IBM WebSphere Transformation Extender

CICS Adapter

Version 8.1

Note
Before using this information, be sure to read the general information in "Notices" on page 13.

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This edition of this document applies to WebSphere Transformation Extender, 8.1 and to all subsequent releases and modifications until otherwise indicated in new editions.

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Chapter 1. CICS Adapter overview

The Customer Information Control System (CICS) adapter allows you to retrieve CICS screen data without the difficulties associated with 3270 ″screen scraping.″ Using the CICS adapter with type trees generated from BMS maps you can easily send data to and retrieve data from CICS transactions.

For more information about CICS transactions see the following Web sites:

- http://www.ibm.com/software/ts/cics/library/cicstsforos390.html (CICS Transaction Server for OS/390 Version 1.3 External Interfaces Guide (SC33-1944))
- http://www.redbooks.ibm.com (CICS Transaction Server for OS/390 Version 1 Release 3 Web Support and 3270 Bridge (SG24-5480))

System requirements

The minimum system requirements and operating system requirements for the CICS adapter are detailed in the release notes. It is assumed that a WebSphere Transformation Extender has already been installed on the computer where the adapter is to be installed for runtime purposes.

In addition, the following requirements are necessary to use the CICS adapter:

- A correctly installed and configured CICS TCP/IP system
- IBM supplied (TCP/IP Port) *Listener*
- IBM supplied 3270 Bridge transaction

Chapter 2. Command alias

Adapter commands can be specified by using a command string on the command line or creating a command file that contains adapter commands. The execution command syntax is:

-IM[*alias*] *card_num*
-OM[*alias*] *card_num*

where `-IM` is the Input Source Override execution command and `-OM` is the Output Target Override execution command, *alias* is the adapter alias, and *card_num* is the number of the input or output card. The following table shows the adapter alias and its execution command.

Adapter	Alias	As Input	As Output
CICS	CICS	**-IMCICS***card_num*	**-OMCICS***card_num*

Chapter 3. CICS Adapter commands

The following table lists valid commands for the CICS Adapter, the command syntax, and whether the command is supported (✓) for use with data sources, targets, or both.

Command	Syntax	Source	Target
Bridge Facility Like (-BFL)	-BFL *terminal_id*	✓	✓
Bridge Keep Time (-BKT)	-BKT *time*	✓	✓
Driver Transaction Name (-DT)	-DT *tran_name*	✓	✓
Host (-HOST)	-HOST *host_name*	✓	✓
Password (-PW)	-PW *password*	✓	✓
Port (-PORT)	-PORT *port_number*	✓	✓
Service (-SERVICE)	-SERVICE *service*	✓	✓
Timeout (-TIMEOUT)	-TIMEOUT *milliseconds*	✓	✓
Trace (-T)	-T[E][+][*filename*]	✓	✓
Transaction Name (-TRAN)	-TRAN *tran_name*	✓	✓
User ID (-UID)	-UID *user_id*	✓	✓

Bridge Facility Like (-BFL)

Use the Bridge Facility Like adapter command (`-BFL`) to specify the four character name of the terminal type. This terminal type is defined by the `FACILITYLIKE` parameter of the **PROFILE** associated with the transaction.

This is an optional command.

`-BFL` *`terminal_id`*

For example:

`-BFL` *`cujo`*

Where *cujo* is the four character name of the terminal type.

Bridge Keep Time (-BKT)

Use the Bridge Keep Time adapter command (`-BKT`) to specify the time, in milliseconds, for the CICS server to keep information (CICS COMMAREA) for the next transaction in the pseudo conversation.

This is an optional command. The default value is set by your CICS system programmer.

`-BKT` *`time`*

For example:

`-BKT` *`60`*

Where *60* is the specified time in milliseconds.

Driver Transaction Name (-DT)

Use the Driver Transaction Name adapter command (`-DT`) to specify the name of the supplied driver transaction. If not provided this will default to MDRV, the default name of the driver transaction.

Check with your CICS system programmer to verify the name of the driver transaction.

Action Meaning

transaction_name
Name of the supplied driver transaction.

Host (-HOST)

Use the Host adapter command (`-HOST` or `-H`) to specify the name of the system or *localhost* to which you want to connect.

This is a required command unless you are running on a native CICS platform. Do not use the `-HOST` command if you are using the CICS adapter within a CICS region.

`-HOST host_name`

For example:

`-HOST Your.CICS.system`

Where *host_name* is the name of the z/OS system that hosts the CICS to which you want to connect.

Password (-PW)

Use the User Password adapter command (`-PW`) to specify the password associated with the user ID. The password is not displayed in the adapter trace file.

This is a required command.

`-PW password`

Where *password* is the password of the local user specified in the `-UID` adapter command, or the default user, if `-UID` is not specified.

Port (-PORT)

Use the Port adapter command (`-PORT` or `-P`) to specify the port number on which the CICS Listener listens. This is customer defined.

This is a required command if `-HOST` is specified. Do not use the `-PORT` command if you are using the CICS adapter from within a CICS region.

This command is mutually exclusive with the Service (`-SERVICE`) command. Either Port or Service must be specified.

`-PORT port_number`

For example:

`-PORT 4321`

Where *4321* is the port number where the CICS listener listens. Consult your CICS systems programmer for the port number.

See http://www.ibm.com/software/ts/cics/library/cicstsforos390.html for more information.

Service (-SERVICE)

Use the Service adapter command (`-SERVICE` or `-S`) to specify the service name that maps to a port. See the Port (`-PORT`) command for more information.

This is a required command if `-HOST` is specified.

This command is mutually exclusive with the Port (`-PORT`) command. Either Port or Service must be specified.

`-SERVICE service`

For example:

`-SERVICE cicslsnr`

Where *cicslsnr* is the service name that maps to the specified port.

Timeout (-TIMEOUT)

Use the Timeout adapter command (**-TIMEOUT**) to specify the time limit for lookup operations in milliseconds. If not specified the timeout is infinite.

-TIMEOUT *milliseconds*

Option Description

milliseconds
The time limit in milliseconds.

For example, to specify **10,000** milliseconds as the time limit for lookup operations.

-TIMEOUT *10000*

Trace (-T)

Use the Trace adapter command (-T) to produce a diagnostics file. This file contains detailed information about adapter activity. By default, the **m4cics.mtr** trace file is created in the directory where the map is located.

This command also determines the trace option that is provided to the server side. The server side transaction and 3270 bridge exit will trace to SYSPRINT.

You can override the adapter command line trace options dynamically using the Management Console. See ″Dynamic Adapter Tracing″ in the *Launcher* documentation for information.

-T[E][**+**] [*filename*]

Option Description

E Produce a trace file containing only the adapter errors that occurred during map execution.

+ Appends trace information to the existing trace file.

filename
Creates a trace file with the specified name in the specified directory.

Transaction Name (-TRAN)

Use the Transaction Name adapter command (`-TRAN`) to specify the customer defined transaction name, configured to use 3270 bridge.

This is a required command.

```
-TRAN tran_name
```

Where *tran_name* is the customer defined application identifier.

User ID (-UID)

Use the User ID adapter command (`-UID`) to specify the User ID for connection and transaction authorization.

This command is required.

```
-UID user_id
```

Where *user_id* is the ID for CICS sign on.

Chapter 4. Syntax summary

Data sources

The following is the command syntax of the CICS adapter commands used for data sources:

```
-DT tran_name
-HOST host_name
-PORT port_number|-SERVICE service
-TIMEOUT milliseconds
[-BFL terminal_id]
[-BKT time]
[-PW password]
[-T[E][+] [filename]]
[-TRAN tran_name]
[-UID user_id]
```

Data targets

The following is the command syntax of the CICS adapter commands used for data targets:

```
-DT tran_name
-HOST host_name
-PORT port_number|-SERVICE service
-TIMEOUT milliseconds
[-BFL terminal_id]
[-BKT time]
[-PW password]
[-T[E][+] [filename]]
[-TRAN tran_name]
[-UID user_id]
```

Example 1

For the **PUT Target** setting in an output card, select CICS. In the **PUT > Target > Command** field, enter:

```
-HOST myhost -SERVICE cicslsnr -TIMEOUT 20000 -UID user -PW
pass -TRAN ABCD
```

This **Target** output command will:

- connect to **host** *myhost using* **service** *cicslsnr*
- change the socket **timeout** to *20 seconds*
- use the **userid** *user and the* **password** *pass*
- run **transaction** *ABCD* passing the data mapped to the output card. The response from the transaction will be discarded, but its success status will be returned from the adapter

Example 2

In a GET map function call enter:

```
=GET("CICS",
"-T+  myfile.mtr
  -HOST myhost -PORT 3020
 -TIMEOUT 30000 -UID user -PW pass
 -TRAN  DINQ ", PACKAGE( MyPackage ))
```

This GET map function call will:

- Enable a trace file called **myfile.mtr** in append mode.
- Connect to **host** *myhost using* **port** *3020*.
- Change the socket **timeout** to *30 seconds*.
- Use the **userid** *user and the* **password** *pass*.
- Run **transaction** *DINQ* using data supplied in **PACKAGE** *MyPackage*.

Adapter examples

Examples are available for most adapters.

To access the adapter example files, navigate to *install_dir*/examples/adapters.

Chapter 5. Using the CICS adapter

Use the CICS adapter to send and receive CICS transaction data.

Adapter capabilities

The capabilities of the adapter include:

- Communication between the client and the CICS based server software is synchronous.
- The client map sends data to the CICS server, and waits for the reply. The CICS server software receives data, sends a reply, and quits.
- Pseudo conversational and non-conversational transactions are supported.

Adapter limitations

The following limitations exist in the adapter:

- The adapter assumes only one map instance per connection.
- CICS conversational transactions are not supported.

Defining a bridge transaction for use with the CICS adapter

- The details of defining a 3270 bridge transaction are covered in the (CICS Transaction Server for OS/390 Version 1.3 External Interfaces Guide (SC33-1944)) http://www.ibm.com/software/ts/cics/library/cicstsforos390.html.
- Examples for defining the bridge transaction can be found in the CICS adapter examples **readme.txt**.

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