

TIBCO iProcess® Server Objects (Java)

Installation

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Introduction

This chapter contains important information which you should read before you install or upgrade the TIBCO iProcess® Server Objects (Java).

Installation Overview

This installation guide provides instructions on how to install, upgrade, or remove the TIBCO iProcess Server Objects (Java).

TIBCO iProcess Server Objects (Java) is available in three different programming interfaces:

- **Standalone** (also known as "JBase") This interface exposes functionality in the form of simple Java objects, i.e., it does not make use of remote objects. It is typically used when incorporating a broker application that is automatically processing work items arriving in a particular work queue.
- RMI This interface uses Java's Remote Method Invocation (RMI) technology. This
 allows the client to be located on a machine remote from the TIBCO iProcess Server
 Objects (Java).
- **EJB** The Enterprise Java Beans (EJB) form of TIBCO iProcess Server Objects (Java) provides the ability to perform business logic functions through EJBs in the middle tier. This architecture, which makes use of a Java application server for scalability, conforms to the J2EE specification.

Note that new features have not been added to the EJB interface since version 10.3.0. This interface is not recommended for new applications.

On Windows systems, the installation program automatically installs all three of the available interfaces.

On UNIX systems, the installation script allows you to choose which of the interfaces you would like to install.

System Requirements

For system requirement information, see the readme file that is included with the TIBCO iProcess Server Objects (Java).

64-Bit Libraries

64-bit software is installed when you install the TIBCO iProcess Server Objects (Java). A copy of .dll files is installed in a separate directory to maintain the folder structure from the previous releases (\x64 on Windows and /lib64 on UNIX) below the directory in which you install the software.

Microsoft Visual C++ Redistributable Package

TIBCO iProcess Server Objects (Java) was built with, and requires, the Microsoft Visual C++ 2017 Redistributable Package. Therefore, you must have the Microsoft Visual C++ 2017 Redistributable Package on Windows runtime machines that will be running applications developed with TIBCO iProcess Server Objects (Java) (i.e., the machine that contains the TIBCO iProcess Server Objects (Java) DLLs).

This redistributable package is required on your runtime machine regardless of the version of Microsoft Visual Studio used to develop your application.

The Microsoft Visual C++ 2017 Redistributable Package is not installed by default (although it is included when Microsoft Visual Studio 2017 is installed). You can determine if you have it installed on your machine by looking for "Microsoft Visual C++ 2017 Redistributable" in Add/Remove Programs.

Installing/Upgrading on Windows Systems

This chapter explains how to install or upgrade TIBCO iProcess® Server Objects (Java) on Windows systems.

Installation/Upgrade Procedure

To install/upgrade TIBCO iProcess Server Objects (Java) on Windows, follow these steps:

Procedure

- 1. Run the **setup.exe** from the installer.
- Note: If the setup program detects that you already have the version installed that you are attempting to install, it displays a Repair/Remove dialog box. This dialog box can be used to either repair corrupted files or remove the TIBCO iProcess Server Objects (Java) installation. For more information, see Repairing/Removing Using the Setup Program.
- 2. Review the information in the TIBCO iProcess Server Objects splash screen, then click **Next**. The **TIBCO End User License Agreement** is displayed.
- 3. Read the license agreement. To continue with the installation, click I Agree to accept the agreement, then click Next.
 - If you do not agree with the license agreement, click **Cancel** to cancel the installation.
 - The **Select Installation Folder** dialog box is displayed.
- 4. Specify the **destination folder** where you want to install/upgrade the TIBCO iProcess Server Objects (Java) files.

The destination folder defaults to:

```
C:\Program Files (x86)\TIBCO\TIBCO iProcess Server Objects (Java)
```

To choose a directory different than the default, either type in the desired path or click **Browse** to select the directory.

You can also click the **Disk Cost** button to determine the required and available disk space.

Also note that if you have administrator privileges, the **Everyone** and **Just me** radio buttons are also displayed. These buttons specify who can see and access TIBCO iProcess Server Objects (Java) from Control Panel Add/Remove Programs. Select as desired.

- 5. Click **Next**. The **Confirm Installation** window is displayed.
- 6. Confirm you want to continue with the installation by clicking the **Next** button.

The **setup** program then copies the JAR files for all three of the available interfaces to the installation directory:

— Standalone: ssoJBase.jar

— RMI: ssoRMI.jar

— EJB: ssoEJB.jar

When **setup** completes copying files, the **Installation Complete** dialog box is displayed.

- 7. Click **Close** to complete the installation/upgrade.
- 8. Set up the CLASSPATH environment variable so that it points to all of the appropriate JAR files. The CLASSPATH must contain the complete path/filename of all of the JAR files that are used. This includes all of the open-source JAR files, the XML serializer JAR file, as well as the iProcess Server Object JAR file (ssoJBase.jar, ssoRMI.jar, or ssoEJB.jar) that are used (you only need to include the iProcess Server Object JAR file for the interface you will be using).

For a list of the JAR files installed, see Installed Files / Directories.



Mote: For Windows, set the environment variable PATH to include the installation directory.

Installed Files / Directories

The following files and directories are installed with TIBCO iProcess Server Objects (Java):

File / Directory	Description
ssoJBase.jar	Compressed files for the Standalone interface.
ssoRMI.jar	Compressed files for the RMI and Standalone interfaces.
ssoEJB.jar	Compressed files for the EJB, RMI, and Standalone interfaces.
ssoJNI.dll	Dynamic link library for the TIBCO iProcess Server Objects (Java).
libcrypto-1_1-x64.dll	A dll file upon which TIBCO iProcess Server Objects (Java) has dependency.
commons-logging.jar log4j-api-2.17.2.jar log4j-core-2.17.2.jar xercesImpl.jar	Open-source JAR files upon which TIBCO iProcess Server Objects (Java) has dependencies.
icudt64.dll	Data table used for Unicode support.
icuuc64.dll	Unicode converter used to convert from Unicode to other character sets.
ssoXMLSerializer.jar	Serializer for the XML Interface.
\x64	This directory contains the 64-bit DLLs (ssoJNI.dll, as well as the ICU DLLs) same as the main folder. This is placed here to maintain the folder structure from previous releases and can be used if you are running 64-bit hardware and using a 64-bit JVM.
\Help	This directory contains the TIBCO iProcess Server Objects (Java) on- line help files (to start, execute start.htm with a browser).



Note: The TIBCO iProcess Server Objects JAR files are cumulative, i.e., ssoRMI.jar contains the files that are in ssoJBase.jar, and ssoEJB.jar contains the files that are in **ssoRMI.jar**.

Installing/Upgrading on UNIX Systems

This chapter explains how to install or upgrade TIBCO iProcess® Server Objects (Java) on UNIX systems.

Running the Installation Script

To install or upgrade TIBCO iProcess Server Objects, perform the following steps:

Procedure

- 1. Log in to your UNIX system. This can be any user who has permissions to create files in the directory in which you are installing the TIBCO iProcess Server Objects (Java).
- 2. **cd** to the directory into which the installation set was extracted. For example:

```
cd /tmp/install
```

If you have just completed extracting the installation set, you are already at the directory into which the **install** directory was created. In this case, simply enter:

```
cd install
```

3. Run the **ssojinstall** installation script using the command:

```
./ssojinstall
```

The **TIBCO End User License Agreement** is displayed.

- 4. Read the license agreement. You can:
 - a. Press **Enter** to step through the license agreement one line at a time.
 - b. Press the **space bar** to step through the license agreement one page at a time.

After reading through the entire agreement, the following prompt is displayed:

```
Do you agree to the above license terms? [yes or no]
```

5. If you do not agree to the terms of the license agreement, type **n**, then press **Enter**. This causes the installation script to exit.

If you agree to the terms of the license agreement, type **y**, then press **Enter**. This causes the menu shown below to be displayed.

```
This Utility supports the following installations:

1. Standalone Client
2. Remote Method Invocation (RMI)
3. Enterprise Java Beans (EJB)
4. Install everything above
5. Quit
Please make a selection from the list above
Input a number between [1-5]:
```

- **Note:** If at some point in the installation script you would like to cancel the installation, press **<Ctrl>C** to exit the script.
- 6. Make a selection from the menu that corresponds to the interface you want to install, then press **Enter**.

You are instructed that TIBCO iProcess Server Objects (Java) will be installed in the /usr/sso directory by default. The following question is displayed:

```
Do you wish to use /usr/sso(Y/N)?
```

- 7. Choose the installation directory as follows:
 - a. To choose the default /usr/sso directory, type Y, then press Enter.
 - b. To choose an alternative directory, type **N**, then press **Enter**. When prompted, enter the path and name of the directory in which you want TIBCO iProcess Server Objects (Java) installed. The new directory is created and you are asked to verify the directory. Type **Y** and press **Enter** to confirm.
 - The installation script checks the directory that you chose to see if TIBCO iProcess Server Objects (Java) software is already installed in that directory:
 - If there is TIBCO iProcess Server Objects (Java) software in the directory, but it is the same version you are now installing, it overwrites it without warning.
 - If there is TIBCO iProcess Server Objects (Java) software in the directory, but it is a different version than you are now installing, a prompt is displayed, asking you if the previous version should be overwritten. To not overwrite the previous version and choose another directory, type N, then press Enter. To overwrite the previous version, type Y, then press Enter.

The software is installed. The installation menu is displayed when it is complete.

8. From the installation menu, select 5, then press Enter, to exit the installation script.

A message is displayed telling you to make sure the CLASSPATH environment variable includes the appropriate JAR files. The CLASSPATH variable must contain the path/file name for the particular JAR file that was installed. The name of the JAR file depends on the interface that you installed, as follows:

— Standalone: ssoJBase.jar

— RMI: ssoRMI.jar — EJB: ssoEJB.jar

Note: If you installed all three interfaces, the CLASSPATH variable must include the path/filename for all three JAR files.

CLASSPATH must also include the path to each of the open-source JAR files and the XML serializer JAR file (see the next section for a complete list of the JAR files installed).

The message also informs you that the appropriate environment variable for your operating system must contain the directory in which TIBCO iProcess Server Objects (Java) was installed (if you installed in the default directory, it is /usr/sso if you are using the 32-bit library, and /usr/sso/lib64 if you are using the 64-bit library). The appropriate environment variable for the UNIX operating system is as follows:

— Linux: LD_LIBRARY_PATH

Following the messages about environment variables, you are asked if the installation script should remove the installation files.

- 9. Respond to the question about removing the installation script as follows:
 - a. To delete the installation script and its related files from the temporary installation directory (the temporary installation directory itself is deleted), type Y, then press Enter.
 - b. To retain the installation script and its related files, type **N**, then press **Enter**.

The installation is complete.

Installed Files / Directories

The following files and directories are installed with TIBCO iProcess Server Objects (Java):

File / Directory	Description
ssoJBase.jar	Compressed files for the Standalone interface.
ssoRMI.jar	Compressed files for the RMI and Standalone interfaces.
ssoEJB.jar	Compressed files for the EJB, RMI, and Standalone interfaces.
commons-logging.jar log4j-api-2.17.2.jar log4j-core-2.17.2.jar xercesImpl.jar	Open-source JAR files upon which TIBCO iProcess Server Objects (Java) has dependencies.
ssoXMLSerializer.jar	Serializer for the XML Interface.
libssoJNI.sl	The shared library.
version.txt	Contains the version of the TIBCO iProcess Server Objects (Java) software.
/lib64	This directory contains the 64-bit libraries.
/Help	This directory contains the TIBCO iProcess Server Objects (Java) on- line help files (to start, execute start.htm with a browser).



Note: The files in the JAR files are cumulative, i.e., **ssoRMI.jar** contains the files that are in ssoJBase.jar, and ssoEJB.jar contains the files that are in ssoRMI.jar.

Removing the TIBCO iProcess Server Objects (Java)

This chapter explains how to remove the TIBCO iProcess® Server Objects (Java) from your system.

Introduction

There are two methods of removing TIBCO iProcess Server Objects (Java):

- Using the **setup** program that was used to install TIBCO iProcess Server Objects (Java). This method also allows you to "repair" the product if it has become corrupted. This is available only on Windows systems.
 - For more information, see Repairing/Removing Using the Setup Program.
- Using the "removal" facility in the operating system.
 - In Windows, this is "Add/Remove Programs" see Removing from Windows Systems.
 - In UNIX, this is the "rm" command see Removing from UNIX Systems.

Repairing/Removing Using the Setup Program

This procedure is applicable only on Windows systems.

The TIBCO iProcess Server Objects (Java) **setup** program has the capability to do one of the following actions:

- repair an existing installation if the TIBCO iProcess Server Objects (Java) files have become corrupted in some way, or
- remove the existing installation.

To accomplish this, you must run the **setup** program for the same version of TIBCO iProcess Server Objects (Java) that you already have installed.

To repair/remove an existing version of TIBCO iProcess Server Objects (Java), perform these steps:

Procedure

- 1. Run the **setup.exe** from the installer.
 - The TIBCO iProcess Server Objects (Java) installation program detects that you already have that version installed.
- 2. Click the appropriate radio button, as follows, then click **Finish**.
 - The "Repair" option causes corrupted files to be replaced.
 - The "Remove" option causes the TIBCO iProcess Server Objects (Java) files to be removed from your system.

The **Installation Complete** window is displayed when the repair/remove operation is finished.

3. Click **Close** to complete the repair/remove operation.

Removing Using the Operating System Facilities

The following subsections describe removing TIBCO iProcess Server Objects (Java) using the operating system facilities.

Removing from Windows Systems



Note: There is an anomaly in Windows that causes multiple entries for TIBCO iProcess Server Objects (Java) in the Control Panel Add/Remove Programs if you have installed a newer version of TIBCO iProcess Server Objects (Java) to the same directory. When installing a newer version to the same directory, the older version is overwritten by the newer version. However, entries for both versions remain in Add/Remove Programs. To remove TIBCO iProcess Server Objects (Java) in this situation, you must remove both versions using Add/Remove Programs.

To remove TIBCO iProcess Server Objects (Java) from a Windows system, follow these steps:

Procedure

- 1. From Control Panel, choose Add/Remove Programs.
- 2. From the list of currently installed programs, select **TIBCO iProcess Server Objects** (**Java**) **Version nnn**, where 'nnn' is the version of TIBCO iProcess Server Objects (Java) you are removing.
- 3. Click Remove.
- 4. Confirm that you want to remove the program.

All TIBCO iProcess Server Objects (Java) files and directories are removed from your system. However, if the remove program detects files in the TIBCO iProcess Server Objects (Java) installation directory that were not added by TIBCO iProcess Server Objects (Java), it will not remove those files nor the directory. It only removes the TIBCO iProcess Server Objects (Java)-related files.

Removing from UNIX Systems

To remove TIBCO iProcess Server Objects (Java) from a UNIX system, follow these steps:

Procedure

- 1. Log in as root.
- 2. Enter the following to remove the TIBCO iProcess Server Objects (Java) files and directories.

rm -r *InstallDir*

where *InstallDir* is the name of the directory where you installed TIBCO iProcess Server Objects (Java) (the default is /usr/sso).

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 Product Documentation website, mainly in HTML and PDF formats.

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

Product-Specific Documentation

The following documentation for this product is available on the TIBCO iProcess® Server Objects (Java) Product 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.

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