TIBCO ActiveMatrix BusinessWorks[™] Plug-in for WebSphere MQ Installation

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TIBCO Documentation and Support Services

All TIBCO documentation is available on the TIBCO Documentation site, which can be found here:

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:

TIBCO_HOME/release_notes/TIB_bwmq_version_docinfo.html

where *TIBCO_HOME* is the top-level directory in which TIBCO products are installed. On Windows, the default *TIBCO_HOME* is C:\tibco. On UNIX systems, the default *TIBCO_HOME* is /opt/tibco.

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

- TIBCO ActiveMatrix BusinessWorks Plug-in for WebSphere MQ Installation
- TIBCO ActiveMatrix BusinessWorks Plug-in for WebSphere MQ User's Guide
- TIBCO ActiveMatrix BusinessWorks Plug-in for WebSphere MQ Release Notes

The following documents provide additional information and can be found on the TIBCO Documentation site:

- TIBCO ActiveMatrix BusinessWorks Documentation
- TIBCO Enterprise Administrator User's Guide

How to Contact TIBCO Support

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

• 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.

How to Join TIBCOmmunity

TIBCOmmunity is an online destination for TIBCO customers, partners, and resident experts. It is a place to share and access the collective experience of the TIBCO community. TIBCOmmunity offers forums, blogs, and access to a variety of resources. To register, go to:

https://www.tibcommunity.com

You can install TIBCO ActiveMatrix BusinessWorks[™] Plug-in for WebSphere MQ either by using TIBCO Universal Installer or TIBCO Eclipse Plug-in.

• TIBCO Universal Installer

TIBCO Universal Installer provides three installation modes. Each installation mode has different characteristics. You can select an installation mode according to your installation environment.

For more information, see Using TIBCO Universal Installer.

• TIBCO Eclipse Plug-in Installer

TIBCO Eclipse Plug-in is an installation package for the Eclipse provisioning platform. With TIBCO Eclipse Plug-in, you can install TIBCO ActiveMatrix BusinessWorks plug-in by using Eclipse Update Manager.

For more information, see Using TIBCO Eclipse Plug-in.

Installation Requirements

Before you run the installer, ensure that you meet all the hardware and software requirements and you have appropriate privileges to run the installer.

Installation Account

To install on Microsoft Windows or Linux, ensure that you have the appropriate privileges, because privileges differ for various platforms.



Use the same installer account to install all TIBCO ActiveMatrix BusinessWorks products.

Platform	Account Privileges	
Microsoft Windows	Only users with administrator privileges can install the plug-in. If you do not have administrator privileges, the installer automatically exits.	
	To install the product on a network drive, ensure that the account used for installation has permission to access the network drive.	
Linux	Any type of user, regular (non-root) user and super-user (root), can perform the installation.	
	A graphic environment such as CDE or X Windows is required to run the installer in GUI mode.	

System Requirements

Ensure that you meet all the system requirements before installing the plug-in.

Platform

Before you run the installer, ensure that the appropriate platform is supported. See the readme file for information regarding supported operating system platforms, versions, and the required patches.

Disk Space

The installer requires space in the temporary directory before installation, and additional space in the temporary directory for running the installer. Ensure that sufficient space is available in the directory that you want to use as the installation environment (*TIBCO_HOME*). See the readme file for the required disk space.



While installing the product, avoid running other processes that consume disk space in the installation environment directory. If another process consumes disk space while the installer is copying the files, the installer might fail and display a failure message.

System Memory

See the readme file for the required system memory.

Software

Ensure that you have installed the required software before you run the installer. See the readme file for supported products and versions.

The following are useful TIBCO products.

Software	Description
TIBCO ActiveMatrix BusinessWorks™	Required. TIBCO ActiveMatrix BusinessWorks supports your integration project throughout the project life cycle. It includes a common graphical user interface for configuration, process design, and deployment.
TIBCO [®] Enterprise Administrator	Optional. The TIBCO Enterprise Administrator comprises the TIBCO Enterprise Administrator server, a web user interface for the server, and the shell interface, with which you can manage the applications that you create in the TIBCO Business Studio.
TIBCO Active matrix BusinessWorks™ Plug-in for Data Conversion	Optional. TIBCO ActiveMatrix BusinessWorks Plug-in for Data Conversion is used to parse the program-generated binary data and produce XML, or render XML data into the binary form for further consumption by the program. This plug-in is particularly useful for formatting and parsing data used as payloads in WebSphere MQ messages, when these messages are exchanged between a TIBCO ActiveMatrix BusinessWorks application and an application written in COBOL, RPG or PLI. TIBCO ActiveMatrix BusinessWorks Plug-in for WebSphere MQ can run without the plug-in for Data Conversion, depending on usage. For example, when XML documents are being exchanged directly through WebSphere MQ.

The following are useful third-party software.

Software	Description
WebSphere MQ	Required.
	Before installing the Plug-in, verify that one of the following is installed for WebSphere MQ:
	• WebSphere MQ Server (7.1 - 8.x) and Java Server libraries.
	 WebSphere MQ Client (7.1 - 8.x) and Java Client libraries.
	 If the intention is to communicate with a combination of Queue Manager 6.x and 7.x, it is still necessary to install a supported version of the WebSphere MQ Client locally for the plug-in to work with.
	It is good practice that you use the sample programs bundled with the WebSphere MQ software to confirm connectivity to the target queue manager(s), before using the plug- in.
	The Plug-in supports the connection to WebSphere MQ Server 6.x, and also, IBM supports the connection between WebSphere MQ Server 6.x and Client 7.x. See the IBM documentation for the version of software installed to determine if the features you wish to use are supported. For MQ Server 6.x, the unsupported items are listed as follows:
	Pub/Sub Applications
	Application Properties

• Locally bound connections to WebSphere MQ Server 6.x

Using TIBCO Universal Installer

TIBCO Universal Installer provides three modes to install TIBCO ActiveMatrix BusinessWorks Plug-in for WebSphere MQ.

Installer Overview

TIBCO Universal Installer provides three installation modes. Using TIBCO Universal Installer, you can select the installation environment and the installation component.

If you are using TIBCO Universal Installer for the first time to install the plug-in, it is good practice to review the following topics before the installation:

- Installation Modes
- Installation Environment
- Installation Components

Installation Modes

You can run TIBCO Universal Installer in GUI, console, or silent mode. Each mode is supported on all platforms.

GUI Mode

In GUI mode, the installer presents panels using which you can select a product, product location, and so on. To invoke the installer in GUI mode, double-click the executable file.

Console Mode

In console mode, you can run the installer on a command line. This is useful if your machine does not have a GUI environment.

Silent Mode

In silent mode, the installer installs the product without prompting you for information. The installer uses either default or custom settings that are saved in a response file.

Installation Environment

An installation environment isolates product installations. A product installed into an installation environment cannot access components in other installation environments.

An installation environment is the top level installation directory for TIBCO products. An installation environment consists of the following properties:

Directory

Identifies the directory into which the product is installed.

• Name

Identifies the name of the folder where the product is installed.

A plug-in must be installed into an existing installation environment where TIBCO ActiveMatrix BusinessWorks is already installed. The installation environment of TIBCO ActiveMatrix BusinessWorks is referenced as *TIBCO_HOME*. On Microsoft Windows, the default value of *TIBCO_HOME* is C:\tibco.

Installation Components

Different installation components are associated with different functions. Using the installer, you can select the components during the installation.

The following installation components are available for the plug-in:

Component	Description	
TIBCO ActiveMatrix BusinessWorks Plug-in for WebSphere MQ 8.3.0 Runtime	This component does the actual work of passing and converting data to and from the vendor application. Parameters of data exchanges are stored in projects created using the plug-in palette.	
TIBCO ActiveMatrix BusinessWorks Plug-in for WebSphere MQ 8.3.0 Design	This component includes the palettes, shared resources, and samples that show how the plug-in interacts with TIBCO ActiveMatrix BusinessWorks. You can configure your own business process in TIBCO Business Studio with an Eclipse user interface.	
	When the design-time component is installed, the runtime component is also installed even if the runtime component is not selected.	

The installation components are grouped into different installation profiles. One installation profile is associated with one or more installation components. When you select a profile, the components that default to the selected profile are installed. By default, the **Typical** installation profile is selected, therefore, all the installation components are installed. However, using the installer, you can customize the installation by explicitly selecting the components that you want to install.

Installation ProfileInstalled ComponentsRuntimeWhen this profile is selected, the TIBCO ActiveMatrix BusinessWorks
Plug-in for WebSphere MQ 8.3.0 Runtime component is installed.TypicalWhen this profile is selected, all the installation components are
installed.
By default, Typical is selected.

The following installation profiles are available for the plug-in:

Installation

The plug-in can be installed in GUI, console, or silent mode.

Ensure that you meet all the requirements described in the Installation Requirements section.



The plug-in must be installed into an existing installation environment where TIBCO ActiveMatrix BusinessWorks is installed. Stop all running processes in *TIBCO_HOME* before the installation.

Installing in GUI Mode

In GUI mode, the installer prompts you for information regarding the installation environment, installation profile, and other installation information.

Procedure

1. Open the physical media or download the package from the TIBCO eDelivery site (https://edelivery.tibco.com).

A user name and password are required for downloading. If you do not have a user name and password, contact TIBCO Technical Support.

- 2. Extract the contents of the package to a temporary directory.
- 3. Navigate to the temporary directory to which you extracted the installation package.
- 4. Use one of the following ways to start the installation:
 - On Microsoft Windows, double-click TIBCOUniversalInstaller.exe.
 - On Linux, run TIBCOUniversalInstaller-platform_acronym.bin.
- 5. In the Welcome dialog, click Next.
- 6. In the License Agreement dialog, read through the license agreement and select **I accept the terms of the license agreement**. Click **Next**.
- In the TIBCO Installation Home dialog, click Use an existing TIBCO_HOME to select an existing installation environment where TIBCO ActiveMatrix BusinessWorks is installed. Click Next. See Installation Environment for more details.
- In the Installation Profile Selection dialog, select one or more installation profiles to specify the installation components to be installed. Or select the Customize Installation check box to explicitly select the installation components. Click Next.

See Installation Components for more details.

- In the WebSphere MQ OSGi Jar Location dialog, click Browse to navigate to the MQ_HOME\java\lib \OSGi directory to select the com.ibm.mq.osgi.java_versionnumber.jar file of WebSphere MQ. Click Next.
- 10. In the Pre-Install Summary dialog, review the list of products selected for installation. Click Install.
- 11. In the Post Install Summary dialog, review the list of installation information. Click **Finish** to complete the installation process and exit the installer.

Installing in Console Mode

In console mode, you can run the installer on a command line.

Procedure

1. Open the physical media or download the package from the TIBCO eDelivery site (https://edelivery.tibco.com).

A user name and password are required for downloading. If you do not have a user name and password, contact TIBCO Technical Support.

- 2. Extract the contents of the package to a temporary directory.
- 3. On a command line, navigate to the temporary directory to which you extracted the installation package.
- 4. Run the following command to start the installation:

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- On Microsoft Windows: TIBCOUniversalInstaller.cmd -console
- On Linux: ./TIBCOUniversalInstaller-platform_acronym.bin -console

A second command line is displayed.

- Respond to the messages on the command line.
 The installation process is the similar to Installing in GUI Mode.
- 6. When the installation completes, press Enter to exit the installer.

Installing in Silent Mode

In silent mode, you can run the installer without user input by pointing the installer to an existing response file.

A default response file named TIBCOUniversalInstaller_bwmq_version.silent is packaged with the TIBCO Universal Installer. You need to edit the response file with information about your environment before launching the silent installation. The best practice is to make a copy of the default response file, then edit that file and use it for the installation.

- If you invoke the installer with only the **-silent** argument, the installer reads the input from default response file.
- If you invoke the installer with the **-silent -V responseFile**=**<filename>** argument, the installer reads the input from the specified response file.

Procedure

1. Open the physical media or download the package from the TIBCO eDelivery site (https://edelivery.tibco.com).

A user name and password are required for downloading. If you do not have a user name and password, contact TIBCO Technical Support.

- 2. Extract the contents of the package to a temporary directory.
- 3. Navigate to the temporary directory to which you extracted the installation package and open the TIBCOUniversalInstaller_bwmq_version.silent file.
- 4. Update the response file directly. Or make a copy of the response file first and then update the copied file.
- 5. On a command line, navigate to the temporary directory to which you extracted the installation package.
- 6. Enter the following command to start the installation:
 - On Microsoft Windows: TIBCOUniversalInstaller.cmd -silent [-V responseFile="filename"]
 - On Linux: TIBCOUniversalInstaller-platform_acronym.bin -silent [-V responseFile="filename"]



If you copied the response file to another directory, not the temporary directory containing the installer, you need to provide the absolute path of the response file.

Uninstallation

The plug-in can be uninstalled in GUI or console mode.



Before uninstalling the plug-in, stop all the running processes in the installation environment.

Uninstalling in GUI Mode

You can uninstall the plug-in by running TIBCO Universal Installer, which allows you to uninstall all products in *TIBCO_HOME* or select the products to uninstall.

Procedure

- 1. Navigate to the *TIBCO_HOME*/tools/universal_installer directory.
- 2. Use one of the following ways to start the uninstallation:
 - On Microsoft Windows, double-click TIBCOUniversalInstaller.exe.
 - On Linux, run TIBCOUniversalInstaller-platform_acronym.bin.
- 3. In the TIBCO Installation Manager dialog, select Uninstall Products from a TIBCO Home Location.
- 4. In the **TIBCO Home Location** field, select the TIBCO_HOME in which the product is installed. Click **Next**.
- 5. In the Welcome dialog, click **Next**.
- 6. In the Uninstallation Type dialog, select an uninstallation option and click Next.
 - Custom Uninstall

Allows you to select the products to be removed.

• Typical Uninstall

Removes all the products in TIBCO_HOME.

- 7. If you select **Custom Uninstall** in step 6, select the check box next to the product to be uninstalled in the Product Uninstall Selection dialog. Click **Next**.
- 8. In the Pre-Uninstall Summary dialog, review the product to be uninstalled. Click Uninstall.
- 9. In the Post Uninstall Summary dialog, click **Finish** to complete the uninstallation process and exit the installer.
- 10. If you have uninstalled all the software in *TIBCO_HOME*, delete the folders in the installation environment and user home.

Uninstalling in Console Mode

If you are not working in a GUI environment, you can uninstall the software in console mode.

Procedure

- 1. On a command line, navigate to the *TIBCO_HOME*/tools/universal_installer directory.
- 2. Run the following command to start the uninstallation:
 - On Microsoft Windows: TIBCOUniversalInstaller.cmd -console
 - On Linux: ./TIBCOUniversalInstaller-platform_acronym.bin -console

A second command line is displayed.

- 3. Respond to the messages on the command line. The uninstallation process is similar to Uninstalling in GUI Mode .
- 4. When the uninstallation completes, press Enter to exit the installer.

Installing from TIBCO Business Studio

The TIBCO Eclipse provisioning platform is a distribution service for TIBCO ActiveMatrix BusinessWorks plug-ins and the Plug-in for WebSphere MQ can be installed and managed using this service.

Installing the Plug-in

You can install the plug-in from Eclipse Update Manager.

Prerequisites

Ensure that your system meets all the requirements described in the Installation Requirements section.

Procedure

- 1. Open TIBCO Business Studio using one of the following ways:
 - Microsoft Windows: click Start > All Programs > TIBCO > TIBCO HOME > TIBCO Business Studio version_number > Studio for Designers.
 - Linux: run the TIBCO Business Studio executable located in the *TIBCO_HOME*/studio/ *version_number*/eclipse directory.
- 2. From the menu, click Help > Install New Software to open Eclipse Update Manager.
- 3. In the **Work with** field, enter http://update.tibco.com/eclipse/bw/6.2. After that, press Enter. A user name and password are required for downloading. If you do not have a user name and password, contact TIBCO Technical Support.
- 4. In the Available Software dialog, select **TIBCO ActiveMatrix BusinessWorks Plug-in for WebSphere MQ**. Click **Next**.
- 5. In the Install Details dialog, review the components to be installed. Click Next.
- 6. In the Review Licenses dialog, click **I accept the terms of the license agreement**. Click **Finish** to start the installation.
- 7. If a security warning dialog is displayed during the installation, click **OK** to continue the installation.
- 8. When the WebSphere MQ OSGi Jar Location dialog is displayed, click Browse to navigate to the MQ_HOME\java\lib\OSGi directory to select the com.ibm.mq.osgi.java_versionnumber.jar file of WebSphere MQ. Click Next.
- 9. Click Restart Now when you are prompted to restart TIBCO Business Studio.

Uninstalling the Plug-in

You can uninstall the plug-in from Eclipse Update Manager.

Procedure

- 1. Open TIBCO Business Studio using one of the following ways:
 - Microsoft Windows: click Start > All Programs > TIBCO > TIBCO HOME > TIBCO Business Studio version_number > Studio for Designers.
 - Linux: run the TIBCO Business Studio executable located in the *TIBCO_HOME*/studio/ *version_number*/eclipse directory.

- 2. From the menu, click **Help** > **Install New Software** to open Eclipse Update Manager.
- 3. In the Available Software dialog, click the **already installed** link.
- 4. In the **Installed Software** tab, select the product to be uninstalled and click **Uninstall**.
- 5. In the Uninstall Details dialog, review the product to be uninstalled. Click **Finish**.
- 6. Click **Restart Now** when you are prompted to restart TIBCO Business Studio.

Postinstallation Tasks

You must perform certain post-installation tasks before you can create and configure runtime objects.

The WebSphere MQ Plug-in is installed and ready to use in most respects, however to use local bindings mode in the studio environment, it is necessary to add the WebSphere MQ native library path to the system library path for your platform.

On Linux, this is the LD_LIBRARY_PATH. On Windows, it is PATH. On other unixes, it is LIBPATH.

For either system wide or for specific user accounts, you have to modify the environment variable to make sure it contains *MQ_HOME/lib*, *MQ_HOME/java/lib*, or *MQ_HOME/java/lib*64.

You can use another method by adding a path in the TIBCOBusinessStudio.ini file for the JVM that runs TIBCOBusinessStudio. Perform the following steps to complete it.

- 1. Navigate to the *TIBCO_HOME*/studio/3.6/eclipse directory and edit the TIBCOBusinessStudio.ini file.
- 2. Add the following line in the section where other **-D type** parameters appear:

Djava.library.path=<mqhome>/java/lib64.

3. Save the file.

To test whether this modification is successful, you can create a WebSphere MQ connection by using the Local bindings and then click **test**. If you get a message such as "MQRC_MODULE_NOT_FOUND MQJE001: Completion Code '2', Reason '2495'.", it means the path is not correct.

Installation Logging

If you encounter problems with the installation, first ensure that your system meets all prerequisites. Next, check the installer log for potential problems.

The installer log file, tibco_universal_installer.timestamp.username_install, is available in the following locations:

- On Microsoft Windows: C:\Users\username\.TIBCO\install_timestamp
- On Linux: user_home_dir/.TIBCO/install_timestamp

The installer log file captures the following information:

- Installation home details regarding the user that invoked the installer, hostname, operating system details, and so on
- List of assemblies installed
- Information related to the Ant scripts executed by the installer

To change the location of the installer log file, specify the option -V logFile="myLogFile" when you run the installer.