Terminal I/O Wait	Journal Wait	Temporary Wait
00:00:00.003	00:00:00	00:00:00	

Hub Time: Thu, 10/09/2008 02:34 PM Server Available Application Trace - IBM-0220AA087D2 - SYSADMIN

Figure 9. The Application Trace workspace.

You can link to the Application Trace workspace from the following workspaces:

- Online Data Viewing
- Units of Work
- Web Service Transactions

These links are only active, if trace details are available for a specific transaction.

CICSplex Application Trace attribute group

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

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

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 8 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 8 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 8 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 8 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 4 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 8 characters.

Chapter 4. Transaction tracking support

The OMEGAMON XE for CICS on z/OS, v4.1.0 transaction tracking enhancement provides you with the ability to monitor all the components that consist of a CICS application. OMEGAMON XE 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.

ITCAM for Transactions v7.1.0 can help you determine all the components of a complex transaction.

The Transaction Instances workspace with a link to the CICS Transaction Unit of Work workspace as shown in Figure 10.

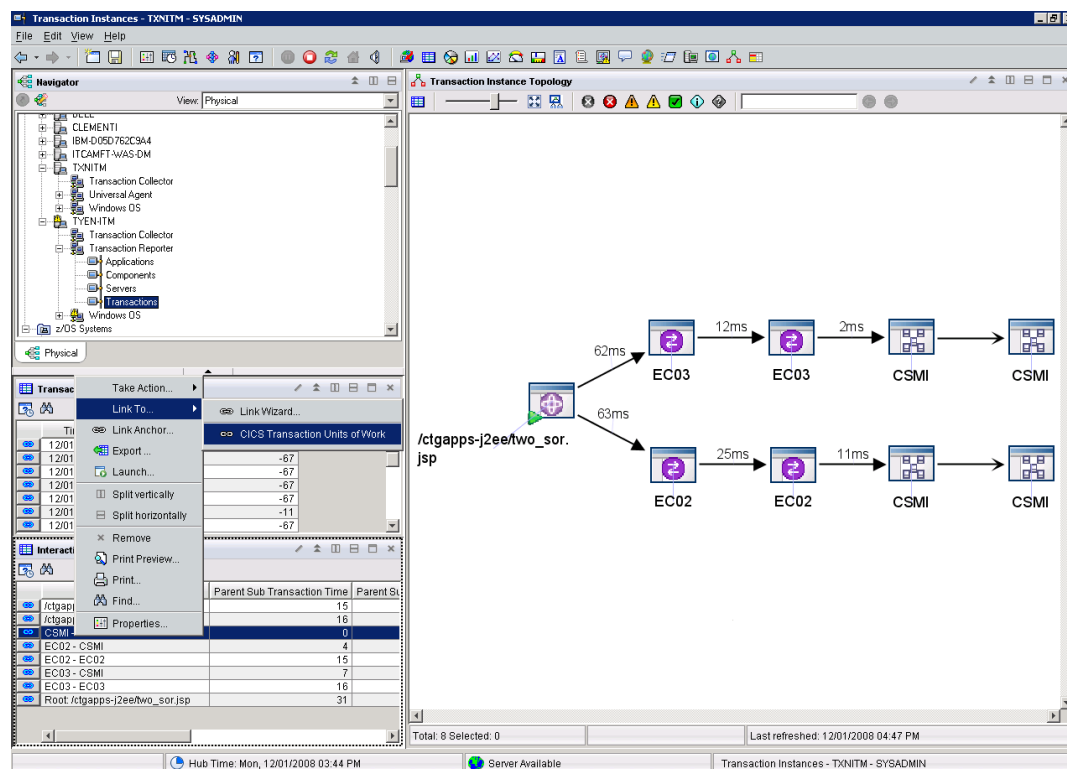


Figure 10. The ITCAM for Transactions v 7.1.0 Transaction Instances workspace.

Starting ITCAM for CICS in a CICS region

OMEGAMON XE for CICS on z/OS can automatically start ITCAM for CICS in a CICS region.

This is controlled by the TRANSACTION_TRACKING=AUTO value in the <STARTUP_CONTROL> section of the global data area:

```
*
<STARTUP_CONTROL>
*
TRANSACTION_TRACKING=AUTO| NOAUTO
```

The default setting is NOAUTO.

When you specify the TRANSACTION_TRACKING=AUTO value, OMEGAMON XE for CICS on z/OS attempts to link to the ITCAM for CICS component and initialize it in the CICS region. With this specified value, you only need the OMEGAMON program (KOCOME00) in the CICS PLT (program list table) to activate both features. If the ITCAM for CICS component is installed in the same SMP/E (System Modification Program/Extended) CSI (Consolidated Software Inventory) as OMEGAMON XE for CICS on z/OS, then no JCL (Job Control Language) changes are required to CICS to enable ITCAM for CICS. The JCL that is required for OMEGAMON XE for CICS on z/OS is sufficient.

Starting or stopping ITCAM for CICS with OMEGAMON II

OMEGAMON XE for CICS on z/OS provides the capability to dynamically start or stop ITCAM for CICS in a specific region. This is achieved through the OMEGAMON for CICS (classic) interface. You can use the O.X menu option to view the status of ITCAM in a specific CICS region.

Figure 11. The OMEGAMON for CICS (classic) interface is used to dynamically enable or disable ITCAM for CICS in a specific region.

```

      ZCTRK   VTM      CICS37L V560./C SYS  11/05/08 14:35:02
> PF1 Help  PF3 Back

> A-RTA On   B-RTA Off   C-RTA Status   D-RTA Intervals   E-RTA Scaling
> F-ONDV On  G-ONDV Off  H-ONDV Status   I-Bottleneck Ctl  J-Wait Reasons
> K-INTR Ctl  L-IANL On   M-IANL Off      N-IANL Settings   O-IANL Groups
> P-Collection Q-Shutdown R-RLIM On    S-RLIM Off        T-RLIM Status
> U-SMF Status V-ATF Filters W-ATF Status X-ITCAM Status
=====
> Transaction Tracking (ITCAM) status

> The current status of ITCAM in the CICS region, The current Global setting
> for transaction tracking and an indication as to whether ITCAM will be
> stopped when OMEGAMON is stopped in the CICS region.

> Changing the command to TRKU allows authorized users to modify status of
> ITCAM in the CICS region and the global setting for transaction tracking.

TRKS
+ Transaction Tracking Control Information
+ TRKSTATE ITCAM for CICS status . : Active
+ TRKGLOB ITCAM started in Global : Yes
+ TRKOMEG Stopped on OMEG SHUT. . : Yes
```

You can use the following commands for the 3270 interface:

TRKS Displays the status of the transaction tracking. The default security level is internal, level=0.

TRKU Modifies the status from the value that is used in the global data area. The default security level is internal, level=3.

You must submit the system security update job and you can customize the security settings for the TRKS and TRKU commands.

After you apply the PTF, run the menu system security update job, using these steps:

1. Access the Configuration Tool and from the main menu, enter **3** (Configure products) > **2** (Select product to configure) > **S** IBM Tivoli OMEGAMON XE for CICS on z/OS V4.1.0.

This displays the **Runtime Environments** panel

2. From the **Runtime Environments** panel, enter **C** in the action column adjacent to the runtime definition.

This displays the **Product Configuration Selection** menu panel.

3. From the **Product Configuration Selection** menu panel, enter **2**, IBM Tivoli OMEGAMON II for CICS on z/OS.
This displays the **Configure IBM Tivoli OMEGAMONII for CICS on z/OS /RTE:** panel.
4. From the **Configure IBM Tivoli OMEGAMONII for CICS on z/OS /RTE:** panel, enter **7** (Modify menu system command security).
This displays the **Modify Menu System Command Security** panel.
5. From the **Modify Menu System Command Security** panel, add the following line to the command list:

```
COMMAND=TRKS,DISP,LEVEL=0,EXTERNAL=NO,AUDIT=NO
COMMAND=TRKU,DISP,LEVEL=3,EXTERNAL=NO,AUDIT=NO
```

Note that the command list is in alphabetic order. Verify the LEVEL=, EXTERNAL=, and AUDIT= values meet your site requirements.
6. Run the update job, and verify that it completed successfully; restart your common interface started task.

Display of new attributes on the 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 and whether any application data is available. This workspace is expanded to enable new queries and allow linking to specify other filters from workspaces where the Web Service Name or Web Service operation name are known. This workspace now has a link to the new Application Trace workspace, if trace data exists.

The following attributes are added to the CICSplex Online Data Viewing attribute group for the transaction tracking support:

Operation Indicates the name of the Web Service Operation. It is a 64 character field.

Web Service Name Indicates the WSNAM for the Web Service transactions query. It is a 32 character field.

New messages introduced with the transaction tracking support enhancement

These are the new KCP Messages that are generated from the transaction support enhancement for OMEGAMON XE for CICS on z/OS v4.1.0.

KCP1101I TRK ITCAM FOR CICS PROGRAM IS NOT INSTALLED

Explanation: An attempt was made to start ITCAM for CICS when it was not installed or defined in the CICS region.

System action: Processing continues and ITCAM for CICS is not started.

User response: Verify that ITCAM for CICS is installed in the CICS regions and the required resources have been defined. See *ITCAM for Transactions z/OS Guide and Reference* for more information.

KCP1102I TRK NOT AUTHORIZED TO LINK TO ITCAM FOR CICS

Explanation: An attempt was made to start ITCAM for CICS, but the USERID defined in the PLTPUSR SIT

parameter does not have the authority to link to the ITCAM CYIPINIT CICS program.

System action: Processing continues and ITCAM for CICS is not started.

User response: Verify that the USERID defined in the PLTPUSR SIT parameter is authorized to link to the CYIPINIT program.

KCP1103E TRK LINK TO CYIPINIT ITCAM PROGRAM EIBRCODE: nnnnnnnn

Explanation: An unidentified error occurred while an attempt was made to link to the CYIPINIT ITCAM for CICS program. This message denotes *nnnnnnnn* as the hex contents of the CICS EIBRCODE for the command.

System action: Processing continues and the results might be unpredictable.

KCP1104I

User response: Check the *CICS TS Application Programmers Reference* for more information about EIBRCODE values. If necessary, contact IBM Software Support.

KCP1104I TRK INSUFFICIENT WORK AREA FOR ITCAM FOR CICS ENABLEMENT

Explanation: The ITCAM for CICS enablement code was invoked with a work area that was not valid.

System action: A system dump is produced.

User response: Retain the contents of the system log and dump, and contact IBM Software Support.

Chapter 5. Web Service monitoring enhancements

OMEGAMON XE for CICS on z/OS provides details of CICS transactions that have run a Web service request to a CICS region

The new Web Service Transactions workspace displays the most recent transactions that have occurred for a particular Web Service. The Web Service Transactions workspace is accessed from new links within the Web Services Analysis workspace. The Web Services Summary table view of the Web Services Analysis workspace contains the following links:

- **Web Services: Transactions:** Displays only the transactions for a specific Web service name.
- **All Web Service Transactions:** Displays *any* Web service provider transaction.
- **ITCAM for SOA: Performance Summary:** Displays the performance summary for a particular Web Service in the ITCAM for SOA product.

The Web Service Transactions workspace uses the Web Service Name and Operation attributes of the Online Data Viewing attribute group.

OMEGAMON XE for CICS on z/OS is unable to determine automatically if a transaction is running as a Web Service provider. For Web service transactions to be effectively monitored OMEGAMON must be informed of the Web Service Name and Operation in the Web Services transaction. OMEGAMON XE 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.

To use umbrella services to inform OMEGAMON XE for CICS on z/OS of the Web service details, issue the OC@API_SOA_WRITE request type that passes an area mapped by the KOCSOA macro provided in the TKANMAC library.

The KOCSOA macro defines the Web Service name as a 32 character field. This should contain the first 32 characters of the Web Service Name padded with blanks. The Operation name is a 64 character field and should contain the first 64 characters of the Web Service operation padded with blanks.

The following example can be used to report these values to OMEGAMON XE for CICS on z/OS using the CICS API in the KOCRMCLL interface to report SOA data. This example shows how to request the information about the Web Services name and Operation from CICS. This does require that DATAREG parameter on the DFHEIENT macro is either set to register 13 or allowed to default to that value.

```
***-----***
/* CICS STORAGE
***-----***
DFHEISTG DSECT
FUNCTION DS CL16
LENGTH DS F
REQUEST DS F
KOCCALL CALL ,(0,0),MF=L
          KOCSOA ,
          EJECT
***-----***
/* PROGRAM START
***-----***
OMEGPROG DFHEIENT
***-----***
/* GET THE FIRST 32 BYTES OF WSNAME
***-----***
      MVC  MN#WSNAME,SPACES
      MVC  LENGTH,=A(L'MN#WSNAME)
      EXEC CICS GET CONTAINER('DFHWS-WEBSERVICE')
            INTO(MN#WSNAME) FLENGTH(LENGTH)
                                     *
```

```

        NOHANDLE
        CLC    EIBRESP,DFHRESP(NORMAL)
        BE     GETOPER
        CLC    EIBRESP,DFHRESP(LENGERR)
        BNE    EXIT
***-----***
/* AND THE FIRST 64 OF THE OPERATION
***-----***
GETOPER  DS    0H
        MVC    MN#OPERATION,SPACES
        MVC    LENGTH,=A(L'MN#OPERATION)
        EXEC   CICS GET CONTAINER('DFHWS-OPERATION')      *
        INTO(MN#OPERATION) FLENGTH(LENGTH)              *
        NOHANDLE
        CLC    EIBRESP,DFHRESP(NORMAL)
        BE     TELLOMEG
        CLC    EIBRESP,DFHRESP(LENGERR)
        BNE    EXIT
***-----***
/* NOW REPORT TO OMEGAMON
***-----***
TELLOMEG DS    0H
        MVC    REQUEST,=A(OC@API_SOA_WRITE)
        CALL   KOCRMCLL,(REQUEST,MN#SOA),VL,MF=(E,KOCCALL)
EXIT     DFHEIRET
***-----***
/* STATIC DATA
***-----***
SPACES   DC    CL64' '

```

OMEGAMON XE for CICS on z/OS also provides the KOCSOAP sample pipeline handler program . You can use this program to report SOA data without having to change any application code. It does require that you assemble and link the KOCSOAP member found in the TKANSAM library and change the pipeline handler program.

The following pipeline definition file shows how to ensure the provided handler is invoked for the Web Services provided by this pipeline configuration file:

```

<?xml version='1.0' encoding="EBCDIC-CP-US"?>
<provider_pipeline xmlns="http://www.ibm.com/software/http/cics/pipeline"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.ibm.com/software/http/cics/pipeline provider.xsd ">
  <service>
    <service_handler_list>
      <handler>
        <program_name>KOCSOAP</program_name>
        <handler_parameter_list> </handler_parameter_list>
      </handler>
    </service_handler_list>
    <terminal_handler>
      </cics_soap_1.2_handler>
    </terminal_handler>
  </service>
  <apphandler.DFHPITP</apphandler>
</provider_pipeline>

```

Viewing Web service and transaction details using the new Web Services Transactions workspace

Depending on your link filtering, the new Web Services Transactions workspace enables you to view Web service and transaction details for a *specific* Web service or for *all* Web services and transactions.

This workspace is accessed from a row in Web Services Summary table view of the Web Services Analysis workspace using the following links:

- Web Services Transactions
- All Web Services Transactions

The Web Services Transactions workspace contains these table views:

- Web Service Transactions 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 19.
- Web Service Details provides a detailed look at a selected Web service.

The Web Services Transactions workspace with transaction details for a specific Web service is shown in Figure 12.

Web Services: Transactions - IBM-0220AA087D2 - SYSADMIN

File Edit View Help

Navigator View: Physical

- System Initialization Table
- Task Class Analysis
- TCPIP Statistics
- Temporary Storage Queues
- Temporary Storage Summary
- Terminal Storage Violations
- Transaction Analysis
- Transaction Storage Violations
- Transient Data Queues
- Transient Data Summary
- Transaction Manager Statistics
- UDW Analysis
- UDW Enqueue Analysis
- URIMAP Analysis
- VSAM Analysis
- VSAM RLS Lock Analysis
- Web Services Analysis
- Workrequest Analysis
- SYS_CICSx62
- SYS_CICSx63
- SYS_CICSx64
- SYS_CIXGG62
- CICSTG
- CP IRA Manager
- Services Management Agent Environment

Web Services: Transactions

Web Service Name	Web Service Operation	Response Time	CPU Time	End Time	Transaction ID	Task Number	Termination
dispatchOrderEndpoint	dispatchOrder	00:00:00.114	00:00:00	09/12/08 12:42:21	CPIH	00098	n/a
dispatchOrderEndpoint	dispatchOrder	00:00:00.449	00:00:00	09/12/08 12:40:17	CPIH	00096	n/a
Link to Application Trace	dispatchOrder	00:00:00.393	00:00:00	09/12/08 11:59:48	CPIH	00093	n/a
dispatchOrderEndpoint	dispatchOrder	00:00:00.115	00:00:00	09/12/08 11:57:14	CPIH	00086	n/a
dispatchOrderEndpoint	dispatchOrder	00:00:00.269	00:00:00	09/12/08 11:52:16	CPIH	00083	n/a

Web Service Details

CICS Region Name	Web Service Name	System ID	Use Count	Pipeline Name	Program Name	URIMAP Name	Container Name	Last Modified	Program Interface	Status	Validation Indicator
CICSR37L	dispatchOrderEndpoint	SYS_	0	EXPIPE01	DFH0XODE	\$808400		04/12/05 14:08:40	Commarea	Inservice	No

Hub Time: Thu, 10/09/2008 02:30 PM Server Available Web Services: Transactions - IBM-0220AA087D2 - SYSADMIN

Figure 12. The Web Services Transactions workspace.

The Web Services Transactions workspace accessed from the All Web Services Transactions link is shown in Figure 13 on page 28.

[illegible]

Figure 13. The Web Services Transactions workspace accessed from the All Web Services Transactions link.

Chapter 6. Classification of CICS transactions into multiple service classes

Currently, in OMEGAMON XE for CICS on z/OS v4.1.0, the Service Level Analysis feature classifies a transaction into a single service class. This enhancement provides you with the ability to classify a CICS transaction into multiple service classes and view those service classes in the Service Level Analysis workspace.

Attempting to classify transactions into multiple service classes results in extra central processing unit (CPU) resource consumption. The amount of CPU usage is heavily dependant upon the number of service classes, the number and complexity of classification rules defined, and the number of CICS transactions to be classified. The activation of this feature merits careful consideration.

The following example shows the service class summary views when you select the option that classifies *all* CICS transactions into their matching service classes. You use the Configuration Tool to set the parameters that enable the Workload Manager subtask to be set to SCLASS=ALL. See “Using the Configuration Tool to enable Service Level Analysis to classify CICS transactions into multiple service classes” on page 31.

You access the CICS Performance Summary and Service Level Summary views from the CICS node on the navigation tree view within a z/OS operating system in the Tivoli Enterprise Portal. In the following sequence, the *LN50* transaction ID is classified in the *MULTIVSM*, *LTRANS*, and **TOTAL** service classes with the default Workload Name, *DFLTWORK*, as shown in Figure 14.

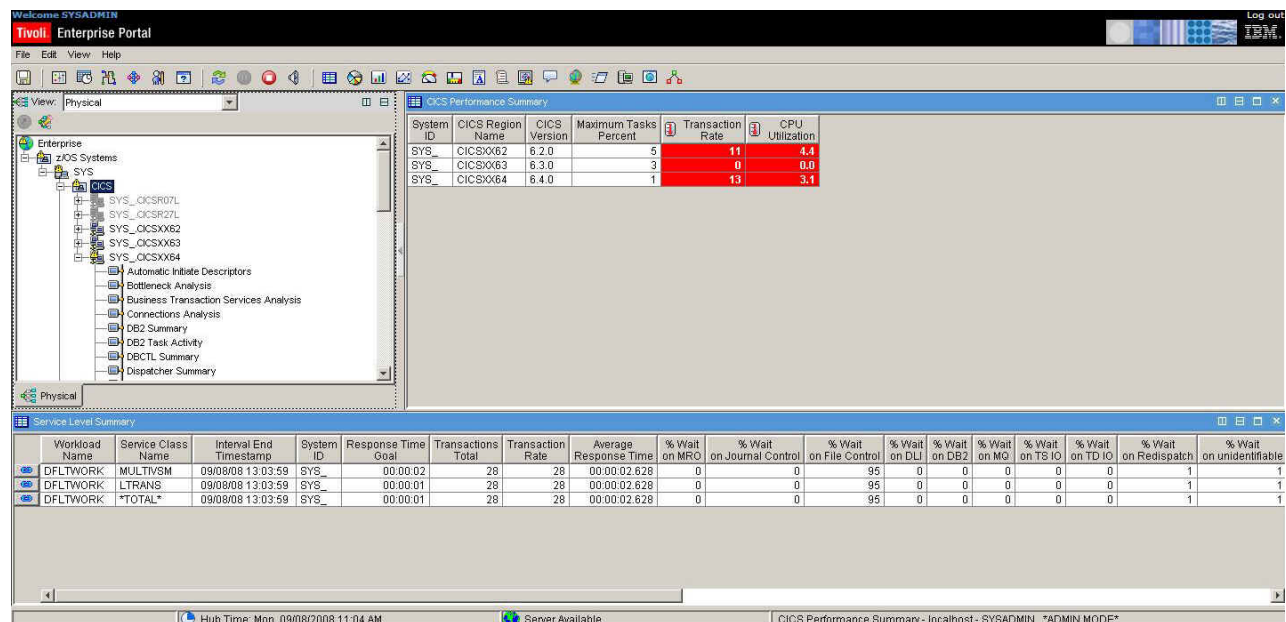


Figure 14. The Service Level Summary view displays the transactions in multiple service classes.

Click the link in the row with the *MULTIVSM* Service Class Name to access the Service Class by Region and Service Class by Transaction views as shown in Figure 15 on page 30.

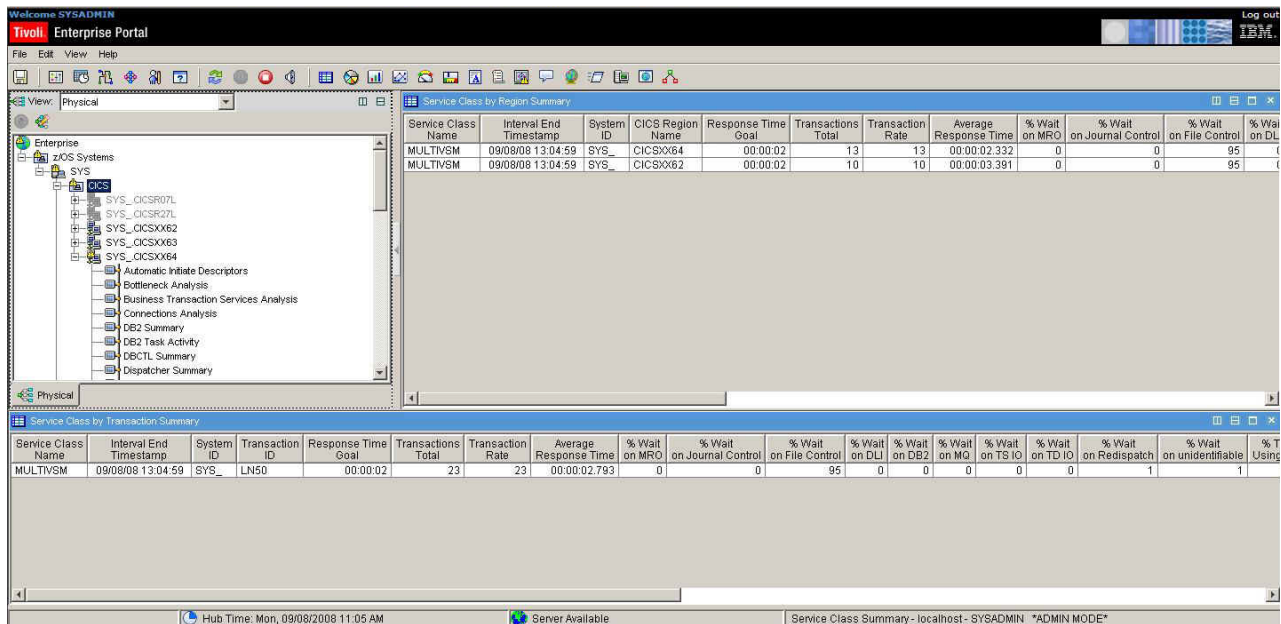


Figure 15. The Service Class by Region and Service Class by Transaction views.

Click the Service Level Analysis workspace node on the navigation tree view to display the transaction that is classified into multiple service classes, *MULTVSM* and *LTRANS*, and **TOTAL** in a single CICS region as shown in Figure 16.

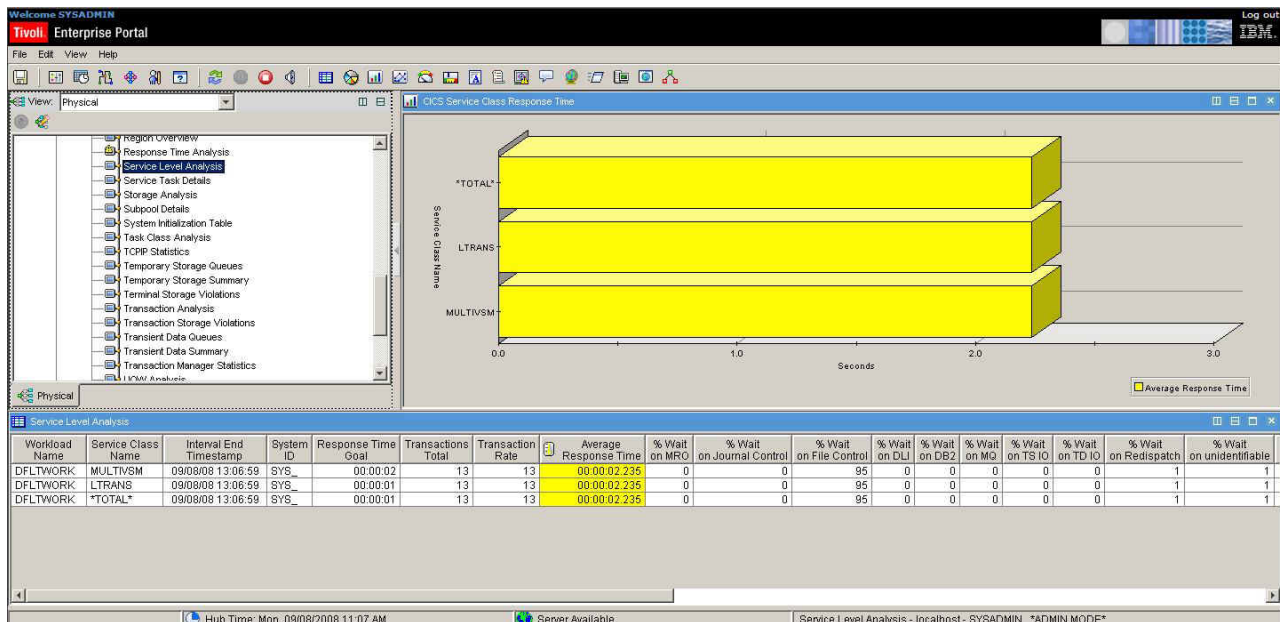


Figure 16. The Service Level Analysis workspace displays the transaction classified into multiple service classes, in a single CICS region.

Using the Configuration Tool to enable Service Level Analysis to classify CICS transactions into multiple service classes

By default, service level transactions are classified into a single service class. When you specify the SCLASS=ALL parameter on the WLM start command, each transaction is matched against all of the available classification rules.

Use the Configuration Tool to enable transaction classification into multiple service classes:

1. Access the Configuration Tool and from the main menu, enter **3** (Configure products) > **2** (Select product to configure) > **S** IBM Tivoli OMEGAMON XE for CICS on z/OS V4.1.0.
This displays the **Runtime Environments** panel
2. From the **Runtime Environments** panel, enter **C** in the action column adjacent to the runtime definition. This displays the **Product Configuration Selection** menu panel.
3. From the **Product Configuration Selection** menu panel, enter **3**, IBM Tivoli OMEGAMON XE for CICS on z/OS This displays the **Configure IBM Tivoli OMEGAMON XE for CICS on z/OS /RTE:** panel as shown in Figure 17.

```
. --- KC541MCU CONFIGURE IBM TIVOLI OMEGAMON XE FOR CICS ON Z/OS /RTE: FULLRTE --- .
. OPTION ==> .
. .
. Last selected .
. Perform the appropriate configuration steps in order: Date Time .
. .
. I Configuration information (What's New) <===Revised .
. .
. 1 Register with local TEMS (required if the Agent will connect to the .
. TEMS in the RTE) .
. .
. 2 Specify configuration parameters .
. .
. Agent address space configuration: .
. 3 Specify Agent address space parameters .
. 4 Create runtime members .
. 5 Configure persistent datastore (in Agent) .
. .
. 6 Complete the configuration .
. .
. Note: Press F5=Advanced to configure Agent to run in the TEMS address space .
. .
. Enter=Next F1=Help F3=Back F5=Advanced .
```

Figure 17. Configure IBM Tivoli OMEGAMON XE for CICS on z/OS panel.

4. From the **Configure IBM Tivoli OMEGAMON XE for CICS on z/OS /RTE:**, enter **2**, Specify configuration parameters. The Specify Configuration Parameters panel is displayed as shown in Figure 18 on page 32. This panel is updated with the new input field, **WLM service classification**.

```

KC541P1----- SPECIFY CONFIGURATION PARAMETERS -----
OPTION==>

Complete the items on this panel

WLM block allocation      ==>236      (10-524287 blocks)
WLM collection interval   ==>1        (TEP or 1 minute)
WLM service classification ==>ALL     (DEFAULT or ALL)

Enter=Next  F1=Help  F3=Back  F5=Advanced

```

Figure 18. Specify configuration parameters panel.

This is the batch configuration parameter for the WLM service classification value in the Configuration Tool:

```
KC5_WLM_CLASSIFY          DEFAULT | ALL
```

If you change the WLM service classification value, the changes do not take effect until after you run the create runtime members configuration and restart the address space that the agent is running in or restart the WLM subtask:

```

/F jobname,OC STOP ID=WLM
/F jobname,OC START ID=WLM,SCLASS=ALL

```

If you want to reset the service classification back to the DEFAULT, enter the following parameters:

```

/F jobname,OC STOP ID=WLM
/F jobname,OC START ID=WLM

```

The KC5410SP batch sample parameter member is updated to include this batch parameter.

This is an example of the KC5AGST member (agent in its own address space) that is generated out of the *C5#3&rte* job after you specified the configuration overrides for the SLA Service Class Summarization option. The parameter generated on the WLM is `SCLASS=DEFAULT | ALL`; the default is DEFAULT.

```

&ihilev.INSTJOBS(C5#3&rte)
//STEP6 EXEC PGM=IEBUPDTE,PARM=NEW
//SYSPRINT DD SYSOUT=*
//SYSUT2 DD DISP=SHR,
//          DSN=&rthilev.rtename.RKANCMU
//SYSIN DD DATA,DLM=$$
.....
./ ADD NAME=KC5AGST
EVERY 2:00 * PREVENT S522 ABENDS
EVERY 00:60:00 STORAGE D * LOG STORAGE USE
EVERY 00:30:00 FLUSH * FLUSH VSAM LSR BUFFERS
OC START ID=XMI
OC START ID=XAM
OC START ID=WLM,BLOCKS=236,SCLASS=ALL
IRAMAN KCPAGENT START
IRAMAN KCPAGENT SWLM
$$
/*

```

This is an example of the KDSSTART member (agent in a Tivoli Enterprise Monitoring Server address space) that is generated out of the *C5#3&rte* job after you specified the configuration overrides for the SLA Service Class Summarization option. The parameter generated on the Workload Manager is `SCLASS=DEFAULT | ALL`; the default is DEFAULT.

```

&IHILEV.INSTJOBS(C5#3&rte)
.....
//STEP6 EXEC PGM=IEBUPDTE,PARM=NEW
//SYSPRINT DD SYSOUT=*
//SYSUT2 DD DISP=SHR,
//          DSN=&rthilev.rtename.RKANCMU

```



```

//SYSIN DD DATA
./ ADD NAME=KDSOPST
* TEMS OPERATOR PARMS
PROFILE FOLD
TIME
./ ADD NAME=KDSSTART
.....
DIALOG CTDDSOP KLVLOGON * TEMS CUA OPERATOR
OC START ID=XMI
OC START ID=XAM
OC START ID=WLM,BLOCKS=236,SCLASS=ALL
CTDS STARTUP * START TEMS
AT ADD ID=DELAYAPP DELAY=00:03:00 CMD='KDSSTRT1'

```

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