



# **TIBCO ActiveMatrix BusinessWorks™ Plug-in for Change Data Capture**

## **Installation**

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# Contents

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# Installation Overview

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You can install TIBCO ActiveMatrix BusinessWorks™ Plug-in for Change Data Capture either by using the TIBCO Universal Installer or an update site.

- [Installing by Using the TIBCO Universal Installer](#)

You can install the plug-in by using the TIBCO Universal Installer, in the following modes: GUI, console, and silent. To skip to the procedure, see [Installation Modes and Procedures](#).

- [Installing by Using an Update Site](#)

You can install the plug-in from within TIBCO Business Studio™ for BusinessWorks™ by using the public update site maintained by TIBCO, using a local update site managed by your organization, or BusinessWorks Plug-ins Manager.

The plug-in must be installed into an existing installation environment where TIBCO ActiveMatrix BusinessWorks™ is already installed. The installation environment of ActiveMatrix BusinessWorks™ is referenced as *TIBCO\_HOME*.



**Note:** TIBCO recommends that you use the same mode for uninstallation that you used for installing the plug-in. Using different methods for installation and uninstallation might cause some problems during uninstallation.

# Installation Requirements

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Before you install the plug-in, ensure that your system meets all the hardware and software requirements and you have appropriate privileges to run the installer.

## Installation Account and Permission Requirements

To install on Microsoft Windows, Linux, or macOS, you must have appropriate privileges. Privileges differ for various platforms.

**i Note:** Use the same installer account to install all ActiveMatrix BusinessWorks products.

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

## System Requirements

Ensure that your system meets the hardware and software requirements before installing the plug-in.

## Platform

Before you run the installer, ensure that the appropriate platform is supported. For information about supported operating system platforms, versions, and the required patches, see the [Readme](#) file.

## Disk Space

The installer requires some space in the local directory before installation, and additional space in the local directory to run the installer. Ensure that sufficient space is available in the directory that you want to use as the installation environment (*TIBCO\_HOME*).

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

## Software Requirements

Ensure that you have installed the required software before you run the installer. For information about supported products and versions, see the [Readme](#) file.

The following table lists required and optional TIBCO products:

Software	Description
TIBCO ActiveMatrix BusinessWorks™	Required. ActiveMatrix BusinessWorks supports your integration project throughout the project life cycle. It includes a common graphical user interface for configuration, process design, and deployment.
TIBCO® Enterprise Administrator	Optional.

Software	Description
	TIBCO Enterprise Administrator consists of a TIBCO Enterprise Administrator server, a web user interface for the server, and a shell interface, with which you can manage the applications that you create in TIBCO Business Studio for BusinessWorks.

# Installing by Using the TIBCO Universal Installer

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You can install the ActiveMatrix BusinessWorks™ Plug-in for Change Data Capture by using the TIBCO Universal Installer, in the following modes: GUI, console, and silent.

Ensure that your system meets all the requirements described in the [Installation Requirements](#) section.

**i Note:** The plug-in must be installed in the same installation environment where ActiveMatrix BusinessWorks is installed. Stop all running processes in the installation environment before the installation.

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

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

- [Installation Environment](#)
- [Installation Components and Profiles](#)
- [Installation Modes and Procedures](#)

## Installation Environment

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

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



Property	Description
Directory	Identifies the directory where the product is installed.
<i>TIBCO_HOME</i>	It is the top-level installation directory for TIBCO products.
Name	Identifies the name of the folder where the product is installed.

## Installation Components and Profiles

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

Installation components are grouped into different installation profiles. One installation profile is associated with one or more installation components. When you select a profile, the components under the selected profile are installed. By default, the **Typical** installation profile is selected. Thus, the Design and Runtime installation components are installed.

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

Component	Description
TIBCO ActiveMatrix BusinessWorks™ Plug-in for Change Data Capture Design	<p>This component includes the palettes, shared resources, and samples that show how the plug-in interacts with ActiveMatrix BusinessWorks. You can configure your own business process in TIBCO Business Studio for BusinessWorks with an Eclipse user interface.</p> <p><b>Note:</b> To install TIBCO ActiveMatrix BusinessWorks™ Plug-in for Change Data Capture Design, a runtime component is required.</p>
TIBCO ActiveMatrix BusinessWorks™ Plug-in for Change Data Capture Runtime	<p>This component passes and converts data to and from vendor applications. The parameters of data exchange are stored in projects that are created by using the plug-in palette.</p>

# Installation Modes and Procedures

You can run the TIBCO Universal Installer in GUI, console, or silent mode. Each mode is supported on all platforms. Ensure that your system meets all the requirements described in [Installation Requirements](#).

**i Note:** The plug-in must be installed in an existing installation environment where ActiveMatrix BusinessWorks is installed. Stop all running processes in the installation environment before the installation.

Installation Mode	Description	Reference
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.	<a href="#">Installing in GUI Mode</a>
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.	<a href="#">Installing in Console Mode</a>
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.	<a href="#">Installing in Silent Mode</a>

## Installing in GUI Mode

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

### Before you begin

1. Ensure that ActiveMatrix BusinessWorks is already installed. The plug-in must be installed in the same installation environment where ActiveMatrix BusinessWorks is installed.
2. Download the installation package from [TIBCO eDelivery](#). To download the

installation package, the TIBCO account credentials (username and password) are required. If you do not have a username and password, contact [TIBCO Support](#).

3. Extract the content of the package to a local directory.
4. Stop all running processes in the installation environment.

## Procedure

1. Go to the directory where you extracted the package.
2. To start the installation, run the executable file of the TIBCO Universal Installer for the required platform.
3. On the **Welcome** page of the installation wizard, click **Next**.
4. Accept the license agreement and click **Next**.
5. On the **Installation Profile Selection** page, select **Use an existing *TIBCO\_HOME*** and choose the installation environment where ActiveMatrix BusinessWorks is installed. Then, click **Next**. For more information, see [Installation Environment](#).
6. On the **Installation Profile Selection** page, select an installation profile to specify the components to be installed. Or select the **Customize Installation** checkbox to select the installation components. Click **Next**. For more information, see [Installation Components and Profiles](#).
7. On the **Pre-Install Summary** page, review the information and click **Next**.
8. On the **Post-Install Summary** page, review the installation details and click **Finish**.

## What to do next

Open TIBCO Business Studio for BusinessWorks and create a project to start using the plug-in. For more information, see the *TIBCO ActiveMatrix BusinessWorks™ Plug-in for Change Data Capture User Guide*.

# Installing in Console Mode

In console mode, you can run the installer from the command line. The installer prompts for values on a console window and you can move through the installation by responding to the prompts.

## Before you begin

1. Ensure that ActiveMatrix BusinessWorks is already installed. The plug-in must be installed in the same installation environment where ActiveMatrix BusinessWorks is installed.
2. Download the installation package from [TIBCO eDelivery](#). To download the installation package, the TIBCO account credentials (username and password) are required. If you do not have a username and password, contact [TIBCO Support](#).
3. Extract the content of the package to a local directory.
4. Stop all running processes in the installation environment.

## Procedure

1. On a command line, go to the local directory where you extracted the installation package.
2. To start the installation, run the following command:

```
<TIBCO Universal Installer executable file> -console
```

3. Respond to the messages on the command line.  
The installation options are the same as GUI mode. For more information, see [Installing in GUI Mode](#).
4. When the installation is completed, press Enter to exit the installer.

## What to do next

Open TIBCO Business Studio for BusinessWorks and create a project to start using the plug-in. For more information, see the *TIBCO ActiveMatrix BusinessWorks™ Plug-in for Change Data Capture User Guide*.

# Installing in Silent Mode

In silent mode, you can run the installer without user input by pointing the installer to an existing response file. A default response file named `TIBCOUniversalInstaller_bwplugincdc_<plugin_version>.silent` is packaged with the TIBCO Universal Installer. Before launching the silent installation, you must edit the response file with the

information about your environment. Ensure that you make a copy of the default response file then edit that file and use it for the installation.

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

### Before you begin

1. Ensure that ActiveMatrix BusinessWorks is already installed. The plug-in must be installed in the same installation environment where ActiveMatrix BusinessWorks is installed.
2. Download the installation package from [TIBCO eDelivery](#). To download the installation package, the TIBCO account credentials (username and password) are required. If you do not have a username and password, contact [TIBCO Support](#).
3. Extract the content of the package to a local directory.
4. Stop all running processes in the installation environment.

### Procedure

1. On the command line, go to the local directory where you extracted the installation package.
2. To start the installation, run the following command:

```
<TIBCO Universal Installer executable file> -silent -V responseFile="<my_response_filename>"
```



**Note:** If you copy the response file to another directory and not the local directory containing the installer, then provide the absolute path of the response file.

### What to do next

Open TIBCO Business Studio for BusinessWorks and create a project to start using the plug-in. For more information, see the *TIBCO ActiveMatrix BusinessWorks™ Plug-in for Change Data Capture User Guide*.

# Installing by Using an Update Site

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

Installation method	Description	Reference
Public update site	You can install the plug-in from within TIBCO Business Studio for BusinessWorks by using the public update site.	<a href="#">Installing the Plug-in by Using the Public Update Site</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.	<a href="#">Installing the Plug-in by Using a Local Update Site or Directory</a>
BusinessWorks Plug-ins Manager	You can install the plug-in from within TIBCO Business Studio for BusinessWorks using the BusinessWorks Plug-ins Manager.	<a href="#">Installing the Plug-in by Using BusinessWorks Plug-ins Manager</a>

## Installing the Plug-in by Using the Public Update Site

You can install plug-ins from within TIBCO Business Studio for BusinessWorks by using the public update site maintained by TIBCO.

### Before you begin

Ensure that design time is supported for your operating system platform.

### Procedure

1. Depending on the platform applicable to your plug-in, start TIBCO Business Studio for BusinessWorks:

Platform	Step
Microsoft Windows	Click <b>Start &gt; All Programs &gt; TIBCO &gt; TIBCO_HOME &gt; TIBCO Business Studio &lt;studio_version&gt; &gt; Studio for Designers</b>
Linux or macOS	Run the TIBCO Business Studio for BusinessWorks executable file in the <i>TIBCO_HOME/studio/&lt;studio_version&gt;/eclipse</i> directory.

For the list of platforms supported by your plug-in, see the [Readme](#) file.

2. On the menu bar, click **Help > Install New Software** to open the installation wizard.
3. On the **Install** page, in the **Work with** field, enter the URL of the public update site, <http://update.tibco.com/eclipse/bw/<bw-version>>. Here the two-digit *bw-version* at the end of the address reflects the version of your ActiveMatrix BusinessWorks you are using.

You can save the URL by adding it to the list of available software sites using the TIBCO Business Studio for BusinessWorks menu **Window > Preferences > Install/Update > Available Software Sites**.

4. From the list of available plug-ins, select the plug-in you want to install. Click **Next**.



**Note:** You can select more than one plug-in from the list to install multiple plug-ins at the same time.

5. On the **Install Details** page, review the components you want to install. Click **Next**.
6. On the **Review Licenses** page, review and accept the license agreement.
7. To start the installation, click **Finish**.

## What to do next

Restart TIBCO Business Studio for BusinessWorks to verify that the plug-in is installed successfully.

# Installing the Plug-in by Using a Local Update Site or Directory

You can install ActiveMatrix BusinessWorks Plug-in for Change Data Capture from within TIBCO Business Studio for BusinessWorks by using a local site or directory maintained by your organization.

## Before you begin

- Ensure that you downloaded the software package from the TIBCO download site and stored it in an appropriate location, such as a local update site or a directory. The default package name has the `TIB_bwplugincdc_<plugin_version>_p2installer.zip` format.
- Ensure that design time is supported for your operating system platform.

## Procedure

1. Depending on the platform applicable to your plug-in, start TIBCO Business Studio for BusinessWorks:

Platform	Step
Microsoft Windows	Click <b>Start &gt; All Programs &gt; TIBCO &gt; <i>TIBCO_HOME</i> &gt; TIBCO Business Studio &lt;studio_version&gt; &gt; Studio for Designers</b>
Linux or macOS	Run the TIBCO Business Studio for BusinessWorks executable file in the <i>TIBCO_HOME/studio/&lt;studio_version&gt;/eclipse</i> directory.

For the list of platforms supported by your plug-in, see the [Readme](#) file.

2. On the menu bar, click **Help > Install New Software** to open the installation wizard.
3. On the **Install** page, click **Add** to add an update site you want to work with.

**i Note:** You can add only one update site at a time. Repeat the following steps to add multiple repositories that contain the downloaded software packages.



- a. In the Add Repository dialog, click **Local** or **Archive** to locate the plug-in installation package you want to install, and then click **OK**.
  - b. The selected plug-in installation package is added to the **Location** field. Click **OK**. The plug-in installation package is added to the list of available software on the Install page.
4. On the **Install** page, select the plug-in you want to install. Click **Next**.



**Note:** You can select more than one plug-in from the list to install multiple plug-ins at the same time.

5. On the **Install Details** page, review the components you want to install. Click **Next**.
6. On the **Review Licenses** page, review and accept the license agreement.
7. To start the installation, click **Finish**.

### What to do next

Restart TIBCO Business Studio for BusinessWorks to verify that the plug-in is installed successfully.

## Installing the Plug-in by Using BusinessWorks Plug-ins Manager

You can install the plug-in from within TIBCO Business Studio for BusinessWorks by using BusinessWorks Plug-ins Manager. TIBCO recommends that you use the same mode for installing and uninstalling the plug-in.

### Before you begin

To install the plug-in by using the plug-ins manager, read the following considerations:

- You must have version 6.8.0 or later of ActiveMatrix BusinessWorks.
- Ensure that design time is supported for your operating system platform.

The software package must be available at the update site:

<http://update.tibco.com/eclipse/bw/<bw-version>>


Here, the *bw-version* at the end of the address reflects the version of ActiveMatrix BusinessWorks you are using.

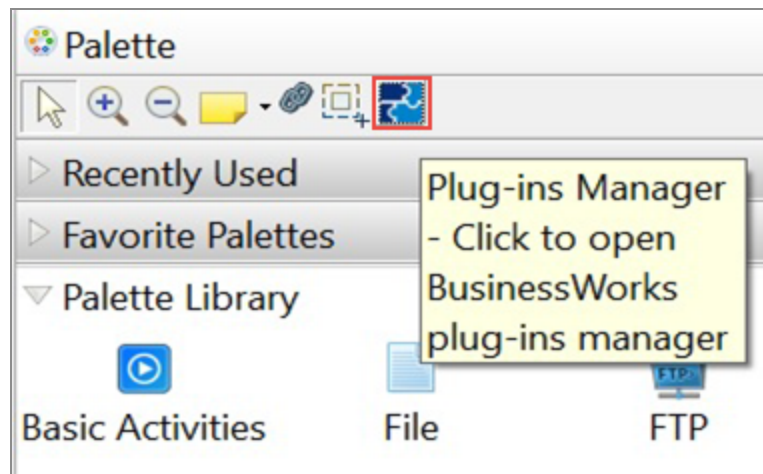
## Procedure

1. Depending on the platform applicable to your plug-in, start TIBCO Business Studio for BusinessWorks:


Platform	Step
Microsoft Windows	Click <b>Start &gt; All Programs &gt; TIBCO &gt; TIBCO_HOME &gt; TIBCO Business Studio &lt;studio_version&gt; &gt; Studio for Designers</b>
Linux or macOS	Run the TIBCO Business Studio for BusinessWorks executable file in the <i>TIBCO_HOME/studio/&lt;studio_version&gt;/eclipse</i> directory.

For the list of platforms supported by your plug-in, see the [Readme](#) file.

2. Open BusinessWorks Plug-ins Manager in one of the following ways:
  - On the menu bar, click **Help > BusinessWorks Plug-ins Manager**.
  - When a process is open, in the **Palette** section (right pane), click the **Plug-ins Manager** icon .



The BusinessWorks Plug-ins Manager dialog opens, listing all the plug-ins available on the public update site.

To open the documentation of a plug-in, on the plug-in tile, click the **View documentation** icon  or right-click and select the relevant option.

3. In the BusinessWorks Plug-ins Manager dialog, select one or more plug-ins that you want to install, and then click **Install**.

The list of plug-ins is displayed based on your selection of options on the **Options** tab.

4. In the Install wizard, perform the following steps:
  - a. On the **Install** page, confirm that the required plug-ins are selected for installation and click **Next**.
  - b. On the **Install Details** page, review the plug-in details and click **Next**.
  - c. To continue, accept the terms of agreement and click **Finish**.

### What to do next

Restart TIBCO Business Studio for BusinessWorks to verify that the plug-in is installed successfully.

# Adding the Plug-in to TIBCO BusinessWorks™ Container Edition

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To add the plug-in to TIBCO BusinessWorks™ Container Edition, you must perform the following steps:

## Procedure

1. Open the physical media or download the installation package from [TIBCO eDelivery](#):
  - `TIB_bwplugincdc_version_buildnumber_bwce-runtime.zip`

To download the installation package, a username and password are required. If you do not have a username and password, contact TIBCO Technical Support.

2. Based on the database you select, perform the following:
  - **For DB2**  
Copy the `com.tibco.tpshell.cdcd2_6.1.0.XXX` wrapper folder with the DB2 libraries present in the `bwce_home/palettes/cdc/<version_number>/runtime/plugins`, to the `resources/addons/jars` location.
  - **For SAP**  
Copy the `com.tibco.tpshell.cdcsap_3.1.8.XXX` wrapper folder with the SAP libraries present in the `bwce_home/palettes/cdc/<version_number>/runtime/plugins`, to the `resources/addons/jars` location.

3. Add the .zip file to TIBCO BusinessWorks™ Container Edition at run time.

For the procedure, see the following section in *TIBCO BusinessWorks™ Container Edition Application Development*:

Platform	Reference
Docker or Docker-	Application Development for Docker section: <ul style="list-style-type: none"><li>• Creating the TIBCO BusinessWorks™ Container Edition Docker</li></ul>

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Platform	Reference
based platforms	<p>Image</p> <ul style="list-style-type: none"><li>• Extending the Base Docker Image &gt; Provision the TIBCO BusinessWorks™ Container Edition Plug-in Runtime</li></ul>

# Uninstalling by Using the TIBCO Universal Installer

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You can uninstall the plug-in by using the TIBCO Universal Installer. It can be done in the following modes: GUI, console, and silent.

**Note:**

- TIBCO recommends that you use the same mode for uninstallation that you used for installing the plug-in. Using different methods for installation and uninstallation might cause some problems during uninstallation.
- Before uninstalling the plug-in, stop all running processes in the installation environment.

- [Uninstalling in GUI Mode](#)
- [Uninstalling in Console Mode](#)
- [Uninstalling in Silent Mode](#)

## Uninstalling in GUI Mode

You can uninstall all the products or specific products from a selected *TIBCO\_HOME* directory when using the TIBCO Universal Installer to uninstall the plug-in in GUI mode.

**Note:**

- TIBCO recommends that you use the same mode for uninstallation that you used for installing the plug-in. Using different methods for installation and uninstallation might cause some problems during uninstallation.
- Before uninstalling the plug-in, stop all running processes in the installation environment.

### Procedure

1. Go to the `TIBCO_HOME/tools/universal_installer` directory.
2. Run the executable file of the TIBCO Universal Installer for the required platform.
3. On the **TIBCO Installation Manager** page, select **Uninstall Products from a TIBCO Home Location**.
4. From the **TIBCO Home Location** list, select the `TIBCO_HOME` directory where the product is installed. Click **Next**.
5. On the **Welcome** page, click **Next**.
6. On the **Uninstallation Type** page, select an uninstallation option and click **Next**.

Option	Description
Custom Uninstall	You can select the products to be removed.
Typical Uninstall	You cannot select the products. All the products in the selected <code>TIBCO_HOME</code> directory are removed.

7. If you select **Custom Uninstall** in the [previous step](#), select the checkbox next to the product to be uninstalled in the **Product Uninstall Selection** page. Click **Next**.
8. On the **Pre-Uninstall Summary** page, review the product to be uninstalled. Click **Uninstall**.
9. On the **Post-Uninstall Summary** page, click **Finish** to complete the uninstallation process and exit the installer.
10. If you have uninstalled all the software in the selected `TIBCO_HOME` directory, delete the folders in the installation environment and user home.

## What to do next

After you have uninstalled all the software in the selected `TIBCO_HOME` directory, delete the residual folders (if any) in the installation environment and user home.

# Uninstalling in Console Mode

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

**Note:**

- TIBCO recommends that you use the same mode for uninstallation that you used for installing the plug-in. Using different methods for installation and uninstallation might cause some problems during uninstallation.
- Before uninstalling the plug-in, stop all running processes in the installation environment.

**Procedure**

1. On a command line, go to the TIBCO\_HOME/tools/universal\_installer directory.
2. To start the uninstallation, run the following command:

```
<TIBCO Universal Installer executable file> -console
```

3. Respond to the messages on the command line.

The uninstallation options are the same as GUI mode. For more information, see [Uninstalling in GUI Mode](#).

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

# Uninstalling in Silent Mode

In silent mode, you can uninstall the product from the command line.



**i Note:**

- TIBCO recommends that you use the same mode for uninstallation that you used for installing the plug-in. Using different methods for installation and uninstallation might cause some problems during uninstallation.
- Before uninstalling the plug-in, stop all running processes in the installation environment.

**Before you begin**

1. Go to the local directory where you extracted the installation package.
2. Copy the `TIBCOUniversalInstaller_bwplugincdc_<plugin_version>.silent` response file to the `TIBCO_HOME/tools/universal_installer` directory, rename the file to `mysilent.silent`, and remove the existing entries in the `mysilent.silent` file.
3. Add the following parameters to the `mysilent.silent` file by using the `<entry key="keyname">keyvalue</entry>` syntax:

```
<entry key="uninstallProductID">bwplugincdc</entry>
<entry key="uninstallProductVersion">6.x.x</entry>
<entry key="uninstallTIBCOHome">c:/tibco</entry>
```

**Procedure**

1. Go to the `TIBCO_HOME/tools/universal_installer` directory.
2. Run the following command:

```
<TIBCO Universal Installer executable file> -silent -V responseFile="<my_
response_filename>"
```



**Note:** If you copy the response file to another directory and not the local directory containing the installer, then provide the absolute path of the response file.

3. You can also use the command-line options to override the value in the silent file. The following options are supported:
  - `-V uninstallTIBCOHome="<TIBCO_HOME path>"`

- `-V uninstallProductID="<productID>"`
- `-V uninstallProductVersion="<product version>"`
- `-V uninstallAllProducts="true"`

Command-Line Options	Description
<code>uninstallTIBCOHome</code>	The path to <i>TIBCO_HOME</i> where you want to run the uninstaller. This value is validated before the uninstallation can proceed in silent mode.
<code>uninstallProductID</code>	The ID of the product that you want to uninstall as defined in the feature config or _installInfo.xml file. A wildcard ("*") can be used to uninstall all products. The <code>uninstallAllProducts="true"</code> option must be used to uninstall all products.
<code>uninstallProductVersion</code>	The version of the product that you specified with the <code>uninstallProductID</code> value. If not specified, all versions matching the <code>uninstallProductID</code> are removed.
<code>uninstallAllProducts</code>	This option must be used in addition to setting <code>uninstallProductID="*"</code> in the silent file to uninstall all products.

## Uninstalling by Using an Update Site

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

Uninstallation method	Description	Reference
Uninstall using the public update site	You can uninstall the plug-in from within TIBCO Business Studio for BusinessWorks by using the public update site.	<a href="#">Uninstalling the Plug-in by Using the Public Update Site or Local Update Site</a>
Uninstall using BusinessWorks Plug-ins Manager	You can uninstall the plug-ins from within TIBCO Business Studio for BusinessWorks by using the BusinessWorks Plug-ins Manager.	<a href="#">Uninstalling the Plug-in by Using BusinessWorks Plug-ins Manager</a>

## Uninstalling the Plug-in by Using the Public Update Site or Local Update Site

You can uninstall the plug-in from within TIBCO Business Studio for BusinessWorks by using the public update site maintained by TIBCO.



**Note:** TIBCO recommends that you use the same mode for uninstallation that you used for installing the plug-in. Using different methods for installation and uninstallation might cause some problems during uninstallation.

### Before you begin

Depending on the platform applicable to your plug-in, start TIBCO Business Studio for BusinessWorks:

Platform	Step
Microsoft Windows	Click <b>Start &gt; All Programs &gt; TIBCO &gt; TIBCO_HOME &gt; TIBCO Business Studio &lt;studio_version&gt; &gt; Studio for Designers</b>
Linux or macOS	Run the TIBCO Business Studio for BusinessWorks executable file in the <i>TIBCO_HOME/studio/&lt;studio_version&gt;/eclipse</i> directory.

For the list of platforms supported by your plug-in, see the [Readme](#) file.

### Procedure

1. On the menu bar, select **Help > About TIBCO Business Studio for BusinessWorks**.
2. Click **Installation Details**.  
The TIBCO Business Studio for BusinessWorks(TM) Installation Details dialog is displayed.
3. Select the plug-in to uninstall and click **Uninstall**.
4. On the **Uninstall Details** page, review the items to uninstall and click **Finish**.

### What to do next

Restart TIBCO Business Studio for BusinessWorks to verify that the plug-in is uninstalled successfully.

## Uninstalling the Plug-in by Using BusinessWorks Plug-ins Manager

You can uninstall the plug-in from within TIBCO Business Studio for BusinessWorks by using BusinessWorks Plug-ins Manager.

**i Note:** TIBCO recommends that you use the same mode for uninstallation that you used for installing the plug-in. Using different methods for installation and uninstallation might cause some problems during uninstallation.

## Before you begin

Depending on the platform applicable to your plug-in, start TIBCO Business Studio for BusinessWorks:

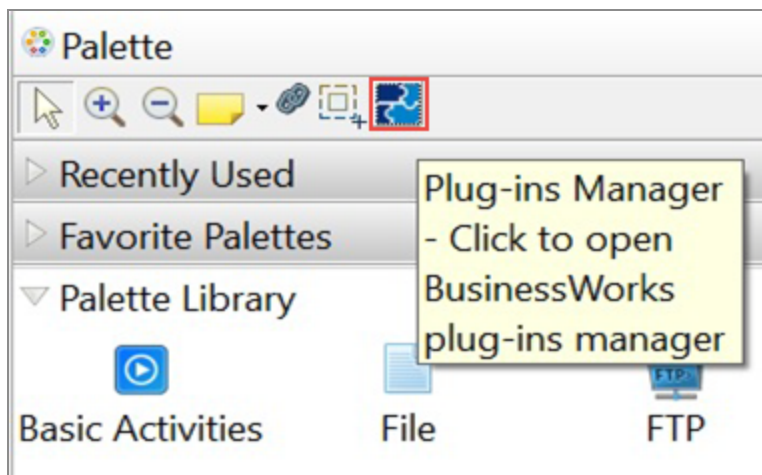
Platform	Step
Microsoft Windows	Click <b>Start &gt; All Programs &gt; TIBCO &gt; <i>TIBCO_HOME</i> &gt; TIBCO Business Studio &lt;studio_version&gt; &gt; Studio for Designers</b>
Linux or macOS	Run the TIBCO Business Studio for BusinessWorks executable file in the <i>TIBCO_HOME/studio/&lt;studio_version&gt;/eclipse</i> directory.

For the list of platforms supported by your plug-in, see the [Readme](#) file.

## Procedure

1. On the menu bar, click **Help > BusinessWorks Plug-ins Manager**.

Optionally, click the **Plug-ins Manager** icon  in the Palette section.



The BusinessWorks Plug-ins Manager dialog opens, listing all the plug-ins available on the public update site.

2. On the **Options** tab, select the **Show only installed plug-ins** checkbox and select the plug-ins to uninstall.
3. Click **Uninstall**.

The Uninstall Details dialog is displayed.

4. In the Uninstall Details dialog, review the components to uninstall.
5. To start the plug-ins uninstallation, click **Finish**.

### **What to do next**

Restart TIBCO Business Studio for BusinessWorks to verify that the plug-in is uninstalled successfully.

# Postinstallation Tasks

---

This section provides information on required steps following the installation of the plug-in. For the CDC-DB Listener activity, additional steps are required for database DB2. For the CDC-SAP Listener activity, additional steps are always required.

## DB2 Driver Installation

To install ActiveMatrix BusinessWorks™ Plug-in for Change Data Capture for DB2 database with CDC-DB Listener activity perform the following steps.

### Procedure

1. On a command line, go to the `<TIBCO_HOME>/bw/palettes/cdc/<version_number>/bin` directory.
2. Run the installer using the following command:

```
cdcinstall db2-driver
```

3. On the command line, enter the location of the DB2 driver folder.  
The installation procedure is the same for GUI, console, and silent mode.
4. When the installation is completed, press **Enter** to exit the installer.

## SAP JCo Libraries Installation

To install ActiveMatrix BusinessWorks™ Plug-in for Change Data Capture for SAP database with CDC-SAP Listener activity perform the following steps.

### Procedure

1. On a command line, go to the `<TIBCO_HOME>/bw/palettes/cdc/<version_number>/bin` directory.
2. Run the installer using the following command:

```
cdcinstall sap-driver
```

3. On the command line, enter the location of the SAP JCo libraries folder.  
The installation procedure is the same for GUI, console, and silent mode.
4. When the installation is completed, press **Enter** to exit the installer.

## Updating the SAP JCo Libraries

If using the CDC-SAP Listener activity, the SAP JCo libraries need to be updated after the plug-in installation and then perform the following steps.

### Before you begin

Install the existing version of ActiveMatrix BusinessWorks™ Plug-in for Change Data Capture. Ensure that the `sapjco3.jar` and corresponding library are present on the local machine.

### Procedure

1. Go to the bin folder where the plug-in is installed. For example, `C:\TIBCO_HOME\bw\palettes\cdc\<version_number>\bin`.
2. On the command line, enter the following commands:

- For Windows

```
cdcinstall.exe sap-driver
```

- For Linux or Unix

```
./cdcinstall sap-driver
```

- For macOS

```
./cdcinstall sap-driver
```

3. On running the command, the following message is displayed

```
Please specify absolute path of the SAP JCo libraries:
```



4. Specify the absolute path of the SAP JCo libraries folder where the `sapjco3.jar` and corresponding library files are present.

For example, `sapjco3.jar` and a corresponding library is present in, `D:\Installer` and then you populate the path.

A `BUILD SUCCESSFUL` message is displayed, which indicates the SAP JCo libraries are updated successfully.

5. If updating the SAP JCo libraries in a deployed environment, a further step is required so that the update is successful.
  - a. Set the `bw.appnode.clean.config.folder.on.startup` property as `true` in the `config.ini` file of `appnode`.

### **What to do next**

Restart TIBCO Business Studio and SAP Plug-in applications.

# Configuring Databases

---

You can configure Apache Cassandra, IBM DB2, MongoDB, MSSQL, MySQL, Oracle Database, and PostgreSQL with ActiveMatrix BusinessWorks™ Plug-in for Change Data Capture using this section.

## Enabling CDC on IBM DB2 database

To enable ActiveMatrix BusinessWorks™ Plug-in for Change Data Capture on DB2 SSH into the machine with username, perform the following steps.

### Procedure

1. Start the IBM DB2 database. You can use the following command:

```
db2 start db <DB_NAME>
```

2. Connect the DB and confirm that you can read the metadata catalog. You can use the following command:

```
db2 connect to <DB_NAME>
db2 bind db2schema.bnd
blocking all grant public sqlerror continue
```

The output should be:

```
db2 bind db2schema.bnd blocking all grant public sqlerror continue
LINE      MESSAGES FOR db2schema.bnd
-----  -----
SQL0061W  The binder is in progress.
SQL0091N  Binding was ended with "0" errors and "0" warnings.
The command must finish with 0 errors and 0 warnings.
```

3. Back up the database:

```
db2 backup db <DB_NAME> to location /dev/null
```

- Restart DB and connect to it.

```
db2 restart db <DB_NAME>
db2 connect to <DB_NAME>
```

- Create CDC database objects by running the SQL scripts in: Create CDC tables Script. Refer the script file at the path *<TIBCO\_HOME>\bw\palettes\cdc\<version\_number>\samples\scripts.zip*.
- Check the status of CDC service on the database side by running the command:

```
asnccmd capture_schema=ASNCDC capture_server=<db_name> status
```

In DB2 by default, CDC artifacts are created in ASNCDC schema. Ideally the following output is observed for the above command:

```
2023-09-18-18.46.58.952383 ASN0520I "AsnCcmd" : "ASNCDC" :
"Initial" : The STATUS command response: "WorkerThread" thread is
in the "is doing work" state.
2023-09-18-18.46.58.952395 ASN0520I "AsnCcmd" : "ASNCDC" :
"Initial" : The STATUS command response: "LogrdThread" thread is in
the "is doing work" state.
The worker thread and the log read thread (LogrdThread) should be
in 'is doing work' state.
```

- If the above command times out without displaying the above output, start the service with the command below:

```
asnccap capture_schema=ASNCDC capture_server=db_name &
The output for this command must show the number of active and
inactive entities.
ASN0109I CAPTURE "ASNCDC" : "WorkerThread". The Capture program
has successfully initialized and is capturing data changes for "4"
registrations. "0" registrations are in a stopped state. "1"
registrations are in an inactive state.
```

- Add desired table to capture mode by running the stored procedure from the SQL client, the script file located at *<TIBCO\_HOME>\bw\palettes\cdc\<version\_number>\samples\scripts.zip*:

```
CALL CDCPLUGIN.ADDTABLE(<actual_schema>, <table_name>);
```

Example:

```
CALL CDCPLUGIN.ADDTABLE('BANK', 'HOLDING');
```

9. Reinitialize the CDC service by running the following command:
10. Now data can be inserted/updated into the table or deleted from the table (for example: BANK.HOLDING) and data changes can be polled.
11. If the table needs to be removed from CDC, call the following stored procedure from SQL client, script file located at *<TIBCO\_HOME>\bw\palettes\cdc\<version\_number>\samples\scripts.zip*:

```
CALL CDCPLUGIN.REMOVETABLE(<actual_schema>, <table_name>);
```

Example:

```
CALL CDCPLUGIN.REMOVETABLE('BANK', 'HOLDING');
```

Then 'reinit' the CDC service and ensure that the worker thread and log read thread are in 'doing work' state.



**Note:** Whenever the status command or reinit command times out, restart the CDC service as explained in the step: 7

## Enabling CDC on PostgreSQL database

To enable ActiveMatrix BusinessWorks™ Plug-in for Change Data Capture on PostgreSQL, after the plug-in installation is complete, ensure that the database is up and running. To conduct change data capture operations, create a new user role apart from SUPERUSER.

### Procedure

1. Create a user/role for CDC.
2. Grant the role with LOGIN, SELECT, CREATE and REPLICATION privileges.
3. Create a new password for the role.
4. Go to *<path\_to>/postgres/<version\_number>/main/postgresql.conf* and open the file and perform the following operations:

For 'listen\_address', set the value to '\*':

```
listen_address= '*'
```

Move to the 'WRITE-AHEAD Log' section and set:

```
wal_level = logical
```

Move to the 'REPLICATION' section and set:

```
max_wal_senders = 4
```

At the end of the file, create a section called 'MODULES' and set:

```
shared_preload_libraries = 'pgoutput'
```

5. Open the file, `pg_hba.conf` located at `<path_to_postgres>/postgres/<version_number>/main`
6. Go to the replication privileges section at the end of the file:
  - Make sure that the entries are consistent with the following and add a row for the CDC db user at the end:

```
=====
#Allow replication connections from localhost, by a user with
the
# replication privilege.

local    replication    all                                     trust
local    replication    all             127.0.0.1/32    trust
host     replication    all                                     trust
host     all             all             all             md5
#host    all             all             ::/0
host     replication    <cdc_db_user> 0.0.0.0/0    trust
```

To add a table in the Replication mode, run the following SQL command:

```
ALTER TABLE <schema_name.db_name> replica identity FULL;
```

## Enabling CDC on MySQL

To enable ActiveMatrix BusinessWorks™ Plug-in for Change Data Capture on MySQL, alter root user and set a password.

```
ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql_native_password BY
'<password_for_root>
```

### Procedure

1. Create a user for CDC and grant all privileges on all databases.

```
CREATE USER '<user_for_cdc>'@'%' IDENTIFIED BY '<cdc_password>';
Grant all privileges on *.*;
Flush privileges;
Exit;
```

2. The minimum set of privileges required for replication is:

```
Grant select, show databases, replication slave, replication client
on *.* to '<cdc_db_user>';
```

3. Go to the directory: `<path_to>/mysql/mysql.conf.d`
4. Open the `mysqld.cnf` file.
5. Ensure to uncomment:

```
Port = 3306
Set bind-address = 0.0.0.0
```

6. Edit and set the following for replication at the end of the file:

```
server-id            = 1
log_bin             = /var/log/mysql/mysql-bin.log
binlog_expire_logs_seconds = 2592000
max_binlog_size     = 100M
binlog_format       = row
default_authentication_plugin = mysql_native_password
```

The binlog size can be updated based on your preference.

## 7. Save the file and restart the DB

Verify the status:

Expected - Active and Running.

For example, the following is the command for Linux

```
sudo systemctl status mysql
```

The server\_id can also be queried on the Mysql prompt: select @@server\_id;

## 8. Check the following variables:

```
a. mysql> SELECT FROM performance_schema.global_variables WHERE
variable_name='log_bin';
SELECT variable_value AS 'BINARY_LOGGING_STATUS (log-bin) ::'
FROM performance_schema.global_variables variable_name = 'log_bin';
This should return 'ON'

b. SHOW global_variables WHERE variable_name = 'binlog_row_value_
options';
The value returned should be empty. If not explicitly set empty
value by executing:
set @@binlog_row_value_options="";
```

## Enabling CDC on MSSQL

To enable ActiveMatrix BusinessWorks™ Plug-in for Change Data Capture on MSSQL, verify the following permissions:

- The user should be part of the db\_owner role for the CDC database.
- The user should have select grant on all captured DB objects.
- The members of the db\_owner role can view information on all captured instances.

## Enabling CDC on Database

The system stored procedures should be run from SQL Server Management Studio.

### Procedure

1. From SQL Server Management Studio, select the **View** menu.
2. Click Template Explorer.

3. Expand SQL Server Templates.
4. Expand Change Data Capture, expand the **Configuration** option and then select **Enable Database for CDC**.
5. Run the stored procedure `sys.sp_cdc_enable_db` to enable the database for CDC after replacing the DB name in the USE statement at the top.

## Enabling CDC for Each Table

### Procedure

1. Navigate to **SQL Server Management Studio > Template Explorer > expand SQL Server Templates**.
2. Expand Change Data Capture, expand **Configuration** option, and select **Enable Table Specifying Filegroup** option.
3. Replace the table name in the USE statement with the name of the table that requires CDC enabled, and run the stored procedure `sys.sp_cdc_enable_table`.

The filegroup where SQL Server saves the CDC information for the selected table must already be present.

## Enabling CDC on Oracle

To enable ActiveMatrix BusinessWorks™ Plug-in for Change Data Capture on Oracle server perform the following steps:

### Procedure

1. Open the new SQL Plus and run the following queries:

```
Enter user-name: '/' as sysdba

SQL> show con_name;
CON_NAME
-----
CDB$ROOT
SQL> show pdbs;
CON_ID CON_NAME                OPEN MODE  RESTRICTED
-----
2  PDB$SEED                    READ ONLY  NO
3  ORCLPDB                     READ WRITE NO
```



```
SQL> shutdown immediate;
Database closed.
Database dismounted.
ORACLE instance shut down.
```

```
SQL> startup;
ORACLE instance started.
Total System Global Area 1.0335E+10 bytes

Fixed Size          12816984 bytes
Variable Size       1577058304 bytes
Database Buffers    8724152320 bytes
Redo Buffers        20733952 bytes
Database mounted.
Database opened.
```

```
SQL> show pdbs;
CON_ID CON_NAME      OPEN MODE  RESTRICTED
-----
2 PDB$SEED          READ ONLY  NO
3 ORCLPDB            READ WRITE NO
```

```
SQL> show parameter recovery;
NAME                TYPE          VALUE
-----
db_recovery_file_dest      string
db_recovery_file_dest_size big integer    0
recovery_parallelism       integer       0
remote_recovery_file_dest  string        0
```

```
SQL> alter system set db_recovery_file_dest_size = 20G;
System altered.
```

```
SQL> alter system set db_recovery_file_dest =
'C:\oracle19c\oradata\ORCL\recovery_area' scope=spfile;
System altered.
```

```
SQL> alter system set db_recovery_file_dest =
'C:\oracle19c\oradata\ORCL\recovery_area' scope=spfile;
System altered.
```

```
SQL> shutdown immediate;
Database closed.
Database dismounted.
ORACLE instance shut down.
```

```
SQL> startup mount;
ORACLE instance started.
Total System Global Area 1.0335E+10 bytes
Fixed Size          12816984 bytes
Variable Size       1577058304 bytes
Database Buffers    8724152320 bytes
Redo Buffers        20733952 bytes

Database mounted.
```

```
SQL> archive log list;
Database log mode          No Archive Mode
Automatic archival         Disabled
Archive destination        USE_DB_RECOVERY_FILE_DEST
Oldest online log sequence 1
Current log sequence       2
```

```
SQL> alter database archivelog;
Database altered.
```

```
SQL> archive log list;
Database log mode          Archive Mode
Automatic archival         Enabled
Archive destination        USE_DB_RECOVERY_FILE_DEST
Old online log sequence    1
Next log sequence to archive 2
Current log sequence       2
```

```
SQL> show pdbs;
CON_ID CON_NAME          OPEN MODE  RESTRICTED
-----
2 PDB$SEED              MOUNTED
3 ORCLPDB                MOUNTED
```

```
SQL> alter database open;
Database altered.
```

```
SQL> show pdbs;
CON_ID CON_NAME          OPEN MODE  RESTRICTED
-----
2 PDB$SEED              READ ONLY  NO
3 ORCLPDB                READ WRITE NO
```

```
SQL> archive log list;
Database log mode          Archive Mode
Automatic archival         Enabled
Archive destination        USE_DB_RECOVERY_FILE_DEST
Old online log sequence    1
Next log sequence to archive 2
Current log sequence       2
```

```
SQL> show parameter recovery;
NAME                           TYPE          VALUE
-----
db_recovery_file_dest string      very_area C:\oracle19c\oradata\ORCL\reco
db_recovery_file_dest_size big integer 20G
recovery_parallelism integer      0
remote_recovery_file_dest string
```

```
SQL> select log_mode from v$database;
LOG_MODE
-----
ARCHIVELOG
```

```
SQL> alter database add supplemental log data;
Database altered.
```

```
SQL> commit;
Commit complete.
```

```
SQL> SELECT GROUP#, BYTES/1024/1024 SIZE_MB, STATUS FROM V$LOG
ORDER BY 1;
GROUP#    SIZE_MB STATUS
-----
1          200 INACTIVE
2          200 CURRENT
3          200 UNUSED
```

```
SQL> SELECT GROUP#, MEMBER FROM V$LOGFILE ORDER BY 1, 2;
GROUP#
-----
MEMBER
-----
1
C:\ORACLE19C\ORADATA\ORCL\REDO01.LOG
2
C:\ORACLE19C\ORADATA\ORCL\REDO02.LOG
3
C:\ORACLE19C\ORADATA\ORCL\REDO03.LOG
```

```
SQL> ALTER DATABASE CLEAR LOGFILE GROUP 1;
Database Altered
```

```
SQL> ALTER DATABASE CLEAR LOGFILE GROUP 1;
Database Altered
```

```
SQL> ALTER DATABASE ADD LOGFILE GROUP 1
('C:\ORACLE19C\ORADATA\ORCL\REDO01.LOG') size 5G REUSE;
Database Altered
```

```
SQL> SELECT GROUP#, BYTES/1024/1024 SIZE_MB, STATUS FROM V$LOG
ORDER BY 1;

GROUP#    SIZE_MB STATUS
-----
1          5120 UNUSED
```

```

2          200 CURRENT
3          200 UNUSED

```

```
SQL> SELECT GROUP#, BYTES/1024/1024 SIZE_MB, STATUS FROM V$LOG
ORDER BY 1;
```

GROUP#	SIZE_MB	STATUS
1	5120	UNUSED
2	200	CURRENT
3	200	UNUSED

**Note:** Change Group 3 first, as Group 2 is currently in use and its status is CURRENT.

```
SQL> ALTER DATABASE CLEAR LOGFILE GROUP 3;
Database altered.
```

```
SQL> ALTER DATABASE DROP LOGFILE GROUP 3;
Database altered.
```

```
SQL> ALTER DATABASE ADD LOGFILE GROUP 3
('C:\ORACLE19C\ORADATA\ORCL\RED003.LOG') size 5G REUSE;
Database altered.
```

```
SQL> SELECT GROUP#, BYTES/1024/1024 SIZE_MB, STATUS FROM V$LOG
ORDER BY 1;
```

GROUP#	SIZE_MB	STATUS
1	5120	UNUSED
2	200	CURRENT
3	5120	UNUSED

```
SQL> ALTER SYSTEM SWITCH LOGFILE;
System altered.
```

```
SQL> SELECT GROUP#, BYTES/1024/1024 SIZE_MB, STATUS FROM V$LOG
ORDER BY 1;
```

GROUP#	SIZE_MB	STATUS
1	5120	CURRENT
2	200	ACTIVE
3	5120	UNUSED

**i Note:** Now here the status of the Group 1 log file is changed from UNUSED to CURRENT. Now we can change the size of the Group 2 logfile. We now need to wait for the database to eventually switch the status of log group 2 to INACTIVE.

```
SQL> SELECT GROUP#, BYTES/1024/1024 SIZE_MB, STATUS FROM V$LOG
ORDER BY 1;
```

GROUP#	SIZE_MB	STATUS
1	5120	CURRENT
2	200	INACTIVE
3	5120	UNUSED

```
SQL> ALTER DATABASE CLEAR LOGFILE GROUP 2;
Database altered
```

```
SQL> ALTER DATABASE DROP LOGFILE GROUP 2;
Database altered
```

```
SQL> ALTER DATABASE ADD LOGFILE GROUP 2
('C:\ORACLE19C\ORADATA\ORCL\RED002.LOG') size 5G REUSE;
Database altered
```

```
SQL> SELECT GROUP#, BYTES/1024/1024 SIZE_MB, STATUS FROM V$LOG
ORDER BY 1;
```

GROUP#	SIZE_MB	STATUS
1	5120	CURRENT

```
2      5120 UNUSED
3      5120 UNUSED
```

```
SQL> commit;
Commit complete.
```

```
SQL> show con_name;
CON_NAME
-----
CDB$ROOT
```

```
SQL> CREATE TABLESPACE logminer_tbs DATAFILE
'C:\oracle19c\oradata\ORCL\orclpdb\logminer_tbs.dbf' SIZE 25M REUSE
AUTOEXTEND ON MAXSIZE UNLIMITED;
Tablespace created.
```

```
SQL> alter session set "_ORACLE_SCRIPT"=TRUE;
Session altered
```

```
SQL> alter user sys identified by <SYS_USER_PASSWORD>;
User altered.
```

```
SQL> CREATE USER c##dbzuser IDENTIFIED BY <PASSWORD> DEFAULT
TABLESPACE LOGMINER_TBS QUOTA UNLIMITED ON LOGMINER_TBS
CONTAINER=ALL;
User created.
```

```
SQL> GRANT CREATE SESSION TO c##dbzuser CONTAINER=ALL;
Grant succeeded.
```

```
SQL> GRANT SET CONTAINER TO c##dbzuser CONTAINER=ALL;
Grant succeeded.
```

```
SQL> GRANT FLASHBACK ANY TABLE TO c##dbzuser CONTAINER=ALL;
Grant succeeded.
```

```
SQL> GRANT SELECT ANY TABLE TO c##dbzuser CONTAINER=ALL;  
Grant succeeded.
```

```
SQL> GRANT EXECUTE_CATALOG_ROLE TO c##dbzuser CONTAINER=ALL;  
Grant succeeded.
```

```
SQL> GRANT SELECT ANY TRANSACTION TO c##dbzuser CONTAINER=ALL;  
Grant succeeded.
```

```
SQL> GRANT SELECT ANY DICTIONARY TO c##dbzuser CONTAINER=ALL;  
Grant succeeded.
```

```
SQL> GRANT LOGMINING TO c##dbzuser CONTAINER=ALL;  
Grant succeeded.
```

```
SQL> GRANT CREATE TABLE TO c##dbzuser CONTAINER=ALL;  
Grant succeeded.
```

```
SQL> GRANT LOCK ANY TABLE TO c##dbzuser CONTAINER=ALL;  
Grant succeeded.
```

```
SQL> GRANT CREATE SEQUENCE TO c##dbzuser CONTAINER=ALL;  
Grant succeeded.
```

```
SQL> GRANT EXECUTE ON DBMS_LOGMNR TO c##dbzuser CONTAINER=ALL;  
Grant succeeded.
```

```
SQL> GRANT EXECUTE ON DBMS_LOGMNR_D TO c##dbzuser CONTAINER=ALL  
Grant succeeded.
```

```
SQL>GRANT SELECT ON V_$LOG TO c##dbzuser CONTAINER=ALL;  
Grant succeeded.
```



```
SQL> GRANT SELECT ON V_$LOG_HISTORY TO c##dbzuser CONTAINER=ALL;  
Grant succeeded.
```

```
SQL> GRANT SELECT ON V_$LOGMNR_LOGS TO c##dbzuser CONTAINER=ALL;  
Grant succeeded.
```

```
SQL> GRANT SELECT ON V_$LOGMNR_CONTENTS TO c##dbzuser  
CONTAINER=ALL;  
Grant succeeded.
```

```
SQL> GRANT SELECT ON V_$LOGMNR_PARAMETERS TO c##dbzuser  
CONTAINER=ALL;  
Grant succeeded.
```

```
SQL> GRANT SELECT ON V_$LOGFILE TO c##dbzuser CONTAINER=ALL;  
Grant succeeded.
```

```
SQL> GRANT SELECT ON V_$ARCHIVED_LOG TO c##dbzuser CONTAINER=ALL;  
Grant succeeded.
```

```
SQL> GRANT SELECT ON V_$ARCHIVE_DEST_STATUS TO c##dbzuser  
CONTAINER=ALL;  
Grant succeeded.
```

```
SQL> commit;  
Grant succeeded.
```

## Enabling CDC on MongoDB

To enable ActiveMatrix BusinessWorks™ Plug-in for Change Data Capture on MongoDB, perform the following steps:

### Procedure

1. Start MongoDB as a replica set.

Debezium requires MongoDB to run as a replica set, even for a single node.

- For a single node:

```
mongod --replSet rs0 --bind_ip localhost
```

- For SSL connections:

```
mongosh --tls --host localhost --tlsCAFile C:\yourPath\ca.crt
--tlsCertificateKeyFile C:\yourPath\mongodb.pem --port
portNumber
```

## 2. Initialize the replica set.

- Connect to the MongoDB shell.
- Run the following command:

```
rs.initiate()
```

- Create a Debezium user with the required permissions.

In the MongoDB shell, create a user with the necessary roles:

```
use admin
db.createUser({
  user: "debezium",
  pwd: "dbz",
  roles: [
    { role: "read", db: "your_database" },
    { role: "readAnyDatabase", db: "admin" },
    { role: "clusterMonitor", db: "admin" }
  ]
})
```

Replace *your\_database* with the name of the database from which you want to capture changes.

## Enabling CDC on Apache Cassandra 4.x

To enable ActiveMatrix BusinessWorks™ Plug-in for Change Data Capture on Apache Cassandra 4.x, perform the following steps:

### Procedure

1. Enable CDC in the `cassandra.yaml` configuration.
  - a. Open your Cassandra node's `cassandra.yaml` file.
  - b. Find the following line:

```
cdc_enabled: false
```

- c. Change it to:

```
cdc_enabled: true
```

2. Restart Cassandra.

Run the Cassandra script from the installation directory:

```
bin/cassandra -f
```

3. To enable CDC on specific tables.

**i Note:** By default, CDC is not enabled for any table. You must enable it for each table individually using CQL.

- a. Connect to `cqlsh`.

```
cqlsh
```

- b. Create a keyspace with CDC enabled:

```
CREATE KEYSPACE testks  
WITH replication = {'class': 'SimpleStrategy', 'replication_  
factor': 1};
```

- c. Use the keyspace:

```
USE testks;
```

- d. Create a table with CDC enabled:

```
CREATE TABLE users (  
    user_id uuid PRIMARY KEY,  
    name text,  
    email text  
    ) WITH cdc = true;
```

- e. Verify that CDC is enabled.

Run the following command and look for `cdc: true` in the output:

```
DESCRIBE TABLE testks.users;
```

## Reconnecting Database using HBTable

---

When the connection between the database and the plug-in is interrupted, the plug-in can be reconnected to the database using a heartbeat table. This heartbeat table is configured using the module properties.

For more information about module properties, see the "Support of Database Reconnection" section in *TIBCO ActiveMatrix BusinessWorks™ Plug-in for Change Data Capture User Guide*.

To enable this heartbeat table, run the SQL scripts for the required database located at the path `<TIBCO_HOME>\bw\palettes\cdc\<version_number>\samples\scripts.zip`.

# Troubleshooting Installation

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

Depending on the platform applicable to your plug-in, select the location of the installer log file. 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, host name, operating system details, and so on
- List of installed assemblies
- Information related to the Ant scripts run by the installer

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

# 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 documentation for this product is available on the [TIBCO ActiveMatrix BusinessWorks™ Plug-in for Change Data Capture Documentation](#) page.

## 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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