



# Talend Open Studio for ESB Installation and Upgrade Guide for Windows

7.0.1

# Contents

<b>Copyleft.....</b>	<b>3</b>
<b>Talend Open Studio for ESB: Prerequisites.....</b>	<b>5</b>
Preparing your installation.....	5
Hardware requirements.....	5
Software requirements.....	6
Setting up JAVA_HOME.....	14
<b>Installing your Talend Open Studio for ESB manually.....</b>	<b>15</b>
Installing and configuring your Talend Studio.....	15
Installing and configuring Talend ESB.....	21
<b>Upgrading your Talend products.....</b>	<b>30</b>
Backing up the environment.....	30
Upgrading the Talend projects in Talend Studio.....	30
<b>Appendices.....</b>	<b>31</b>
Cheatsheet: start and stop commands for Talend server modules.....	31
Supported Third-Party System/Database/Business Application Versions.....	32

# Copyleft

Adapted for 7.0.1. Supersedes previous releases.

Publication date: April 13, 2018

This documentation is provided under the terms of the Creative Commons Public License (CCPL).

For more information about what you can and cannot do with this documentation in accordance with the CCPL, please read: <http://creativecommons.org/licenses/by-nc-sa/2.0/>.

## Notices

Talend and Talend ESB are trademarks of Talend, Inc.

Talend, Talend Integration Factory, Talend Service Factory, and Talend ESB are trademarks of Talend, Inc.

Apache CXF, CXF, Apache Karaf, Karaf, Apache Camel, Camel, Apache Maven, Maven, Apache Syncope, Syncope, Apache ActiveMQ, ActiveMQ, Apache Log4j, Log4j, Apache Felix, Felix, Apache ServiceMix, ServiceMix, Apache Ant, Ant, Apache Derby, Derby, Apache Tomcat, Tomcat, Apache ZooKeeper, ZooKeeper, Apache Jackrabbit, Jackrabbit, Apache Santuario, Santuario, Apache DS, DS, Apache Avro, Avro, Apache Abdera, Abdera, Apache Chemistry, Chemistry, Apache CouchDB, CouchDB, Apache Kafka, Kafka, Apache Lucene, Lucene, Apache MINA, MINA, Apache Velocity, Velocity, Apache FOP, FOP, Apache HBase, HBase, Apache Hadoop, Hadoop, Apache Shiro, Shiro, Apache Axiom, Axiom, Apache Neethi, Neethi, Apache WSS4J, WSS4J are trademarks of The Apache Foundation. Eclipse Equinox is a trademark of the Eclipse Foundation, Inc. Hyperic is a trademark of VMware, Inc. Nagios is a trademark of Nagios Enterprises, LLC.

All brands, product names, company names, trademarks and service marks are the properties of their respective owners.

## License Agreement

The software described in this documentation is licensed under the Apache License, Version 2.0 (the "License"); you may not use this software except in compliance with the License. You may obtain a copy of the License at <http://www.apache.org/licenses/LICENSE-2.0.html>. Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

This product includes software developed at AOP Alliance (Java/J2EE AOP standards), ASM, AntLR, Apache ActiveMQ, Apache Ant, Apache Avro, Apache Axiom, Apache Axis, Apache Axis 2, Apache Batik, Apache CXF, Apache Camel, Apache Chemistry, Apache Common Http Client, Apache Common Http Core, Apache Commons, Apache Commons Bcel, Apache Commons JXPath, Apache Commons Lang, Apache Derby Database Engine and Embedded JDBC Driver, Apache Geronimo, Apache Hadoop, Apache Hive, Apache HttpClient, Apache HttpComponents Client, Apache JAMES, Apache Log4j, Apache Lucene Core, Apache Neethi, Apache POI, Apache Pig, Apache Qpid-Jms, Apache Tomcat, Apache Velocity, Apache WSS4J, Apache WebServices Common Utilities, Apache Xml-RPC, Apache Zookeeper, Box Java SDK (V2), CSV Tools, DataStax Java Driver for Apache Cassandra, Ehcache, Ezmorph, Ganymed SSH-2 for Java, Google APIs Client Library for Java, Google Gson, Groovy, Guava: Google Core Libraries for Java, H2 Embedded Database and JDBC Driver, HsqlDB, Ini4j, JClouds, JLine, JSON, JSR 305: Annotations for Software Defect Detection in Java, JUnit, Jackson Java JSON-processor, Java API for RESTful Services, Jaxb, Jaxen, Jettison, Jetty, Joda-Time, Json Simple, MetaStuff, Mondrian, OpenSAML, Paracel JDBC Driver, PostgreSQL JDBC Driver, Resty: A simple HTTP REST client for Java,

Rocoto, SL4J: Simple Logging Facade for Java, SQLite JDBC Driver, Simple API for CSS, SshJ, StAX API, StAXON - JSON via StAX, Talend Camel Dependencies (Talend), The Castor Project, The Legion of the Bouncy Castle, W3C, Woden, Woodstox : High-performance XML processor, XML Pull Parser (XPP), Xalan-J, Xerces2, XmlBeans, XmlSchema Core, Xmlsec - Apache Santuario, Zip4J, atinject, dropbox-sdk-java: Java library for the Dropbox Core API, google-guice. Licensed under their respective license.

# Talend Open Studio for ESB: Prerequisites

## Preparing your installation

### Software packages

This page details the software packages you need to download to install your Talend product.

In this page:

- YYYYMMDD\_HHmm corresponds to the package timestamp
- A.B.C. corresponds to package version number (Major. Minor. Patch.)

The software modules must be all in the same versions/revisions. This means that both YYYYMMDD\_HHmm and A.B.C must match on both client side and server side.

### Manual installation software packages

File name	Description
Talend-Studio-YYYYMMDD_HHmm-VA.B.C.zip	Studio IDE (GUI) To download it, go to <a href="#">this page</a>
Talend-Runtime-VA.B.C-YYYYMMDDHHmm.zip	Talend Runtime: OSGi Container including Talend JobServer. Talend Runtime is a standalone equivalent to the Talend ESB OSGi Container ( <code>container</code> folder) of Talend ESB.
Talend-ESB-YYYYMMDD_HHmm-VA.B.C.zip	Talend ESB: application integration solution with an OSGi Container, Service Locator, Service Activity Monitoring and Security Token Service. It includes the Talend Runtime (in the <code>container</code> folder) and provides additional parts like examples, standalone, Tomcat deployment relevant parts and other additional parts primarily used by Java Developers.

## Community and Support

There are several ways to get help and support for your Talend installation:

- [Official Talend Documentation](#). Here you can find everything to help you install and use your Talend product.
- [Talend Community](#). This is the place where you can ask questions to the community, and get answers.

## Hardware requirements

Before installing your Talend product, make sure the machines you are using meet the following hardware requirements recommended by Talend.

Memory and disk usage heavily depends on the size and nature of your Talend projects. However, in summary, if your Jobs include many transformation components, you should consider upgrading the total amount of memory allocated to your servers, based on the following recommendations.

## Memory usage

Product	Client/Server	Recommended alloc. memory	Note
Talend Studio	Client	3GB minimum, 4 GB recommended	
Talend Runtime	Server	2GB minimum, 4 GB recommended	Memory requirements depend on the executed processes.

## Disk space requirements

Product	Client/Server	Required disk space for installation	Required disk space for use
Talend Studio	Client	3GB	3+GB
Talend Runtime	Server	400MB	400+ MB

## Software requirements

### Compatible Operating Systems

This page details the recommended and supported Operating Systems for Talend products.

In the following documentation:

- recommended: designates an environment recommended by Talend based on our experiences and customer usage;
- supported: designates a supported environment for use with the listed component or service;
- supported with limitations: designates an environment that is supported by Talend but with certain conditions explained in notes.

The information contained in the following table is applicable for the 7.0.1 version of your Talend product at the time of its release. For updated information on the latest supported software or databases, see the online version of this page on [Talend Help Center](#).

### Talend Studio

Support type	Operating System (64-bit)	
Recommended	Linux	Ubuntu 16.04 LTS
	Windows	Microsoft Windows 10

Support type	Operating System (64-bit)	
Supported	Linux	Ubuntu 17.04
		Ubuntu 14.04 LTS
		Red Hat Enterprise Linux Server/ CentOS 7.4
		Red Hat Enterprise Linux Server/ CentOS 7.3
		Red Hat Enterprise Linux Server/ CentOS 7.2
		Red Hat Enterprise Linux Server/ CentOS 7.1
		Red Hat Enterprise Linux Server/ CentOS 6.9
		Red Hat Enterprise Linux Server/ CentOS 6.8
	Windows	Microsoft Windows Professional 7
		Microsoft Windows Server 2016 RTM
		Microsoft Windows Server 2012 RTM
	Mac	Apple macOS 10.13/High Sierra
		Apple macOS 10.12/Sierra
		Apple OS X 10.11/El Capitan

### Talend Server modules

The server modules include:

- Talend ESB Servers
- Talend Runtime

Support type	Operating System		Processor
Recommended	Linux	Red Hat Enterprise Linux Server/CentOS 7.4	64 bits
	Windows	Microsoft Windows Server 2016	64 bits
Supported	Linux	Ubuntu 17.04	64 bits
		Ubuntu 16.04 LTS	64 bits
		Ubuntu 14.04 LTS	64 bits

Support type	Operating System	Processor	
		Red Hat Enterprise Linux Server/CentOS 7.3	64 bits
		Red Hat Enterprise Linux Server/CentOS 7.2	64 bits
		Red Hat Enterprise Linux Server/CentOS 7.1	64 bits
		Red Hat Enterprise Linux Server/CentOS 6.9	64 bits
		Red Hat Enterprise Linux Server/CentOS 6.8	64 bits
		SUSE SLES 12	64 bits
		SUSE SLES 11	64 bits
	Windows	Microsoft Windows Server 2012 R2	64 bits
		Microsoft Windows Server 2012	64 bits Except for Talend Data Preparation.

## Compatible Java Environments

The following tables provide information on the recommended Java Environment you should download and install to use your Talend product.

The Compiler Compliance Level corresponds to the Java version used for the Job code generation. This option can be changed in the Studio preferences. For more information, see the Talend Studio User Guide.

In the following documentation:

- recommended: designates an environment recommended by Talend based on our experiences and customer usage;
- supported: designates a supported environment for use with the listed component or service;
- supported with limitations: designates an environment that is supported by Talend but with certain conditions explained in notes.

The information contained in the following table is applicable for the 7.0.1 version of your Talend product at the time of its release. For updated information on the latest supported software or databases, see the online version of this page on [Talend Help Center](#).








## Studio Java environments

Support type	JRE Version	Studio JDK Compiler Compliance Level
Recommended	Oracle 8	1.8 (default)

## Server Java environments

The server modules include:

- Talend ESB Servers
- Talend Runtime

JRE Version	Talend JobServer	Talend MDM Server	Talend ESB/Talend Runtime	Talend ESB/ Microservices	Big Data Distributions	Talend Server Application	Comment/ Limitation
Oracle 8	 (R)	 (R)	 (R)	 (R)	Compatible with Java 1.8	 (R)	Compatible with Studio JDK Compiler Compliance Level 1.7 (default/ recommended) or 1.8

## Compatible Apache software and JMS Brokers for Talend ESB

The following tables provide information on the compatible Apache software and JMS Brokers for Talend ESB.

The information contained in the following table is applicable for the 7.0.1 version of your Talend product at the time of its release. For updated information on the latest supported software or databases, see the online version of this page on [Talend Help Center](#).

### Supported Apache software

Software	Note	More information
Apache Karaf 4.1.5	Service release upgrade.	<a href="#">Release notes</a>
Apache CXF 3.2.4	Minor release upgrade.	<a href="#">Release notes</a>
Apache Camel 2.20.1	Minor release upgrade.	<a href="#">Release notes</a>
Apache ActiveMQ 5.15.2	Minor release upgrade.	<a href="#">Release notes</a>

### Supported Messaging Brokers for SOAP/JMS

Software	More information
Apache ActiveMQ 5.15.2	<a href="#">Release notes</a>

Software	More information
IBM WebSphere MQ 7.5	<a href="#">Release notes</a>

## Compatible web application servers

The following tables provide information on the recommended and supported Web application servers for the Talend server modules.

In the following documentation:

- recommended: designates an environment recommended by Talend based on our experiences and customer usage;
- supported: designates a supported environment for use with the listed component or service;
- supported with limitations: designates an environment that is supported by Talend but with certain conditions explained in notes.

The information contained in the following table is applicable for the 7.0.1 version of your Talend product at the time of its release. For updated information on the latest supported software or databases, see the online version of this page on [Talend Help Center](#).

## Compatible containers

The following tables provide information on the recommended and supported containers for the Talend server modules.

In the following documentation:

- recommended: designates an environment recommended by Talend based on our experiences and customer usage;
- supported: designates a supported environment for use with the listed component or service;
- supported with limitations: designates an environment that is supported by Talend but with certain conditions explained in notes.

The information contained in the following table is applicable for the 7.0.1 version of your Talend product at the time of its release. For updated information on the latest supported software or databases, see the online version of this page on [Talend Help Center](#).

## Talend ESB

Support type	Runtime Containers	Note
Recommended	Talend Runtime (Apache Karaf) 7.0.1	Except for Talend Identity Management, where Apache Tomcat 8.5 is recommended.
	Apache Tomcat 8.5	Only for Talend Identity Management.
Supported	Apache Tomcat 8.5/8.0	Only for CXF Services, Camel Routes, Service Activity Monitoring, Talend Identity Management and Security Token Service.

## Compatible databases

The following tables provide information on the recommended and supported databases you can use with Talend server modules.

In the following documentation:

- recommended: designates an environment recommended by Talend based on our experiences and customer usage;
- supported: designates a supported environment for use with the listed component or service;
- supported with limitations: designates an environment that is supported by Talend but with certain conditions explained in notes.

The information contained in the following table is applicable for the 7.0.1 version of your Talend product at the time of its release. For updated information on the latest supported software or databases, see the online version of this page on [Talend Help Center](#).

### ESB Service Registry/Authorization/Talend Identity Management/Event Logging

Support type	Database	Note
Recommended	MySQL 5.7	The corresponding Amazon Relational Database Service (Amazon RDS) is supported. The corresponding Google Cloud SQL is supported.
	Oracle 12c	The corresponding Amazon Relational Database Service (Amazon RDS) is supported.
Supported	Derby DB > 10.8	
	MS SQL Server 2016	The corresponding Amazon Relational Database Service (Amazon RDS) is supported.
	MS SQL Server 2014	
	MS SQL Server 2012 (SP2)	
	MySQL 5.6	Only InnoDB table type is supported.
	Oracle 11g	
	PostgreSQL 9.6	The corresponding Amazon Relational Database Service (Amazon RDS) is supported. The corresponding Google Cloud SQL is supported.
	PostgreSQL 9.5	The corresponding Amazon Relational Database Service (Amazon RDS) is supported.

Support type	Database	Note
	PostgreSQL 9.4	PostgreSQL JDBC driver 9.4 is used.

## Port information

The following tables list the most important TCP/IP ports the Talend products use.

You need to make sure that your firewall configuration is compatible with these ports or change the default ports where needed.

Additionally, add the following websites to the whitelist:

- update.talend.com on port 443
- www.bonita.com
- talend-update.talend.com on port 443
- www.talend.com on port 443
- talendforge.org on port 443
- community.talend.com on port 443
- help.talend.com on port 443

In this table:

- **Port:** a TCP/IP port or a range of ports.
- **Direction:** In (Inbound); Out (Outbound) - related to the communication direction (for example a HTTP Port for a CXF Route or Service we listen on request) will be an 'Inbound' port. For example, a browser which sends a request to port 7080 will have this port as 'Outbound' port in this list.
- **Usage:** which part of the Product component uses this port (for example 1099 is used by the JMX Monitoring component of Talend Runtime).
- **Configuration file:** the file or location where the value can be changed.
- **Note:** anything which is important to mention additionally.

## Talend Studio ports

Port	Direction	Usage	Configuration file
8090	IN	tESBProviderRequest (SOAP Data Server) and tRESTRRequest (REST Data Service default port)	REST: Preferences / Talend / ESB SOAP: tESBProviderRequest component details

## Talend ESB Ports

Port	Direction	Usage	Configuration file (./ etc)	Note
8040	IN	Standard HTTP port	org.ops4j.pax.web.cfg	See the Talend ESB Container Administration Guide for config scripts and also the admin: command which allows you to set ports to different values.
9001	IN	Standard HTTPS port	org.ops4j.pax.web.cfg	
1099	IN	JMX - RMI Registry Port	org.apache.karaf.management.cfg	
44444	IN	JMX - RMI Registry Port	org.apache.karaf.management.cfg	
8101	IN	Apache Karaf - SSH Port	org.apache.karaf.shell.cfg	
61616	IN	Messaging - ActiveMQ Broker Port	system.properties	
2181	IN OUT	ESB Locator - Apache Zookeeper Port	Server: org.talend.esb.locator.server.cfg  Client: org.talend.esb.locator.cfg	
1527	IN	ESB SAM Database - Apache Derby Port	The port value of the embedded Derby database depends on the Talend Runtime Container configuration, as the database is shipped with the container.	The embedded Apache Derby DB is only supported for Development and Testing purpose in production system environments. The Container, which hosts the SAM Server, needs access to the related Database port. The port depends on the Database and Database configuration.

Port	Direction	Usage	Configuration file (./ etc)	Note
8082	OUT	ESB Runtime Features Installer - Talend Artifact Repository access	org.ops4j.pax.url.mvn.cfg	
(*)	IN OUT	Customer Services, Routes etc.		Any of the Data Services, Routes and other components additionally deployed to the container might require additional port to be accessible.

## Setting up JAVA\_HOME

In order for your Talend product to use the Java environment installed on your machine, you must set the JAVA\_HOME environment variable.

### Procedure

1. Find the folder where Java is installed, usually `C:\Program Files\Java\jre*.x.x`.
2. Open the **Start** menu and type `Environment variable` in the search bar to open the Environment variable properties.
3. Click **Environment Variables...**
4. Under **System Variables**, click **New...** to create a variable. Name the variable `JAVA_HOME`, enter the path to your Java environment, and click **OK**.
5. Under **System Variables**, select the **Path** variable, click **Edit...** and add the following variable at the end of the Path variable value: `;%JAVA_HOME%\bin`

# Installing your Talend Open Studio for ESB manually

## Installing and configuring your Talend Studio

### Unzip the archive

#### Procedure

1. Download your product from [this page](#).
2. Unzip it using 7-zip.

#### Results

When you extract it, you get two folders:

- `Runtime_ESBSE` that contains Talend Runtime and examples.
- `studio` that contains Talend Studio.

### Editing the memory and JVM settings

To gain in performance at runtime and when launching Talend Studio, proceed as follows: you can edit the memory settings in the `.ini`.

#### Procedure

1. Edit the `TOS_ESB-win-x86_64.ini` file.
2. Edit the memory attributes. For example:

```
-vmargs -Xms40m -Xmx500m -XX:MaxMetaspaceSize=256m
```

For more details, see <http://www.oracle.com/technetwork/java/hotspotfaq-138619.html>.

### Launching your Talend Studio

#### Procedure

Double-click the `TOS_ESB-win-x86_64.exe` executable to launch your Talend Studio.

### Installing external modules

Talend Studio requires specific third-party Java libraries or database drivers (`.jar` files) to be installed to connect to sources and targets.

Those libraries or database drivers, known as external modules, may be required by some of Talend components or by some connection wizards or by both. Due to license restrictions, Talend may not be able to ship some of these external modules within Talend Studio. You need to install them for your Studio to functional properly.

#### Identify required external modules

When you launch Talend Studio or select **Help > Install Additional Packages** in the Talend Studio menu, if any external modules are found missing for any features, the **Additional Talend packages**

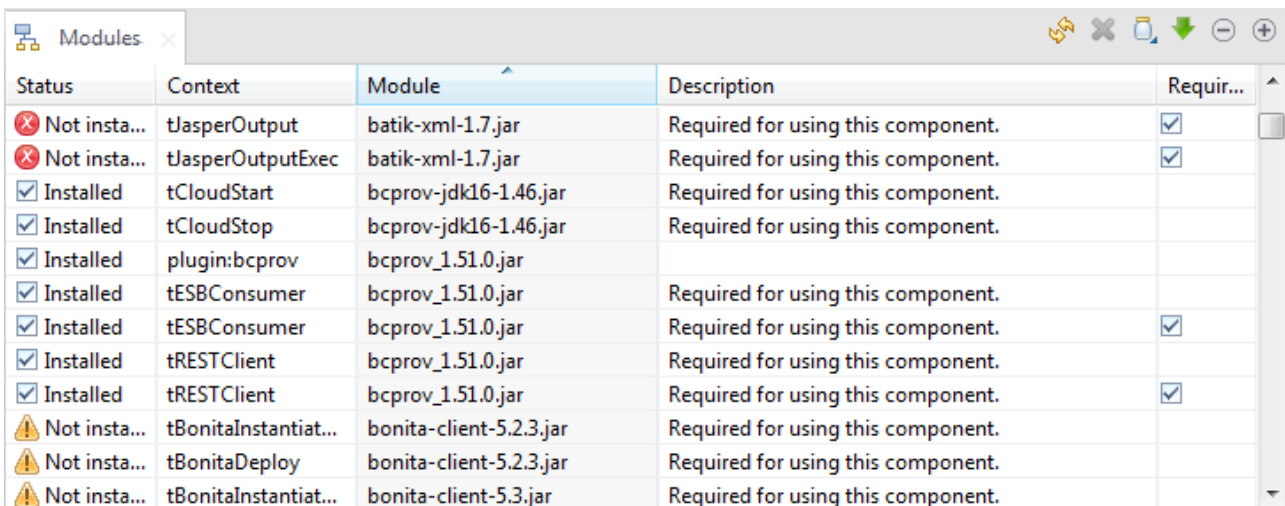
wizard opens, showing the **Optional** and **Required third-party libraries** check boxes. Make sure these check boxes are selected and click **Finish** to open the **Download external modules** dialog box, which lists all the available external modules, displays the license terms under which the external modules are provided, and lets you install all the modules at a single click. For more information, see [Install external modules](#) on page 19.

On your design workspace, if a component requires the installation of external modules before it can work properly, a red error indicator appears on the component. With your mouse pointer over the error indicator, you can see a tooltip message showing which external modules are required for that component to work.

When you open the **Basic settings** or **Advanced settings** view of a component for which one or more external modules are required, you will see a piece of highlighted information about external modules, followed by an **Install** button. Clicking the **Install** button opens a wizard that will show you the external modules to be installed.



The **Modules** view lists all the modules required to use the components embedded in Talend Studio, including those Java libraries and drivers that you must install to get the relevant components or Metadata connection working.

If the **Modules** view is not shown under your design workspace, go to **Window > Show View... > Talend** and then select **Modules** from the list.



Status	Context	Module	Description	Requir...
Not insta...	tJasperOutput	batik-xml-1.7.jar	Required for using this component.	<input checked="" type="checkbox"/>
Not insta...	tJasperOutputExec	batik-xml-1.7.jar	Required for using this component.	<input checked="" type="checkbox"/>
Installed	tCloudStart	bcprov-jdk16-1.46.jar	Required for using this component.	
Installed	tCloudStop	bcprov-jdk16-1.46.jar	Required for using this component.	
Installed	plugin:bcprov	bcprov_1.51.0.jar		
Installed	tESBConsumer	bcprov_1.51.0.jar	Required for using this component.	
Installed	tESBConsumer	bcprov_1.51.0.jar	Required for using this component.	<input checked="" type="checkbox"/>
Installed	tRESTClient	bcprov_1.51.0.jar	Required for using this component.	
Installed	tRESTClient	bcprov_1.51.0.jar	Required for using this component.	<input checked="" type="checkbox"/>
Not insta...	tBonitaInstantiat...	bonita-client-5.2.3.jar	Required for using this component.	
Not insta...	tBonitaDeploy	bonita-client-5.2.3.jar	Required for using this component.	
Not insta...	tBonitaInstantiat...	bonita-client-5.3.jar	Required for using this component.	

The table below describes the information presented in the **Modules** view.


Column	Description
<b>Status</b>	<p>points out if a module is installed or not installed on your system.</p> <p>The  icon indicates that the module is not necessarily required for the corresponding component or Metadata connection listed in the <b>Context</b> column.</p> <p>The  icon indicates that the module is absolutely required for the corresponding component or Metadata connection.</p>
<b>Context</b>	<p>lists the name of <b>Talend</b> component or Metadata connection using the module. If this column is empty, the module is then required for the general use of Talend Studio.</p>



Column	Description
	This column lists any external libraries added to the routines you create and save in your Talend Studio library folder. For more information, see the Talend Studio User Guide.
<b>Module</b>	lists the module exact name.
<b>Description</b>	explains why the module/library is required.
<b>Required</b>	the selected check box indicates that the module is required.

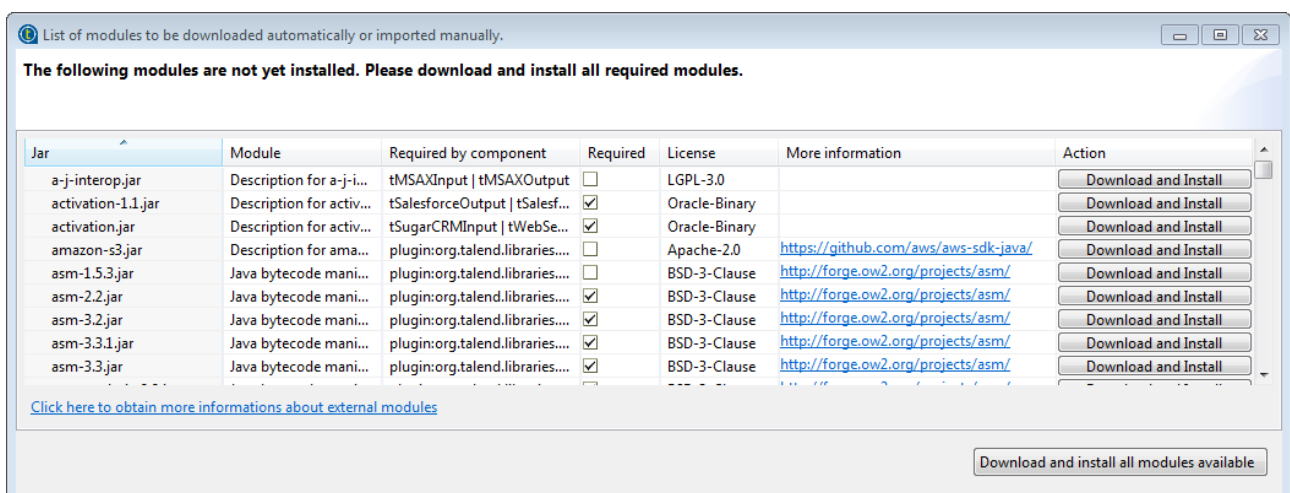
In addition to the **Modules** view, Talend Studio provides a mechanism that enables you to easily identify, download and install most of the required third-party modules from the Talend website and directs you to valid websites for the rest.

A Jar installation wizard appears whenever any required external module is found missing for any feature in Talend Studio, including when you:

- drop a component from the **Palette** if one or more external modules required for that component to work are missing in Talend Studio, or
- click the **Check** button in a Metadata connection setup wizard in Talend Studio if one or more external modules required for the connection are missing in Talend Studio, or
- click the **Guess schema** button in the **Component** view of a component if one or more external modules required for that component to work are missing in Talend Studio,
- click **Install** on the top of the **Basic settings** or **Advanced settings** view of a component for which one or more required external modules are missing,
- run a Job that involves components or Metadata connections for which one or more required external modules are missing, or
- click the  button in the **Modules** view.



**Note:** When you click this button, the wizard that appears will list all the required external modules that are not integrated in Talend Studio.

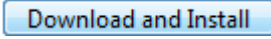


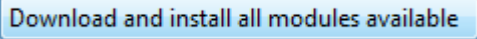



Jar	Module	Required by component	Required	License	More information	Action
a-j-interop.jar	Description for a-j-i...	tMSAXInput   tMSAXOutput	<input type="checkbox"/>	LGPL-3.0		Download and Install
activation-1.1.jar	Description for activ...	tSalesforceOutput   tSalesf...	<input checked="" type="checkbox"/>	Oracle-Binary		Download and Install
activation.jar	Description for activ...	tSugarCRMInput   tWebSe...	<input checked="" type="checkbox"/>	Oracle-Binary		Download and Install
amazon-s3.jar	Description for ama...	plugin:org.talend.libraries...	<input type="checkbox"/>	Apache-2.0	<a href="https://github.com/aws/aws-sdk-java/">https://github.com/aws/aws-sdk-java/</a>	Download and Install
asm-1.5.3.jar	Java bytecode mani...	plugin:org.talend.libraries...	<input type="checkbox"/>	BSD-3-Clause	<a href="http://forge.ow2.org/projects/asm/">http://forge.ow2.org/projects/asm/</a>	Download and Install
asm-2.2.jar	Java bytecode mani...	plugin:org.talend.libraries...	<input checked="" type="checkbox"/>	BSD-3-Clause	<a href="http://forge.ow2.org/projects/asm/">http://forge.ow2.org/projects/asm/</a>	Download and Install
asm-3.2.jar	Java bytecode mani...	plugin:org.talend.libraries...	<input checked="" type="checkbox"/>	BSD-3-Clause	<a href="http://forge.ow2.org/projects/asm/">http://forge.ow2.org/projects/asm/</a>	Download and Install
asm-3.3.1.jar	Java bytecode mani...	plugin:org.talend.libraries...	<input checked="" type="checkbox"/>	BSD-3-Clause	<a href="http://forge.ow2.org/projects/asm/">http://forge.ow2.org/projects/asm/</a>	Download and Install
asm-3.3.jar	Java bytecode mani...	plugin:org.talend.libraries...	<input checked="" type="checkbox"/>	BSD-3-Clause	<a href="http://forge.ow2.org/projects/asm/">http://forge.ow2.org/projects/asm/</a>	Download and Install

[Click here to obtain more informations about external modules](#)

Download and install all modules available

The table below describes the information presented in the wizard.

Item	Description
Jar	The file name of the external module.
Module	A short description about the nature of the module.
Required by component	Lists the components that require the external module.
Required	The selected check box indicates that the module is required.
License	The license under which the module is provided.
More information	Provides the URL of the valid website where you can find more information about this module and download the module manually.
Action	<p>: Click to open the <b>Download external modules</b> dialog box to download and install the module, which is available on the Talend website;</p> <p><a href="#">Open in browser</a> : Click the link to open the valid website to download the module, which is not available on the Talend website, and then click the jar button to import the downloaded module into your Talend Studio;</p> <p>: You need to find and download the module yourself and click the jar button to import it into your Talend Studio.</p>
	Click to open the <b>Download external modules</b> dialog box to download and install all the required modules that are available on the Talend website.
Do not show again	Select to prevent the wizard from appearing again unless you click the  button in the <b>Modules</b> tab view. This check box shows only when you drop a component, set up a connection, or guess the schema of a database, that requires an external module, or click the <b>Install</b> button on the <b>Component</b> tab of a component that requires an external module.
<b>Click here to obtain more information about external modules</b>	Click to go to Talend online documentation on installing third-party modules.

This wizard lists the external modules to be installed, the licenses under which they are provided, and the URLs of the valid websites where they are downloadable, and allows you to download and install automatically all the modules available on the Talend website and download those not available on the Talend website by following the links provided in the **Action** column and then install them into your Talend Studio manually.

When you drop a component, set up a connection, or guess the schema of a database, that requires an external module for which neither the Jar file nor its download URL information is available on the Talend website, the Jar installation wizard does not appear, but the **Error Log** view will present an

error message informing you that the download URL for that module is not available. You can try to find and download it by yourself, and then install it manually into Talend Studio.

**Note:** To show the **Error Log** view on the tab system, go to **Window > Show views**, then expand the **General** node and select **Error Log**.

## Install external modules

### Downloading and installing modules in Talend Studio

#### Before you begin

If you are working behind a network proxy, make sure you have correctly set up your proxy before you can download and install external modules in your Talend Studio.

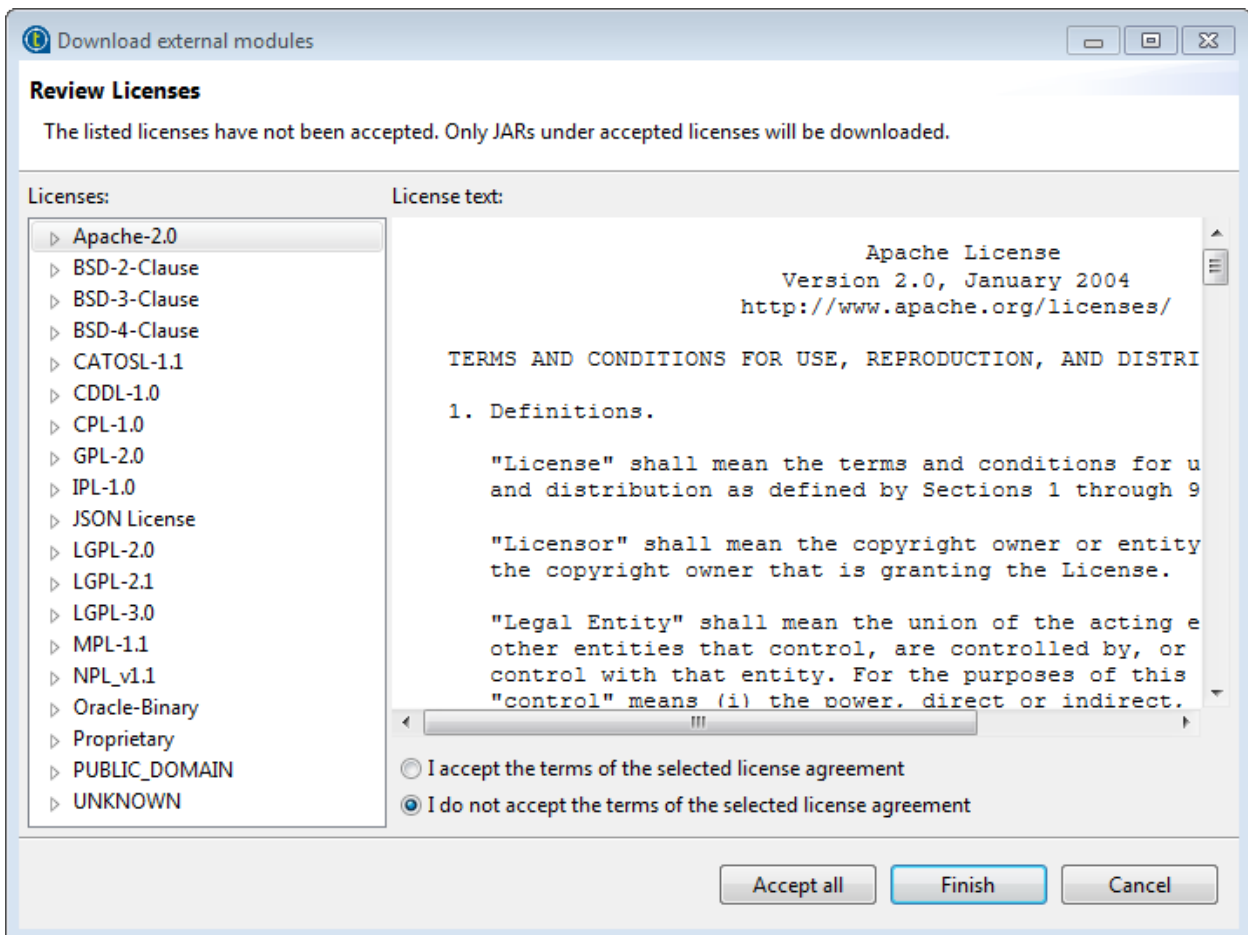
To access the proxy settings, select **Window > Preferences** from the menu to open the **Preferences** window, then expand the **General** node and click **Network Connections**.

Add the web site <http://talend-update.talend.com> and the port 443 to the whitelist.

#### Procedure

1. In the Jar installation wizard, click the **Download and Install** button to install a particular module, or click the **Download and install all modules available** button to install all the available modules, or select **Help > Install Additional Packages** from the menu to open the **Additional Talend Packages** wizard. From this wizard, make sure the **Optional third-party libraries** and **Required third-party libraries** check boxes are selected and click **Finish**. The **Download external modules** dialog box opens.

**Note:** This **Additional Talend Packages** wizard appears automatically when you launch Talend Studio if any additional packages, including external modules, need to be installed for any features to function in Talend Studio.




2. To download and install the external module(s) provided under a particular license, select that license from the **Licenses** pane, review the license terms, select the **I accept the terms of the license agreement** option, and click **Finish** to start the download and installation process.

To download and install all external modules provided under all the listed licenses, click the **Accept all** button to start the download and installation process.

Upon installation of the chosen external module or modules, a dialog box appears to notify you about the number of modules successfully installed and/or about the modules failed to install, if any.

To install manually an external module you already have in your local file system, do the following:

- a) Click the  button in the upper right corner of the **Modules** view or in Jar installation wizard to browse your local file system.

If the **Modules** view is not shown under your design workspace, go to **Window > Show View... > Talend** and then select **Modules** from the list.

- b) In the **Open** dialog box of your file system, browse to the module you want to install, double-click the .jar file, or select it and then click **Open** to install it.

The dialog box closes and the selected module is installed in the library folder of the current Talend Studio.

You can now use the component or Metadata connection dependant on this module in any of your Job designs.

## Installing manually external modules downloaded from external Web sites for Talend Web applications

Some modules are not available on the Talend website but can be downloaded directly from external websites. Once downloaded, these modules must be placed in specific folders.

- For Talend Studio, the downloaded modules must be placed in the following folder: `<StudioPath>\configuration\.m2`

## Installing and configuring Talend ESB

Talend ESB is provided to you through an archive file named `Talend-ESB-VA.B.C.zip` that you can extract to install Talend ESB on your server machines.

The following procedures detail the installation and configuration of the ready-to-use tools contained in the Talend ESB package:

- [Running Talend ESB Container](#) on page 21
- [Installing Apache ActiveMQ](#) on page 23
- [Accessing Service Locator](#) on page 24
- [Installing Service Activity Monitoring](#) on page 25
- [Installing Security Token Services](#) on page 28

Note about the start commands: Instead of the individual start commands that you can find in the following sections, you can also use: `tesb:start-all` in the container, which starts all the Infrastructure Services, except the Event Logging features which have to be started individually with the `tesb:start-el-default` command.

For more information about the Infrastructure Services, see the Talend ESB Infrastructure Services Configuration Guide.

For more information about the logging modules and the advanced configuration of those Services, see [Installing and configuring Talend logging modules](#) and Talend ESB Container Administration Guide.

### Running Talend ESB Container

Once Talend ESB installed, you can access Talend ESB Container in the `Talend-ESB-VA.B.C/container` directory.

Talend ESB Container is an OSGI container, based on Apache Karaf, allowing you to deploy and execute various components and applications inside its `Talend-ESB-VA.B.C/container/deploy` folder.

#### Procedure

1. Browse to the `Talend-ESB-VA.B.C/container/bin` directory.
2. Run the `trun.bat` file.

## Results

After starting Talend ESB Container, you need to wait a few seconds for initialization to complete before entering the commands. Karaf, on which the Talend ESB Container is built, starts the non core bundles in background. So even if the console is already available, the commands may not.

For more information on Talend ESB Container usage and configuration, see the Talend ESB Container Administration Guide and Talend ESB Infrastructure Services Configuration Guide.

Once Talend ESB Container is installed and launched, you will be able to install all the other components available in the Talend ESB package as features directly in the container. Thus, when launching Talend ESB Container, all the other components will be launched at the same time.

You also have the possibility to install these components as standalone.

**Warning:** When installing Talend ESB components as features in the container, you might encounter memory problems. For more information on how to increase the memory allocation of the container, see Talend ESB Container Administrator's Guide.

This implementation can ease the management of Talend ESB but if you want to create a cluster environment, you will need to replicate the container to have several containers with the right components installed as features in it, whereas if you are using the different components as standalone you will only have to duplicate the corresponding instance.

If you only want to use several basic containers, you can also use Talend Runtime, as Talend Runtime is the exact equivalent of the container folder provided in Talend ESB. For more information about the installation of Talend Runtime, see [Installing Talend Runtime](#).

## Customizing the access parameters of Talend ESB Container

How to configure the Talend ESB Container parameters in order to adapt it to your environment.

### Procedure

1. Go to the following directory: `Talend-ESB-VA.B.C/container/etc`
2. Edit the following files for example:
  - `org.ops4j.pax.web.cfg` to change the HTTP listening port.
  - `org.apache.karaf.management.cfg` to manage RMI connection to connect to Talend ESB Container via JMX in order to manage and supervise each of its components and their activity from a JConsole, for example.

## Configure the proxy settings

How to configure the proxy settings of the Talend ESB Container according to your environment.

### Procedure

1. Open the following file to edit it: `Talend-ESB-VA.B.C/container/etc/org.ops4j.pax.web.cfg`
2. Uncomment the line: `org.ops4j.pax.url.mvn.proxySupport=true` so that the settings in the `settings.xml.sample` file are taken into account.
3. Update the `etc/settings.xml.sample` file according to your proxy configuration.

## Installing Apache ActiveMQ

ActiveMQ is a message broker enabling to support different messaging options. It will provide you high availability, performance, scalability, reliability and security for enterprise messaging. And it allows you to mediate events between distributed applications, guaranteeing that they reach their intended recipients.

Once Talend ESB installed, you can either access a standalone instance of ActiveMQ in the `Talend-ESB-VA.B.C/activemq` directory or install it as a Feature directly within the Talend ESB Container.

Once installed, ActiveMQ can be used in Talend's Mediation routes, for example.

### Running ActiveMQ as standalone

#### Procedure

1. Browse to the `Talend-ESB-VA.B.C/activemq/bin` directory.
2. Run the `activemq.bat` file.

### Configuring Apache ActiveMQ

There are a number of configuration options, and these are listed by entering `activemq -h`.

You can configure the ActiveMQ broker by using either a configuration file or via broker URI. For more information about the broker URI syntax, see the online [Apache ActiveMQ documentation](#).

The default location for configuration files is in `activemq/conf`.

For more information on how to configure Apache ActiveMQ, see the Talend ESB Infrastructure Services Configuration Guide.

### Installing Apache MQ as an OSGi Feature

ActiveMQ can also be installed as a Feature in Talend ESB Container, this way, it will be automatically launched when launching Talend ESB Container.

#### Procedure

1. In the Talend Runtime container, use the following command to start ActiveMQ: `karaf@trun> feature:install activemq`
2. By default, no broker is created in the Container. To start a broker within the Talend Runtime container, use the following command: `karaf@trun> feature:install activemq-broker`

It creates a default broker named **amq-broker** and its configuration file: `<TalendRuntimePath>/container/etc/org.apache.activemq.server-default.cfg`. You can modify the broker's default configuration by editing this file. For more information on how to create multiple brokers, to remove or to query a broker, see the Talend ESB Infrastructure Services Configuration Guide.

This command also installs the ActiveMQ Web console, available at: <http://localhost:8040/activemqweb/>

For more information on ActiveMQ Web console advanced configuration, see the Talend ESB Infrastructure Services Configuration Guide.

## Install Apache ActiveMQ and create a broker

### Procedure

1. In the Talend Runtime container, use the following command to start ActiveMQ: `karaf@trun> feature:install activemq`
2. By default, no broker is created in the Container. To start a broker within the Talend Runtime container, use the following command: `karaf@trun> feature:install activemq-broker`

It creates a default broker named **amq-broker** and its configuration file: `<TalendRuntimePath>/container/etc/org.apache.activemq.server-default.cfg`. You can modify the broker's default configuration by editing this file. For more information on how to create multiple brokers, to remove or to query a broker, see the Talend ESB Infrastructure Services Configuration Guide.

This command also installs the ActiveMQ Web console, available at: <http://localhost:8040/activemqweb/>

For more information on ActiveMQ Web console advanced configuration, see the Talend ESB Infrastructure Services Configuration Guide.

## Accessing Service Locator

Service Locator provides automatic and transparent failover and load balancing between service Consumers and Providers and allows for dynamic endpoint registration and lookup.

Once Talend ESB installed, you can access the Service Locator in the `Talend-ESB-VA.B.C/zookeeper` directory or install it as a feature directly within the Talend ESB Container.

### Installing Service Locator as an OSGi Feature (Recommended)

Service Locator can also be installed as a Feature in Talend ESB Container, this way, it will be automatically launched when launching Talend ESB Container.

### Procedure

1. Run the Container.
2. Type in the following command to start the feature corresponding to Service Locator: `tesb:start-locator`.
3. To stop the Service Locator, type in the following command: `tesb:stop-locator`.

### Installing Service Locator as standalone (Alternative)

### Procedure

1. Open a command window.
2. Browse to the `Talend-ESB-VA.B.C/zookeeper/bin` directory.
3. Run the following command:

```
zkServer.cmd start
```

To customize the configuration of the Service Locator standalone, edit the file `Talend-ESB-VA.B.C/zookeeper/conf/zoo.cfg`. For more information on the parameters you can edit, see [Configuration file properties of the Service Locator standalone](#) on page 25.



### Configuration file properties of the Service Locator standalone

To customize the configuration of the Service Locator standalone, edit the following file: `Talend-ESB-VA.B.C/zookeeper/conf/zoo.cfg` and change the parameters according to your needs.

Field name	Description
tickTime	the basic time unit in milliseconds used by the Service Locator. It is used to do heartbeats, and the minimum session timeout will be twice the tickTime
dataDir	the location to store the in-memory database snapshots and, unless specified otherwise, the transaction log of updates to the database
clientPort	the port to listen for client connections

### Installing Service Activity Monitoring

Service Activity Monitoring (SAM) facilitates the capture of analysis of service activity, including service response times, traffic patterns, auditing and more, by capturing events and storing information. This component consists of two parts:

- Agents (sam-agent) which gather and send monitoring data
- A monitoring Server (sam-server) which processes and stores the data

The sequence of how these are used is as follows:

1. The Agent creates events out of requests and replies from both the service consumer and provider side.
2. The events are first collected locally and then sent to the Monitoring Server periodically (so as not to disturb the normal message flow).
3. When the Monitoring Server receives events from the Agent, it optionally uses filters and/or handlers on those events and stores them into a database.

The Agent and Monitoring Server are made available as follows:

- The agent is by default installed as a feature in Talend ESB Container.
- The Monitoring Server needs to be installed into a Servlet Container (Tomcat) or an OSGi Container (Talend ESB Container) and needs access to a database.

Once Talend ESB installed, you can access the Service Activity Monitoring server in the `Talend-ESB-VA.B.C/add-ons/sam` directory to install it or directly install it as a feature within the Talend ESB Container.

### Prerequisites to the Monitoring Server

The Monitoring Server requires a database engine to store Events data. The supported databases are listed in [Compatible databases](#) on page 11.

The following are the script files corresponding to the databases, run them to configure the database properly. You can find the SQL scripts in the `Talend-ESB-VA.B.C/add-ons/sam/db` directory.

SQL script filename	Database
create.sql	Apache Derby

SQL script filename	Database
create_mysql.sql	MySQL
create_oracle.sql	Oracle
create_sqlserver.sql	SQL Server
create_h2.sql	H2 Database Engine
create_db2.sql	IBM DB2

### Procedure

1. Make sure your chosen database is installed properly and is accessible.
2. Login with a user which has CREATE permissions.
3. Run the init SQL script for the corresponding database from the table above.

**Note:** If the value of `db.recreate` property in the `logserver.properties` is set to `true`, the init SQL script will be executed automatically when starting the Monitoring Server. But this is not recommended for any database except Apache Derby running in embedded mode.

### Results

You will then find the `EVENTS` and `EVENTS_CUSTOMINFO` table have been created in your database.

Now, you can install the Monitoring server either in standalone or as a Feature in the Talend ESB Container.

### Installing SAM as an OSGi Feature (Recommended)

Service Activity Monitoring server can be installed as a feature in Talend ESB Container, this way, it will be automatically launched when launching Talend ESB Container.

### Procedure

1. Run the Container.
2. Type in the following command to start the SAM server Feature: `tesb:start-sam`.
3. To stop the SAM server, type in the following command: `tesb:stop-sam`.

### As Web application (Alternative)

To install the Service Activity Monitoring (SAM) server as Web application, you need to:

- deploy it in an Servlet Container.
- configure the database connection information,
- configure the Monitoring endpoint in the Talend ESB Container.

For more information, see the procedures below.

### Deploy SAM into Apache Tomcat

#### Procedure

1. Copy the `sam-server-war.war` file of the `Talend-ESB-VA.B.C/add-ons/sam` directory.

2. Paste it in the `<TomcatPath>/webapps` directory. The next time you will start Tomcat, the SAM Server application will automatically be deployed on the server.

To do it in command line, you can use the following command:

```
copy Talend-ESB-VA.B.C/add-ons/sam/sam-server-war.war <TomcatPath>\webapps
```

3. You can check whether the SAM Server has been successfully installed and is running by going to the following URL: <http://localhost:8080/sam-server-war/services/sam>



**Warning:** "http://localhost:8080/sam-server-war/services/sam" is only given as example. Depending on your configuration, you may have to replace `<localhost>` with the IP address of the Web server and `<8080>` with the actual port used for the application.

## Configure the database connection information

### Procedure

1. Open the `<TomcatPath>/conf/context.xml` file and add the following lines, according to your database server:

For H2:

```
<Resource name="jdbc/datasource" auth="Container"
type="javax.sql.DataSource" username="sa" password=""
driverClassName="org.h2.Driver"
url="jdbc:h2:tcp://localhost/~/test"
maxActive="8" maxIdle="30" maxWait="10000"/>
```

For Derby:

```
<Resource name="jdbc/datasource" auth="Container"
type="javax.sql.DataSource" username="test" password="test"
driverClassName="org.apache.derby.jdbc.ClientDriver"
url="jdbc:derby://localhost:1527/db;create=true"
maxActive="8" maxIdle="30" maxWait="10000"/>
```

For MySQL:

```
<Resource name="jdbc/datasource" auth="Container"
type="javax.sql.DataSource" username="test" password="test"
driverClassName="com.mysql.jdbc.Driver"
url="jdbc:mysql://localhost:3306/test"
maxActive="8" maxIdle="30" maxWait="10000"/>
```

For DB2:

```
<Resource name="jdbc/datasource" auth="Container"
type="javax.sql.DataSource" username="db2admin" password="qwaszx"
driverClassName="com.ibm.db2.jcc.DB2Driver"
url="jdbc:db2://localhost:50000/TEST"
maxActive="8" maxIdle="30" maxWait="10000"/>
```

For SQLServer:

```
<Resource name="jdbc/datasource" auth="Container"
type="javax.sql.DataSource" username="test" password="test"
driverClassName="com.microsoft.sqlserver.jdbc.SQLServerDriver"
```

```
url="jdbc:sqlserver://localhost:1029;instanceName=sqlexpress;databaseName=Test"
maxActive="8" maxIdle="30" maxWait="10000"/>
```

For Oracle:

```
<Resource name="jdbc/datasource" auth="Container"
type="javax.sql.DataSource" username="xxx" password="xxx"
driverClassName="oracle.jdbc.pool.OracleDataSource"
url="jdbc:oracle:thin:@localhost:1521:XE"
maxActive="8" maxIdle="30" maxWait="10000"/>
```

2. Check the database connection information specified in the following file, and edit them if needed:

```
<TomcatPath>/webapps/sam-server-war/WEB-INF/logserver.properties
```

## Configure the Monitoring endpoint in the Talend ESB Container

### Procedure

1. In the Service Activity Monitoring Server page available at <http://localhost:8080/sam-server-war/services/sam>, click the **services** link.
2. In the services page, copy the Endpoint address, for example: <http://localhost:8080/sam-server-war/services/MonitoringServiceSOAP>
3. Go to the Talend ESB Container configuration directory: `Talend-ESB-VA.B.C/container/etc` to configure its SAM agent with the right Monitoring endpoint.
4. Edit the `org.talend.esb.sam.agent.cfg` file.
5. Replace the **service.url** field with the new Endpoint address.

## Installing Security Token Services

An informal description of a Security Token Service is that it is a web service that offers some or all of the following services (among others):

- It can issue a Security Token of some sort based on presented or configured credentials.
- It can say whether a given Security Token is valid or not.
- It can renew (extend the validity of) a given Security Token.
- It can cancel (remove the validity of) a given Security Token.
- It can transform a given Security Token into a Security Token of a different sort.

Offloading this functionality to another service greatly simplifies client and service provider functionality, as they can simply call the STS appropriately rather than have to handle the security processing logic themselves. For example, the WSDL of a service provider might state that a particular type of security token is required to access the service. Then:

1. A client of the service can ask an STS for a Security Token of that particular type, which is then sent to the service provider.
2. The service provider could choose to validate the received token locally, or dispatch the token to an STS for validation.

These are the two most common use cases of an STS.


## Running STS server as feature in container (Recommended)

### Procedure

1. To enable the STS server Feature in the Karaf container, execute the following command:

```
tesb:start-sts
```

2. The STS service will start automatically. To make sure that it is running, execute the `list` command in the console and find two additional bundles: **Apache CXF STS Core** and **Talend :: ESB :: STS :: CONFIG** which enable the STS functionality.

 **Note:** It is normal that the status of this (fragment) bundle is only Resolved and not Active, as the other one.


Sample keys distributed with the RentACar demo should not be used in production. For more information on how to replace the keys used, see the chapter "Using STS with the Talend Runtime" from the Talend ESB Infrastructure Services Configuration Guide.

For additional information about the usage of STS, please read the Talend ESB STS User Guide and the chapter "Using STS with the Talend Runtime" from the Talend ESB Infrastructure Services Configuration Guide.

### Running STS server as Web application (Alternative)

The STS war file is located at `add-ons/sts/SecurityTokenService.war` of the distributive directory and ready for deployment on Tomcat.

For the STS war file deployment, please use standard deployment instructions for your J2EE container (Deployment guide for Tomcat 8.0: <http://tomcat.apache.org/tomcat-8.0-doc/deployer-howto.html>) and the chapter "Using STS with the Talend Runtime" from the Talend ESB Infrastructure Services Configuration Guide.

-  **Note:** Sample keys distributed with the RentACar demo should not be used in production. For more information on how to replace the keys used, see the chapter "Using STS with the Talend Runtime" from the Talend ESB Infrastructure Services Configuration Guide.

# Upgrading your Talend products

## Backing up the environment

Before you start migrating your Talend solutions, make sure your environment is correctly backed up.


The environment backup process includes the following mandatory steps:

**i** **Note:** These steps usually need to be completed in the following order.

1. Saving the local projects, see [Saving the local projects](#) on page 30 .

### Saving the local projects

#### Procedure

1. Launch the Studio.
2. Click the  icon and export your local projects to an archive file.

## Upgrading the Talend projects in Talend Studio

### Importing your local projects

#### Procedure

1. Launch the new Talend Studio you have just installed.
2. In the login windows, select **Import** then import the archive file containing your local projects.

#### Results

The local projects are displayed in the **Project** list and appear on the Talend Studio **Repository** view.

For more information on how to export local projects to an archive file, see [Saving the local projects](#) on page 30.

# Appendices

## Cheatsheet: start and stop commands for Talend server modules

The following table sums up the commands or executables you can use to start and stop Talend server modules.

Talend server module	Start command/executable	Stop command/executable
Apache Tomcat service for Talend Administration Center	<code>net start &lt;TomcatService Name&gt;</code>	<code>net stop &lt;TomcatService Name&gt;</code>
JBoss service for Talend Administration Center	<code>net start "JBoss"</code>	<code>net stop "JBoss"</code>
Talend Runtime	<code>&lt;TalendRuntimePath&gt;\bin\trun.bat</code>	<b>Ctrl+C</b>
Talend Artifact Repository	<code>&lt;ArtifactRepositoryPath&gt;\bin\nexus.exe /run by default or nexus.bat console for Nexus 2</code>	<b>Ctrl+C</b>
Talend JobServer	<code>&lt;JobServerPath&gt;\start_rs.bat</code>	<code>&lt;JobServerPath&gt;\stop_rs.bat</code>
Talend Log Server	<code>&lt;LogServerPath&gt;\start_logserver.bat</code>	<code>&lt;LogServerPath&gt;\stop_logserver.bat</code>
Talend ESB	<code>tesb:start-all</code>	<code>tesb:stop-all</code>
Event Logging	<code>tesb:start-el-default</code>	<code>tesb:stop-el-default</code>
Talend Runtime Container	<code>&lt;TalendESBPath&gt;\container\bin\trun.bat</code>	<b>Ctrl+C</b>
Apache ActiveMQ	In Talend Runtime Container: <code>feature:install activemq</code>	<b>Ctrl+C</b>
Service Locator	<code>tesb:start-locator</code>	<code>tesb:stop-locator</code>
Service Activity Monitoring	<code>tesb:start-sam</code>	<code>tesb:stop-sam</code>
Security Token Service	<code>tesb:start-sts</code>	<code>tesb:stop-sts</code>

1: The command/executable to use depends whether you installed your Talend product using manual installation or using automatic installation.

## Supported Third-Party System/Database/Business Application Versions

This document provides the information about the versions of the systems or databases or business applications supported by Talend Studio.

### Supported systems, databases and business applications by Talend components

The information contained in the following table is applicable for the 7.0.1 version of your Talend product at the time of its release. For updated information on the latest supported software or databases, see the online version of this page on [Talend Help Center](#).

The access to these systems, databases and business applications varies depending on the Studio you are using.

Systems/Databases	Versions	OS	Available with...	Note
Amazon Redshift	Initial release of Amazon Redshift	N/A	All Talend products	The test information is not available yet.
AS/400	V5R2 to V5R4 V5R3 to V6R1 V6R1 to V7R2	N/A	All Talend products	The test information is not available yet.
Access	2003 2007	Windows	Talend products with Data Integration (DI), Master Data Management (MDM), Enterprise Service Bus (ESB) or Big Data	When working with Java 8, only the General collation mode is supported.
Bonita	5.2.3 5.3.1 5.6.1 5.10.1 6.5.2 7.2.4	N/A	All Talend products	The test information is not available yet.
Cassandra	2.0.0 3.0/3.1/3.2/3.3/3.4 (Deprecated versions: 1.1.2/1.2.2)	Windows + Linux	Talend products with Big Data	
CouchBase	4.5 5.0	Windows	Talend products with Big Data	
CouchDB	1.0.2	Windows	Talend products with Big Data	



<b>Systems/Databases</b>	<b>Versions</b>	<b>OS</b>	<b>Available with...</b>	<b>Note</b>
DB Generic	ODBC	Windows	All Talend products	
DB2	11.X 10.5 10.1	Windows + Linux	Talend components with all products.  Talend products with MDM or ESB.	
DynamoDB	No specified version	N/A	Talend products with Big Data	The test information is not available yet.
EXASolution	6.0 and earlier	Windows	Talend products with DI, MDM, ESB or Big Data	
Elasticsearch	Until 2.3.X	N/A	Talend products with Big Data	The test information is not available yet.
FireBird	2.1	Windows + Linux	Talend products with DI, MDM, ESB or Big Data	
Greenplum	4.2.1.0	Windows (client only) + Linux	Talend products with DI, MDM, ESB or Big Data	
HSQLDb	1.8.0	N/A	Talend products with DI, MDM, ESB or Big Data	The test information is not available yet.
Informix	11.50	Windows + Linux	All Talend products	
Ingres	9.2	Windows + Linux	All Talend products	
Interbase	7 and above	N/A	Talend products with DI, MDM, ESB or Big Data	The test information is not available yet.
JavaDB	6	Windows + Linux	Talend products with DI, MDM, ESB or Big Data	

Systems/Databases	Versions	OS	Available with...	Note
Kafka	0.8.2.0 0.9.0.1 0.10.0.1	Windows + Linux	Talend products with Big Data	For information about the security options supported by the Kafka components, see <a href="#">Talend Help Center</a> .
LDAP	No version limitation	Windows + Linux	All Talend products	
Microsoft AX	Dynamics AX 4.0 Dynamics AX 2012	N/A	All Talend products	The test information is not available yet.
Microsoft CRM	4.0 2011 2013 2015 2016	N/A	All Talend products	The test information is not available yet.
MS SQL Server	2000 2003 2005 2008 2012 2014 2016	Windows + Linux	All Talend products	No new feature introduced by MS SQL Server 2014/2016 is supported.
MarkLogic	V9	N/A	Talend products with Big Data	
MaxDB	7.6	N/A	Talend products with DI, MDM, ESB or Big Data	The test information is not available yet.
MongoDB	2.6.X 3.0.X 3.2.X 3.4.X (Deprecated version: 2.5.X)	Windows + Linux	Talend products with Big Data	

Systems/Databases	Versions	OS	Available with...	Note
MySQL	Mysql4 Mysql5 MariaDB	Windows + Linux	All Talend products	
Netezza	7.2	Windows + Linux	All Talend products	
NetSuite	2014 2016	Windows + Linux	All Talend products	
Neo4j	1.X.X 2.X.X/2.2.X/2.3 3.2.X	Linux	Talend products with Big Data	
OleDb	2000 2003 2005 2007 2010	N/A	All Talend products	The test information is not available yet.
Oracle	Oracle 8i/9i/10g/11g/11g (11.6)/12c	Windows + Linux	All Talend products	
ParAccel	3.1 3.5	N/A	Talend products with DI, MDM, ESB or Big Data	The test information is not available yet.
PostgreSQL	9.X	Windows + Linux	All Talend products	
PostgresPlus	9.X	Windows + Linux	Talend products with DI, MDM, ESB or Big Data	
Red Hat BRMS	6.1	Windows + Linux	Talend products with DI, MDM, ESB or Big Data	
Salesforce	V42 and earlier	Windows + Linux	All Talend products	
SAP Business Suite (ERP)	Netweaver: From 7.3 to 7.5 ERP6.0, From EhP6 to EhP8	Windows	All Talend products	
SAP Business Warehouse (BW)	Netweaver: From 7.31 to 7.5	Windows	All Talend products	
SAP Hana	1.0	Windows	All Talend products	

<b>Systems/Databases</b>	<b>Versions</b>	<b>OS</b>	<b>Available with...</b>	<b>Note</b>
SAS	9.1 9.2	Windows + Linux	Talend products with DI, MDM, ESB or Big Data	
SQLite	3.6.7	Windows + Linux	All Talend products	
Sybase	12.5 12.7 15.2 15.5 15.7 16.0	Windows + Linux	All Talend products	
SybaseIQ	12.5 12.7 15.2 16.0	Windows + Linux	All Talend products	
Teradata	12 13 14 15	Windows + Linux	All Talend products	
VectorWise	2	Windows + Linux	Talend products with DI, MDM, ESB or Big Data	
Vertica	9.0.X (Deprecated versions: 3, 3.5, 4, 4.1, 5.0, 5.1, 6.0, 6.1.X, 7.0.X, 7.1.X)	Windows + Linux	Talend products with DI, MDM, ESB or Big Data	
VtigerCRM	Vtiger 5.0 Vtiger 5.1	N/A	All Talend products	The test information is not available yet.