talend | Connecting the Data-Driven Enterprise

Talend Open Studio for ESB

Release Notes

6.0.1

Adapted for v6.0.1. Supersedes previous releases.

Publication date September 10, 2015

Copyleft

Notices

License Agreement

Table of Contents

System Requirements

Users should refer to the *Talend Installation and Upgrade Guide* on the **Talend Help Center** (*http://help.talend.com*) for more information on Installation and System Requirements.

ESB: New Features

1. Studio

1.1. Enhanced look and feel and user experience

The Studio includes a number of redesigns to enhance the look and feel and user experience.

1. The Studio user interface and component icons have been redesign for enhanced look and feel.
2. The Studio login process has been streamlined.
   - For the first startup, fewer steps are required.
   - After the first start up, users can directly open the same project without seeing the login dialog.
3. Users can now drag and drop an output component from an input one on the design workspace.
4. Enhanced component search:
   - Users can now search for a component by providing a descriptive phrase as the search keywords, without having to know the component name. The maximum number of entries in the search result is configurable.
   - The Palette shows recently used components to ease component search in Job design. The maximum number of components shown on the **Recently Used** list is configurable.

1.2. Java 8 support

The Studio now supports Java 8 only.

1.3. Data Services (REST)

There are no new features in this release.

1.4. Data Services (SOAP)

There are no new features in this release.

1.5. Route Builder

- New cFlatPack component which supports fixed width and delimited file parsing via the FlatPack library.

- Enhanced cCXFRS component to support MDC logging.
- Enhanced cLoop component to support the copy mode.

2. Runtime

- The Talend Runtime has been upgraded to the latest versions of the underlying projects to support Java 8 with additionally improvements. The most remarkable is that Talend Runtime is now based on Apache Karaf 4.0.1, which supports OSGi 5.0. The HTTP support is also upgraded to Jetty 9.

  With CXF 3.1.2, Talend Runtime includes a new major version of Apache CXF which provides many individual improvements on all areas. The Apache ActiveMQ Message Broker is upgraded to 5.11 and Apache Camel to 2.15. For the exact version of the Apache Projects, see the related section in the and *Talend Installation and Upgrade Guide*.

  The Talend Runtime has undergone a major update by this. If you plan to upgrade from an older version of Talend ESB Runtime, please see ESB: Migration V5.6.x to 6.0.x for details.

- New Provisioning Service that distributes resources and features in several containers via profiles to maintain consistency for your configuration throughout all your containers.

ESB: Deprecated and Removed Items

1. Deprecated Items

There are no deprecated features in this release.

2. Removed Items

The following features are removed in the current release.

- Support for SoapUI within the Talend Studio

  The SoapUI Plugin for Eclipse is removed from the Talend Studio. If you want to continue Service Testing using SoapUI, you can download the standalone applications from http://www.soapui.org/.

- Talend ESB Standard Edition

  Talend ESB Standard Edition is no longer available for download. Only Talend Opens Studio for ESB is provided from the 6.0 version. Nevertheless the Runtime folder within the download is the same delivery as Talend ESB Standard Edition before for existing Talend ESB Standard Edition users.

ESB: Bug fixes and change log

In addition to the above new features a number of improvements within the entire product and significant bug fixes have been made.

See the corresponding Change Log on our bug tracking system for more details on the individual issues:

- Talend ESB 6.0.0 Release Notes Report: https://jira.talendforge.org/secure/ReleaseNote.jspa?projectId=10186&version=16608.
- Talend ESB 6.0.1 Release Notes Report: https://jira.talendforge.org/secure/ReleaseNote.jspa?projectId=10186&version=18902.

Please note that this list also includes fixes to Talend Enterprise ESB products. (If in doubt please check the **Edition** field of the issue you are interested in to see if it applies to *Talend Enterprise ESB only* or if the component is a *Talend Enterprise Only* component in general (for example, Talend Administration Center).

As Talend Open Studio for ESB is based on the unified Talend Open Studio, you will also find general changes of the Studio, which apply to all Talend Open Studio products, in Talend DI and UP (TDI /TUP) JIRA Projects.

ESB: Known Issues

We encourage you to consult the JIRA bug tracking tool for a full list of Known Issues. This report of Known Issues is intended to highlight issues which might be of broader interest or impact for easier accessibility. The report does not represent the full list of known bugs.

https://jira.talendforge.org/issues/?filter=20940.

Note that this list shows issues from both Talend's Community and Subscription products.

1. Studio

1.1. External JAR file dependencies declared in cConfig are not exported [TESB-4219]

Symptoms: In Talend ESB Studio Route designer, when an external JAR is referenced in cConfig component it is correctly used when a Route is started inside Talend Studio and also for exporting the route as a standalone service or OSGi bundle. However it does not get exported when doing "Export as Item".

Workaround: As a workaround, you can copy JAR files manually and re-associate them in cConfig after the route is imported in your workspace.

1.2. Route Builder beans cannot be organized in packages [TESB-3701]

Symptoms: Beans in a route build can be used to add Java code for the route builder routes, however all beans are currently located in one single package.

Workaround: None

1.3. XML payload content is not fully displayed in trace or debug mode

Symptoms: When starting a Data Service Job in trace/debug mode, the content of the Document fields of the flows is not displayed fully - only the first line of the XML payload is shown.

Workaround: If you need to see the XML data you can place a tLogRow component anywhere in your models. Keep in mind that Talend Studio also allows you to disable this component, so that you can enable it for testing inside Talend Studio, but disable it for export or publishing.

2. Runtime

2.1. OSGi Container fails to log messages that were sent to system.err / system.out [TESB-11603]

Symptoms: In the tesb.log file you will not see any messages which were sent via system.err or system.out.

Workaround: If you encounter this issue, you can run the same scenario in Console mode as the system.err and system.out will show up on the console.

ESB: Known Limitations

This section contains limitations on how you use the product that you need to be aware of.

1. Studio

1.1. Only WS-I Basic Profile compliant WSDL documents are supported

All WSDL service descriptions should be at least WS-I Basic Profile compliant if you want to use them in the ESB Studio. See http://ws-i.org/deliverables/workinggroup.aspx?wg=basicprofile for more information. Other WSDL documents might also work but they are more likely to fail.

1.2. Activity Monitoring Console / Components only with limitations

The Activity Monitoring Console as provided in the Studio and the related Dashboard screens can be used to visualize tLogCatcher, tStatCatcher and tFlowMeterCatcher events. In Talend Enterprise ESB there are some limitations that you need to consider for these components and the related features in the Studio:

- tLogCatcher can be used in Data Services and Jobs, but the tLogCatcher component must be explicitly included in the Job and the use of a database for logging is recommend in this environment (Talend Runtime - OSGi Container).
- tStatCatcher and tFlowMeterCatcher can be used only in Jobs which are not defined as **Keep Listening** but not in Data Services (where the operations are implemented in **Keep Listing** Jobs). Also these components must be explicitly included in the Job and the use of a database for logging is recommended in this environment (Talend OSGi container).
- tLogCatcher, tStatCatcher and tFlowMeterCatcher by the entire Activity Monitoring Console feature cannot be used within Routes developed using the Route designer with the Studio (Mediation Perspective).
- Note that you can use the AMC view in Talend Enterprise ESB Studio but the related AMC Web-Console in TAC is only provided with a license which contains the DI Product (for example, Talend Platform for Data Services license).

1.3. tWaitForXXX components are not supported in Talend ESB Data Services and tRoute Jobs

The **tWaitForFile**, **tWaitForSqlData** and **tWaitForSocket** components are not supported to be used in ESB Data Services (REST&SOAP) or in **tRouteInput** based Jobs (cTalendJob use cases).

2. Runtime

There are no known limitations at this time.

ESB: Migration V5.6.x to 6.0.x

Note: this section provides details relevant for the ESB migrating from V5.6.x to 6.0.x

1. Studio

The ESB Studio requires a new installation. You need to export your 5.6.x projects from your local 5.6.x workspace and import the project with the ESB Studio 6.0.x.

Studio projects can be used without any manual migration. When the Data Services, Jobs and Routes are opened in the ESB Studio, the components that need changes will be upgraded automatically .

2. Runtime

The ESB Runtime (OSGi Container) requires a new installation. See also *Compatibility Notes on Talend Runtime (Apache Karaf), Service Development (Apache CXF) and Routes (Apache Camel)* for details.

The API of the ESB Infrastructure Services (services listed in the *Talend ESB Infrastructure Services Configuration Guide*, except Apache ActiveMQ and Talend Identity Management, based on Apache Syncope) are still compatible with the 5.6.x API's.

The `tesb:cluster` and related Apache Cellar support has been removed from Talend Runtime 6.0. Please consider to use the ESB Provisioning Service for general distribution to the container.

3. Compatibility notes on Studio Data Services and Studio Routes

If you want to run your existing Data Services or Routes on the new 6.0.x Container, you need to re-build, re-publish and re-deploy the Studio models to use the latest code changes.

With the 6.0.x we do NOT support the mixed installation and use of Talend ESB container 6.0.x with Data Services and Routes generated by Talend ESB Studio 5.6.x.

4. Compatibility Notes on Talend Runtime (Apache Karaf), Service Development (Apache CXF) and Routes (Apache Camel)

4.1. Talend Runtime 6.0.x based on Apache Karaf 4.0.1

Talend Runtime 6.0.x now contains Karaf 4.0.1 which supports the latest OSGi 5.0 using Eclipse Equinox 3.10.

Talend Runtime has significant changes in many areas. The following list highlights the subset of the most important ones for Talend ESB users:

- The command `features:` is renamed to `feature:`. The most important is that `features:install` is now `feature:install` and `features:add-url` is now `feature:repo-add`.
- The commands `tesb:create-update-info` and `tesb:apply-update-info` are not available from 6.0 onwards for the migration from 5.x to 6.x, as Talend Runtime is not binary compatible, you will have to republish your Routes and Data Services.
- Resolving features has changed significantly and you might need to adapt your manifest / feature.xml to have the correct feature / bundle dependencies declared.
- Your self-developed Features might fail to install in case they have not all depended features / bundles declared correctly. Before this was not checked explicitly if the feature /bundle was already existing on the container.
- Fragment bundles (dependency bundles) should not be listed as system bundles, or the container might have startup problems.
- The container now uses ACL's (Acess Control Lists) for any interaction (ssh, console, jmx, etc). Make sure you have the right permissions in case you use our own Users / JaaS Config.
- JMX Operations is not binary compatible and parameters have changed. Please check each JMX command you use explicitly if the API has changed or not.
- `client.sh` and `client.bat` has differences in the parameter. Please use the `--help` command to see the new parameter structure of ssh client connections to the container.

4.1.1. Bundle refresh feature

If you are installing your features in the new version of the Talend Runtime, and experiencing some blocking refreshing of (dependency) bundles, you might want to install all your features at once, so that all the dependencies get refreshed at once. Furthermore, by installing all at once, the Feature Service of the Talend Runtime will select once and for all the right version of the bundles to refresh, instead of refreshing the version of that bundle each time you install features using it. For more information, see the following Knowledge Base article: ESB Migration from 5.6.x to 6.0.x: bundle refresh issues.

4.2. Java Service Development (JAX-WS / JAX-RS) based on Apache CXF 3.1.2

4.2.1. Major Notes

- Talend ESB in general and also CXF 3.1.2 no longer supports Java 6. You must use Java 7 or Java 8. For Talend ESB only Java 8 is supported from Talend 6.0 onwards.
- The JAX-WS/Simple frontend ServerFactoryBean will automatically call reset at the end of the `create()` call. This allows resources to be cleaned up and garbage collected sooner. However, it also prevents multiple calls to `create()` from sharing the same ServerInfo/EndpointInfo/etc... objects like they would with 3.0.x. That sharing has caused many problems in the past due to sharing of properties (like token caches) that are stored on those objects. The new behaviour is more correct but different than previous versions, so care must be taken while upgrading.

4.2.2. Security changes

- The Talend STS (Security Token Service) now issues tokens using the RSA-SHA256 signature algorithm by default (previously RSA-SHA1), and the SHA-256 digest algorithm (previously SHA-1).
- Some security configuration tags have been renamed from *ws-security.** to *security.**, as they are now shared with (some of) the JAX-RS stack. The old tags will continue to work as before however without any change.
- The SAML/XACML functionality previously available in the cxf-rt-security module is now in the cxf-rt-security-saml module.
- If you are explicitly specifying the SAML version in a SAML CallbackHandler, then this is changed in CXF 3.1.2 due to the migration to use OpenSAML 3.1. The version is now set on the SAMLCallback using a `org.apache.wss4j.common.saml.bean.Version` class. Previously there was a dependency on OpenSAML's `SAMLVersion` class.
- It is now possible to plug in custom WS-SecurityPolicy validators if you want to change the default validation logic for a particular policy.

4.2.3. Major Dependency Changes

- The Jetty based HTTP transport has been updated to support Jetty 9 as well as Jetty 8. However, support for Jetty 7 has been dropped. The Talend Runtime only includes and supports Jetty 9.
- Support for using JAX-WS 2.1 based API jars has been removed. Java 8 (now required) includes JAX-WS 2.2 so this should not be an issue.
- WSS4J 2.1 is included, which in turn includes OpenSAML 3.0.

4.3. Talend Route Builder, Java, Blueprint and Spring DSL Routes - based on Apache Camel 2.15.3

- Remember to add `@BootstrapWith(CamelTestContextBootstrapper.class)` if upgrading from Spring 3.x or 4.0.x to Spring 4.1 onwards, and using the camel-test-spring module.
- the XSLT component now requires configuring transformerFactory using URIs with the `#syntax` to refer to a bean. Just like any other component would do.
- camel-csv is upgraded to Commons CSV 1.x which has a different API than the old 0.x version. End users may need to adjust their code.
- camel-sjms has been refactored a bit to further harden this component. End users may need to adjust their code.
- The simple function `properties:locations:key` has been renamed to `properties-location:locations:key`, as it would clash with the new functionality to specify a default value after the key name, for example, `properties:key:default`.
- Removed the backlog tracer commands from the Karaf Camel commands as they are not suitable for a CLI environment.
- `org.apache.camel.spi.InflightRepository` now includes additional methods for browsing in-flight exchanges.
- Using `?exchangePattern=InOnly` or `InOut` in endpoint URIs now take precedence as the pattern in use when sending to the endpoint, using to/recipient list.

- DefaultClassLoader now fallback and use the application context classloader that may have been set on CamelContext to better be able to load classes/resources from classpath in different runtime environments.
- the Mail component no longer includes headers starting with Camel in their keys, as those are considered internal headers and should not be included in the sent emails.
- Removing a route now also remove its static Endpoint's from the EndpointRegistry (if those endpoints are not shared and used by other routes). Mind that any dynamic endpoint created during routing from dynamic EIPs such as recipient list, routing slip, dynamic router and so on, are not removed from the EndpointRegistry when the route is removed.
- All boolean isFoo methods on the model classes has been removed to ensure the model has consistent java bean getter/setter style with exactly one getter and one setter of the same type.
- The exchange property language has been renamed from *property* to *exchangeProperty* to avoid ambiguity, confusion and clash with properties as a general term. So use *exchangeProperty* instead of *property*.
- The delay option in SNMP has changed from using seconds to millis as the time unit.
- Routing starting from a Bean endpoint is not supported (which was not really intended anyway). Start with a scheduler and use the bean instead.
- The copy method is added to StreamCache API for Stream caching.
- The camel-jetty component is now split into camel-jetty8 and camel-jetty9 to support both Jetty versions. But only one is supported on the classpath, so pick only one of them.
- Custom components using *@UriEndpoint* must now include a syntax attribute to document the uri syntax of the endpoint, when using the apt compiler plugin to generate documentation.

ESB: Hints and Notes

1. Studio

1.1. JDK Required to Build Jobs/Routes

To build Jobs or Routes, you need to install a full JDK rather than a JRE. If the system fails to initialize automatically with a JDK, you can define which JDK to use by selecting Window > Preferences > Java > Installed JREs.

1.2. cAMQP requires the Client ID to be set

When you use the cAMQP component in the Route Builder, make sure you always set the Client ID to a unique value which is not used in other Routes (the `clientId` header in cAMQP advanced settings.) If more than one cAMQP based Routes are executed in the same Talend Runtime container and the Client ID is not set, you will see some exceptions like:

```
org.springframework.jms.UncategorizedJmsException: Uncategorized exception occured
 during JMS processing; nested exception is javax.jms.JMSException: Broker: localhost -
 Client: tlnd-spappala(6968):2 already connected from tcp://127.0.0.1:49729
```

2. Runtime

2.1. Copying an ESB Container might lead to unexpected behaviour

A Talend Runtime container which was started once can't be copied to a different directory or machine. We recommend to always use the container that is shipped with the product.

Documentation

1. Talend Help Center

Find out more about how to get the most out of your Talend products on the Talend Help Center: http://help.talend.com.

2. Videos

From within the Studio, you can now directly access the videos hosted in Talend Help Center relating to new features.

- For components, related videos are available from the F1 help view of this component.
- For other features, related videos are available in the help view of the wizard for the feature.

Note that not every feature has related videos in Talend Help Center and for this reason, not all the features have this type of access.

3. New documents

The following new documents have been added in this release:

- Talend Open Studio for Data Integration Getting Started Guide, Talend Open Studio for Data Quailty Getting Started Guide, Talend Open Studio for ESB Getting Started Guide, and Talend Open Studio for MDM Getting Started Guide.

  These Getting Started Guides walk users through their first steps with the product, including launching the Studio and setting up their first projects, and provide some basic examples.

- Talend Open Studio Big Data Getting Started Guide now has completely new content, and its existing content has been moved to the Talend Open Studio for Big Data User Guide.

4. Revised documents

In addition to updates to the content across the documentation set, the following specific documentation changes have been made:

- In the Talend Components Reference Guide, the MapReduce components, the Spark components and the Storm components each have their specific table of properties.
- For all community products, the previous Installation and Upgrade Guides have been renamed as Installation and Migration Guides.
- The contents of the previous Talend Open Studio for Big Data Getting Started Guide are now included in the Talend Open Studio for Big Data User Guide.

- The Talend ESB Getting Started Guide that was available in previous versions has been renamed Talend ESB Hands-on Guide.

5. Open issues

We encourage you to consult the JIRA bug tracking tool for a full list of open issues:

https://jira.talendforge.org/issues/?filter=18375

Reporting Defects and Issues

As a customer of Talend with a valid support contract, you can use our Talend Online Helpdesk or you can contact our customer support by phone and e-mail as stated in your contract.

Often the following information is needed and would help us to more easily evaluate your issue:

- Product and Version which you used (for example, Talend Open Studio for ESB 6.0.1)
- Operating System, for example Windows Server 2008 R2 SP1 (64bit)
- Version of Java Platform JDK / JRE in use (for example, ORACLE JDK 1.8.0_60).
- Log files and/or screenshots

Also, in order to ensure that the technical support team has sufficient information to help you, describe at least the following in detail:

- your actions up to the point when the problem occurred
- the results you expected
- the ensuing results that differ from your expected results.

Note: in addition to our support helpdesk, you can also use our community support tools:

- The Talend User's Forum at Talend Forum.
- You can also look into the Talend Bug Tracker.
- Just keep in mind that only cases you create via one of the Talend Support channels in our Talend Support Helpdesk are treated under the service level agreements we provided in the related contract to you.