

TIBCO® API Exchange Gateway Installation Guide

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TIBCO Documentation and Support Services

Documentation for this and other TIBCO products is available on the TIBCO Documentation site. This site is updated more frequently than any documentation that might be included with the product. To ensure that you are accessing the latest available help topics, please visit:

<https://docs.tibco.com>

Product-Specific Documentation

Documentation for TIBCO products is not bundled with the software. Instead, it is available on the TIBCO Documentation site. To directly access documentation for this product, double-click the following file:

The following documents for this product can be found on the TIBCO Documentation site:

- Installation
- User's Guide

How to Contact TIBCO Support

For comments or problems with this manual or the software it addresses, contact TIBCO Support:

- For an overview of TIBCO Support, and information about getting started with TIBCO Support, visit this site:

<http://www.tibco.com/services/support>

- If you already have a valid maintenance or support contract, visit this site:

<https://support.tibco.com>

Entry to this site requires a user name and password. If you do not have a user name, you can request one.

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Installation Overview

This section gives an overview of the installation requirements and different installation modes.

Installation Requirements

It is best practice to ensure the appropriate disk space requirements, system memory requirements, software requirements by the installer are met. For best results, check the supported platform requirements for this product.

Prerequisites for Installation

Ensure that you have installed following packages on the machine before you install the TIBCO API Exchange Gateway product.

- **Microsoft Visual C++ 2005 SP1 Redistributable Package (x64)**
- **Microsoft Visual C++ 2010 SP1 Redistributable Package (x64)**

Guidelines for TIBCO API Exchange Gateway Installation



- Do not install TIBCO API Exchange Gateway in the same *TIBCO_HOME* where TIBCO BusinessEvents® or TIBCO ActiveSpaces® products are installed.
- Do not install TIBCO API Exchange Gateway 64-bit software in the same *TIBCO_HOME* where 32-bit TIBCO applications are installed. It is best practice to install TIBCO API Exchange Gateway in a separate *TIBCO_HOME* to keep this software installation separate from the installation of the 32-bit software.

Disk Space Requirements for Installer

The installer files for *each* version of the product consume up to 1.2 GB of disk space.

Temporary Disk Space Required by the Installer

The installer launcher first extracts a Java Virtual Machine (JVM) in a temporary directory and uses this JVM to launch itself. The size of the extracted JVM differs from platform to platform.

On Linux, the installer requires at least 50 MB of free space in the temporary directory (/tmp).

Starting the Installer

If your system does not have sufficient disk space in the default temporary area, run the installer with a different temporary directory by using the following option when starting the installer:

```
install_package_name.bin -is:tempdir /new_tmp
```

where */new_temp* has sufficient free disk space.

Disk Space Requirement in Product Home Directory

The installer calculates the disk space required in the product home location for the selected components. The calculation is done before the actual installation begins. The installer proceeds only if sufficient free disk space is available in the product home location.

However, if disk space is consumed by another process while the installer is copying the files, and if the required disk space is thereby reduced, the installer might fail and display a failure message.

While performing installation, avoid running other processes that consume disk space in the product home location.

Disk Space After Installation

The installed product can consume up to 1.5 GB of free space under TIBCO_HOME.

System Memory Requirements for the Installer

A minimum of 2 GB of physical memory is required.

Supported Platforms

Refer to the readme file for supported platforms, versions, and required patches.

TIBCO API Exchange Gateway Software Requirements

Depending on the tasks you wish to perform, install one or more other TIBCO products. The following table describes the required and optional software products and their purpose.

TIBCO API Exchange Gateway Software Requirements

Software	Description
TIBCO Software The following products are distributed and installed separately from this product. See the readme file for the supported versions.	
TIBCO Rendezvous	Optional. TIBCO Rendezvous is used as a message transport. Refer to <i>TIBCO Rendezvous Installation Guide</i> for installation details of TIBCO Rendezvous. If you want to use Rendezvous (RV) transport, see Enabling RV communication section in <i>TIBCO® API Exchange Gateway User's Guide</i> .
TIBCO Enterprise Message Service	Optional. Using TIBCO Enterprise Message Service, you can use the Java Messaging Services (JMS) as a message transport. TIBCO API Exchange Gateway is not necessarily installed on the machine on which TIBCO Enterprise Message Service is installed.
TIBCO ActiveMatrix BusinessWorks	Optional. TIBCO ActiveMatrix BusinessWorks is a scalable, extensible, and easy to use integration platform. You can use TIBCO ActiveMatrix BusinessWorks to develop integration projects. Optionally, you can use BusinessWorks in integration projects.
TIBCO ActiveMatrix Spotfire	Operational and analytical reporting.
Third-party Software See the readme file for the supported versions.	
Apache HTTP Server	Optional. Refer to the TIBCO API Exchange Gateway readme file for the supported versions.

Software	Description
Java Virtual Machine	Required. JRE is packaged with TIBCO API Exchange Gateway as a convenience. Refer to the product readme file for the supported version.
DBMS Software	Required. The database stores audit log information for operations and transactions. Different DBMS software are supported. Refer to the readme file for the supported databases and versions.
JDBC Drivers	JDBC drivers are used to access the databases used by TIBCO API Exchange Gateway Server. Use database drivers, as provided, by the DBMS vendors for their respective database management systems. Place the database drivers under <i>ASG_HOME\lib\ext\tpcl</i> so that they can be used by TIBCO API Exchange Gateway to access the database server.
Web Browsers	Required. Web Browsers are required to access the graphical user interface (GUI).

Installation Modes

Three installation modes are available: GUI, console, and silent.

GUI Mode

In GUI mode, the installer presents panels which you can use to make choices about product selection, product location, and so on. To invoke the installer in GUI mode, double-click the executable file.

Console Mode

In console mode, the installer is executed from the command prompt or terminal window. This is useful if your machine does not have a GUI environment.

Silent Mode

Silent mode installs the product using either the default or custom settings that are saved in a response file. Silent mode installs the product without prompting you for information.

Installation Types

Two installation types are available: Profile or Custom.

- The Profile installation type installs all the software for a specific profile.
- The Custom installation type installs the selected components.

Installer Account

Two types of users can install this product.

- Regular (non-root) user
- Super-user (root)

While installing this product on UNIX platforms, ensure that the same installer account is used to install all TIBCO products.

Windowing Environment

A windowing environment such as CDE (that is, X11 Windows) is required to run the installer in GUI mode. A windowing environment is not required for a console installation or silent installation.

Permissions

To perform the installation, you must have read, write, and execute permissions on all the files and directories, after the compressed file is unpacked. The file structure after unpacking must be identical to the structure that was packed.

Installer Log File

The installer log file, `tibco_universal_installer.username_install.log`, is written to the `.TIBCO/install_timestamp` folder of the user's home directory. To change the location of the installer log file, specify the option `-V logFile="myLogFile"` when you run the installer.

The installer log file captures the following information:

- The installation environment details such as the user that invoked the installer, host name, Java home in the environment, operating system details, and so on.
- The list of assemblies installed.
- The information related to the Ant scripts that are executed by the installer.

Installing TIBCO API Exchange Gateway

Follow these installation guidelines to install and verify product installation. Instructions to uninstall the product are also available.

Windows Installation Guidelines

Follow these guidelines to install product on Windows platform.

Installer Account

You must have administrator privileges for the machine on which the software is installed.

If you do not have administrator privileges, the installer exits. You must then log out of the system and log in as a user with the required privileges, or request your system administrator to assign the privileges to your account.

Installing from a Network Drive

If you intend to install the product from a network drive, ensure that the account used for installation has permission to access the network drive. The account must have read and execute permission for the directory path where the installer file is located.

It is best practice to copy the installer file to a local directory with read, write, and execute permissions.

Installing on Windows 2000 Terminal Server

The two modes in a terminal server are execute and install. By default, all users are logged on in execute mode. Using the execute mode, users can run the applications. When you want to install the software for use by everyone, the administrator should change to Install mode.

The best way to install the software on Windows 2000 Terminal Server is to use the Add/Remove Programs control panel applet, because this automatically sets the mode to Install during the installation and then back to execute in the end.

Alternatively, you can manually change your mode to Install by typing `C:\> change user /install`

Change back to execute by typing `C:\> change user /execute`

Check your current mode by typing `C:\> change user /query`

If you install in the execute mode, the installation registry is maintained in your home directory. If you install in the install mode, the installation registry is maintained in the `%SystemRoot%` folder.

UNIX Installation Guidelines

Follow these guidelines to install product on UNIX platform.

Installer Account

The product can be installed by a regular (non-root) user or a super user (root). Different users can install the same product at different locations.

Permissions

The user performing the installation must have Read, Write, and Execute permissions on all files and directories, after the file is unpacked. The file structure after unpacking must be identical to the structure that was packed.

Installation

TIBCO provides downloadable product archive files and the products can be installed using TIBCO Universal Installer. Extract the downloaded product archive file to a temporary directory, and then run the TIBCO Universal Installer executable from that directory.



If installing more than one product, you can extract multiple product archive files to the same temporary directory and then run TIBCO Universal Installer.

Installation Modes

You can run the installer in one of the following modes: GUI, console, or silent. Each mode is supported on all platforms.



The installer backs up the existing TIBCO API Exchange Gateway installation files in the following directory:

`ASG_HOME\servicepack\sp1\backup`

GUI Mode

In GUI mode, invoke the installer by double-clicking the `TIBCOUniversalInstaller` executable file. The installer presents windows that you can use to select the product components, its location, and so on. Proceed through the installation process by providing your input.

Console Mode

In console mode, you invoke the installer from a command prompt or a terminal window, and the installer prompts for values on the console. You can move through the installation process by responding to the prompts. This mode is useful if your machine does not have a Windows environment.

Silent Mode

In silent mode, the installer installs the product without prompting you for information. Silent mode either installs using the default settings or uses a response file that was saved during an earlier installation. In this mode:

- If no response file has been recorded earlier, invoke the installer with the `-silent` argument to use the default installation parameters.
- If a response file exists, invoke the installer with the arguments `-silent -V`

`responseFile="<responseFileName>"` to use the values specified in the response file.

By default, the installer uses the `TIBCOUniversalInstaller-api-exchange-gateway.silent` file, which is included in the directory that contains the universal installer. To customize the silent installer, make a backup copy of the `TIBCOUniversalInstaller-api-exchange-gateway.silent` file and edit the file itself. The file includes comments that describe the installation properties you can set. You can then run the silent installer with or without the response file argument.

Installing in GUI Mode


Install the product in GUI mode.

Procedure


1. Run TIBCO Universal Installer executable (**TIBCOUniversalInstaller***).
 - On Microsoft Windows: `TIBCOUniversalInstaller-x86-64.exe`

- On Linux: `TIBCOUniversalInstaller-lnx-x86-64.bin`
2. Click **Next** on the Welcome dialog.
 3. Read through the license text when the License Agreement dialog appears, select **I Accept The Terms of The License Agreement**.
 4. Click **Next**. The TIBCO Installation Home dialog is displayed.
 5. Choose to create a new installation environment (TIBCO_HOME) and specify the directory and name for the new environment.

An installation environment isolates product installations. A product installed into an installation environment does not access components in other installation environments. An installation environment consists of a name and path. You can choose a new environment or an existing environment.

Option	Procedure
Create a new TIBCO_HOME	<p>This option is used to install the product into a new installation environment.</p> <p>Specify properties:</p> <ul style="list-style-type: none"> • Directory The directory into which the product is installed. The directory cannot be the same as the directory of an existing installation environment. <p>The directory path cannot contain the following special characters:</p> <p># \$ % & * < > ? ` </p> <ul style="list-style-type: none"> • Name Identifies the installation environment. The name cannot contain the following special characters: <p>" * / : < > ? \ </p>
Use an existing TIBCO_HOME	<p>Select an existing installation environment from the drop-down menu.</p> <div style="display: flex; align-items: center;">  <p>If you are upgrading to the latest version of the software from an earlier version, it is good practice to install the latest version in a new installation environment.</p> </div>

6. Click **Next**.
7. On the Installation Profile Selection screen, select **Typical** as the installation profile from the list on the left. This is the default option. This profile installs the typical feature set for this product.



TIBCO Universal Installer allows customization of the profile feature settings. For this option, select the **Customize Installation** check box and use the feature tree on the right to explicitly select the components you want to install. .
8. Click **Next**.
9. On the TIBCO Configuration Directory screen, Click **Browse** to select a folder for **TIBCO Configuration Directory**. This folder is used to store the configuration information. The subdirectories `tibco/cfgmgmt` are created to the above folder. Then click **Next**.
10. Review the information such as **Installation Environment Details, Environment Location, and Environment Configuration Directory Location** in the Pre-Install Summary dialog.
11. Click **Install** to start the installation process.
12. Review the information listed in the Post-Install Summary dialog.
13. Click **Finish** to complete the installation process and exit TIBCO Universal Installer.

Installing in Console Mode

Install the product in Console mode in a non-Windows environment.

Prerequisites

Prepare your system and the installation media before running the installer in console mode.

Procedure

1. Open the physical media or download the package.
2. Extract the contents of the package to a temporary directory.
3. Using a console window, navigate to the temporary directory that contains TIBCO Universal Installer.
4. Run the TIBCO Universal Installer executable (**TIBCOUniversalInstaller***) using this command line:

```
TIBCOUniversalInstaller -console
```

For example,

- On Microsoft Windows 64-bit platform, run the installer as follows:

```
TIBCOUniversalInstaller-x86-64.exe -console
```

- On Linux platform, type the following command:

```
./TIBCOUniversalInstaller-lnx-x86-64.bin -console
```

5. Complete the installation by responding to the console window prompts.

Installing in Silent Mode

Install the product in silent mode.



- While you can use the `TIBCOUniversalInstaller-api-exchange-gateway.silent` file, copy the file to a different name and use that file for the silent install.
- If errors occur during installation, they are listed in the installation log file located in the `User_Home/.TIBCO` directory.

Procedure

1. Make a copy of the `TIBCOUniversalInstaller-api-exchange-gateway.silent` file to `TIBCOUniversalInstaller-api-exchange-gateway.silent.backup` file.
2. Using a text editor, open the `TIBCOUniversalInstaller-api-exchange-gateway.silent` file and update the install location, `ENV_NAME`, and features to install as follows:

- a) Update the install location. This indicates the directory where the product is to be installed. For example, update the directory as follows:

```
<entry key="installationRoot">/home/user/tibco</entry>
```

- b) Update `ENV_NAME`.

For example, update `ENV_NAME` as follows:

```
<entry key="createNewEnvironment">true</entry>
<entry key="environmentName">TIBCO_HOME</entry>
```

- c) Update TIBCO Configuration Directory. This directory is used to store the configuration information.

For example, update `configDirectoryRoot` as follows:

```
<entry key="configDirectoryRoot">/home/user/tibcocfg</entry>
```



If TIBCO API Exchange Gateway is installed in a directory that has a configuration directory already set by another TIBCO product (for example, TIBCO Enterprise Message Service), you do not need to set the **configDirectoryRoot** in the silent file. In this case, the silent installer uses the value of **configDirectoryRoot** as already set and ignores the value if set in the silent file.

- d) Update features to install. Set the features that you want to install to `true`.

For example, the following key values must be set to `true` to install both TIBCO API Exchange Gateway and the documentation for TIBCO API Exchange Gateway.

```
<entry key="feature_Runtime_api-exchange-gateway">true</entry>
```

```
<entry key="feature_Documentation_api-exchange-gateway">true</entry>
```

- e) On the Linux platform, make sure that the following properties are set:



```
<entry key="LGPLAssemblyLicenseAccepted">true</entry>
<entry key="LGPLAssemblyDownload">true</entry>
<entry key="LGPLAssemblyPath"></entry>
```

3. Run TIBCO Universal Installer (**TIBCOUniversalInstaller***) using the following command, replacing *myfile.silent* with your response silent file name:

```
TIBCOUniversalInstaller -silent -V responseFile="myfile.silent"
```

For example,

- On the Windows 64-bit platform, run the installer as follows:

```
TIBCOUniversalInstaller-x86-64.exe -silent -V responseFile="myfile.silent"
```

- On the Linux platform, type the command as follows:

```
./TIBCOUniversalInstaller-lnx-x86-64.bin -silent -V
responseFile="myfile.silent"
```

Verifying the Installation

Follow these instructions to verify the successful installation of TIBCO API Exchange Gateway.

Checking the Installer Log File

Check the *tibco_universal_installer.userid_install.log* and *antTask_log_post-install_yyyy-mm-dd.timestamp.log* files, which are located in the *.TIBCO/install_timestamp* folder of the user's home directory performing the installation.

For example, on the Windows platform, the *tibco_universal_installer.userid_install.log* and *antTask_log_post-install_yyyy-mm-dd.timestamp.log* files are located in the *C:\Users\userid\.TIBCO* directory.

Errors in this file, or the existence of error files under this folder, indicates installation problems. Error files have the following format:

```
antTask_ERROR_log_post-install_yyyy-mm-dd.n.log
```

Checking the TIBCO API Exchange Gateway Server Status

Check the status of the TIBCO API Exchange Gateway server instance by invoking a simple ping operation. This involves configuring and running the Apache HTTP Server, configuring EMS Server (optional) and running the Core Engine.

Core Engine

You must run the Core Engine of TIBCO API Exchange Gateway to test the ping operation.

Running the Core Engine on Windows Platform

The Core Engine can be run on the Windows platform.

Procedure

1. Open a command prompt window.
2. Navigate to the TIBCO API Exchange Gateway installation as follows:

```
cd ASG_HOME\bin
```

3. Type the following command to start the Core Engine:

```
asg-engine
```

Running the Core Engine on UNIX Platform

The Core Engine can be run on the UNIX platform.

Procedure

1. Open a command prompt window.
2. Navigate to the TIBCO API Exchange Gateway installation as follows:

```
cd ASG_HOME/bin
```

3. Type the following command to start the Core Engine:

```
./asg-engine
```



If any errors are seen when starting the Core Engine, ensure that you have completed the steps listed in following sections:

[Setting the System Environment Variables.](#)

[Configuring Apache HTTP Server for TIBCO API Exchange Gateway.](#)

Testing Ping Operation using Native HTTP Channel

Send a ping operation request to TIBCO API Exchange Gateway after checking that the Core Engine has started successfully.

Procedure

1. Refer to the following log file to check if the Core Engine started successfully, or if there are any errors.

```
ASG_CONFIG_HOME/logs/asg-caching-core.log
```

2. Open a web browser and type the following URL:

```
http://hostname:port/ping
```



hostname is the machine on which TIBCO API Exchange Gateway runs and *port* is the listening port for HTTP connection as configured in the *ASG_CONFIG_HOME/asg.properties* file. The default value of HTTP port is 9222.

For example, type the following URL to send a ping operation request using the HTTP channel:

```
http://localhost:9222/ping
```

3. Verify that the following message is displayed in the browser window:

```
ASG is alive
```

Apache HTTP Server (Optional)

To use the RV transport and Apache module for TIBCO API Exchange Gateway, install and setup the Apache HTTP server. For information on installing the Apache HTTP server, see [Installing and Configuring Apache HTTP Server \(Optional\)](#).

Running Apache HTTP Server on Windows Platform (Optional)

The Apache HTTP server can be run on the Windows platform.

Procedure

1. Navigate to the following directory:

```
APACHE_HOME\bin
```

2. Run the following command to run the Apache HTTP Server:

```
httpd.exe
```

Running Apache HTTP Server on UNIX Platform (Optional)

Procedure

1. Navigate to the following directory:

```
APACHE_HOME/bin
```

2. Run the following command to run the Apache HTTP Server:

```
./apachectl start
```

Testing Ping Operation Using RV Transport (Optional)

To test the ping operation using RV transport, setup and configure Apache module.

Prerequisites

- Install TIBCO Rendezvous product.
- Setup and configure Apache HTTP server.
Make sure that you have configured TIBCO API Exchange Gateway Apache Module.
- Enable the RV communication for the gateway. Refer to the *TIBCO API Exchange Gateway User's Guide*.

Procedure

1. Start the Core Engine.
2. Refer to the following log file to check if the Core Engine started successfully, or if there are any errors.

```
ASG_CONFIG_HOME/logs/asg-caching-core.log
```

3. Open a web browser and type the following URL:

```
http://hostname:port/ping
```




hostname is the machine on which Apache HTTP Server runs and *port* is the listening port for Apache HTTP Server as configured in *APACHE_HOME/conf/httpd.conf* file. The default value is 8080.

For example, type the following URL to send a ping operation request using the RV transport and Apache module:

`http://localhost:8080/ping`

4. Verify that the following message is displayed in the browser window:

`ASG is alive`

Verifying the RVRD License File Installation (Optional)

Verify that the RVRD license file is found at the following location after the product is successfully installed:

`ASG_HOME/doc/license/RVRD_LicenseKey.txt`

Install and Run Gateway Components as Windows Services

You can install and run the Core Engine (asg-engine) and other components of TIBCO API Exchange Gateway as a Windows service.



The command Prompt must be in administrator mode to successfully install or uninstall a service. To start a command Prompt as an administrator, see [Start a Command Prompt as an Administrator](#).

Start a Command Prompt as an Administrator

Prerequisites

You must be member of the Administrators group.

Procedure

1. Click **Start**, then click **All Programs**.
2. Type **Command Prompt** in search box.
3. Right-click **Command Prompt**, and then click **Run as administrator**.

Installing and Running the Config UI Server as a Windows Service

Procedure

1. Navigate to the `ASG_HOME/bin` directory.
2. Copy the existing `asg-configui.tra` file as follows:


```
copy asg-configui.tra JHF_asg-configui.tra
```
3. Using a text editor, edit the `JHF_asg-configui.tra` file as follows:
 - a) Locate `APP_ARGS` variable to set the path to the `asg_core.ear` EAR file.


```
tibco.env.APP_ARGS=ASG_HOME %ASG_PORT%
```

For example:

```
tibco.env.APP_ARGS=C:/tibco/asg/2.3 %ASG_PORT%
```
 - b) To install the Config UI server as a Windows service, add the following properties:


```
ntservice.name=ASG-ConfigUI
ntservice.displayname=TIBCO ASG Config UI
ntservice.starttype=automatic
ntservice.binary.path.absolute=%ASG_HOME%/bin/asg-configui.exe --propFile
ASG_HOME/bin/JHF_asg-configui.tra
ntservice.interactive=false
```
 - c) Add the following property to configure the location of the log directory (Optional):


```
Engine.Log.Dir ASG_HOME/bin/configui/logs
```
 - d) Verify that `RV_HOME` and `HAWK_HOME` variables are set appropriately to the directory where TIBCO Rendezvous and TIBCO Hawk® products are installed. (Optional)
 - e) Verify that `tibco.class.path.extended` variable includes the `HAWK_HOME/lib` directory at the beginning, as follows (Optional):


```
tibco.class.path.extended %HAWK_HOME%/lib%PSP%%CUSTOM_EXT_PREPEND_CP%%PSP%
%STD_EXT_CP% %PSP%%CUSTOM_EXT_APPEND_CP%%PSP%
```
 - f) Save the `JHF_asg-configui.tra` file.

4. Open a command prompt window. Change to the `ASG_HOME/bin` directory. Run the following command:


```
asg-configui --propFile JHF_asg-configui.tra --install
```
5. Open the Services Manager on the Windows system. Verify that **TIBCO ASG Config UI** is added as a service in the local services list.
6. Right-click the **TIBCO ASG Config UI** service and select **Start** to run the Config UI server.



- To uninstall a Windows service, type the following command:


```
asg-configui --propFile JHF_asg-configui.tra --uninstall
```
- If you make any change to the `JHF_asg-configui.tra` file after the service is registered, make sure to run `--uninstall` and `--install` again to register the changes.

Installing and Running the Core Engine as a Windows Service

Procedure


1. Navigate to the `ASG_HOME/bin` directory.
2. Copy the existing `asg-engine.tra` as follows:


```
copy asg-engine.tra JHF_asg-engine.tra
```
3. Using a text editor, edit the `JHF_asg-engine.tra` file as follows:
 - a) Locate `APP_ARGS` variable to set the path to the `asg_core.ear` EAR file.


```
tibco.env.APP_ARGS=ASG_HOME/bin/asg_core.ear
```

For example,

```
tibco.env.APP_ARGS=C:/tibco/asg/2.3/bin/asg_core.ear
```



To run the Core Engine with a project configuration, add the project configuration name in the `tibco.env.APP_ARGS` variable as follows:

```
tibco.env.APP_ARGS=ASG_HOME/bin/asg_core.ear -u asg-caching-core -a ASGProject Configuration Name
```
 - b) To install the Core Engine as a Windows service, add the following properties:


```
ntservice.name=ASG-Caching-Core Engine
ntservice.displayname=TIBCO ASG Gateway Caching Core Engine
ntservice.starttype=automatic
ntservice.binary.path.absolute=%ASG_HOME%/bin/asg-engine.exe --propFile ASG_HOME/bin/JHF_asg-engine.tra
ntservice.interactive=false
```
 - c) Add the following property to configure the location of the log directory (Optional):


```
Engine.Log.Dir ASG_HOME/bin/logs
```
 - d) Verify that `RV_HOME` and `HAWK_HOME` variables are set appropriately to the directory where TIBCO Rendezvous and TIBCO Hawk products are installed. (Optional)
 - e) Edit the **`tibco.class.path.extended`** variable to include the `HAWK_HOME/lib` directory at the beginning, as follows (Optional):


```
tibco.class.path.extended %HAWK_HOME%/lib%PSP%CUSTOM_EXT_PREPEND_CP%%PSP%
%STD_EXT_CP% %PSP%CUSTOM_EXT_APPEND_CP%%PSP%
```
 - f) Save the `JHF_asg-engine.tra` file.
4. Open a command prompt window. Change to the `ASG_HOME/bin` directory. Run the following command:


```
asg-engine.exe --propFile JHF_asg-engine.tra --install
```
5. Open the Services Manager on the Windows system. Verify that **TIBCO ASG Gateway Caching Core Engine** is added as a service in the local services list.

6. Right-click the **TIBCO ASG Gateway Caching Core Engine** service and click **Start** to run the cache-enabled Core Engine.



- To uninstall a Windows service, type the following command:

```
asg-engine.exe --propFile JHF_asg-engine.tra --uninstall
```
- If you make any change to the `JHF_asg-engine.tra` file after the service is registered, make sure to run `--uninstall` and `--install` again to register the changes.

Installing and Running the Central Logger as a Windows Service

Procedure

1. Navigate to the `ASG_HOME/bin` directory.

2. Copy the existing `asg-engine.tra` file as follows:

```
copy asg-engine.tra JHF_asg-cl.tra
```

3. Using a text editor, edit the `JHF_asg-cl.tra` file as follows:

- a) Locate `APP_ARGS` variable to set the path to the `asg_core.ear` EAR file.

```
tibco.env.APP_ARGS=ASG_HOME/bin/asg_core.ear -u asg-cl
```

For example,

```
tibco.env.APP_ARGS=C:/tibco/asg/2.3/bin/asg_core.ear -u asg-cl
```



To run the Central Logger with a project configuration, add the project configuration name in the `tibco.env.APP_ARGS` variable as follows:

```
tibco.env.APP_ARGS=ASG_HOME/bin/asg_core.ear -u asg-cl -a ASGProject  
Configuration Name
```

- b) To install the Central Logger as a Windows service, add the following properties:

```
ntservice.name=ASG-Central-Logger  
ntservice.displayname=TIBCO ASG Central Logger  
ntservice.starttype=automatic  
ntservice.binary.path.absolute=%ASG_HOME%/bin/asg-engine.exe --propFile  
ASG_HOME/bin/JHF_asg-cl.tra  
ntservice.interactive=false
```

- c) Add the following property to configure the location of the log directory (Optional):

```
Engine.Log.Dir ASG_HOME/bin/centrallogger/logs
```

- d) Verify that `RV_HOME` and `HAWK_HOME` variables are set appropriately to the directory where TIBCO Rendezvous and TIBCO Hawk products are installed. (Optional)

- e) Verify that the **tibco.class.path.extended** variable includes `HAWK_HOME/lib` directory at the beginning, as follows (Optional):

```
tibco.class.path.extended %HAWK_HOME%/lib%PSP%CUSTOM_EXT_PREPEND_CP%%PSP%  
%STD_EXT_CP% %PSP%CUSTOM_EXT_APPEND_CP%%PSP%
```

- f) Save the `JHF_asg-cl.tra` file.

4. Open a command prompt window. Change to the `ASG_HOME/bin` directory. Run the following command:

```
asg-engine.exe --propFile JHF_asg-cl.tra --install
```

5. Open the Services Manager on the Windows system. Verify that **TIBCO ASG Central Logger** is added as a service in the local services list.
6. Right-click the **TIBCO ASG Central Logger** service and click **Start** to run the Central Logger.



- To uninstall a Windows service, type the following command:

```
asg-engine.exe --propFile JHF_asg-cl.tra --uninstall
```
- If you make any change to the JHF_asg-cl.tra file after the service is registered, make sure to run --uninstall and --install again to register the changes.

Installing and Running the Global Throttle Manager as a Windows Service

Procedure

1. Navigate to the `ASG_HOME/bin` directory.
2. Copy the existing `asg-engine.tra` file as follows:

```
copy asg-engine.tra JHF_asg-gtm.tra
```
3. Using a text editor, edit the `JHF_asg-gtm.tra` file as follows :
 - a) Locate `APP_ARGS` variable to set the path to the `asg_core.ear` EAR file.

```
tibco.env.APP_ARGS=ASG_HOME/bin/asg_core.ear -u asg-gtm
```

For example,

```
tibco.env.APP_ARGS=C:/tibco/asg/2.3/bin/asg_core.ear -u asg-gtm
```
 - b) To install the Global Throttle Manager as a Windows service, add the following properties:

```
ntservice.name=ASG-GTM
ntservice.displayname=TIBCO ASG Global Throttle Manager
ntservice.starttype=automatic
ntservice.binary.path.absolute=%ASG_HOME%/bin/asg-engine.exe --propFile
ASG_HOME/bin/JHF_asg-gtm.tra
ntservice.interactive=false
```
 - c) Add the following property to configure the location of the log directory (Optional):

```
Engine.Log.Dir ASG_HOME/bin/gtm/logs
```
 - d) Verify that `RV_HOME` and `HAWK_HOME` variables are set appropriately to the directory where TIBCO Rendezvous and TIBCO Hawk products are installed. (Optional)
 - e) Verify that the **tibco.class.path.extended** variable includes `HAWK_HOME/lib` directory at the beginning, as follows (Optional):

```
tibco.class.path.extended %HAWK_HOME%/lib%PSP%CUSTOM_EXT_PREPEND_CP%%PSP%
%STD_EXT_CP% %PSP%CUSTOM_EXT_APPEND_CP%%PSP%
```
 - f) Save the `JHF_asg-gtm.tra` file.
4. Open a command prompt window. Change to the `ASG_HOME/bin` directory. Run the following command:

```
asg-engine.exe --propFile JHF_asg-gtm.tra --install
```
5. Open the Services Manager on the Windows system. Verify that **TIBCO ASG Global Throttle Manager** is added as a service in the local services list.
6. Right-click the **TIBCO ASG Global Throttle Manager** service and click **Start** to run the Global Throttle Manager.



- To uninstall a Windows service, type the following command:

```
asg-engine.exe --propFile JHF_asg-gtm.tra --uninstall
```
- If you make any change to the `JHF_asg-gtm.tra` file after the service is registered, make sure to run --uninstall and --install again to register the changes.

Installing and Running the Cache Agent as a Windows Service

Procedure

1. Navigate to the `ASG_HOME/bin` directory.
2. Copy the existing `asg-engine.tra` file as follows:


```
copy asg-engine.tra JHF_asg-cache-agent.tra
```
3. Using a text editor, edit the `JHF_asg-cache-agent.tra` file as follows:
 - a) Locate `APP_ARGS` variable to set the path to the `asg_core.ear` EAR file.


```
tibco.env.APP_ARGS=ASG_HOME/bin/asg_core.ear -u asg-cache
```

For example,

```
tibco.env.APP_ARGS=C:/tibco/asg/2.3/bin/asg_core.ear -u asg-cache
```
 - b) To install the Cache Agent as a Windows service, add the following properties:


```
ntservice.name=ASG-Cache-Agent
ntservice.displayname=TIBCO ASG Cache Agent
ntservice.starttype=automatic
ntservice.binary.path.absolute=%ASG_HOME%/bin/asg-engine.exe --propFile
ASG_HOME/bin/JHF_asg-cache-agent.tra
ntservice.interactive=false
```
 - c) Add the following property to configure the location of the log directory (Optional):


```
Engine.Log.Dir ASG_HOME/bin/cache/logs
```
 - d) Verify that `RV_HOME` and `HAWK_HOME` variables are set appropriately to the directory where TIBCO Rendezvous and TIBCO Hawk products are installed. (Optional)
 - e) Verify that the **`tibco.class.path.extended`** variable includes `HAWK_HOME/lib` directory at the beginning, as follows (Optional):


```
tibco.class.path.extended %HAWK_HOME%/lib%PSP%CUSTOM_EXT_PREPEND_CP%%PSP%
%STD_EXT_CP% %PSP%CUSTOM_EXT_APPEND_CP%%PSP%
```
 - f) Save the `JHF_asg-cache-agent.tra` file.
4. Open a command prompt window. Change to the `ASG_HOME/bin` directory. Run the following command:


```
asg-engine.exe --propFile JHF_asg-cache-agent.tra --install
```
5. Open Services Manager on the Windows system. Verify that **TIBCO ASG Cache Agent** is added as a service in the local services list.
6. Right-click the **TIBCO ASG Cache Agent** service and click **Start** to run the Cache Agent.



- To uninstall a Windows service, type the following command:


```
asg-engine.exe --propFile JHF_asg-cache-agent.tra --uninstall
```
- If you make any change to the `JHF_asg-cache-agent.tra` file after the service is registered, make sure to run `--uninstall` and `--install` to register the changes.

Installing and Running the Cache Cleanup Agent as a Windows Service

Procedure

1. Navigate to the `ASG_HOME/bin` directory.
2. Copy the existing `asg-engine.tra` file as follows:


```
copy asg-engine.tra JHF_asg-cache-cleanup.tra
```
3. Using a text editor, edit the `JHF_asg-cache-cleanup.tra` file as follows:
 - a) Locate the `APP_ARGS` variable to set the path to the `asg_core.ear` EAR file.


```
tibco.env.APP_ARGS=ASG_HOME/bin/asg_core.ear -u asg-cache-cleanup
```

For example,

```
tibco.env.APP_ARGS=C:/tibco/asg/2.3/bin/asg_core.ear -u asg-cache-cleanup
```

- b) To install the Cache Cleanup Agent as a Windows service, add the following properties:

```
ntservice.name=ASG-Cache-Cleanup
ntservice.displayname=TIBCO ASG Cache Cleanup
ntservice.starttype=automatic
ntservice.binary.path.absolute=%ASG_HOME%/bin/asg-engine.exe --propFile
ASG_HOME/bin/JHF_asg-cache-cleanup.tra
ntservice.interactive=false
```

- c) Add the following property to configure the location of the log directory (Optional):

```
Engine.Log.Dir ASG_HOME/bin/cachecleanup/logs
```

- d) Verify that `RV_HOME` and `HAWK_HOME` variables are set appropriately to the location where the RV and HAWK products are installed. (Optional)
- e) Verify that the **tibco.class.path.extended** variable includes `HAWK_HOME/lib` directory at the beginning, as follows (Optional):

```
tibco.class.path.extended %HAWK_HOME%/lib%PSP%CUSTOM_EXT_PREPEND_CP%%PSP%
%STD_EXT_CP% %PSP%CUSTOM_EXT_APPEND_CP%%PSP%
```

- f) Save the `JHF_asg-cache-cleanup.tra` file.

4. Open a command prompt window. Change to the `ASG_HOME/bin` directory. Run the following command:

```
asg-engine.exe --propFile JHF_asg-cache-cleanup.tra --install
```

5. Open the Services Manager on the Windows system. Verify that **TIBCO ASG Cache Cleanup** is added as a service in the local services list.
6. Right-click the **TIBCO ASG Cache Cleanup** service and click **Start** to run the Cache Cleanup Agent.



- To uninstall a Windows service, type the following command:

```
asg-engine.exe --propFile JHF_asg-cache-agent.tra --uninstall
```

- If you make any change to the `JHF_asg-cache-agent.tra` file after the service is registered, make sure to run `--uninstall` and `--install` again to register the changes.

Post Installation Tasks

Post installation tasks are additional tasks that you might have to perform after installation.

Prerequisites

Complete the installation before running the post installation tasks.

Setting the System Environment Variables

After the product is installed, ensure that the following system variables are set appropriately. If they are not set, define them correctly, as indicated for both Windows and UNIX platforms.



You need to set the system environment variables if you use TIBCO Rendezvous as communication transport for the gateway.

- On Windows Platform

After the product is installed, verify that the `PATH` system variable includes `RV_HOME/bin`, where `RV_HOME` specifies the directory into which the TIBCO Rendezvous product is installed.

- On UNIX Platform

After the product is installed, ensure that the following environment variables are set correctly. Depending on the type of shell, you might have to use different commands to set these variables.

- `RV_HOME`: Verify that this variable is set to the directory into which TIBCO Rendezvous is installed. If not, set it as follows:

```
export RV_HOME=directory where the TIBCO Rendezvous product is installed.
```

- `PATH`: Verify that this variable includes `$RV_HOME/bin`. If not, set it as follows:

```
export PATH=$RV_HOME/bin:$PATH
```

- `LD_LIBRARY_PATH`: Verify that this variable includes `$RV_HOME/lib`. If not, set it as follows:

```
export LD_LIBRARY_PATH=$RV_HOME/lib/64:$RV_HOME/lib:$LD_LIBRARY_PATH
```

If you use the EMS channels with TIBCO API Exchange Gateway, follow one of these steps:

- Verify that the property `tibco.env.EMS_HOME` is set to the TIBCO Enterprise Message Service installation home. This property is defined in the `ASG_HOME/bin/asg-engine.tra` file.



For example,

```
tibco.env.EMS_HOME=/home/asg/tibco/ems/8.2
```

- Copy the `jms.jar` and `tibjms.jar` files from TIBCO Enterprise Message Service installation (`EMS_HOME/lib`) to `ASG_HOME/lib/ext/tpcl`

Installing and Configuring Apache HTTP Server (Optional)

You can use Apache HTTP Server to forward HTTP requests to TIBCO API Exchange Gateway.



The TIBCO API Exchange Gateway Apache Module requires the RV transport communication. Make sure that you have installed TIBCO Rendezvous and enabled the RV transport communication before you configure the TIBCO API Exchange Gateway Apache Module. Refer to *TIBCO API Exchange Gateway User's Guide* for details.

Installing Apache HTTP Server

You can install the Apache HTTP Server from the Apache website <http://httpd.apache.org>. Refer to the TIBCO API Exchange Gateway readme for the Apache HTTP Server version requirements, and download the supported version using the following steps.

The Apache HTTP Server can be installed in the following ways:

- Download the source and compile the source.
- Download the binary distribution and run the binary executable.

For example, on the Windows platform, you can download the binary executable of the installer as follows, which contains the pre-built Apache server.

Installing Apache HTTP Server on Windows 64-bit Platform

You can install the Apache server on the Windows platform.

Procedure

1. Go to <http://www.apachelounge.com/download/win64/>
2. Follow VC10 SP1 vc_redist_x64.exe to install the Visual C++ 2010 SP1 Redistributable Package x64.
3. Download the supported Apache 2.4.x win64 binary httpd-2.4.7-win64.zip file to install the Apache HTTP Server. Refer to the Apache HTTP Server documentation for complete installation details.



- Download the latest point release of the Apache 2.4 win64 binary from <http://www.apachelounge.com/download>. (For example, httpd-2.4.7-win64-VC11.zip is available at the time of this release.)
- For the complete documentation of the Apache server, refer to the following link:
<http://httpd.apache.org/docs/current/platform/windows.html>

Installing Apache HTTP Server on UNIX Platform

You can install the Apache server on the UNIX platform.

Procedure

1. Go to the <http://httpd.apache.org/download.cgi#apache24> link.
2. Download the source file. For example, httpd-2.4.7.tar.gz.
3. Compile the source and install it. Refer to the Apache httpd server documentation for the complete installation details. You may download the binary installation for your distribution.

Configuring Apache HTTP Server for TIBCO API Exchange Gateway

You must configure Apache HTTP server to include the TIBCO API Exchange Gateway module.

Procedure

1. Open the `APACHE_HOME/conf/httpd.conf` file for editing.
2. Add the following line in the file:

```
Include ASG_HOME/modules/http_server/apache/mod_ASG.conf
```



Replace the `ASG_HOME` with the directory location where TIBCO API Exchange Gateway is installed.

3. Modify the listening port, as required:

```
Listen 8080
```



Edit the listen port only if you run the Apache HTTP Server as a normal user. If you run it as a superuser, the change in port is not required.

4. Verify that you have set up the system environment variables. See [Setting the System Environment Variables](#).

Configuring TIBCO Enterprise Message Service (Optional)

To use the ESB channel or JMS transport for TIBCO API Exchange Gateway, configure the EMS server.

Procedure

Task A Update TIBCO Enterprise Message Service Libraries

1. Open the `ASG_HOME/bin/asg-engine.tra` file for editing. Set the `tibco.env.EMS_HOME` property to the TIBCO Enterprise Message Service installation home.

For example,

```
tibco.env.EMS_HOME=c:/tibco/ems/8.2
```

2. Copy the `jms.jar` and `tibjms.jar` files from TIBCO Enterprise Message Service installation (`EMS_HOME/lib`) to `ASG_HOME/lib/ext/tpcl`

Task B Enable the ESB Channels in the CDD file

3. Open the `ASG_HOME/bin/asg_core.cdd` file for editing in a text editor.
4. Search the following property.

```
<property-group comment="" name="Channel">
```

```
<property name="be.channel.deactivate" value="/DefaultImplementation/Channels/
SouthboundEsb0Channel,/DefaultImplementation/Channels/SouthboundEsb1Channel,/
DefaultImplementation/Channels/SouthboundEsb2Channel,/DefaultImplementation/Channels/
North_ESBChannel,/DefaultImplementation/Channels/North_HTTPChannel,/ASG/Channels/
SOAPJMSChannel_North,/ASG/Channels/SOAPJMSChannel_South,/ASG/Channels/
modAS_Channel,/Common/Channel/PSMChannel,/Common/Channel/CentralLoggerJMS"/>
```

5. Copy the property **be.channel.deactivate** to **be.channel.deactivate.backup** as follows:

```
<property name="be.channel.deactivate.backup" value="/DefaultImplementation/Channels/
SouthboundEsb0Channel,/DefaultImplementation/Channels/SouthboundEsb1Channel,/
DefaultImplementation/Channels/SouthboundEsb2Channel,/DefaultImplementation/Channels/
North_ESBChannel,/DefaultImplementation/Channels/North_HTTPChannel,/ASG/Channels/
SOAPJMSChannel_North,/ASG/Channels/SOAPJMSChannel_South,/ASG/Channels/
modAS_Channel,/Common/Channel/PSMChannel,/Common/Channel/CentralLoggerJMS"/>
```

6. Enable the ESB channels as follows:

- a) To enable the northbound ESB channel, remove `/DefaultImplementation/Channels/North_ESBChannel` from the value of the **be.channel.deactivate** property. The modified value of the property is as follows:

```
<property name="be.channel.deactivate" value="/DefaultImplementation/Channels/
SouthboundEsb0Channel,/DefaultImplementation/Channels/SouthboundEsb1Channel,/
DefaultImplementation/Channels/SouthboundEsb2Channel,/DefaultImplementation/Channels/
North_HTTPChannel,/ASG/Channels/SOAPJMSChannel_North,/ASG/Channels/
```

```
SOAPJMSChannel_South,/ASG/Channels/modAS_Channel,/Common/Channel/PSMChannel,/
Common/Channel/CentralLoggerJMS"/>
```

- b) To enable the southbound ESB channels, remove the /DefaultImplementation/Channels/SouthboundEsb0Channel,/DefaultImplementation/Channels/SouthboundEsb1Channel, ,/DefaultImplementation/Channels/SouthboundEsb2Channel from the value of the **be.channel.deactivate** property. The modified value of the property is as follows:

```
<property name="be.channel.deactivate" value="/DefaultImplementation/Channels/
North_ESBChannel,/DefaultImplementation/Channels/North_HTTPChannel,/ASG/Channels/
SOAPJMSChannel_North,/ASG/Channels/SOAPJMSChannel_South,/ASG/Channels/
modAS_Channel,/Common/Channel/PSMChannel,/Common/Channel/CentralLoggerJMS"/>
```

7. Save the changes to the file.

Task C Create Users on JMS Server

8. Ask your JMS server administrator to create a regular user (not an administrator). The Core Engine uses this user to connect to the JMS server when the JMS transport is used at the facade and target side. The administrator should grant the following privileges to this user:

- Send
- Receive
- Browse

This user is specified by the runtime property in the *ASG_CONFIG_HOME/asg.properties* file. Refer to **Engine Runtime Properties** in *TIBCO API Exchange Gateway User's Guide*.

Task D Create Queues on EMS Server

9. Make sure that TIBCO Enterprise Message Service is running.
10. Create the following queues in the TIBCO EMS server. For example, using **tibemsadmin** tool:

```
create queue asg.out.request
create queue asg.out.request.reply.0.0
create queue asg.out.request.reply.0.1
create queue asg.out.request.reply.0.2
create queue asg.in.request
create queue asg.in.request.reply.0
create queue asg.soap.in.request
create queue asg.soap.in.request.reply.0
create queue asg.soap.forward
create queue asg.soap.forward.reply.0
```



The default configuration assumes that TIBCO Enterprise Message Service is running on the localhost and port 7222. Depending on the host and port where the EMS server runs, edit the EMS server configuration parameters in the *ASG_CONFIG_HOME/asg.properties* file.

Uninstalling Software

TIBCO Universal Installer can be used to uninstall the software. Using the Universal Installer, you can choose to uninstall either all products installed in the TIBCO_HOME directory or just the selected products.

You can uninstall this product in GUI mode and in console mode.

Uninstalling in GUI Mode

The product can be uninstalled in GUI mode.

Procedure

1. Shut down all running TIBCO applications.
 2. Navigate to the TIBCO_HOME/tools/universal_installer directory and run TIBCOUniversalInstaller executable (**TIBCOUniversalInstaller***).
- For example,
- On the Windows 64-bit platform, run the following installer executable:
`TIBCOUniversalInstaller-x86-64.exe`
 - On the Linux platform, run the installer executable as follows:
`./TIBCOUniversalInstaller-lnx-x86-64.bin`
3. In the TIBCO Installation Manager page, follow these steps:
 - Select **Uninstall Products From Selected TIBCO Home Location**.
 - Select the TIBCO_HOME location from the TIBCO Home Location drop-down list.
 4. Click **Next**.
 5. Verify the Welcome dialog appears. Click **Next**.
 6. Choose an uninstallation option. The wizard provides two uninstallation options:
 - **Custom Uninstall** - You can select the products to be removed.
 - **Typical Uninstall** - The universal uninstaller removes all the products in this TIBCO_HOME.
 7. Click **Next**. If you selected **Custom Uninstall**, select the check boxes for products to uninstall under the list of **Products Available for Uninstall**, and then click **Next**.
 8. Review the Pre-UnInstall Summary and click **Uninstall** to start the uninstallation process.
 9. Review the Post-UnInstall Summary and click **Finish** to exit the uninstall wizard.
 10. Verify that there are no errors in the `tibco_universal_installer.asg_uninstall.log` file, located in the `.TIBCO/maintenance_<date.time_stamp>` directory of the user's home directory performing the uninstallation.

Uninstalling in Console Mode

The product can be uninstalled in console mode.

Procedure

1. Using a command window, navigate to the directory: TIBCO_HOME\tools\universal_installer
2. Run the TIBCOUniversalInstaller executable (**TIBCOUniversalInstaller***) with the console option.

For example,

- On the Windows 64-bit platform, type the following command at the command prompt:
`TIBCOUniversalInstaller-x86-64.exe -console`
 - On the Linux platform, type the following command at the command prompt:
`./TIBCOUniversalInstaller-lnx-x86-64.bin -console`
3. Complete the uninstallation by responding to the console window prompts.