

EasyConnect Installation

Introduction

Amadeus and Gabriel APIs are used as examples.

The EasyConnect web application enables communication with 3rd party services through specific 3rd party APIs or drivers. The APIs may not be Java based and may have to be installed separately. Wrapper APIs are developed to enable a Java interface with such 3rd party drivers.

Note

Wrapping a system is the process of defining and restricting access to a system through an abstract interface. A wrapper for information sources accepts queries in a given format, converts them into one or more commands or sub-queries understandable by the underlying information source and transforms the native results into a format understood by the application.

This document uses the Amadeus API Version 2 to illustrate the complete procedure of the EasyConnect installation.

Note

Amadeus is a computer reservations system through which tickets are sold for multiple airlines (see <http://www.amadeus.com/amadeus/amadeus.html>).

EasyConnect is a Java based web application. This section covers its deployment in Apache Tomcat. EasyConnect specific logging is described as an important part of tracking and troubleshooting facilities.

Basic testing also is covered in this section. For a fully-fledged real life testing of EasyConnect, refer to Appendix A, “Testing EasyConnect after installation.”

System Preparation

Platform

Install Java and Tomcat as described in the preceding sections.

EasyConnect Log Folder

1. Create a folder structure to store the EasyConnect specific logs. The following sample folder structure complies with the requirements to have a main folder for two types of the logs, EasyCRS and EayCard, and a subfolder for the Amadeus log:

C:\ECLog

C:\ECLog\AmadeusLog¹

¹ The path C:\ECLog is specified for a demonstration purpose only.

The EasyConnect Java application distribution currently depends on this folder structure. It is recommended to use it exactly as shown.

2. Locate the following file from the FDS EasyConnect distribution package:

log4jEC.properties

3. Copy the file into the **C:\ECLog** folder.

This file defines logging properties for EasyConnect, such as log filenames, log types and log rotation.

4. To configure the logging properties, open this file with Notepad and edit the appropriate sections.

If the above folder structure is used, the predefined defaults will work fine. Note that two log files are generated by default, and the logger dumps them into the **C:\ECLog** folder.

Third Party Drivers

The following is specific to Amadeus in use.

1. Locate the following files from the FDS EasyConnect distribution package:

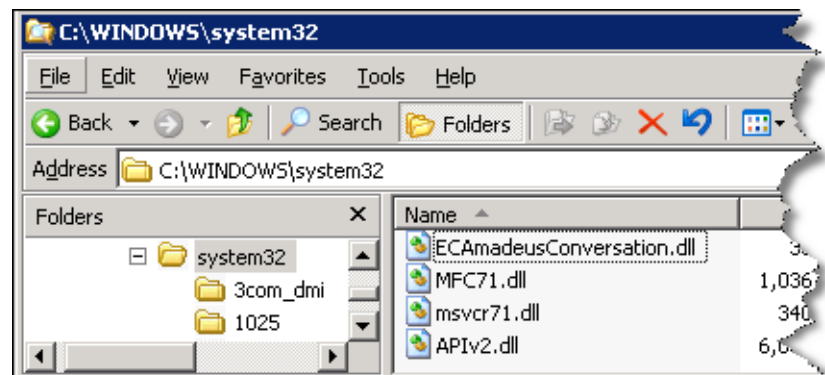
⇒ APIv2.dll

⇒ ECAmadeusConversation.dll

⇒ MFC71.dll

⇒ MSVCR71.dll

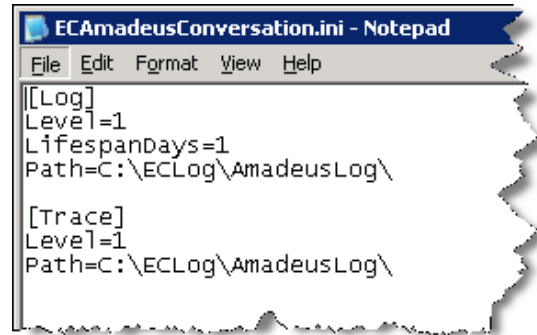
2. Copy these DLLs into the **C:\WINDOWS\system32** folder.



3. Locate the ECAmadeusConversation.ini file from the FDS EasyConnect distribution package:

- Copy ECAmadeusConversation.ini into the **C:\WINDOWS** folder.

The file should be opened and the Path definitions checked for conformity with the previously created folder structure. The **\AmadeusLog** path has been setup for this purpose.



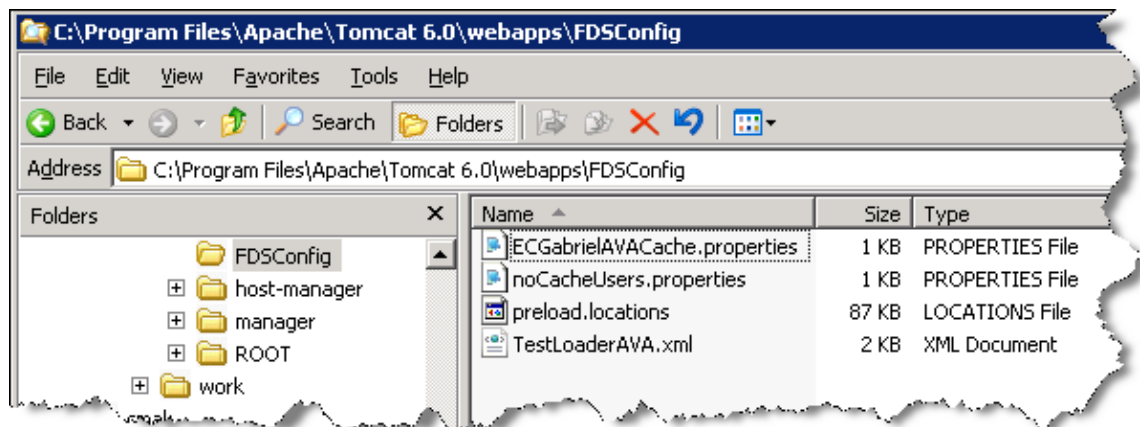
```

ECAmadeusConversation.ini - Notepad
File Edit Format View Help
[Log]
Level=1
LifespanDays=1
Path=C:\ECLog\AmadeusLog\

[Trace]
Level=1
Path=C:\ECLog\AmadeusLog\
  
```

The following is specific to Gabriel in use.

- Locate the FDSConfig.zip file from the FDS EasyConnect distribution package.
- Place a copy of the FDSConfig.zip file into the **\webapps** folder of the Tomcat installation.
- Extract the FDSConfig.zip content in the **\webapps** folder.

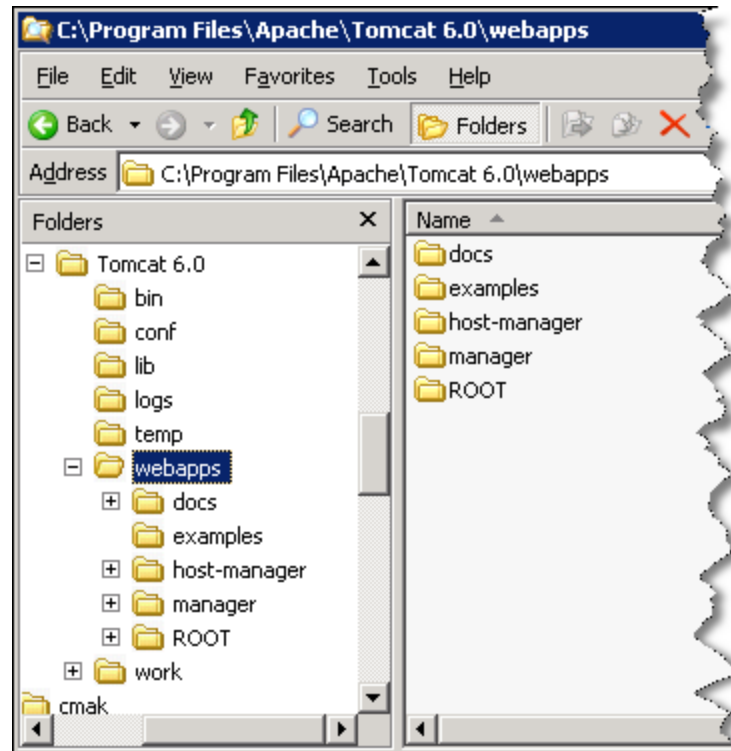


- Remove the copy of the FDSConfig.zip file from the **\webapps** folder.

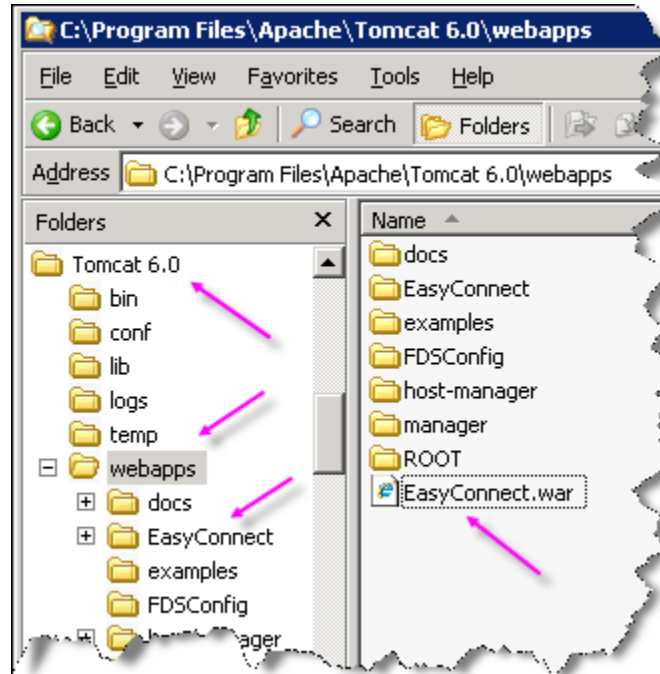
EasyConnect Java Application Deployment

For this purpose, do as follows:

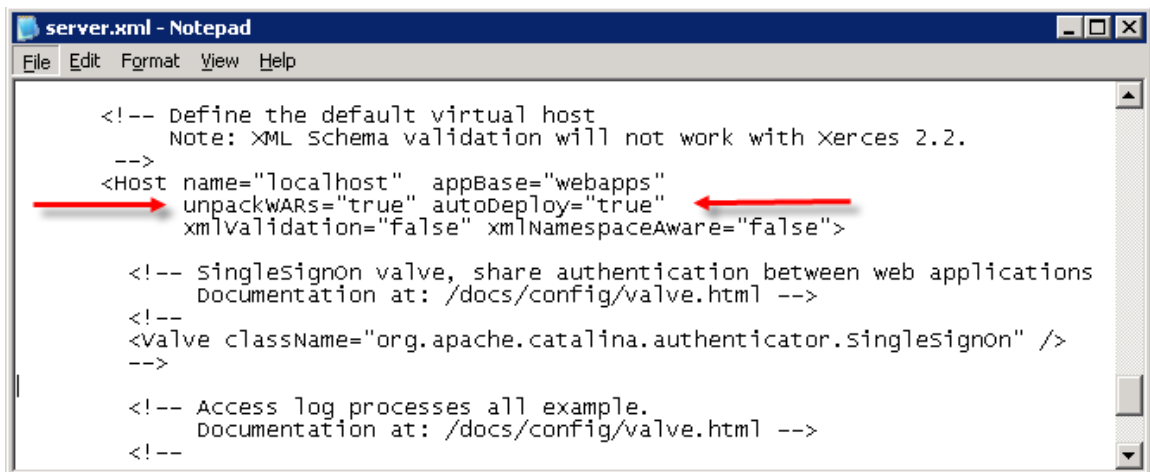
1. Locate the EasyConnect.war file from the EasyConnect distribution package.
2. Copy the file and move it to the \webapps folder of the Tomcat installation.



Provided the default WAR auto-deploy settings were preserved unchanged, in a moment you will observe the results of the automatic deployment of your web application—the \EasyConnect folder with the corresponding subfolders and the application content will appear in the \webapps folder as shown in the picture that follows.



The above-mentioned default settings can be found in the **server.xml** file located in the **\Tomcat 6.0\conf** folder of the Tomcat installation (e.g., C:\Program Files\Apache\Tomcat 6.0\conf).



Note

The Tomcat Manager can also be used to deploy EasyConnect. For this purpose, point a browser to the following URL:

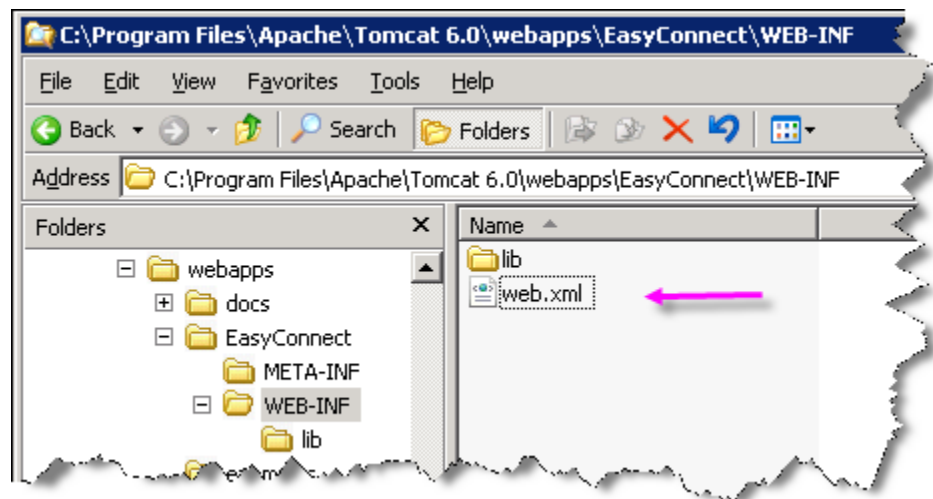
<http://localhost:8080/manager/html>

If accessing Tomcat from another computer, use the hostname or IP address of the Tomcat Installation. If Tomcat is running on a custom port, specify the port number in the URL. For example:

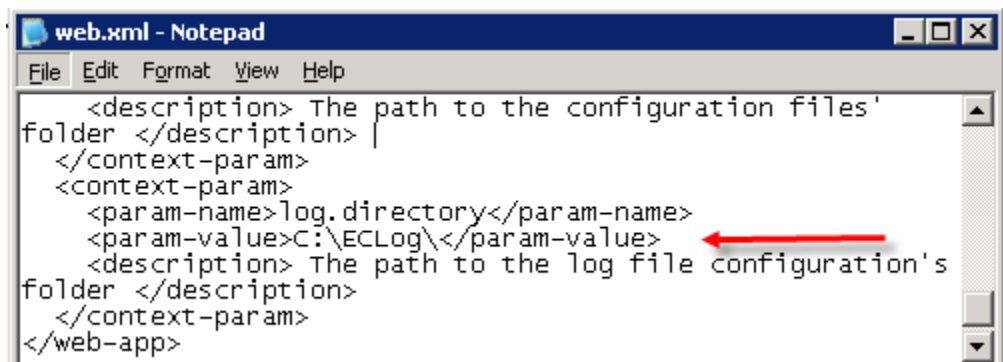
<http://10.20.30.1:5050/manager.html>

Verification & Testing

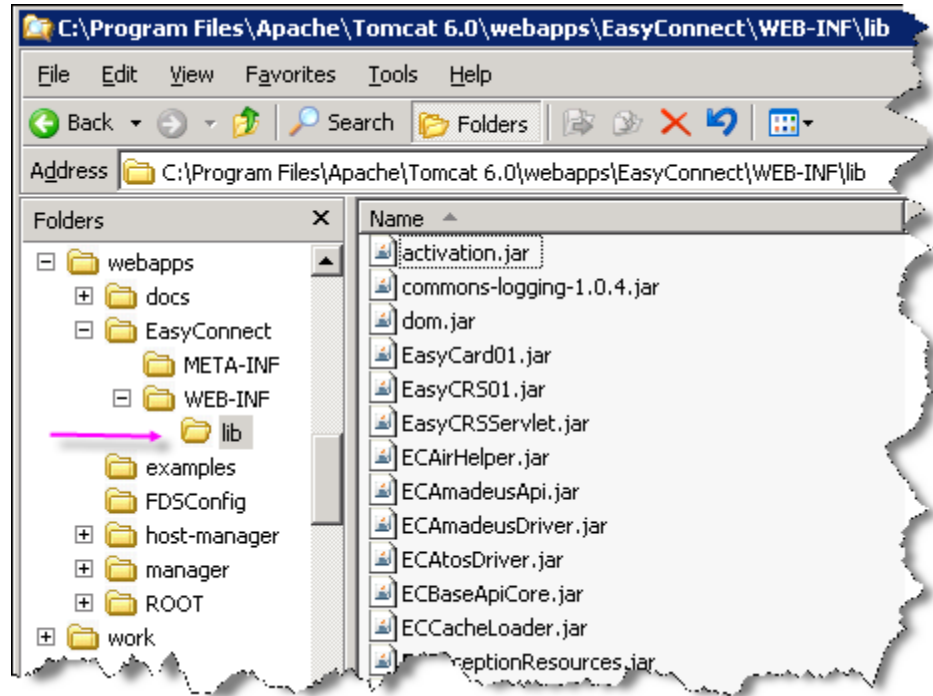
1. After the deployment it is advisable to check the following:
 - ⇒ Under Tomcat, these folders should have been automatically created:
 - ⇒ \webapps\EasyConnect\META-INF\
 - ⇒ \webapps\EasyConnect \WEB-INF\lib\



- ⇒ The \WEB-INF folder contains the application's web.xml file. Among other things this file contains the pointer to ECLog. Verify that the location of ECLog is correct.



- ⇒ The \WEB-INF\lib folder should contain the application's JAR files.



- Restart the Tomcat service and verify that these folders and files remain intact.
- Check that EasyConnect is listening for input. Point a browser to the following URL:

<http://localhost/EasyConnect/EasyCRS>

The normal and expected response is: “405 – HTTP method GET is not supported”.

Amadeus connectivity can be checked with this CMD shell command:

```
telnet piv2.amadeus.net 2002
```

A blank screen with no error messages should be the result.

For fully-fledged real life testing of the EasyConnect, refer to Appendix A:” Testing EasyConnect after installation.”

Troubleshooting

Following contains information about troubleshooting issues that may arise when using EasyConnect. It includes the following sections:

- ✚ Handling Problems
- ✚ Monitoring EasyConnect Log Files
- ✚ Monitoring CRS² Log Files.

Handling Problems

It is possible to encounter a problem while using EasyConnect, especially if these are your first steps with the [CONTOUR®](#) travel product search and reservation system.

The best place to look for answers to questions/problems is the section “Monitoring EasyConnect Log Files.”

If you don’t even get to the point that the EasyConnect server is up and running and the log files does not exist yet, check the list of EasyConnect Errors (see Appendix D). If your error is listed there, you might find the corresponding course of action or workaround. And of course, you can always contact [FDS](#) technical support experts. Please provide the following information when you contact FDS support:

- ⇒ CONTOUR® release information
- ⇒ EasyConnect version
- ⇒ Problem/question description
- ⇒ Error message or error number (if applicable)
- ⇒ EasyConnect log file (if applicable, attach the file to your email).

Monitoring EasyConnect Log Files

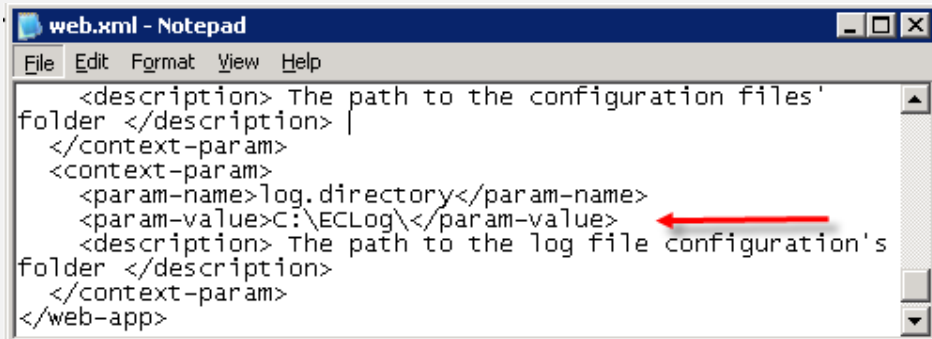
By default, the EasyConnect application records all transaction information to the following two log files:

- <EasyConnect log folder>**EasyCRS.log**
- <EasyConnect log folder>**EasyCard.log**

² A computer reservations system (CRS) is a computerized system used to store and retrieve information and conduct transactions related to travel products (air, hotel, etc.). Major CRSes (e.g., Amadeus) are known as global distribution systems (GDS).

Note

The <EasyConnect log folder> value (e.g., C:\ECLog) is defined in the WEB.XML file.



```
web.xml - Notepad
File Edit Format View Help
<description> The path to the configuration files'
folder </description> |
</context-param>
<context-param>
  <param-name>log.directory</param-name>
  <param-value>C:\ECLog</param-value>
  <description> The path to the log file configuration's
folder </description>
</context-param>
</web-app>
```

See also the subsection “Verification & Testing” in the section “EasyConnect Installation.”

The EasyConnect web application uses the files EasyCRS.log and EasyCard.log to keep records of everything it does. Most of the entries in the log files are informational or success messages. However, error messages are also written to the log files, and these are what you are looking for, when you are facing a problem. For detailed information, refer to Appendix B: “EasyConnect Log Information.”

Note

Both EasyCRS.log and EasyCard.log files are rotated on a daily basis. The settings are adjustable through the **ECLog4j.properties** file (see the subsection “EasyConnect Log Folder” in the section “EasyConnect Installation”).

```
log4j.logger.EASYCRS=DEBUG, RollingEasyCRSFile
log4j.logger.EASYCARD=DEBUG, RollingEasyCardFile

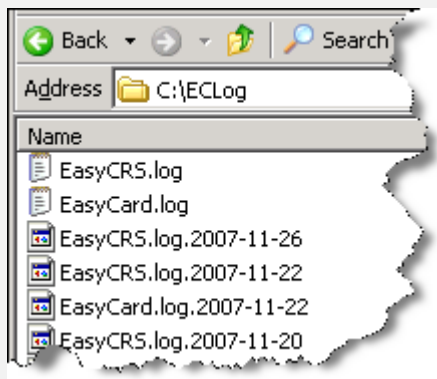
log4j.appender.RollingEasyCRSFile=org.apache.log4j.DailyRollingFileAppender
log4j.appender.RollingEasyCRSFile.Threshold=debug
log4j.appender.RollingEasyCRSFile.Append=true
log4j.appender.RollingEasyCRSFile.File=c:/ECLog/EasyCRS.log
log4j.appender.RollingEasyCRSFile.DatePattern='.'yyyy-MM-dd
log4j.appender.RollingEasyCRSFile.layout=org.apache.log4j.PatternLayout
log4j.appender.RollingEasyCRSFile.layout.ConversionPattern=[%d{yyyy-MM-dd
hh:mm:ss.SSS} %-5p [%t] %m]%n

log4j.appender.RollingEasyCardFile=org.apache.log4j.DailyRollingFileAppender
log4j.appender.RollingEasyCardFile.Threshold=debug
log4j.appender.RollingEasyCardFile.Append=true
log4j.appender.RollingEasyCardFile.File=c:/ECLog/EasyCard.log
log4j.appender.RollingEasyCardFile.DatePattern='.'yyyy-MM-dd
log4j.appender.RollingEasyCardFile.layout=org.apache.log4j.PatternLayout
log4j.appender.RollingEasyCardFile.layout.ConversionPattern=[%d{yyyy-MM-dd
hh:mm:ss.SSS} %-5p [%t] %m]%n

log4j.appender.chainsaw_socket_hub=org.apache.log4j.net.SocketHubAppender
log4j.appender.chainsaw_socket_hub.Port=4445

log4j.rootCategory=DEBUG, stdout, file, chainsaw_socket_hub
```

Provided a log file was created on a particular date, at the end of the day the date is appended to the file name, e.g. EasyCRS.log.2007-11-26 or EasyCard.log.2007-11-20.



Monitoring CRS Log Files

Depending on the CRS(s) currently in use by the CONTOUR® system, the log data of a particular CRS within the EasyConnect installation has its own log file the content of which should be analyzed according to the CRS specifics. Appendix C provides information on how to monitor Amadeus log files. A similar method might be used in case of other CRSs.