

# **TIBCO ActiveMatrix BusinessWorks™ Plug-in for Microsoft Dynamics CRM Installation**

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# TIBCO Documentation and Support Services

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All TIBCO documentation is available in the TIBCO Documentation Library, which can be found here:

<https://docs.tibco.com>

## Product-Specific Documentation

The following documents for this product can be found in the TIBCO Documentation Library:

- TIBCO ActiveMatrix BusinessWorks Plug-in for Microsoft Dynamics CRM Installation
- TIBCO ActiveMatrix BusinessWorks Plug-in for Microsoft Dynamics CRM User's Guide
- TIBCO ActiveMatrix BusinessWorks Plug-in for Microsoft Dynamics CRM Release Notes

## 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:

<http://www.tibcommunity.com>

# Installer Overview

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TIBCO Universal Installer is used to install and uninstall a plug-in.

## Installation Modes

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

### GUI Mode

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

### Console Mode

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

### Silent Mode

In the 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 does not 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:\Program Files\tibco\bw6`.

## Installation Components

Different installation components are associated with different functions. The installer allows you to select the components during the installation.

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

Component	Description
TIBCO ActiveMatrix BusinessWorks Plug-in for Microsoft Dynamics CRM Design	<p>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.</p> <p> This component cannot be installed separately without the runtime component.</p>
TIBCO ActiveMatrix BusinessWorks Plug-in for Microsoft Dynamics CRM Runtime	<p>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.</p>

The installation components are grouped into different installation profiles. One installation profile is associated with one or more installation components. When a profile is selected, 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, the installer allows you to customize the installation by explicitly selecting the components that you want to install.

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

- Runtime
- Typical

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

## 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.

### Software

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

Software	Description
TIBCO ActiveMatrix BusinessWorks	<p>Required.</p> <p>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.</p>

Software	Description
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, which allows you to manage the applications that you create in the TIBCO Business Studio.



# Installation

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The plug-in can be installed in the 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 the GUI Mode

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

### Procedure

1. Navigate to the temporary to which you extract the installation package.
2. Use one of the following ways to start the installation:
  - On Microsoft Windows, double-click `TIBCOUniversalInstaller.exe`.
  - On Linux, run `TIBCOUniversalInstaller-platform_acronym.bin`.
  - On Mac OS, double-click `TIBCOUniversalInstaller-mac.command`.
3. Click **Next** in the **Welcome** wizard.
4. Read through the license agreement and select **I accept the terms of the license agreement**. Click **Next**.
5. Click **Use an existing TIBCO\_HOME** to select an existing installation environment where TIBCO ActiveMatrix BusinessWorks has been installed. Click **Next**.  
See [Installation Environment](#) for more details.
6. Select one installation profile 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.
7. Verify the list of products selected for installation in the **Pre-Install summary** wizard. Click **Install**.
8. Verify the list of installation information in the **Post-Install Summary** wizard. Click **Finish**.

## Installing in the Console Mode

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

### Procedure

1. On a command line, navigate to the temporary directory to which you extract the installation package.
2. Run the following command to start the installation:
  - Microsoft Windows: `TIBCOUniversalInstaller.cmd -console`
  - Linux: `./TIBCOUniversalInstaller-platform_acronym.bin -console`
  - Mac OS: `./TIBCOUniversalInstaller-mac.command -console`

A second command line is displayed.

3. Respond to the messages on the command line. The installation process is the similar to [Installing in the GUI Mode](#).
4. When the installation completes, press Enter to exit the installer.

## Installing in the Silent Mode

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

In the silent mode, the installer does not prompt for any inputs during installation. Instead, the inputs are read from a response file that can be provided as a command-line parameter.

- If you invoke the installer with the `-silent` argument, the installer reads the input from default response file, which is `TIBCOUniversalInstaller_bwplugindynamicscrm_version.silent` packaged in the directory that contains the universal installer.
- If you invoke the installer with the `-silent -V responseFile="filename"` argument, the installer reads the input from the specified response file.

### Procedure

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



If you copy 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

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



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

## Uninstalling in the 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*.
  - On Mac OS, double-click *TIBCOUniversalInstaller-mac.command*.
3. Select **Uninstall Products from a TIBCO Home Location** in the **TIBCOInstallationManager** wizard. Click **Next**.
4. Click **Next** in the **Welcome** wizard.
5. 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*.
6. Select the check box next to the product to be uninstalled and click **Uninstall**, if you selected **Custom Uninstall**.
7. Review the product to be uninstalled and click **Uninstall**.
8. Click **Finish** in the **Post Uninstall Summary** wizard to exit the uninstall wizard.
9. If you have uninstalled all the software in *TIBCO\_HOME*, delete the folders in the installation environment and user home.

## Uninstalling in the Console Mode

If you are not working in a GUI environment, you can uninstall the software in the 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:

- Microsoft Windows: `TIBCOUniversalInstaller.cmd -console`
- Linux: `./TIBCOUniversalInstaller-platform_acronym.bin -console`
- Mac OS: `./TIBCOUniversalInstaller-mac.command -console`

A second command line is displayed.

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

## Postinstallation Tasks

Before using the Entity Event Source activity, some tasks should be performed. Otherwise, the Entity Event Source activity cannot work or some features are not available.

The tasks include:

- [Importing Dynamics CRM Solution to Dynamics CRM Server](#)
- [Configuring for HTTPS](#)

### Importing Dynamics CRM Solution to Dynamics CRM Server

The Dynamics CRM solution is used to catch the user events triggered on a specified entity.

#### Procedure

1. Upload the solution to the Dynamics CRM server.
  - a) Log in to the Dynamics CRM server as an administrator.
  - b) From the menu, click **SETTINGS > Solutions**.  
The **All Solutions** window is displayed.
  - c) Click **Import** to locate the Dynamics CRM solution.  
The Dynamics CRM solution `TibcoBWEventListenerSolution.zip` is located in the `TIBCO_HOME\bw\palettes\dynamicscrm\6.0\scripts` directory.
 

If a solution is referenced by other components, you cannot delete it before the reference is removed.
2. Configure the plug-in setting.
  - a) Double-click the Dynamics CRM solution uploaded in [Step 1](#).  
The **Configuration** page is displayed.
  - b) Configure the settings for the log and plug-in listener, and then click **Save** and **Publish** to publish the configuration.  
See [Configurations for Dynamics CRM Solution](#) for more information about the settings.
  - c) Click **Sdk Message Processing Steps** under the Components node and ensure that the SDK message processing steps are enabled.

#### Result

The messages failed to be sent to the listener are stored in the UnpublishedData entity. You can click **Republish** to resend the unpublished messages.

### Configurations for Dynamics CRM Solution

The **Configuration** page contains the settings for logs and listener.

Field	Description
<b>Log Setting</b>	
log level	Specifies the log level to trace different messages. See <i>TIBCO ActiveMatrix BusinessWorks Plug-in for Microsoft Dynamics CRM User's Guide</i> for more information regarding log levels.
<b>Listener Settings/ Listener</b>	

Field	Description
Server URL	<p>The URL for the Entity Event Source activity. The format is <i>domain_name:port_number/relative_path</i>.</p> <ul style="list-style-type: none"> <li>The domain name must have been parsed by DNS. It cannot be the IP address or local host.</li> <li>The information in the URL must be consistent with the values specified in the Entity Event Source activity.</li> </ul>
use SSL	Determines whether the Dynamics CRM solution sends user event messages to the Entity Event Source activity over HTTPS.
Username	The username specified in the Entity Event Source activity.
Password	The password specified in the Entity Event Source activity.
Retries	The amount of times the Dynamics CRM solution attempts to resend user event messages to the Entity Event Source activity if the previous sending failed.
RetryInterval	The interval period in milliseconds before the Dynamics CRM solution attempts to resend the user event messages.
X509Certification	<p>The name or ID of the keystore file uploaded on the <b>Web Resources</b> page. See <a href="#">SSL Client Authentication Configuration</a> for more information.</p> <p>This field is displayed when the <b>use SSL</b> check box is selected. It is required only when the client and server in the SSL connection authenticate to each other.</p>
CertificationPassword	<p>The password for the certification.</p> <p>This field is displayed when the <b>use SSL</b> check box is selected. It is required only when the client and server in the SSL connection authenticate mutually.</p>
Enable	Determines whether to enable this listener.

## Configuring for HTTPS

If the Dynamics CRM solution sends user event messages to the Entity Event Source activity over HTTPS, you need to complete the following configurations.

- If unidirectional authentication, that is only the client in the SSL connection authenticates to the server, complete [SSL Server Configuration](#).
- If bidirectional authentication, that is the client and the server in the SSL connection authenticate, complete [SSL Server Configuration](#) and [SSL Client Authentication Configuration](#).

## SSL Server Configuration

The SSL server configuration is necessary when sending user event messages over HTTPS.

### Procedure

1. Generate a keystore file in JKS format that contains a valid certification for the embedded HTTPS listener.  
This valid certification should be authorized from a third-party.
2. Specify SSL parameters for the HTTP connection in TIBCO Business Studio.
  - a) Select the **Confidentiality** check box in the HTTP Connector shared resource.
  - b) Create a SSL Server Configuration shared resource in the **SSL Server Configuration** field.
  - c) Import the generated keystore file to the SSL Server Configuration shared resource.

See *TIBCO ActiveMatrix BusinessWorks Bindings and Palettes Reference* for more information.

## SSL Client Authentication Configuration

The SSL client authentication configuration is necessary only when the client and server in the SSL connection authenticate to each other.

### Procedure

1. Generate a keystore file in PKCS12 format that contains a valid certification for the embedded HTTPS listener.  
For example,  

```
Keytool -genkey -v -alias clientkey -keyalg RSA -storetype PKCS12 -keystore file_fullpath
```

This valid certification should be authorized from a third-party.
2. Configure SSL information in the Dynamics CRM server.
  - a) Change the extension of the keystore file from .p12 to .xml, and then upload it to the **Web Resources** page.  
You can find the **Web Resources** page by clicking **SETTINGS > Customizations > Customize the system > Components**.
  - b) Specify the certification name and password on the Configuration page of the Dynamics CRM solution.  
See [Configurations for Dynamics CRM Solution](#) for more information.
3. Configure SSL client authentication for the HTTP connection in TIBCO Business Studio.
  - a) Export the certification to a .cer file, and then import the .cer file to Trust Store.
  - b) Select the **Enable Mutual Authentication** check box in the SSL Server Configuration shared resource created in [SSL Server Configuration](#).
  - c) Specify the keystore information in the **Keystore Provider as Trust store** field.

See *TIBCO ActiveMatrix BusinessWorks Bindings and Palettes Reference* for more information.

# Installation Logging

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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.log`, is available in the following locations:

- Microsoft Windows: `C:\Users\username\.TIBCO\install_timestamp`
- Linux: `user_home_dir/.TIBCO/install_timestamp`
- Mac OS: `Users/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.