

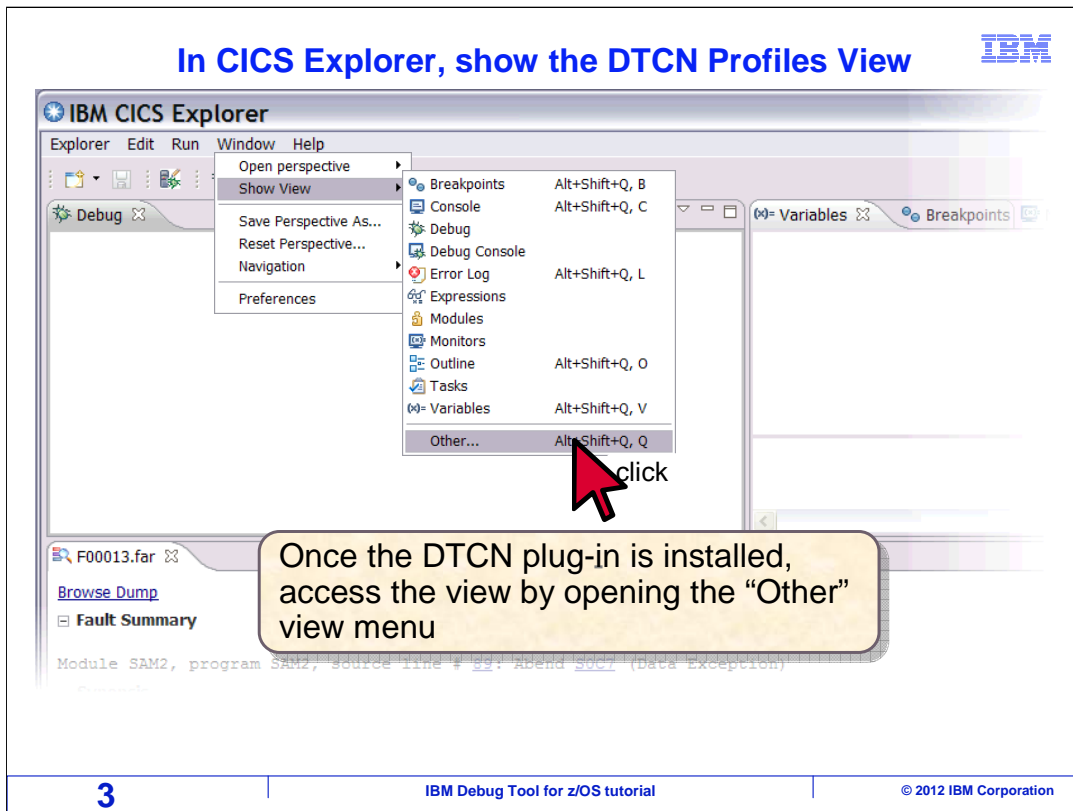
This is the tutorial for IBM Debug Tool for z/OS[®], one of the IBM zSeries[®] problem determination tools.

Debugging CICS® Applications

- Starting the debugger using the DTCN transaction
 - Creating a DTCN profile
 - Working with DTCN profiles
 - Setting the current terminal ID in a DTCN profile
- Creating and editing a DTCN profile using the GUI plug-in
- Starting the debugger using the CADP transaction
 - Creating a CADP profile
 - Working with CADP profiles
 - Setting the current terminal ID in a CADP profile



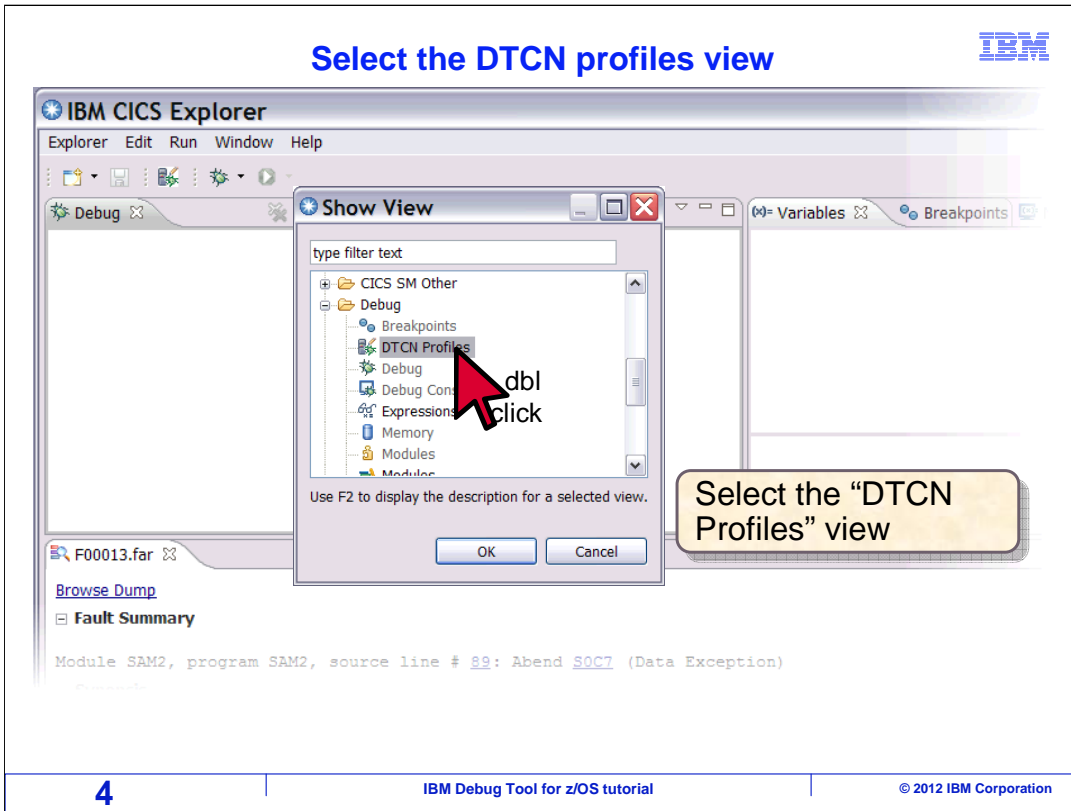
This section describes how the graphical user interface for the DTCN transaction can be used to define profiles to start the debugger.



Software is available as a plug-in to CICS Explorer® that provides a graphical interface to the DTCN transaction. To use it, you must first install CICS Explorer on your workstation. It can be downloaded and installed from the IBM web site by following the instructions on the site. After it is installed, then follow the links and instructions on the same page to download and install the DTCN plug-in.

To run the plug-in, first start CICS Explorer on your workstation. Select "window", then "show view", then "other".

Select the DTCN profiles view



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Select "DTCN profiles" from the show view window, and click OK.

The DTCN profiles view is displayed

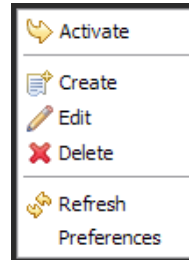


Owner	Status	Tra...	Load Module	Compile Unit	Ses...	Session Ad...	Port#	Test...	Level	Command...	Preference...	Other...
JWINCHE	Active	ADC1			TCP	9.65.11.66	8001	TEST	ERR...	*	*	
KPHUME	Active	KPH1			TCP	9.76.135.206	5702	TEST	ALL	*	*	
TSS01	Active	CD*			TCP	9.76.69.145	8002	TEST	ALL	*	*	
TSS03	Active	*	CD*	CD*	TCP	9.65.136.2	8002	TEST	ALL	*	*	
TSS05	Active	PSC1		*	TCP	9.49.191.96	8001	TEST	ALL	*	*	

The "DTCN Profiles" view is displayed near the "Remote Systems Details" view

■ "Right click" actions:

- Activate – activate a profile
- Create – begin wizard driven profile creation
- Edit – wizard driven profile editing
- Delete – remove a profile
- Refresh – refresh view
- Preferences – edit the DTCN connection information defined at installation



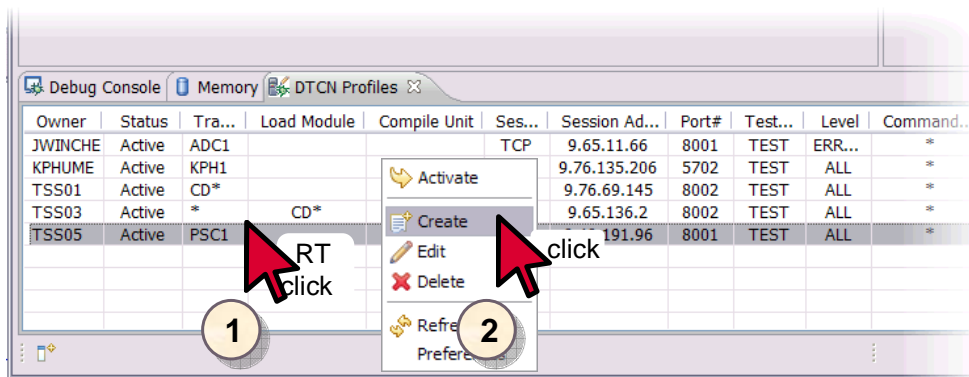
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That displays the DTCN profiles view. One way to navigate is by right-clicking. When you right click in the view, you are given options to activate a profile, create, edit, or delete a profile, refresh the list, and change your preferences.

Create a new DTCN Profile



In the "DTCN Profiles" view, right click and select "Create"

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To create a new profile, right click anywhere in the profile view, then select "create".

Specify your CICS user ID and "create"



Debug Tool Profiles Management

DTCN profile action choices

Profile Owner User Id: TSS09

Choose an action: Create

[DTCN Preferences](#)

< Back Next > Finish Cancel

click

Debug Tool Profiles Management

DTCN pattern matching resources

Resources to debug

Terminal Id:

Transaction Id: CDA*

Load Module and Compile Unit (maximum 8 pairs)

Load Module	Compile Unit
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

Add Edit Remove

User Id: TSS09

NetName:

IP Name/Address:

Commarea

Offset: 0

Data:

Container

Name:

Offset: 0

Data:

URM Debugging: NO

Profile Status: ACTIVE

< Back Next > Finish Cancel

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A "Debug Tool profiles management" window is displayed. Specify your CICS user id, and click OK. That displays a window where you can specify settings for the new profile.

Specify the settings for your DTCN profile

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Specify information about the application you want to debug. You can specify the name of the CICS terminal where the transaction will run, the transaction ID, program names, CICS user ID, and other identifiers. By default, your user id is filled in automatically. You can use an asterisk as a wildcard for all or part of a name in these fields. The profile determines when the debugger will start. When a program runs in CICS, and all of the resource names match, then the debugger will trigger. For example. If you specify a terminal id, a user id, and a program name, all three must match. To add a program, click the add button. A window will be displayed where you can enter a combination of a load module and compile unit. The load module is the name known to CICS. It is the name of a load module, which could be the first program that runs in a transaction, or a program called with a an EXEC CICS XCTL or LINK. The compile unit is the name known to the compiler, such as the COBOL "program id" or the PL/I main procedure.

You can specify up to eight pairs of load modules and compile units. You can use asterisks and question marks as wildcards in the names. For example, you can code the load module name and specify an asterisk in the compile unit field. Then the profile will trigger if there is a match on the load module name, regardless of the compile unit name.

You can also specify a data value that must be present in the commarea at a specific offset, or you can specify a data value that must be present at a specific offset in a named container. Typically, these are only needed in cases where a combination of terminal, transaction, program, and user id are not specific enough, and the profile might trigger for the wrong instance of a transaction. This can happen with background transactions that are started from other systems or web-based applications. Applications and interfaces often communicate through the commarea or a container.

If you want the profile to be active immediately, ensure that the "profile status" box is set to "active".

Click next to continue.

You can change the Test run-time options



Ensure that the session type is set to TCP. The option for mainframe interface, MFI is available.

Selecting "TCP" updates the TCPIP address

Ensure that port number corresponds to the port number RDz is listening to

click

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A window is displayed where you can make changes to the sub-options of the TEST option that will be used to start the debugger. Notice that by default, the session type is set to TCP, and the address of your workstation has been filled in automatically. With these settings, the debugger will use GUI debugging software that must be installed on your workstation, such as the debugger in Rational® Developer for System z®, or the Debug Tool plug-in for CICS Explorer.

Click "finish".

A new DTCN profile was created



Owner	Status	Tra...	Load Module	Compile Unit	Ses...	Session Ad...	Port#	Test...	Level	Command...	Preference...	Other...
JWINCHE	Active	ADC1			TCP	9.65.11.66	8001	TEST	ERR..	*	*	
KPHUME	Active	KPH1			TCP	9.76.135.206	5702	TEST	ALL	*	*	
TSS01	Active	CD*			TCP	9.76.69.145	8002	TEST	ALL	*	*	
TSS03	Active	*	CD*	CD*	TCP	9.65.126.2	8002	TEST	ALL	*	*	
TSS08	Active	PSC1		*	TCP	9.49.191.96	8001	TEST	ALL	*	*	
TSS09	Active	CDA*			TCP	9.49.144.4	8001	TEST	ALL	*	*	

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That added the new DTCN profile, and it is displayed in the list.

At this point, you are ready. The profile is defined and active in CICS. Now, do whatever you need to do to run your application to create the conditions specified in the profile that will start the debugger. When the profile is matched, the debugger will be started. It will be displayed on the device that you specified in the profile, which could be the GUI debugger on your workstation, or a CICS terminal.

Editing a DTCN profile



Owner	Status	Tra...	Load Module	Compile Unit	Ses...	Session Ad...	Port#	Test...	Level	Command...	Pr...
JWINCHE	Active	ADC1			TCP	9.65.11.66	8001	TEST	ERR...	*	
KPHUME	Active	KPH1			TCP	9.76.135.206	5702	TEST	ALL	*	
TSS01	Active	CD*				9.76.69.145	8002	TEST	ALL	*	
TSS03	Active	*	CD*			9.65.136.2	8002	TEST	ALL	*	
TSS05	Active	PSC1				9.49.191.96	8001	TEST	ALL	*	
TSS09	Active	CD*				9.49.144.4	8001	TEST	ALL	*	

In the "DTCN Profiles" view, right click the profile and select "Edit"

Once a profile is created, you can delete it or make changes to it. Right click the profile. Click "delete" to remove it, or click "edit", as in this example.

DTCN profile editor



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You can work through the same windows that you used to create the profile, and make changes as needed. Your changes are saved when you click "finish".

That is the end of this section, which described how to start the debugger for CICS programs by using the graphical user interface for the DTCN transaction.

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