



TIBCO® Product and Service Catalog powered by TIBCO EBX®

Installation

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Installation Overview

TIBCO® Product and Service Catalog powered by TIBCO EBX® installation overview covers the following details:

- [Required Third-Party Products](#)
- [Operating System and Database Requirements](#)
- [Environment Variables](#)
- [All-in-one Installation](#)
- [Installing Using the Plug-in](#)

Required Third-Party Products

The following table lists the required third-party products (for version details, see the TIBCO Product and Service Catalog powered by EBX® readme file).

Component to Install	Supported Options	Reference
Java	Java 11.x	<i>TIBCO® Product and Service Catalog powered by TIBCO EBX® Installation</i>
Tomcat	Tomcat 8.x	<i>TIBCO® Product and Service Catalog powered by TIBCO EBX® Installation</i>

All-in-one Installation

This installation has a pre-configuration of h2 database and Tomcat as web server.

Before you begin

Confirm if you have Java 11 and TIBCO EMS (to publish records on JMS topics) installed on your computer.

Procedure

1. Download the product -TIB_psc-ebx_ver.zip and unzip the archive file. For example, if you unarchive the product at /home then the directory structure is /home/psc-ebx/1.2 and is called as *PSC_HOME*.
2. If TIBCO EMS requires any credentials to access then it can be configured in \$PSC_HOME/config/config.properties. You can set the username and password using the following properties.

```
com.tibco.psc.jms.topic.connection.username  
com.tibco.psc.jms.topic.connection.password
```

3. To publish records on JMS topics, perform the following steps:
 1. Set ebx.jms.activate=true in \$PSC_HOME/ebx.properties and update the TIBCO EMS address URL in the following resource property which is present in PSC_HOME/apache-tomcat/conf/context.xml

```
<Resource name="jms/EBX_JMSConnectionFactory"  
auth="Container"  
type="com.tibco.tibjms.TibjmsConnectionFactory"  
  
factory="com.tibco.tibjms.naming.TibjmsAdministeredObjectFac  
tory"  
address="tcp://localhost:7222"  
clientID="TibcoPSCEBX">  
</Resource>
```

2. Create all the topics in \$PSC_HOME/bin/install/ createtopic.txt in TIBCO EMS.

3. Copy the `jms-2.0.jar` and `tibjms.jar` files from the TIBCO EMS lib directory to `$PSC_HOME/apache-tomcat/lib` directory.
4. Run the `$PSC_HOME/apache-tomcat/bin/startPSCServer.bat/sh` script file to start the Tomcat server.
5. After starting the server, see [Configuring TIBCO Product and Service Catalog powered by EBX](#).

Result

The environment is ready to use.

Installing Using the Plug-in

To install using the plug-in, perform the following steps:

Procedure

1. Download the product - TIB_psc-ebx_plugin_ver.zip and unzip the archive file. For example, if the product is unarchived at /home then the directory structure is /home/psc-ebx/1.2. The /home/psc-ebx/1.2 directory location is called as EBX_HOME and PSC_HOME.
2. Configure the PostgreSQL database. For more information, see [Configuring the PostgreSQL Database](#).
3. Configure TIBCO EMS. This is required if the records have to be published on the JMS topics. For more information, see [Setting Up TIBCO Enterprise Message Service™](#).
4. Configure the Tomcat Application Server. For more information, see [Configuring the Tomcat Application Server](#).
5. Update the **artifactsFolder** and copy the **EnvironmentFolder** value in \$PSC_HOME/dev-artifacts.properties. The value of **artifactsFolder** is absolute. It must point to the \$PSC_HOME/data/artifacts directory. The value of **copyEnvironmentFolder** must be relative to the Tomcat bin directory. This must point to the copyEnv directory which is present in psc-mdm.war file. So the relative path is /webapps/psc-mdm/copyEnv.
6. Update the addonDamaDrivePathPrefix in dev-artifacts.properties file inside \$PSC_HOME. For example, addonDamaDrivePathPrefix=C:/EBX_Installations/PSC_EBX_Installations/PSC_EBX_ver._buildnumber/psc-ebx/ver/common/images.
7. Start the Tomcat Application Server and follow the process for [Configuring TIBCO Product and Service Catalog powered by EBX](#).

Environment Variables

The following table lists the environment variables with respective sample values and their description:

Environment Variable	Description
EBX_HOME	Defines EBX_HOME to point to the EBX directory where ebx.properties are present.
PSC_HOME	Defines PSC_HOME to point to the installation directory.
PSC_COMMON_DIR	All the standard configuration files for workflow and data validation as well as all customizations are stored in this directory. This directory also holds all files generated during normal application processing.

Configuring the PostgreSQL Database

To configure the PostgreSQL Database, perform the following steps:

Procedure

1. Start the PostgreSQL Database.
2. Update the properties from the below table in `$PSC_HOME/ebx.properties`. There are multiple occurrences of each property, you must comment all the below properties and there must be a single `ebx.persistence.factory` property which points to the PostgreSQL database.

Operation	PostgreSQL
<code>ebx.persistence.factory</code>	postgresql
<code>ebx.persistence.url</code>	Comment it
<code>ebx.persistence.driver</code>	Comment it
<code>ebx.persistence.user</code>	Comment it
<code>ebx.persistence.password</code>	Comment it

3. Run the `$PSC_HOME/db/postgresql/ install/doall` script. This creates the Database schema.
4. Add the below Datasource resource entry in the `context.xml` of Apache Tomcat.

```
<?xml version='1.0' encoding='utf-8'?>
<Context>
<WatchedResource>WEB-INF/web.xml</WatchedResource>
<WatchedResource>${catalina.base}/conf/web.xml</WatchedResource>
<Resources cachingAllowed="true" cacheMaxSize="100000"/>
<JarScanner scanClassPath="false" />
<Resource
name="jdbc/EBX_REPOSITORY"
auth="Container"
```

```
type="javax.sql.DataSource"
maxActive="100"
maxIdle="30"
driverClassName="${database.driverclass}"
url="${database.url}"
username="${database.username}"
password="${database.password}"
/>
</Context>
```

5. Update the **driverClassName**, **URL**, **username**, and **password**.
6. Copy the postgresql-42.2.11.jar file to Tomcat lib directory.

Setting Up TIBCO Enterprise Message Service™

You must configure TIBCO EMS™ to publish the records on JMS topics.

Procedure

1. Start TIBCO EMS™.
2. Set the `ebx.jms.activate` to `true` in `$EBX_HOME/ebx.properties`.
3. Create all the topics in TIBCO EMS™ which are present in `$PSC_HOME/bin/install/createtopic.txt`. Add the below resource entry in the `$TOMCAT_HOME/conf/context.xml` of Apache Tomcat.
4. Configure the following JMS connection factory and topics in `context.xml` file of Tomcat. This file is present in the `tom conf` directory of the Tomcat server.
5. Update the TIBCO EMS™ address in the JMS Connection Factory. This is the TIBCO EMS™ URL where TIBCO EMS™ is running.

```
<Resource name="jms/EBX_JMSConnectionFactory" auth="Container"
type="com.tibco.tibjms.TibjmsConnectionFactory"
factory="com.tibco.tibjms.naming.TibjmsAdministeredObjectFactory"
address="tcp://localhost:7222"
clientID="TibcoPSCEBX">
</Resource>
<Resource name="jms/tibco.ac.productmodel.topic"
auth="Container" type="com.tibco.tibjms.TibjmsTopic"
factory="com.tibco.tibjms.naming.TibjmsAdministeredObjectFactory"
address="tibco.ac.productmodel.topic" />
<Resource name="jms/tibco.ac.customermodel.topic"
auth="Container" type="com.tibco.tibjms.TibjmsTopic"
factory="com.tibco.tibjms.naming.TibjmsAdministeredObjectFactory"
address="tibco.ac.customermodel.topic" />
<Resource name="jms/tibco.ac.segmentmodel.topic"
auth="Container" type="com.tibco.tibjms.TibjmsTopic"
factory="com.tibco.tibjms.naming.TibjmsAdministeredObjectFactory"
address="tibco.ac.segmentmodel.topic" />
<Resource name="jms/tibco.ac.planfragmentmodel.topic"
auth="Container" type="com.tibco.tibjms.TibjmsTopic"
factory="com.tibco.tibjms.naming.TibjmsAdministeredObjectFactory"
address="tibco.ac.planfragmentmodel.topic" />
<Resource name="jms/tibco.ac.actionmodel.topic"
```

```

auth="Container" type="com.tibco.tibjms.TibjmsTopic"
factory="com.tibco.tibjms.naming.TibjmsAdministeredObjectFactory"
address="tibco.ac.actionmodel.topic" />
<Resource name="jms/tibco.ac.pricemodel.topic"
auth="Container" type="com.tibco.tibjms.TibjmsTopic"
factory="com.tibco.tibjms.naming.TibjmsAdministeredObjectFactory"
address="tibco.ac.pricemodel.topic" />
<Resource name="jms/tibco.ac.discountmodel.topic"
auth="Container" type="com.tibco.tibjms.TibjmsTopic"
factory="com.tibco.tibjms.naming.TibjmsAdministeredObjectFactory"
address="tibco.ac.discountmodel.topic" />
<Resource name="jms/tibco.ac.rulemodel.topic" auth="Container"
type="com.tibco.tibjms.TibjmsTopic"
factory="com.tibco.tibjms.naming.TibjmsAdministeredObjectFactory"
address="tibco.ac.rulemodel.topic" />
<Resource name="jms/tibco.ac.categorymodel.topic"
auth="Container" type="com.tibco.tibjms.TibjmsTopic"
factory="com.tibco.tibjms.naming.TibjmsAdministeredObjectFactory"
address="tibco.ac.categorymodel.topic" />

```

6. Copy the jms-2.0.jar and tibjms.jar files from \$EMS_HOME/lib directory to the \$PSC_HOME/apache-tomcat/lib directory.
7. If TIBCO EMS™ requires any credentials to access then it can be configured in \$PSC_HOME/config/config.properties. You can set the username and password using the following properties.

```

com.tibco.psc.jms.topic.connection.username
com.tibco.psc.jms.topic.connection.password

```

Result


TIBCO EMS™ is configured.

Configuring the Tomcat Application Server

For configuring an existing Tomcat server, see TIBCO EBX® documentation. Perform the following steps to configure the application server:

Procedure

1. Set the required environment variables. For more information, see [Environment Variables](#).
2. Copy all the .war files from \$PSC_HOME/wars to \$CATALINA_HOME/webapps directory.
3. Copy EBX™ and the third-party libraries from \$PSC_HOME/lib/external to Tomcat lib directory.
4. Update the following properties in \$PSC_HOME/dev-artifacts.properties.
 - **artifactsFolder** - The value of artifactsFolder can be absolute or relative. It must point to the \$PSC_HOME/data/artifacts directory.
 - **copyEnvironmentFolder** - The value of **copyEnvironmentFolder** must be relative to the Tomcat bin directory. This must point to the copyEnv directory which is present in psc-mdm.war file. So the absolute path is /webapps/psc-mdm/copyEnv.copyEnvironmentFolder.
 - **addonDamaDrivePathPrefix** - This property indicates where **dama** related artifacts are stored. You can specify the absolute path or a relative path. The TIBCO PSC related artifacts are stored at \$PSC_HOME/common directory. You can use \$PSC_HOME/common/images directory for **dama** related artifacts.

 **Note:** This property file does not resolve environment variables so specify absolute or relative path.

5. Update the \$CATALINA_HOME/conf/catalina.properties file:

```
tomcat.util.scan.DefaultJarScanner.jarsToSkip=\
ebx.jar,\
ebx-addons.jar,\
```

6. Update the \$CATALINA_HOME/conf/server.xml file:

```
<Context path="/ebx" crossContext="true" docBase="ebx.war"/>
```

7. Configure the launch properties. If Tomcat is launched by a command in Windows' Command Prompt or Unix shell then create another launcher file.

For Windows, edit the launcher file %CATALINA_HOME%\bin\startup.bat and set the following environment variables:

```
export PSC_HOME={PATH TO INSTALLED PRODUCT}
export TOMCAT_HOME={PATH TO TOMCAT HOME}
export EBX_HOME={PATH TO EBX HOME}
export PSC_COMMON_DIR={PATH TO PSC COMMON DIR}
JAVA_OPTS="$JAVA_OPTS -Debx.home=${EBX_HOME}"
JAVA_OPTS="$JAVA_OPTS -Debx.properties=${EBX_HOME}/ebx.properties"
JAVA_OPTS="$JAVA_OPTS -DPSC_HOME=${PSC_HOME}"
JAVA_OPTS="$JAVA_OPTS -DPSC_COMMON_DIR=${PSC_COMMON_DIR}"
```

Set the below jvm parameter if using JAVA 11

```
set "JAVA_OPTS=%JAVA_OPTS% --add-opens
jdk.management/com.sun.management.internal=ALL-UNNAMED"
```

For Linux, edit the launcher file \$CATALINA_HOME/bin/startup.sh and set the following environment variables:

```
export PSC_HOME={PATH TO INSTALLED PRODUCT}
export EBX_HOME={PATH TO EBX HOME}
export PSC_COMMON_DIR={PATH TO PSC COMMON DIR}
JAVA_OPTS="$JAVA_OPTS -Debx.home=${EBX_HOME}"
JAVA_OPTS="$JAVA_OPTS -Debx.properties=${EBX_HOME}/ebx.properties"
JAVA_OPTS="$JAVA_OPTS -DPSC_HOME=${PSC_HOME}"
JAVA_OPTS="$JAVA_OPTS -DPSC_COMMON_DIR=${PSC_COMMON_DIR}"
```

Set the below jvm parameter if using JAVA 11



```
JAVA_OPTS="$JAVA_OPTS --add-opens
jdk.management/com.sun.management.internal=ALL-UNNAMED"
export JAVA_OPTS
```

Result

Tomcat is configured. User accounts used to launch EBX™ must have create/update/delete rights on EBX_HOME & PSC_HOME directories.

Configuring TIBCO Product and Service Catalog powered by EBX


Procedure

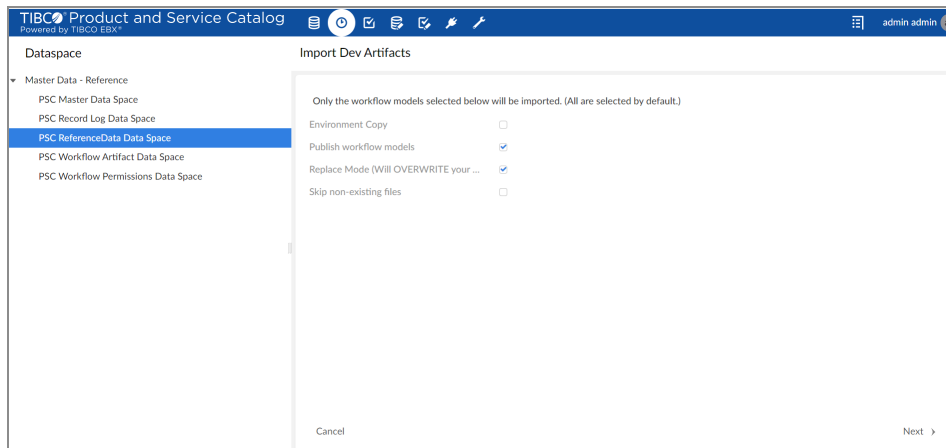
1. Go to `http://$host:$PORT/ebx` URL to open the Login page. The default port is 8080 (if not changed).
2. Login using following credentials:
 - username: admin
 - password: admin
3. Click the Administration icon  and select Add-ons Registration. The Registered Add-ons page opens. Click  to add a new add-on.
4. Add the following add-ons:
 - TIBCO EBX™ Digital Asset Manager - This add-on does not require a license key. Leave the license key field empty.
 - TIBCO EBX™ Data Exchange – This add-on requires a license key. You can get the TIBCO EBX™ Data Exchange license key from the `TIB_psc-ebx_version_addon_license_key.pdf` file which is bundled with the product.
5. Click **Save and Close**.
6. Click **Administration section > Directory > Roles** and create the **Tech Admin** role.
7. Assign this role to the admin user through the User menu by selecting the **Tech Admin** role and clicking **Associate**.
8. Import the Dev Artifacts. For more information, see [Importing Dev Artifacts](#).
9. Initialize the TIBCO® Product and Service Catalog environment by clicking **Dataspaces > Master Data - Reference > Actions > Admin > Initialize PSC Environment**.

Importing Dev Artifacts

To import the dev artifacts, perform the following steps:

Procedure

1. Click  to go to **Dataspaces** and select the **Master Data - Reference** dataspace.
2. Go to **Actions > Admin > select Import Dev Artifacts**.
3. The default options are selected already. Click **Next**.



This process creates the following environments:

- The **PSC Master Data Space** dataspace: This is the master dataspace for TIBCO® Product and Service Catalog.
- The following roles are created:

Role	Purpose
Data Analyst	Data creation, modification, and self approval
Workflow Executor	To view workflow parameters

- The following users are created:

Username	Role	Password
techadmin	Tech Admin	techadmin
dataanalyst	PSC - Data Analyst	Dataanalyst

- The required data models that you can view using the “techadmin” user.
- The dataset “PSCDataSet” into the “PSC Master Data Space” dataspace.

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® Product and Service Catalog powered by TIBCO EBX® is available on the [TIBCO® Product and Service Catalog powered by TIBCO EBX® Product Documentation](#) page.

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

- *TIBCO® Product and Service Catalog powered by TIBCO EBX® Release Notes*
- *TIBCO® Product and Service Catalog powered by TIBCO EBX® Installation*
- *TIBCO® Product and Service Catalog powered by TIBCO EBX® User Guide*
- *TIBCO® Product and Service Catalog powered by TIBCO EBX® Customization Guide*

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.

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