

webMethods EntireX

Post-installation Steps under Windows

Version 10.9

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This document applies to webMethods EntireX Version 10.9 and all subsequent releases.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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1 About this Documentation

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Document Conventions

Convention	Description
Bold	Identifies elements on a screen.
Monospace font	Identifies service names and locations in the format <code>folder.subfolder.service</code> , APIs, Java classes, methods, properties.
<i>Italic</i>	Identifies: Variables for which you must supply values specific to your own situation or environment. New terms the first time they occur in the text. References to other documentation sources.
Monospace font	Identifies: Text you must type in. Messages displayed by the system. Program code.
{ }	Indicates a set of choices from which you must choose one. Type only the information inside the curly braces. Do not type the { } symbols.
	Separates two mutually exclusive choices in a syntax line. Type one of these choices. Do not type the symbol.
[]	Indicates one or more options. Type only the information inside the square brackets. Do not type the [] symbols.
...	Indicates that you can type multiple options of the same type. Type only the information. Do not type the ellipsis (...).

Online Information and Support

Product Documentation

You can find the product documentation on our documentation website at <https://documentation.softwareag.com>.

In addition, you can also access the cloud product documentation via <https://www.software-ag.cloud>. Navigate to the desired product and then, depending on your solution, go to “Developer Center”, “User Center” or “Documentation”.

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- Ask questions and find answers in our discussion forums.
- Get the latest Software AG news and announcements.
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- Download products, updates and fixes.
- Search the Knowledge Center for technical information and tips.
- Subscribe to early warnings and critical alerts.
- Open and update support incidents.
- Add product feature requests.

Data Protection

Software AG products provide functionality with respect to processing of personal data according to the EU General Data Protection Regulation (GDPR). Where applicable, appropriate steps are documented in the respective administration documentation.

2 Post-installation Steps under Windows

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Under Linux and Windows, EntireX is now installed using the Software AG Installer, which you download from the Software AG Empower website at [Empower](#). You can view the documentation for the Software AG Installer under *Software AG Installer* under Software AG Suite & Cross-Product Guides. Alternatively, you can install and configure EntireX using Command Central; see *Installing EntireX using Command Central*.

This chapter assumes you have already installed EntireX using the Software AG Installer. It covers installation instructions for components not included in the Software AG Installer; instruction on how to verify the installation and set up EntireX Security.

See also *General Installation Information* for topics that apply to multiple operating systems.

Broker Instance Created Automatically during Installation

If check box **Turn on Autostart for default EntireX Broker** is checked, the installation starts the default broker ETB001. This broker instance listens on the TCP/IP port defined in the custom panel during installation. Default port numbers are 1971 (TCP/IP) and 1958 (SSL), but only the TCP/IP port is enabled by default.

» To change the default port of the default broker

- 1 Stop the broker, using one of the following methods:
 - Use Command Central to stop the broker. See *Administering EntireX Components with Command Central* in the EntireX documentation or the separate Command Central documentation and online help for details.
 - From the Windows start menu, choose **Software AG > Stop EntireX Default Broker**.
- 2 Edit the configuration file, using one of the following methods:
 - Use Command Central to change. See *Configuring a Broker Instance > Ports* using the Command Central GUI | Command Line.
 - Edit the broker attribute file `config/etb/ETB001/ETB001.atr` and change the TCP/IP and SSL port numbers to a different value.
- 3 Start the broker, using one of the following methods:
 - Use Command Central to start the broker. See *Administering EntireX Components with Command Central* in the EntireX documentation or the separate Command Central documentation and online help for details.
 - From the Windows start menu, choose **Software AG > Start EntireX Default Broker**.

Startup Service for Broker Administration

When installation is complete, the Windows service `sagexxbrokeradmin10.9_<installation_id>` is running and ready to be used by `etbsrv` script located in directory `<Installation_Dir>/EntireX/bin`. This script can be used, for example, to start or stop the broker.

Eclipse Considerations

Eclipse is an optional component of EntireX. For Software AG Designer, it is required.

If you have not already installed Eclipse at your site, you can install Eclipse and the Software AG Designer from the installation medium. If you wish to install the Software AG Designer into an existing Eclipse environment, use the Eclipse update mechanism to deploy the EntireX feature.

Migrating from one EntireX Version to a Higher Version

When you migrate from one EntireX version to a higher version you have to change the license file setting to the new license file.

➤ To set a new license file

- Go to the Preferences pages in Eclipse (**Window > Preferences**) and select the page **Software AG > EntireX > Installation**.

Installing the EntireX Designer Plug-ins in Standalone Mode

If you want to install the EntireX design-time separately, that is, not as part of the full webMethods EntireX installation, see *Installing EntireX Design-time outside the Designer*.

Verifying the EntireX Broker Installation

The following methods are available to verify successful broker installation:

- `etbinfo` under *Broker Command-line Utilities* in the platform-specific Administration documentation
- `etbcmd` under *Broker Command-line Utilities* in the platform-specific Administration documentation
- *Sample Programs for Client (bcoc) and Server (bcos)*

➤ **To verify the broker installation**

- 1 If you have not already created a default broker, create one using Command Central. See *Creating a Broker Instance under Administering EntireX Broker using the Command Central GUI*.
- 2 Start the broker using Command Central. See *Starting a Broker Instance under Administering EntireX Broker using the Command Central GUI*.
- 3 Use one of the following methods to check if the broker is running:

- Run `etbinfo` to query the broker for information. Start a Command Prompt session, change your directory to the EntireX *bin* directory and use the following command:

```
etbinfo -blocalhost -dBROKER -pbroker.pro
```

This assumes that you use the default port 1971. Otherwise use the command:

```
etbinfo -blocalhost:port -dBROKER -pbroker.pro
```

where *port* is the port number of your broker.

This should display a formatted report with information about the broker. If the broker is not active, you get response 02150148 “EntireX Broker not active”.

- Run the `etbcmd` utility.

```
etbcmd -bETB048 -cPING -dBROKER
```

The broker ID is ETB0248. If successful, the message `PING broker ETB048 successfully performed` is returned. If the broker is not active, you get response 02150148 “EntireX Broker not active”.

- Use the client program `bcoc` and server program `bcos` to test broker request and replies.

- **Server**

For the server, start a Command Prompt session, change your directory to the EntireX *bin* directory and use the following command:

```
bcos -i100 -bETB048.
```

- **Client**

For the client start another Command Prompt session, change your directory also to the EntireX *bin* directory and use the following command:

```
bcoc -i100 -bETB048
```

The Broker ID is ETB048 and the number_of_messages is 100. The parameters are described under [Sample Programs for Client \(bcoc\) and Server \(bcos\)](#).

Sample Programs for Client (bcoc) and Server (bcos)

The programs `bcoc` and `bcos` are client and server programs provided for test purposes. They are delivered as executables in the `<Install_Dir>\Entirex\bin\` folder.

If the broker is not active, you get 02150148 “EntireX Broker not active”.

bcoc Parameters

Parameter	Description	ACI Field
<code>-a locale</code>	<code>locale_string,environment</code>	LOCALE-STRING, ENVIRONMENT
<code>-bbroker_id</code>	Broker ID (same as the database ID). This is an EntireX Broker configuration parameter. Example: <code>bcoc -bETB045</code>	BROKER-ID
<code>-cclass</code>	Server class (part of the server definition). Default is <code>AClass</code> . Value must be configured in the <i>Broker Attributes</i> . Together with server and service it forms the fully qualified server name.	SERVER-CLASS
<code>-g input_file_name</code>	Use a file as send buffer.	
<code>-h</code>	Display usage information.	
<code>-inum_messages[,num_uows]</code>	If <code>num_uows</code> is not specified, the number of messages sent. If <code>num_uows</code> is specified, the number of UOWs and messages therein sent. Example: <code>bcoc -i10</code>	
<code>-jreply_error</code>	Test <code>REPLY-ERROR</code> .	
<code>-kconversation_flag</code>	Using conversational mode.	
<code>-l</code>	Silent mode. Suppress output.	
<code>-ntoken</code>	Specify the security token, if desired.	TOKEN
<code>-pmessage_size</code>	The size, in bytes, of the packets that will be transmitted. Used to specify send and receive length in the broker API. Example: <code>bcoc -p10000</code>	
<code>-rcompress</code>	Compression level. Values: <code>N Y 0-9</code> .	COMPRESSLEVEL
<code>-s server</code>	Name of server. Default is <code>ASERVER</code> . Value must be configured in <i>Broker Attributes</i> . Together with <code>class</code> and <code>service</code> it forms the fully qualified server name.	SERVER-NAME

Parameter	Description	ACI Field
<code>-twait_time</code>	Set the wait time.	WAIT
<code>-uuser_id</code>	User ID. With a secure broker, this will be used to perform authentication.	USER-ID
<code>-vservice</code>	Name of service (part of the server definition). The default is ASERVICE. Value must be configured in <i>Broker Attributes</i> . Together with <code>class</code> and <code>server</code> it forms the fully qualified server name.	SERVER-NAME
<code>-wpassword</code>	Password. With a secure broker, this will be used to perform authentication.	PASSWORD
<code>-xssl_parms</code>	SSL parameters. For example: -x"TRUST_STORE=..\ExxCACert.pem&VERIFY_SERVER=NO" See also <i>SSL/TLS Parameters for SSL Clients</i> .	
<code>-ysleep_time</code>	Delay between messages in seconds.	
<code>-zstore[<i>uwstatp</i>[,<i>uowtime</i>]]</code>	Test unit of work.	
<code>-1..12</code>	By default, if omitted, the highest possible API version is used. Note that if you specify the API version, certain features might depend on a minimum API version.	API-VERSION

bcos Parameters

Most `bcoc` parameters apply to `bcos`, too. The following table lists additional parameters or parameters that have a different meaning.

Parameter	Description	ACI Field
<code>-goutput-file-name</code>	Name of output file for receive buffer (if not running in silent mode).	
<code>-inum_messages[,<i>num_uows</i>]</code>	If <i>num_uows</i> is not specified, the number of messages accepted. If <i>num_uows</i> is specified, the number of UOWs and messages therein that are accepted before deregistration. Example: <code>bcos -i10</code>	
<code>-iunit_of_work_flag</code>	Test unit of work.	

Setting up EntireX Security under Windows

- [Setting up EntireX Security for Broker Kernel](#)
- [Setting up EntireX Security for Broker Stubs](#)



Note: You must set up EntireX Security for broker kernel and - if your application(s) use API version 7 or below - also for broker stubs.

Setting up EntireX Security for Broker Kernel

➤ To set up EntireX Security for broker kernel under Windows

- 1 Determine that all prerequisites for EntireX components have been met before setting up EntireX Security. See *Windows Prerequisites*.
- 2 Insert the following statement into the broker-specific section of the attribute file. See *Broker-specific Attributes*.

```
SECURITY=YES
```

- 3 Modify the security-specific section of the broker attribute file according to your requirements. See *Security-specific Attributes*. These parameters are used to determine whether you will use Windows local security or LDAP-based authentication.



Note: If you are using LDAP-based authentication, define your authorization rules in LDAP and reference these with Security-specific attribute `LDAP-AUTHORIZATION-RULE`.



Note: Authentication: Windows authentication calls `LogonUser()` with the flag `LOGON32_LOGON_INTERACTIVE`.

Setting up EntireX Security for Broker Stubs



Note: If you are running your application(s) at ACI version 7 or below, the following steps are required to install EntireX Security for the Broker stubs in all environments where applications execute either as clients or servers. See *Platform Coverage* for where EntireX Security for broker stubs is supported.

These steps are not required if you are running your application(s) at ACI version 8 or above.

➤ To install EntireX Security for broker stubs on Windows

- When requested to specify the installation type, choose **Custom** and check the **Security** box. (The required directories including *secuexit.dll* are copied to your computer during installation.)



Notes:

1. *Secuexit.dll* is needed for backward compatibility if your applications issue any commands using ACI version 7 or below. Applications using ACI version 8 do not require this additional component in the stub.
2. For encrypted transport we strongly recommend using the Secure Sockets Layer/Transport Layer Security protocol. See *SSL/TLS, HTTP(S), and Certificates with EntireX* in the platform-independent Administration documentation.



Caution: If stub tracing level is > 1 , unencrypted contents of the send/receive buffers are exposed in the trace.

Installation of EntireX Security for Broker stubs is now complete. Now you can install the security components for the Broker stubs on the remaining operating systems where your application components are located.

EntireX Mini Runtime Considerations

The EntireX Mini Runtime is a set of components that can be used for the deployment of applications using the Broker ACI, the Broker RPC, and - under Windows only - DCOM Wrapper objects and the Broker ActiveX Control. Unlike the full EntireX Runtime, the Mini Runtime does not include Java capabilities. The EntireX Mini Runtime is provided as a separate package in the Software AG Installer.

If you need the EntireX Mini Runtime with your application, you may have to extend the `PATH` variable to `<inst_root>\EntireX\bin` before starting your application.

Broker ActiveX Control and TOR Editor

Before you can use the Broker ActiveX Control (file `ebx.dll`) and/or the TOR Editor (file `toredit.exe`) you have to register the Broker ActiveX Control as a COM component. Start the program `regsvr32` with "Run as Administrator":

```
regsvr32 <path>\ebx.dll
```

Files `ebx.dll` and `toredit.exe` are located in the `<inst_root>\EntireX\bin\x86` directory of the installation.



Note: Only program `ebx.dll` needs to be registered as a COM component. See *Calling the Transaction Object Editor*.

Enabling SSL and Authentication for JMX

To enable SSL and Authentication for JMX, see *Enabling SSL and Authentication for JMX* under *Setting up Broker Instances* in the Windows Administration documentation.