



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 using Debug Tool with CICS programs, using the CADP transaction to define profiles that will start the debugger when your application runs. You will see how to create a CADP profile, and how to work with your profiles.

Start the CADP transaction



CADP



Use the CADP transaction to set a trigger that will start the debugger when your application runs

Log on to the CICS region where the application will run

Clear the screen, and enter CADP

3

IBM Debug Tool for z/OS tutorial

© 2012 IBM Corporation

First, log on to the CICS region where the application will run. Clear the screen, type “CADP” and press Enter.

The CADP main panel is displayed
Press F5 to create a new profile



```

CADP          - CICS Application Debugging Profile Manager - CICSACB5

All Debugging Profiles      (A=Activate, I=Inactivate, D=Delete, C=Copy)

  Owner  Profile  S Tran Program  Compile Unit  Applid  Userid  Term  Type
  ────  ────  ──  ────  ────  ────  ────  ────  ────  ────
  █ DNET161 ADC1ONLY A CDAT *      *      CICSACB5 DNET161 0078 Comp
  ─ CICSUSER CDAT      I CDAT *      *      CICSACB5 CICSUSER 0076 Comp
  ─ DBA022  CDAT      A CDAT *      *      CICSACB5 DBA022 0082 Comp
  ─ DNET161 CDATONLY I CDAT *      *      CICSACB5 DNET161 0078 Comp
  ─ DDS0515 EGUI      I EGUI *      *      CICSACB5 DDS0515 0027 Comp
  ─ ADPOT24 EPSASM   I EPSA *      *      *        ADPOT24 *    Comp
  ─ ADPOT24 EPSL     I *    EPSL03 *    CICSACB5 ADPOT24 *    Comp
  ─ DDS0481 EPSL     I *    MADL02 *    CICSACB5 *      *    Comp
  ─ DDS0515 EPSL     A *    EPSL03 *    CICSACB5 DDS0516 *    Comp
  ─ DNET215 EPSL     I *    EPSL02 *    CICSACB5 *      *    Comp
  ─ SYS029  EPSLRTMT I *    EPSL03 *    CICSACB5 *      *    Comp
  ─ ADPOT24 HCCLANG  I *    HCPHDET *    *        *      *    Comp
  ─ ADPOT24 HCDEMO   I *    HC*    *    *        *      *    Comp
  ─ DNET047 RUSS     A *    CDAT*  *    CICSACB5 DNET047 0082 Comp

14 profile(s). All profiles shown
Enter=Process PF1=Help 2=Filter 3=Exit 4=View 5=Create Comp 6=Create Java
9=Set display device 10=Edit 11=Sort
    
```

F5 = create a new profile
for compiled programs

F5

This screen is displayed, which shows a list of debugging profiles that were previously defined on the CICS system. Notice that the F5 key is set to "Create comp", which means 'create a profile for a compiled program'. Press F5 to create a new profile.

Specify the combination of resources that will trigger the debugger



```
CADP - CICS Application Debugging Profile Manager - CICSACB5
Create Compiled Debugging Profile ==> █ for DNET074

CICS Resources To Debug (use * to specify generic values e.g. *, A*, AB*, etc.)
Transaction ==>                               Applid ==> CICSACB5
Program ==>                                   Userid ==> DNET074
Compile Unit ==>                               Termid ==> Z002
                                                Netname ==> ISZ002

Debug Tool Language Environment Options
Test Level ==> All (All, Error, None)
Command File ==>
Prompt Level ==> PROMPT
Preference File ==>

Other Language Environment Options
==>
==>
==>
==>

Enter=Create PF1=Help 2=Save options as defaults 3=Exit 10=Replace 12=Return
```

Identify the trigger combination

Default values are the current CICS region, your user ID, terminal, and terminal network ID

Another screen is displayed where you can specify your debugging profile. On the top part of the screen, specify information about the application you want to debug. You can specify the transaction ID, the program, compile unit, user ID, the terminal id where the transaction will run, and other identifiers. By default, your current terminal ID and your user ID are filled in automatically. Use any combination of the resource fields to identify the conditions that, when they all occur, will trigger the debugger.

The resource combination can be specific or generic



- The debugger will trigger when all of the resource names are matched
- You can be specific about the trigger combination. For example:

```
CICS Resources To Debug (use * to specify generic values e.g. *, A*, AB*, etc.)
Transaction      ==> CDAT                      Applid  ==> CICSACB5
Program          ==> CDAT1                    Userid  ==> DNET074
Compile Unit     ==> *                       Termid  ==> Z002
                                                         Netname ==> ISZ002
```

- Or you can have a more generic combination

```
CICS Resources To Debug (use * to specify generic values e.g. *, A*, AB*, etc.)
Transaction      ==> *                      Applid  ==> *
Program          ==> X*                    Userid  ==> *
Compile Unit     ==> *                       Termid  ==> *
                                                         Netname ==> *
```

Use caution! This combination will trigger regardless of the user ID, terminal, or transaction.

An asterisk (*) is a wildcard

6

IBM Debug Tool for z/OS tutorial

© 2012 IBM Corporation

When you define the conditions to trigger the debugger, you can be very specific. In the top example, when a transaction called CDAT runs on terminal Z002, a program called CDAT1 runs, and the user is DNET074, then and only then will the debugger trigger. By being specific, you can be assured that you do not trap other people's transactions.

But you can also use a more generic combination. In the second example the debugger will start any time a program that begins with X runs. Notice that you can use asterisks as wildcards. In this example, asterisks are entered in the other fields. Since the terminal ID is an asterisk, this profile will trap programs running on any terminal, and even transactions not running on a terminal. Since the transaction ID is an asterisk, the program can be running under any transaction ID. And the blank user ID means that it will trap programs for all users. Use caution when you have a generic profile like this one, because you can trap other people's transactions, even if it is not your intention.

A trigger can be set for someone else's transactions or for background transactions



- You can debug someone else's transaction

```
CICS Resources To Debug (use * to specify generic values e.g. *, A*, AB*, etc.)
Transaction    ==> CDAT                               Applid    ==> CICSACB5
Program        ==> *                                   Userid     ==> OTHERGUY
Compile Unit   ==> CDAT1                               Termid     ==> *
                                                       Netname    ==> *
```

Debug someone else's transaction by coding their user ID or terminal or both

- To debug a background transaction, Termid and Netname must not be specified

```
CICS Resources To Debug (use * to specify generic values e.g. *, A*, AB*, etc.)
Transaction    ==> CDAT                               Applid    ==> CICSACB5
Program        ==> *                                   Userid     ==> *
Compile Unit   ==> CDAT1                               Termid     ==> *
                                                       Netname    ==> *
```

A background transaction is a transaction that does not use a 3270 terminal

7

IBM Debug Tool for z/OS tutorial

© 2012 IBM Corporation

However, you can trap someone else's transaction on purpose. In the first example, notice that the User id field has a different id. This profile would only trap transactions initiated by user "otherguy" when they run compile unit CDAT1.

You can also debug a background CICS transaction. A background transaction is a transaction that is not initiated from a CICS terminal. For example, transactions that are initiated by an external web service, and transactions initiated from MQ Series are often background transactions. Code an asterisk in the Termid field. That is all there is to it, and use any other combination of available identifiers to trap only the transaction you want.

Case sensitive fields, and specifying program names



- **Be careful! Some fields are case sensitive**
 - If the case does not match, the debugger will not trigger
 - Non-case sensitive fields convert to upper case when you press Enter
- **What is the difference between the program and compile unit?**
 - Program is the name known to CICS, such as a load module name, initial program in a transaction or a program that is XCTL'd or LINKed to.
 - Compile unit is the name known to the compiler. Examples are the COBOL PROGRAM-ID or the PL/I main PROCEDURE name.
 - They are not necessarily the same

```
CICS Resources To Debug (use * to specify generic values e.g. *, A*, AB*, etc.)
Transaction      ==> cdat                      Applid   ==> CICSACB5
Program          ==> CDAT1                    Userid   ==> DNET074
Compile Unit     ==> CDAT1                    Termid   ==> trm7
                                                         Netname  ==> ISZ002
```

8

IBM Debug Tool for z/OS tutorial

© 2012 IBM Corporation

Take some care when entering your CADP profile, because some fields are case sensitive. If the case does not match, the profile will not trigger. Other fields are not case sensitive. Your entries in these fields are converted to upper case automatically when you press enter. If you enter a lower case character into a field and it is not converted to upper case, then it is a case sensitive field.

Notice the "program" and "compile unit" fields. The "program" is the name of the program known to CICS. It is the load module, which could be the first program that runs in a transaction, or a program called with a CICS EXEC XCTL or LINK. The compile unit is the name known to the compiler. For example, the name of the COBOL "program id" or the PL/I main procedure.

Name the profile, identify the resource combination, and press Enter to save the profile



```
CADP - CICS Application Debugging Profile Manager - CICSACB5
Create Compiled Debugging Profile ==> CDATDOUG for DNET074

CICS Resources To Debug (use * to specify generic values e.g. *, A*, AB*, etc.)
Transaction ==> CDAT                               Applid ==> CICSACB5
Program ==>                                         Userid ==> DNET074
Compile Unit ==> CDAT1                             Termid ==> Z002
                                                    Netname ==> ISZ002

Debug Tool Language Environment Options
Test Level ==> All                                  (All, Error, None)
Command File ==>
Prompt Level ==> PROMPT
Preference File ==>

Other Language Environment Options
==>
==>
==>
==>

Enter=Create PF1=Help 2=Save options as defaults 3=Exit 10=Replace 12=Return
```

9 | IBM Debug Tool for z/OS tutorial | © 2012 IBM Corporation

Give your debugging profile a unique name, you can call it anything. Make up a profile name, and enter it in the field labeled: "Create compiled debugging profile". You can have as many CADP profiles as you want with different names.

Specify information about the application that you want to debug. In this example, the transaction and compile unit names are coded. The user id and Termid fields were filled in automatically with the current user and terminal.

Press Enter to create the new profile.

The profile was saved
Press F12 to return



```
CADP - CICS Application Debugging Profile Manager - CICSACB5
Create Compiled Debugging Profile ==> CDATDOUG for DNET074

CICS Resources To Debug (use * to specify generic values e.g. *, A*, AB*, etc.)
Transaction ==> CDAT Applid ==> CICSACB5
Program ==> * Userid ==> DNET074
Compile Unit ==> CDAT1 Termid ==> Z002
Netname ==> ISZ002

Debug Tool Language Environment Options
Test Level ==> All (All,Error,None)
Command File ==>
Prompt Level ==> PROMPT
Preference File ==>

Other Language Environment Options
==>
==>
==>
==>
Debugging profile created
Enter=Create PF1=Help 2=Save options as defaults 3=Exit 10=Replace 12=Return
```



The profile was created. Notice the “Debugging profile created” message. This profile is defined to trigger as soon as compile unit CDAT1 runs under transaction CDAT on terminal Z002, and the user running the transaction is DNET074.

The profile is defined, but is not yet active. Press F12 to return.

The new profile is in the list Activate it with an A line command

```

CADP          -      CICS Application Debugging Profile Manager      -      CICSACB5

All Debugging Profiles          (A=Activate, I=Inactivate, D=Delete, C=Copy)

  Owner   Profile  S  Tran  Program  Compile Unit  Applid  Userid  Term  Type
  -----  -----  -  ----  -
  DNET161 ADC1ONLY A  CDAT  *          *          CICSACB5 DNET161 0078 Comp
  - CICSUSER CDAT      I  CDAT  *          *          CICSACB5 CICSUSER 0076 Comp
  - DBA022  CDAT      A  CDAT  *          *          CICSACB5 DBA022 0082 Comp
  (A) DNET074 CDATDOUG I  CDAT  *          CDAT1      CICSACB5 DNET074 Z002 Comp
  - DNET161 CDATONLY I  CDAT  *          *          CICSACB5 DNET161 0078 Comp
  - DDS0515 EGUI      I  EGUI  *          *          CICSACB5 DDS0515 0027 Comp
  - ADPOT24 EPSASM  I  EPSA  *          *          *          ADPOT24 *      Comp
  - ADPOT24 EPSL      I  *     EPSL03 *          *          CICSACB5 ADPOT24 *      Comp
  - DDS0481 EPSL      I  *     MADL02 *          *          CICSACB5 *      *      Comp
  - DDS0515 EPSL      A  *     EPSL03 *          *          CICSACB5 DDS0516 *      *      Comp
  - DNET215 EPSL      I  *     ERSLO2 *          *          CICSACB5 *      *      Comp
  - SYS029  *          *          *          *          CICSACB5 ADPOT24 *      *      Comp
  - ADPOT24 *          *          *          *          *          ADPOT24 *      *      Comp
  - ADPOT24 HCDEMO  I  *     HC*    *          *          *          ADPOT24 *      *      Comp
  - DNET047 RUSS      A  *     CDAT*  *          *          CICSACB5 DNET047 *      *      Comp

15 profile(s)
Enter=Process PF1=Help 2=Filter 3=Exit 4=View 5=Create Comp 6=Create Java
9=Set display device 10=Edit 11=Sort
  
```

New profiles are in 'inactive' status



The new profile was created, and it appears in the list. New profiles are created with a status of “inactive”. It will not trigger until it is active. To activate a profile, type an A line command next to it, and press Enter.

When activating a profile, the display device is specified



```
CADP      -      CICS Application Debugging Profile Manager      -      CICSACB5

Set Compiled Debugging Display Device (checked at PROFILE activation time)

Debugging Display Device
Session Type      ==> 3270      (3270, TCP)
3270 Display Terminal ==> Z002

TCP/IP Name Or Address
==>
==>
==>
==>
Port              ==> 08001

Type of socket communication ==> Single      (Single, Multiple)

Display this panel on comp profile activation ==> YES

Enter=Save and return PF1=Help 3=Exit 12=Cancel
```

The debugger will display on this terminal. It defaults to your terminal ID.

When you activate a profile, this screen is shown, where you can specify where the debugger will display when it starts. By default, it fills in your current CICS terminal ID.

Specifying the debug display device



- A CICS terminal can be used

- The 3270 option displays the debugger on a CICS terminal

```
Debugging Display Device
Session Type ==> 3270
3270 Display Terminal ==> Z002

TCP/IP Name Or Address
==>
==>
==>
Port ==> 08001
```

- Or you can use a GUI debugging interface

- The TCP option connects to a remote GUI debugger at the specified TCP/IP address and port

```
Debugging Display Device
Session Type ==> TCP
3270 Display Terminal ==>

TCP/IP Name Or Address
==> 8.76.54.234
==>
==>
Port ==> 08001
```

13

IBM Debug Tool for z/OS tutorial

© 2012 IBM Corporation

You can change the display terminal to a another id, if you want the debugger to be displayed on a different terminal, instead of your current terminal. If you plan to use GUI debugging software, change the Session Type field to “TCP”, and specify the IP address of your workstation in the first field under the title “TCP/IP Name Or Address”, and specify the port number in the Port field.

For a 3270 debugging session, press Enter without any changes



```
CADP - CICS Application Debugging Profile Manager - CICSACB5
Set Compiled Debugging Display Device (checked at PROFILE activation time)

Debugging Display Device
Session Type ==> 3270 (3270, TCP)
3270 Display Terminal ==> Z002

TCP/IP Name Or Address
==>
==>
==>
Port ==> 08001

Type of socket communication ==> Single (Single, Multiple)

Display this panel on comp profile activation ==> YES

Enter=Save and return PF1=Help 3=Exit 12=Cancel
```

It defaults to your CICS terminal ID



In this example, the defaults were taken. No changes were made. Enter is pressed.

The profile is active F3 to exit



```

CADP          -      CICS Application Debugging Profile Manager      -      CICSACB5

All Debugging Profiles          (A=Activate, I=Inactivate, D=Delete, C=Copy)

  Owner   Profile  S Tran Program  Compile Unit  Applid  Userid  Term  Type
  -----  -----  - ----  -
  _ DNET161 ADC1ONLY A CDAT *          *          CICSACB5 DNET161 0078 Comp
  _ CICSUSER CDAT      I CDAT *          *          CICSACB5 CICSUSER 0076 Comp
  _ DBA022  CDAT      A CDAT *          *          CICSACB5 DBA022 0082 Comp
  █ DNET074 CDATDOUG A CDAT *          CDAT1      CICSACB5 DNET074 Z002 Comp
  _ DNET161 CDATONLY I CDAT *          *          CICSACB5 DNET161 0078 Comp
  _ DDS0515 EGUI      I EGUI *          *          CICSACB5 DDS0515 0027 Comp
  _ ADPOT24 EPSASM   I EPSA *          *          *          ADPOT24 *    Comp
  _ ADPOT24 EPSL     I *    EPSL03 *          CICSACB5 ADPOT24 *    Comp
  _ DDS0481 EPSL     I *    MADL02 *          CICSACB5 *      *    Comp
  _ DDS0515 EPSL     A *    EPSL03 *          CICSACB5 DDS0516 *    Comp
  _ DNET215 EPSL     I *    EPSL02 *          CICSACB5 *      *    Comp
  _ SYS029  EPSLRTMT I *    EPSL03 *          CICSACB5 ADPOT24 *    Comp
  _ ADPOT24 HCCLANG  I *    HCPHDET *          *          ADPOT24 *    Comp
  _ ADPOT24 HCDemo    I *    HC*    *          *          ADPOT24 *    Comp
  _ DNET047 RUSS     A *    CDAT*  *          CICSACB5 DNET047 *    mp

1 activate(s) processed
Enter=Process PF1=Help 2=Filter 3=Exit 4=View 5=Create Comp 6=Create Java
9=Set display device 10=Edit 11=Sort
  
```



The profile list is displayed again, and now the profile is in “active” status. At this point, the profile is ready. The profile will trigger the next time you run the application defined by the profile. F3 is pressed to exit.

Run the application



CDAT

This transaction runs a program that was specified in the CADP profile

Enter

16

IBM Debug Tool for z/OS tutorial

© 2012 IBM Corporation

Now, do whatever you need to do to run the application to create the conditions that will trigger the profile and start the debugger. In this case, the sample transaction CDAT is run.

The CADP profile triggered the debugger when the application ran



```
COBOL      LOCATION: CDAT1 ENTRY
Command ==>                               Scroll ==> PAGE
MONITOR  --+---1---+---2---+---3---+---4---+---5---+---6- LINE: 0 OF 0
***** TOP OF MONITOR *****
***** BOTTOM OF MONITOR *****

SOURCE:  CDAT1  --+---1---+---2---+---3---+---4---+---5---+ LINE: 2 OF 576
2  PROGRAM-ID, CDAT1.
3  *   CICS / DEBUG TOOL DEMO PROGRAM
4  *
5  *   THIS PROGRAM WILL RECEIVE A DATE AND COVERT THE DATE TO
6  *   AN INTEGER IN A CALLED PROGRAM TO DETERMINE DAYS FROM
7  *   CURRENT DATE.

LOG 0 --+---1---+---2---+---3---+---4---+---5---+ LINE: 28 OF 30
0028 IBM Debug Tool Version 10 Release 1 Mod 0
0029 12/29/2009 8:15:08 PM
0030 5655-V50: Copyright IBM Corp. 1992, 2009
PF 1: ?      2: STEP      3: QUIT      4: LIST      5: FIND      6: AT/CLEAR
PF 7: UP     8: DOWN     9: GO       10: ZOOM     11: ZOOM LOG  12: RETRIEVE
```

17

IBM Debug Tool for z/OS tutorial

© 2012 IBM Corporation

The transaction created the conditions needed to trigger the debugger, which was started automatically. From here, you can set breakpoints, monitor variables, and follow the program flow into subprograms. When the application writes messages or maps to the screen, those messages will appear. The debugger will share the screen with the application.

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
- Starting the debugger using the CADP transaction
 - Creating a CADP profile
 - Working with CADP profiles
 - Setting the current terminal ID in a CADP profile



Next, you will see how to work with your CADP profiles.

Start the CADP transaction



CADP

Enter

```
CADP - CICS Application Debugging Profile Manager - CICSACB5

All Debugging Profiles (A=Activate,I=Inactivate,D=Delete,C=Copy)

  Owner  Profile  S Tran Program  Compile Unit  Applid  Userid  Term  Type
  -----
  DNET161 ADC1ONLY A CDAT *      *      CICSACB5 DNET161 0078 Comp
  CICSUSER CDAT    I CDAT *      *      CICSACB5 CICSUSER 0076 Comp
  DBA022  CDAT    A CDAT *      *      CICSACB5 DBA022 0082 Comp
  DNET074 CDATDOUG A CDAT *      CDAT1   CICSACB5 DNET074 Z002 Comp
  DNET161 CDATONLY I CDAT *      *      CICSACB5 DNET161 0078 Comp
  DDS0515 EGUI    I EGUI *      *      CICSACB5 DDS0515 0027 Comp
  ADPOT24 EPSASM  I EPSA *      *      *        ADPOT24 *    Comp
  ADPOT24 EPSL    I *    EPSL03 *      *      CICSACB5 ADPOT24 *    Comp
  DDS0481 EPSL    I *    MADL02 *      *      CICSACB5 *      *    Comp
  DDS0515 EPSL    A *    EPSL03 *      *      CICSACB5 DDS0516 *    Comp
  DNET215 EPSL    I *    EPSL02 *      *      CICSACB5 *      *    Comp
  SYS029  EPSLRTMT I *    EPSL03 *      *      CICSACB5 ADPOT24 *    Comp
  ADPOT24 HCCLANG I *    HCPHDET *      *      *        ADPOT24 *    Comp
  ADPOT24 HCDemo  I *    HC*    *      *      *        ADPOT24 *    Comp
  DNET047 RUSS   A *    CDAT*  *      *      CICSACB5 DNET047 0082 Comp

15 profile(s). All profiles shown
Enter=Process PF1=Help 2=Filter 3=Exit 4=View 5=Create Comp 6=Create Java
9=Set display device 10=Edit 11=Sort
```

19

IBM Debug Tool for z/OS tutorial

© 2012 IBM Corporation

The CADP transaction is entered to display the list of profiles. In this example, all profiles are shown.

Use the F2 key to filter the list



CADP - CICS Application Debugging Profile Manager - CICSACB5

All Debugging Profiles (A=Activate, I=Inactivate, D=Delete, C=Copy)

| Owner | Profile | S | Tran | Program | Compile Unit | Applid | Userid | Term | Type |
|------------|----------|---|------|---------|--------------|----------|----------|------|------|
| ■ DNET161 | ADC1ONLY | A | CDAT | * | * | CICSACB5 | DNET161 | 0078 | Comp |
| - CICSUSER | CDAT | I | CDAT | * | * | CICSACB5 | CICSUSER | 0076 | Comp |
| - DBA022 | CDAT | A | CDAT | * | * | CICSACB5 | DBA022 | 0082 | Comp |
| - DNET074 | CDATDOUG | A | CDAT | * | CDAT1 | CICSACB5 | DNET074 | Z002 | Comp |
| - DNET161 | CDATONLY | I | CDAT | * | * | CICSACB5 | DNET161 | 0078 | Comp |
| - DDS0515 | EGUI | I | EGUI | * | * | CICSACB5 | DDS0515 | 0027 | Comp |
| - ADPOT24 | EPSASM | I | EPSA | * | * | * | ADPOT24 | * | Comp |
| - ADPOT24 | EPSL | I | * | EPSL03 | * | CICSACB5 | ADPOT24 | * | Comp |
| - DDS0481 | EPSL | I | * | MADL02 | * | CICSACB5 | * | * | Comp |
| - D | | | | EPSL03 | * | CICSACB5 | DDS0516 | * | Comp |
| - D | | | | EPSL02 | * | CICSACB5 | * | * | Comp |
| - S | | | | EPSL03 | * | CICSACB5 | ADPOT24 | * | Comp |
| - ADPOT24 | HCCLANG | I | * | HCPHDET | * | * | ADPOT24 | * | Comp |
| - ADPOT24 | HCDEMO | I | * | HC* | * | * | ADPOT24 | * | Comp |
| - DNET047 | RUSS | A | * | CDAT* | * | CICSACB5 | DNET047 | | |

15 profile(s). All profiles shown

Enter=Process PF1=Help 2=Filter 3=Exit 4=View 5=Create Comp 6=Create Java
9=Set display device 10=Edit 11=Sort

Annotations: A yellow box with the text "Currently all profiles are shown" has an arrow pointing to the first row of the table. A yellow box with the text "F2" has an arrow pointing to the "2=Filter" option in the command list.

20

IBM Debug Tool for z/OS tutorial

© 2012 IBM Corporation

Notice that the F2 key is set to "filter". It will change which profiles are displayed. F2 is pressed.

The list of profiles is filtered showing only those created by your user ID



```
CADP - CICS Application Debugging Profile Manager - CICSACB5
Owner Debugging Profiles (A=Activate, I=Inactivate, D=Delete, C=Copy)

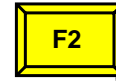
  Owner  Profile  S Tran Program  Compile Unit  Applid  Userid  Term  Type
  ────  ────  ──  ────  ────  ────  ────  ────  ────  ────
█ DNET074 CDATDOUG A CDAT *      CDAT1      CICSACB5 DNET074 Z002 Comp
```

The F2 key toggles between:

- show all
- filter by owner ID
- filter by status (show active profiles only)

1 profile(s) filtered by owner

Enter=Process PF1=Help 2=Filter 3=Exit 4=View 5=Create Comp 6=Create Java
9=Set display device 10=Edit 11=Sort



That changed the filtering of the list to display only the profiles that you created. Notice the message: "filtered by owner". F2 is pressed again.

The list of profiles is filtered showing only active profiles



CADP - CICS Application Debugging Profile Manager - CICSACB5

Active Debugging Profiles (A=Activate, I=Inactivate, D=Delete, C=Copy)

| Owner | Profile | S | Tran | Program | Compile Unit | Applid | Userid | Term | Type |
|-----------|----------|---|------|---------|--------------|----------|---------|------|------|
| ■ DNET161 | ADC1ONLY | A | CDAT | * | * | CICSACB5 | DNET161 | 0078 | Comp |
| - DBA022 | CDAT | A | CDAT | * | * | CICSACB5 | DBA022 | 0082 | Comp |
| - DNET074 | CDATDOUG | A | CDAT | * | CDAT1 | CICSACB5 | DNET074 | Z002 | Comp |
| - DDS0515 | EPSL | A | * | EPSL03 | * | CICSACB5 | DDS0516 | * | Comp |
| - DNET047 | RUSS | A | * | CDAT* | * | CICSACB5 | DNET047 | 0082 | Comp |

The F2 key toggles between:

- show all
- filter by owner ID
- filter by status (show active profiles only)

F2

5 profile(s) filtered by status

Enter=Process PF1=Help 2=Filter 3=Exit 4=View 5=Create Comp 6=Create Java
9=Set display device 10=Edit 11=Sort

Now the list is filtered by status. Profiles for all users are shown, but only those with an active status. F2 is pressed again.

The list of profiles is showing all profiles again



```

CADP - CICS Application Debugging Profile Manager - CICSACB5
All Debugging Profiles (A=Activate, I=Inactivate, D=Delete, C=Copy)

  Owner  Profile  S Tran Program  Compile Unit  Applid  Userid  Term  Type
  ────  ────  ────  ────  ────  ────  ────  ────  ────
  █ DNET161 ADC1ONLY A CDAT * * CICSACB5 DNET161 0078 Comp
  ─ CICSUSER CDAT I CDAT * * CICSACB5 CICSUSER 0076 Comp
  ─ DBA022 CDAT A CDAT * * CICSACB5 DBA022 0082 Comp
  ─ DNET074 CDATDOUG A CDAT * CDAT1 CICSACB5 DNET074 Z002 Comp
  ─ DNET161 CDATONLY I CDAT * * CICSACB5 DNET161 0078 Comp
  ─ DDS0515 EGUI I EGUI * * CICSACB5 DDS0515 0027 Comp
  ─ ADPOT24 EPSASM I EPS * * CICSACB5 ADPOT24 * Comp
  ─ ADPOT24 EPSL I * * * * ADPOT24 * Comp
  ─ DDS0481 EPSL I * * * * ADPOT24 * Comp
  ─ DDS0515 EPSL A * * * * ADPOT24 * Comp
  ─ DNET215 EPSL I * * * * ADPOT24 * Comp
  ─ SYS029 EPSLRTMT I * EPSL03 * * CICSACB5 ADPOT24 * Comp
  ─ ADPOT24 HCCLANG I * HCPHDET * * * ADPOT24 * Comp
  ─ ADPOT24 HCDemo I * HC* * * * ADPOT24 * Comp
  ─ DNET047 RUSS A * CDAT* * * CICSACB5 DNET047 0082 Comp

15 profile(s). All profiles shown
Enter=Process PF1=Help 2=Filter 3=Exit 4=View 5=Create Comp 6=Create Java
9=Set display device 10=Edit 11=Sort
    
```

The F2 key toggles between:
 - show all
 - filter by owner ID
 - filter by status (show active profiles only)

15 profile(s). All profiles shown

That changed the filtering back to all profiles again. The F2 key toggles the list filter between all profiles, only profiles created by you (based on your user id), and only those profiles with an active status.

Use the F11 key to sort the list



CADP - CICS Application Debugging Profile Manager - CICSACB5

All Debugging Profiles (A=Activate, I=Inactivate, D=Delete, C=Copy)

| Owner | Profile | S | Tran | Program | Compile Unit | Applid | Userid | Term | Type |
|------------|----------|---|------|---------|--------------|----------|----------|------|------|
| ■ DNET161 | ADC1ONLY | A | CDAT | * | * | CICSACB5 | DNET161 | 0078 | Comp |
| - CICSUSER | CDAT | I | CDAT | * | * | CICSACB5 | CICSUSER | 0076 | Comp |
| - DBA022 | CDAT | A | CDAT | * | * | CICSACB5 | DBA022 | 0082 | Comp |
| - DNET074 | CDATDOUG | A | CDAT | * | CDAT1 | CICSACB5 | DNET074 | Z002 | Comp |
| - DNET161 | CDATONLY | I | CDAT | * | * | CICSACB5 | DNET161 | 0078 | Comp |
| - DDS0515 | EGUI | I | EGUI | * | * | CICSACB5 | DDS0515 | 0027 | Comp |
| - ADPOT24 | EPSASM | I | EPSA | * | * | CICSACB5 | ADPOT24 | * | Comp |
| - ADPOT24 | EPSL | I | * | EPSL03 | * | CICSACB5 | ADPOT24 | * | Comp |
| - DDS0481 | EPSL | I | * | MADL02 | * | CICSACB5 | DDS0481 | * | Comp |
| - DDS0515 | EPSL | A | * | EPSL03 | * | CICSACB5 | DDS0515 | * | Comp |
| - DNET215 | EPSL | I | * | EPSL02 | * | CICSACB5 | DNET215 | * | Comp |
| - SYS029 | EPSLRTMT | I | * | EPSL03 | * | CICSACB5 | ADPOT24 | * | Comp |
| - ADPOT24 | HCCLANG | I | * | HCPHDET | * | CICSACB5 | ADPOT24 | * | Comp |
| - ADPOT24 | HCDEMO | I | * | HC* | * | CICSACB5 | ADPOT24 | * | Comp |
| - DNET047 | RUSS | A | * | CDAT* | * | CICSACB5 | DNET047 | * | Comp |

15 profile(s). All profiles shown

Enter=Process PF1=Help 2=Filter 3=Exit 4=View 5=Create Comp 6=Create Java
9=Set display device 10=Edit 11=Sort

Currently sorted by profile name

F11

You can also sort the profiles. Notice that the F11 key is set to "sort". The list is currently sorted by profile name. F11 is pressed.

The list of profiles sorted by transaction ID



CADP - CICS Application Debugging Profile Manager - CICSACB5

All Debugging Profiles (A=Activate, I=Inactivate, D=Delete, C=Copy)

| Owner | Profile | S | Tran | Program | Compile Unit | Applid | Userid | Term | Type |
|----------|----------|-----|------|---------|--------------|----------|---------|------|------|
| ADPOT24 | EPSL | I * | EP | EP | EP | CICSACB5 | ADPOT24 | * | Comp |
| ADPOT24 | HCCLANG | I * | HC | HCPHDET | * | * | ADPOT24 | * | Comp |
| ADPOT24 | HCDEMO | I * | HC | HC* | * | * | ADPOT24 | * | Comp |
| DDS0481 | EPSL | I * | MADL | MADL02 | * | CICSACB5 | * | * | Comp |
| DDS0515 | EPSL | A * | EP | EP | EP | CICSACB5 | DDS0515 | * | Comp |
| DNET047 | RUSS | A * | CDAT | CDAT* | * | CICSACB5 | DNET047 | 0082 | Comp |
| DNET215 | EPSL | I * | EP | EP | EP | CICSACB5 | DNET215 | 0078 | Comp |
| SYS029 | EP | I * | EP | EP | EP | CICSACB5 | SYS029 | 0027 | Comp |
| CICSUSER | CDAT | I | CDAT | CDAT * | * | | | | |
| DBA022 | CDAT | A | CDAT | CDAT * | * | | | | |
| DNET074 | CDATDOUG | A | CDAT | CDAT * | CDAT1 | | | | |
| DNET161 | ADC1ONLY | A | CDAT | CDAT * | * | | | | |
| DNET161 | CDATONLY | I | CDAT | CDAT * | * | CICSACB5 | DNET161 | 0078 | Comp |
| DDS0515 | EGUI | I | EGUI | EGUI * | * | CICSACB5 | DDS0515 | 0027 | Comp |
| ADPOT24 | EPSASM | I | EPSA | EPSA * | * | * | ADPOT24 | * | Comp |

Sorted by Tranid

Enter=Process PF1=Help 2=Filter 3=Exit 4=View 5=Create Comp 6=Create Java
9=Set display device 10=Edit 11=Sort

The F11 key toggles between:
 - sort by profile
 - sort by tran
 - sort by program
 - sort by owner

Sorted by Tranid

Now the list is sorted by transaction id. You can use the F11 key to toggle the sort order by profile, transaction, program, and owner.

Place your cursor next to a profile,
and use the F10 key to edit it



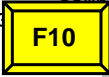
CADP - CICS Application Debugging Profile Manager - CICSACB5

All Debugging Profiles (A=Activate, I=Inactivate, D=Delete, C=Copy)

| Owner | Profile | S | Tran | Program | Compile Unit | Applid | Userid | Term | Type |
|----------|----------|---|------|---------|--------------|----------|----------|------|------|
| DNET161 | ADC1ONLY | A | CDAT | * | * | CICSACB5 | DNET161 | 0078 | Comp |
| CICSUSER | CDAT | I | CDAT | * | * | CICSACB5 | CICSUSER | 0076 | Comp |
| DBA022 | CDAT | A | CDAT | * | * | CICSACB5 | DBA022 | 0082 | Comp |
| DNET074 | CDATDOUG | A | CDAT | * | CDAT1 | CICSACB5 | DNET074 | Z002 | Comp |
| DNET161 | CDATONLY | I | CDAT | * | * | CICSACB5 | DNET161 | 0078 | Comp |
| DDS0515 | EGUI | I | EGUI | * | * | CICSACB5 | DDS0515 | 0027 | Comp |
| ADPOT24 | EPSASM | I | EPSA | * | * | * | ADPOT24 | * | Comp |
| ADPOT24 | EPSL | I | * | EPSL03 | * | CICSACB5 | ADPOT24 | * | Comp |
| DDS0481 | EPSL | I | * | MADL02 | * | CICSACB5 | * | * | Comp |
| DDS0515 | EPSL | A | * | EPSL03 | * | CICSACB5 | DDS0516 | * | Comp |
| DNET215 | EPSL | I | * | EPSL02 | * | CICSACB5 | * | * | Comp |
| SYS029 | EPSLRTMT | I | * | EPSL03 | * | CICSACB5 | ADPOT24 | * | Comp |
| ADPOT24 | HCCLANG | I | * | HCPHDET | * | * | ADPOT24 | * | Comp |
| ADPOT24 | HCDEMO | I | * | HC* | * | * | ADPOT24 | * | Comp |
| DNET047 | RUSS | A | * | CDAT* | * | CICSACB5 | DNET047 | | |

Sorted by Profile

Enter=Process PF1=Help 2=Filter 3=Exit 4=View 5=Create Comp 6=Create Java
9=Set display device 10=Edit 11=Sort



Use the F10 key to edit a profile. Place your cursor next to the profile you want to view or update, and press F10.

Make any changes needed to the profile Press F10 to update



```
CADP - CICS Application Debugging Profile Manager - CICSACB5

Create Compiled Debugging Profile ==> CDATDOUG for DNET074
activated by DNET074

CICS Resources To Debug (use * to specify generic values e.g. *, A*, AB*, etc.
to 0054
Transaction ==> CDAT Applid ==> CICSACB5
Program ==> * Userid ==> DNET074
Compile Unit ==> CDAT1 Termid ==> Z002
Netname ==> ISZ002

Debug Tool Language Environment Options
Test Level ==> All (All,Error,None)
Command File ==>
Prompt Level ==> PROMPT
Preference File ==> DNET074.ADLAB.FILES(DTPREF2)

Other Language Environment Options
==>
==>
==>
==>

Enter=Create PF1=Help 2=Save options as defaults 3=Exit 10=Replace 12=Return
```

In this example, a preferences file (a script that runs when the debugger starts) is specified

```
-IPT- BROWSE DNET074.ADLAB.FILES(DTPREF2) - 01.01
Command ==>
***** Top of Data *****
SET DEFAULT SCROLL CSR ;
SET AUTOMONITOR ON BOTH;
SET WARNING OFF;
SET TEST ERROR;
SET DEFAULT LISTINGS(TEST.SYSDEBUG, PROD.SYSDEBUG );
SET PF16 "MONITOR" = MONITOR LOCAL %CU LIST CURSOR ;
***** Bottom of Data *****
```

F10

That displayed the profile, and you can change the settings as needed.

Notice the "Debug Tool Language Environment Options" in the middle of the screen. In this area you can specify sub-options for the TEST option that is passed to LE automatically to start Debug Tool when the conditions in the profile are matched.

You can run a script by entering the name of a script file in either the "preference file" or "command file" fields. In this example, a preference file is specified. When the debugger starts, the script will run automatically. After the script completes, the debugger will be displayed. F10 is pressed to replace the profile.

The changes to the profile were saved



```
CADP      -      CICS Application Debugging Profile Manager      -      CICSACB5

Create Compiled Debugging Profile ==> CDATDOUG  for DNET074
activated by DNET074

CICS Resources To Debug (use * to specify generic values e.g. *, A*, AB*, etc.)
Transaction      ==> CDAT                               Applid ==> CICSACB5
Program          ==> *                                 Userid  ==> DNET074
Compile Unit     ==> CDAT1                             Termid  ==> Z002
                                                         Netname ==> ISZ002
                                                         to 0054

Debug Tool Language Environment Options
Test Level       ==> All                               (All,Error,None)
Command File     ==>
Prompt Level     ==> PROMPT
Preference File  ==> DNET074.ADLAB.FILES(DTPREF2)

Other Language Environment Options
==>
==>
==>
==>
Debugging profile replaced
Enter=Create PF1=Help 2=Save options as defaults 3=Exit 10=Replace 12=Return
```



28

IBM Debug Tool for z/OS tutorial

© 2012 IBM Corporation

The profile was replaced. Press F12 to return.

Returned to the list of profiles
F3 to exit



CADP - CICS Application Debugging Profile Manager - CICSACB5

All Debugging Profiles (A=Activate, I=Inactivate, D=Delete, C=Copy)

| Owner | Profile | S | Tran | Program | Compile Unit | Applid | Userid | Term | Type |
|----------|----------|---|------|---------|--------------|----------|----------|------|------|
| DNET161 | ADC1ONLY | A | CDAT | * | * | CICSACB5 | DNET161 | 0078 | Comp |
| CICSUSER | CDAT | I | CDAT | * | * | CICSACB5 | CICSUSER | 0076 | Comp |
| DBA022 | CDAT | A | CDAT | * | * | CICSACB5 | DBA022 | 0082 | Comp |
| DNET074 | CDATDOUG | A | CDAT | * | CDAT1 | CICSACB5 | DNET074 | Z002 | Comp |
| DNET161 | CDATONLY | I | CDAT | * | * | CICSACB5 | DNET161 | 0078 | Comp |
| DDS0515 | EGUI | I | EGUI | * | * | CICSACB5 | DDS0515 | 0027 | Comp |
| ADPOT24 | EPSASM | I | EPSA | * | * | * | ADPOT24 | * | Comp |
| ADPOT24 | EPSL | I | * | EPSL03 | * | CICSACB5 | ADPOT24 | * | Comp |
| DDS0481 | EPSL | I | * | MADL02 | * | CICSACB5 | * | * | Comp |
| DDS0515 | EPSL | A | * | EPSL03 | * | CICSACB5 | DDS0516 | * | Comp |
| DNET215 | EPSL | I | * | EPSL02 | * | CICSACB5 | * | * | Comp |
| SYS029 | EPSLRTMT | I | * | EPSL03 | * | CICSACB5 | ADPOT24 | * | Comp |
| ADPOT24 | HCCLANG | I | * | HCPHDET | * | * | ADPOT24 | * | Comp |
| ADPOT24 | HCDEMO | I | * | HC* | * | * | ADPOT24 | * | Comp |
| DNET047 | RUSS | A | * | CDAT* | * | CICSACB5 | DNET047 | | |

15 profile(s)
Enter=Process PF1=Help 2=Filter 3=Exit 4=View 5=Create Comp 6=Create Java
9=Set display device 10=Edit 11=Sort



The profile list is displayed again. Press F3 to exit from CADP. The next time a transaction runs that matches the profile, the debugger will be started.

Profile retention and tie-breaking



- How long is a CADP profile retained?
 - Profiles are retained until they are explicitly deleted

- What if multiple profiles match an application?
 - The oldest profile is used

30

IBM Debug Tool for z/OS tutorial

© 2012 IBM Corporation

When you enter a profile, it is retained permanently until you delete it. Even after CICS regions are restarted.

When a program runs in CICS, it is possible that the conditions can match more than one profile. If that happens, the oldest profile triggers, and all other profiles are ignored.

Defining a profile in a multi-region CICS environment

- If a profile is defined on a terminal owning region (TOR), is it active in the application owning region (AOR) where the application will run?
 - If the CADP profile repository file is shared between multiple CICS regions, a profile entered on one region is also active on all other sharing regions
 - If the CADP profile repository file is not shared, then a profile is only active on the CICS region where it is entered
 - Sharing the CADP profile repository file among multiple CICS regions is controlled by the installer

It is not unusual for CICS regions to be configured to work together. A common configuration is for one CICS region to serve as a terminal owning region, or TOR. Your CICS terminal connects to the TOR. But programs run on different regions, called application owning regions, or AORs.

The person who installs Debug Tool can configure the system so that the CADP profile repository is shared between CICS regions. If that is done, you can define CADP profiles in the TOR, and the debugger will still trigger for programs running in AORs.

However, if the profiles are not shared, then a profile is only active in the region where it is entered.

The installer decides whether CADP profiles are shared between CICS regions.

- Is it necessary to route (using a CRTE transaction) to the region where the application will run before debugging?
 - You can be connected to a terminal-owning region (TOR) and debug a program or transaction running in an application-owning region (AOR), if both of the following have been configured:
 1. The CADP repository is shared between the TOR and the AOR
 2. The CICS administrator has installed a CICS "terminal not found" exit in the AOR
 - The exit allows the debugger (running in the AOR) to display on your terminal in the TOR
 - Note: when using a remote GUI debugger, the "terminal not found" exit is not needed
 - If either of the above requirements is not configured, then you must either:
 - Log on directly to the region where the application will run, or
 - Connect to the application region using a CRTE transaction
 - For example, after connecting to the TOR, clear the screen and enter: CRTE SYSID=ABCD (where ABCD is the CICS ID of the AOR)

On some systems you can enter your CADP profile in the terminal owning region, and the debugger will trigger even if the target program runs in a different CICS region. But on other systems, you must log on directly to the application region, or route to the application region where the program will run, before defining your CADP profile. You can route from one region to another with the CICS "CRTE" transaction.

Whether you need to route or not depends on how the person who installed Debug Tool configured it on your system. If the CADP repository is shared between the various CICS regions, then you do not need to route to the region where the application will run before creating your CADP profile. To complete the shared repository configuration, the installer must also install a CICS "terminal not found" exit if you plan to use the 3270 terminal debugging interface.

If the repository is shared, you can define your profile in the terminal owning region, and it will trigger even when the program runs in a different region. If the repository is not shared, you must route or log on to the application region before defining your CADP profile. Ask your system programmer or help desk if the CADP repository is shared in your CICS systems.

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
- Starting the debugger using the CADP transaction
 - Creating a CADP profile
 - Working with CADP profiles
 - Setting the current terminal ID in a CADP profile



Next, you will see how to update a CADP profile to refer to a new terminal.

Change the terminal ID in your profile if it has changed



- When you log off and back on to CICS, your terminal ID may change
 - The terminal IDs in your profile will not match your new terminal ID
- This example shows how to update the profile with your new terminal ID

When you log off and back on to CICS, your terminal id may change, and your new terminal id will not match the terminal id in your profile. This example shows how to update your existing profile with your new terminal id.

Start the CADP transaction



CADP

Enter

```
CADP - CICS Application Debugging Profile Manager - CICSACB5

All Debugging Profiles (A=Activate, I=Inactivate, D=Delete, C=Copy)

  Owner  Profile  S Tran Program  Compile Unit  Applid  Userid  Term  Type
  -----
  DNET161 ADC1ONLY A CDAT *      *      CICSACB5 DNET161 0078 Comp
  CICSUSER CDAT    I CDAT *      *      CICSACB5 CICSUSER 0076 Comp
  DBA022  CDAT    A CDAT *      *      CICSACB5 DBA022 0082 Comp
  DNET074 CDATDOUG A CDAT *      CDAT1   CICSACB5 DNET074 Z002 Comp
  DNET161 CDATONLY I CDAT *      *      CICSACB5 DNET161 0078 Comp
  DDS0515 EGUI    I EGUI *      *      CICSACB5 DDS0515 0027 Comp
  ADPOT24 EPSASM  I EPSA *      *      *        ADPOT24 *    Comp
  ADPOT24 EPSL    I *    EPSL03 *      *      CICSACB5 ADPOT24 *    Comp
  DDS0481 EPSL    I *    MADL02 *      *      CICSACB5 *      *    Comp
  DDS0515 EPSL    A *    EPSL03 *      *      CICSACB5 DDS0516 *    Comp
  DNET215 EPSL    I *    EPSL02 *      *      CICSACB5 *      *    Comp
  SYS029  EPSLRTMT I *    EPSL03 *      *      CICSACB5 ADPOT24 *    Comp
  ADPOT24 HCCLANG I *    HCPHDET *      *      *        ADPOT24 *    Comp
  ADPOT24 HCDemo  I *    HC*    *      *      *        ADPOT24 *    Comp
  DNET047 RUSS   A *    CDAT*  *      *      CICSACB5 DNET047 0082 Comp

15 profile(s). All profiles shown
Enter=Process PF1=Help 2=Filter 3=Exit 4=View 5=Create Comp 6=Create Java
9=Set display device 10=Edit 11=Sort
```

35

IBM Debug Tool for z/OS tutorial

© 2012 IBM Corporation

In this example, a CADP profile was created. Then later, the user logged off of CICS. And then some time after that the user logged back on. The CADP transaction is entered, and the profile list is displayed.

Place your cursor next to the profile, and use the F9 key to update the debug display terminal

```

CADP          -      CICS Application Debugging Profile Manager      -      CICSACB5

All Debugging Profiles          (A=Activate, I=Inactivate, D=Delete, C=Copy)

  Owner   Profile  S Tran Program  Compile Unit  Applid  Userid  Term  Type
  -----  -----  - ----  -
  DNET161 ADC1ONLY A CDAT *      *          CICSACB5 DNET161 0078 Comp
  CICSUSER CDAT      I CDAT *      *          CICSACB5 CICSUSER 0076 Comp
  DBA022   CDAT      A CDAT *      *          CICSACB5 DBA022 0082 Comp
  DNET074 CDATDOUG A CDAT *      CDAT1     CICSACB5 DNET074 Z002 Comp
  DNET161 CDATONLY I CDAT *      *          CICSACB5 DNET161 0078 Comp
  DDS0515 EGUI      I EGUI *      *          CICSACB5 DDS0515 0027 Comp
  ADPOT24 EPSASM   I EPSA *      *          *         ADPOT24 *   Comp
  ADPOT24 EPSL     I *     EPSL03 *      *          CICSACB5 ADPOT24 *   Comp
  DDS0481 EPSL     I *     MADL02 *      *          CICSACB5 *     *   Comp
  DDS0515 EPSL     A *     EPSL03 *      *          CICSACB5 DDS0516 *   Comp
  DNET215 EPSL     I *     EPSL02 *      *          CICSACB5 *     *   Comp
  SYS029  EPSLRMT I *     EPSL03 *      *          CICSACB5 ADPOT24 *   Comp
  ADPOT24 HCCLANG I *     HCPHDET *      *          *         ADPOT24 *   Comp
  ADPOT24 HCDEMO  I *     HC*     *      *          *         ADPOT24 *   Comp
  DNET047 RUSS    A *     CDAT*   *      *          CICSACB5 DNET047 00

15 profile(s)
Enter=Process PF1=Help 2=Filter 3=Exit 4=View 5=Create Comp 6=Create Java
9=Set display device 10=Edit 11=Sort
  
```

Notice that the F9 key is set to "set display device". The cursor is placed next to the old profile, and F9 is pressed.

The debugger display terminal is changed to your current terminal ID



```
CADP - CICS Application Debugging Profile Manager - CICSACB5
Set Compiled Debugging Display Device (checked at PROFILE activation time)

Debugging Display Device
Session Type ==> 3270 (3270, TCP)
3270 Display Terminal ==> 0054
TCP/IP Name Or Address
==>
==>
==>
Port ==> 08001
Type of socket communication ==> Single (Single, Multiple)
Display this panel on comp profile activation ==> YES

Enter=Save and return PF1=Help 3=Exit 12=Cancel
```

The debugger will display on this terminal

Note your new terminal ID



That changed the display terminal in the profile to the current terminal. Notice that the current terminal id is '0054'. Enter is pressed to continue.

The change to the profile was saved
Press F10 to edit the profile



CADP - CICS Application Debugging Profile Manager - CICSACB5

All Debugging Profiles (A=Activate, I=Inactivate, D=Delete, C=Copy)

| Owner | Profile | S | Tran | Program | Compile Unit | Applid | Userid | Term | Type |
|----------|----------|---|------|---------|--------------|----------|----------|------|------|
| DNET161 | ADC1ONLY | A | CDAT | * | * | CICSACB5 | DNET161 | 0078 | Comp |
| CICSUSER | CDAT | I | CDAT | * | * | CICSACB5 | CICSUSER | 0076 | Comp |
| DBA022 | CDAT | A | CDAT | * | * | CICSACB5 | DBA022 | 0082 | Comp |
| DNET074 | CDATDOUG | A | CDAT | * | CDAT1 | CICSACB5 | DNET074 | Z002 | Comp |
| DNET161 | CDATONLY | I | CDAT | * | * | CICSACB5 | DNET161 | 0078 | Comp |
| DDS0515 | EGUI | I | EGUI | * | * | CICSACB5 | DDS0515 | 0027 | Comp |
| ADPOT24 | EPSASM | I | EPSA | * | * | * | ADPOT24 | * | Comp |
| ADPOT24 | EPSL | I | * | EPSL03 | * | CICSACB5 | ADPOT24 | * | Comp |
| DDS0481 | EPSL | I | * | MADL02 | * | CICSACB5 | * | * | Comp |
| DDS0515 | EPSL | A | * | EPSL03 | * | CICSACB5 | DDS0516 | * | Comp |
| DNET215 | EPSL | I | * | EPSL02 | * | CICSACB5 | * | * | Comp |
| SYS029 | EPSLRTMT | I | * | EPSL03 | * | CICSACB5 | ADPOT24 | * | Comp |
| ADPOT24 | HCCLANG | I | * | HCPHDET | * | * | ADPOT24 | * | Comp |
| ADPOT24 | HCDEMO | I | * | HC* | * | * | ADPOT24 | * | Comp |
| DNET047 | RUSS | A | * | CDAT* | * | CICSACB5 | DNET047 | 00 | |

Debugging display device saved

Enter=Process PF1=Help 2=Filter 3=Exit 4=View 5=Create Comp 6=Create Java
9=Set display device 10=Edit 11=Sort



The profile list is displayed again. Notice the message: "debugging display device saved". That changed the display device, but not the terminal id where the transaction must run to match the profile. The cursor is still next to the profile, and the "edit" key, F10, is pressed.

The profile is displayed



```
CADP - CICS Application Debugging Profile Manager - CICSACB5

Create Compiled Debugging Profile ==> CDATDOUG for DNET074
activated by DNET074

CICS Resources To Debug (use * to specify generic values e.g. *, A*, AB*, etc.)
Transaction ==> CDAT Applid ==> CICSACB5 to 0054
Program ==> * Userid ==> DNET074
Compile Unit ==> CDAT1 Termid ==> Z002
Netname ==> ISZ002

Debug Tool Language Environment Options
Test Level ==> All (All, Error, None)
Command File ==>
Prompt Level ==> PROMPT
Preference File ==> DNET074.ADLAB.FILES (DTPREF2)

Other Language Environment Options
==>
==>
==>
==>

Enter=Create PF1=Help 2=Save options as defaults 3=Exit 10=Replace 12=Return
```

The old termid and netname are still being used to identify the transaction to debug

The profile settings are displayed. The Termid is still set to the old terminal.

Change the Termid and Netname in the profile, and press F10 to update



```
CADP - CICS Application Debugging Profile Manager - CICSACB5

Create Compiled Debugging Profile ==> CDATDOUG for DNET074
activated by DNET074

CICS Resources To Debug (use * to specify generic values e.g. *, A*, AB*, etc.)
Transaction ==> CDAT Applid ==> CICSACB5
Program ==> * Userid ==> DNET074
Compile Unit ==> CDAT1 Termid ==> 0054
Netname ==> *

Debug Tool Language Environment Options
Test Level ==> All (All, Error, None)
Command File ==>
Prompt Level ==> PROMPT
Preference File ==> DNET074.ADLAB.FILES (DTPREF2)

Other Language Environment Options
==>
==>
==>
==>

Enter=Create PF1=Help 2=Save options as defaults 3=Exit 10=Replace 12=Return
```



Overtyping the Termid with the current terminal. Also, change the netname field to asterisk. The netname is the VTAM® network name of the terminal, and is not typically needed. But if it is left unchanged, it will not match. F10 is pressed to replace the profile.

The updates were saved



```
CADP - CICS Application Debugging Profile Manager - CICSACB5

Create Compiled Debugging Profile ==> CDATDOUG for DNET074
activated by DNET074

CICS Resources To Debug (use * to specify generic values e.g. *, A*, AB*, etc.)
Transaction ==> CDAT Applid ==> CICSACB5 to 0054
Program ==> * Userid ==> DNET074
Compile Unit ==> CDAT1 Termid ==> 0054
Netname ==> *

Debug Tool Language Environment Options
Test Level ==> All (All,Error,None)
Command File ==>
Prompt Level ==> PROMPT
Preference File ==> DNET074.ADLAB.FILES(DTPREF2)

Other Language Environment Options
==>
==>
==>
==>
Debugging profile replaced
Enter - Create PF1=Help 2=Save options as defaults 3=Exit 10=Replace 12=Return
```



The profile was replaced. Press F12 to return.

Returned to the list of profiles
F3 to exit



CADP - CICS Application Debugging Profile Manager - CICSACB5

All Debugging Profiles (A=Activate, I=Inactivate, D=Delete, C=Copy)

| Owner | Profile | S | Tran | Program | Compile Unit | Applid | Userid | Term | Type |
|----------|----------|---|------|---------|--------------|----------|----------|------|------|
| DNET161 | ADC1ONLY | A | CDAT | * | * | CICSACB5 | DNET161 | 0078 | Comp |
| CICSUSER | CDAT | I | CDAT | * | * | CICSACB5 | CICSUSER | 0076 | Comp |
| DBA022 | CDAT | A | CDAT | * | * | CICSACB5 | DBA022 | 0082 | Comp |
| DNET074 | CDATDOUG | A | CDAT | * | CDAT1 | CICSACB5 | DNET074 | 0054 | Comp |
| DNET161 | CDATONLY | I | CDAT | * | * | CICSACB5 | DNET161 | 0078 | Comp |
| DDS0515 | EGUI | I | EGUI | * | * | CICSACB5 | DDS0515 | 0027 | Comp |
| ADPOT24 | EPSASM | I | EPSA | * | * | * | ADPOT24 | * | Comp |
| ADPOT24 | EPSL | I | * | EPSL03 | * | CICSACB5 | ADPOT24 | * | Comp |
| DDS0481 | EPSL | I | * | MADL02 | * | CICSACB5 | * | * | Comp |
| DDS0515 | EPSL | A | * | EPSL03 | * | CICSACB5 | DDS0516 | * | Comp |
| DNET215 | EPSL | I | * | EPSL02 | * | CICSACB5 | * | * | Comp |
| SYS029 | EPSLRTMT | I | * | EPSL03 | * | CICSACB5 | ADPOT24 | * | Comp |
| ADPOT24 | HCCLANG | I | * | HCPHDET | * | * | ADPOT24 | * | Comp |
| ADPOT24 | HCDEMO | I | * | HC* | * | * | ADPOT24 | * | Comp |
| DNET047 | RUSS | A | * | CDAT* | * | CICSACB5 | DNET047 | 00 | |

15 profile(s)

Enter=Process PF1=Help 2=Filter 3=Exit 4=View 5=Create Comp 6=Create Java
9=Set display device 10=Edit 11=Sort



And press F3 to exit from CADP. Now you can run the target program from your terminal to create the causes to match the profile and start the debugger.

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

Feedback



Your feedback is valuable

You can help improve the quality of IBM Education Assistant content to better meet your needs by providing feedback.

- Did you find this module useful?
- Did it help you solve a problem or answer a question?
- Do you have suggestions for improvements?

Click to send email feedback:

mailto:iea@us.ibm.com?subject=Feedback_about_DTv12s24CICSUsingCADP.ppt

This module is also available in PDF format at: [../DTv12s24CICSUsingCADP.pdf](.../DTv12s24CICSUsingCADP.pdf)

You can help improve the quality of IBM Education Assistant content by providing feedback.



Trademarks, copyrights, and disclaimers

IBM, the IBM logo, ibm.com, CICS, VTAM, z/OS, and zSeries 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 other IBM trademarks is available on the web at "[Copyright and trademark information](http://www.ibm.com/legal/copytrade.shtml)" at <http://www.ibm.com/legal/copytrade.shtml>

Other company, product, or service names may be trademarks or service marks of others.

THE INFORMATION CONTAINED IN THIS PRESENTATION IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. WHILE EFFORTS WERE MADE TO VERIFY THE COMPLETENESS AND ACCURACY OF THE INFORMATION CONTAINED IN THIS PRESENTATION, IT IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. IN ADDITION, THIS INFORMATION IS BASED ON IBM'S CURRENT PRODUCT PLANS AND STRATEGY, WHICH ARE SUBJECT TO CHANGE BY IBM WITHOUT NOTICE. IBM SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES ARISING OUT OF THE USE OF, OR OTHERWISE RELATED TO, THIS PRESENTATION OR ANY OTHER DOCUMENTATION. NOTHING CONTAINED IN THIS PRESENTATION IS INTENDED TO, NOR SHALL HAVE THE EFFECT OF, CREATING ANY WARRANTIES OR REPRESENTATIONS FROM IBM (OR ITS SUPPLIERS OR LICENSORS), OR ALTERING THE TERMS AND CONDITIONS OF ANY AGREEMENT OR LICENSE GOVERNING THE USE OF IBM PRODUCTS OR SOFTWARE.

© Copyright International Business Machines Corporation 2012. All rights reserved.