



# **TIBCO ActiveMatrix BusinessWorks™**

## **Installation**

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# Changing Help Preferences

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By default, documentation access from TIBCO Business Studio™ for BusinessWorks™ is online, through the [TIBCO Product Documentation](https://docs.tibco.com/) website that contains the latest version of the documentation. Check the website frequently for updates. To access the product documentation offline, download the documentation to a local directory or an internal web server and then change the help preferences in TIBCO Business Studio for BusinessWorks.

## Before you begin

Before changing the help preferences to access documentation locally or from an internal web server, download the documentation.

1. Go to <https://docs.tibco.com/>
2. In the **Search** field, enter TIBCO ActiveMatrix BusinessWorks™ and press **Enter**.
3. Select the TIBCO ActiveMatrix BusinessWorks™ product from the list. This opens the product documentation page for the latest version.
4. Click **Download All**.
5. A compressed .zip file containing the latest documentation is downloaded to your web browser's default download location.
6. Copy the .zip file to a local directory or to an internal web server and unzip the file.

To point to a custom location:

## Procedure

1. Perform one of the following steps in TIBCO Business Studio for BusinessWorks based on your operating system:
  - On Windows OS: Click **Window > Preferences**
  - On macOS: Click **TIBCO Business Studio > Preferences**.
2. In the Preferences dialog, click **BusinessWorks > Help**.
3. Click **Custom Location**, and then browse to the `html` directory in the folder where you extracted the documentation or provide the URL to the `html` directory on your

internal web server.

4. Click **Apply**, and then click **OK**.

# Installation Requirements

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Before installing the product on your system, ensure that you can log in to the system with appropriate permissions, and that your system meets the hardware and software requirements need to install ActiveMatrix BusinessWorks™.

If you plan to install in an existing installation environment, stop all running processes in *TIBCO\_HOME*.

## Installation Account

The privileges required to install the product differ for Windows and UNIX platforms. Ensure that you have the appropriate privileges to install on the target platform.

### Microsoft Windows

You must have administrator privileges for the machine on which you want to install the software. If you do not have administrator privileges, the installer exits. If you want to install the product on a network drive, ensure that the account used for installation has permission to access the network drive.

### Mac and UNIX

Any user, regular user (non-root) or super-user (root), can perform the installation. Use the same user account to install all TIBCO products.

On Unix systems, a graphic environment such as CDE or X Windows is required to run the installer in GUI mode.

## Preinstallation Tasks

Preinstallation tasks include the tasks that you must complete before you start the installer, such as ensuring your system meets the installation requirements and customizing your environment for certain platforms.

## Download TIBCO ActiveMatrix BusinessWorks™ Software

Download the ActiveMatrix BusinessWorks™ software package for your platform from the TIBCO Software Product Download Site (<https://edelivery.tibco.com/>). Extract the ActiveMatrix BusinessWorks archive file to a temporary directory on the machine on which you run the installer.

### Required on Linux and Solaris: Download Eclipse LGPL Software Assembly

If the Eclipse LGPL software assembly (`product_tibco_eclipse_lgpl`) is not present in the temporary directory where you extracted the product archive file, and the machine on which you want to run the ActiveMatrix BusinessWorks installer is not connected to the internet, download the Eclipse LGPL software assembly for your target platform before you install ActiveMatrix BusinessWorks.

Save the downloaded assembly in a temporary directory accessible to the machine on which you run the installer. During installation, provide the location of the temporary directory where the downloaded software assembly is available.

If the machine is connected to the internet, you can download the Eclipse LGPL software assembly file for your target platform from the TIBCO Software Product Download Site during installation. The `product_tibco_eclipse_lgpl_3.7.2.001_OSplatform.zip` is downloaded to the location that you select.

### Optional: Download Sunec LGPL Software Assembly

The software requires the Sunec LGPL library (Oracle Elliptic Curve Cryptography (ECC) Library) only if you want to use the ECC ciphers with SSL/TLS configurations. Without the ECC library, the SSL/TLS functionality is still available, but without ECC ciphers.

If the Sunec LGPL software assembly (`product_tibco_sunec`) is not present in the temporary directory where you extracted the product archive file, and the machine on which you run the installer is not connected to the Internet, download the Sunec LGPL software assembly for your target platform before you install ActiveMatrix BusinessWorks.

Save the downloaded assembly in a temporary directory accessible to the machine on which you run the installer. During installation, provide the location of the temporary directory where the downloaded software assembly is available.

If the machine is connected to the Internet, you can download the Eclipse LGPL software assembly file for your target platform from the TIBCO Software Product Download Site

during installation. The `product_tibco_sunec_1.7.0.072_OSplatform.zip` is downloaded to the location that you select.

## Required on Red Hat Enterprise Linux (RHEL) 8.x and above: Download `libnsl.so.1` Package

By default, the `libnsl.so.1` package is not installed in Red Hat Enterprise Linux version 8.x and above. Without this package, no agent can be installed successfully. The `libnsl.so.1` package is required on RHEL 8.x and above versions, and you need to install it manually.



**Note:** RHEL and CentOS have the same kernel version.

To resolve this issue, let your administrator set up a "yum" repository, and then run the following command:

```
yum install libnsl
```

After the successful installation of `libnsl`, you can see `libnsl.so.1` under the `/usr/lib64/` directory.

# Hardware and Software Requirements

Review the system memory and disk space requirements before you start the installation.

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 and Disk Space Requirements

The product readme file specifies the system memory and disk space required for installation. In addition to the disk space in the temporary directory before installation, the installer requires additional space in the temporary directory to copy files during installation. Ensure that sufficient space is available in the directory you want to use as the installation environment, your `TIBCO_HOME`.



**Note:** If you want to run scripts, make sure that the *TIBCO\_HOME* path does *not* contain any spaces, such as: Program Files.

**Important:** See the readme file for information about the system and disk space requirements, supported operating system platforms and versions, and required patches, if any.

## Software Requirements

Before running the installer on a target platform, ensure that the platform is supported and your system meets the software requirements.

**Important:** Unless indicated otherwise, see the readme file for the supported products and versions.

### Required Software

Software	Description
Eclipse components	Required. On some operating system platforms, TIBCO Universal Installer automatically downloads certain Eclipse LGPL components during installation, if necessary. However, on Linux and Solaris platforms, you must download the Eclipse LGPL software assembly for your target platform before installing the software. For more information, see <a href="#">Pre-installation Tasks</a> .
Sunec LGPL	Optional. The software requires the Sunec LGPL library only if you want to use the ECC ciphers with SSL/TLS configurations. Without the ECCL library, the SSL/TLS functionality is still available, but without ECC ciphers.  You must download the Sunec LGPL software assembly for your target platform before installing the software. For more information, see <a href="#">Pre-installation Tasks</a> .

# Compatibility Chart for TIBCO ActiveMatrix BusinessWorks™ and TIBCO® Enterprise Administrator

The TIBCO Enterprise Administrator (TEA) server is an application administration UI that supports multiple TIBCO products, including the ActiveMatrix BusinessWorks. Using the Admin UI you can create, view, and monitor runtime entities. Each product registers its own agent with the server and the server communicates with the products through these agents. The compatibility rules and chart help determine the minimum version of the TEA server required by a given version of ActiveMatrix BusinessWorks.

These are the compatibility rules for the TEA server and TEA agent libraries:



















- The TEA server is backward compatible with earlier versions of TEA agent libraries, unless there is a known issue.
- The TEA server does not guarantee forward compatibility with newer versions of TEA agent libraries.

The following table lists the version of the TEA agent library bundled with a given version of ActiveMatrix BusinessWorks.

ActiveMatrix BusinessWorks Version	Version of TEA Agent Library Bundled
6.7.0	2.4.0 HF-001
6.8.0	2.4.0 HF-006
6.8.1	2.4.1
6.9.0	2.4.1
6.9.1	2.4.1 HF-002
6.10.0	2.4.1

## Compatibility Chart

Based on compatibility rules and the version of the TEA agent library bundled in a given version of ActiveMatrix BusinessWorks, see the following compatibility chart:

ActiveMatrix BusinessWorks Version with TEA Agent Library Version	TEA Server Version		
	2.4.0	2.4.1	2.4.1 HF-002
ActiveMatrix BusinessWorks 6.7.0 with TEA Agent Library 2.4.0 HF-001			
ActiveMatrix BusinessWorks 6.8.0 with TEA Agent Library 2.4.0 HF-006			
ActiveMatrix BusinessWorks 6.8.1 with TEA Agent Library 2.4.1			
ActiveMatrix BusinessWorks 6.9.0 with TEA Agent Library 2.4.1			
ActiveMatrix BusinessWorks 6.9.1 with TEA Agent Library 2.4.1 HF-002			
ActiveMatrix BusinessWorks 6.10.0 with TEA Agent Library 2.4.1			

# Installation

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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.



**Note:** 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 and Procedures

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

Installation Mode	Description
GUI	In GUI mode, the installer contains panels where you can select a product, product location, and so on. To invoke the installer in GUI mode, double-click the executable file.
Console	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	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.

## Installing in GUI Mode

When you run the installer in GUI mode, the installer presents panels that you can use to choose the installation environment and customize your installation.

### Before you begin

If you want to install TIBCO ActiveMatrix BusinessWorks™ Maven Plugin, install Apache Maven from <https://maven.apache.org/download.cgi> and set Maven home in the Environment Variables.

### Procedure

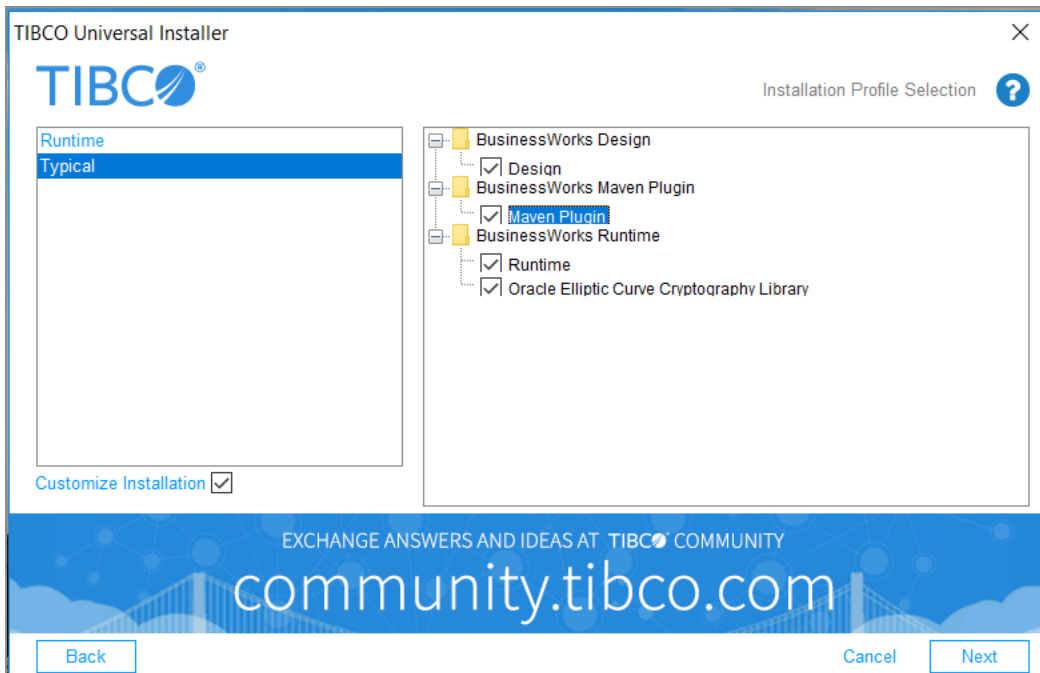
1. Run the TIBCOUniversalInstaller executable.

- On Microsoft Windows: `TIBCOUniversalInstaller.exe`
  - On Unix: `TIBCOUniversalInstaller.bin`
  - On Mac OS: `TIBCOUniversalInstaller-mac.command`
2. On the Welcome screen, click **Next**.
  3. Read the license agreement, select **I accept the terms of the license agreement** if you agree to the terms, and click **Next**.
  4. Choose to create a new installation environment that is be your `TIBCO_HOME` and specify the path to the new environment. If you want to run scripts, make sure that the `TIBCO_HOME` path does not contain any spaces, such as Program Files. Then click **Next**.

Option	Procedure
<b>Create a new TIBCO_HOME</b>	<p>In the <b>Directory</b> field, specify the directory into which the product is installed. The directory cannot be the same as the directory of an existing installation environment.</p> <p>The directory path cannot contain the following special characters:</p> <pre># \$ % &amp; * &lt; &gt; ? `  </pre> <p><b>Note:</b> If you want to run scripts, make sure that the <code>TIBCO_HOME</code> path does not contain any spaces, such as: Program Files.</p>
<b>Use an existing TIBCO_HOME</b>	<p>Select an existing installation environment from the drop-down menu.</p> <p><b>Note:</b> If you want to run scripts, make sure that the <code>TIBCO_HOME</code> path does not contain any spaces, such as: Program Files.</p> <p><b>Important:</b> 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 the same installation environment.</p>

5. On the Installation Profile Selection screen, select one or more of the pre-configured profiles, or click **Customize Installation**, and explicitly select the components you want to install. By default, the pre-configured profiles include the **Oracle Elliptic**

**Curve Cryptography Library (ECCL)** component. The software requires the ECCL only if you want to use the ECC ciphers with SSL/TLS configurations. Without the ECCL, the SSL/TLS functionality is still available, but without the ECC ciphers.



- If you want to install TIBCO ActiveMatrix BusinessWorks™ Maven Plugin, select the **Customize Installation** and **Maven Plugin** check boxes and then click **Next**.
  - If you do not plan to use the ECC ciphers, you do not need to download and install the ECCL. Select the check box **Customize Installation** and clear the check box for the **Oracle Elliptic Curve Cryptography Library** component. Then click **Next**.
  - To continue with the default selection, click **Next**.
6. On Linux and Solaris, the design feature requires Eclipse LGPL assembly to be available in the temporary directory prior to installation. For more information, see [Software Requirements](#). The installer prompts the LGPL License Agreement screen for the Eclipse LGPL assembly. Read the license agreement, select **I accept the terms of the license agreement** if you agree to the terms, and click **Next** to proceed.
  7. On the LGPL Assembly Download screen, select one of the following download options and click **Next**.
    - **Download Gnome Binding assembly from TIBCO:** Select this option if you are

connected to the Internet or do not want to use a previously downloaded assembly. The assembly is automatically downloaded and stored in the assemblies subdirectory of the directory where you extracted the installer.

- **Provide the location for the assembly previously downloaded from TIBCO:**  
Select this option if you are not connected to the Internet. Click **Browse** to navigate to the directory where the previously downloaded LGPL assembly is stored. Select the directory, and click **Open**.

**i Note:** Skip this step if the **Oracle Elliptic Curve Cryptography Library** component was not selected in the Installation Profile Selection screen.

8. If you choose to install the Oracle Elliptic Curve Cryptography Library component, the design feature requires the Sunec LGPL assembly to be available in the temporary directory prior to installation. See [Software Requirements](#) for details. The installer prompts the LGPL License Agreement screen for the Sunec LGPL assembly. To download the Oracle Elliptic Curve Cryptography Library, select **I accept the terms of the license agreement**, and click **Next**. If you do not want to download the Oracle Elliptic Curve Cryptography Library, click **Cancel** to exit.
9. On the LGPL Assembly Download screen, select one of the following download options and click **Next**.
  - **Download Oracle Elliptic Curve Cryptography Library assembly from TIBCO:**  
Select this option if you are connected to the Internet or do not want to use a previously downloaded assembly. The assembly is automatically downloaded and stored in the assemblies subdirectory of the directory where you extracted the installer.
  - **Provide the location for the assembly previously downloaded from TIBCO:**  
Select this option if you are not connected to the Internet. Click **Browse** to navigate to the directory where the previously downloaded LGPL assembly is stored. Select the directory, and click **Open**.
10. On the Pre-Install Summary screen, verify the list of products and components selected for installation, and click **Install**.
11. Verify the Post-Install Summary, click **Finish** to complete the installation process, and close the installer window.



- i Note:** If you want to install Maven Plug-in after installing TIBCO ActiveMatrix BusinessWorks™ in the GUI mode, double-click the TIBCO Universal Installer file to start installation. Select **Customize Installation** and **Maven Plugin** check boxes and clear the other check boxes to continue the installation of Maven Plug-in.

## Installing in Console Mode

When you run the installer in console mode, the installer prompts for values on a console window and you can move through the installation by responding to the prompts. The Console mode can be used to install the software in a non-Windows environment.

### Before you begin

- Prepare your system and the installation media before running the installer in console mode.
- If you want to install TIBCO ActiveMatrix BusinessWorks™ Maven Plugin, install Apache Maven from <https://maven.apache.org/download.cgi> and set Maven home in the Environment Variables.

### Procedure

1. Open a console window and navigate to the temporary directory where you extracted the product archive file.
2. Run the installer using one of the following commands:

- **On Windows:**

```
Run TIBCOUniversalInstaller -console
```

The installer launches a second console window.

- **On UNIX:**

```
Run ./TIBCOUniversalInstaller.bin -console
```

- **On Mac OS:**

```
Run ./TIBCOUniversalInstaller-mac.command -console
```

3. Complete the installation by responding to the console window prompts, which are similar to those described in the section [Installing in GUI Mode](#). The console also provides an option to return to a previous selection periodically.

**i Note:**

- If you want to run scripts, make sure that the `TIBCO_HOME` path does *not* contain any spaces, such as: Program Files.
- To install Maven Plugin in the console mode, select the **Customize Installation** and then **Maven Plugin** options.

4. When the installation is completed, press **Enter** to exit the installer.



**Note:** If you want to install the Maven Plugin after installing TIBCO ActiveMatrix BusinessWorks™ in the console mode, run the installer again. Select **Customize Installation** and then **Maven Plugin** options, and clear the other options to continue the installation of Maven Plugin.

## Installing in Silent Mode

When you run the installer in silent mode, the installer does not prompt for your input. Instead, the values specified in a response file are used to complete the installation. You can use a default pre-configured response file or create your own response file.

By default, the installer uses the `TIBCOUniversalInstaller_BW_<version>.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_BW_<version>.silent` file and edit the file itself. You can then run the silent installer with or without the response file argument.


### Before you begin

If you want to install TIBCO ActiveMatrix BusinessWorks™ Maven Plugin, install Apache

Maven from <https://maven.apache.org/download.cgi> and set Maven home in the Environment Variables.

## Procedure

1. Make a copy of `TIBCOUniversalInstaller_BW_<version>.silent` file and rename the file, for example, `newfile.silent`.
2. Using a text editor, open the copied file and update the installation location and features to install.

 **Note:** If you want to run scripts, make sure that the `TIBCO_HOME` path does *not* contain any spaces, such as: Program Files.

3. Open a console window, and navigate to the temporary directory where you extracted the product archive file. Run the silent installer using one of the following commands:

- **On Windows:**


```
TIBCOUniversalInstaller.cmd -silent -V responseFile="newfile.silent"
```

- **On UNIX:**

```
TIBCOUniversalInstaller.bin -silent -V responseFile='newfile.silent'
```

- **On Mac OS:**

```
TIBCOUniversalInstaller-mac.command -silent -V  
responseFile='newfile.silent'
```

-  **Note:**
- To install Maven Plugin in the silent mode, set Maven Plugin to 'true'.
  - If you want to install the Maven Plugin after installing TIBCO ActiveMatrix BusinessWorks™ in the silent mode, run the silent installer again. Set **Maven Plugin** to 'true' and other options to 'false' to continue the installation of Maven Plugin.

# Troubleshooting Installation

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

The installer log file, `tibco_universal_installer.username_install.log`, is available at the following locations:

Platform	Location
Microsoft Windows	<code>C:\Users\username\.TIBCO\install_timestamp</code>
Linux	<code>user_home_dir/.TIBCO/install_timestamp</code>
macOS	<code>Users/user_home_dir/.TIBCO/install_timestamp</code>

The installer log file captures the following information:

- Detailed information 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.

# Post Installation Tasks

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Post installation tasks are additional tasks that you might have to perform after installation. These tasks are required for certain scenarios and must be performed before you develop your applications or create and configure the runtime objects.

## Before you begin

Complete the installation before running the post installation tasks.

**i Note:** In case Apache Maven is not installed before installing TIBCO ActiveMatrix BusinessWorks™ Maven Plugin, install Apache Maven and then run `install.sh/install.bat` from `<TIBCO-HOME>\bw\6.x\maven` to install Maven Plugin.

## Set Environment Variable RV\_HOME

If you want to use the Rendezvous palette activities, install TIBCO Rendezvous®. For the supported versions, see the product readme file.

**! Important:** Ensure that the environment variable `RV_HOME` is set and refers to the TIBCO Rendezvous installed. For example, on Windows platform, set "`RV_HOME=TIBCO_HOME\tibrv\8.4`".

## On AIX Platform: Configure the Environment

On AIX platform, follow the steps to configure the environment:

1. Remove `TIBCO_JRE_HOME/1.8.0/lib/xml.jar`.
2. Copy `BW_HOME/system/shared/com.tibco.tpcl.javax.system.exports_5.10.0.001/xml-apis.jar` into `TIBCO_JRE_HOME/1.8.0/lib/ext`
3. Copy `BW_HOME/system/shared/com.tibco.tpcl.com.ctc.wstx_3.2.300.002/wstx-asl-3.2.9.jar` into `TIBCO_JRE_HOME/1.8.0/lib/ext`

4. To resolve localhost on AIX platform, add the property [hosts = local, bind4] to /etc/netsvc.conf if applicable.

**i Note:** If you are using BWAgent with TEA, *TEA\_HOME* and *BW\_HOME* locations must be different.

## On Ubuntu 22.x: Configure the Environment

To configure the environment on Ubuntu 22.x, perform the following steps:

1. Open the /etc/gdm3/custom.conf file available on your local machine.
2. Set WaylandEnable=true to WaylandEnable=false and save the changes.
3. Run the following command:

```
sudo systemctl restart gdm3
```

# Integrating with TIBCO Enterprise Message Service™

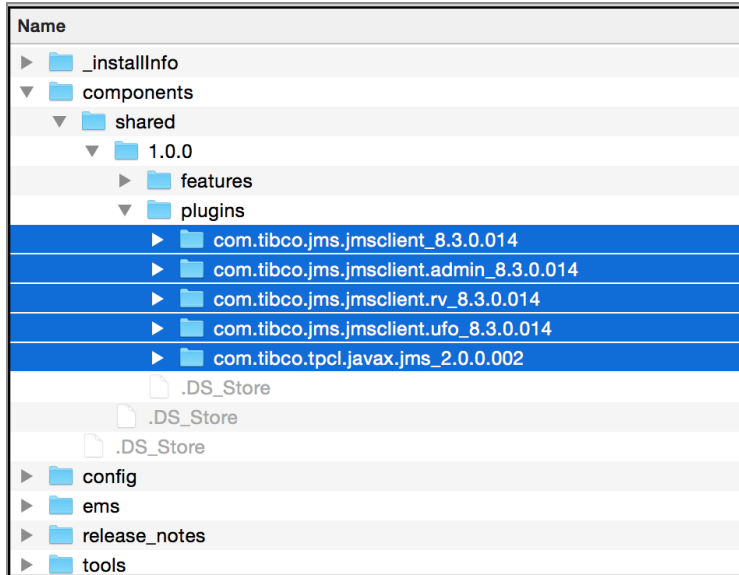
## Before you begin

Make sure that the *TIBCO Enterprise Message Service™* client OSGi bundles are present in the <EMS\_HOME>/components/shared/1.0/plugins folder.

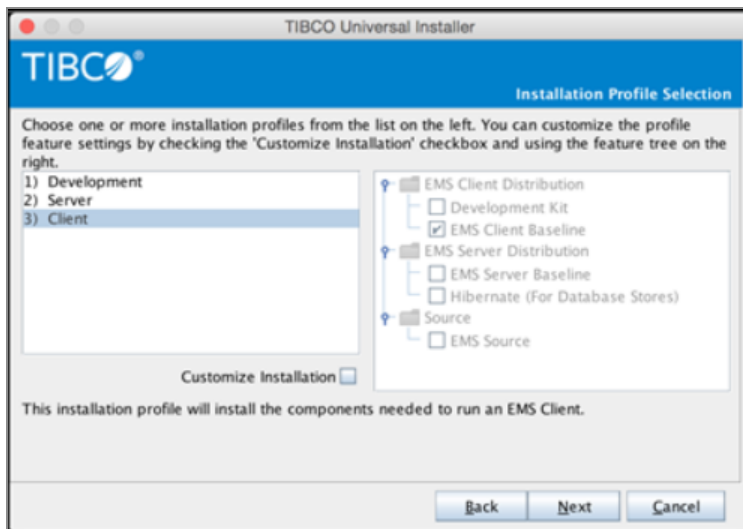
**i Note:** The plugins folder that you specify for *TIBCO Enterprise Message Service™* must contain only the *TIBCO Enterprise Message Service™* client OSGi bundles.

**i Note:** In case the plugins folder contains additional library jars, copy the *TIBCO Enterprise Message Service™* client OSGi bundles to a temporary folder. Use this temporary folder path as input for `bwinstall ems-driver`.

For driver jars, see the following figure.



If you do not have these client libraries, install the TIBCO Enterprise Message Service™ libraries by selecting either the Development or Client installation profiles.



Alternatively, copy the `<EMS_HOME>/components` folder from an existing installation to your local machine.

## Installing TIBCO Enterprise Message Service™ Client Libraries

To install the TIBCO Enterprise Message Service™ client libraries for your ActiveMatrix BusinessWorks environment, run the following command from the `<BW_HOME>/bin` folder and follow the prompts:

```
bwininstall ems-driver
```

## Setting Up TIBCO FTL® for BWAgent Transport

Follow these instructions to set up TIBCO FTL for BWAgent transport.



**Important:** Note the following items:

- Refer to the TIBCO ActiveMatrix BusinessWorks™ readme for the version of TIBCO FTL that is supported with the version of ActiveMatrix BusinessWorks™ 6.x you are using.
- If you are installing TIBCO FTL after you have already installed ActiveMatrix BusinessWorks, set the **tibco.env.FTL\_HOME** variable in the `bwcommon.tra` file. You can find this file in the bin folder at `BW_HOME\bin` for Windows, or `${BW_HOME}/bin` for Unix.
- Ensure you have installed FTL client libraries. For more information, see [Integrating with TIBCO FTL](#).

### Procedure

1. Install TIBCO FTL. For more information, see the *TIBCO FTL® Installation* guide.
2. Start the FTL Realm server by executing the `./tibrealmserver -ht <hostIP>:<port>` FTL command.

```
./tibrealmserver -ht <hostIP>:<port>
```

3. To populate data in the `bwadmin_ftlrealmserver.json` template file, located in the `BW_HOME/config` folder, execute the following FTL command:

For FTL 5.x,

```
./tibrealmadmin -rs <realmserverurl> -ur <PATH of bwadmin_ftl_realmserver.json>
```

For FTL 6.x,



```
./tibftladmin --ftlserver <realmserverurl> -ur <PATH of bwadmin_ftl_
realmserver.json>
```

4. Optional. If you are upgrading from ActiveMatrix BusinessWorks 6.4.x/6.5.x/6.6.x to ActiveMatrix BusinessWorks 6.7.0, and you use FTL, use the `bwadmin_ftlrealmserver.json_orig` file.



**Tip:** For instructions on how to configure an FTL backup server for high availability, see "Configuring Backup Realm Servers for Fault Tolerance" in *TIBCO FTL® Administration*.

## Integrating with TIBCO FTL

To install the TIBCO FTL client libraries for your TIBCO ActiveMatrix BusinessWorks™ environment, follow instructions in either of the following sections.

### Before you begin

The base version required is TIBCO FTL 5.2.1.

### Using the bwinstall Utility

To install the TIBCO FTL client libraries for your ActiveMatrix BusinessWorks™ environment, run the following command from the `<BW_HOME>/bin` folder and follow the prompts:

```
bwinstall ftl-driver
```

### Using the TIBCO Universal Installer

Use the TIBCO ActiveMatrix BusinessWorks™ Plug-in for TIBCO FTL® to install the TIBCO FTL client libraries for your ActiveMatrix BusinessWorks environment.



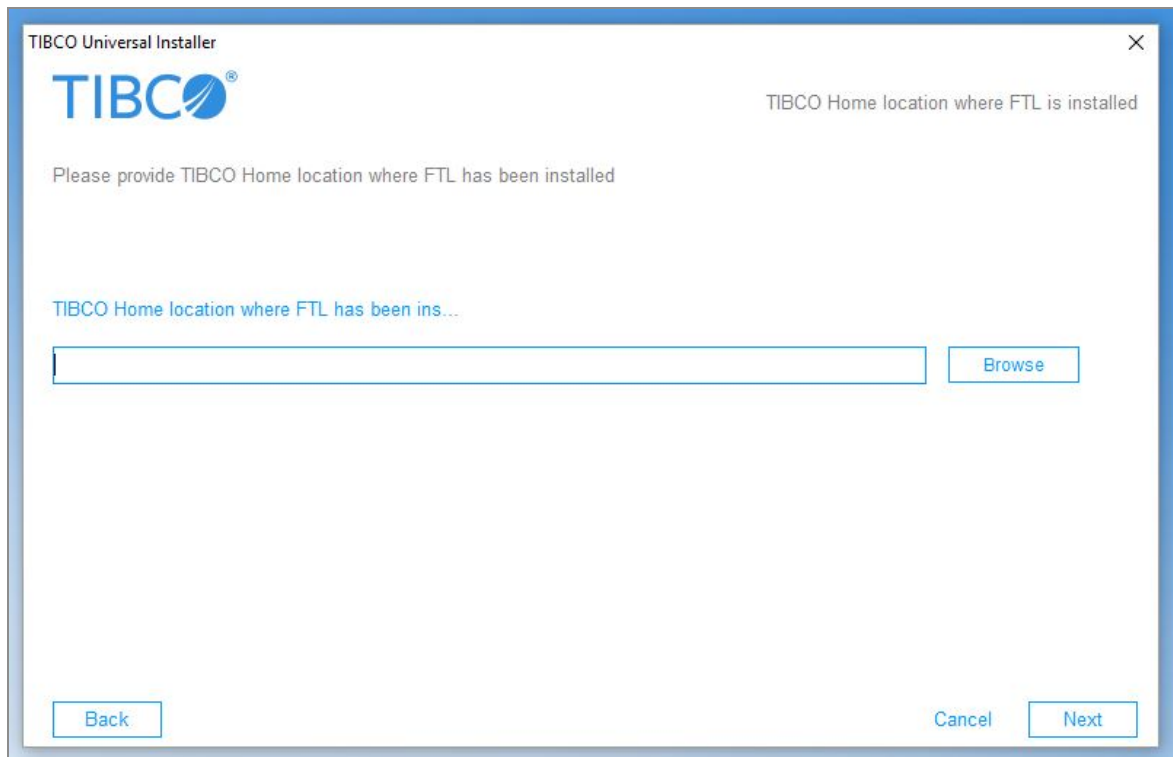
**Note:** The FTL palette and the activities in the palette are available at design time and run time, after the plug-in is installed.

## Procedure

1. Run the TIBCOUniversalInstaller executable.
2. On the Welcome screen, click **Next**.
3. Read the license agreement, select **I accept the terms of the license agreement** if you agree to the terms, and click **Next**.
4. Choose to create a new installation environment in an existing *TIBCO\_HOME*. Specify the location that ActiveMatrix BusinessWorks is installed. Then click **Next**.
5. On the Installation Profile Selection screen, ensure Typical is selected, and click **Next**.



6. Provide the *TIBCO\_HOME* path where you installed TIBCO FTL, and click **Next**.



7. On the Pre-Install Summary screen, verify the list of products and components selected for installation, and click **Install**.
8. Verify the Post-Install Summary, click **Finish** to complete the installation process, and close the installer window.

# Upgrading

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You can upgrade to a higher version of the software when new features are available or when problems in the software have been fixed. Typical steps include downloading and installing the newer version of the software, and some manual tasks to complete the upgrade. The manual tasks consist of generic tasks required for all versions and some additional tasks that depend on the version you are upgrading to.

- [Upgrading from Version 6.4.x/6.5.x/6.6.0 to Version 6.6.1](#)
- [Upgrading from Version 6.4.x/6.5.x/6.6.x to Version 6.7.0](#)
- [Upgrading from Version 6.4.x/6.5.x/6.6.x/6.7.x to Version 6.8.x](#)
- [Upgrading from Version 6.4.x/6.5.x/6.6.x/6.7.x/6.8.0 to Version 6.8.1](#)
- [Upgrading from Version 6.4.x/6.5.x/6.6.x/6.7.x/6.8.x to Version 6.9.0](#)
- [Upgrading from Version 6.6.x/6.7.x/6.8.x/6.9.0 to Version 6.9.1](#)
- [Upgrading from Version 6.6.x/6.7.x/6.8.x/6.9.x to Version 6.10.0](#)
- [TIBCO Business Studio™ for BusinessWorks™ Upgrade Manager](#)

## Upgrading from Version 6.4.x/6.5.x/6.6.0 to Version 6.6.1

These instructions apply if you are upgrading from version 6.4.2 or later versions of 6.4.x/6.5.x/6.6.0 to version 6.6.1.

### Before you begin

- The base version required for this upgrade scenario is 6.4.2 or higher.
- Complete these steps:
  1. Back up the domains from the command line, or the Admin UI.

**Important:** Before you back up your domains, ensure that all runtime artifacts have been stopped, and are not running.

To back up a domain, open a console window and navigate to the `TIBCO_HOME/bw/<older_version>/bin` directory. Then run the following command:

```
bwadmin backup -s <destination_file>.cmd domain <domain_name>
```

The bwadmin command file `<destination_file>.cmd` is generated.

If you are restoring to a different location, you need to update the command file as follows:

- The BWAgent name points to `localhost` by default; you need to change this to the name of the machine you are restoring to.
- Update the domain home to point to the absolute path to the new location.
- Update the path to the application archive (EAR) file to an absolute path.

For more information, see "Backing Up and Restoring a Domain" in *TIBCO ActiveMatrix BusinessWorks™ Administration*.

2. Delete domains from the command line, or the Admin UI.

**Note:** Deleting a domain cleans up the database entries. The entries are repopulated when you restore the domain in the new upgraded version.

3. Stop the BWAgent.

## Procedure

1. Install the software in the same `TIBCO_HOME` directory.

Follow the instructions in [Installation](#) section to install the software in a same `TIBCO_HOME` directory using GUI, console, or silent mode.

The installer copies the following files, if they are present, from the `TIBCO_HOME/bw/6.x/config/` folder to `TIBCO_HOME/bw/6.6/config/` folder and renames the new files as they are with the `_orig` suffix.

- `bwagent_db.json`

- bwadmin\_ftlrealmserver.json
- bwagent\_ftl.json
- jaas.login.conf
- realm.properties
- krb5.conf
- mashery.ini
- logback.xml

2. Optional. If you use FTL 5.x in FT mode, add the following properties manually:

File Name	Changes Required
bwagent_ftl.json	<ul style="list-style-type: none"> <li>• ftlsecondary: true</li> <li>• statsftlsecondary: true</li> </ul>
bwagent_db.json	<ul style="list-style-type: none"> <li>• statsftlsecondary: true</li> </ul>

To create an application on FTL side, use the `bwadmin_ftlrealmserver.json_orig` file.

3. Optional. If you have made manual updates to configuration files, or .tra files, copy them from your previous *TIBCO\_HOME* to the appropriate locations in your new *TIBCO\_HOME*.
4. Update the `bwagent.ini` file by running the `config` command with the `-cf` option. The command changes based on how the BWAgent is configured for data persistence and transport.

If the BWAgent is configured to use an external database and TIBCO FTL for data persistence and transport, run the following command.

```
bwadmin config -cf ../config/bwagent_ftl.json agent
```

If the BWAgent is configured to use an external database and TIBCO Enterprise

Messaging Service, run the following command.

```
bwadmin config -cf ../config/bwagent_db.json agent
```

**i Note:** Use `bwagent_db/ftl.json_orig` file if you want to use new features like Process Monitoring.

5. Optional. Ensure third party JDBC drivers are installed.

If you want to use other databases, other than PostgreSQL or Microsoft SQL Server, you must add them separately. This is a one time process for every installation of ActiveMatrix BusinessWorks. Open the README.txt in the respective database shells at `BW_HOME/config/drivers/shells/` for details on what JAR files to download, and where to add them.

To add the drivers at run time for Oracle, MySQL or DB2, run the `bwinstall` command from `<BW_Home>/6.x/bin`. Ensure that you run `bwinstall` with no arguments to access the help and instructions to add the driver to the run time. For more information, see "Installing Supported Drivers for Run Time" in *TIBCO ActiveMatrix BusinessWorks™ Bindings and Palettes Reference*.

**i Note:** If you had already installed third party JDBC drivers in the previous version of ActiveMatrix BusinessWorks 6.3.x/6.4.x, the drivers do not need to be re-installed.

6. Install EMS client libraries to use activities from the JMS palette, or the BWAgent with a database and TIBCO Enterprise Message Service (EMS) for persistence and transport. For instructions about how to configure the EMS client libraries, see [Integrating with TIBCO Enterprise Message Service™](#).
7. Install FTL client libraries to use the activities from the FTL palette, or if the BWAgent is configured to use the `dbftl` mode. For instructions about how to configure the FTL client libraries, see [Integrating with TIBCO FTL](#).
8. Optional. If you are using a file based or an LDAP authentication, see "Securing the bwagent REST API " section in *TIBCO ActiveMatrix BusinessWorks™ Administration*.
9. Start the BWAgent.
10. Restore the domains.

By default, the runtime components are installed under the `TIBCO_HOME/bw/<new_version>` directory and the runtime artifacts such as domains, AppSpaces, and AppNodes are created under the `TIBCO_HOME/bw/<new_version>/domains` directory. If you want to use the runtime artifacts created using the older version of the software, you can restore the runtime artifacts for the newer version of the software. Complete the following tasks to restore the runtime artifacts to the new environment:

**i Note:** You also have the option to re-create the runtime artifacts. For details on recreating runtime artifacts, see "Administration Tasks and Reference" section in *TIBCO ActiveMatrix BusinessWorks™ Administration*.

a. Before restoring the domain, edit the `<destination_file>.cmd` as described:

- In the `create -agent` command, update the argument `domainHome` to provide the `TIBCO_HOME/bw/<new_version>/domains` directory.
- In the `upload -domain` command, update the location of the archive file to provide the absolute path to the archive file. For example, update the `upload -domain` command to the following:

```
upload -domain BookStore-Domain <TIBCO_HOME>/bw/<old_
version>/bin/archives/BookStore-
Domain/tibco.bw.sample.binding.rest.BookStore.application_1.0.0.ear
```

**i Note:** You also have the option to import the TIBCO Business Studio for BusinessWorks projects to a new workspace.

After installing the latest version of the software, use a new TIBCO Business Studio for BusinessWorks workspace when developing applications, modules, or rebuilding archive files. To use projects created in the older version, import the projects to the new workspace using the **File > Import** menu in TIBCO Business Studio for BusinessWorks. Reusing an existing workspace with the newer version of the software makes that workspace unusable with the older version of the software.



**i Note:** If the agent name is specified as localhost in the command file, update it to specify the BWAgent name. The BWAgent name (`bw.agent.memberName`) is the specified in the `bwagent.ini` file.

- b. To restore the domain, or other runtime entities, in the new *TIBCO\_HOME* environment, navigate to the *TIBCO\_HOME/bw/<new\_version>/bin* on the console, and run the following command:

```
bwadmin -f <destination_file>.cmd
```

**i Note:** If you encounter issues with the TIBCO<sup>®</sup> Enterprise Administrator web client UI, stop the TIBCO<sup>®</sup> Enterprise Administrator server, clean up the `sr` folder under `$TEA_ConfigHome/tibco/cfgmgmt/tea/data/sr`, and restart the TIBCO<sup>®</sup> Enterprise Administrator server.

### What to do next

After you have completed the upgrade, import your projects to a new workspace and confirm all of your applications are running properly.

**i Note:** Reusing an existing workspace with the newer version of the software makes that workspace unusable with the older version of the software. User history of the executed command is unavailable in the command history table.

## Upgrading from Version 6.4.x/6.5.x/6.6.x to Version 6.7.0

These instructions apply if you are upgrading from version 6.4.2 or later versions of 6.4.x/6.5.x/6.6.x to version 6.7.0.

### Before you begin

- The base version required for this upgrade scenario is 6.4.2 or higher.

- Complete these steps:

1. Back up the domains from the command line, or the Admin UI.



**Important:** Before you back up your domains, ensure that all runtime artifacts have been stopped, and are not running.

To back up a domain, open a console window and navigate to the *TIBCO\_HOME/bw/<older\_version>/bin* directory. Then run the following command:

```
bwadmin backup -s <destination_file>.cmd domain <domain_name>
```

The bwadmin command file *<destination\_file>.cmd* is generated.

If you are restoring to a different location, you need to update the command file as follows:

- The BWAgent name points to localhost by default; you need to change this to the name of the machine you are restoring to.
- Update the domain home to point to the absolute path to the new location.
- Update the path to the application archive (EAR) file to an absolute path.

For more information, see "Backing Up and Restoring a Domain" in *TIBCO ActiveMatrix BusinessWorks™ Administration*.

2. Delete domains from the command line, or the Admin UI.



**Note:** Deleting a domain cleans up the database entries. The entries are repopulated when you restore the domain in the new upgraded version.

3. Stop the BWAgent.



**Tip:** While migrating an application from TIBCO ActiveMatrix BusinessWorks™ 6.4.2 to 6.7.0, if you deploy the TIBCO ActiveMatrix BusinessWorks™ 6.4.2 EAR as it is on TIBCO ActiveMatrix BusinessWorks™ 6.7.0 with nil or optional-nil elements and no input specified and mapped to optional element, the empty tags are generated at runtime. So, if the output shows empty tags, first rebuild the EAR file and then deploy the TIBCO ActiveMatrix BusinessWorks™ 6.4.2 EAR on 6.7.0.

## Procedure

1. Install the software in the same *TIBCO\_HOME* directory.

Follow the instructions in [Installation](#) section to install the software in a same *TIBCO\_HOME* directory using GUI, console, or silent mode.

The installer copies the following files, if they are present, from the *TIBCO\_HOME/bw/6.x/config/* folder to *TIBCO\_HOME/bw/6.7/config/* folder and renames the new files as they are with the *\_orig* suffix.

- *bwagent\_db.json*
- *bwadmin\_ftlrealmserver.json*
- *bwagent\_ftl.json*
- *jaas.login.conf*
- *realm.properties*
- *krb5.conf*
- *mashery.ini*
- *logback.xml*

2. Optional. If you use FTL 5.x in FT mode, add the following properties manually:

File Name	Changes Required
<i>bwagent_ftl.json</i>	<ul style="list-style-type: none"><li>• <i>ftlsecondary: true</i></li><li>• <i>statsftlsecondary: true</i></li></ul>
<i>bwagent_db.json</i>	<ul style="list-style-type: none"><li>• <i>statsftlsecondary: true</i></li></ul>

To create an application on FTL side, use the *bwadmin\_ftlrealmserver.json\_orig* file.

3. Optional. If you have made manual updates to configuration files, or *.tra* files, copy them from your previous *TIBCO\_HOME* to the appropriate locations in your new *TIBCO\_HOME*.

4. Update the `bwagent.ini` file by running the `config` command with the `-cf` option. The command changes based on how the BWAgent is configured for data persistence and transport.

If the BWAgent is configured to use an external database and TIBCO FTL for data persistence and transport, run the following command.

```
bwadmin config -cf ../config/bwagent_ftl.json agent
```

If the BWAgent is configured to use an external database and TIBCO Enterprise Messaging Service, run the following command.

```
bwadmin config -cf ../config/bwagent_db.json agent
```

**i Note:** Use `bwagent_db/ftl.json_orig` file if you want to use new features like Process Monitoring.

5. Optional. Ensure third party JDBC drivers are installed.

If you want to use other databases, other than PostgreSQL or Microsoft SQL Server, you must add them separately. This is a one time process for every installation of ActiveMatrix BusinessWorks. Open the `README.txt` in the respective database shells at `BW_HOME/config/drivers/shells/` for details on what JAR files to download, and where to add them.

To add the drivers at run time for Oracle, MySQL, MariaDB, or DB2, run the `bwinstall` command from `<BW_Home>/6.x/bin`. Ensure that you run `bwinstall` with no arguments to access the help and instructions to add the driver to the run time. For more information, see "Installing Supported Drivers for Run Time" in *TIBCO ActiveMatrix BusinessWorks™ Bindings and Palettes Reference*.

**i Note:** If you had already installed third party JDBC drivers in the previous version of ActiveMatrix BusinessWorks 6.4.x/6.5.x/6.6.x, do not re-install the drivers.

6. Install EMS client libraries to use activities from the JMS palette, or the BWAgent with a database and TIBCO Enterprise Message Service (EMS) for persistence and transport. For instructions about how to configure the EMS client libraries, see [Integrating with TIBCO Enterprise Message Service™](#).

7. Install FTL client libraries to use the activities from the FTL palette, or if the BWAgent is configured to use the dbftl mode. For instructions about how to configure the FTL client libraries, see [Integrating with TIBCO FTL](#).
8. Optional. If you are using a file based or an LDAP authentication, see "Securing the bwagent REST API " section in *TIBCO ActiveMatrix BusinessWorks™ Administration*.
9. Start the BWAgent.
10. Restore the domains.

By default, the runtime components are installed under the `TIBCO_HOME/bw/<new_version>` directory and the runtime artifacts such as domains, AppSpaces, and AppNodes are created under the `TIBCO_HOME/bw/<new_version>/domains` directory. If you want to use the runtime artifacts created using the older version of the software, you can restore the runtime artifacts for the newer version of the software. Complete the following tasks to restore the runtime artifacts to the new environment:

**Note:** You also have the option to re-create the runtime artifacts. For details on recreating runtime artifacts, see "Administration Tasks and Reference" section in *TIBCO ActiveMatrix BusinessWorks™ Administration*.

- a. Before restoring the domain, edit the `<destination_file>.cmd` as described:
  - In the `create -agent` command, update the argument `domainHome` to provide the `TIBCO_HOME/bw/<new_version>/domains` directory.
  - In the `upload -domain` command, update the location of the archive file to provide the absolute path to the archive file. For example, update the `upload -domain` command to the following:

```
upload -domain BookStore-Domain <TIBCO_HOME>/bw/<old_
version>/bin/archives/BookStore-
Domain/tibco.bw.sample.binding.rest.BookStore.application_1.0.0.ear
```

**i Note:** You also have the option to import the TIBCO Business Studio for BusinessWorks projects to a new workspace.

After installing the latest version of the software, use a new TIBCO Business Studio for BusinessWorks workspace when developing applications, modules, or rebuilding archive files. To use projects created in the older version, import the projects to the new workspace using the **File > Import** menu in TIBCO Business Studio for BusinessWorks. Reusing an existing workspace with the newer version of the software makes that workspace unusable with the older version of the software.

**i Note:** If the agent name is specified as localhost in the command file, update it to specify the BWAgent name. The BWAgent name (bw.agent.memberName) is the specified in the bwagent.ini file.

- b. To restore the domain, or other runtime entities, in the new *TIBCO\_HOME* environment, navigate to the *TIBCO\_HOME/bw/<new\_version>/bin* on the console, and run the following command:

```
bwadmin -f <destination_file>.cmd
```

**i Note:** If you encounter issues with the TIBCO<sup>®</sup> Enterprise Administrator web client UI, stop the TIBCO<sup>®</sup> Enterprise Administrator server, clean up the sr folder under \$TEA\_ConfigHome/tibco/cfgmgmt/tea/data/sr , and restart the TIBCO<sup>®</sup> Enterprise Administrator server.

## What to do next

After you have completed the upgrade, import your projects to a new workspace and confirm all of your applications are running properly.

**i Note:** Reusing an existing workspace with the newer version of the software makes that workspace unusable with the older version of the software. User history of the executed command is unavailable in the command history table.

## Using MySQL 8.x Database

### Procedure

1. Use the following command and then follow the instructions to install the new MySQL 8.x driver:

```
bwinstall mysql-driver
```

2. Update the following properties in the `bwagent_ftl.json` or `bwagent_db.json` files with the MySQL 8.x database details

Property Name	Value
dbconnectionurl	jdbc:mysql://<host or IP address>:<port>/<database_name>?useSSL=false
dbproviderconnectionurl	jdbc:mysql://<host or IP address>:<port>/<database_name>?useSSL=false

For more information about configuring BWAgent with MySQL 8.x, see "Configuring bwagent for MySQL and TIBCO FTL" or "Configuring bwagent for MySQL and TIBCO Enterprise Message Service" sections in *TIBCO ActiveMatrix BusinessWorks™ Administration*.

## Upgrading from Version 6.4.x/6.5.x/6.6.x/6.7.x to Version 6.8.x

For design-time upgrade, if you want to install ActiveMatrix BusinessWorks 6.8.x in existing TIBCO\_HOME with versions 6.4.x/6.5.x/6.6.x, then first install TIBCO AMBW 6.7.0 in the same TIBCO\_HOME and then upgrade to ActiveMatrix BusinessWorks 6.8.x.

For design-time upgrade, if you have ActiveMatrix BusinessWorks 6.7.0 in the TIBCO\_HOME, then you can directly upgrade to ActiveMatrix BusinessWorks 6.8.x.

**Note:** Re-installation of all the ActiveMatrix BusinessWorks supported plug-ins is required after upgrading to the version 6.8.x.

For runtime upgrade, you can directly upgrade from ActiveMatrix BusinessWorks 6.5.x/6.6.x/6.7.x to Version AMBW 6.8.x.

TIBCO ActiveMatrix BusinessWorks™ 6.4.2 is compatible with FTL 5.4.2.

The following instructions apply for the other components such as Administration and Core Runtime if you are upgrading from version 6.4.2 or later versions of 6.4.x/6.5.x/6.6.x/6.7.x to version 6.8.x.

### Before you begin

- The base version required for this upgrade scenario is 6.4.2 or higher.
- Complete these steps:
  1. Back up the domains from the command line, or the Admin UI.

**Important:** Before you back up your domains, ensure that all runtime artifacts have been stopped, and are not running.

To back up a domain, open a console window and navigate to the *TIBCO\_HOME/bw/<older\_version>/bin* directory. Then run the following command:

```
bwadmin backup -s <destination_file>.cmd domain <domain_name>
```

The bwadmin command file *<destination\_file>.cmd* is generated.

If you are restoring to a different location, you need to update the command file as follows:

- The BWAgent name points to localhost by default; you need to change this to the name of the machine you are restoring to.
- Update the domain home to point to the absolute path to the new location.
- Update the path to the application archive (EAR) file to an absolute path.

For more information, see "Backing Up and Restoring a Domain" in *TIBCO ActiveMatrix BusinessWorks™ Administration*.



2. Delete domains from the command line, or the Admin UI.

**i Note:** Deleting a domain cleans up the database entries. The entries are repopulated when you restore the domain in the new upgraded version.

3. Stop the BWAgent.

## Procedure

1. Install the software in the same *TIBCO\_HOME* directory.

Follow the instructions in [Installation](#) section to install the software in a same *TIBCO\_HOME* directory using GUI, console, or silent mode.

The installer copies the following files, if they are present, from the *TIBCO\_HOME/bw/6.x/config/* folder to *TIBCO\_HOME/bw/6.8/config/* folder and renames the new files as they are with the *\_orig* suffix.

- bwagent\_db.json
- bwadmin\_ftlrealmserver.json
- bwagent\_ftl.json
- jaas.login.conf
- realm.properties
- krb5.conf
- mashery.ini
- logback.xml

2. Optional. If you use FTL 5.x in FT mode, add the following properties manually:

File Name	Changes Required
bwagent_ftl.json	<ul style="list-style-type: none"><li>• ftlsecondary: true</li><li>• statsftlsecondary: true</li></ul>
bwagent_db.json	<ul style="list-style-type: none"><li>• statsftlsecondary: true</li></ul>

To create an application on FTL side, use the `bwadmin_ftlrealmserver.json_orig` file.

3. Optional. If you have made manual updates to configuration files, or .tra files, copy them from your previous *TIBCO\_HOME* to the appropriate locations in your new *TIBCO\_HOME*.
4. Update the `bwagent.ini` file by running the `config` command with the `-cf` option. The command changes based on how the BWAgent is configured for data persistence and transport.

If the BWAgent is configured to use an external database and TIBCO FTL for data persistence and transport, run the following command.

```
bwadmin config -cf ../config/bwagent_ftl.json agent
```

If the BWAgent is configured to use an external database and TIBCO Enterprise Messaging Service, run the following command.

```
bwadmin config -cf ../config/bwagent_db.json agent
```



**Note:** Use `bwagent_db/ftl.json_orig` file if you want to use new features like Process Monitoring.

5. Optional. Ensure third party JDBC drivers are installed.

If you want to use other databases, other than PostgreSQL or Microsoft SQL Server, you must add them separately. This is a one time process for every installation of ActiveMatrix BusinessWorks. Open the README.txt in the respective database shells at *BW\_HOME/config/drivers/shells/* for details on what JAR files to download, and where to add them.

To add the drivers at run time for Oracle, MySQL, MariaDB, or DB2, run the `bwinstall` command from `<BW_Home>/6.x/bin`. Ensure that you run `bwinstall` with no arguments to access the help and instructions to add the driver to the run time. For more information, see "Installing Supported Drivers for Run Time" in *TIBCO ActiveMatrix BusinessWorks™ Bindings and Palettes Reference*.

**i Note:** If you had already installed third party JDBC drivers in the previous version of ActiveMatrix BusinessWorks 6.4.x/6.5.x/6.6.x, do not re-install the drivers.

6. Install EMS client libraries to use activities from the JMS palette, or the BWAgent with a database and TIBCO Enterprise Message Service (EMS) for persistence and transport. For instructions about how to configure the EMS client libraries, see [Integrating with TIBCO Enterprise Message Service™](#).
7. Install FTL client libraries to use the activities from the FTL palette, or if the BWAgent is configured to use the dbftl mode. For instructions about how to configure the FTL client libraries, see [Integrating with TIBCO FTL](#).
8. Optional. If you are using a file based or an LDAP authentication, see "Securing the bwagent REST API " section in *TIBCO ActiveMatrix BusinessWorks™ Administration*.
9. Start the BWAgent.
10. Restore the domains.

By default, the runtime components are installed under the `TIBCO_HOME/bw/<new_version>` directory and the runtime artifacts such as domains, AppSpaces, and AppNodes are created under the `TIBCO_HOME/bw/<new_version>/domains` directory. If you want to use the runtime artifacts created using the older version of the software, you can restore the runtime artifacts for the newer version of the software. Complete the following tasks to restore the runtime artifacts to the new environment:

**i Note:** You also have the option to re-create the runtime artifacts. For details on recreating runtime artifacts, see "Administration Tasks and Reference" section in *TIBCO ActiveMatrix BusinessWorks™ Administration*.

- a. Before restoring the domain, edit the `<destination_file>.cmd` as described:
  - In the `create -agent` command, update the argument `domainHome` to provide the `TIBCO_HOME/bw/<new_version>/domains` directory.
  - In the `upload -domain` command, update the location of the archive file to provide the absolute path to the archive file. For example, update the `upload -domain` command to the following:

```
upload -domain BookStore-Domain <TIBCO_HOME>/bw/<old_
version>/bin/archives/BookStore-
Domain/tibco.bw.sample.binding.rest.BookStore.application_1.0.0.ear
```

**i Note:** You also have the option to import the TIBCO Business Studio for BusinessWorks projects to a new workspace.

After installing the latest version of the software, use a new TIBCO Business Studio for BusinessWorks workspace when developing applications, modules, or rebuilding archive files. To use projects created in the older version, import the projects to the new workspace using the **File > Import** menu in TIBCO Business Studio for BusinessWorks. Reusing an existing workspace with the newer version of the software makes that workspace unusable with the older version of the software.

**i Note:** If the agent name is specified as localhost in the command file, update it to specify the BWAgent name. The BWAgent name (bw.agent.memberName) is the specified in the bwagent.ini file.

- b. To restore the domain, or other runtime entities, in the new *TIBCO\_HOME* environment, navigate to the *TIBCO\_HOME/bw/<new\_version>/bin* on the console, and run the following command:

```
bwadmin -f <destination_file>.cmd
```

**i Note:** If you encounter issues with the TIBCO<sup>®</sup> Enterprise Administrator web client UI, stop the TIBCO<sup>®</sup> Enterprise Administrator server, clean up the sr folder under \$TEA\_ConfigHome/tibco/cfgmgmt/tea/data/sr , and restart the TIBCO<sup>®</sup> Enterprise Administrator server.

## What to do next

After you have completed the upgrade, import your projects to a new workspace and confirm all of your applications are running properly.

**i Note:** Reusing an existing workspace with the newer version of the software makes that workspace unusable with the older version of the software. User history of the executed command is unavailable in the command history table.

Following are the steps for post upgrade to Debug/Run applications for users who are working on an existing workspace:

### Procedure

1. In a previously created workspace, right click on an application and select the **Debug/Run Configuration** option.
2. In the Debug/Run Configuration window, right click on **BusinessWorks Application** option and select **New Configuration**.  
A new configuration is created. For example, 'BWApplication(1)',(2),....
3. In the New Configuration, click **Debug/Run**.

## Upgrading from Version 6.4.x/6.5.x/6.6.x/6.7.x/6.8.0 to Version 6.8.1

For design-time upgrade, if you want to install ActiveMatrix BusinessWorks 6.8.1 in existing TIBCO\_HOME with versions 6.4.x/6.5.x/6.6.x, then first install TIBCO AMBW 6.7.0 in the same TIBCO\_HOME and then upgrade to ActiveMatrix BusinessWorks 6.8.1.

For design-time upgrade, if you have ActiveMatrix BusinessWorks 6.7.0 in the TIBCO\_HOME, then you can directly upgrade to ActiveMatrix BusinessWorks 6.8.1.

**i Note:** Re-installation of all the ActiveMatrix BusinessWorks supported plug-ins is required after upgrading to the version 6.8.1, if you are upgrading from ActiveMatrix BusinessWorks 6.7.0.

For runtime upgrade, you can directly upgrade from ActiveMatrix BusinessWorks 6.5.x/6.6.x/6.7.x/6.8.0 to version AMBW 6.8.1.

TIBCO ActiveMatrix BusinessWorks™ 6.4.2 is compatible with FTL 5.4.2.

The following instructions apply for the other components such as Administration and Core Runtime if you are upgrading from version 6.4.2 or later versions of 6.4.x/6.5.x/6.6.x/6.7.x/6.8.0 to version 6.8.1.

## Before you begin

- The base version required for this upgrade scenario is 6.4.2 or higher.
- Complete these steps:
  1. Back up the domains from the command line, or the Admin UI.



**Important:** Before you back up your domains, ensure that all runtime artifacts have been stopped, and are not running.

To back up a domain, open a console window and navigate to the `TIBCO_HOME/bw/<older_version>/bin` directory. Then run the following command:

```
bwadmin backup -s <destination_file>.cmd domain <domain_name>
```

The bwadmin command file `<destination_file>.cmd` is generated.

If you are restoring to a different location, you need to update the command file as follows:

- The BWAgent name points to localhost by default; you need to change this to the name of the machine you are restoring to.
- Update the domain home to point to the absolute path to the new location.
- Update the path to the application archive (EAR) file to an absolute path.

For more information, see "Backing Up and Restoring a Domain" in *TIBCO ActiveMatrix BusinessWorks™ Administration*.

2. Delete domains from the command line, or the Admin UI.



**Note:** Deleting a domain cleans up the database entries. The entries are repopulated when you restore the domain in the new upgraded version.

3. Stop the BWAgent.

## Procedure

1. Install the software in the same *TIBCO\_HOME* directory.

Follow the instructions in [Installation](#) section to install the software in a same *TIBCO\_HOME* directory using GUI, console, or silent mode.

The installer copies the following files, if they are present, from the *TIBCO\_HOME/bw/6.x/config/* folder to *TIBCO\_HOME/bw/6.8/config/* folder and renames the new files as they are with the *\_orig* suffix.

- *bwagent\_db.json*
- *bwadmin\_ftlrealmserver.json*
- *bwagent\_ftl.json*
- *jaas.login.conf*
- *realm.properties*
- *krb5.conf*
- *mashery.ini*
- *logback.xml*

2. Optional. If you use FTL 5.x in FT mode, add the following properties manually:

File Name	Changes Required
<i>bwagent_ftl.json</i>	<ul style="list-style-type: none"><li>• <i>ftlsecondary: true</i></li><li>• <i>statsftlsecondary: true</i></li></ul>
<i>bwagent_db.json</i>	<ul style="list-style-type: none"><li>• <i>statsftlsecondary: true</i></li></ul>

To create an application on FTL side, use the *bwadmin\_ftlrealmserver.json\_orig* file.

3. Optional. If you have made manual updates to configuration files, or *.tra* files, copy them from your previous *TIBCO\_HOME* to the appropriate locations in your new *TIBCO\_HOME*.

4. Update the `bwagent.ini` file by running the `config` command with the `-cf` option. The command changes based on how the BWAgent is configured for data persistence and transport.

If the BWAgent is configured to use an external database and TIBCO FTL for data persistence and transport, run the following command.

```
bwadmin config -cf ../config/bwagent_ftl.json agent
```

If the BWAgent is configured to use an external database and TIBCO Enterprise Messaging Service, run the following command.

```
bwadmin config -cf ../config/bwagent_db.json agent
```

**i Note:** Use `bwagent_db/ftl.json_orig` file if you want to use new features like Process Monitoring.

5. Optional. Ensure third party JDBC drivers are installed.

If you want to use other databases, other than PostgreSQL or Microsoft SQL Server, you must add them separately. This is a one time process for every installation of ActiveMatrix BusinessWorks. Open the `README.txt` in the respective database shells at `BW_HOME/config/drivers/shells/` for details on what JAR files to download, and where to add them.

To add the drivers at run time for Oracle, MySQL, MariaDB, or DB2, run the `bwinstall` command from `<BW_Home>/6.x/bin`. Ensure that you run `bwinstall` with no arguments to access the help and instructions to add the driver to the run time. For more information, see "Installing Supported Drivers for Run Time" in *TIBCO ActiveMatrix BusinessWorks™ Bindings and Palettes Reference*.

**i Note:** If you had already installed third party JDBC drivers in the previous version of ActiveMatrix BusinessWorks 6.4.x/6.5.x/6.6.x/6.7.x/6.8.0 do not re-install the drivers.

6. Install EMS client libraries to use activities from the JMS palette, or the BWAgent with a database and TIBCO Enterprise Message Service (EMS) for persistence and transport. For instructions about how to configure the EMS client libraries, see [Integrating with TIBCO Enterprise Message Service™](#).



7. Install FTL client libraries to use the activities from the FTL palette, or if the BWAgent is configured to use the dbftl mode. For instructions about how to configure the FTL client libraries, see [Integrating with TIBCO FTL](#).
8. Optional. If you are using a file based or an LDAP authentication, see "Securing the bwagent REST API " section in *TIBCO ActiveMatrix BusinessWorks™ Administration*.
9. Start the BWAgent.
10. Restore the domains.

By default, the runtime components are installed under the `TIBCO_HOME/bw/<new_version>` directory and the runtime artifacts such as domains, AppSpaces, and AppNodes are created under the `TIBCO_HOME/bw/<new_version>/domains` directory. If you want to use the runtime artifacts created using the older version of the software, you can restore the runtime artifacts for the newer version of the software. Complete the following tasks to restore the runtime artifacts to the new environment:

**i Note:** You also have the option to re-create the runtime artifacts. For details on recreating runtime artifacts, see "Administration Tasks and Reference" section in *TIBCO ActiveMatrix BusinessWorks™ Administration*.

- a. Before restoring the domain, edit the `<destination_file>.cmd` as described:
  - In the `create -agent` command, update the argument `domainHome` to provide the `TIBCO_HOME/bw/<new_version>/domains` directory.
  - In the `upload -domain` command, update the location of the archive file to provide the absolute path to the archive file. For example, update the `upload -domain` command to the following:

```
upload -domain BookStore-Domain <TIBCO_HOME>/bw/<old_
version>/bin/archives/BookStore-
Domain/tibco.bw.sample.binding.rest.BookStore.application_1.0.0.ear
```

**i Note:** You also have the option to import the TIBCO Business Studio for BusinessWorks projects to a new workspace.

After installing the latest version of the software, use a new TIBCO Business Studio for BusinessWorks workspace when developing applications, modules, or rebuilding archive files. To use projects created in the older version, import the projects to the new workspace using the **File > Import** menu in TIBCO Business Studio for BusinessWorks. Reusing an existing workspace with the newer version of the software makes that workspace unusable with the older version of the software.

**i Note:** If the agent name is specified as localhost in the command file, update it to specify the BWAgent name. The BWAgent name (bw.agent.memberName) is the specified in the bwagent.ini file.

- b. To restore the domain, or other runtime entities, in the new *TIBCO\_HOME* environment, navigate to the *TIBCO\_HOME/bw/<new\_version>/bin* on the console, and run the following command:

```
bwadmin -f <destination_file>.cmd
```

**i Note:** If you encounter issues with the TIBCO<sup>®</sup> Enterprise Administrator web client UI, stop the TIBCO<sup>®</sup> Enterprise Administrator server, clean up the sr folder under \$TEA\_ConfigHome/tibco/cfgmgmt/tea/data/sr , and restart the TIBCO<sup>®</sup> Enterprise Administrator server.

## What to do next

After you have completed the upgrade, import your projects to a new workspace and confirm all of your applications are running properly.

**i Note:** Reusing an existing workspace with the newer version of the software makes that workspace unusable with the older version of the software. User history of the executed command is unavailable in the command history table.

Following are the steps for post upgrade to Debug/Run applications for users who are working on an existing workspace:

### Procedure

1. In a previously created workspace, right click on an application and select the **Debug/Run Configuration** option.
2. In the Debug/Run Configuration window, right click on **BusinessWorks Application** option and select **New Configuration**.  
A new configuration is created. For example, 'BWApplication(1)',(2),....
3. In the New Configuration, click **Debug/Run**.

## Upgrading from Version 6.4.x/6.5.x/6.6.x/6.7.x/6.8.x to Version 6.9.0

For design-time upgrade, if you want to install ActiveMatrix BusinessWorks 6.9.0 in existing TIBCO\_HOME with versions 6.4.x/6.5.x/6.6.x, then first install TIBCO AMBW 6.7.0 in the same TIBCO\_HOME and then upgrade to ActiveMatrix BusinessWorks 6.9.0.

For design-time upgrade, if you have ActiveMatrix BusinessWorks 6.7.0 in the TIBCO\_HOME, then you can directly upgrade to ActiveMatrix BusinessWorks 6.9.0.

### Note:

- Re-installation of all the ActiveMatrix BusinessWorks supported plug-ins is required after upgrading to the version 6.9.0, if you are upgrading from ActiveMatrix BusinessWorks 6.7.0.
- Post upgrade, it is recommended to append the `-clean` argument in the `TIBCOBusinessStudio.ini` file.

For runtime upgrade, you can directly upgrade from ActiveMatrix BusinessWorks 6.5.x/6.6.x/6.7.x/6.8.x to version AMBW 6.9.0.

The following instructions apply for the other components such as Administration and Core Runtime if you are upgrading from version 6.4.2 or later versions of 6.4.x/6.5.x/6.6.x/6.7.x/6.8.x to version 6.9.0.

## Before you begin

- The base version required for this upgrade scenario is 6.4.2 or higher.
- Complete these steps:
  1. Back up the domains from the command line, or the Admin UI.



**Important:** Before you back up your domains, ensure that all runtime artifacts have been stopped, and are not running.

To back up a domain, open a console window and navigate to the *TIBCO\_HOME/bw/<older\_version>/bin* directory. Then run the following command:

```
bwadmin backup -s <destination_file>.cmd domain <domain_name>
```

The bwadmin command file *<destination\_file>.cmd* is generated.

If you are restoring to a different location, you need to update the command file as follows:

- The BWAgent name points to localhost by default; you need to change this to the name of the machine you are restoring to.
- Update the domain home to point to the absolute path to the new location.
- Update the path to the application archive (EAR) file to an absolute path.

For more information, see "Backing Up and Restoring a Domain" in *TIBCO ActiveMatrix BusinessWorks™ Administration*.

2. Delete domains from the command line, or the Admin UI.



**Note:** Deleting a domain cleans up the database entries. The entries are repopulated when you restore the domain in the new upgraded version.

3. Stop the BWAgent.

## Procedure

1. Install the software in the same *TIBCO\_HOME* directory.

Follow the instructions in [Installation](#) section to install the software in a same *TIBCO\_*

*HOME* directory using GUI, console, or silent mode.

The installer copies the following files, if they are present, from the *TIBCO\_HOME/bw/6.x/config/* folder to *TIBCO\_HOME/bw/6.8/config/* folder and renames the new files as they are with the *\_orig* suffix.

- *bwagent\_db.json*
- *bwadmin\_ftlrealmserver.json*
- *bwagent\_ftl.json*
- *jaas.login.conf*
- *realm.properties*
- *krb5.conf*
- *mashery.ini*
- *logback.xml*

2. Optional. If you use FTL 5.x in FT mode, add the following properties manually:

File Name	Changes Required
<i>bwagent_ftl.json</i>	<ul style="list-style-type: none"> <li>• <i>ftlsecondary: true</i></li> <li>• <i>statsftlsecondary: true</i></li> </ul>
<i>bwagent_db.json</i>	<ul style="list-style-type: none"> <li>• <i>statsftlsecondary: true</i></li> </ul>

To create an application on FTL side, use the *bwadmin\_ftlrealmserver.json\_orig* file.

3. Optional. If you have made manual updates to configuration files, or *.tra* files, copy them from your previous *TIBCO\_HOME* to the appropriate locations in your new *TIBCO\_HOME*.
4. Update the *bwagent.ini* file by running the *config* command with the *-cf* option. The command changes based on how the BWAgent is configured for data persistence and transport.

If the BWAgent is configured to use an external database and TIBCO FTL for data persistence and transport, run the following command.

```
bwadmin config -cf ../config/bwagent_ftl.json agent
```

If the BWAgent is configured to use an external database and TIBCO Enterprise Messaging Service, run the following command.

```
bwadmin config -cf ../config/bwagent_db.json agent
```

**Note:** Use `bwagent_db/ftl.json_orig` file if you want to use new features like Process Monitoring.

5. Optional. Ensure third party JDBC drivers are installed.

If you want to use other databases, other than PostgreSQL or Microsoft SQL Server, you must add them separately. This is a one time process for every installation of ActiveMatrix BusinessWorks. Open the README.txt in the respective database shells at `BW_HOME/config/drivers/shells/` for details on what JAR files to download, and where to add them.

To add the drivers at run time for Oracle, MySQL, MariaDB, or DB2, run the `bwinstall` command from `<BW_Home>/6.x/bin`. Ensure that you run `bwinstall` with no arguments to access the help and instructions to add the driver to the run time. For more information, see "Installing Supported Drivers for Run Time" in *TIBCO ActiveMatrix BusinessWorks™ Bindings and Palettes Reference*.


**Note:** If you had already installed third party JDBC drivers in the previous version of ActiveMatrix BusinessWorks 6.4.x/6.5.x/6.6.x/6.7.x/6.8.x, do not re-install the drivers.

6. Install EMS client libraries to use activities from the JMS palette, or the BWAgent with a database and TIBCO Enterprise Message Service (EMS) for persistence and transport. For instructions about how to configure the EMS client libraries, see [Integrating with TIBCO Enterprise Message Service™](#).
7. Install FTL client libraries to use the activities from the FTL palette, or if the BWAgent is configured to use the `dbftl` mode. For instructions about how to configure the FTL

client libraries, see [Integrating with TIBCO FTL](#).

8. Optional. If you are using a file based or an LDAP authentication, see "Securing the bwagent REST API " section in *TIBCO ActiveMatrix BusinessWorks™ Administration*.
9. Start the BWAgent.
10. Restore the domains.

By default, the runtime components are installed under the `TIBCO_HOME/bw/<new_version>` directory and the runtime artifacts such as domains, AppSpaces, and AppNodes are created under the `TIBCO_HOME/bw/<new_version>/domains` directory. If you want to use the runtime artifacts created using the older version of the software, you can restore the runtime artifacts for the newer version of the software. Complete the following tasks to restore the runtime artifacts to the new environment:

 **Note:** You also have the option to re-create the runtime artifacts. For details on recreating runtime artifacts, see "Administration Tasks and Reference" section in *TIBCO ActiveMatrix BusinessWorks™ Administration*.

a. Before restoring the domain, edit the `<destination_file>.cmd` as described:

- In the `create -agent` command, update the argument `domainHome` to provide the `TIBCO_HOME/bw/<new_version>/domains` directory.
- In the `upload -domain` command, update the location of the archive file to provide the absolute path to the archive file. For example, update the `upload -domain` command to the following:

```
upload -domain BookStore-Domain <TIBCO_HOME>/bw/<old_
version>/bin/archives/BookStore-
Domain/tibco.bw.sample.binding.rest.BookStore.application_1.0.0.ear
```

**i Note:** You also have the option to import the TIBCO Business Studio for BusinessWorks projects to a new workspace.

After installing the latest version of the software, use a new TIBCO Business Studio for BusinessWorks workspace when developing applications, modules, or rebuilding archive files. To use projects created in the older version, import the projects to the new workspace using the **File > Import** menu in TIBCO Business Studio for BusinessWorks. Reusing an existing workspace with the newer version of the software makes that workspace unusable with the older version of the software.

**i Note:** If the agent name is specified as localhost in the command file, update it to specify the BWAgent name. The BWAgent name (bw.agent.memberName) is the specified in the bwagent.ini file.

- b. To restore the domain, or other runtime entities, in the new *TIBCO\_HOME* environment, navigate to the *TIBCO\_HOME/bw/<new\_version>/bin* on the console, and run the following command:

```
bwadmin -f <destination_file>.cmd
```

**i Note:** If you encounter issues with the TIBCO<sup>®</sup> Enterprise Administrator web client UI, stop the TIBCO<sup>®</sup> Enterprise Administrator server, clean up the sr folder under \$TEA\_ConfigHome/tibco/cfgmgmt/tea/data/sr , and restart the TIBCO<sup>®</sup> Enterprise Administrator server.

## What to do next

After you have completed the upgrade, import your projects to a new workspace and confirm all of your applications are running properly.

**i Note:** Reusing an existing workspace with the newer version of the software makes that workspace unusable with the older version of the software. User history of the executed command is unavailable in the command history table.



Following are the steps for post upgrade to Debug/Run applications for users who are working on an existing workspace:

### Procedure

1. In a previously created workspace, right click on an application and select the **Debug/Run Configuration** option.
2. In the Debug/Run Configuration window, right click on **BusinessWorks Application** option and select **New Configuration**.  
A new configuration is created. For example, 'BWApplication(1)',(2),....
3. In the New Configuration, click **Debug/Run**.

## Upgrading from Version 6.6.x/6.7.x/6.8.x/6.9.0 to Version 6.9.1

For design-time upgrade, if you want to install ActiveMatrix BusinessWorks 6.9.1 in an existing TIBCO\_HOME with versions 6.6.x, then first install ActiveMatrix BusinessWorks 6.7.0 in the same TIBCO\_HOME and then upgrade to 6.9.1.

For design-time upgrade, if you have ActiveMatrix BusinessWorks 6.7.0 in the TIBCO\_HOME, then you can directly upgrade to ActiveMatrix BusinessWorks 6.9.1.

### Note:

- Reinstallation of all the ActiveMatrix BusinessWorks supported plug-ins is required after upgrading to version 6.9.1, if you are upgrading from ActiveMatrix BusinessWorks 6.7.0.
- Post upgrade, it is recommended to append the `-clean` argument in the `TIBCOBusinessStudio.ini` file.
- Post upgrade from ActiveMatrix BusinessWorks version 6.8.1 to 6.9.1, if the TIBCO Business Studio for BusinessWorks is unresponsive or takes time to launch, it is recommended to delete the **org.eclipse.osgi** folder present at `<TIBCO_HOME>/studio/4.0/eclipse/configuration`, then relaunch it again.

For runtime upgrade, you can directly upgrade from ActiveMatrix BusinessWorks 6.6.x/6.7.x/6.8.x/6.9.0 to version 6.9.1.

The following instructions apply for the other components such as Administration and Core Runtime if you are upgrading from 6.6.x/6.7.x/6.8.x/6.9.0 to version 6.9.1.

### Before you begin

- The base version required for this upgrade scenario is 6.6.0 or higher.
- Complete these steps:
  1. Back up the domains from the command line, or the Admin UI.



**Important:** Before you back up your domains, ensure that all runtime artifacts have been stopped, and are not running.

To back up a domain, open a console window and navigate to the `TIBCO_HOME/bw/<older_version>/bin` directory. Then run the following command:

```
bwadmin backup -s <destination_file>.cmd domain <domain_name>
```

The BWAdmin command file `<destination_file>.cmd` is generated.

If you are restoring to a different location, you need to update the command file as follows:

- The BWAgent name points to `localhost` by default. You need to change this to the name of the machine you are restoring to.
- Update the domain home to point to the absolute path to the new location.
- Update the path to the application archive (EAR) file to an absolute path.

For more information, see "Backing Up and Restoring a Domain" in *TIBCO ActiveMatrix BusinessWorks™ Administration*.

2. Delete domains from the command line, or the Admin UI.



**Note:** Deleting a domain cleans up the database entries. The entries are repopulated when you restore the domain in the new upgraded version.

3. Stop the BWAgent.

### Procedure

1. Install the software in the same *TIBCO\_HOME* directory.

Follow the instructions in this [Installation](#) section to install the software in the same *TIBCO\_HOME* directory using GUI, console, or silent mode.

The installer copies the following files, if they are present, from the *TIBCO\_HOME/bw/6.x/config/* folder to *TIBCO\_HOME/bw/6.8/config/* folder and renames the new files as they are with the `_orig` suffix.

- `bwagent_db.json`
- `bwadmin_ftlrealmserver.json`
- `bwagent_ftl.json`
- `jaas.login.conf`
- `realm.properties`
- `krb5.conf`
- `mashery.ini`
- `logback.xml`

2. Optional. If you use FTL 5.x in FT mode, add the following properties manually:

File Name	Changes Required
<code>bwagent_ftl.json</code>	<ul style="list-style-type: none"><li>• <code>ftlsecondary: true</code></li><li>• <code>statsftlsecondary: true</code></li></ul>
<code>bwagent_db.json</code>	<ul style="list-style-type: none"><li>• <code>statsftlsecondary: true</code></li></ul>

To create an application on the FTL side, use the `bwadmin_ftlrealmserver.json_orig` file.

3. Optional. If you have made manual updates to configuration files, or `.tra` files, copy them from your previous *TIBCO\_HOME* to the appropriate locations in your new *TIBCO\_HOME*.
4. Update the `bwagent.ini` file by running the `config` command with the `-cf` option.

The command changes based on how the BWAgent is configured for data persistence and transport.

If the BWAgent is configured to use an external database and TIBCO FTL for data persistence and transport, run the following command.

```
bwadmin config -cf ../config/bwagent_ftl.json agent
```

If the BWAgent is configured to use an external database and TIBCO Enterprise Messaging Service, run the following command.

```
bwadmin config -cf ../config/bwagent_db.json agent
```

**Note:** Use the `bwagent_db/ftl.json_orig` file if you want to use new features like Process Monitoring.

5. Optional. Ensure that third-party JDBC drivers are installed.

If you want to use other databases, other than PostgreSQL or Microsoft SQL Server, you must add them separately. This is a one-time process for every installation of ActiveMatrix BusinessWorks. Open the README.txt in the respective database shells at `BW_HOME/config/drivers/shells/` for details on what JAR files to download, and where to add them.

To add the drivers at run time for Oracle, MySQL, MariaDB, or DB2, run the `bwinstall` command from `<BW_Home>/6.x/bin`. Ensure that you run `bwinstall` with no arguments to access the help and instructions to add the driver to the run time. For more information, see "Installing Supported Drivers for Run Time" in *TIBCO ActiveMatrix BusinessWorks™ Bindings and Palettes Reference*.

**Note:** If you had already installed third-party JDBC drivers in the previous version of ActiveMatrix BusinessWorks 6.6.x/6.7.x/6.8.x/6.9.0, do not reinstall the drivers.

6. Install EMS client libraries to use activities from the JMS palette, or the BWAgent with a database and TIBCO Enterprise Message Service (EMS) for persistence and transport. For instructions about how to configure the EMS client libraries, see [Integrating with TIBCO Enterprise Message Service™](#).

7. Install FTL client libraries to use the activities from the FTL palette, or if the BWAgent is configured to use the `dbftl` mode. For instructions about how to configure the FTL client libraries, see [Integrating with TIBCO FTL](#).
8. Optional. If you are using a file-based or an LDAP authentication, see "Securing the BWAgent REST API" section in *TIBCO ActiveMatrix BusinessWorks™ Administration*.
9. Start the BWAgent.
10. Restore the domains.

By default, the runtime components are installed under the `TIBCO_HOME/bw/<new_version>` directory and the runtime artifacts such as domains, AppSpaces, and AppNodes are created under the `TIBCO_HOME/bw/<new_version>/domains` directory. If you want to use the runtime artifacts created using the older version of the software, you can restore the runtime artifacts for the newer version of the software. Complete the following tasks to restore the runtime artifacts to the new environment:

**Note:** You also have the option to re-create the runtime artifacts. For details on recreating runtime artifacts, see the "Administration Tasks and Reference" section in *TIBCO ActiveMatrix BusinessWorks™ Administration*.

- a. Before restoring the domain, edit the `<destination_file>.cmd` as described:
  - In the `create -agent` command, update the argument `domainHome` to provide the `TIBCO_HOME/bw/<new_version>/domains` directory.
  - In the `upload -domain` command, update the location of the archive file to provide the absolute path to the archive file. For example, update the `upload -domain` command to the following:

```
upload -domain BookStore-Domain <TIBCO_HOME>/bw/<old_
version>/bin/archives/BookStore-
Domain/tibco.bw.sample.binding.rest.BookStore.application_1.0.0.ear
```

**i Note:** You also have the option to import the TIBCO Business Studio for BusinessWorks projects to a new workspace.

After installing the latest version of the software, use a new TIBCO Business Studio for BusinessWorks workspace when developing applications, modules, or rebuilding archive files. To use projects created in the older version, import the projects to the new workspace using the **File > Import** menu in TIBCO Business Studio for BusinessWorks. Reusing an existing workspace with the newer version of the software makes that workspace unusable with the older version of the software.

**i Note:** If the agent name is specified as localhost in the command file, update it to specify the BWAgent name. The BWAgent name (bw.agent.memberName) is specified in the bwagent.ini file.

- b. To restore the domain, or other runtime entities, in the new *TIBCO\_HOME* environment, navigate to the *TIBCO\_HOME/bw/<new\_version>/bin* on the console, and run the following command:

```
bwadmin -f <destination_file>.cmd
```

**i Note:** If you encounter issues with the TIBCO® Enterprise Administrator web client UI, stop the TIBCO® Enterprise Administrator server, clean up the sr folder under \$TEA\_ConfigHome/tibco/cfgmgmt/tea/data/sr, and restart the TIBCO® Enterprise Administrator server.

## What to do next

After you have completed the upgrade, import your projects to a new workspace and confirm all of your applications are running properly.

**i Note:** Reusing an existing workspace with the newer version of the software makes that workspace unusable with the older version of the software. User history of the executed command is unavailable in the command history table.

Following are the steps for post upgrade to Debug/Run applications for users who are working on an existing workspace:

### Procedure

1. In a previously created workspace, right-click an application and select the **Debug/Run Configuration** option.
2. In the Debug/Run Configuration window, right-click the **BusinessWorks Application** option and select **New Configuration**.  
A new configuration is created. For example, 'BWApplication(1)',(2),....
3. In the New Configuration, click **Debug/Run**.

## Upgrading from Version 6.6.x/6.7.x/6.8.x/6.9.x to Version 6.10.0

For design-time upgrade, if you want to install ActiveMatrix BusinessWorks 6.10.0 in an existing TIBCO\_HOME with versions 6.6.x, then first install ActiveMatrix BusinessWorks 6.7.0 in the same TIBCO\_HOME and then upgrade to 6.10.0.

For design-time upgrade, if you have ActiveMatrix BusinessWorks 6.7.0 and above in the TIBCO\_HOME, then you can directly upgrade to ActiveMatrix BusinessWorks 6.10.0.



### Note:

- Reinstallation of all the ActiveMatrix BusinessWorks supported plug-ins is required after upgrading to version 6.10.0, if you are upgrading from ActiveMatrix BusinessWorks 6.7.0.
- Post upgrade, it is recommended to append the `-clean` argument in the `TIBCOBusinessStudio.ini` file.

For runtime upgrade, you can directly upgrade from ActiveMatrix BusinessWorks 6.6.x/6.7.x/6.8.x/6.9.x to version 6.10.0.

The following instructions apply for the other components such as Administration and Core Runtime if you are upgrading from 6.6.x/6.7.x/6.8.x/6.9.x to version 6.10.0.

## Before you begin

- The base version required for this upgrade scenario is 6.7.0 or higher.
- Complete these steps:
  1. Back up the domains from the command line, or the Admin UI.



**Important:** Before you back up your domains, ensure that all runtime artifacts have been stopped, and are not running.

To back up a domain, open a console window and navigate to the *TIBCO\_HOME/bw/<older\_version>/bin* directory. Then run the following command:

```
bwadmin backup -s <destination_file>.cmd domain <domain_name>
```

The BWAdmin command file *<destination\_file>.cmd* is generated.

If you are restoring to a different location, you need to update the command file as follows:

- The BWAgent name points to localhost by default. You need to change this to the name of the machine you are restoring to.
- Update the domain home to point to the absolute path to the new location.
- Update the path to the application archive (EAR) file to an absolute path.

For more information, see "Backing Up and Restoring a Domain" in *TIBCO ActiveMatrix BusinessWorks™ Administration*.

2. Delete domains from the command line, or the Admin UI.



**Note:** Deleting a domain cleans up the database entries. The entries are repopulated when you restore the domain in the new upgraded version.

3. Stop the BWAgent.

## Procedure

1. Install the software in the same *TIBCO\_HOME* directory.

Follow the instructions in this [Installation](#) section to install the software in the same



*TIBCO\_HOME* directory using GUI, console, or silent mode.

The installer copies the following files, if they are present, from the *TIBCO\_HOME/bw/6.x/config/* folder to *TIBCO\_HOME/bw/6.10/config/* folder and renames the new files as they are with the `_orig` suffix.

- `bwagent_db.json`
- `bwadmin_ftlrealmserver.json`
- `bwagent_ftl.json`
- `jaas.login.conf`
- `realm.properties`
- `krb5.conf`
- `mashery.ini`
- `logback.xml`

2. Optional. If you use FTL 5.x in FT mode, add the following properties manually:

File Name	Changes Required
<code>bwagent_ftl.json</code>	<ul style="list-style-type: none"> <li>• <code>ftlsecondary: true</code></li> <li>• <code>statsftlsecondary: true</code></li> </ul>
<code>bwagent_db.json</code>	<ul style="list-style-type: none"> <li>• <code>statsftlsecondary: true</code></li> </ul>

To create an application on the FTL side, use the `bwadmin_ftlrealmserver.json_orig` file.

3. Optional. If you have made manual updates to configuration files, or `.tra` files, copy them from your previous *TIBCO\_HOME* to the appropriate locations in your new *TIBCO\_HOME*.
4. Update the `bwagent.ini` file by running the `config` command with the `-cf` option. The command changes based on how the BWAgent is configured for data persistence and transport.

If the BWAgent is configured to use an external database and TIBCO FTL for data persistence and transport, run the following command.

```
bwadmin config -cf ../config/bwagent_ftl.json agent
```

If the BWAgent is configured to use an external database and TIBCO Enterprise Messaging Service, run the following command.

```
bwadmin config -cf ../config/bwagent_db.json agent
```

**Note:** Use the `bwagent_db/ftl.json_orig` file if you want to use new features like Process Monitoring.

5. Optional. Ensure that third-party JDBC drivers are installed.

If you want to use other databases, other than PostgreSQL or Microsoft SQL Server, you must add them separately. This is a one-time process for every installation of ActiveMatrix BusinessWorks. Open the README.txt in the respective database shells at `BW_HOME/config/drivers/shells/` for details on what JAR files to download, and where to add them.

To add the drivers at run time for Oracle, MySQL, MariaDB, or DB2, run the `bwinstall` command from `<BW_Home>/6.x/bin`. Ensure that you run `bwinstall` with no arguments to access the help and instructions to add the driver to the run time. For more information, see "Installing Supported Drivers for Run Time" in *TIBCO ActiveMatrix BusinessWorks™ Bindings and Palettes Reference*.


**Note:** If you had already installed third-party JDBC drivers in the previous version of ActiveMatrix BusinessWorks 6.6.x/6.7.x/6.8.x/6.9.x, do not reinstall the drivers.

6. Install EMS client libraries to use activities from the JMS palette, or the BWAgent with a database and TIBCO Enterprise Message Service (EMS) for persistence and transport. For instructions about how to configure the EMS client libraries, see [Integrating with TIBCO Enterprise Message Service™](#).
7. Install FTL client libraries to use the activities from the FTL palette, or if the BWAgent is configured to use the `dbftl` mode. For instructions about how to configure the FTL

client libraries, see [Integrating with TIBCO FTL](#).

8. Optional. If you are using a file-based or an LDAP authentication, see "Securing the BWAgent REST API" section in *TIBCO ActiveMatrix BusinessWorks™ Administration*.
9. Start the BWAgent.
10. Restore the domains.

By default, the runtime components are installed under the `TIBCO_HOME/bw/<new_version>` directory and the runtime artifacts such as domains, AppSpaces, and AppNodes are created under the `TIBCO_HOME/bw/<new_version>/domains` directory. If you want to use the runtime artifacts created using the older version of the software, you can restore the runtime artifacts for the newer version of the software. Complete the following tasks to restore the runtime artifacts to the new environment:

 **Note:** You also have the option to re-create the runtime artifacts. For details on recreating runtime artifacts, see the "Administration Tasks and Reference" section in *TIBCO ActiveMatrix BusinessWorks™ Administration*.

- a. Before restoring the domain, edit the `<destination_file>.cmd` as described:
  - In the `create -agent` command, update the argument `domainHome` to provide the `TIBCO_HOME/bw/<new_version>/domains` directory.
  - In the `upload -domain` command, update the location of the archive file to provide the absolute path to the archive file. For example, update the `upload -domain` command to the following:

```
upload -domain BookStore-Domain <TIBCO_HOME>/bw/<old_
version>/bin/archives/BookStore-
Domain/tibco.bw.sample.binding.rest.BookStore.application_1.0.0.ear
```

**i Note:** You also have the option to import the TIBCO Business Studio for BusinessWorks projects to a new workspace.

After installing the latest version of the software, use a new TIBCO Business Studio for BusinessWorks workspace when developing applications, modules, or rebuilding archive files. To use projects created in the older version, import the projects to the new workspace using the **File > Import** menu in TIBCO Business Studio for BusinessWorks. Reusing an existing workspace with the newer version of the software makes that workspace unusable with the older version of the software.

**i Note:** If the agent name is specified as localhost in the command file, update it to specify the BWAgent name. The BWAgent name (bw.agent.memberName) is specified in the bwagent.ini file.

- b. To restore the domain, or other runtime entities, in the new *TIBCO\_HOME* environment, navigate to the *TIBCO\_HOME/bw/<new\_version>/bin* on the console, and run the following command:

```
bwadmin -f <destination_file>.cmd
```

**i Note:** If you encounter issues with the TIBCO® Enterprise Administrator web client UI, stop the TIBCO® Enterprise Administrator server, clean up the sr folder under \$TEA\_ConfigHome/tibco/cfgmgmt/tea/data/sr, and restart the TIBCO® Enterprise Administrator server.

## What to do next

After you have completed the upgrade, import your projects to a new workspace and confirm all of your applications are running properly.

**i Note:** Reusing an existing workspace with the newer version of the software makes that workspace unusable with the older version of the software. User history of the executed command is unavailable in the command history table.

Following are the steps for post upgrade to Debug/Run applications for users who are working on an existing workspace:

### Procedure

1. In a previously created workspace, right-click an application and select the **Debug/Run Configuration** option.
2. In the Debug/Run Configuration window, right-click the **BusinessWorks Application** option and select **New Configuration**.  
A new configuration is created. For example, 'BWApplication(1)',(2),....
3. In the New Configuration, click **Debug/Run**.

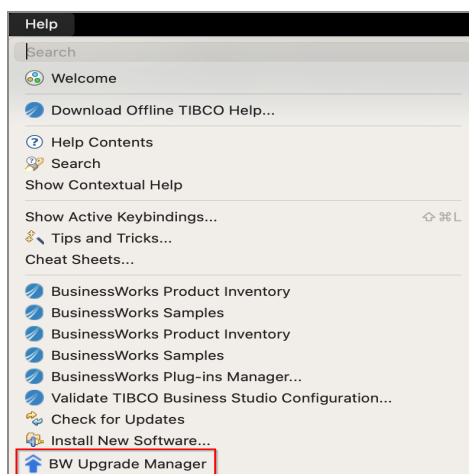
## TIBCO Business Studio™ for BusinessWorks™ Upgrade Manager

The purpose of the BusinessWorks™ Upgrade Manager is to upgrade the BusinessWorks™ version within the Studio itself.

To access the BusinessWorks™ Upgrade Manager, perform the following steps:

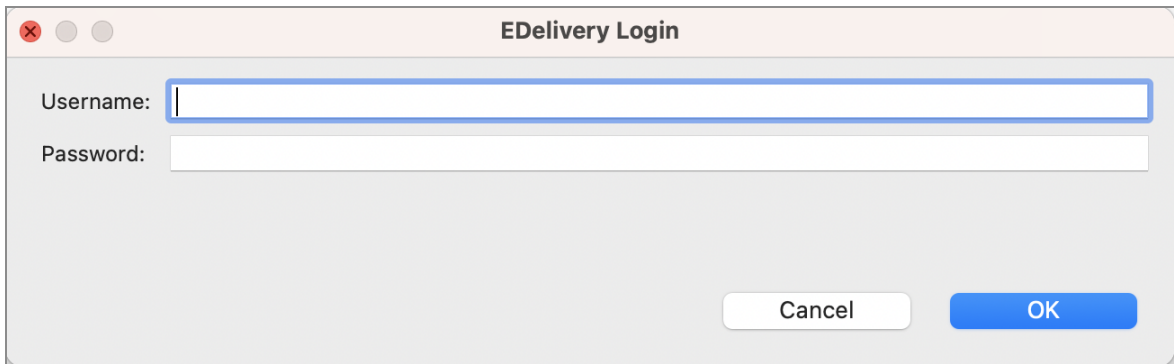
### Procedure

1. In the Help tab on the Studio window, select **BW Upgrade Manager**.



2. To access the BusinessWorks™ Upgrade Manager, authenticate using an EDelivery

Login with your username and password. Click **OK**.

A screenshot of a macOS-style dialog box titled "EDelivery Login". The dialog has a light gray background and a title bar with standard window controls (red, yellow, and green buttons). Inside the dialog, there are two text input fields: "Username:" and "Password:". The "Username:" field is currently selected with a blue border. At the bottom right of the dialog, there are two buttons: "Cancel" (a white button with a gray border) and "OK" (a blue button with white text).

**i Note:** If you are already on the latest version of BusinessWorks™ Upgrade Manager, a pop-up is shown with a message that you are on the latest version of TIBCO Business Studio for BusinessWorks.

# Updating the Database Schema to Enable BWAgent to Use Database with TIBCO Enterprise Message Service

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If you are upgrading from TIBCO ActiveMatrix BusinessWorks™ 6.3.1™, or from TIBCO ActiveMatrix BusinessWorks™ 6.3.2, to a higher version of the software, refer to the following sections for instructions on how to update the database schemas for PostgreSQL, Microsoft SQL, Oracle, DB2, and MySQL.

## PostgreSQL, Microsoft SQL, Oracle, or DB2

If you have configured BWAgent to use PostgreSQL, Microsoft SQL, Oracle, or DB2 with TIBCO Enterprise Message Service (EMS) for persistence and transport, update the database schema by following these steps:

1. Back-up your data in the commandHistory table.
2. Execute the following command to drop the table.

```
drop table commandHistory;
```

3. Restart the BWAgent.

## MySQL

If you have configured BWAgent to use MySQL with TIBCO Enterprise Message Service (EMS) for persistence and transport, update the database schema by following these steps:

1. Execute the following command to alter the table.

```
ALTER TABLE commandHistory MODIFY commandId int NOT NULL AUTO_INCREMENT;
```

2. Restart the BWAgent.

# Installing ActiveMatrix BusinessWorks Plug-ins

---

You can install the ActiveMatrix BusinessWorks plug-in in the following ways. For details about installation procedures, see the *Installation* guide provided with the respective plug-in.

Installation method	Description
<b>Installation by Using an Update Site</b>	
Install from the public update site	You can install the plug-in from within TIBCO Business Studio for BusinessWorks by using the public update site.
Install from a local update site or directory	You can install the plug-in from within TIBCO Business Studio for BusinessWorks by using a local update site or a shared directory managed by your organization.
Install using BusinessWorks Plug-ins Manager	You can install the plug-ins from within TIBCO Business Studio for BusinessWorks using the BusinessWorks Plug-ins Manager.
<b>Installation by Using the TIBCO Universal Installer</b>	



# Uninstalling ActiveMatrix BusinessWorks Plug-ins

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You can uninstall plug-ins in the following ways. For details about uninstallation procedures, see the *Installation* guide provided with the respective plug-in.

Uninstallation method	Description
<b>Uninstallation by Using an Update Site</b>	
Uninstall plug-ins that were installed using the public update site	You can uninstall the plug-in from within TIBCO Business Studio for BusinessWorks by using the public update site.
Uninstall using BusinessWorks Plug-ins Manager	You can uninstall the plug-ins from within TIBCO Business Studio for BusinessWorks using the BusinessWorks Plug-ins Manager.

# Uninstalling the 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.

## Before you begin

Before uninstalling the product, stop all running AppNodes, BWEngine, and the BWAgents on the machine on which you want to uninstall the product. Also, close TIBCO Business Studio™ for BusinessWorks™.

## Procedure

1. To uninstall the product, run the TIBCO Universal Installer (TIBCOUniversalInstaller) from the *TIBCO\_HOME/tools/universal\_installer/* directory.
2. In the TIBCOInstallationManager screen, select **Uninstall Products from a TIBCO Home Location**, and select the *TIBCO\_HOME* location from the drop-down menu. Then click **Next**.
3. Click **Next** on the Welcome screen.
4. On the Uninstallation Type screen, choose the type of uninstall from the following options and then click **Next**.
  - **Custom Uninstall**: Select the products to be removed.
  - **Typical Uninstall**: Removes all the products in the selected *TIBCO\_HOME* folder.
5. If you selected **Custom Uninstall**, select the products you want to uninstall on the Product Uninstall Selection screen. Then click **Next**.
6. Review the product to be uninstalled in the Pre-Uninstall Summary screen, and click **Uninstall** to proceed.
7. The installer uninstalls the selected products. When prompted to clean up the */tools* directory, click **Yes, clean it up**.
8. Click **Finish** in the Post Uninstall Summary screen to exit the uninstall wizard.

9. If you have uninstalled all the software under *TIBCO\_HOME*, delete the folders under the *TIBCO\_HOME* directory.

# TIBCO Documentation and Support Services

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For information about this product, you can read the documentation, contact TIBCO Support, and join TIBCO Community.

## How to Access TIBCO Documentation

Documentation for TIBCO products is available on the [Product Documentation website](#), mainly in HTML and PDF formats.

The [Product Documentation website](#) is updated frequently and is more current than any other documentation included with the product.

## Product-Specific Documentation

The following documentation for this product is available on the [TIBCO ActiveMatrix BusinessWorks™](#) page:

- *TIBCO ActiveMatrix BusinessWorks™ Release Notes*
- *TIBCO ActiveMatrix BusinessWorks™ Installation*
- *TIBCO ActiveMatrix BusinessWorks™ Application Development*
- *TIBCO ActiveMatrix BusinessWorks™ Bindings and Palettes Reference*
- *TIBCO ActiveMatrix BusinessWorks™ Concepts*
- *TIBCO ActiveMatrix BusinessWorks™ Error Codes*
- *TIBCO ActiveMatrix BusinessWorks™ Getting Started*
- *TIBCO ActiveMatrix BusinessWorks™ Migration*
- *TIBCO ActiveMatrix BusinessWorks™ Performance Benchmarking and Tuning*
- *TIBCO ActiveMatrix BusinessWorks™ REST Implementation*
- *TIBCO ActiveMatrix BusinessWorks™ Refactoring Best Practices*
- *TIBCO ActiveMatrix BusinessWorks™ Samples*

## How to Contact Support for TIBCO Products

You can contact the Support team in the following ways:

- To access the Support Knowledge Base and getting personalized content about products you are interested in, visit our [product Support website](#).
- To create a Support case, you must have a valid maintenance or support contract with a Cloud Software Group entity. You also need a username and password to log in to the [product Support website](#). If you do not have a username, you can request one by clicking **Register** on the website.

## How to Join TIBCO Community

TIBCO Community is the official channel for TIBCO customers, partners, and employee subject matter experts to share and access their collective experience. TIBCO Community offers access to Q&A forums, product wikis, and best practices. It also offers access to extensions, adapters, solution accelerators, and tools that extend and enable customers to gain full value from TIBCO products. In addition, users can submit and vote on feature requests from within the [TIBCO Ideas Portal](#). For a free registration, go to [TIBCO Community](#).

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