TIBCO BusinessConnect™

Installation and Configuration

Version 7.4.0
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Contents

Introduction

This section explains installation modes, requirements, and other options you must be aware of before starting installation.

Installation Overview

This section gives an overview of the installer.

Installation Modes

Three installation modes are available: GUI, console, and silent.

GUI Mode

In GUI mode, the installer presents panels that allow you to make choices concerning product selection, product location, and so on. To invoke the installer in the GUI mode, double-click the executable.

Console Mode

The console mode allows you to run the installer from the command prompt or terminal window. This is useful if your machine does not have a GUI environment.

Silent Mode

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

Installation Components

The following installation components are available for the product:

- **Gateway Only** This profile is intended for installation on the Gateway machine, which is located in the DMZ zone outside the company's firewall. With this profile, the following pre-selected components are installed:

    — Gateway Documentation

    — BusinessConnect Runtime: Gateway

- **Interior Server Only** This profile is intended for TIBCO BusinessConnect Administrator. With this profile, the following pre-selected components are installed:

    — Interior Server Documentation

    — BusinessConnect Runtime: Interior Server

    — BusinessConnect Tools: Interior Server Tools

- **Typical** If you choose this installation profile, all components are installed:

    — Interior Server Documentation, Gateway Documentation

    — BusinessConnect Runtime: Interior Server, Gateway

    — BusinessConnect Tools: Interior Server Tools

ℹ️ **Note**   To customize the profile feature settings, select the **Customize Installation** checkbox and use the feature tree on the right.

Installer Account

Microsoft Windows

You must have administrator privileges for the machine on which you want to install this product. If you do not have administrator privileges, the installer exits. You must then log out of the system and log in as a user with the required privileges, or request your system administrator to assign the privileges to your account.

If you intend to install the product on a network drive, ensure that the account used for installation has permission to access the network drive.

Linux

Any user can install this product.

- Regular (non-root) user
- Super-user (root)

While installing this product on Linux platforms, ensure that the same installer account is used to install all TIBCO products.

A graphic environment such as CDE or X Windows is required to run the installer in GUI mode.

Installer Log File

The installer log file, `tibco_universal_installer.`*username*`_install.log`, is written to the `.TIBCO\install_`*timestamp* folder of the user's home directory. To change the location of the installer log file, specify the option `-V logFile="`*myLogFile*`"` when you run the installer.

Installation Requirements

This section describes the disk space requirements, system memory requirements, software requirements, and supported platforms for this product.

Disk Space Requirements

Refer to the readme file for the disk space requirements.

System Memory Requirements

Refer to the readme file for the system memory requirements.

Supported Platforms

Refer to the readme file for the supported platforms and versions and required patches.

Software Requirements

The following table lists the required and optional software products.

Software Requirements

Software	Description
TIBCO Software	
The software products below are distributed and installed separately from this product. See the readme file for the supported versions.	
TIBCO Runtime Agent	Required by TIBCO BusinessConnect. TIBCO Runtime Agent includes TIBCO Designer along with a number of TIBCO and third-party libraries used by TIBCO BusinessConnect and other TIBCO products. This includes, for example, TIBCO Hawk software. You must install TIBCO Runtime Agent on each machine that hosts TIBCO BusinessConnect. And TIBCO Runtime Agent must be installed before you install TIBCO BusinessConnect.
TIBCO Rendezvous	Required. You must install TIBCO Rendezvous on each machine that hosts TIBCO BusinessConnect to use fault tolerance feature for the FILE service.
TIBCO Administrator	Required only for administration and migration. TIBCO Administrator includes the following modules: **User Management** Management of authentication, roles, and users that can connect roles (groups) and users to access control lists (ACLs). This includes security for server-based projects at design-time and for deployed applications at runtime. **Resource Management** Monitoring of machines and of all running applications in a TIBCO administration domain. Alerts can be created, for example, to notify an administrator if the number of processes or disk usage exceeds a certain number.

Software	Description
	Application Management Uploading of Enterprise Archive (EAR) files, creation, configuration, deployment, and monitoring of applications. This console is also used to start and stop applications.
	Installation One installation of TIBCO Administrator is required per domain. Other runtime machine in the same domain do not require this software to be installed.
TIBCO ActiveMatrix BusinessWorks	Optional (required only for use of the TIBCO BusinessConnect palette).
	TIBCO ActiveMatrix BusinessWorks is a scalable, extensible, and easy to use integration platform that allows you to develop integration projects. It is available as a separate installation.
TIBCO BusinessConnect Palette	Optional.
	This software is about the resources available in the TIBCO BusinessConnect Palette for TIBCO ActiveMatrix BusinessWorks.
TIBCO Enterprise Message Service	TIBCO Enterprise Message Service is also used as the notification and messaging backbone for TIBCO BusinessConnect. TIBCO BusinessConnect is not necessarily installed on the machine on which TIBCO Enterprise Message Service is installed.
	The TIBCO BusinessConnect license does not cover this usage of the included TIBCO Enterprise Message Service software. You must separately license TIBCO Enterprise Message Service or another supported JMS product for this usage.
	The client libraries of TIBCO Enterprise Message Service are required for the internal communication on the Gateway and Interior servers.

Software	Description
TIBCO Hawk	Optional (required only if TIBCO BusinessConnect Interior Server Instances and Gateway Instances have to be monitored and managed).
	TIBCO Hawk is a tool for monitoring and managing distributed applications and operating systems. The software is designed specifically for monitoring distributed systems, so no centralized console or frequent polling exists across the network. With this structure, TIBCO Hawk software is able to scale to multi-thousand node global networks without the use of hierarchical managers and has the flexibility to allow individual managed entities to be added or modified without the need to reconfigure or restart any other parts of the system.
	Note: To monitor and manage TIBCO BusinessConnect Interior Server and Gateway Server by TIBCO Hawk, you are required to install the full version of TIBCO Hawk first, and then install TIBCO Hawk® JMX Plug-in. You do not have to install the TIBCO Hawk Agent component, because this component is contained in TIBCO Runtime Agent.
Java Virtual Machine	Required. JRE is packaged with TIBCO BusinessConnect Gateway Server profile as a convenience.

Third-party Software

See the readme file for the supported versions.

You need a database to run TIBCO BusinessConnect. For an updated list of supported databases and version numbers, see the file `TIB_bc_version_readme.txt` for the specific release.

Installation and Uninstallation

This section explains how to install and uninstall this product.

Preinstallation Tasks

You have to install FESI EcmaScript Interpreter and also set up database information before installing TIBCO BusinessConnect.

Installing FESI EcmaScript Interpreter to Support Custom Scripts

If you have been using FESI EcmaScript Interpreter for custom scripts, you can continue using it by extracting the `fesi.jar` file from the downloaded `fesikit.zip` file (https://mvnrepository.com/artifact/fesi/fesi/1.1.5) and storing it in the *TIBCO_HOME*\bc*version*\lib\is directory.

If you are the first time users of custom scripts, it is good practice to use the Nashorn script interpreter embedded in JRE. The Nashorn script engine is roughly compatible with the FESI EcmaScript Interpreter engine. The sample scripts shipped with TIBCO BusinessConnect support both of these two engines.

Setting Up Database Information

TIBCO BusinessConnect uses a database to store the audit log, the non-repudiation log, the runtime data store, and the configuration store. You can assign these logs/data stores to different databases, or you can use one database for all.

The CONNECT and RESOURCE permissions are not granted by default, and these privileges must be assigned explicitly to the database user, before setting up the database information in BusinessConnect.

For run time operations, the CONNECT and default permissions are sufficient.

> ℹ️ **Note** Ensure CREATE VIEW privilege is assigned to the user for all the databases.

Configuring Oracle, DB2, SQL Server, and MySQL

All databases except for MySQL are installed according to the corresponding software vendor's instructions and contain the necessary drivers.

Users of all databases, except MySQL users, are supposed to be schema owners.

> ℹ️ **Note** The supported Checkpoint databases are Oracle, SQL Server, and DB2.
>
> MySQL is not supported.

Oracle Client Library Path Usage

If you are planning to use the Oracle OCI drivers, you must specify the Oracle Client Library path. When dealing with the TIBCO BusinessConnect configuration UI, you must specify this path in the TIBCO Administrator .tra file. Depending on the platform where TIBCO Administrator is installed, you must update different library paths appropriately.

The drivers are stored under the *TIBCO_HOME*\tpcl*version*\jdbc directory.

JDBC (Type 4) drivers are needed for DB2, Oracle, and MSSQL databases.

To be consistent, you have to define the following environmental variable as follows:

1. Set tibco.env.ORACLE_CLIENT_PATH=<Oracle Client native library path>.

2. Prepend %ORACLE_CLIENT_PATH% to the variables *PATH*, *LD_LIBRARY_PATH*, *SHLIB_PATH*, and *LIBPATH*.

The value must point to the Oracle native client libraries directory as follows:

- **On Windows** This is typically the *ORACLE_CLIENT_HOME* directory, such as C:\oracle\product\11.2.0.

- **On UNIX** This is typically the *ORACLE_CLIENT_HOME* directory.

Configuration of Oracle, DB2, SQL Server, and MySQL Databases

Configuring Oracle, DB2, SQL Server, and MySQL Databases

Database		Configuration steps and other data to keep in mind
Oracle	Thin JDBC	`jdbc:oracle:thin:@<host>:<port>:<sid>`

	RAC	`jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS=`
		`(PROTOCOL=TCP)`
		
		`(HOST=<host>)(SERVICE_NAME=<service_name>))`
		`(ADDRESS=(PROTOCOL=TCP)(HOST=<host>)(PORT=<port>))`
		`(LOAD_BALANCE=yes) (CONNECT_DATA=(SERVICE_`
		`NAME=<service_name>)(FAILOVER_MODE=(TYPE=SELECT)`
		`(METHOD=BASIC)(RETRIES=<no_of_retries>))))`
		`DELAY=<retry_interval>`

	OCI JDBC	`jdbc:oracle:oci:@<Service Name>`

	TAF	`jdbc:oracle:oci:@(DESCRIPTION=(ADDRESS=`
		`(PROTOCOL=TCP) (HOST=<host>)(PORT=<port>))`
		`(ADDRESS=(PROTOCOL=TCP) (HOST=<host>)`
		`(PORT=<port>))(CONNECT_DATA= (SERVICE_`
		`NAME=<service_name>)(FAILOVER_MODE=(TYPE=SELECT)`
		`(METHOD=BASIC)(RETRIES=<no_of_retries>)`
		`(DELAY=<retry_interval>))))`

DB2	JDBC	`jdbc:db2://<host>:<port>/<databaseName>` Create regular and system temporary tablespaces each with a page size of 32 KB. Set `APPLHEAPSIZE` to `4096`.

Database		Configuration steps and other data to keep in mind
SQL Server		jdbc:sqlserver://<host>:<port>, databaseName=<databaseName>
MySQL	JDBC	`jdbc:mysql://[host]:[port]/[database]`
		To configure MySQL, set the maximum packet size variable on the client and the server to 64MB. See the MySQL documentation for instructions.
		Run the following query to create a database in MySQL 5.6:
		`create database <databaseName> default character set latin1;`
		Make sure that you install the following software components: • MySQL Database Server and Client • Administrative tools (MySQL Administrator) • MySQL Connector/J, a native Java driver that converts JDBC (Java Database Connectivity) calls into the network protocol used by the MySQL database. This driver must be present in the directory reserved for drivers, which is the *TIBCO_HOME*\tpcl*version*\jdbc directory.

Installation

ℹ️ **Note**   You must install the client libraries of TIBCO Enterprise Message Service before installing TIBCO BusinessConnect. For more information on installing TIBCO Enterprise Message Service client libraries, see *TIBCO Enterprise Message Service Installation.*

The following sections describe the installation process in the available installation modes:

- Installing in GUI Mode

- Installing in Console Mode

- Installing in Silent Mode

Note   The installers of some plug-ins and protocols for TIBCO BusinessConnect require modification before you can install them properly. Contact TIBCO Support to obtain the PluginInstallerMigrator tool, which can modify these plug-ins and protocols. The plug-ins and protocols whose installers must be modified by the utility include, but are not limited to:

- TIBCO PartnerExpress™ 6.0.0

- TIBCO BusinessConnect™ Trading Community Management 6.0.0

Installing in GUI Mode

Perform the following steps to install this product in GUI mode:

1. Open the physical media or download the package.

2. Extract the contents of the package to a temporary directory.

3. Navigate to the temporary directory.

4. Run `TIBCOUniversalInstaller`. You can do so in one of the following ways:

   — Double-click the installer icon.

   — On the command prompt, provide the absolute path of the installer file without specifying any options. The installer defaults to GUI mode.

5. Click **Next** on the **Welcome** wizard.

6. Read through the license text when the **License Agreement** wizard is displayed, select the **I accept the terms of the license agreement** and then click **Next**.

7. Select either **Create a new TIBCO_HOME** or **Use an existing TIBCO_HOME** on the **TIBCO Installation Home** wizard to decide where you want to install the product. Click **Next**.

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

— **Create a new TIBCO_HOME** Install the product into a new installation environment. An installation environment consists of a name and path.

Directory The directory into which the product is installed. Type a path or click **Browse** to specify the path or accept the default location.

The path cannot contain special characters such as "*", "#", "?", ">", "<", "%", "&", "$", "`", or "|". The path cannot be the same as the path of an existing environment.

Name Identifies the installation environment. The name cannot contain special characters such as "*", "?", ">", "<", ":", "|", "/", "\", or quotation marks ("). The name is appended to the name of Windows services created by the installer and is a component of the path to the product in the Windows **Start** > **All Programs** menu.

— **Use an existing TIBCO_HOME** Install the product into an existing installation environment.

8. Select an installation profile from the list on the left to install corresponding components on the right. See Installation Components for details about installation components. To customize the profile settings, select the **Customize Installation** checkbox and use the feature tree on the right. Click **Next**.

9. Click **Browse** in theTIBCO Universal Installer window to select the client library location of TIBCO Enterprise Message Service and then click **Next**. For example, the EMS client path can be `EMS_HOME/<version>/lib`.

10. Verify the list of products selected for install in the **Pre-Install Summary** wizard. Click **Install** to start the installation process.

11. Review the information listed in the **Post-Install Summary** wizard. Click **Finish** to complete the installation process and exit the universal installer.

Installing in Console Mode

Perform the following steps to install this product in console mode:

1. Open the physical media or download the package.

2. Extract the contents of the package to a temporary directory.

3. Using a console window, go to the temporary directory.

4. Run the following commands:
   For Windows X86 64-bit:
   `TIBCOUniversalInstaller-x86-64.exe –is:javaconsole –console`
   For Linux:
   `./TIBCOUniversalInstaller-lnx-x86-64.bin –is:javaconsole –console`

5. Complete the installation by responding to the console window prompts.

Installing in Silent Mode

In silent mode, the universal installer does not prompt for any inputs during installation. Instead, the inputs are read from a response file that can be provided as a command-line parameter. If no value is specified, the installer uses the default `TIBCOUniversalInstaller-bc.silent` file.

The `TIBCOUniversalInstaller-bc.silent` file is packaged in the directory that contains the universal installer. Edit the file with information for your environment before launching the silent installation. The file includes comments that describe the installation properties you can set. While you can use the `TIBCOUniversalInstaller-bc.silent` file, it is good practice to copy the file to a different name and use that file for the silent install.

If errors occur during installation, they are listed in the installation log file located in the *User_Home*`\.TIBCO` directory.

1. Open the physical media or download the package.

2. Extract the contents of the package to a temporary directory.

3. Using a console window, navigate to the temporary directory.

4. Make a copy of the `TIBCOUniversalInstaller-bc.silent` file and rename the file.

5. Using a text editor, open the copied file and update the install location and features to install.

6. Run the following commands:

   — Windows

     `TIBCOUniversalInstaller.cmd –silent –V responseFile="`*myfilename*`.silent"`

   — UNIX

```
./TIBCOUniversalInstaller_platform_acronym.bin -silent -V
responseFile="myfilename.silent"
```

Uninstallation

This section describes how to uninstall this product in GUI mode and console mode.

Uninstalling in GUI Mode

Perform the following steps to uninstall this product in GUI mode:

1. Shut down all running TIBCO applications.

2. Navigate to the universal installer using one of the following methods:

   — Go to the TIBCO_HOME\tools\universal_installer directory and run TIBCOUniversalInstaller to start the uninstall process.

   — From the Windows Start menu, select **All Programs > TIBCO > Uninstall** to start the uninstall process.

3. Perform the following steps in the **TIBCOInstallationManager** wizard:

   Select the **Uninstall Products From Selected TIBCO Home Location**.

   Select the TIBCO_HOME location from the **TIBCO Home Location** list.

   Click **Next**.

4. Click **Next** in the **Welcome** wizard.

5. Select an uninstallation option and click **Next**.

   — **Custom Uninstall** Allows you to select the products to be removed.

   — **Typical Uninstall** Removes all the products in *TIBCO_HOME*.

6. Select the checkbox next to the product to be uninstalled and click **Next**, if you selected **Custom Uninstall**.

7. Review the product to be uninstalled and click **Uninstall**.

8. Click **Finish** in the **Post Uninstall Summary** wizard to exit the uninstall wizard.

9. If you have uninstalled all the software in *TIBCO_HOME*, delete the folders in the installation environment and user home.

Uninstalling in Console Mode

Perform the following steps to uninstall this product in console mode:

1. Using a command window, go to the *TIBCO_HOME*`\tools\universal_installer` directory.

2. Type the following command on the command line:

   — **Windows X86 64-bit**

     `TIBCOUniversalInstaller-x86-64.exe -is:javaconsole -console`

   — **Linux**

     `./TIBCOUniversalInstaller-lnx-x86-64.bin -is:javaconsole -console`

3. Complete the uninstallation process by responding to the console window prompts.

Postinstallation

This section explains the tasks that you have to complete following the installation of TIBCO BusinessConnect.

Overview

After installing TIBCO BusinessConnect, you have to perform certain tasks.

- **Managing Permissions**

  To establish permissions for the TIBCO BusinessConnect Super user and other users, you have to set up permissions. See Managing Permissions for the Installation.

- **Initializing a Database**

  This procedure is explained in Initializing a Database.

- **Managing an Existing Database**

  After a database is configured, you can edit its parameters. One additional tab for protocol activation becomes available: Protocol Plug-In Activation.

- **Configuring a Database**

  A database must be set up before TIBCO BusinessConnect is installed, and afterwards the connection to this database is configured as a part of the new database configuration.

  However, later you can change connection defaults for the installed database, and install additional databases for the system. To do so, see Audit, Non-Repudiation and Runtime Database Configuration.

Managing Permissions for the Installation

After installing TIBCO BusinessConnect and before deploying the application, you have to define user permissions for the installation.

TIBCO BusinessConnect Super User

TIBCO BusinessConnect User Management provides the ability to manage access restrictions on users of the TIBCO BusinessConnect Administration console. The TIBCO BusinessConnect Super User is the only user who can see the User Management configuration items in the TIBCO BusinessConnect configuration GUI. There must always be one TIBCO BusinessConnect Super User.

> **ⓘ**
> **Note**
> The TIBCO Administrator user who creates the TIBCO BusinessConnect installation is automatically the TIBCO BusinessConnect Super User.

To read the overview of the TIBCO BusinessConnect User Management feature, see the information regarding TIBCO BusinessConnect Super User in the section that explains TIBCO BusinessConnect User Management in *TIBCO BusinessConnect Concepts*.

Setting Up Other User Permissions

All TIBCO BusinessConnect users must have read, write, and run permissions for the following directories:

```
$TIBCO_HOME/bc/version/bin
$TIBCO_HOME/logs
$TIBCO_HOME/tra/version/logs
$TIBCO_HOME/bc/version/gs
```

For example, if TIBCO BusinessConnect has been installed in *TIBCO_HOME*, the user who installed TIBCO BusinessConnect should run the following UNIX / Linux specific commands:

```
% chmod 777 /TIBCO_HOME/bc/version/bin/
% chmod 777 /TIBCO_HOME/log
% chmod 777 /TIBCO_HOME/tra/version/logs
% chmod 777 /TIBCO_HOME/bc/version/gs
```

In addition, the palettes directory, *TIBCO_HOME*/bw/*version*/lib/palettes, must be writable by all users who use TIBCO Designer.

Initializing a Database

⚠️ **Warning**	If you have an existing TIBCO BusinessConnect application on your machine, you must undeploy and delete this application before you initialize a database.

The TIBCO BusinessConnect Super User initializes a database as follows:

1. Log in to TIBCO Administrator.

2. In the left panel, click **BusinessConnect**.

✅ **Tip**	TIBCO BusinessConnect software is not displayed immediately upon launching TIBCO Administrator for the first time. Sometimes, it requires several minutes before **BusinessConnect** is displayed in the left panel of TIBCO Administrator after installing TIBCO BusinessConnect.

An error message is displayed: `The BusinessConnect Installation has not been configured.`

3. In the right panel, click **Manage** to set up the configuration.

    Two tabs are available to manage an installation:

    — Configuration Repository

    — Protocol Plug-In Activation: After a database is initialized, this tab is available for managing protocol plug-ins.

Configuration Repository

⚠️ **Warning**	Before making any changes in the **Configuration Repository** tab, make sure that all running engines are properly shut down. If any of the engines are still running, changes to this window may result in unexpected failures.

1. Provide (or retain) the information in the fields listed in the Configuration Repository table:

Configuration Repository

Field	Description

General

Name	The name of the TIBCO BusinessConnect installation. TIBCO BusinessConnect console pre-fills this field for you: BC–*domain*.
Prefix	The prefix TIBCO BusinessConnect prepends to the subject of every TIBCO Rendezvous message and TIBCO Enterprise Message Service message sent between private processes and the TIBCO BusinessConnect server. TIBCO BusinessConnect console pre-fills this field for you: AX.BC.

Database Connection

JDBC Driver Type	Select one of the available JDBC driver types from the list: • **Oracle Thin** • **Oracle OCI** • **Microsoft SQL Server** • **MySQL** • **IBM DB2 Universal Type 4** **Note**: To learn about Oracle client library path, see Oracle Client Library Path Usage.
JDBC Driver Class	In the list, select the JDBC driver to use with the database you have previously chosen.
JDBC URL	The URL for the database. TIBCO BusinessConnect console pre-fills this field with a URL template formatted correctly for the driver that you selected. You have to replace the variables with actual values. Edit the value in the **JDBC URL** field, providing the correct URL for the database.

Field	Description
Username	Provide a valid username for the database.
Password	The password associated with the database username.
Save	Click **Save.** A message is displayed: `The existing BusinessConnect Application must be undeployed and deleted before proceeding. Your session will be logged off automatically when the Database Connection settings are saved.` Click **OK**. If you do not want to save the settings, click **Cancel**.
Test Connection	Click **Test Connection**. - If the test was successful, a message is displayed: **Connected Successfully**. - If the test was unsuccessful, correct the database connection fields and test the connection again until TIBCO BusinessConnect is able to connect to the database.

Management

Initialize Database	Initialize configuration schema and metadata in the database. 2. Click **Initialize**. You must initialize configuration schema and metadata in the database each time after installing a new software for the first time only. Otherwise, you still see the old configuration. You get a warning that you will be logged off automatically if you initialize configuration schema and metadata in the database. 3. Click **OK** in the dialog to initialize configuration schema and metadata in the database and log out of TIBCO Administrator.
Import and Export	Import and Export configuration data for this Installation. For more information, see Import and Export.

Field	Description
Create Deployment	Generate the TIBCO BusinessConnect Application for Interior Server deployment. To recreate it, any existing TIBCO BusinessConnect Application must be first undeployed and deleted. Click **Create** to create the deployment. To configure the application and the Interior Server, see *TIBCO BusinessConnect Interior Server Administration*.
Revoke Gateway Tokens	Invalidate all trusted Gateway Tokens exported with this installation. This action invalidates the existing running Gateway instances and no new trading partner requests are received by these Gateway Instances. The TIBCO BusinessConnect Administrator must re-export the new Gateway Token from the TIBCO Administrator UI and place it in the machines where the Gateway Instances are installed and running. The default location of the Gateway token is the following directory: *BC_HOME*\gs\token

Import and Export

TIBCO BusinessConnect allows you to export configuration data from one TIBCO BusinessConnect application and import it into another application of the same or higher version. The configuration data includes these sets of data:

- Participants
- Business agreements
- Operations
- System settings
- Public process configuration except the advanced configuration
- Private process configuration
- Component settings

ℹ Note   Saved queries are not exported. See *TIBCO BusinessConnect Trading Partner Administration*, Saving a Query.

You can set a password before you export data. This is optional.

You can export an installation configuration to use it with a future installation, or to use the same configuration on another server. You can also import an installation configuration that was previously saved (exported). The installation configuration is saved in the format *Domain_name*.csx.

ℹ Note   Ensure that the activated TIBCO BusinessConnect protocols used for importing configuration files are the same as those used for exporting the configuration files.

To learn how certain installation components are merged in the .csx file, see Component Behavior During Import/Export.

For more information on migrating the installation configuration from the previous versions of TIBCO BusinessConnect, see Migration and Compatibility in *TIBCO BusinessConnect Release Notes*.

Importing the Saved Installation Configuration

If you are importing data from the previously saved installation configuration, follow these steps:

1. Expand **BusinessConnect > Manage > Configuration Repository**.

2. Click **Import**.

3. In the Configuration Data Import dialog, click **change** and locate the previously exported configuration file BC-*domain_name*.csx.

4. If the configuration .csx file was exported using a password, enter that password.

5. A warning is displayed:

   Installation enters into maintenance mode while Import is in progress.

   Configuration data in the import file may merge or overwrite the current configuration.

6. Click **Import**, and then click **OK**.

> ⚠️ **Warning**
>
> Do not exit the screen while the data import is in progress. It is important to allow this process to be completed properly. If the data import is interrupted for any reason, the system may be left in an unpredictable state. In such case, you have to recreate the installation and perform a new import.

The Importing Data dialog is displayed showing you the data import log, with the message **Data import has completed successfully. Your session will be automatically logged off** at the end.

7. Click **Done** to finish import.

   You are logged out of the system.

Exporting the Installation Configuration

If you are exporting the existing installation configuration to use it for the new installation, follow these steps:

1. Expand **BusinessConnect > Manage > Configuration Repository**.

2. Click **Export**.

3. In the Configuration Data Export dialog, set a password to protect the configuration file (not mandatory).

4. Click **Export**.
   The Export Configuration dialog is displayed showing you the data export log, with the message **Export Completed Successfully** at the end.

5. Click **Download**.
   Navigate to the desired location and save the exported file BC-*domain_name*.csx.

6. Click **Done** to conclude the export.

Component Behavior During Import/Export

When importing an installation configuration, components are imported in the following way:

Installation Component

- Server name and subject prefix are merged.

- Default host is set if there was no default host.

- TIBCO BusinessConnect properties are merged, or added if new.

- Plug-in properties are merged, or added if new.

- Credential alerts are merged.

- Outbound file pollers are merged.

- Proxy information is added only if proxy name did not exist. If it exists with the same name, it is not merged.

- JDBC information entries are added only if JDBC name did not exist. If it exists with the same name, it is not merged.

- For logging: logs with message flags are merged.

- Private process transport information is merged.

- Public and private smart routes are inserted at the top of their tables, as in exporter's order.

- Domain, `Partner Classification` codes, `supply Chain` codes, and role catalog entries are added if they do not exist.

Interface Component (Operations)

- New uploaded files are created.

- Interfaces are created.

- Operations are added if they do not exist on the importing system, otherwise they are not merged.

Participant Profiles (Hosts, Trading Partners)

- Trading partners are created if they do not exist.

- Enabled protocols are added if they do not exist.

- Credentials are added if they do not exist with the same name; otherwise they are not merged.

- Domain types and domain IDs are added if they do not exist.

- Business locations and contacts are added if they do not exist; properties are always merged.

- Trading partners enabled protocols are added if they do not exist; default domain IDs and AS2 domain IDs are merged.

- PartnerClassification codes and supplyChain codes are added (if they do not exists) and merged.

- Scheduled transmission details are merged where available.

- Outbound transports are added if a transport with the same name does not exist, otherwise they are not merged.

Business Agreements

- If an agreement does not exist between the given participants, it is created.

- If protocol bindings do not exist for a given protocol, the binding is added.

- Document security properties, primary, backup, error transports are merged.

- Inbound transport properties are merged and enabled as per import configuration, for example, certificates, keys, passwords, URLs, and so on.

Managing an Existing Database

After a database is initialized, a new Protocol Plug-In Activation tab becomes available.

Protocol Plug-In Activation

Select this tab to activate protocols for the installation.

If you have installed any business protocols, those protocols are listed in the **Protocol Plug-In** list.

- **Activate** Select the checkbox next to the protocol and click **Activate**.

- **Deactivate** Select the checkbox next to the protocol and click **Deactivate**.

Each time you activate or deactivate a protocol, you are logged out of the system and have to log in again. For more information on protocol activation, see the installation guide for the specific protocol.

Once the protocols are activated, they are displayed in this window with the status **Activated**.

During activation, TIBCO BusinessConnect performs the following activities:

- Installs the protocol grammar in the configuration store.

- Creates protocol-specific tables in the configuration store.

- Updates protocol-specific resources.

- Activates the protocol-specific online help.

- Activates protocol checker integration.

- Performs protocol-specific custom actions.

Audit, Non-Repudiation and Runtime Database Configuration

When you initially set up TIBCO BusinessConnect, you provide connection information for a database.

Adding a Database Connection

To add and configure a new database connection, expand **BusinessConnect > System Settings > Audit, Non-Repudiation and Runtime Database Configuration**, and enter information as explained in the following table:

Non-Repudiation and Runtime Database Configuration

Field	Description
Database Connections	
Add	Click **Add** to show the New Database Connection dialog. See Editing Database Connection for how to configure the parameters.
bc-check-point-db	This is the default checkpoint database. As with any database, it can be edited as explained in Editing Database Connection.

Field	Description
bc-db	This is the default database for the following data stores: • Runtime data store • Configuration store **Note**: After making any configuration changes to the database used for the configuration stores, redeploy the TIBCO BusinessConnect application. To edit this database, see Editing Database Connection.
Connection Settings	
General	
Include Message in Log	Select or clear the checkbox to enable or disable inclusion of log messages. You can request that TIBCO BusinessConnect not only log information about the transaction state but also include the actual message in the log. To include the message, select the **Include Message in Log** checkbox under **BusinessConnect > System Settings > Audit**, **Non-Repudiation and Runtime Database Configuration**. The message is included in all entries where that is possible now. **Note**: If you change the value of the **Include Message in Log** checkbox, you must restart the TIBCO BusinessConnect server to pick up the change. Messages can only be included for log entries going to or coming from the trading partner. If you want information about the message coming from and going to the private process, implement the logging as part of that process. Including the message substantially increases the size of your log file.
Connection Defaults	

Field	Description
Audit Logs	Select which alias database connection is used for various Connection Stores.
Non Repudiation Log	Select from the list to manage any of the following: **bc-db** (the initial database connection), **None**, or any other configured database connection.
Runtime Data Store	
Management	First select from the **Target Table Type** list, and then either export the database table schemas, or drop and recreate them.
Target Table Type	Select from the **Target Table Type** list: • **Audit Log** • **Non-Repudiation Log** • **Runtime Data Store** For the selected log or a data store, you can export the audit schema, or create new tables. If you confirm the Create Tables actions, all existing tables are dropped and new ones are created.
Export DDL for database table schemas	Click **Export** to perform the following operations: • **Export Audit Schema** Select **Audit Log** in the **Target Table Type** list, and then click **Export** to export the Audit Schema, such as `audit.sql`. • **Export NR Schema** Select **Non-Repudiation Log** in the **Target Table Type** list, and then click **Export** to export the non-repudiation schema, such as `nr.sql`. • **Export Runtime Schema** Select **Runtime Data Store** in the **Target Table Type** list, and then click **Export** to export the Runtime schema, such as `runtime.sql`.
Drop and recreate the database tables	Click **Create** to perform the following operations: • **Create Audit Tables** Select **Audit Log** in the **Target Table Type** list, and then click **Create** to drop all Audit tables and recreate them. During this process all existing Audit data is

Field	Description
	lost.
	• **Create NR Tables** Select **Non-Repudiation Log** in the **Target Table Type** list, and then click **Create** to drop all Non-repudiation tables and recreate them. During this process all existing Non-repudiation data is lost.
	• **Create Runtime Tables** Select **Runtime Data Store** in the **Target Table Type** list, and then click **Create** to drop all Runtime tables and recreate them. During this process all existing Runtime data is lost.

ⓘ **Note** After changing database assignments for the audit, or non-repudiation logs, or the runtime data store, restart all TIBCO BusinessConnect engines for this application.

Editing a Database Connection

To edit the database connection, enter information as explained in the following table:

Editing Database Connection

Field	Description
Alias	Name of the database.
JDBC Driver Type	Select one of the available JDBC driver types from the list: • **Oracle Thin** • **Oracle OCI** • **Microsoft SQL Server** • **MySQL** • **IBM DB2 Universal Type 4**

Field	Description
	Note: To learn about Oracle client library path, see Oracle Client Library Path Usage.
JDBC Driver Class	In the list, select the JDBC driver to use with the database you have previously chosen.
JDBC URL	The URL for the database. TIBCO BusinessConnect console pre-fills this field with a URL template formatted correctly for the driver you selected. You have to replace the variables with actual values. Edit the value in the **JDBC URL** field, providing the correct URL for the database.
Database Username	Provide a valid user name for the database.
Database Password	The password associated with the database user name.
Connection Pool Size	Accept or change the connection pool size. The default value is 16. When you add a new connection, or modify an existing connection, you can provide a value for the connection pool size parameter. This parameter allows you to create a pool of database connections that reserve first priority for runtime requests. This helps you prevent a situation in which too many simultaneous connection requests result in inadequate resources for run time. The proper size for the connection pool varies greatly depending on the typical volume of transactions running through TIBCO BusinessConnect, the number of applications using the database, and other factors. Database administrators need to determine the proper pool size for specific installations: for high-volume installations, pool size value is increased to 20 or more. **Note**: For better performance, database pool size for audit logging should be at least the same as the number of the TIBCO ActiveMatrix BusinessWorks engine threads configured for deployment.
Save	Click **Save.** The details are saved.

Field	Description
	If you do not want to save the settings, click **Cancel**.
Test Connection	Click **Test Connection**.
	If the test was successful, a message is displayed: **Connected Successfully**.
	If the test was unsuccessful, correct the database connection fields and test the connection again until TIBCO BusinessConnect is able to connect to the database.

TIBCO Documentation and Support Services

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 TIBCO Product Documentation website, mainly in HTML and PDF formats.

The TIBCO Product Documentation website is updated frequently and is more current than any other documentation included with the product.

Product-Specific Documentation

Documentation for TIBCO BusinessConnect™ is available on the TIBCO BusinessConnect™ Product Documentation page.

To directly access documentation for this product, double-click the following file:

TIBCO_HOME/release_notes/TIB_bc_7.4.0_docinfo.html where *TIBCO_HOME* is the top-level directory in which TIBCO products are installed. On Windows, the default *TIBCO_HOME* is C:\tibco. On UNIX systems, the default *TIBCO_HOME* is /opt/tibco.

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

- *TIBCO BusinessConnect™ Installation and Configuration*
- *TIBCO BusinessConnect™ Concepts*
- *TIBCO BusinessConnect™ Interior Server Administration*
- *TIBCO BusinessConnect™ Gateway Server Administration*
- *TIBCO BusinessConnect™ Training Partner Administration Guide*
- *TIBCO BusinessConnect™ Scripting Deployment User Guide*
- *TIBCO BusinessConnect™ Release Notes*

How to Contact TIBCO Support

Get an overview of TIBCO Support. You can contact TIBCO Support in the following ways:

- For accessing the Support Knowledge Base and getting personalized content about products you are interested in, visit the TIBCO Support website.

- For creating a Support case, you must have a valid maintenance or support contract with TIBCO. You also need a user name and password to log in to TIBCO Support website. If you do not have a user name, 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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