



SupportPac CA5F

IBM CICS TG Gateway intercept plug-in support

*Installation and User Guide
Version 1.1 – May 2014*

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Description

SupportPac CA5F allows integration test tools to intercept ECI calls to CICS originating from Java Standard Edition (Java SE) and Java Enterprise Edition (JEE) applications. This allows such applications to be tested without requiring a running CICS Transaction Gateway (CICS TG) or CICS server.

This SupportPac provides updated versions of the CICS TG V8.0 Java base classes and non-XA ECI resource adapter. These updated files support the use of a Gateway Intercept Plug-in that can intercept application calls made through the Java Application Programming Interfaces (APIs). Documentation for the APIs is also provided.

When enabled, a Gateway Intercept Plug-in is notified before a connection to a Gateway daemon is opened or closed, and before a request is sent to the Gateway daemon. Before a connection is opened, the plug-in can change properties of the connection object, and can prevent the connection from opening. Before a request is sent over a connection, the plug-in can change properties of the request object, and can cause the request to be returned to the application without being sent. Before a connection is closed, the plug-in can prevent the connection from closing. This allows a variety of scenarios to be simulated for application testing.

This SupportPac can be used with CICS Transaction Gateway for z/OS or CICS Transaction Gateway for Multiplatforms in remote mode topologies. This SupportPac cannot be used in a local mode topologies.

System requirements

For Java SE applications, Java 1.5 or later is required.

For JEE applications, a J2EE 1.4 certified application server or a JEE 5 certified application server that successfully runs the JCA resource adapter IVT provided with CICS TG is required.

This SupportPac is compatible with:

- CICS Transaction Gateway for z/OS V8.0 or later
- CICS Transaction Gateway for Multiplatforms V8.0 or later

Usage is restricted to remote mode topologies for JEE or Java applications. Java applications using the Java base classes must ensure that the only CICS TG jar file on their classpath is the version of ctgclient.jar provided by this SupportPac.

Skill level required

Plug-in developers must be familiar with developing applications in Java.

Changes in V1.1

The ctgclient.jar provided in the SupportPac can now be used with Java request monitoring exits enabled.

Supplied files

| | |
|----------------|--------------------------------------|
| ctgclient.jar | Java base classes API |
| cicsecl.rar | Non-XA ECI resource adapter |
| Samples/ | Sample plug-in implementation |
| Documentation/ | HTML documentation for the Java APIs |
| License/ | SupportPac license files |
| ca5f.pdf | This readme file |

Installation

Copy the file ca5f.zip to a directory on your chosen system. Extract the file contents using a utility that supports the zip format.

Do not extract this SupportPac into the CICS TG installation directory.

Enabling a Gateway Intercept Plug-in in a Java SE application

To enable a Gateway Intercept Plug-in in a Java SE application, the ctgclient.jar provided in this SupportPac and the plug-in class must be available on the class path of your application. All other CICS TG jar files must be removed from the class path.

A plug-in can be enabled programmatically:

```
Properties connectionProps = new Properties();
connectionProps.put(GatewayIntercept.CTG_PROP_INTERCEPT_PLUGIN,
    "plugin.package.name.PluginClassName");
gateway.setProtocolProperties(connectionProps);
gateway.open();
```

or by using a Java system property:

```
java -Dgateway.intercept.plugin=plugin.package.name.PluginClassName
    application.package.name.ApplicationClassName
```

Enabling a Gateway Intercept Plug-in in a JEE environment

To install the SupportPac resource adapter in your JEE application server:

1. Uninstall any existing CICS TG resource adapters.
2. Restart your JEE application server.
3. Install the cicseci.rar provided in this SupportPac.
 - If installing both the cicseci.rar and cicsepi.rar into the same WebSphere Application Server, then the resource adapters should be isolated from each other by enabling the configuration option once each resource adapter has been installed.

To use a Gateway Intercept Plug-in, the plug-in class must be available on the class path.

A plug-in can be enabled for a connection factory instance by setting the *InterceptPlugin* connection factory property. Figure 1 shows an example configuration in IBM WebSphere Application Server V7.0.

| | | | |
|---------------------------------|--|---|-------|
| InterceptPlugin | <code>plugin.package.name.PluginClassName</code> | The name of a GatewayIntercept plugin class called during the execution of interactions | false |
|---------------------------------|--|---|-------|

Figure 1: Gateway Intercept Plug-in configuration in IBM WebSphere Application Server V7.0

A plug-in can also be enabled programmatically using the `setInterceptPlugin` method of the `ECIManagedConnectionFactory` object, before obtaining an `ECIConnection` object.

Compiling and using the sample plug-in

The SupportPac includes a sample plug-in written in Java. The plug-in is designed to be used with the EciB1 Java sample included with CICS TG. When the plug-in is active, EciB1 can be executed successfully without requiring a CICS TG or a CICS server to be running. The EciB1 Java sample is included with CICS TG in source code format and compiled in `ctgsamples.jar`.

The sample plug-in can be compiled using the following commands:

```
cd <supportpac_path>/Samples
javac -cp ../ctgclient.jar com/ibm/ctg/samples/intercept/BasicPlugin.java
```

After compiling the plug-in, the EciB1 sample program can be run with the plug-in enabled by copying `ctgsamples.jar` from the classes directory of the CICS TG installation to the SupportPac directory, and issuing the following commands:

On Linux, UNIX and z/OS:

```
cd <supportpac_path>
java -cp Samples:ctgclient.jar:ctgsamples.jar
    -Dgateway.intercept.plugin=com.ibm.ctg.samples.intercept.BasicPlugin
    com.ibm.ctg.samples.eci.EciB1 cicstg.host.name
```


On Windows:

```
cd <supportpac_path>
java -cp Samples;ctgclient.jar;ctgsamples.jar
      -Dgateway.intercept.plugin=com.ibm.ctg.samples.intercept.BasicPlugin
      com.ibm.ctg.samples.eci.EciB1 cicstg.host.name
```

Plug-in development

The API for implementing a Gateway Intercept Plug-in is provided in ctgclient.jar. Documentation for the API is provided in HTML format and can be viewed by opening the file <supportpac_path>/Documentation/index.html in a web browser. Plug-in classes must implement the `com.ibm.ctg.client.GatewayIntercept` interface.

To compile your plug-in class, the ctgclient.jar provided by this SupportPac must be available on the class path.

Further details

More information, see the CICS TG V8.0 Information Center:

<http://www.ibm.com/software/htp/cics/ctg/library/index.html>

Support information can be found on the SupportPac download page:

<http://www.ibm.com/support/docview.wss?uid=swg24033968>