talend | Connecting the Data-Driven Enterprise

Talend Repository Manager

User Guide

6.4.1

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Preface

1. General information

1.1. Purpose

This User Guide explains how to manage *Talend Repository Manager* functions in a normal operational context.

Information presented in this document applies to *Talend Repository Manager* **6.4.1**.

1.2. Audience

This guide is for users and administrators of *Talend Repository Manager*.

The layout of GUI screens provided in this document may vary slightly from your actual GUI.

1.3. Typographical conventions

This guide uses the following typographical conventions:

- text in **bold:** window and dialog box buttons and fields, keyboard keys, menus, and menu options,
- text in **[bold]:** window, wizard, and dialog box titles,
- text in `courier`: system parameters typed in by the user,
- text in *italics*: file, schema, column, row, and variable names,
- The icon indicates an item that provides additional information about an important point. It is also used to add comments related to a table or a figure,
- The icon indicates a message that gives information about the execution requirements or recommendation type. It is also used to refer to situations or information the end-user needs to be aware of or pay special attention to.
- `Any command is highlighted with a grey background or code typeface.`

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Chapter 1. Prior to installing Talend Repository Manager

This chapter provides useful information on software and hardware prerequisites you should be aware of, prior to starting the installation of *Talend Repository Manager*.

1.1. Installation requirements

The following table lists the minimum version requirements for each **Talend** element and feature in communication with *Talend Repository Manager*.

Element	**Minimum supported version**
Talend Administration Center	3.2.2
Talend Data Integration items	3.2.2
Talend Data Quality items	5.0
Talend MDM items	5.1
Talend ESB items	5.1
Branches in projects	4.0.2
Advanced import (references, status, statistics and logs)	4.0.3
Export to destination directory	4.1.0
Last item version	4.1.0

In addition, migration can only be set up to an equal or above version of the element in question.

1.2. Oracle specific prerequisites

If you want to use the Oracle database with *Talend Repository Manager*, you must update the *hibernate.cfg.xml* file as the following:

1. In the *Talend Repository Manager* .war file, browse to *WEB-INF/classes/hibernate.cfg.xml*.
2. Comment out the following lines:

```
<mapping resource="org/talend/repositorymanager/model/businessModel/
Repository.hbm.xml"/>
```

```
<mapping resource="org/talend/repositorymanager/model/logModel/RuleStatus.hbm.xml"/>
```

```
<mapping resource="org/talend/repositorymanager/model/logModel/
RuleExecutionHistory.hbm.xml"/>
```

3. Uncomment the following lines:

```
<mapping resource="org/talend/repositorymanager/model/businessModel/
Repository_oracle.hbm.xml"/>
```

```
<mapping resource="org/talend/repositorymanager/model/logModel/
RuleStatus_oracle.hbm.xml"/>
```

```
<mapping resource="org/talend/repositorymanager/model/logModel/
RuleExecutionHistory_oracle.hbm.xml"/>
```

You can not use the same database for both *Talend Administration Center* and *Talend Repository Manager*.

Chapter 2. Getting started with Talend Repository Manager

Talend Repository Manager is a web-based, cross-platform, multi-repository administration tool based on the GWT framework and GWT-Ext. It provides modules to administrate repositories, access central common resources and to manage item and project migration across repositories.

Talend Repository Manager provides fine-tuned features to set up a rigorous management system, enabling cooperative work between administrators and users.

2.1. What is Talend Repository Manager

Put simply, *Talend Repository Manager* helps administrators to:

- Coordinate multiple project repositories. For further information about how to connect to your repositories, see *Repositories*.
- Automate the transfer of processes from one repository to another. For further information about how to migrate items across repositories, see *Cross-repository rules*.
- Schedule migrations. For further information about how to schedule migrations, see *Migration scheduling*.
- Monitor and record migration execution processes. For further information, see *Migration scheduling*.

2.2. Deploying Talend Repository Manager on a Java application server

To be able to use *Talend Repository Manager*, you must first deploy it onto your Java application server. Take, for example, Apache Tomcat and proceed as follows to deploy the Repository Manager:

1. Paste the .war file of *Talend Repository Manager* into the **webapps** folder of Apache Tomcat.

   For example, the path to this **webapps** folder can be *C:\Program Files\Apache Software Foundation\Tomcat 6.0\webapps*.

2. Start Apache Tomcat so that *Talend Repository Manager* is deployed automatically onto the server.

   All data related to the management and administration of license, users, repositories, migration rules and their execution are stored in a database. By default, this database is an H2 embedded database. But you can choose to store such data in another compatible database system including MySQL, MS SQL and Oracle.

   For more information about how to configure a new database connection from *Talend Repository Manager*, see *Configuring the database connection*.

   For more information about the prerequisites to use the Oracle database with *Talend Repository Manager*, see *Oracle specific prerequisites*.

2.3. Accessing Talend Repository Manager

To access *Talend Repository Manager* using the default Administrator account provided by **Talend**, do the following:

1. Start your Java application server which hosts *Talend Repository Manager*.

2. Enter the Repository Manager address into your web browser and press **Enter**.

   By default, the URL address corresponds to the location of the repository manager: *http://[server address]:8080/org.talend.repositorymanager/*.

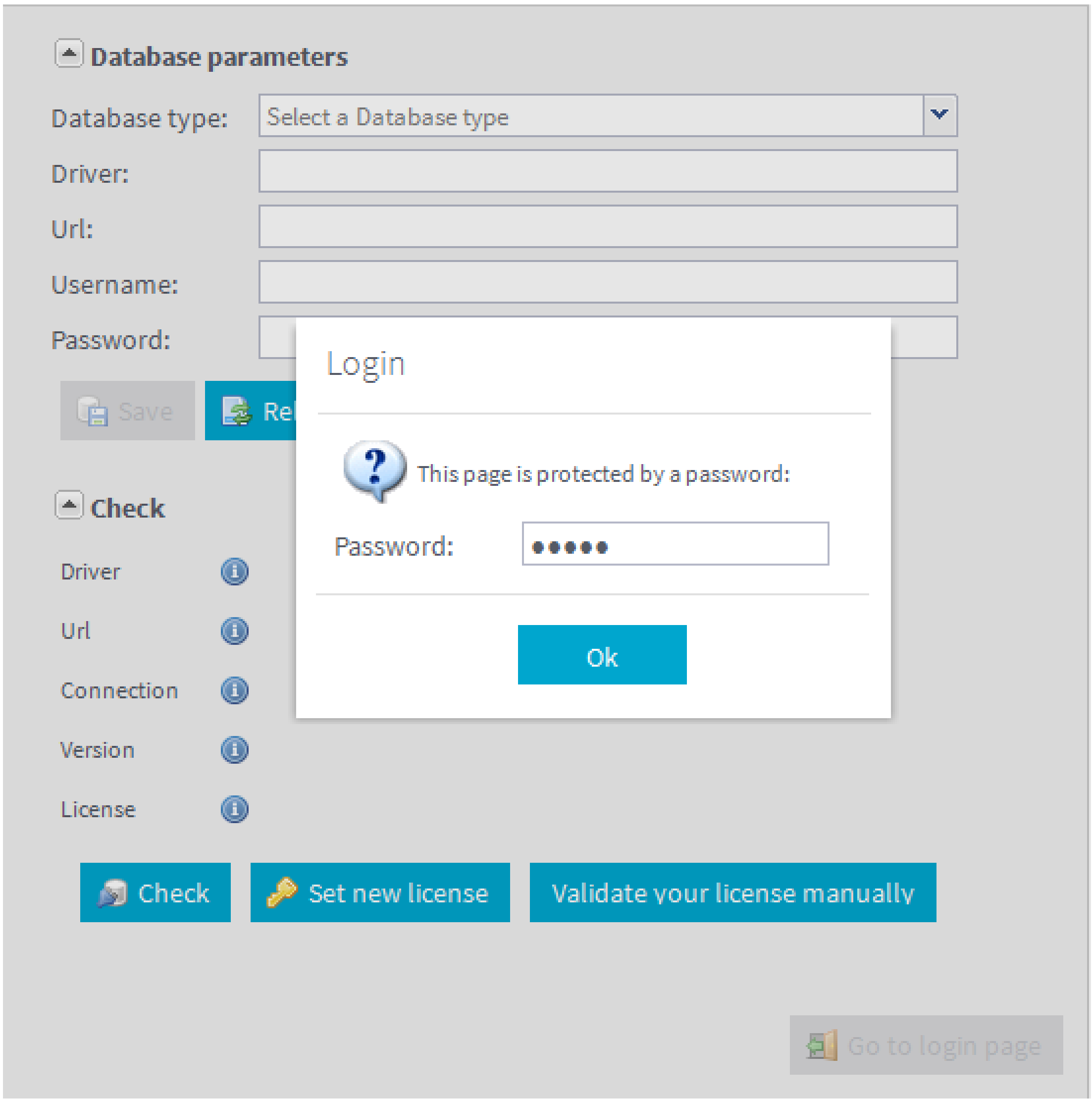
   The *org.talend.repositorymanager* used in the URL is the name of the Repository manager *.war* file.

2.3.1. How to access Talend Repository Manager for the first time

When you access *Talend Repository Manager* for the first time, you must set the license key provided by **Talend** and complete checking steps before being able to log in.

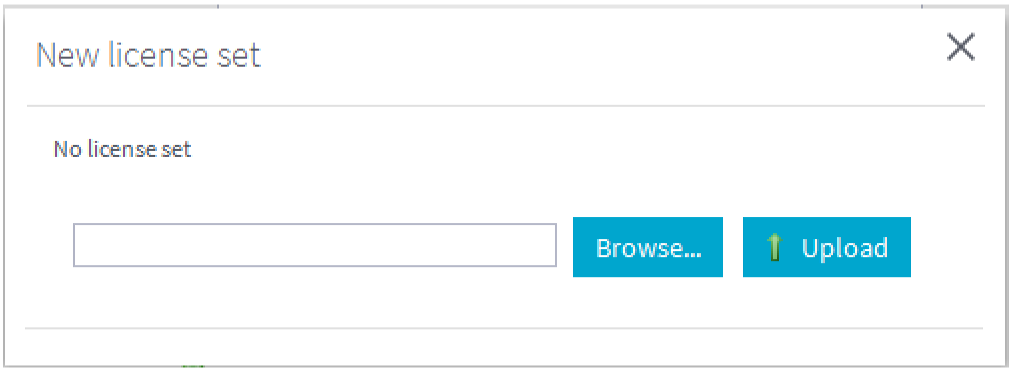
When you access *Talend Repository Manager* for the first time, the database configuration page is displayed.

1. In the database configuration page, type in the administrator password, *admin* by default, and click **OK**.



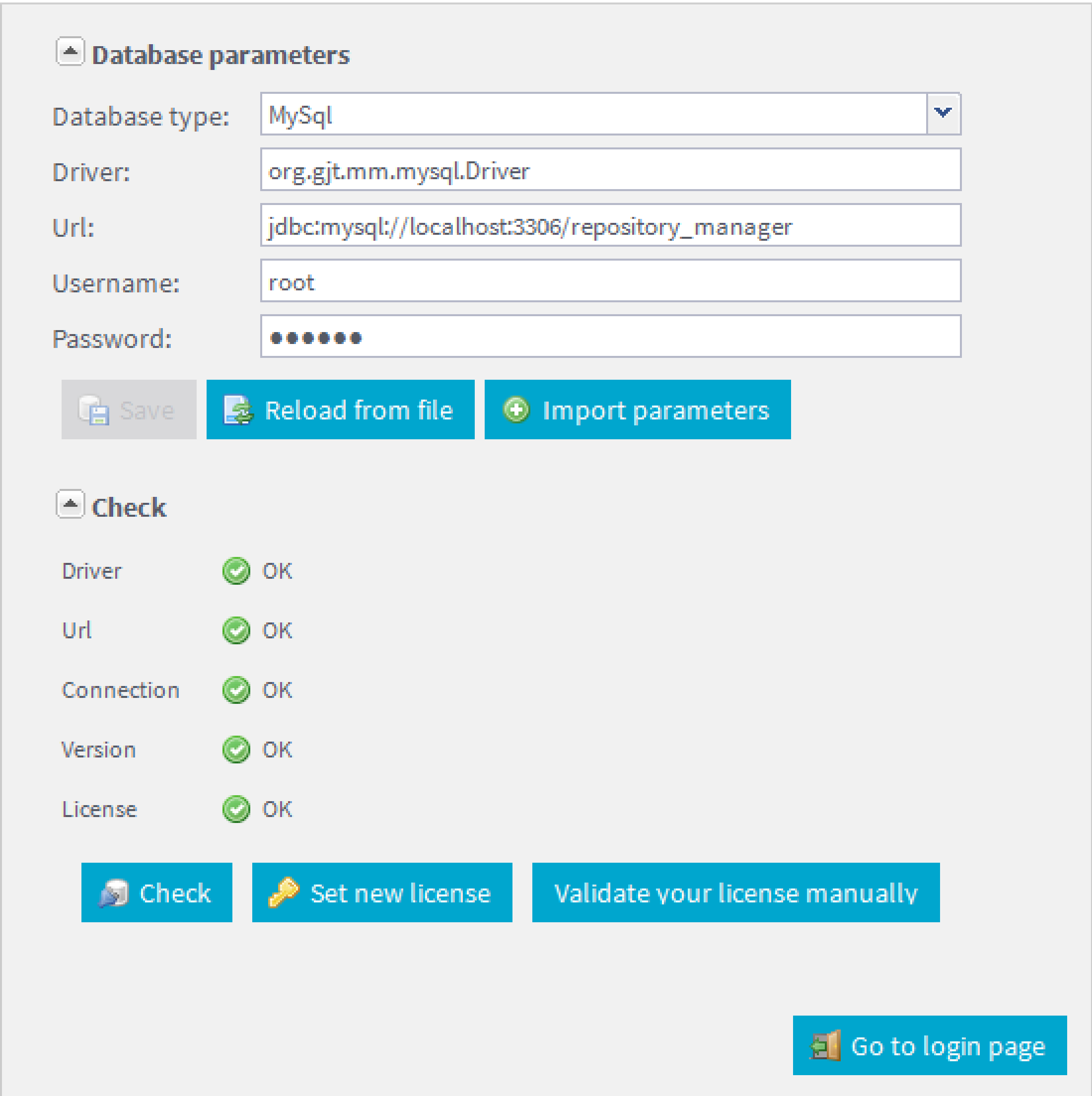
Upon validation of your password, *Talend Repository Manager* runs a series of checks. If no license or an invalid license is found, you will be prompted to specify a license.

2. Click the **Set new license** button.

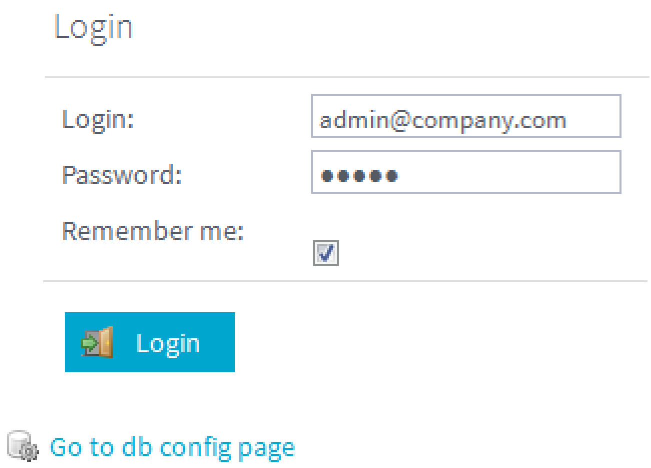


3. Click **Browse** to browse to your license file and click **Upload**.

   Upon validation of your license, *Talend Repository Manager* runs a second series of checks and the indicators on the **Check** list show if everything is OK.



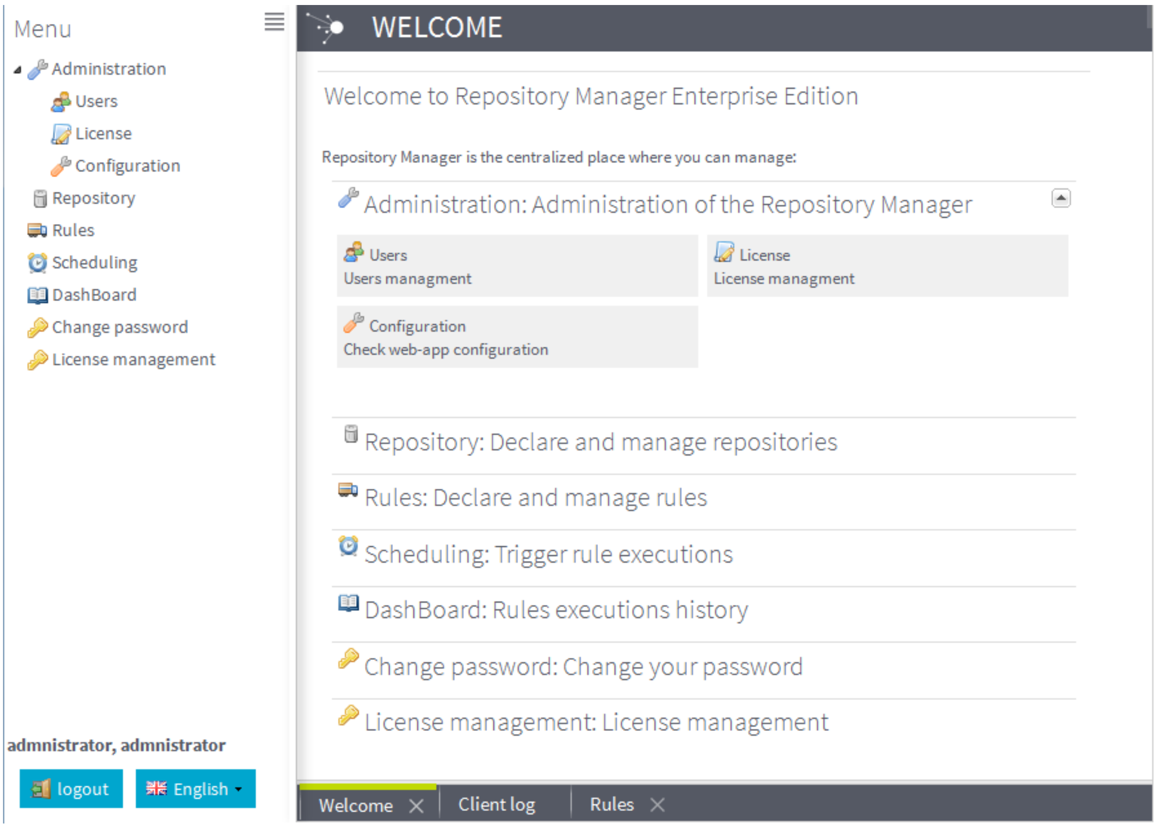
4. Click **Go to login page** and in the page that opens, enter the login and password for the Administrator account: *admin@company.com* / *admin*.



The **Remember me** check box is selected by default so that you can continue logging in to the Repository Manager without having to enter the password again.

5. Click the **Login** button.

   Talend Repository Manager opens up on a welcome page.



2.3.2. How to log in to Talend Repository Manager

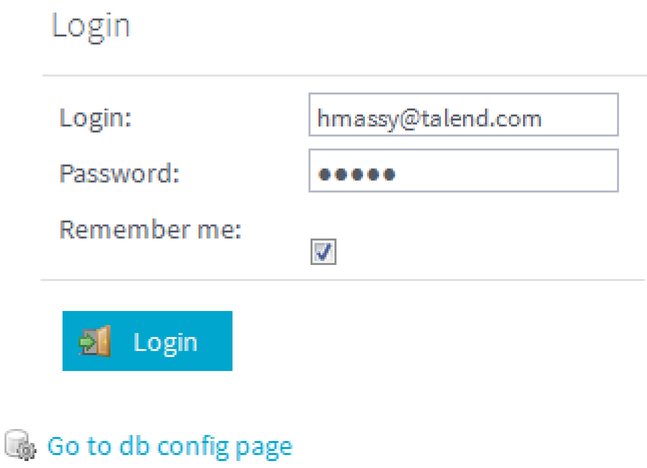
If you are not logging in for the first time, you just need to enter your authentication information to access *Talend Repository Manager*.

1. Start your Java application server which hosts *Talend Repository Manager*.

2. Enter the Repository Manager address into your web browser, for example *http://localhost:8080/org.talend.repositorymanager/*, and press **Enter**.

   The *org.talend.repositorymanager* used in the URL is the name of the Repository Manager *.war* file

3. In the **[Login]** dialog box, type in the login and password provided by **Talend** (*security@company.com* / *admin*) or your own authentication information provided by your administrator.



4. Click the **Login** button.

   Talend Repository Manager opens up on a welcome page.

2.4. Configuring the database connection

In *Talend Repository Manager*, all data related to the management and administration of license, users, repositories, migration rules and their execution are stored in a database.

By default, this database is an H2 embedded database. But you can choose to store such data in another compatible database system including MySQL, MS SQL and Oracle.

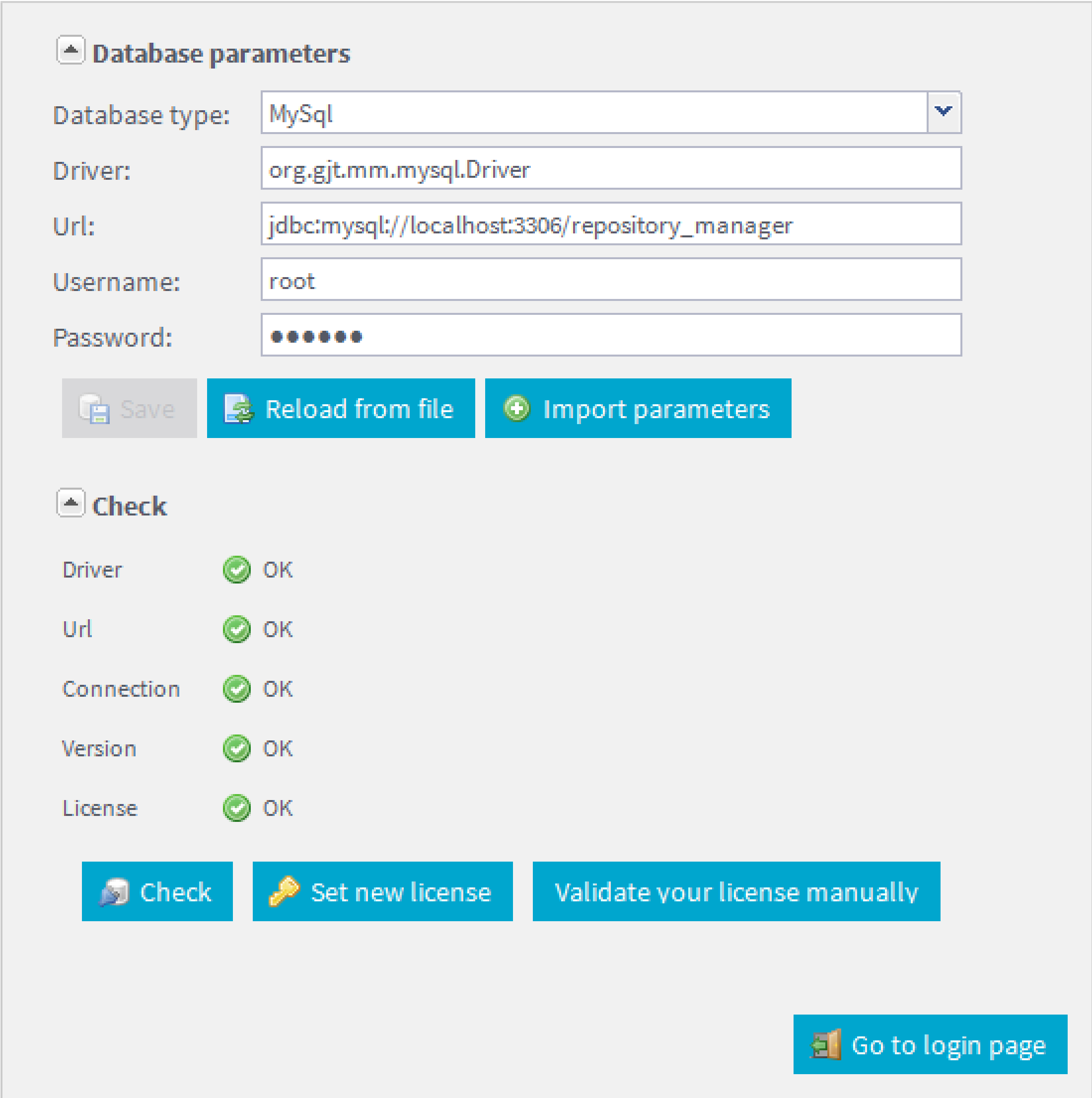
To configure a new database connection from *Talend Repository Manager*, do the following:

1. After starting the Java application server which hosts the Repository Manager, enter its URL into your web browser and press **Enter**.

2. On the login page, click **Go to db config page**.

3. In the open popup, type in the default password, *admin*, to access the configuration page.

   You can change this default password if you go to the Repository Manager's *configuration.properties* file and replace the password with the new one.



4. From the **Database Type** list, select the database you want to use to store administration and management data.

5. Fill in the connection parameters to the new database.

   This database must exist already. Compatible databases include MySQL, Oracle or Microsoft SQL server.

   For more information about the prerequisites to use the Oracle database with *Talend Repository Manager*, see *Oracle specific prerequisites*.

   An automatic check operation is done on the connection parameters and license validity and the check results show directly in the **Check** section.

6. Click **Save** to save the new connection parameters.

   Every time you click the **Reload from file** tab when defining a new connection, your last saved parameters will be listed automatically in the **Database parameters** fields.

7. From the **Check** section, click:

   - **Check** to verify the database connection, if required.

     When all of the indicators on the **Check** list show **OK**, the configuration is done.

- **Set new license** to open a dialog box where you can browse to a new license or replace an invalid one.
- **Go to login page** to go back to the login page.

2.5. Modifying the path to the log file

The log events of *Talend Repository Manager* are stored by default in a file as defined in the *Log4j.xml* file located at *<Tomcat_home>/webapps/Talend-RepositoryManager/WEB-INF/classes*.

You can decide to write log information in a different file, or change any of the parameters responsible for delivering log events.

1. Browse to the *Log4j.xml* file at *<Tomcat_home>/webapps/Talend-RepositoryManager/WEB-INF/classes*.

```
<!-- The file appender -->
 <appender name="TalendAppender" class="org.apache.log4j.RollingFileAppender">
 <!-- WARNING when relative path is used, absolute path of log file will depend on
 how Tomcat is launched -->
  <param name="File" value="/home/sbessaies/tmp/Talend/repomanager/
TIS_repository_manager.log" />
  <param name="Append" value="true" />
  <param name="Threshold" value="debug" />
  <param name="MaxFileSize" value="1000KB" />
  <param name="MaxBackupIndex" value="100" />
  <layout class="org.apache.log4j.PatternLayout">
   <param name="ConversionPattern"
    value="%d{yyyy-MM-dd HH:mm:ss} %-5p %c{1} %x - %m%n" />
  </layout>
 </appender>
```

2. Modify the *file* parameter to govern the path to the log file according to your needs.

2.6. Logging off

- Click the **Logout** button at the bottom left corner of *Talend Repository Manager*to log off from the active session at any moment.

  To log in again, fill in your authentication details in the login window.

Chapter 3. Talend Repository Manager administration

Talend Repository Manager is a web-based application delivered with one default account. This account enables you to manage the creation, deletion and edition of all *Talend Repository Manager* users as well as monitor and manage licenses.

3.1. Managing Users

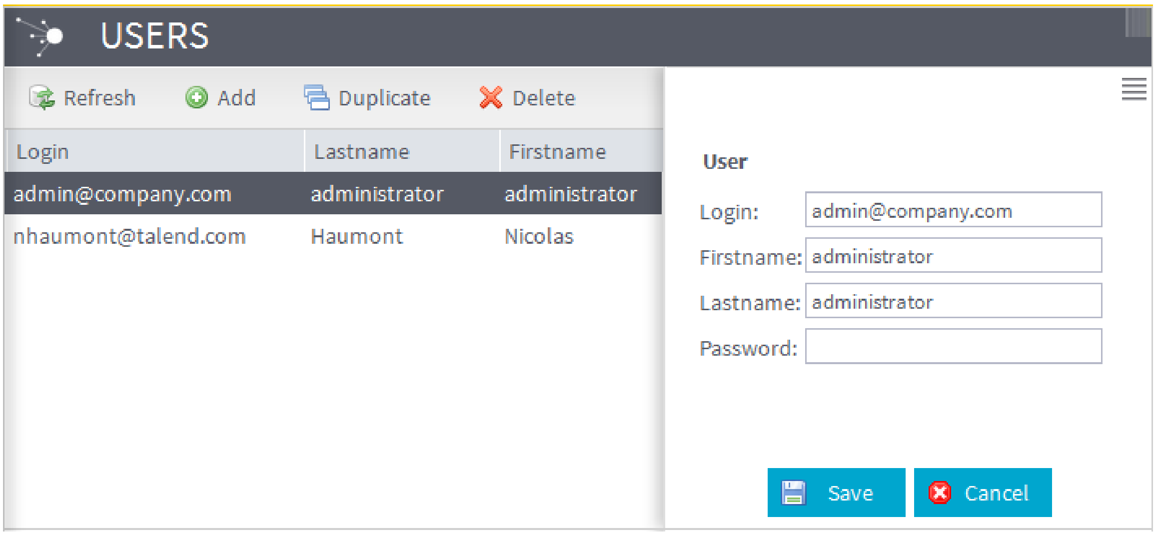
From the **Users** page, you can manage the users of *Talend Repository Manager*.

3.1.1. How to access the user list

To access the list of the user accounts:

- In the **Menu** tree view, click **Users** to open the user list.

  The following figure shows an example of this list.



The user list shows the authentication information of each user:

3.1.2. How to add a user

From the **Users** page, you can add new user accounts.

However, users must be assigned special roles and rights in *Talend Administration Center* to be able to do migration tasks in *Talend Repository Manager*. For example, they must have the Operation Manager role and rights on the source an target repositories in order to be able to execute a rule. For further information about users' roles and rights, see *Talend Administration Center User Guide*.

To add a user:

1. On the **Users** page, click **Add** on the toolbar.

2. In the panel to the right, fill in the following information.

Login	Type in the user's email address that will be used to log on to *Talend Repository Manager*
First Name	Type in the user's first name
Last Name	Type in the user's last name
Password	Type in a password for this account

   You can hide or show the panel by clicking the » and the « buttons respectively.

3. Click **Save** to validate the newly created account or click **Cancel** to abandon account creation.

If you click on any of the users in the list before finalizing the creation or modification of the current user, a dialog box prompts you to save the parameters in the configuration panel before switching to another user. Click Cancel to return to the configuration panel and save the parameters.

3.1.3. How to edit a user

To edit the authentication information of a user:

1. In the **Menu** tree view, click **Users**.
2. In the user list, select the user you want to edit, and then edit the connection detail in the panel to the right.
3. Click **Save** at the bottom right corner to validate the changes or click **Cancel** to abandon the operation.

If you click on any of the users in the list before finalizing the creation or modification of the current user, a dialog box prompts you to save the parameters in the configuration panel before switching to another user. Click Cancel to return to the configuration panel and save the parameters.

3.1.4. How to duplicate a user

To avoid creating a new user from scratch, you can duplicate an existing one and modify the authentication information as required.

To duplicate a user:

1. On the **Users** page, select the user you want to duplicate.
2. On the toolbar, click **Duplicate** and modify the information on the panel to the right.
3. Click **Save** at the bottom right corner to validate the operation or click **Cancel** to cancel it.

If you click on any of the users in the list before finalizing the creation or modification of the current user, a dialog box prompts you to save the parameters in the configuration panel before switching to another user. Click Cancel to return to the configuration panel and save the parameters.

3.1.5. How to delete a user

To delete a user:

1. On the **Users** page, select the user you want to delete.

   Use the **Ctrl+click** method to select several accounts.
2. Click **Delete** on the toolbar.
3. Click **Yes** in the pop-up dialog box to confirm the deletion.

   The user is deleted.

3.1.6. How to refresh the user list

The **Users** list is refreshed automatically at regular intervals, however, you can refresh it manually whenever you like.

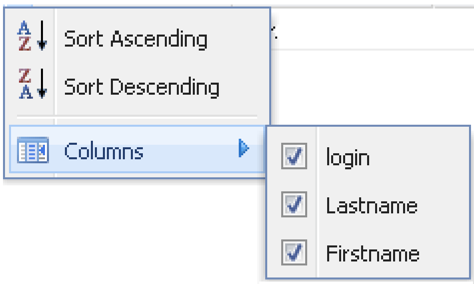
To refresh manually the users list:

- Click **Refresh** on the toolbar.

3.1.7. How to customize the user list display

You can customize the user list view to determine the order of the users and to hide or show any columns depending on your needs.

1. On the user list, place the cursor on the column name and click the arrow that appears.



2. From the drop-down list, use the following options to change the list display:

Item	To...
Sort Ascending	Arrange the list in an ascending alphabetical order.
Sort Descending	Arrange the list in an descending alphabetical order.
Columns	Select the check box(es) to display the corresponding column(s); otherwise, keep the check box(es) clear.

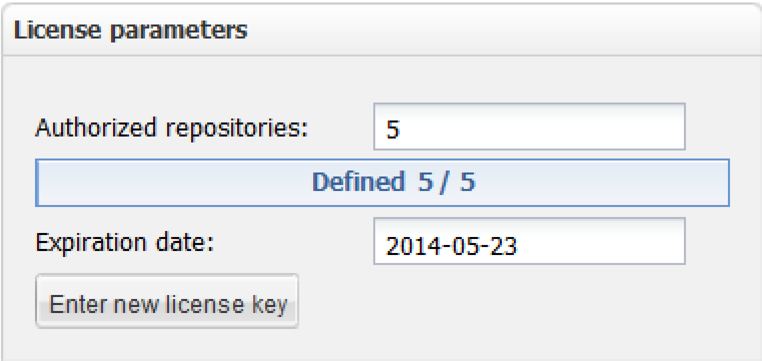
To make a quick ascending or descending sorting of the users list, click any column header.

3.2. Changing the license

You need to upload a new license file to change the license.

1. In the **Menu** tree view, click **License** to display the license parameters.

2. Click **Enter new license key** to open a popup.



3. In the field, paste the new license key and click **OK** to set the new license and close the popup.

4. Restart *Talend Repository Manager* to operate under the new license parameters.

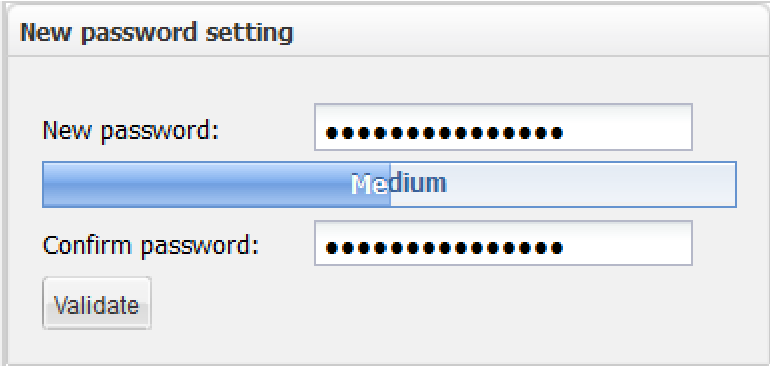
The **License** page presents the following information:

Authorized repositories	Maximum number of repositories authorized by your license.
Expiration date	License expiration date.

3.3. Changing a user password

Users can change their *Talend Repository Manager* authentication passwords. To do so:

1. In the **Menu** tree view, select **Change password** to display the corresponding page.



2. Enter your new password in the **New password** field.

   The information bar beneath the field indicates whether the new password is **Very weak**, **Medium** or **Strong**.

3. Enter the new password in the **Confirm password** field and then click **Validate** to confirm your modification.

   Once done, a message appears to confirm that this change is validated. Otherwise, an error message indicates the problem you need to handle.

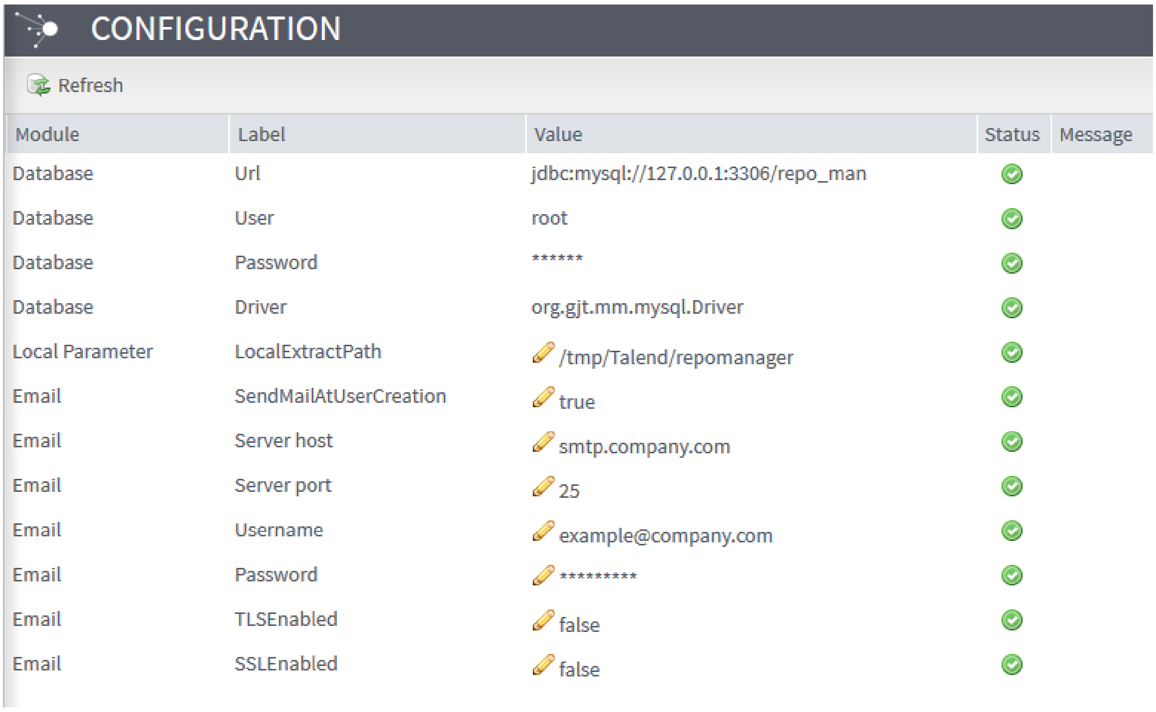
3.4. Setting up the Repository Manager parameters

The **Configuration** page offers accurate details on *Talend Repository Manager* parameters and their related values including the database connection. From this page, you can read and edit the values of the application parameters and their errors, if any.

3.4.1. How to access the configuration page

To access the configuration page:

1. In the **Menu** tree view, expand **Administration**.
2. Click **Configuration** to open the configuration page.



The following table provides details regarding the configuration page.

Modules	Values
Database	The values displayed are those defined in the **Go to db config page** page for creating the connection. You need to use that page to modify these values. For further information about **Go to db config page**, see *Accessing Talend Repository Manager*. For further information about the prerequisites to use the Oracle database with *Talend Repository Manager*, see *Oracle specific prerequisites*.
Local Parameter	Enter the directory as the intermediate destination of the items migrated. The items temporarily stored will be removed after the migration is done.
Email	Configure sending email notifications when new user accounts are created in *Talend Repository Manager*.

This list helps you to detect system problems and reduce the repair time. In the **Status** column, the icon is displayed when the corresponding modules are up and well configured. Otherwise the icon appears and the **Message** column reports the error details to help you diagnose the problem

3.4.2. How to set up parameters for email notifications

From the **Configuration** page, you can decide whether to send email notifications at user creation.

To set up the parameters for email notifications:

1. In the **Menu** tree view, expand **Administration** and then click **Configuration** to open the configuration page.

2. Set the value of the **SendMailAtUserCreation** field to *true* so that an email notification is sent when a new user is created.

   This email contains the user account information for logging in to *Talend Repository Manager*.

3. Configure the email server host, port, user name and password in the relevant fields, by referring to your email service settings.

Email	SendMailAtUserCreation	true
Email	Server host	smtp.company.com
Email	Server port	25
Email	Username	example@company.com
Email	Password	*********
Email	TLSEnabled	false
Email	SSLEnabled	false

4. To enable Transport Layer Security or Secure Sockets Layer, set the **TLSEnabled** or **SSLEnabled** field to *true*, if your email server supports the TLS or SSL protocol.

   Note that you cannot set both fields to *true* at the same time.

Chapter 4. Repositories

A repository stores various integration items, MDM objects, data quality items, etc., designed in *Talend Studio*. When managing these items across several repositories, *Talend Repository Manager* centralizes these repositories, classify them and helps you understand their differences.

The **Repository** module allows you to set up connections to a number of repositories and to organize all the established connections in a single list.

For further information, see *Accessing the Repository module*.

Via the **Repository** page, *Talend Repository Manager* allows you to specify the types of repositories to be managed.

For further information, see *How to add a repository connection*.

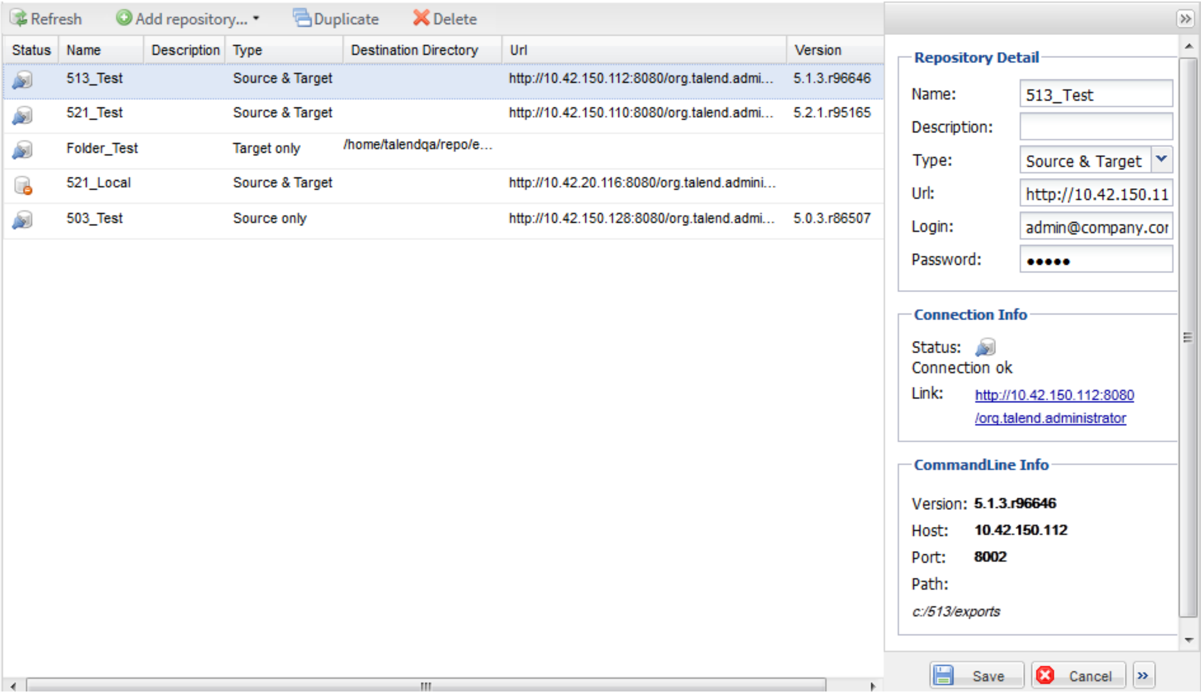
In addition, the **Repository** page offers the option of setting up connections to the directories used to store your Job scripts. This enables you to centralize and manage Job scripts exported from *Talend Studio*.

4.1. Accessing the Repository module

The **Repository** page allows you to create and manage repositories.

To access the **Repository** page, click the **Repository** node in the **Menu** tree view.

A repository list appears in the workspace.



The following table provides information related to the repository connection list.

Status	Status of connections to the corresponding repository. The status can be: - : connection ok; - : connection failed; - : connection is being processed.
Name	Name of the repository to be connected to.
Description	Detailed information describing this repository connection.
Type	Type of the repository. The type may be **Source only**, **Target only** or **Source & Target**. For more information, see *How to add a repository connection*
Destination directory	Directory used to store the migrated Job script.
url	URL of the *Talend Administration Center* Web application hosting the repository to be connected to. This address should always have the actual host name, and not *localhost* for example.
Version	Version of the *Talend Administration Center* Web application hosting the repository to be connected to.

From this page, you can:

- use the buttons on the toolbar to reload the repository connection parameters and to add, duplicate or remove repositories. For further information, see *Managing the repository connection list*.

- set up connections to the directories used to store your Job scripts. This enables you to centralize and manage Job scripts exported from *Talend Studio*.
- specify the repository type, whether it is a source repository, a target repository or a source and targer repository. For further information, see *How to add a repository connection*.
- select a repository in the list and in the panel to the right configure the repository connection parameters. For further information regarding connection configuration, see *How to add a repository connection* and *How to edit a repository connection*.
- hide or show the panel to the right by clicking the » and « buttons respectively.

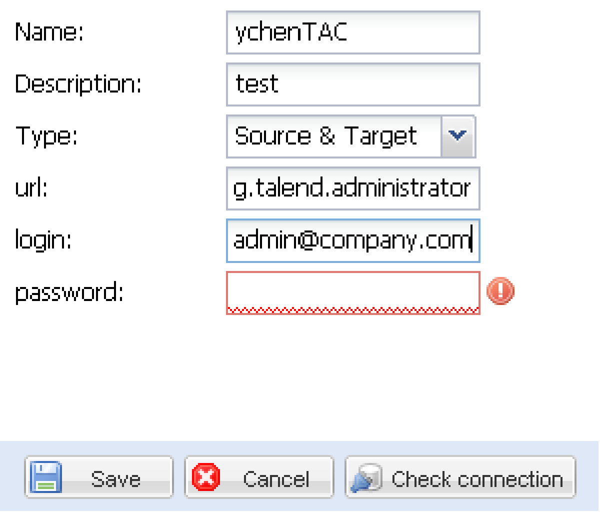
4.2. Managing the repository connection list

Talend Repository Manager allows you to set up connections to repositories hosted on *Talend Administration Center*, and to organize all the established connections in a single list.

4.2.1. How to add a repository connection

To add a repository connection, do the following:

1. In the **Menu** tree view, click **Repository** to open the repository connection list in the workspace.
2. Click **Add** and from the drop-down list, select **Add repository** to open an empty configuration panel to the right of the connection list
3. Enter the connection parameters in each field on the panel.



Fields marked with the icon are required.

The following table provides details regarding the fields on the panel.

Name	Name of the connection.
Description	Detailed information describing the connection.
Type	May be: -**Source only**: where Talend items are migrated from.

	-**Target only**: where Talend items are migrated to. -**Source & Target**: used as a source repository and a target repository. For further information about the usage of these three repository types, see *Cross-repository rules*.
Url	URL of the *Talend Administration Center* Web application which hosts the repository to be connected to. When applicable, use the actual host name and not *localhost*.
Login	Email address used to log in to the *Talend Administration Center* hosting the repository to be connected to. For more information see the *Talend Administration Center User Guide*.
Password	Password used to log in to the *Talend Administration Center* hosting the repository to be connected to. For further information, see *Talend Administration Center User Guide*.

4. Click **Check Connection** to verify the connection status.

The following table provides some information related to the connection status.

Link	Hyperlink to the *Talend Administration Center* hosting the repository to be connected to.
Status	Status of the connection: success or failure.
Version	Version of the *Talend Administration Center* hosting the repository to be connected to.
Host	Host server of the command line to be connected to.
Port	Port through which to connect to the command line. For further information about this command line, see *Talend Administration Center User Guide*.
Path	Define the directory where the items to be migrated are stored temporarily, depending on the type of repository.

	For more information about defining the storage directory, see the *Talend Administration Center User Guide*.

5. When the connection status shows the icon, click **Save** and the newly created connection is added to the repository connection list.

If you click on any connection in the list before finalizing the creation or modification of the current connection, a dialog box prompts you to save the parameters in the configuration panel before switching to another connection. Click Cancel to return to the configuration panel and save the parameters.

4.2.2. How to edit a repository connection

To edit the repository connection parameters, proceed as follows:

1. Click **Repository** in the **Menu** tree view to open the repository connection list page.
2. Click the connection you need to edit to display its parameters on the configuration panel to the right.
3. Modify the parameters in question directly on the panel.

   For further information on the parameters and the panel, see *How to add a repository connection*.
4. Click **Check Repository** to check the new configuration.

   For further information on checking the configuration, see *How to add a repository connection*.
5. Click **Save** to validate the changes.

   For further details, refer to *How to add a repository connection*.

*If you click on any of the repository connections in the list before finalizing the creation or modification of the current connection, a dialog box prompts you to save the parameters in the configuration panel before switching to another repository connection. Click **Cancel** to return to the configuration panel and save the parameters.*

4.2.3. How to duplicate a repository connection

You can duplicate an existing repository and modify its metadata to add a new repository connection to the list.

To duplicate a repository connection:

1. On the **Repository** page, select the repository connection you want to duplicate.
2. On the toolbar, click **Duplicate**. The configuration panel to the right shows the metadata of the repository connection selected.
3. Modify the parameters you need to modify.
4. Click **Save** to validate the operation.

   The new repository connection is added to the trigger list.

If you click on any of the repository connections in the list before finalizing the creation or modification of the current connection, a dialog box prompts you to save the parameters in the configuration panel before switching to another repository connection. Click Cancel to return to the configuration panel and save the parameters.

4.2.4. How to delete a repository connection

Do the following to delete a repository connection:

1. In the **Menu** tree view, click **Repository**.
2. Select the connection you need to delete from the connection list.
3. Click **Delete** on the toolbar at the top of the view.
4. Click **Yes** in the pop-up dialog box to validate this deletion.

4.2.5. How to customize the repository connection list display

This feature in the **Repository** module works the same way as that of the **Users** module does. For further details as to how to use it, see *How to customize the user list display*.

4.3. Defining the destination directory for Job scripts

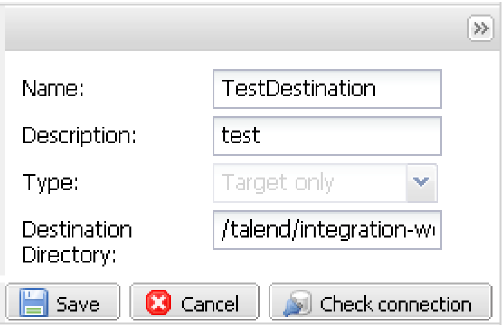
The **Repository** module allows you to set up connections to a directory in order to store the Job scripts exported from a source repository. Once the exportation is done, the exported scripts can be easily executed on any server, independent from your *Talend Studio*.

The connections are managed in the **Repository** module workspace in the same manner as the repository connections are managed.

4.3.1. How to add a destination directory

To add a destination directory, do the following:

1. In the **Menu** tree view, click **Repository** to open the **Repository** page in the workspace.
2. Click **Add** to open the drop-down list.
3. Select **Add Destination Directory** on the list to open an empty configuration panel on the right side of the **Repository** page.
4. Type in the connection parameters in every corresponding field on the panel.

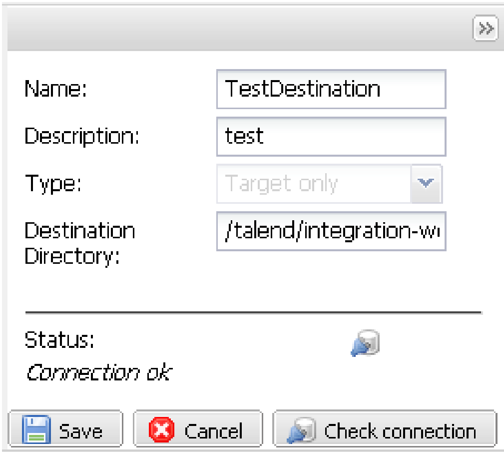


The following table presents details related to the fields on the panel.

Note that the fields shown may change depending on which version of *Talend Administration Center* you are using. For more information on supported versions, see *Installation requirements*.

Name	Name of the connection.
Description	Detailed information describing this connection
Type	As this is a destination directory, the connection type is **Target only** and cannot be changed.
Destination directory	Directory used to store the exported Job scripts. This directory must already exist.

5. Click **Check Connection** to verify the connection status.



6. The connection status view displays on the lower part of the configuration panel, indicating that the status is ok , failed or unknown .

7. When the connection status shows the icon, click **Save**, then, the newly created connection is added to the connection list.

For information regarding the other operations you can carry out to manage the destination directory connection list, see *Managing the repository connection list*.

For further information regarding Job scripts, see *Talend Studio User Guide*.

If you click on any connection in the list before finalizing the creation or modification of the current connection, a dialog box prompts you to save the parameters in the configuration panel before switching to another connection. Click Cancel to return to the configuration panel and save the parameters.

When Job scripts are exported to the destination directory, a Job list can be automatically created to help you to find the Jobs you need to use. This Job list is available only when the *Talend Administration Center* your *Talend Repository Manager* works with is version 4.1.0 or later.

Chapter 5. Cross-repository rules

Prior to reading this chapter, we strongly recommend that you read *Managing the repository connection list* and *Defining the destination directory for Job scripts* to set up the repository or the destination directory connections following the instructions provided.

An item migration rule defines the nature of the migration and determines whether the migration execution is allowed or not.

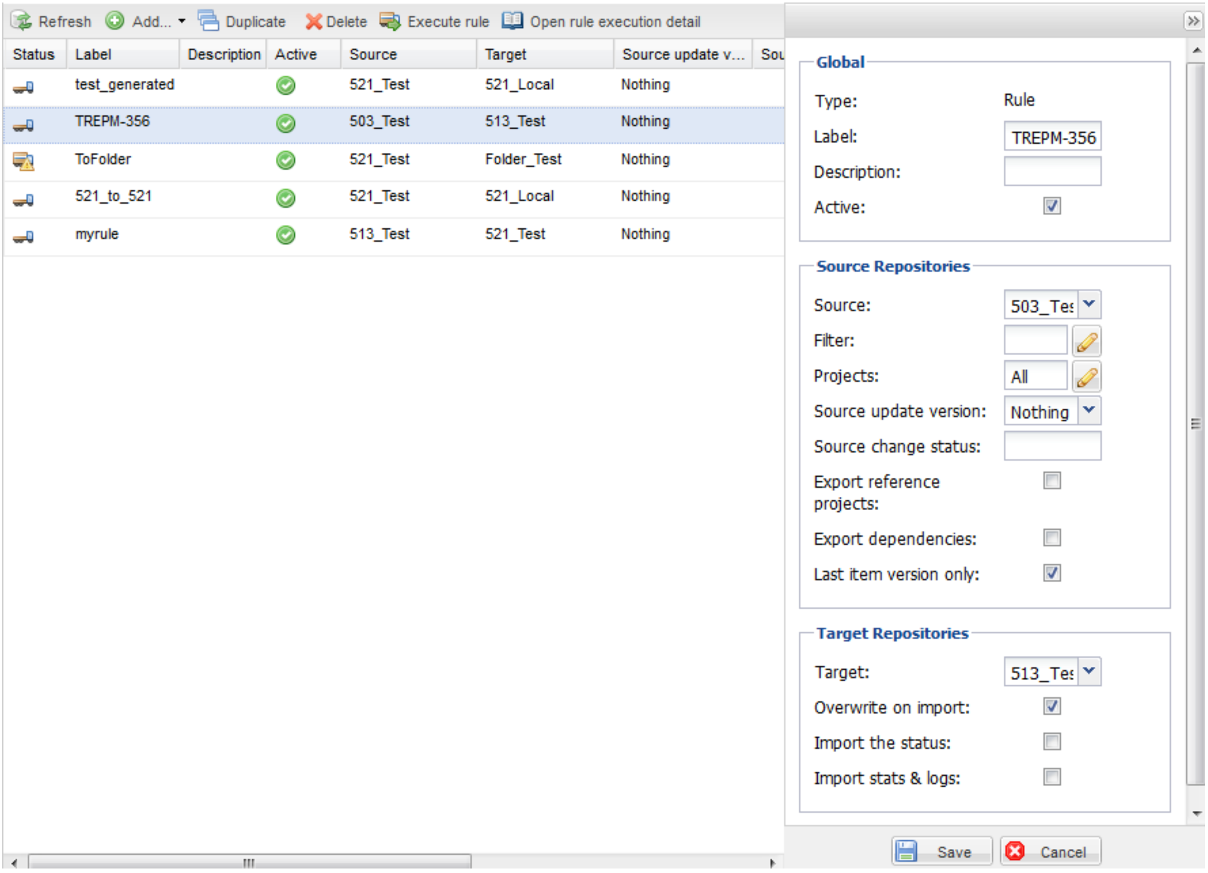
Talend Repository Manager is equipped with a rule management module to configure, execute and record the item migration rules across repositories.

5.1. Accessing the Rules page

In *Talend Repository Manager*, the **Rules** page helps you to create rules to migrate specific items or generated tasks (jobs zip files) from a source repository to a target repository.

To access the **Rules** page:

- In the **Menu** tree view, click **Rules** .



All created migration rules are listed in this page. The panel to the right, the configuration panel, helps you create new rules or modify existing rules.

The configuration panel to the right allows you to modify the parameters of any migration rule you select in the list. For further information, see *Setting up migration rules*, *Adding projects to rules* and *Configuring filters in rules*.

The fields in the configuration panel may change depending on which version of *Talend Administration Center* you are using. For more information on supported versions, see *Installation requirements*.

The rule list provides the following information about every rule:

Column	Description
Status	The status of the rule. The status can be: - :The rule is ready to be executed. - : The last rule execution failed. - : The rule execution is currently in progress
Label	The rule name as defined by the user in the rule configuration panel.

	For more information, see *Setting up migration rules*.
Description	The descriptive information of the rule.
Active	When the icon appears, the corresponding rule is active. - Active: the rule can be executed. - Not active: the rule cannot be executed.
Source	The source repository of the migrated element.
Target	The target repository of the migrated element.
Source update version	Information about the version changes of the source items at the end of the migration. - Nothing: no version update is carried out - Update major: the version major number is incremented. - Update minor: the version minor number is incremented.
Source change status	Information about the status of the source items at the end of the migration.
Overwrite on import	Whether the migrated item overwrites an identical pre-existing item.
Import the status	Whether to migrate the project status that you define yourself in addition to the attributed status. For further information about the project status, see *Talend Studio User Guide*.
Import stats & logs	Whether to migrate the project settings, including the statistics, the logs and the volumetric information. The settings as such are configured in *Talend Studio*. For further information, see *Talend Studio User Guide*.

From this quick access toolbar of the **Rules** page, you can:

- refresh the rule list,
- add, execute or delete a rule,
- duplicate the configuration of a rule,
- view the rule execution details.

The four buttons **Duplicate**, **Delete**, **Execute rule** and **Open rule execution detail** are greyed out until you select one rule from the rule list.

5.2. Setting up migration rules

In *Talend Repository Manager*, the **Rules** page helps you to select specific items, ESB items, execution plans or generated tasks (job zip files) and migrate them from one administration center to another.

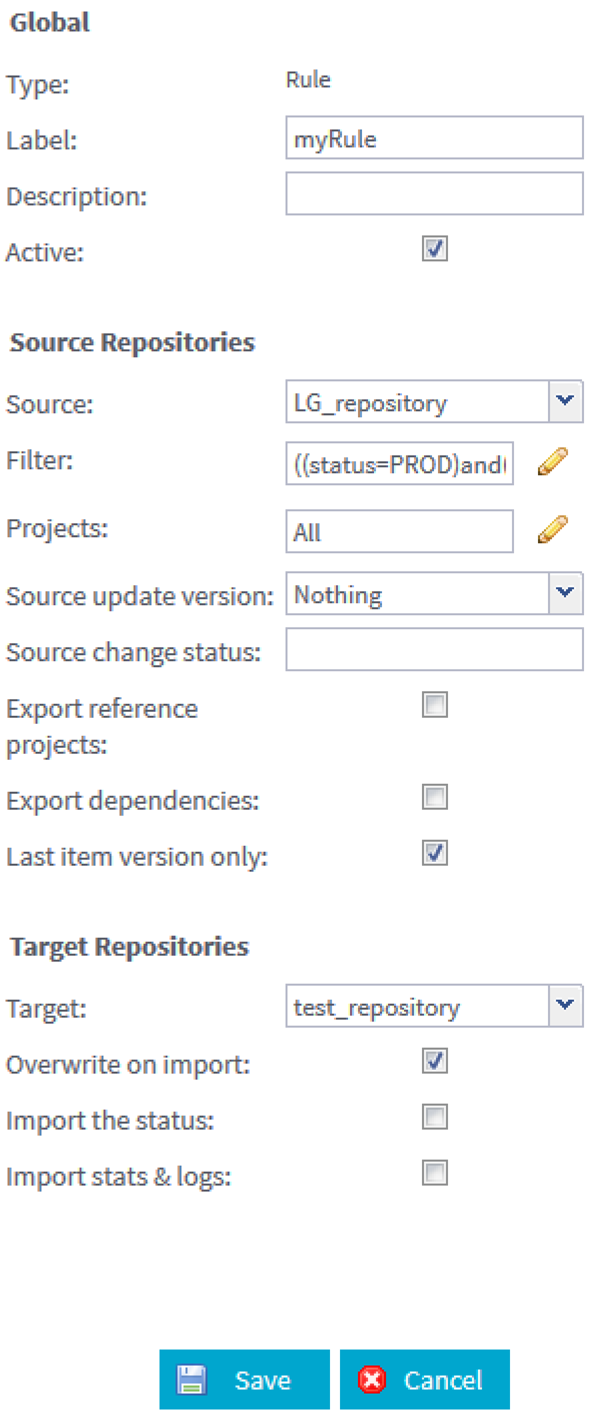
During migration, you exports elements from a source repository and import them into a target repository.

When you migrate generated tasks, you can execute the jobs in the target directory directly without regenerating them.

5.2.1. How to create a rule to migrate items

1. In the **Menu** tree view, click **Rules**.
2. On the **Rules** toolbar, click **Add** > **Rule**.

   The configuration panel to the right of the rule list is activated.



3. In the configuration panel to the right, fill in the following information.

   For the global parameters:

Label	Enter a name for the rule to be created.
Description	Enter some text to describe the rule you want to create.
Active	Clear the check box to disable the execution of the rule. By default the check box is selected, meaning that the rule execution is enabled.

   For the source repository parameters:

Source	Select the source repository where the items are migrated from.

	From this list you have access only to the repositories that are defined as **Source only** or as **Source & Target** when created in *Talend Repository Manager*. For more information about how to define a repository connection, see *Managing the repository connection list*.
Filter	Set a filter to decide what items of a project you want to migrate. Click the icon next to the field to open the **[Filter Configuration]** window. For more information on how to configure the filters, see *Configuring filters in rules*.
Projects	Select the projects containing the items to be migrated across repositories. The default value in this field is **All.** Click the icon to open the **[Project Selection]** dialog box. For more information, see *Adding projects to rules* -Project branches are available in the **[Project Selection]** dialog box when the version of *Talend Administration Center* with which *Talend Repository Manager* communicates is 4.0.2 and above. -Project tags are available in the **[Project Selection]** dialog box when the version of *Talend Administration Center* with which *Talend Repository Manager* communicates is 5.2.1 and above.
Source update version	Select the update mode to be taken in account on the source item version at the end of the migration. The mode may be: -**Nothing**: no update will be executed. -**Next major**: version major is to be updated, e.g version 1.0 changes to 2.0 or 2.4 changes to 3.0. -**Next minor**: version minor is to be updated, e.g. version 1.0 changes to 1.1 For more information on item versioning, see the *Talend Studio User Guide*.
Source change status	Enter the target status of the source items at the end of the migration, using the exact status names defined in the *Talend Studio* you are using. By default, the status available may be: -**DEV**: item development is in progress. -**TEST**: item development is finalized but requires QA/test -**PROD**: item can be executed or used for production. You need to consult the **Status** view in the **[Project Settings]** window of the *Talend Studio* you are using to read the existing statuses and define new statuses. For more information about how to create a status, see the *Talend Studio User Guide*.
Export reference projects	Select this check box to migrate the projects referenced to the major project you defined in the **Projects** field.
Export dependencies	Select this check box if you want to export the dependencies of your item, for example contexts, routines, connections, etc.
Last item version only	Select this check box to migrate only the latest version of the items you are interested in. This check box is available only when the repository manager communicates with *Talend Administration Center* of version 4.1.0 and above.

For the parameters relative to the target repository or the destination directory:

Target repository	Select the target repository where you want to migrate the items. From this list you have access only to the repositories that are defined as **Target only** or as **Source & Target** when created in *Talend Repository Manager*. For more information about how to define a repository connection, see *Managing the repository connection list*.
Overwrite on import	Select this check box to overwrite an existing item with the newly imported item. If cleared, the new item is not migrated.

Import the status	Select this check box to migrate the user-defined project status in addition to the attributed status in the *Talend Studio* you are using. This check box is available only when the repository manager communicates with *Talend Administration Center* of version 4.0.3 +.
Import stats & logs	Select this check box to migrate the project settings regarding the statistics, the log and the volumetric information. This check box is available only when the repository manager communicates with *Talend Administration Center* of version 4.0.3+.

Note that the fields in the configuration panel may change depending on which version of *Talend Administration Center* you are using. For more information on supported versions, see *Installation requirements*.

4. Save the migration rule.

   The rule is ready now to be executed. For information about executing migration rules, see *How to execute a rule from the toolbar*.

5.2.2. How to create a rule to migrate generated tasks

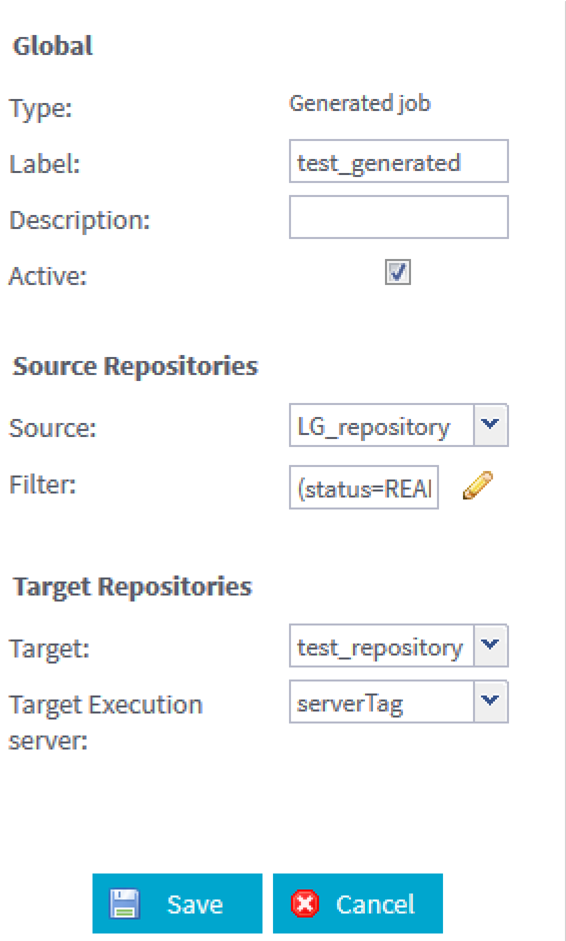
In *Talend Repository Manager*, the **Rules** page helps you to select specific generated tasks (job zip files), the tasks that has been generated in Job Conductor, and migrate them from one administration center to another.

After migrating these tasks to the target repository, you can execute the jobs directly without regenerating them.

You can migrate generated tasks between repositories only if their version is 5.2.1+.

1. In the **Menu** tree view, click **Rules**.
2. On the **Rules** toolbar, click **Add** > **Generated Job**.

   The configuration panel to the right of the rule list is activated.



3. In the configuration panel, fill in the following information.

   For the global parameters:

Label	Enter a name for the rule to be created.
Description	Enter some text to describe the rule you want to create.
Active	Clear the check box to disable the execution of the rule. By default the check box is selected, meaning that the rule execution is enabled.

   For the source repository parameters:

Source	Select the source repository where the tasks are migrated from. From this list you have access only to the repositories that are defined as **Source only** or as **Source & Target** when created in *Talend Repository Manager*. For more information about how to define a repository connection, see *Managing the repository connection list*.
Filter	Set a filter to decide what tasks of a project you want to migrate. Click the icon next to the field to open the **[Filter Configuration]** window. For more information on how to configure the filters, see *Configuring filters in rules*.
Projects	Select the projects containing the tasks to be migrated across repositories. The default value in this field is **All.** Click the icon to open the **[Project Selection]** dialog box. For more information, see *Adding projects to rules* Project tags are available in the **[Project Selection]** dialog box when the version of *Talend Administration Center* with which *Talend Repository Manager* communicates is 5.2.1 and above.

For the parameters relative to the target repository or the destination directory:

Target repository	Select the target repository where you want to migrate the tasks. From this list you have access only to the repositories that are defined as **Target only** or as **Source & Target** when created in *Talend Repository Manager*. For more information about how to define a repository connection, see *Managing the repository connection list*.
Target Execution server	Select the target execution server to run the migrated tasks. Leave this field empty if the target execution server has the same name as the source.

Note that the fields in the configuration panel may change depending on which version of *Talend Administration Center* you are using. For more information on supported versions, see *Installation requirements*.

4. Save the migration rule.

   The rule is ready now to be executed. For information about executing migration rules, see *How to execute a rule from the toolbar*.

5.2.3. How to create a rule to migrate ESB items

In *Talend Repository Manager*, the **Rules** page helps you to select an ESB item (an execution task in the ESB conductor that can start Services, Routes and data service Jobs) and migrate it from one administration center to another.

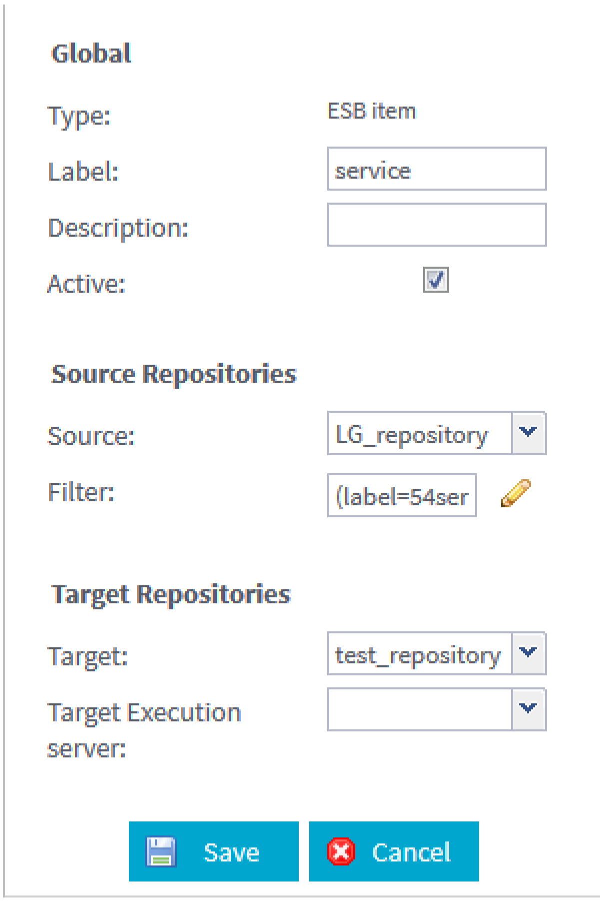
After migrating an ESB item to the target repository, you can execute it directly.

You can migrate ESB items between repositories only if their version is 5.4.1+.

1. In the **Menu** tree view, click **Rules**.

2. On the **Rules** toolbar, click **Add** > **ESB item**.

   The configuration panel to the right of the rule list is activated.



3. In the configuration panel, fill in the following information.

   For the global parameters:

Label	Enter a name for the rule to be created.
Description	Enter a description of the rule you want to create.
Active	Clear the check box to disable the execution of the rule. By default the check box is selected, meaning that the rule execution is enabled.

   For the source repository parameters:

Source	Select the source repository where the ESB item is migrated from. From this list you have access only to the repositories that are defined as **Source only** or as **Source & Target** when created in *Talend Repository Manager*. For more information about how to define a repository connection, see *Managing the repository connection list*.
Filter	Set a filter to decide what ESB item you want to migrate. Click the icon next to the field to open the **[Filter Configuration]** window. For more information on how to configure the filters, see *Configuring filters in rules*.

   For the parameters relative to the target repository or the destination directory:

Target repository	Select the target repository where you want to migrate the ESB item. From this list you have access only to the repositories that are defined as **Target only** or as **Source & Target** when created in *Talend Repository Manager*. For more information about how to define a repository connection, see *Managing the repository connection list*.
Target Execution server	Select the target execution server to run the migrated ESB item.

	Leave this field empty if the target execution server has the same name as the source.

Note that the fields in the configuration panel may change depending on which version of *Talend Administration Center* you are using. For more information on supported versions, see *Installation requirements*.

4. Save the migration rule.

   The rule is ready now to be executed. For information about executing migration rules, see *How to execute a rule from the toolbar*.

5.2.4. How to create a rule to migrate execution plans

In *Talend Repository Manager*, the **Rules** page helps you to select an execution plan, a plan defined in *Talend Administration Center* to execute specific Jobs in certain order, and migrate them from one administration center to another.

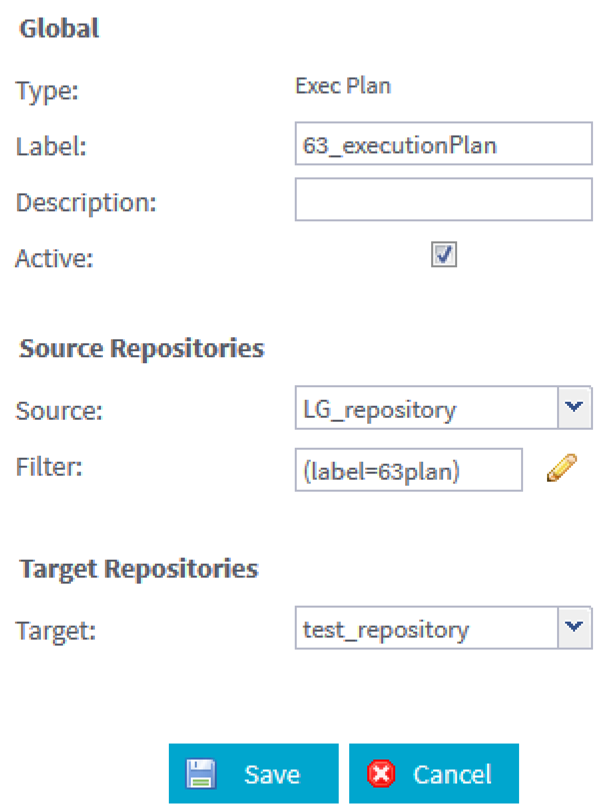
After migrating an execution plan to the target repository, you can execute the jobs - grouped in the plan - directly without regenerating them on the condition that the execution tasks of the Jobs are already migrated to the same target repository. For further information about migrating tasks, see *How to create a rule to migrate generated tasks*.

You can migrate execution plans between repositories only if their version is 5.4.1+.

1. In the **Menu** tree view, click **Rules**.

2. On the **Rules** toolbar, click **Add** > **Exec Plan**.

   The configuration panel to the right of the rule list is activated.



3. In the configuration panel, fill in the following information.

   For the global parameters:

Label	Enter a name for the rule to be created.
Description	Enter a description of the rule you want to create.
Active	Clear the check box to disable the execution of the rule. By default the check box is selected, meaning that the rule execution is enabled.

   For the source repository parameters:

Source	Select the source repository where the execution plans are migrated from. From this list you have access only to the repositories that are defined as **Source only** or as **Source & Target** when created in *Talend Repository Manager*. For more information about how to define a repository connection, see *Managing the repository connection list*.
Filter	Set a filter to decide what execution plans you want to migrate. Click the icon next to the field to open the **[Filter Configuration]** window. For more information on how to configure the filters, see *Configuring filters in rules*.

   For the parameters relative to the target repository or the destination directory:

Target repository	Select the target repository where you want to migrate the execution plan. From this list you have access only to the repositories that are defined as **Target only** or as **Source & Target** when created in *Talend Repository Manager*. For more information about how to define a repository connection, see *Managing the repository connection list*.

   Note that the fields in the configuration panel may change depending on which version of *Talend Administration Center* you are using. For more information on supported versions, see *Installation requirements*.

4. Save the migration rule.

   The rule is ready now to be executed. For information about executing migration rules, see *How to execute a rule from the toolbar*.

5.3. Adding projects to rules

When creating the rule, you can decide what project to migrate items or generated tasks (job zip files) from.

Talend Repository Manager uses the migration rule to select the items or generated tasks from a specific project in a source repository and distribute them to the selected mirror projects in the target repository. If the source project does not exist in the target repository, it will be created automatically.

If the repository manager communicates with *Talend Administration Center* which version is 4.0.2+, you can migrate items from project branches.

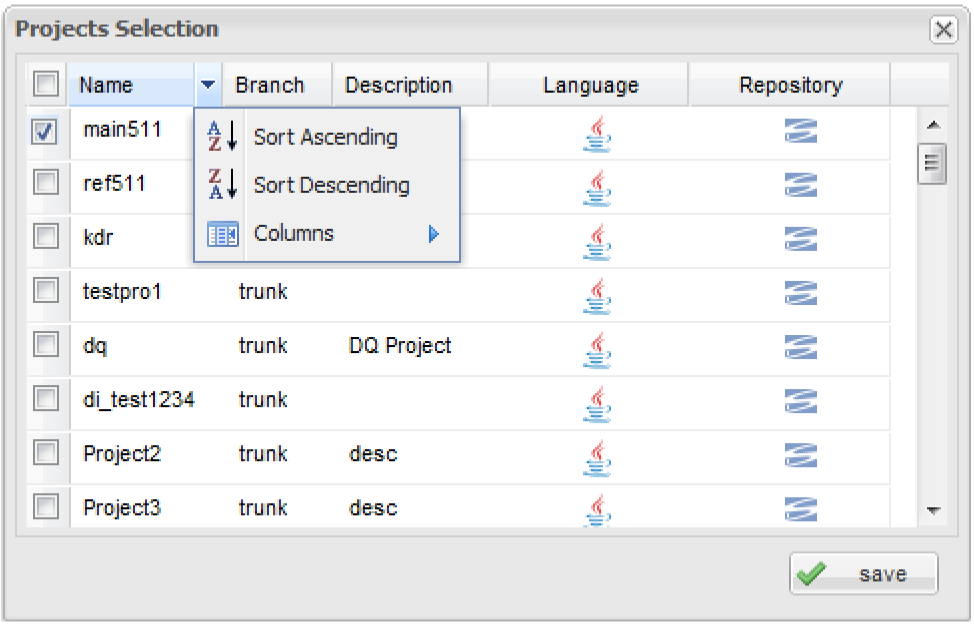
If the repository manager communicates with *Talend Administration Center* which version is 5.2.1, you can migrate items from project tags.

You can migrate generated tasks between repositories only if their version is 5.2.1+.

To add a project containing the items or tasks to be migrated, proceed as follows:

1. In the **Rules** page, click the icon next to the **Projects** field.

The **[Project Selection]** dialog box is displayed listing the projects available in the selected repository.



Depending on the *Talend Administration Center* version, this list may contain not only trunks but project branches and tags.

2. Select the check box of the project from which you want to import the items or tasks and click **Save**.

   The selected project is displayed in the **Projects** field.

   You can sort the projects listed or show or hide specific columns the same way as you are able to do it about the **Users** module. For details on how to customize a module display, see *How to customize the user list display*.

5.4. Configuring filters in rules

The **[Filter Configuration]** dialog box allows you to set up and combine filters of different levels and natures so as to rigorously select the items or tasks to be migrated.

A basic unit of filter is provided by default to show the syntax required. You can then graphically build the most complex and hierarchical filters easily.

5.4.1. How to set up a filter

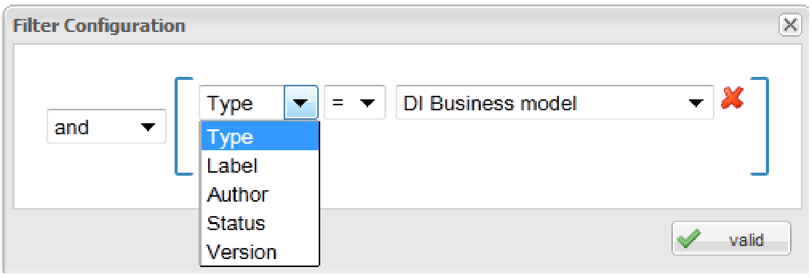
1. In the **Rules** page, click the  icon next to the **Filters** field.

   The **[Filter Configuration]** dialog box is displayed.

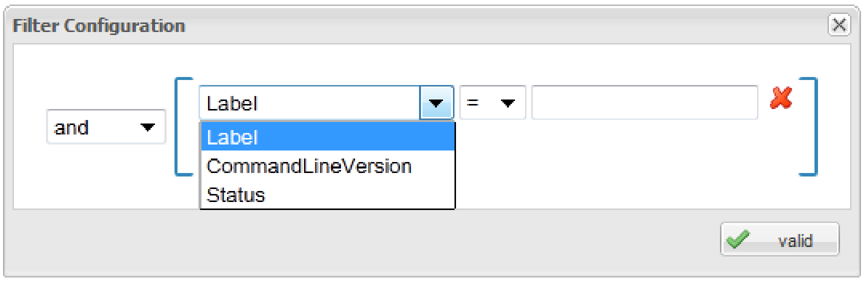
2. Select the filter nature to determine on what the filter is based.

   The filter drop-down list is different depending on whether you are migrating items or generated tasks.

   For items, the filter is based on the **Type**, **Label**, **Author**, **Status**, or **Version** of the items.



For generated tasks, the filter is based on the **Label**, **CommandLineVersion**, or **Status** of the generated task.



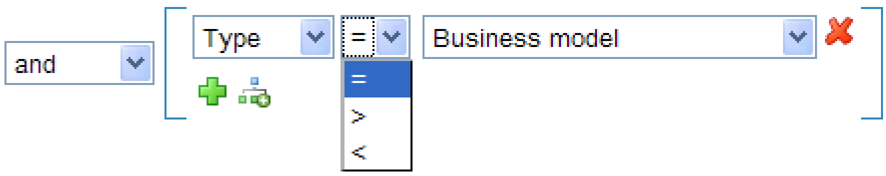
The table below describes the filter nature for items:

Nature	Description
Type	Type of items available in the **Repository** view of *Talend Studio*, such as: Business Model, Job Design, Metadata, Documentation, Context, Routines, SQL patterns, TDQ reports, TDQ analyses, MDM objects, etc. Among them, the DQ or the MDM items are available only when you have subscribed to the 1.2.0 + version of *Talend Repository Manager*.
Label	Item actual name.
Author	Item author.
Status	Item statuses. By default, this status may be: - **DEV**: item development is in progress. - **TEST**: item development is finalized but requires QA/test - **PROD**: item can be executed or used for production. You can read or even edit these elements from the **Repository** view or the **[Project settings]** view of *Talend Studio*. For further information, see *Talend Studio User Guide*.
Version	Item versions.

The table below describes the filter nature for generated tasks:

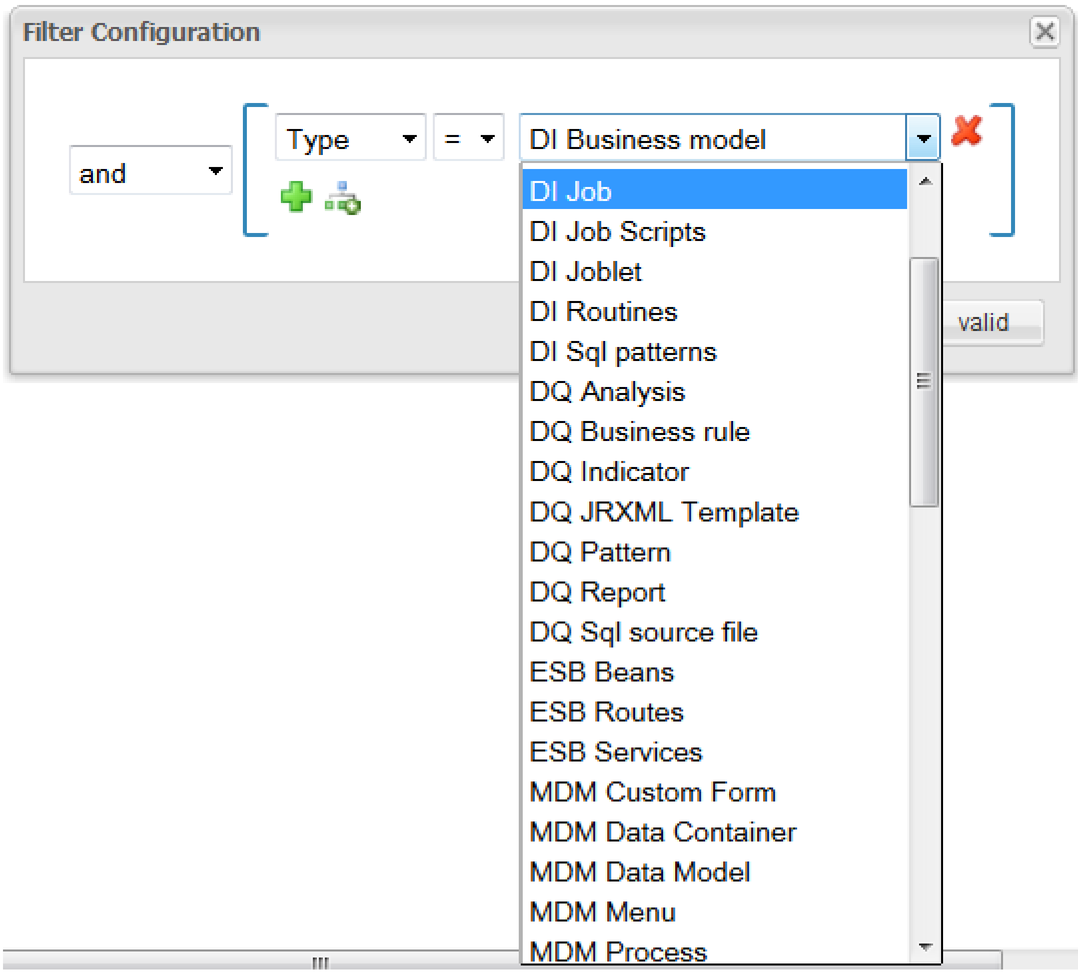
Nature	Description
Label	The name of the generated task.
CommandLineVersion	The version of the command line with which the task has been generated in the Job Conductor in *Talend Administration Center*. This version number is displayed in a column in the Job Conductor page starting from version 5.2.1+. You can use `*` when setting the command line version. For example: `version%5.2_*` means that all tasks where the command line version starts with `5.2_` will be migrated.
Status	The status of the task displayed in the Job Conductor page in *Talend Administration Center*.

3. Select the operator.



Operator	Description
>	Item versions greater than a given value. This operator is available only to the **Version** filter.
<	Item versions lower than a given value. This operator is available only to the **Version** filter.
=	Items equal to a given value.
%	Zero or more characters in an item label. For example: `label%job_*` means that all jobs where label starts with`job_` will be migrated. This operator is available only to the **Label** filter

4. Enter or select the expected value as the migration criterion in the text field.



5. Click the boolean button located to the left to combine filters and define priority levels.

   By default, the value is **and**. If you only need a single filter, leave the default setting.

6. If you want to combine several filters, the two following booleans are available:

5.4.2. How to combine filters

We strongly recommend you to read *How to set up a filter*, prior to beginning this section.

To combine filters to create an advanced migration rule, proceed as follows:

1. Create filters of different levels.

   The following buttons are available to develop these filters.

Tools	Description
	Click this button to delete the corresponding filter.
	Click this button to add a filter in the same level.
	Click this button to create a filter in the inferior level.

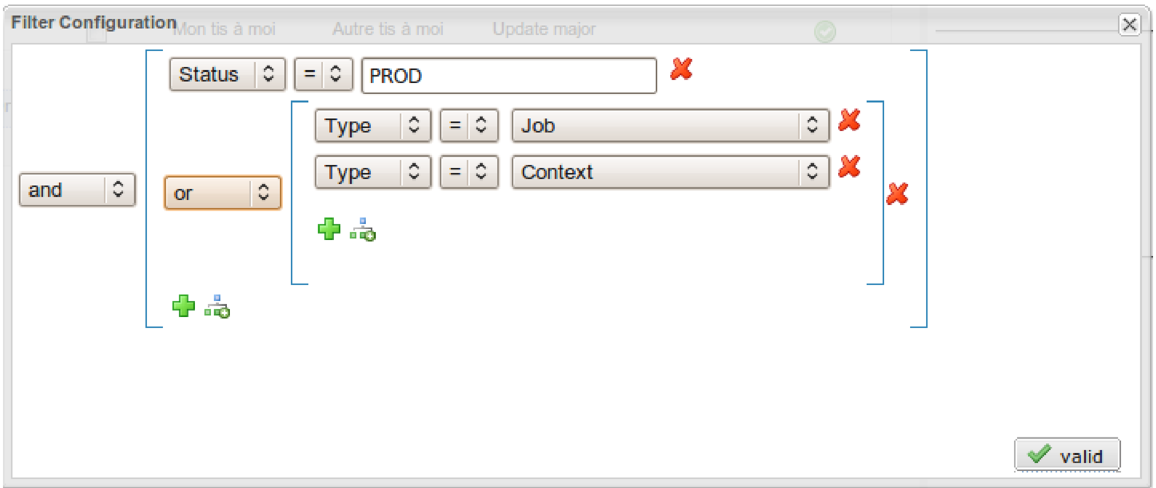
2. Select either of the orchestration key to combine these filters.

   This key may be **and** or **or**.

Operator	Description
and	All filters covered by **and** should apply for filtering the items.
or	Each of the filters covered by **or** can apply alone for filtering the items.

   The following figure presents an example of the combined filters.

   In this example, the combined filters read: *The items to be migrated should have the PROD status and their type must be either Job or Context.*



3. Click **Valid** to validate the configuration and return to the **Rules** view.

5.5. Executing rules

After you set up the migration rule, you need to execute or schedule the execution of these rules in order to time the occurrence of each migration.

5.5.1. How to execute a rule from the toolbar

You can execute the rules you defined from the toolbar and trigger the migration task immediately.

To be able to execute migration rules, you must have the Operation Manager role and rights on the source an target repositories. Otherwise, you will get an error about insufficient rights. For further information about users' roles and rights, see *Talend Administration Center User Guide*.

1. Click **Rules** on the **Menu** tree view to display the list of rules defined.

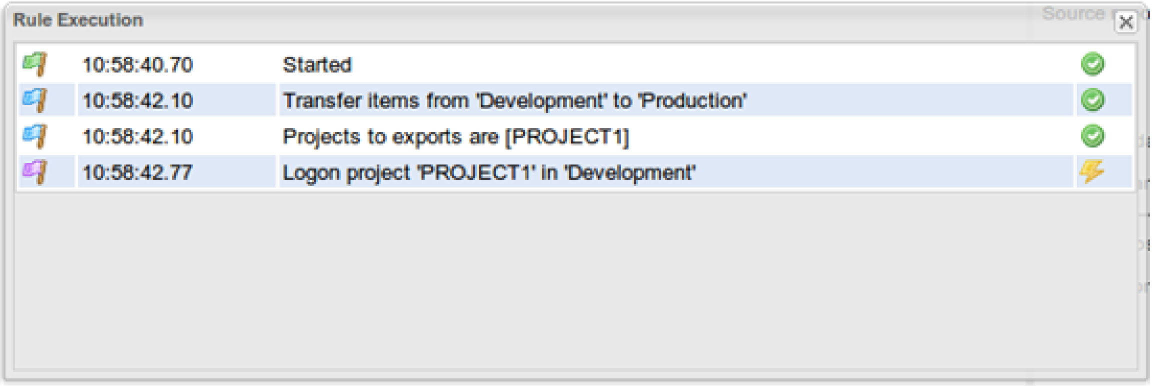
   If you have not defined any migration rules yet, see *Setting up migration rules*

2. Select the rule you need to execute.

3. Click **Execute rule** to launch the migration task.

   Execution can take some time depending on the scale of your migration.

   A **[Rule Execution]** window displays, showing the execution details while the migration is in progress.



If you get an error message about insufficient rights in the execution window, you must be granted in *Talend Administration Center* the Operation Manager role and rights on the source an target repositories.

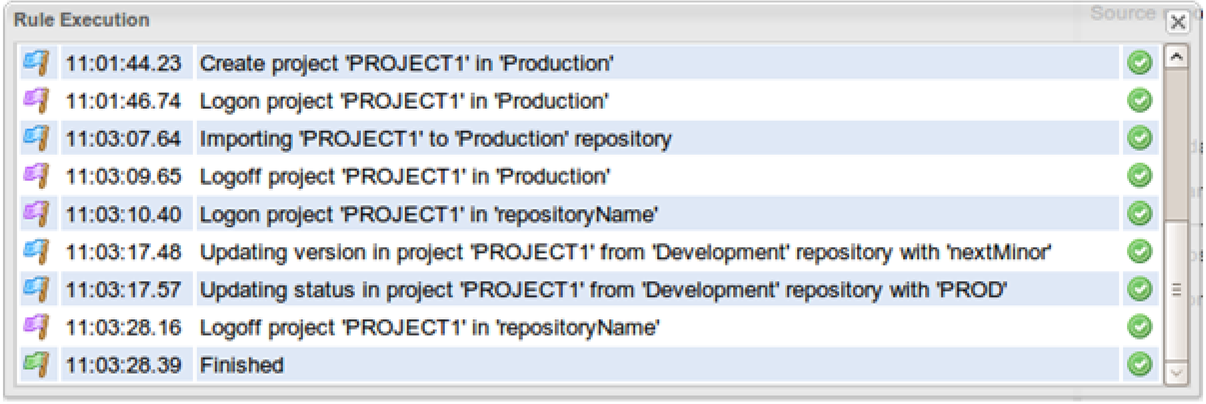
In the **[Rule Execution]** window, detailed information is provided to indicate the execution progress step by step:

Columns	Description
	The flag icons represent how important the execution stage is: green being the most important step, blue being an intermediate step and violet being a minor step.
10:58:42(example)	The timestamp shows the moment at which an execution step is performed.
Started	The description shows the nature of the operations carried out.
	This green icon appears when the operation is successfully completed. The lightning icon displays when the operation is in progress.

5.5.2. Migration example

In the example provided in this guide, the migration will move items from the *PROJECT1* project of the *Development* repository to the *Production* repository.

The example shows that the items are fetched from the *Development* repository, then another *PROJECT1* project is created in the *Production* repository as this project does not yet exist there. Finally, the items are migrated into the *Production* repository.



According to the configuration in the **Source update version** and the **Source status change** fields of the **Rules** configuration panel, the version and the status of the migrated items are changed in the *Development* repository.

For further information on how to configure the **Source update version** and the **Source status change** fields, see *Setting up migration rules*.

5.5.3. How to automate & schedule rule execution

The rule execution and thus the migration triggering can be automated using the **Scheduling** module.

For more information on how to access the scheduling module and how to schedule a rule execution, see *Scheduling a rule execution*

5.5.4. How to review the execution details

The **[Rule Execution]** tracing window appears when you click **Execute rule** and provides a wealth of information on the execution progress.

However, in case you accidentally closed it and want to review it:

1. On the **Rules** page, select the rule about which you need to view the execution details.
2. Click **Open rule execution detail** on the toolbar to open the window again.

Open rule execution detail allows you to check only the details of the last execution of a rule.

For more information on how to access the history records of all rule executions, see *Monitoring rule executions*

5.6. Managing rules

Talend Repository Manager allows you to manage the rules which are created to migrate specific items or tasks (job zip files) from a source repository to a target repository.

5.6.1. How to edit a migration rule

To edit a migration rule you already added to the rule list, proceed as follows:

1. Click **Rules** on the **Menu** tree view.
2. Select the rule you need to edit from the rule list.
3. Edit the parameters you need to configure in the corresponding fields in the configuration panel to the right.

   For more information about how to configure the parameters, see *Setting up migration rules*.
4. Click **Save** to validate your changes.

5.6.2. How to refresh the Rules view

Although *Talend Repository Manager* refreshes the current page at regular time intervals, you may also refresh it manually at any time.

Click **Refresh** on the toolbar and the **Rules** view will refresh the rule list immediately.

5.6.3. How to duplicate a migration rule

To avoid creating a new rule from scratch, you can duplicate an existing one and work around its metadata to have a new rule in the list.

To duplicate a rule:

1. On the **Rules** page, select the rule you want to duplicate.
2. On the toolbar, click **Duplicate**. The configuration panel to the right shows the metadata of the selected rule.
3. Modify the metadata as required in order to create a new rule.
4. Click **Save** to validate the operation or **Cancel** to cancel it.

   The new rule is listed in the trigger list.

*If you click on any of the rules in the list before finalizing the creation or modification of the current rule, a dialog box prompts you to save the parameters in the configuration panel before switching to another rule. Click **Cancel** to return to the configuration panel and save the parameters.*

5.6.4. How to delete a migration rule

If you need to delete a migration rule, proceed as follows:

1. On the **Menu** tree view, click **Rules**.
2. Select the rule you need to delete.
3. Click **Delete** on the toolbar on top.
4. On the popup asking for your confirmation, click **Yes** to validate the deletion.

5.6.5. How to customize the Rules view

Customization of the **Rules** module display is done in the same way as the **Users** module. For details on how to customize a module display, refer to *How to customize the user list display*.

Chapter 6. Migration scheduling

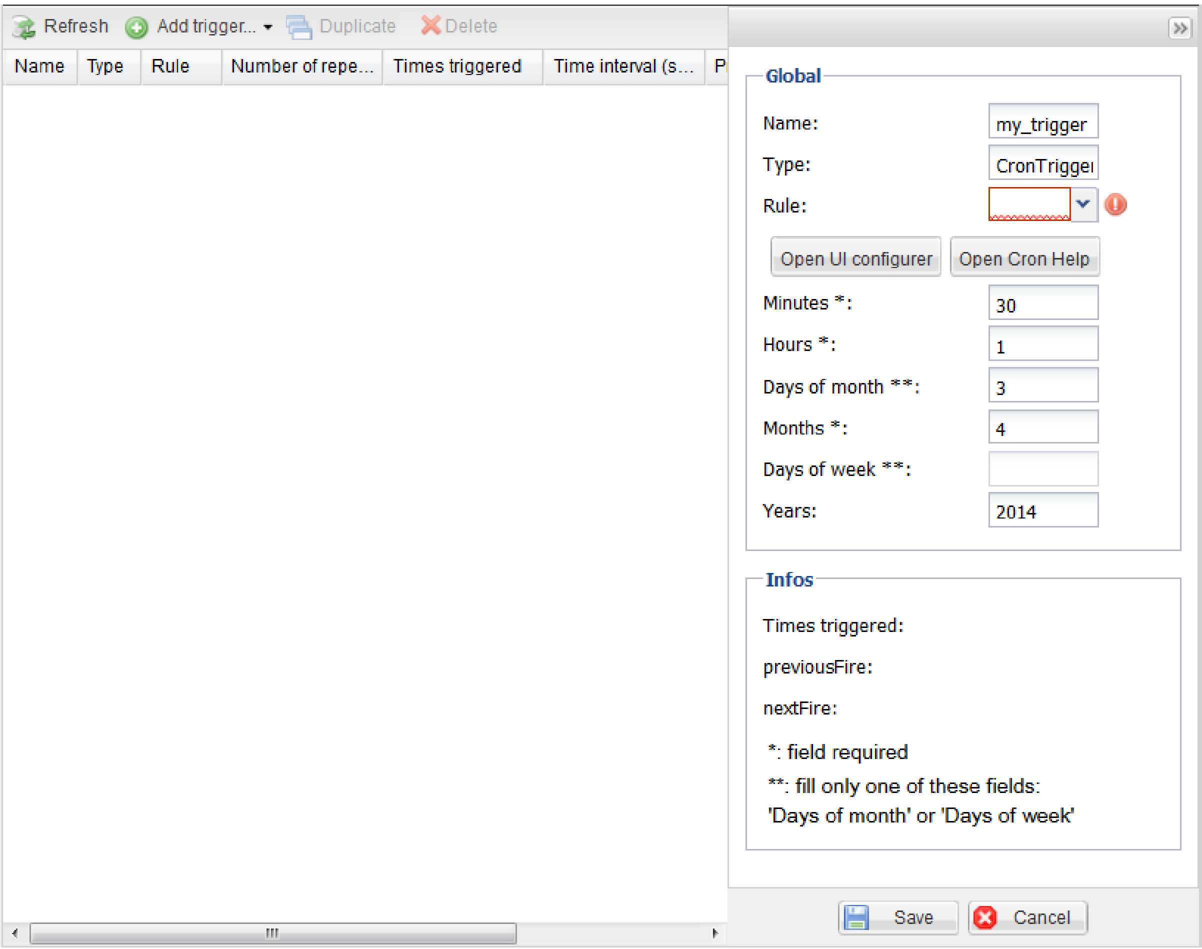
The **Scheduling** module allows you to schedule time-based rule executions.

In *Talend Repository Manager*, migration rules that are configured to filter the items for migration, can then be launched automatically, based on either a simple or a Cron trigger from the **Scheduling** module.

6.1. Accessing the Scheduling module

The **Scheduling** module helps you to automate the execution of migration-related rules that you previously defined. Prior to reading this section, we recommend that you read *Cross-repository rules*.

To access the Scheduling module, click the **Scheduling** node on the **Menu** tree view.



From this Scheduling view, you can plan the execution of a rule for each migration task, using time triggers. For further information about how to schedule a rule execution*Scheduling a rule execution*

6.2. Scheduling a rule execution

You can schedule your tasks based on simple or advanced time triggers. Time-based scheduling uses a simple trigger or a Cron trigger depending on the way you want your time-based triggered task to be executed, either at a defined time and date or regularly, over a period of time.

Note that if you define several types of triggers for the same rule execution, the first trigger to be verified is the first to be executed.

On the **Scheduling** view, you can set up different types of triggers that automate the execution of the defined migration rule.

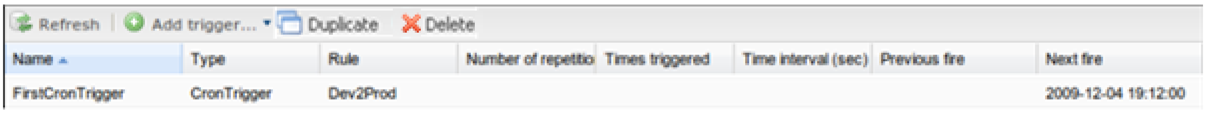
The triggers available include:

- Time-based triggers **(SimpleTrigger)**:

Refresh | Add trigger... | Duplicate | Delete

Name	Type	Rule	Number of repetitions	Times triggere	Time interval (sec)	Previous fire	Next fire
DailyTrigger	SimpleTri	Dev2Pr	10	4	60	2009-12-04 17:01:29	2009-12-04 17:02:29

- Periodic multi-platform CRON-like triggers **(CronTrigger)**:



Refresh | Add trigger... | Duplicate | Delete

Name	Type	Rule	Number of repetitio	Times triggered	Time interval (sec)	Previous fire	Next fire
FirstCronTrigger	CronTrigger	Dev2Prod					2009-12-04 19:12:00

The toolbar on top of the trigger table allows you to refresh the table, add or delete triggers, or duplicate a trigger configuration. For further information regarding the trigger management tools*Managing the Scheduling module*

The scheduled execution table provides the following information regarding the execution triggering:

Name	Trigger name
Type	Trigger types: **SimpleTrigger** : time trigger based on the time intervals between executions **CronTrigger**: time trigger based on a scheduled time of execution.
Rule	Name of the rule, the execution of which is scheduled using the selected trigger.
Number of repetitions	Number of defined triggering repetitions.
Times triggered	Number of times the execution already triggered.
Time interval (sec)	Time interval between each execution triggering.
Previous fire	Date and time when the previous triggering took place.
Next fire	Date and time when the next triggering will take place.

For more information about how to use these triggers for executing migration rules, see:

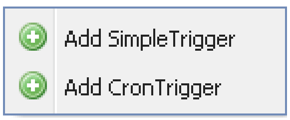
- *How to schedule a migration using a simple trigger*
- *How to schedule a migration using a CRON-based trigger*.

6.2.1. How to schedule a migration using a simple trigger

Add a simple trigger onto a rule in order to schedule its executions based on a defined time interval between the executions.

To add a simple trigger to a rule:

1. On the **Scheduling** page, click **Add trigger** on the toolbar located above the execution scheduling table.
2. Select **Add SimpleTrigger** from the drop-down list.

   The configuration panel displays to the right-hand side:

3. Fill in the configuration panel with the following information:

Field	Description
Name	Name of the trigger
Type	Type of trigger. **SimpleTrigger** displays and is read-only as you selected **Add SimpleTrigger** from the **Add trigger** drop-down list.
Rule	Select the rule for which execution is to be triggered.
Number of repetitions	Type in the number of executions that should occur in addition to the first execution.
Time interval (sec)	Type in (in seconds) the time interval between triggerings. For long intervals, use a CRON-based trigger.

Fields marked with an exclamation mark are mandatory.

The following fields are read-only triggering information which are displayed automatically, as soon as the trigger is saved (hence fired).

Time triggered	Number of times the trigger has already fired.
Previous fire	Date and time at which the previous triggering took place.
Next fire	Date and time at which the next triggering will take place.

4. Click **Save** to validate the simple trigger configuration.

   The corresponding rule is executed immediately.

Once the trigger executes all of the expected executions, the trigger disappears from the scheduled execution list.

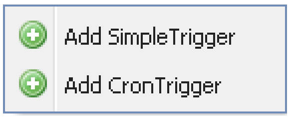
*If you click on any trigger in the list before finalizing the creation or modification of the current trigger, a dialog box prompts you to save the parameters in the configuration panel before switching to another trigger. Click **Cancel** to return to the configuration panel and save the parameters.*

6.2.2. How to schedule a migration using a CRON-based trigger

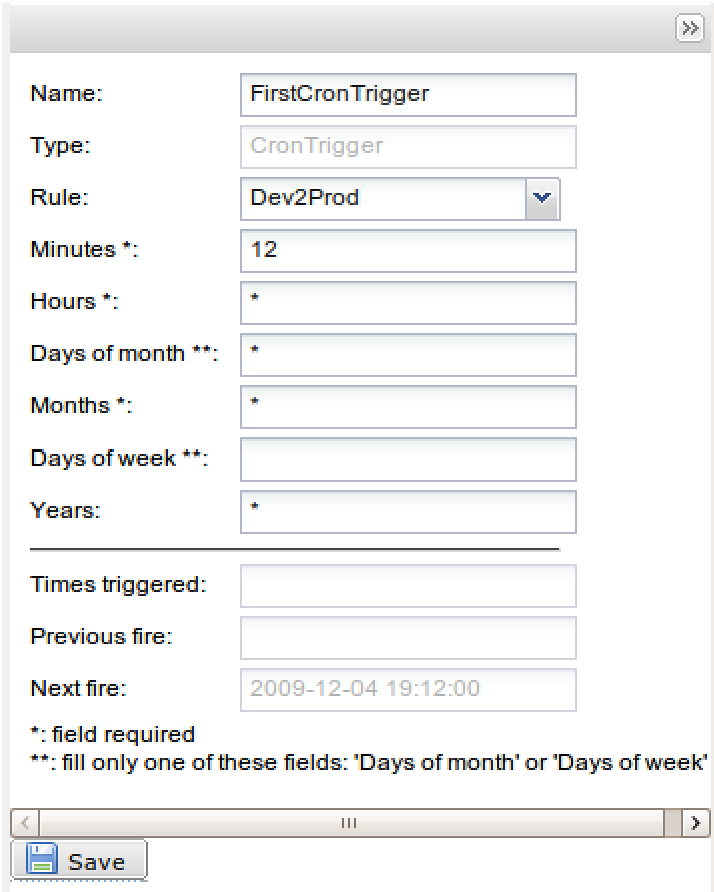
If you need monthly or weekly executions of your rules, then use a CRON-based trigger.

To add a CRON trigger to a rule:

1. On the **Scheduling** page, click **Add trigger** on the toolbar located above the execution scheduling table.
2. Select **Add CronTrigger** from the drop-down list.



The configuration panel opens to the right:



3. Fill out the configuration panel with the following information:

Field	Description
Name	Name of the trigger.
Type	Type of trigger. **CronTrigger** displays and is read-only as you selected **Add CronTrigger** from the **Add trigger** drop-down list.
Rule	Select the rule for which execution is to be triggered..
Minutes	Minute you want to execute the migration rule.
Hours	Hour at which you want to execute the migration rule.
Days of month	Day of the month when you want to execute the migration rule.
Months	Month when you want to execute the migration rule.

Field	Description
Days of week	Day of the week when you want to execute the migration rule.
Years	Year you want to execute the migration rule.
	Fields marked with **: Select one or more week day OR one or more dates. **Fields marked with ***: mandatory information For multiple selections, press **Ctrl + click**

The following fields are read-only triggering information which display automatically, as soon as the trigger is saved (hence fired).

Time triggered	Number of times the trigger has already fired.
Previous fire	Date and time at which the previous triggering took place.
Next fire	Date and time at which the next triggering will take place.

4. Click **Save** to validate the CRON-based trigger configuration.

If you click on any trigger in the list before finalizing the creation or modification of the current trigger, a dialog box prompts you to save the parameters in the configuration panel before switching to another trigger. Click Cancel to return to the configuration panel and save the parameters.

If you have problems related to triggering Jobs at a fixed time, consult your Administrator to see if the TimeZone is set correctly on your server. For further information about setting the TimeZone, see the Talend Installation Guide.

6.3. Managing the Scheduling module

Through the **Scheduling** module, you can add triggers to a rule, edit and delete triggers, duplicate configuration of a trigger as well as customize the trigger list.

6.3.1. How to edit a trigger

To edit a trigger entry:

1. On the **Scheduling** page, select the trigger in question from the trigger list.
2. Its details display in the configuration panel to the right.
3. Make the relevant changes to the trigger details where necessary.
4. Click **Save** to validate the changes.

*If you click on any trigger in the list before finalizing the creation or modification of the current trigger, a dialog box prompts you to save the parameters in the configuration panel before switching to another trigger. Click **Cancel** to return to the configuration panel and save the parameters.*

6.3.2. How to duplicate a trigger

To avoid creating a new trigger from scratch, you can duplicate an existing one and work around its metadata to add a new trigger to the list.

To duplicate a trigger:

1. On the **Scheduling** page, select the trigger you want to duplicate.
2. On the toolbar, click **Duplicate**. The configuration panel to the right shows the metadata of the selected trigger.
3. Modify the metadata as required in order to create a new trigger.
4. Click **Save** to validate the operation or **Cancel** to cancel it.

   The new trigger is added to the trigger list.

If you click on any of the triggers in the list before finalizing the creation or modification of the current trigger, a dialog prompts you to save the parameters in the configuration panel before switching to another trigger. Click Cancel to return to the configuration panel and save the parameters.

6.3.3. How to delete one or more triggers

To delete a trigger from the trigger list:

1. On the **Scheduling** page, select the trigger in question.
2. On the toolbar on top of the tabular **trigger** list, click **Delete**. A confirmation dialog box appears.
3. Click **OK** to delete the entry from the trigger list.

6.3.4. How to customize the trigger list display

Customization of the **Scheduling** module display is done in the same way as the **Users** module. For the details on how to customize a module display, refer to *How to customize the user list display*.

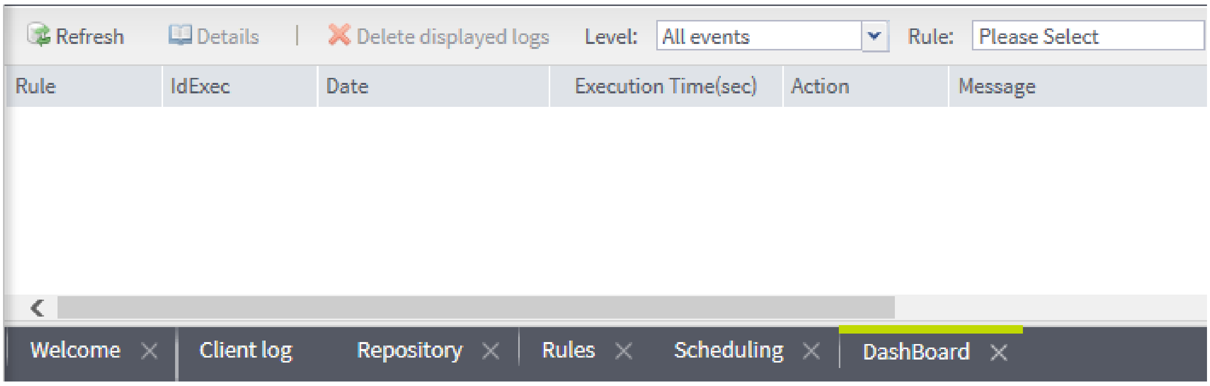
Chapter 7. Dashboard

The **Dashboard** module makes it easy to monitor the status of the executed rules and details the recorded execution events.

7.1. Accessing the Dashboard

The **Dashboard** module helps you to monitor the execution of pre-defined migration rules. Prior to reading this section, we recommend that you read *Cross-repository rules*.

To access the **Dashboard** module, click **Dashboard** in the **Menu** tree to the left to open the **Dashboard** view.



As no rule has been executed yet, the **Dashboard** view is empty.

Above the **Dashboard** table, a toolbar allows you to refresh the tabular execution data, display the execution details or delete the executions recorded.

For further information concerning the management of the Dashboard view*Managing the Dashboard module*

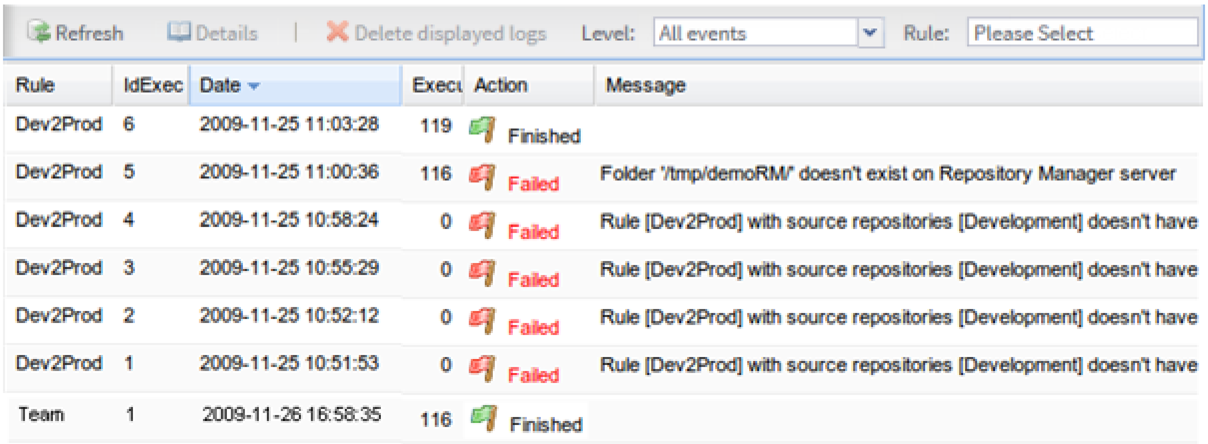
Filtering tools are also available to help you determine the executions to be displayed. For further information about how to use these tools, see *Sorting execution records* .

7.2. Monitoring rule executions

The **Dashboard** view provides you with timely, updated information whilst tracking and monitoring the rule executions until they run their course.

7.2.1. How to read the execution status

After the execution of a rule, the *Talend Repository Manager* **Dashboard** closely tracks all of the events that occur throughout the execution process. The final status displays on the **Dashboard** view.


Refresh | Details | Delete displayed logs | Level: All events | Rule: Please Select

Rule	IdExec	Date	Execu	Action	Message
Dev2Prod	6	2009-11-25 11:03:28	119	Finished	
Dev2Prod	5	2009-11-25 11:00:36	116	Failed	Folder '/tmp/demoRM/' doesn't exist on Repository Manager server
Dev2Prod	4	2009-11-25 10:58:24	0	Failed	Rule [Dev2Prod] with source repositories [Development] doesn't have
Dev2Prod	3	2009-11-25 10:55:29	0	Failed	Rule [Dev2Prod] with source repositories [Development] doesn't have
Dev2Prod	2	2009-11-25 10:52:12	0	Failed	Rule [Dev2Prod] with source repositories [Development] doesn't have
Dev2Prod	1	2009-11-25 10:51:53	0	Failed	Rule [Dev2Prod] with source repositories [Development] doesn't have
Team	1	2009-11-26 16:58:35	116	Finished	

For example, each execution of the *Dev2Prod* rule is listed in the table. Of each instance of *Dev2Prod* rule execution, only the last one (**IdExec** = *6*) succeeded. This execution ended at *11:03:28 on Nov. 25, 2009* after *119* seconds.

You can also notice that the **IdExec** column indicates the number of executions carried per rule.

The execution which has an **IdExec** value of 5 was unsuccessful. The reason indicated in the **Message** column states that the */temp/demoRM/* temporary storage folder does not exist on the *Talend Repository Manager* server.

The **Dashboard** table consolidates and details the status of each instance of migration rule execution. The following table provides information related to the **Dashboard** tabular view:

Column	Description
Rule	Rules executed.
IdExec	Execution ID numbering all instances of the execution of a rule. It starts from number 1 for the first one of a series of executions and restarts when switching to another rule.
Date	Exact time at which a rule execution ends.
Execution Time (sec)	Execution duration, calculated in seconds.
Action	Execution results, including: Finished : the corresponding execution succeeded; Failed : the corresponding execution failed.
Message	Reason for the failure of the execution. This column remains empty when the executions are successful.

7.2.2. How to view the execution history details

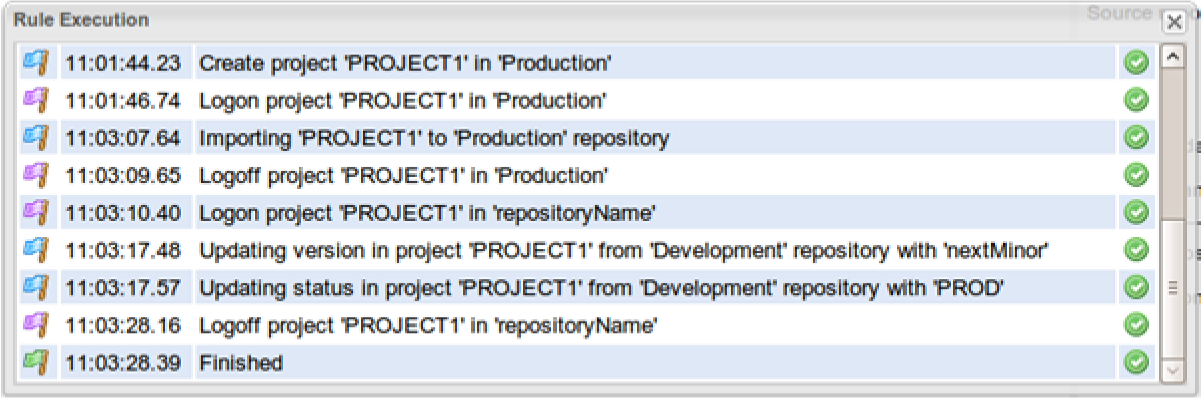
Talend Repository Manager **Dashboard** provides the detailed history of any execution carried out.

1. On the **Dashboard** view, click the execution instance about which you ask for the details. Only one instance can be selected at a time.

2. Click **Details**, on the toolbar, to view the detailed history of the execution selected.

The **[Rule Execution]** window displays, providing all of the details and corresponding times regarding the execution events.

For example, all of the events that occurred during the item migration from the *Development* repository to the *Production* repository are listed in the **[Rule Execution]** view in the following figure.



For further information about how to read the **[Rule Execution]** window, see *How to execute a rule from the toolbar*.

7.3. Sorting execution records

The **Dashboard** also features filtering tools to help you sort the execution records you are concerned about.

You can use the **Level** and the **Rule** filters located at the top of the **Dashboard** page individually or concurrently to sort the records.

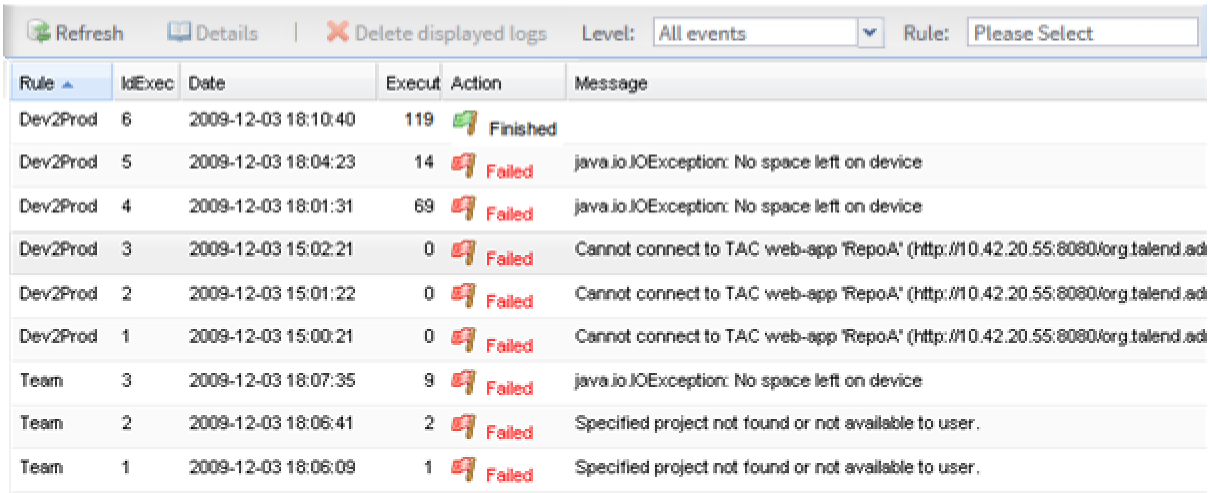
7.3.1. How to filter by level

The **Level** filter allows you to select the execution records according to the execution result. It works in the rule execution level. Two options are offered in the drop-down list:

The following table describes the two options:

Only errors	Select this option if you only want to view the executions in error. This option helps you identify and troubleshoot the execution issues quickly.
All events	Select this option to display all of the execution events. This is the default selection.

The following table is an example of the **All events** selection.



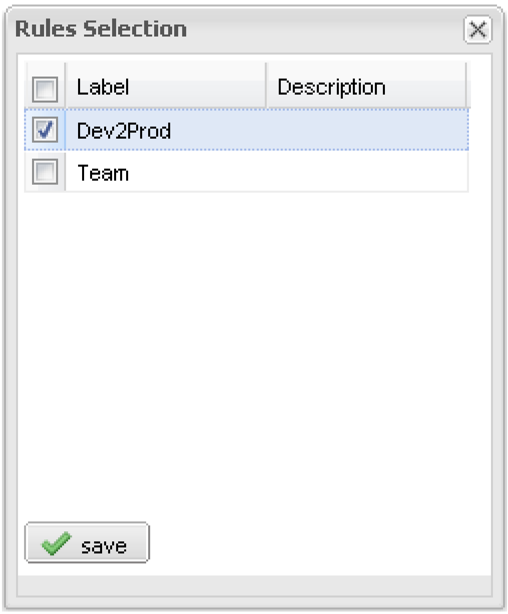
You can also filter the execution list by rule. For further information, see section *How to filter by rule*

7.3.2. How to filter by rule

The **Rule** field helps you to filter by rule in order to narrow down the number of executions displayed on the list.

To do this, proceed as follows:

1. On the **Dashboard** view, click the **Rule** field to open the **[Rule Selection]** window.



2. Select the check box in front of the rule execution(s) that you want to display.

   To select all, select the check box next to the **Label** column.

3. Click **Save** to finalize your selection.

7.4. Managing the Dashboard module

Talend Repository Manager allows you to manage the rule execution list which monitors the status of the executed rules and details the recorded execution events.

7.4.1. How to refresh the execution list

The **Dashboard** main window is refreshed at regular intervals of time. However, you can also refresh it manually at any time.

Click **Refresh** on the toolbar at top of the tabular main window to refresh the execution list.

7.4.2. How to remove all the recorded executions

You may need to remove the recorded executions, for example, after rule execution issues have been resolved.

To clear the execution list, simply click the **Delete displayed logs** button.

Once clicked, it will remove all of the executions displayed in the **Dashboard** main window.

7.4.3. How to customize the rule executions display

You can customize the **Dashboard** module display the same way as you are able to do it about the **Users** module. For further information, see *How to customize the user list display*.

Chapter 8. Central licensing

The **License management** module enables you to assign licences to your teams and manage your licenses internally, based on your organization's needs.

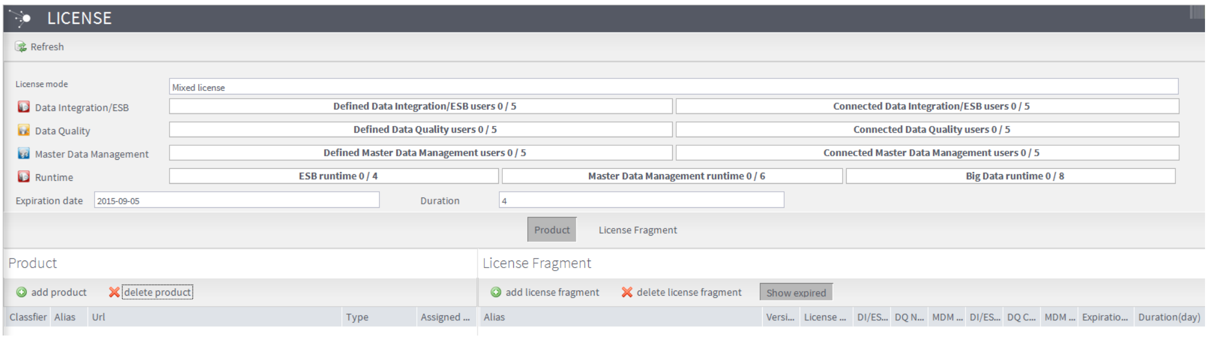
The **License management** module is an optional feature and will not be included in every *Talend Repository Manager*. For more information on how to obtain and install this feature, contact your **Talend** Sales or Support representative.

8.1. Accessing the License management module

The **License management** module lets you create license fragments from a super license provided by **Talend** and assign them to teams within your organization by pushing the license fragments to *Talend Administration Center* and/or *Talend MDM* servers.

Before you can have access to this module, you need to log on to *Talend Repository Manager* using a super license.

To access the **License management** module, click **License management** in the **Menu** tree to the left to open the **License** view.



The upper part of the **License** view displays the license assignment status information, including the license mode, the total numbers of different types of users allowed by the super license and the number of created users for each **Talend** product, the expiration date of the super license, and the number of days before expiry of the super license.

The lower part of the **License** view lets you assign license fragments to different products, namely *Talend Administration Center* and/or *Talend MDM* servers, and displays the detailed information of the products and license fragments. You can swap the display of product and license fragment information by clicking the **Product** or **License Fragment** button in the middle of the view.

For further information concerning license assignment, see *Assigning licenses*.

For further information on managing assigned licenses, see *Managing assigned licenses*.

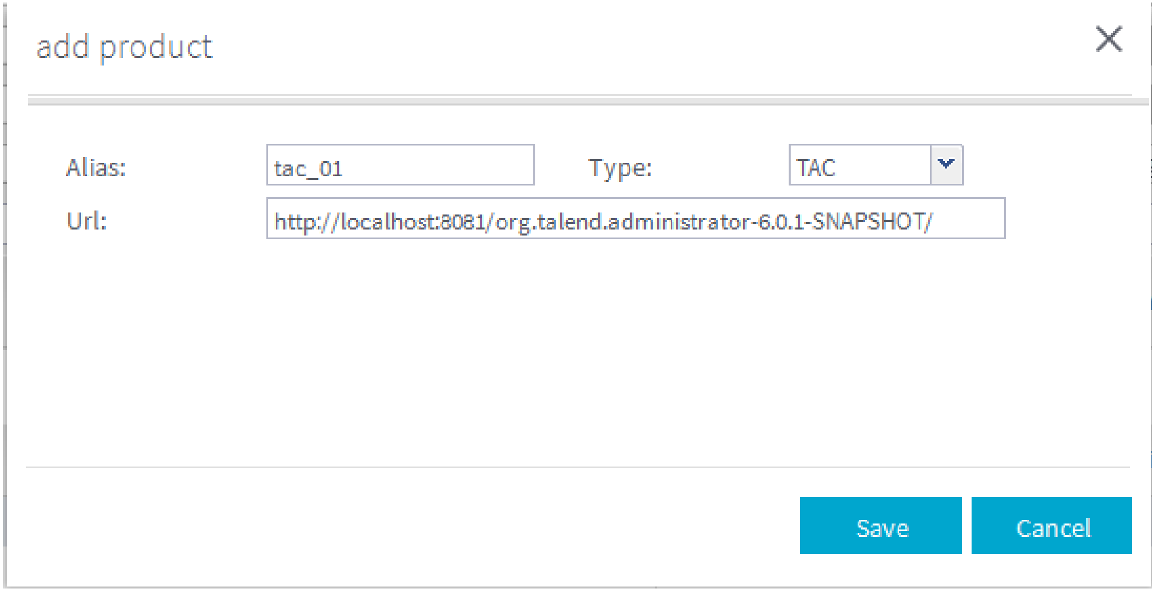
8.2. Assigning licenses

Using the **License management** module, you can create as many license fragments as the super license allows and assign them to *Talend Administration Center* and/or *Talend MDM* servers. Note that:

- Each fragment has a flexible validity period, the maximum validity period being limited by the super license's expiration date.
- Each fragment consumes the user limit of the super license.

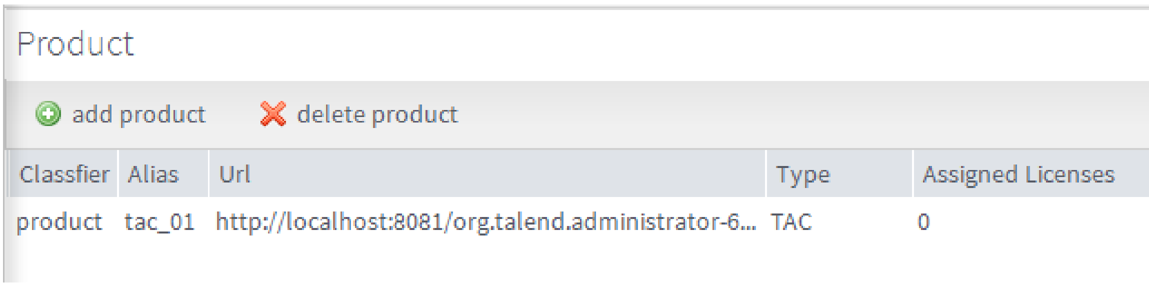
The following example shows how to assign a license to a *Talend Administration Center* server.

1. From the menu tree to the left, click **License management** to open the **License** view.
2. Click **add product** in the **Product** pane to open the **add product** dialog box.

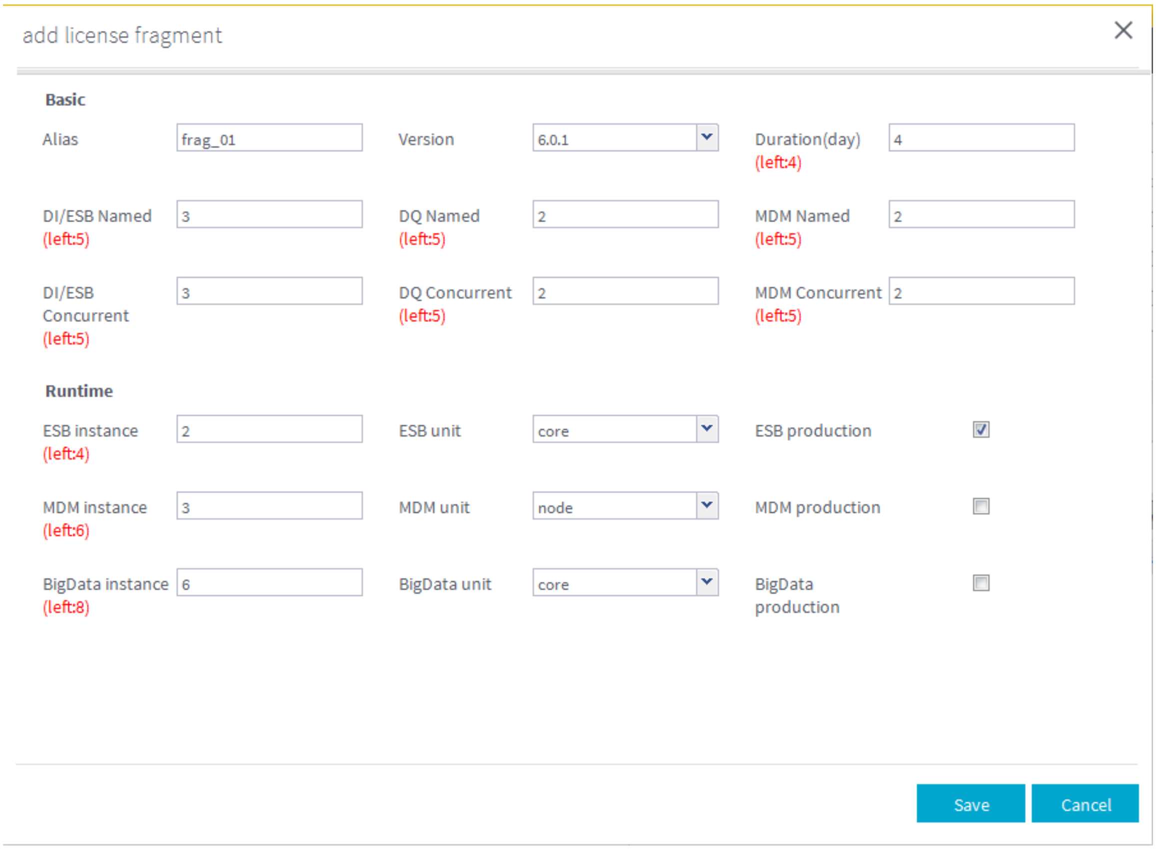


3. Enter an alias for the product in the **Alias** field, select the type of the product from the **Type** list, and fill the **URL** field with the address of the product, a *Talend Administration Center* server in this example.

   When done, click **Save** to save the product definition and close the dialog box. The information of the product added is displayed in the **Product** pane.



4. Click **add license fragment** in the **License Fragment** pane to open the **add license fragment** dialog box.



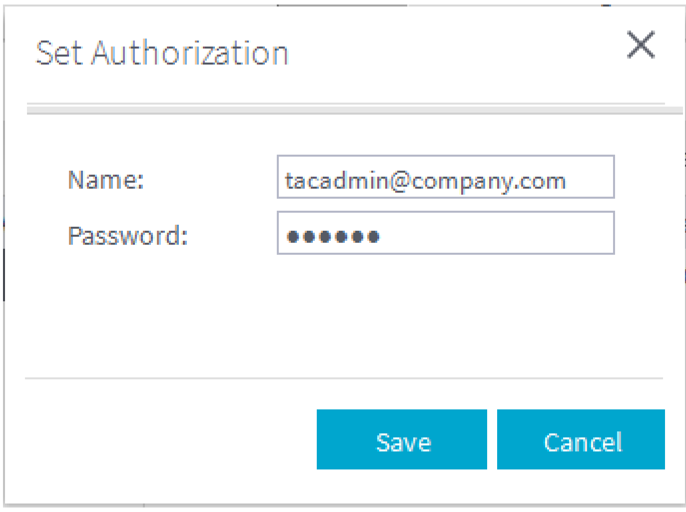
5. Specify the license parameters:

   - an alias for the license fragment to be created from the super license
   - the version of the **Talend** product
   - the number of days left before the license fragment expires
   - the number of users allowed to connect to *Talend Administration Center* for each **Talend** product
   - the details of the runtime servers allowed for the license fragment, including the number of instances, licensing unit between per core and per node, and whether to be in production.

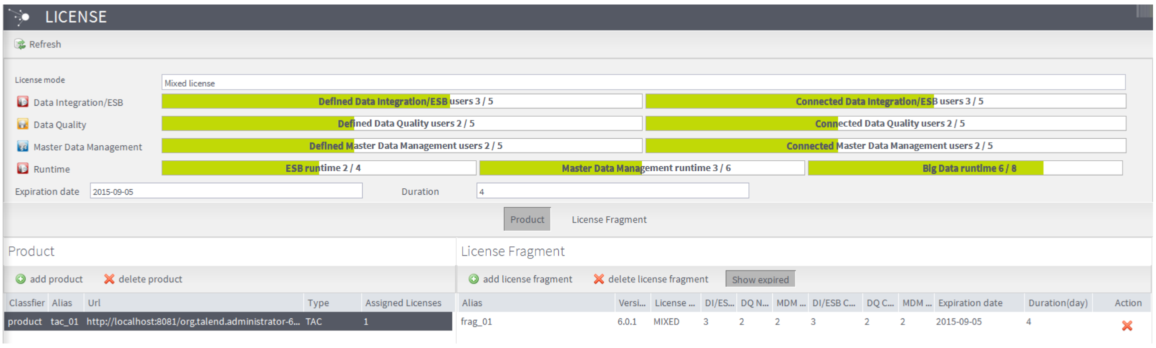
   For more information on license parameters, see the section on license management of the *Talend Administration Center User Guide*.

6. When done, click **Save** to save the licensing settings and close the dialog box. The detailed information of the license fragment created is displayed in the **License Fragment** pane, and the license assignment status is displayed in the upper part of the **License** view.

7. Select the product to which you want to assign the license fragment, and click the **Push** button (green arrow) that appears in the **Action** field to open the **Set Authorization** dialog box. Enter the user name and password used to log in to the *Talend Administration Center* server and click **Save** to push the license fragment to the *Talend Administration Center*.



The **Push** button becomes **Revoke** (red X).



You can assign more than one license fragment to the same product.

Now the administrator can directly log in to the *Talend Administration Center* to perform administration tasks without the step of loading a license, and users can connect to the *Talend Administration Center* using the allocated license. For more information on *Talend Administration Center*, see the *Talend Administration Center User Guide*.

8.3. Managing assigned licenses

Using the **License management** module, you can revoke assigned license fragments, delete license fragments, and delete the added products.

Before you can delete an assigned license fragment, you need first to revoke it; before you can delete a product, you need first delete the license fragment or fragments assigned to it.

To revoke an assigned license fragment, click the corresponding **Revoke** button in the **License Fragment** pane, enter in the **Set Authorization** dialog box the user name and password used to log in to the product to which the license fragment has been assigned, and click **Save**.

To delete a license fragment, first revoke it, then select it and click **delete license fragment**.

By default, expired license fragments are hidden from the **License Fragment** pane. To show expires license fragments, click the **Show expired** button. You can directly delete an expired license fragment by selecting it and clicking the **delete license fragment** button.

To delete a product, first revoke and delete all the license fragments assigned to it, then select it in the **Product** pane and **click delete product**.