

TIBCO® Fulfillment Subscriber Inventory Installation and Configuration Guide

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TIBCO Documentation and Support Services

Documentation for this and other TIBCO products is available on the TIBCO Documentation site. This site is updated more frequently than any documentation that might be included with the product. To ensure that you are accessing the latest available help topics, please visit:

<https://docs.tibco.com>

Product-Specific Documentation

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

- *TIBCO Fulfillment Subscriber Inventory Installation and Configuration Guide*
- *TIBCO Fulfillment Subscriber Inventory User's Guide*
- *TIBCO Fulfillment Subscriber Inventory Web Services Guide*
- *TIBCO Fulfillment Subscriber Inventory REST Services Guide*
- *TIBCO Fulfillment Subscriber Inventory Release Notes*

How to Contact TIBCO Support

For comments or problems with this manual or the software it addresses, contact TIBCO Support:

- For an overview of TIBCO Support, and information about getting started with TIBCO Support, visit this site:

<http://www.tibco.com/services/support>

- If you already have a valid maintenance or support contract, visit this site:

<https://support.tibco.com>

Entry to this site requires a user name and password. If you do not have a user name, you can request one.

How to Join TIBCOmmunity

TIBCOmmunity is an online destination for TIBCO customers, partners, and resident experts. It is a place to share and access the collective experience of the TIBCO community. TIBCOmmunity offers forums, blogs, and access to a variety of resources. To register, go to the following web address:

<https://www.tibcommunity.com>

Installation Overview

This chapter provides information about the system requirements in terms of operating systems and disk space, recommended setup for TIBCO® Fulfillment Subscriber Inventory installation, variables and properties required, and important files necessary to perform the post-install log analysis.

Provided below are links to detailed information for preinstall requirements and settings, the install, and post-install steps.

Pre-Install

To ensure that you have a good experience installing TIBCO Fulfillment Subscriber Inventory, it is always recommended to check whether your computer is ready for the installation. The pre-install section gives you the prerequisites to install TIBCO Fulfillment Subscriber Inventory:

- 1. [Operating System and Database Requirements](#): This section provides you with information about the platforms that TIBCO Fulfillment Subscriber Inventory supports.
- 2. [Installation Guidelines](#): This section provides details about the installation guidelines for TIBCO Fulfillment Subscriber Inventory.
- 3. [Required Products](#): TIBCO Fulfillment Subscriber Inventory requires a number of software components to be installed. For a complete list of versions and platforms supported, see the `TIB_fsi_1.0.0_readme.txt` file. Install and configure them in the mentioned order.
- 4. [Installation Options](#): This section provides information about the options for installing TIBCO Fulfillment Subscriber Inventory.
- 5. [Installation Related Files](#): This section provides information regarding disk space requirements, and installation registry, history, and log files.

Install

- [Installation Modes](#): TIBCO Fulfillment Subscriber Inventory supports different installation modes. This chapter provides you with information about the available installation modes.
- [Installing TIBCO Fulfillment Subscriber Inventory](#): Step-by-step instructions are provided in this chapter to help you install TIBCO Fulfillment Subscriber Inventory using different installation modes.

Post-Install

[Post-Installation Tasks](#): After you complete the installation of TIBCO Fulfillment Subscriber Inventory, complete the post-installation tasks and verify the installation.

Operating System and Database Requirements

TIBCO Fulfillment Subscriber Inventory supports the following platforms and databases:

Operating System

| Operating System |
|---|
| Red Hat Enterprise Linux Server 6.x, 7.x 64-bit on x86-64 |

Databases

| Database |
|---|
| Oracle 11g Enterprise Edition (Oracle 11.2.x), single |
| Oracle 12c Enterprise Edition (Oracle 12.1.x), single and RAC |



Oracle Databases use traditional (non-container) Enterprise Edition releases.

Installation Guidelines

The following are the installation guidelines for TIBCO Fulfillment Subscriber Inventory:

| | |
|--|---|
| Installer Account | TIBCO Fulfillment Subscriber Inventory can be installed by a regular (non-root) user and super-user (root). Product dependencies during the installation are resolved at the user level through the installation registry maintained at the user's home directory. |
| Installing from a Network Drive | If you intend to install the product from a network drive, you must ensure that the account used for installation has permission to access the network drive. |
| Install Required Software First for All the Installations | TIBCO recommends that you install TIBCO EMS before installing TIBCO Fulfillment Subscriber Inventory. |
| Windowing Environment | A windowing environment, such as CDE (that is, X11 Windows), is required to run the installer in GUI mode. It is not required for a console installation or silent installation. |

Required Products

You must install the third-party products and TIBCO products listed in this section.

Required Third-Party Products

The following table lists the required third-party products:

Required Third-Party Products

| Products | Version | Purpose |
|----------|------------------|--|
| JDK | 1.8 (or greater) | A Java Development Kit (JDK) is a program development environment which you can use for writing Java applets and applications. |

| Products | Version | Purpose |
|-----------------|--|--|
| Oracle Database | 11g Enterprise Edition or 12c Enterprise Edition and RAC | An Oracle database is required by Fulfillment Subscriber Inventory to store data. |
| Database driver | ojdbc6.jar or ojdbc7.jar | <p>This is required on the machine where TIBCO Fulfillment Subscriber Inventory is installed.</p> <p>The driver is used to connect to and query the Oracle server.</p> <p>The driver (ojdbc6.jar or ojdbc7.jar) can be found in the Oracle database installation or it can be downloaded directly from the Oracle website.</p> |



For product version details, you can also refer to the TIBCO Fulfillment Subscriber Inventory readme file.

JDK Environment Variables


Create the following environment variables after installing JDK:

- Set JAVA = /usr/java/jdk1.8.0_11/bin/java
- Set JAVA_HOME = /usr/java/jdk1.8.x
- In the PATH variable, add JAVA_HOME/bin.

Required TIBCO Products

The following table lists the required TIBCO product for TIBCO Fulfillment Subscriber Inventory:

Required TIBCO Products for TIBCO Fulfillment Subscriber Inventory

| Product & Version | Purpose | For more information, refer to: |
|---|--|---|
| TIBCO Enterprise Message Service™ 8.3.x | <p>Standards-based messaging software that can serve as the backbone of an SOA by providing Java Message Service (JMS)-compliant communications across a wide range of platforms and application technologies.</p> <div>  <p>EMS is a pre-requisite but is not a part of the TIBCO Fulfillment Order Management product license.</p> </div> | <i>TIBCO Enterprise Message Service™ Installation</i> |

Installer Options

This topic lists the executable file names and describes some of the options available during product installation.

Executable Filenames

In this document, the executable file names are displayed using variables where needed, for example:

TIB_fsi_<version>_<platform>

where:

- `version` is the three-digit version number for this Fulfillment Subscriber Inventory release, for example, 1.0.0.
- `platform` is an abbreviated form of the hardware platform for which the executable is intended, for example, `linux_x86_64`.

Linux

Linux: TIB_fsi_1.0.0_linux_x86_64.zip.

Typical or Custom Install

The installer prompts you to accept the license agreement, then allows you to choose an option to perform either a typical install or a custom install (full installer only).

- Typical install has minimal prompts and installs standard components in default locations.
- Custom install prompts you to choose the product suite components you wish to use, and then installs only those components.

Installation Modes

The installer allows you to run the installation in the following modes:

Installation Modes

| | |
|---------------------|---|
| GUI Mode | <p>In GUI mode, the installer presents panels that allow you to make choices about product selection, product location, and so on. When you run the installer by double-clicking on the icon, GUI mode is used.</p> <p>See the Installing in GUI Mode topic for more details.</p> |
| Console Mode | <p>Console mode allows you to run the installer from the command prompt or terminal window in a non-Windows environment.</p> <p>See the Installing in Console Mode topic for more details.</p> |
| Silent Mode | <p>Silent mode either installs using default settings or uses a response file that was saved during an earlier installation. Silent mode installs without user prompts.</p> <p>See the Installing in Silent Mode topic for more details.</p> |

Installation-Related Files

This section provides the following information:

- [Installer Disk Space Requirements in Temporary Area](#)
- [Installation Registry, History, and Log Files](#)

Installer Disk Space Requirements in Temporary Area

This section describes the temporary disk space requirements for TIBCO Fulfillment Subscriber Inventory.

Linux Platform

The installer launcher first extracts a Java Virtual Machine (JVM) in a temporary directory and uses this JVM to launch itself. The size of the extracted JVM differs from platform to platform.

On Linux platforms, the following disk space is required in the temporary area:

- 256 MB of free disk space in /tmp

If your system does not have sufficient free disk space in the above temporary area, you can still run the installer with a different temporary area by using the following option when starting the installer:

```
install_package_name.bin -is:tempdir /new_tmp
```

where /new_tmp has sufficient free disk space.

Installation Registry, History, and Log Files

Installation and uninstallation log files are in the \$HOME/.TIBCO directory within the installer's user home directory. The files use the following format:

- Install log
 .TIBCO/install_<yyyy-mm-dd.hhmmss>/
 tibco_universal_installer.<fsiuser>_install.log
- Uninstall log
 .TIBCO/uninstall_<yyyy-mm-dd.hhmmss>/
 tibco_universal_installer.<fsiuser>_uninstall.log

The installation and uninstallation log files log the history and maintain the registry files in the \$HOME/.InstallShield directory.



Do not edit, rename, move, or remove the files in the \$HOME/.InstallShield directory.

Installing TIBCO Fulfillment Subscriber Inventory

This chapter describes the installation of TIBCO Fulfillment Subscriber Inventory using TIBCO Universal Installer `TIBCOUniversalInstaller-<os platform>.bin`.

Installing in GUI Mode

The following procedure lists the steps to install TIBCO Fulfillment Subscriber Inventory in GUI mode.

Procedure

1. Download the TIBCO Fulfillment Subscriber Inventory product package.
2. Extract the TIBCO Fulfillment Subscriber Inventory product archive file to a temporary directory.
3. Navigate to the temporary directory.
4. Run `TIBCOUniversalInstaller-<platform>.bin`. The name of the executable depends on the platform.
5. Review the information in the Welcome dialog and click **Next**.
6. The License Agreement dialog appears. Review the terms of the license agreement and select **I accept the terms of the license agreement**. Click **Next** to continue with the installation.
7. The TIBCO Installation Home dialog appears. Specify an installation environment and click **Next**. You can choose to either create a new TIBCO installation environment or select an existing environment. A TIBCO installation environment is used for software installations and consists of a directory (the path where the product will be installed). Products installed into different installation environments do not share components; therefore you can keep product installations completely isolated from each other.

Create a new TIBCO_HOME

If this is the first time that you are installing a TIBCO product using the Universal Installer, you must create an installation environment by specifying the following:

- **Directory:** The root directory into which all TIBCO products are installed. Individual products will use sub-directories. 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 ("").

Use an existing TIBCO_HOME

If you have previously installed a TIBCO product using the Universal Installer, you can install the product into a previously created installation environment (by selecting the environment from the list). If you do this, the directory and name fields are populated automatically and cannot be edited.

8. On the Installation Type dialog, you can choose from the following available options:
 - Select the **Typical** option to install all the default features.
 - Select the **Custom** option to install the features of your choice.

After making your choice, click **Next**. After the installer configures your installation choices, the Pre Install Summary dialog appears. Review the information displayed in the dialog. If you want to change any of your choices, click the **Back** button to step back through the dialogs to the appropriate point. You can then proceed with the installation process.

9. Enter the information for the TIBCO Fulfillment Subscriber Inventory server, and then click **Next**.
10. The Hibernate LGPL License Agreement dialog appears. Review the terms of the license agreement and select **I accept the terms of the license agreement**. Click **Next** to continue with the installation.
11. The LGPL Assembly Download dialog appears. Select either option as applicable:
 - Select **Download Hibernate assembly from TIBCO** if you have not installed Hibernate assembly from TIBCO.
 - Select **Provide the location for the assembly previously downloaded from TIBCO** if you have already installed Hibernate assembly from TIBCO, and provide the assembly path.
 Click **Next**.
12. The Oracle Elliptic Curve Cryptography Library LGPL License Agreement dialog appears. Review the terms of the license agreement and select **I accept the terms of the license agreement**. Click **Next** to continue with the installation.
13. The Oracle Elliptic Curve Cryptography Library LGPL Assembly Download dialog appears. Select either option as applicable:
 - Select **Download Oracle Elliptic Curve Cryptography Library assembly from TIBCO** if you have not installed Hibernate assembly from TIBCO.
 - Select **Provide the location for the assembly previously downloaded from TIBCO** if you have already installed Hibernate assembly from TIBCO, and provide the assembly path.
 Click **Next**.
14. Verify the list of features selected for install and click **Install**.
15. The installer now performs the necessary installation tasks. When the installation has completed, the Post Install Summary dialog is displayed. Click **Finish** to exit from the installer.



The **Launch TIBCO Configuration Tool** checkbox is enabled. This will launch the TIBCO Configuration Tool (TCT) right after the TIBCO Universal Installer is done. For more information about how to configure TIBCO Fulfillment Subscriber Inventory with TCT, see the [Configuration](#) chapter.

Installing in Console Mode

The following procedure lists the steps to install TIBCO Fulfillment Subscriber Inventory in console mode.

Procedure

1. Download the TIBCO Fulfillment Subscriber Inventory product package.
2. Extract the TIBCO Fulfillment Subscriber Inventory product archive file to a temporary directory.
3. Using a console window, navigate to the temporary directory that contains the universal installer and run the installer using this command line:


```
bash-3.00$ ./TIBCOUniversalInstaller-<os platform>.bin -console
```
4. Complete the installation by responding to the console window prompts.
5. Complete the post installation tasks. See the [Post-Installation Tasks](#) topic for more details.

Installing in Silent Mode

The `TIBCOUniversalInstaller.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.silent` file, it is a good practice to copy the file to a different name, and edit the file for silent mode.

If errors occur during the installation, they will be listed in the installation log file, which is located in the `User_Home/.TIBCO` directory.

Procedure

1. Download the TIBCO Fulfillment Subscriber Inventory product package.
2. Extract the TIBCO Fulfillment Subscriber Inventory product archive file to a temporary directory.
3. Using a console window, navigate to the temporary directory that contains the universal installer.
4. Copy the `TIBCOUniversalInstaller.silent` file and name the file.
5. Using a text editor, open the `TIBCOUniversalInstaller.silent` file, and update the install location and the list of features to install.
6. Run the installer. For example:

```
TIBCOUniversalInstaller-<os>.bin -silent -V responseFile="myfilename.silent"
```

When the installation completes, a line similar to the following is written to the installer log file:

```
Install, com.tibco.installer.util.TIBCOInstaller, dbg.Debug, The installation  
has completed. Please check the log file for additional information.
```

7. Complete the post installation tasks. See the [Post-Installation Tasks](#) topic for more details.

Post-Installation Tasks

Post-Installation Task 1: Configure TIBCO Fulfillment Subscriber Inventory

To configure TIBCO Fulfillment Subscriber Inventory, you can use TIBCO® Configuration Tool (TCT), or you can configure TIBCO Fulfillment Subscriber Inventory manually in the `ConfigValues_FSI.xml` file.

Configuration Using TIBCO Configuration Tool

TIBCO Configuration Tool (TCT) is a standalone tool that lets you do the basic configuration of TIBCO Fulfillment Subscriber Inventory. You can use TCT to configure TIBCO Fulfillment Subscriber Inventory's required configurations and get TIBCO Fulfillment Subscriber Inventory running.

TCT can be used in the following three modes:

- **Graphical mode:** This is a graphical user interface. It requires access to the display with a pointer (mouse). This is an interactive interface where you can navigate through the different configurations and change the configuration parameters.
- **Console mode:** This is a textual user interface. It does not require access to the display; it can be used with a simple terminal. This is an interactive interface where you can navigate through the different configurations and change the configuration parameters.
- **Silent mode:** This is a textual user interface. It does not require access to the display; it can be used with a simple terminal. This is not an interactive interface. All the configuration parameters have to be configured in advance, in a file.

Configuring in the Graphical Mode

The graphical mode can be used if you have access to a display with a window manager. This is probably the most user-friendly mode, where you can easily check and update the TIBCO Fulfillment Subscriber Inventory configuration.

To start TCT in graphical mode, run the following command:

```
$ cd $TIBCO_HOME/tct/<version>
$ ./TIBCOConfigurationTool
```



Make sure your `$DISPLAY` environment variable is set so TCT can appear on your display. A typical setting in ksh, would be `export DISPLAY=localhost:0.0`

TCT in graphical mode is a standalone application.

1. The first pop up window asks where to store a copy of all the configuration. This copy could be used as a backup, and so could be used later to reapply the configuration to TIBCO Fulfillment Subscriber Inventory.
2. TCT provides links to configure the messaging and the database. Click the **Configure Fulfillment Subscriber Inventory Database** link and click **Next**.
3. Enter the configuration details for the database. TCT needs the following information:
 - The Oracle database version
 - The JDBC driver directory
 - The database URL
 - The database administrator user name and password

Testing the connection for the database administrator is possible from this wizard screen by clicking **Test Connection**.

4. Click **Next**. The Create Table Space wizard is shown. This wizard page helps gathering tablespace creation details, if needed. If the "Create TableSpace" toggle is off, then all fields are greyed out except "Tablespace Name".
5. After entering the tablespace information, click **Next**. The Create DB User wizard is shown.
6. Click **Configure**. The confirmation screen is shown. After you click **Configure** the wizard will use the information to create the tablespace, users, and tables. The confirmation screen shows the tasks to performed by TCT.
7. Click **Close** to close the database configuration wizard.
8. Click the **Configure Fulfillment Subscriber Inventory Messaging** link and click **Next**.
9. Enter the configuration details of the TIBCO Enterprise Message Service server:
 - a. Enter the location of EMS_HOME directory and click **Next**.
 - b. Enter the TIBCO EMS URL list, TIBCO EMS user name, and TIBCO EMS password and click **Next**.
10. After clicking **Next**, click **Configure**.
11. Click **Close** to close the messaging configuration wizard
12. After exiting the confirmation screen, configure the following values in the ConfigValues_FSI.xml file:
 - com.tibco.fos.fsi.jms.jndi.url : with the URL list. Also, replace the "tcp" part with "tibjmsnaming".
 - com.tibco.fos.fsi.jms.jndi.security.principal : EMS User.
 - com.tibco.fos.fsi.jms.jndi.security.credentials : EMS Password (this field should display "*" when filled).

Configuring in the Console Mode

The console mode can be used if you do not have access to a display with a window manager, or if you only have access to the server through a terminal. The console mode is still an interactive process where the text screen asks for inputs.

To start TCT in console mode, run the following command:

```
$ cd $TIBCO_HOME/tct/<version>
$ ./TIBCOConfigurationTool -consoleMode
```

TCT then goes through the same screens as in the graphical mode, except that they are presented in the console in plain text.

Configuring in the Silent Mode

The silent mode can be used if you just want to apply a configuration to TIBCO Fulfillment Subscriber Inventory. This is not an interactive process; it just applies the configuration from a file. When configuring in the silent mode, TCT does not modify the configuration file or ask for inputs, it only applies the configuration file to TIBCO Fulfillment Subscriber Inventory.

To start TCT in silent mode run the following command:

```
$ cd $TIBCO_HOME/tct/<version>
$ ./TIBCOConfigurationTool -silentMode
```

You need to provide the wizard.id, which can be any of the following:

- com.tibco.tct.fsi.messaging
- com.tibco.tct.fsi.database

Configuring TIBCO Fulfillment Subscriber Inventory

You can configure TIBCO Fulfillment Subscriber Inventory without using TIBCO Configuration Tool (TCT).



These tasks can be done through TIBCO Configuration Tool (TCT), and do not need to be done if you already configured TIBCO Fulfillment Subscriber Inventory using TCT.

Complete the following tasks if you are going to configure TIBCO Fulfillment Subscriber Inventory without using TIBCO Configuration Tool (TCT):

- [Create a Tablespace](#)
- [Create a Database User](#)
- [Create a Database Schema](#)
- [Create the TIBCO EMS Queue](#)
- [Configure Values in the ConfigValues_FSI.xml File](#)

Creating a Tablespace

Create a new tablespace or use the default tablespace. To create a tablespace, run the following script:

```
$FSI_HOME/scripts/oracle/createTableSpace.sql
```

Optionally, you can use the default tablespace instead of creating a new table space. To use the default table space, run the following script instead of the createTableSpace.sql script:

```
fos_fsi_ddl_default_ts.sql
```

In this case, you do not have to run the fos_fsi_ddl.sql script mentioned in the [Creating a Database Schema](#) topic.

Creating a Database User

To create a database user, run the following script:

```
$FSI_HOME/scripts/oracle/createUser.sql
```

Creating a Database Schema

To create a database user, run the following script:

```
$FSI_HOME/scripts/oracle/fos_fsi_ddl.sql
```

Creating the TIBCO EMS Queue

To create the TIBCO EMS queue, run the following script:

```
$FSI_HOME/scripts/ems/inventoryEMS.txt
```

Configuring Values in the ConfigValues_FSI.xml File

Configure the following properties in the \$FSI_HOME/config/ConfigValues_FSI.xml file.

1. Configure the following properties for the database:

```
<ConfValue description="Pooled Data Source Host" name="Pooled Data Source Host"
propname="com.tibco.fos.fsi.pooledDataSource.host" sinceVersion="3.0"
visibility="Basic">
    <ConfString default="localhost" value="12.345.67.89"/>
</ConfValue>
<ConfValue description="Pooled Data Source Port" name="Pooled Data
Source Port" propname="com.tibco.fos.fsi.pooledDataSource.port"
sinceVersion="3.0" visibility="Basic">
    <ConfString default="1521" value="1234"/>
</ConfValue>
<ConfValue description="Pooled Data Source Database" name="Pooled
Data Source Database" propname="com.tibco.fos.fsi.pooledDataSource.database"
sinceVersion="3.0" visibility="Basic">
    <ConfString default="orcl" value="fosdb12.na.tibco.com"/>
</ConfValue>
<ConfValue description="Pooled Data Source Username" name="Pooled
Data Source Username" propname="com.tibco.fos.fsi.pooledDataSource.username"
sinceVersion="3.0" visibility="Basic">
    <ConfString default="aff_fsi" value="username"/>
</ConfValue>
<ConfValue description="Hibernate Default Catalog" name="Hibernate
Default Catalog" propname="com.tibco.fos.fsi.hibernate.default_catalog"
sinceVersion="3.0" visibility="Basic">
    <ConfString default="aff_inv" value="Catalog"/>
</ConfValue>
<ConfValue description="Pooled Data Source Password" name="Pooled
Data Source Password" propname="com.tibco.fos.fsi.pooledDataSource.password"
sinceVersion="3.0" visibility="Basic">
    <ConfString default="aff_inv" isPassword="true"
value="password"/>
</ConfValue>
```

2. Configure the following properties for the TIBCO EMS queue:

```
<ConfValue description="JNDI URL for JMS Service" name="JNDI URL"
propname="com.tibco.fos.fsi.jms.jndi.url" sinceVersion="1.0" visibility="Basic">
    <ConfString default="tibjmsnaming://localhost:7222"
value="tibjmsnaming://localhost:1234"/>
</ConfValue>
<ConfValue description="JNDI Username" name="JNDI Username"
propname="com.tibco.fos.fsi.jms.jndi.security.principal" sinceVersion="1.0"
visibility="Basic">
    <ConfString default="admin" value="username"/>
</ConfValue>
<ConfValue description="JNDI Password" name="JNDI Password"
propname="com.tibco.fos.fsi.jms.jndi.security.credentials" sinceVersion="1.0"
visibility="Basic">
    <ConfString default="admin" isPassword="true" value="password"/>
</ConfValue>
```

3. Configure the following properties for the bulk load:

```
<Category description="Inventory bulk load" name="Inventory bulk load"
visibility="Basic">
    <ConfValue description="Bulk load configuration file path (on the
inventory server machine)." name="Bulk load configuration file path."
propname="com.tibco.fos.fsi.bulk.configuration" sinceVersion="1.0"
visibility="Basic">
    <ConfString default="/tmp/bulkconfig.json" value="/
TIBCO_HOME/fsi/1.0/bulk_upload/bulkconfig.jsonbulk_upload/bulkconfig.json"/>
</ConfValue>
</Category>
```

Post-Installation Task 2: Copying the WAR File

Procedure

- Copy the inventory WAR file `fsi-server.war` from the `$FSI_HOME/webapps` folder to the `$FSI_HOME/tomcat/webapps` folder.

Post-Installation Task 3: Setting the Environment Variables

Set the following environment variables where TIBCO Fulfillment Subscriber Inventory is installed:

| Environment Variable | Value |
|-------------------------------------|--|
| <code>export FSI_HOME</code> | <code>\$TIBCO_HOME/fsi/1.0</code> |
| <code>export FSI_CONFIG_HOME</code> | <code>\$FSI_HOME/config</code> |
| <code>export ORACLE_HOME</code> | <code>/usr/local/app/oracle/product/<ORACLE_VERSION>/db_1</code> |
| <code>export JAVA_HOME</code> | <code>/local/fsiuser/jdk1.8.x</code> |
| <code>export ANT_HOME</code> | <code>/local/fsiuser/apache-ant-1.8.x</code> |
| <code>export EMS_HOME</code> | <code>\$TIBCO_HOME/ems/8.3.x</code> |
| <code>export PATH</code> | <code>\$ANT_HOME/bin:\$ORACLE_HOME/bin:\$JAVA_HOME/bin: \$EMS_HOME/bin:\$PATH</code> |
| <code>export NODE_ID</code> | <code>Member1</code> |
| <code>export LD_LIBRARY_PATH</code> | <code>\$ORACLE_HOME/lib:\$LD_LIBRARY_PATH</code> |
| <code>export CLASSPATH</code> | <code>\$ANT_HOME/lib:\$CLASSPATH</code> |

Post-Installation Task 4: Restarting the Server

Procedure

1. Go to the `$FSI_HOME/apache-tomcat-<version>/bin` directory.
2. Set environment variable `NLS_LANG` to **AMERICAN_AMERICA.UTF8** and `LANG` to **en_US.utf8**.
3. Launch Tomcat by running the `$FSI_HOME/tomcat/bin/startup.sh` file.

TIBCO Fulfillment Subscriber Inventory Migration

The bulk load service refers to the action of mass importing existing inventory data into the TIBCO Fulfillment Subscriber Inventory database. This feature is designed to support migration from an existing system where the data is in the form of CSV files. This chapter explains the requirements for the bulk load, configuration for the bulk load, triggering the bulk load, and the bulk load logging.

Configuring for the Bulk Load

The bulk load service provides a way to mass provision the inventory database with existing parties and items. A configuration file has been provided which needs to be configured with appropriate values before the bulk load is initiated.

Prerequisites

The data to load must be converted as CSV files if they are not already in that format. The Oracle database is only able to read CSV files and will treat these as a table. Inventory then applies the stored procedures to create internal items, item characteristics, item relationships, orders, parties, characteristics, relationships, and orders. See [CSV File and JSON Config File Samples](#) for examples of item.csv and items_characs.csv files.

Procedure

1. If you have not already, create CSV files containing items, item characteristics, orders, item relationships, parties, party characteristics, and put these files in a directory on the Oracle database server so that Oracle can access them.
2. Define the CSV file directory accessible by the Oracle database by running the following command:

```
create or replace directory FSI_BULK_DIR as '[existing directory absolute path on oracle server]';
grant read, write on directory FSI_BULK_DIR to [inventory oracle user];
```

Both the directory and file need to be readable and writeable by the Oracle process user.

3. Create a bulk load JSON configuration file (bulkConfig.json) on the TIBCO Fulfillment Subscriber Inventory server machine. See [CSV File and JSON Config File Samples](#) for an example of how the JSON configuration file should be constructed. This file can be saved in the \$FSI_HOME/config/file.
4. Configure the following parameters in the bulk load JSON configuration file:

| Parameter | Description |
|---------------------|---|
| oracleDirectoryName | This is the directory name for the Oracle server. The value should be "FSI_BULK_DIR". The data files containing the data to be loaded should be placed in this directory which needs to be created beforehand in the Oracle server. |

| Parameter | Description |
|-----------------|--|
| timeStampFormat | This is the timestamp format for the date/time columns that is used in the CSV exported data. Timestamps here follow the Oracle notation. It is possible to customize the date/time format per entity for the date/time type of columns in the source data. One possible timestamp format is: "DD-MON-YYYY HH12.MI.SS PM". An example value of this format is: "01-JAN-2014 05.40.12 PM". |
| commitSize | This is the frequency of commits when performing creations. |
| entities | <p>This is the list of entities to load. Each entity to load is a configuration object containing the following parameters:</p> <ul style="list-style-type: none"> • type - This parameter defines the type of entity to load. It can be any one of the following types: FSI_PARTY, FSI_PARTY_CHARACTERISTIC, FSI_ITEM, FSI_ITEM_CHARACTERISTIC, FSI_ITEM_RELATIONSHIP, FSI_ITEM_ORDER, FSI_ITEM_ORDER_COMMENT • dataSourceName - This is the name of the CSV file relative to the inside of the FSI_BULK_DIR directory. • dataSourceColumnList - This parameter is for the names of the columns in the CSV file. The possible values depend on the type of entity to load. Some columns are mandatory and some are optional. See Mandatory and Optional Columns for the list of mandatory and optional columns. |

5. Configure the path to the bulk load JSON config file in the ConfigValues_FSI.xml file. The value to configure is `com.tibco.fos.fsi.bulk.configuration`.

CSV File and JSON Config File Samples

The following are samples of the CSV files for items and item characteristics and the bulk load JSON configuration file:

items.csv File Sample

```
ID_0,ItemType,Active,owner,creator,01-JAN-2014 05.40.12 PM,0,0, PARTY_ID_0,
PRODUCT_ID_0,01-JAN-2014 05.40.12 PM
ID_1,ItemType,Active,owner,creator,01-JAN-2014 05.40.12 PM,1,0, PARTY_ID_1,
PRODUCT_ID_1,01-JAN-2014 05.40.12 PM
...
```

items_characs.csv File Sample

```
Charac_ID_0_0,ID_0,Name1,Value1
Charac_ID_0_1,ID_0,Name2,Value2
...
```

JSON Config File Sample

```
{
  "oracleDirectoryName" : "FSI_BULK_DIR",
  "timeStampFormat" : "DD-MON-YYYY HH12.MI.SS PM",
  "commitSize" : 100,
  "entities" : [ {
    "type" : "PARTY",
    "dataSourceName" : "party.csv",
    "dataSourceColumnList" : [ "ID", "PARTY_REF", "NAME", "PARTY_TYPE",
"SUB_TYPE", "STATUS", "PARENT_PARTY_ID", "OWNED_BY", "CREATED_BY", "CREATED_ON",
"UPDATED_BY", "UPDATED_ON", "VERSION", "DELETED" ]
  }, {
    "type" : "PARTY_CHARACTERISTIC",
    "dataSourceName" : "party_characs.csv",
    "dataSourceColumnList" : [ "ID", "PARTY_ID", "CHARACTERISTIC_NAME",
"CHARACTERISTIC_VALUE" ]
  }, {
    "type" : "ITEM",
    "dataSourceName" : "items.csv",
    "dataSourceColumnList" : [ "ID", "ITEM_REF", "PRODUCT_ID",
"PRODUCT_VERSION", "NAME", "ITEM_TYPE", "SUB_TYPE", "STATUS", "PARTY_ID",
"START_DATE", "END_DATE", "OWNED_BY", "CREATED_BY", "CREATED_ON", "UPDATED_BY",
"UPDATED_ON", "VERSION", "DELETED" ]
  }, {
    "type" : "ITEM_CHARACTERISTIC",
    "dataSourceName" : "item_characs.csv",
    "dataSourceColumnList" : [ "ID", "ITEM_ID", "CHARACTERISTIC_NAME",
"CHARACTERISTIC_VALUE" ]
  }, {
    "type" : "ITEM_RELATIONSHIP",
    "dataSourceName" : "item_relationships.csv",
    "dataSourceColumnList" : [ "ID", "ITEM_ID", "FORWARD_TYPE",
"REVERSE_TYPE", "CHILD_ITEM_ID" ]
  }, {
    "type" : "ITEM_ORDER",
    "dataSourceName" : "item_orders.csv",
    "dataSourceColumnList" : [ "ITEM_ID", "ID", "ORDER_REF", "ORDER_DATE",
"LINE_NUMBER", "LINE_ACTION", "LINE_ACTION_MODE", "PLAN_ITEM_ID",
"PLAN_ITEM_ACTION" ]
  }, {
    "type" : "ITEM_ORDER_COMMENTS",
    "dataSourceName" : "item_order_comments.csv",
    "dataSourceColumnList" : [ "ORDER_ID", "COMMENT_DETAIL" ]
  } ]
}
```

Mandatory and Optional Columns

The following table indicates which columns are mandatory or optional:

| Entity Type | Mandatory Columns | Optional Columns |
|----------------------|---|---|
| FSI_PARTY | ID(VARCHAR2) PARTY_TYPE(VARCHAR2) STATUS(VARCHAR2) OWNED_BY(VARCHAR2) CREATED_BY(VARCHAR2) CREATED_ON(TIMESTAMP(6)) VERSION(NUMBER), DELETED(NUMBER) (0 for not deleted, 1 for deleted) | PARTY_REF(VARCHAR2) NAME(VARCHAR2) SUB_TYPE(VARCHAR2) PARENT_PARTY_ID(VARCHAR2) UPDATED_BY(VARCHAR2) UPDATED_ON(TIMESTAMP(6)) |
| PARTY_CHARACTERISTIC | ID(VARCHAR2) PARTY_ID(VARCHAR2) (the party to relate to) CHARACTERISTIC_NAME(VARCHAR2) CHARACTERISTIC_VALUE(VARCHAR2) | N/A |
| ITEM | ID(VARCHAR2) PRODUCT_ID(VARCHAR2) ITEM_TYPE(VARCHAR2) STATUS(VARCHAR2) PARTY_ID(VARCHAR2) START_DATE(TIMESTAMP(6)) OWNED_BY(VARCHAR2) CREATED_BY(VARCHAR2) CREATED_ON(TIMESTAMP(6)) VERSION(NUMBER) DELETED(NUMBER) (0 for not deleted, 1 for deleted) | ITEM_REF(VARCHAR2) PRODUCT_VERSION(VARCHAR2) NAME(VARCHAR2) SUB_TYPE(VARCHAR2) END_DATE(TIMESTAMP(6)) UPDATED_BY(VARCHAR2) UPDATED_ON(TIMESTAMP(6)) |
| ITEM_CHARACTERISTIC | ID(VARCHAR2) ITEM_ID(VARCHAR2) (the item to relate to) CHARACTERISTIC_NAME(VARCHAR2) CHARACTERISTIC_VALUE(VARCHAR2) | N/A |

| Entity Type | Mandatory Columns | Optional Columns |
|-----------------------|--|--|
| ITEM_RELATIONS HIP | ID(VARCHAR2) ITEM_ID(VARCHAR2) (the item to relate to) FORWARD_TYPE(VARCHAR2) REVERSE_TYPE(VARCHAR2) CHILD_ITEM_ID(NUMBER) (the child item to relate to) | N/A |
| ITEM_ORDER | ITEM_ID(VARCHAR2) (the item to relate to) ID(VARCHAR2) ORDER_REF(VARCHAR2) ORDER_DATE(TIMESTAMP(6)) LINE_NUMBER(VARCHAR2) LINE_ACTION(VARCHAR2) | LINE_ACTION_MODE(VARCHAR2) PLAN_ITEM_ID(VARCHAR2) PLAN_ITEM_ACTION(VARCHAR2) |
| ITEM_ORDER_COMMENTS | ORDER_ID COMMENT_DETAIL | N/A |

Triggering the Bulk Load

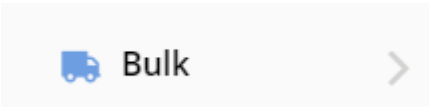
You will need to use the TIBCO Fulfillment Subscriber Inventory UI to trigger the bulk load. Logs are available on the UI and on the Oracle server during and after the load.

Prerequisites

User must have administrator privileges to trigger the bulk load.

Procedure

1. Log in to TIBCO Fulfillment Subscriber Inventory.

2. Click **Bulk**  on the left side of the window. You are directed to the "Bulk loads" page. From this page, you can view previous bulk load logs.
3. Provide a bulk load ID and click **Load**.

Bulk Load Logging

There are four types of log files created for each data input file. The bulk load process logs the various stages of execution. A unique ID is generated for each load.

The log files for the bulk load will be created in the same directory where the bulk load files are placed (the directory created in step 2 in [Configuring for the Bulk Load](#)).

The following log files are generated for the particular load process:

Log File

This file is used by Oracle to log information about the process used to create the external table. The log file name has the following format: Log_<EntityName>_<LoadId>.log (for example, Log_Item_001.log) This file contains the logs generated by the ACCESS driver and is created by the Oracle server.

Bad File

This file contains records which cannot be loaded because of errors. For example, a record was written to the bad file because a field in the datafile could not be converted to the datatype of a column in the external table. The bad file name has the following format: Bad_<EntityName>_<LoadId>.bad (for example, Bad_Item_001.bad). This file will only be created if any bad records are encountered. This file contains bad records as detected by the ACCESS driver as well as the insert process and is created by the Oracle server.

Discard File

This file contains records that fail the condition in the LOAD WHEN clause of the statement used to create the external table. This file will only be created if any records that fail the LOAD WHEN condition. The discard file name has the following format: Discard_<EntityName>_<LoadId>.discard (For example, Bad_Item_001.bad).

Stored Procedure logs

This file is created by the procedures which copy the records from the external table to the actual table. This file will display any errors encountered during the copying process. It also displays the current status of the load. The file name has the following format:

Log_SP_<EntityName>_<LoadId>.log. The following is an example of the contents of this log file:

```
05-Jan-2016 17:09:50.430000000 - Load has started with commit frequency 10
05-Jan-2016 17:10:05.510000000 - Committed Inventory items after processing
2000(1-2000) records
05-Jan-2016 17:10:11.698000000 - Committed Inventory items after processing
2000(2001-4000) records
05-Jan-2016 17:10:12.712000000 - Committed Inventory items after processing
2000(4001-6000) records
05-Jan-2016 17:10:38.226000000 - Committed Inventory items after processing
2000(6001-8000) records
05-Jan-2016 17:10:39.492000000 - Committed Inventory items after processing
2000(8001-10000) records
...
...
... (truncated for brevity)
...
...
05-Jan-2016 17:13:19.685000000 - Committed Inventory items after processing
1156(102001-103156) records
05-Jan-2016 17:13:19.686000000 - Completed load of Inventory items after loading
103156 records out of 103156 records.
05-Jan-2016 17:13:19.688000000 - Load has ended
```

Uninstalling TIBCO Fulfillment Subscriber Inventory

Procedure

- To uninstall Fulfillment Subscriber Inventory, navigate to the `$TIBCO_HOME/$FSI_HOME/tools/universal_installer` directory and run the `TIBCOUniversalInstaller-<os-type>.bin` script.



Uninstaller removes or uninstalls the files which are installed during the installation. It does not delete the seed data and repository metadata.