

Talend Data Stewardship Console

User Guide

6.4.1

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Preface

1. General information

1.1. Purpose

This User Guide explains how to manage *Talend Data Stewardship Console* functions in a normal operational context.

Information presented in this document applies to *Talend Data Stewardship Console* **6.4.1**.

1.2. Audience

This guide is for data stewards and administrators of *Talend Data Stewardship Console*.



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.

2. Feedback and Support

Your feedback is valuable. Do not hesitate to give your input, make suggestions or requests regarding this documentation or product and find support from the **Talend** team, on **Talend Community** at:

https://community.talend.com/



Chapter 1. About Talend Data Stewardship Console

The *Talend Data Stewardship Console* is deprecated since Talend 6.4. Consider migrating to *Talend Data Stewardship*.

Talend Data Stewardship Console is a stewardship tool that helps to manage manually data resolution and data integration tasks that are the output of data matching and data integrity processes. The data steward can then, using Talend Data Stewardship Console, resolve the data issues included in the listed tasks to reach the golden data record before saving it in the MDM hub or writing it in any MDM target application.

This chapter describes the data stewardship console and all management processes possible via this console.

1.1. What is *Talend Data Stewardship* Console

Talend Data Stewardship Console is a web-based data stewardship tool that helps manage manual data resolution, provided either within *Talend MDM Web User Interface* or as a stand-alone application. For more information, see *Two modes of Talend Data Stewardship Console*.

Talend Data Stewardship Console lists tasks related to data resolution and data integrity issues. These tasks need manual intervention of an administrator or an authorized steward to be resolved.

Talend Data Stewardship Console allows an administrator or an authorized steward to:

- visualize a list of data resolution and data integrity tasks that represents the problematic results of the data
 integrity processes and matching operations done on data across heterogeneous sources. For further information
 about the management of the task list, see *Menus and menu items*.
- merge, compare and resolve the data records that are held in these tasks.

For further information on how to resolve data records, see *Resolving data conflicts and data problems*.

1.2. Two modes of *Talend Data Stewardship*Console

Talend Data Stewardship Console is offered as an add-on to Talend MDM Web User Interface, or as a standalone application.

When the stewardship console is integrated within *Talend MDM Web User Interface*, it can be accessed through a menu in the **Menu** panel.

For further information on how to access *Talend Data Stewardship Console*, see *Logging in to the stewardship console embedded in Talend MDM Web User Interface* and *Logging in to the standalone Talend Data Stewardship Console*.

1.3. Lifecycle of the tasks listed in the stewardship console

The lifecycle of the data resolution and data integrity tasks listed in the stewardship console involves the following steps:

- a **Talend** Job that uses the **tMatchGroup** data quality component to carry out matching operations on data across heterogeneous sources that can be a file, a database, an application or **tMDMInput**. Or,
 - a Talend Job that uses different Talend components to deal with data integrity issues,
- a **tStewardshipTaskOutput** component is integrated in the same Job to create/list the data resolution and data integrity tasks in the stewardship console. These tasks represent the problematic results of the matching and integrity operations and are stored as operational data in the stewardship console database,
- an authorized steward intervenes to track/merge/resolve the tasks listed in the stewardship console to reach the final data records that will be stored in the stewardship console database,

• another **Talend** Job that uses a **tStewardshipTaskInput** and any **Talend** output components to read the tasks in the stewardship console database and write the data in the MDM hub or in any MDM target application.

The **tStewardshipTaskInput** component will read resolved tasks from the stewardship console database and send the records stored in the tasks to the output component that will populate the MDM hub or any other MDM target application with these master data records.



When you want to write the resolved master data record in the MDM hub (XML repository), you must use the **tMDMOutput** as the output component. This component transforms the resolved data record to XML data to be able to store it in the XML repository.

For more information about the above-mentioned components, see the Data Quality and MDM component chapters in the *Talend Components* Reference Guide.

1.4. Task types and assignments

The stewardship console lists two types of tasks: data resolution tasks and data integrity tasks.

Data resolution tasks are those that need the steward intervention to merge/resolve different information related to the same data record and coming from heterogeneous sources. Resolution tasks are most commonly created during data matching process.

Data integrity tasks are those that need the steward intervention to insure that data is consistent and complete. Data tasks are most commonly created during standardization and cleansing of data.

These tasks are assigned to a specific data steward in the **tStewardshipTaskOutput** component, the component that is used in the **Talend** Job to create/list tasks in the stewardship console. For further information, see the component dedicated section in *Talend Components* Reference Guide.

However, it is also possible for an administrator to assign a task to a specific steward manually from the stewardship console. For further information, see *Assigning a task*.

When a steward connects to the stewardship console, the steward can only see the tasks assigned to him/her.

These tasks have also a status, **New** by default. This status is automatically changed to **Resolved** when the data steward defines and merges the data in the data record associated with the task.



An administrator or a data steward can manually change any task status from the **Status** menu in the stewardship console. For further information, see *Changing a task status*.





Chapter 2. Getting Started with *Talend Data* Stewardship Console

This chapter introduces *Talend Data Stewardship Console*, whether it is used as an add-on to *Talend MDM Web User Interface* or as a standalone application.

The chapter provides a short description of the stewardship interface and guides you through the basics to access it.

2.1. Installing the standalone *Talend Data* Stewardship Console

An installer is provided to help you install the standalone *Talend Data Stewardship Console* in a simple click-next steps. Just double-click on the .jar file provided by **Talend** and follow the instructions.



The .jar file is a java installer which installs both a Tomcat server and a .war file. However, if you wish to use *Talend Data Stewardship Console* with a different application server, you will need a .war file that can be provided by **Talend**. You must then do all installation operations manually as they will depend on your application server.

Prerequisite(s): *Talend Data Stewardship Console* has a software prerequisite for the installation: Make sure you have JVM installed.



- -If you choose not to install Tomcat when installing *Talend Data Stewardship Console*, a Tomcat 5.5 or above should be installed.
- -By default, Talend Data Stewardship Console creates its database automatically when being started.

To install the standalone stewardship console, complete the following:

- 1. Double-click the .jar file provided by **Talend**. Select an installation language from the list and click **OK** to close the pop-up and proceed to the next step.
- 2. Click **Next** on the **Talend** MDM welcome page to proceed to the next step.
- 3. Read the license agreement and select the accept option and then click **Next** to proceed to the next step.
- 4. Read the displayed information and click **Next** to proceed to the next step.
- 5. Select the check boxes of the packs you want to install and then click **Next** to proceed to the next step.



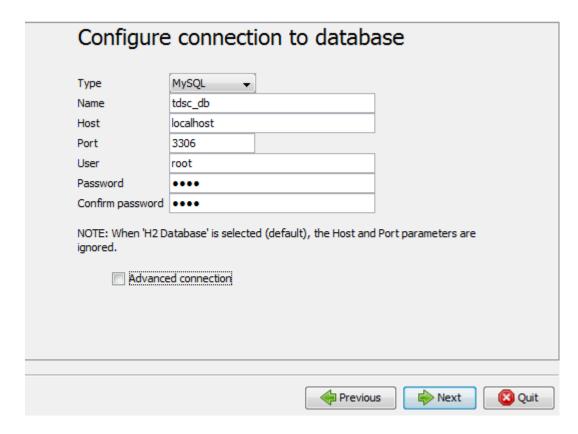
- -The check boxes of required packs are already selected and unavailable.
- 6. Browse to where you want to install Tomcat and the stewardship console and then click **Next** to proceed to the next step.

A message displays to inform you that the target directory will be created.

- 7. Click **OK** to close the message and proceed to the next step.
- 8. Set the parameters to the stewardship console database that will be used to store the data values held in the task that will be listed in the console.

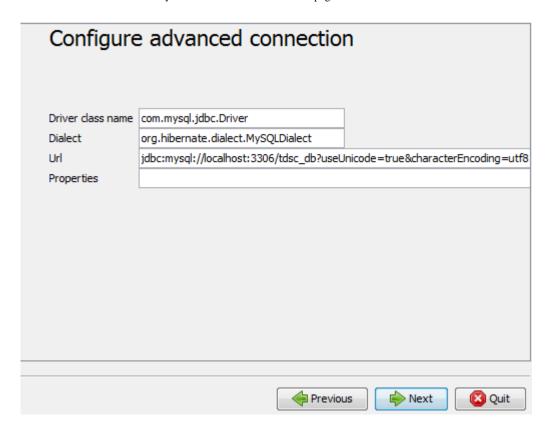
From the **Type** list, select the database type. Enter a name for this database in the corresponding field or use the by-default name.

In the **Host** field, enter the database server IP address. In the **Port** field, enter the listening port number of the database server. Set the login information for this database and click **Next** to proceed to the next step.





If you select the **Advanced connection** check box and click **Next**, you will have a page where you can modify the connection information in any of the connection fields on the page.



9. Click **Next** to proceed to the next step and start the installation.

Two progress bar indicate how much of the installation has been completed.

10. When the installation is completed, click **Next** to have a confirmation message that the installation is completed successfully. Click **Done** to close the installation wizard.



Click **Generate an automatic installation script** to generate a script for MDM server installation. You can use this script to install the MDM server on any platform without using the click-next-step installer.

2.2. Logging in to the standalone *Talend Data* Stewardship Console

Prerequisite(s): The standalone *Talend Data Stewardship Console* has already been installed. Tomcat is already launched. For further information, see *Installing the standalone Talend Data Stewardship Console*.

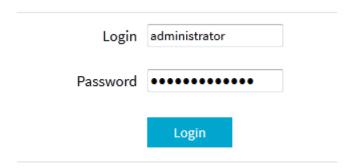
To start the standalone Talend Data Stewardship Console, complete the following:

1. Type its address into your web browser as the following:

http://[server address]:8080/org.talend.datastewardship/ and press Enter on your keyboard.



If Talend Data Stewardship Console is installed on a port other than the by-default one (port 8080), make sure to include the correct port name in the address.



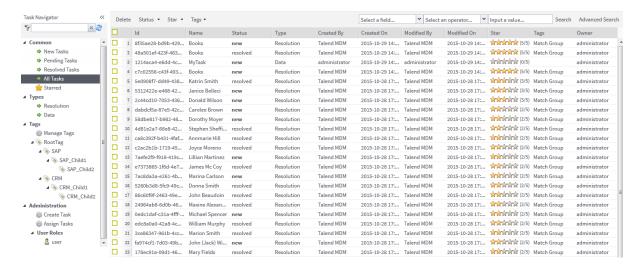
2. From this page, log in using *administrator/administrator* or *user/user* as username and password to access the stewardship console.



If you want to use a login module other than the default login module supplied by **Talend**, for example to use an LDAP directory for authentication and authorization, you need to edit the file <\$INSTALLDIR>/conf/jaas.conf and replace the configuration details for the default login module with the configuration details for the login module you want to use instead.

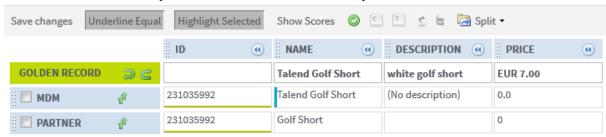
 $For further information, see {\it http://docs.oracle.com/javase/6/docs/technotes/guides/security/jaas/JAASRefGuide.html.}$

The figure below illustrates an example of the user interface of Talend Data Stewardship Console.



For further information about the menus and options you can see in this user interface, see *Menus and menu items*.

To access the data held in a specific task, double-click the task to open its detail view.



In this view an authorized steward or an administrator can merge/resolve the data record held in the task. For further information on how to resolve data records, see *Resolving data conflicts and data problems*.

2.3. Managing users in the standalone *Talend Data Stewardship Console*

As *Talend Data Stewardship Console* uses the JAAS mechanism, you can manage the console users using the <TDSC_WAR>/WEB-INF/jaas.conf file.

You can use the <code>javax.security.auth.spi.LoginModule</code> interface to implement pluggable authentication modules in the <code>jaas.conf</code> file and provide particular types of authentications according to your needs. JAAS analyzes its configuration file, instantiates the implementation class of the <code>LoginModule</code> interface, passes the declared parameters to the implementation to be initialized. Once this is done, the implementation knows exactly how to deal with the parameters when it is called to authenticate a user.

With the standalone *Talend Data Stewardship Console*, **Talend** provides a default implementation which is the *org.talend.datastewardship.server.security.DefaultLoginModule* java class.

```
igas.com

TDSC

org.talend.datastewardship.server.security.DefaultLoginModule required logins="administrator, user" passwords="NKNCzuAvtojMffRWt9ZLRw==, Encrypt, /D3gd8pEaKOp/3Z81rNp/g==, Encrypt";

igas.com

igas.co
```

By default, the passwords are encrypted. If needed, you can firstly encrypt plain text passwords from the CommandLine and then replace the default passwords with the encrypted passwords in the file accordingly. For

more information, see the section about encrypting the passwords using the CommandLine in Talend Installation Guide.

This is a very basic implementation which uses a list of users and passwords, administrator, user. At first, you can use this simple implementation to add additional users.

You can also use your own implementations such a MySQLLoginModule, FileLoginModule, ActiveDirectoryLoginModule, and so on to adapt the authentication to your own environment. Each implementation can be initialized differently by using a database connection, a path to a file, a cryptographic algorithm, etc. An implementation is made of one or more java classes and must be provided within the class path of your data stewardship web application in order to be correctly loaded at runtime. You can usually deliver it as a jar file that you must place in the WEB-INF/lib file in the root folder of your Web application.

For http://download.oracle.com/javase/1.4.2/docs/guide/security/jaas/ further information, see JAASRefGuide.html.

2.4. Logging in to the stewardship console embedded in Talend MDM Web User Interface

If you have chosen to install Talend Data Stewardship Console when installing the MDM server, the data stewardship console will be integrated in Talend MDM Web User Interface. This allows you to access the console through the **Data Stewardship** menu in the **Govern** area of the **Menu** panel.

For further information on how to install the stewardship console when installing the MDM server, see the *Talend* Installation Guide.

Prerequisite(s): The MDM server is already launched. A login and password have been provided to you by the MDM administrator or a manager has allowed you access to Talend MDM Web User Interface.



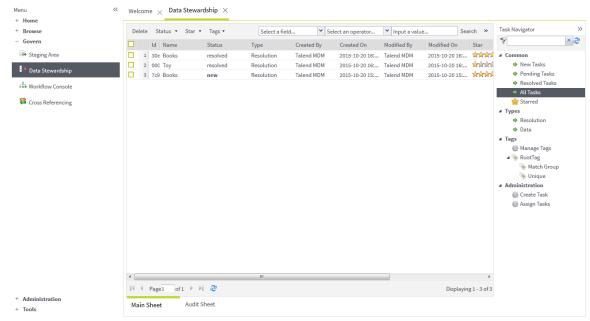
The default user/administrator authentication information to Talend MDM Web User Interface is user/user and administrator/administrator respectively.

To access the stewardship console, complete the following:

Log in to Talend MDM Web User Interface. For more information, see the Talend MDM Web User Interface User Guide.

Your web browser opens the main page of *Talend MDM Web User Interface*.

2. In the **Menu** panel, click **Govern** and then click **Data Stewardship** to display the page where you can manage data resolution and data integrity tasks.





When you access the *Talend Data Stewardship Console*, you will be able to see only the tasks that are assigned to you unless you log in as an administrator, then you can see all the tasks available in the task list. For further information, see *Task types and assignments* and *Assigning a task*.

For further information about the menus and options you can see in this page, see *Menus and menu items*.

2.5. Describing the stewardship interface

Talend Data Stewardship Console is an interface that lists tasks related to data resolution and data integrity issues. These tasks need the manual intervention of an administrator or an authorized steward to make sure that the final data set is clean, consistent, and accurate.

2.5.1. Menus and menu items

Talend Data Stewardship Console provides access to a web user interface through which you can access a task list where each task holds a data issue that needs to be resolved by an authorized data steward.

The table below describes the menus and menu items available on the stewardship console.

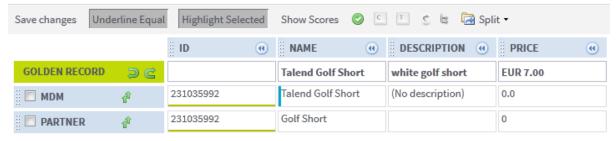
Menu/Button	Menu item	Description
Delete		deletes the selected data resolution or data integrity task from the task list.
Status	New	Sets the status of the selected task to New.
	Resolved	Sets the status of the selected task to Resolved .
	Locked	Sets the status of the selected task to Locked .
Star		Assigns a numerical rating of 0 through 5 to the selected task, represented by yellow stars, to highlight importance.

Menu/Button	Menu item	Description
Tags		A way to classify listed tasks by tags.
		For further information, see Associating tags with tasks.
Search		Opens the search panel that allows precise queries on tasks. All the criteria on this panel can be used independently or in combination.
Advanced Search		Opens the advanced search panel that allows more precise queries on tasks. All the criteria on this panel can be used independently or in combination.

The task list provides the following information.

Column label	Description
ID	Task identifier. This column ensures that the task is unique.
Name	The functional name given to the task during its creation process done manually or by using the tStewardshipTaskOutput component in a relevant Talend Job. For further information, see <i>Creating a task</i> .
Status	Task status: New, Resolved or Locked. For further information, see <i>Task types and assignments</i> .
Туре	Task type: data resolution or data integrity. For further information, see <i>Task types and assignments</i> .
CreatedBy	Name of the task source.
CreatedOn	Task creation date and time.
ModifiedBy	Name of the user who does any modifications on the task.
ModifiedOn	Task modification date and time.
Star	Number of stars, 0 through 5, to highlight importance.
Tags	Names of the tag categories associated with each of the listed tasks.

To access the data held in a specific task, double-click the task to open its detail view.

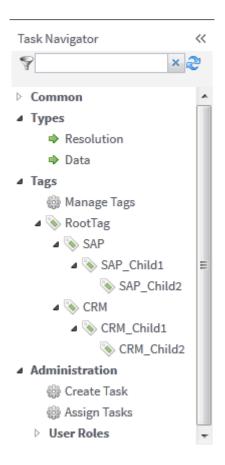


In this view an authorized steward can merge/resolve the data record held in the task. For further information on how to resolve data records, see *Resolving data conflicts and data problems*

2.5.2. The Task Navigator panel

The **Task Navigator** panel of *Talend Data Stewardship Console* allows you to:

- navigate through tasks according to their status,
- navigate through tasks according to their type,
- manage the tags you want to assign to tasks,
- create tasks directly from the stewardship console if you are logged in as an administrator,
- assign tasks to data stewards if you are logged in as an administrator.



You can show or hide the **Task Navigator** panel by clicking the >>> and << buttons located in the upper right corner of the panel.

The table below describes the available management options in the **Task navigator** panel of the *Talend Data Stewardship Console*.

Node	Sub-node	Description
Common	New Tasks	Lists all new tasks in the task list.
	Resolved Tasks	Lists all resolved tasks in the task list.
	All Tasks	Lists new, resolved and locked tasks in the task list.
	Starred	Lists in the task list all tasks that have a numerical rating, of 0 through 5 represented by yellow stars.
Types	Resolution	Lists data resolution tasks that need the steward intervention to merge/resolve different information related to the same data record coming from heterogeneous sources.
	Data	Lists data integrity tasks that need the steward intervention to insure that data is consistent and complete.
Tags	Manage Tags	Allows the authorized user to create and manage hierarchical, multi- level categories of tags and then tag the tasks in different ways according to his/her needs.
	RootTag	Displays a hierarchical, multi-level view of the created tag categories. Clicking a category tag in this view will display in the task list only the tasks that have the same tag.
Administration	Create Task	Allows an administrator to create a task in the task list.
	Assign Task	Allows an administrator to assign manually a specific task to a data steward.
		Tasks can also be assigned to a specific data steward in the tStewardshipTaskOutput component. This component

Node	Sub-node	Description
		is used in Talend Jobs to create/list tasks in the stewardship
		console. For further information, see the above component
		dedicated section in the <i>Talend Components</i> Reference Guide.



Chapter 3. Resolving data conflicts and data problems

Talend Data Stewardship Console is a stewardship tool that enables an administrator or an authorized data steward to manually track and resolve data issues held in tasks. These tasks are the output of data matching and data integrity processes.

The data steward can then, using *Talend Data Stewardship Console*, resolve the listed data issues to reach the golden data record before saving it in the MDM hub or writing it in any MDM target application.

This chapter details the process to resolve master data conflicts or data problems via the data stewardship console.

3.1. Resolving master data conflicts resulting from data matching

Talend Data Stewardship Console provides the possibility to resolve data conflicts in a data record resulting from the matching processes performed on data. These matching processes may be carried out using a Match Rule attached to a data model, or using the **Talend** data quality component **tMatchGroup**.

The results of the matching processes will point out any data conflicts among the matched elements across heterogeneous sources. Conflicted record values will be listed in the stewardship console in *Talend MDM Web User Interface* in the form of tasks.

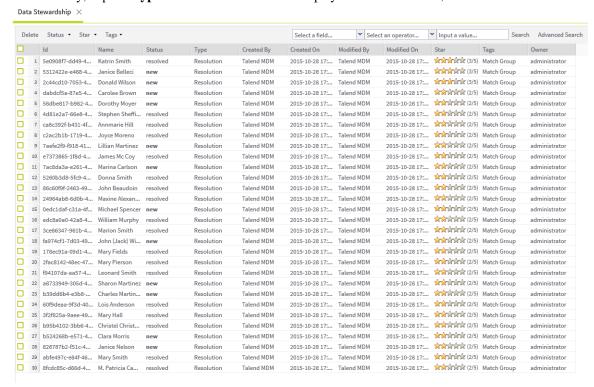
Validity checks are now necessary through the stewardship console in order to improve and enhance data quality. An authorized data steward must manually define and merge data in the listed tasks.

Prerequisite(s): You have logged in to *Talend MDM Web User Interface* and accessed the stewardship console. At least one data resolution task is assigned to you by the administrator. For further information, see *Assigning a task*.

To resolve data match problems related to multiple sources of data, do the following:

In the Task Navigator panel, expand Common and then click New to display all new tasks.

Alternatively, expand Types and click Resolution to display all resolution tasks, whether new or resolved.

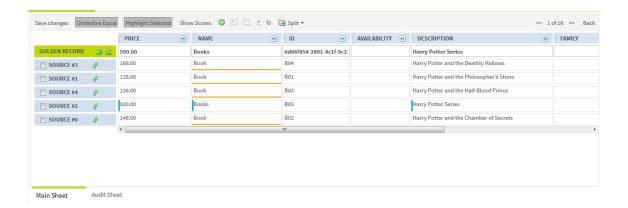




Your list will show only the tasks that have been assigned to you by the administrator. For further information, see *Assigning a task*.

2. Double-click the data resolution task that holds the data record you want to resolve.

The detail view of the selected task is displayed on the console.





You can use the << and >>> buttons in the upper right corner of the task detail view in order to open the detail view of the previous or next task in the task list. When you need to leave the task detail view, you can click back to go back to the task list.

In the task detail view, all data items of the selected data record coming from different sources are displayed in a table which may be partially filled thanks to the auto-suggest feature. In order to appropriately use the auto-suggest feature, avoid using the same name for these sources. For further information about the auto-suggest feature, see the table presented later.

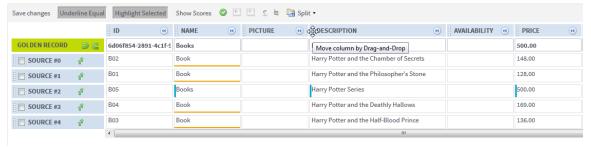
In the table, the rows are the source record(s) together with the golden record, which is shown at the top, and the columns are the data record fields.



The **Use Auto Suggest** button , the **Use Common Value** button and the **Use Trusted Score** button are all activated by default. They use the common values or the trusted values, if any, from the **SOURCE** records to prefill the **GOLDEN RECORD**.

3. If needed, you can drag-and-drop the rows or columns to the exact position you want to place them in the table.

To do so, firstly hover the pointer over the left-hand side of a row or column until the pointer turns into two crossing arrows, then drag the row or column to the desired position and hold the pointer until the desired position becomes totally blank, and finally drop the row or column.





If you change the positions of rows or columns in a table, this change will be maintained and will also be applied to any other existing tasks with the same rows (source records) and columns (fields).

In this example, the golden record comes from five different sources. The result of the match and survivorship process is represented by the golden record and reveals that the values contained in the record differ from one source to the other.



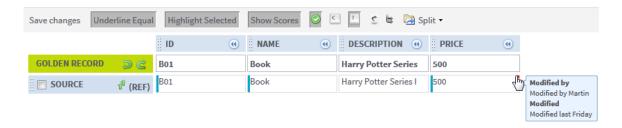
Different from matching scores that represent the distance between a record and a master record, a trusted score indicates how trustworthy a source value is: it gets one point each time when the steward selects it as the target value.

- 4. Click the **Underline Equal** tab on top of the page to underline all similar values in the different source rows.
- 5. Now you need to manually coordinate the data for the master data record: click the value in the source that you want to use to create the master record.

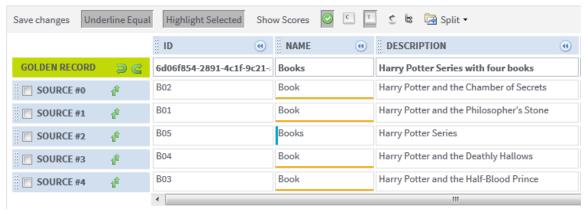
The selected value from the source record row is displayed in the corresponding field of the golden record row.



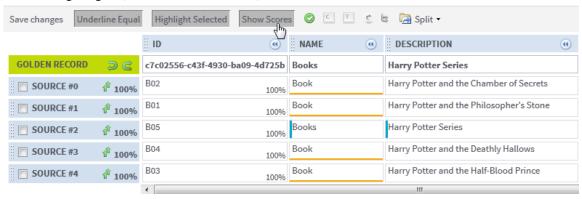
If any of the values in the source record row has a red mark, place your pointer on this mark to display its attached information in this task. Such information can help you in resolving the data record. For further information about adding this information to the task, see the **tStewardshipTaskOutput** section in the *Talend Components* Reference Guide.



- 6. To write all the values from a **SOURCE** row to the **GOLDEN RECORD** row, click in the corresponding source record row.
- If required, enter a completely new value in the corresponding field of the GOLDEN RECORD row and consider it as the correct value for the master data record.



- 8. Click the **Highlight Selected** tab to highlight all values in the source rows that you have selected for the **GOLDEN RECORD** row.
- 9. Click the **Show Scores** tab to display the overall score of the source record (next to the source name) and the matching weights (next to individual values).



When a source row has 100% as an overall score, it is considered as the master record. The matching distance of all the values in other source records is measured against the values in the master record. The overall score and individual matching weights are usually sent to *Talend Data Stewardship Console* when creating the tasks using the tMatchGroup and tStewardshipTaskOutput components. For further information, see the tStewardshipTaskOutput section in the *Talend Components* Reference Guide.

10. Click the Save Changes tab in the upper left corner of the console to confirm the data resolution operation.

A confirmation dialog box pops up.

11. Click **Save and Close** if you want to close the task.

The task is closed and its status is changed to *Resolved*. The data values held in the task will be stored in the stewardship console database.

If you do not want close the task, simply click **Save**; if you need to continue to process the next task, click to open it.



In this example, the active task is already saved. If not, when you click >> to open the next task, a message box will appear and you can:

- Click Cancel to abandon the changes you did for this task and to open the next task.
- Click Save to save these changes and to open the next task.
- Click **Save and close** to save these changes and to go back to the task list view.

During this procedure, the auto-suggest feature dynamically adapts the trusted scores depending on the operations you have performed. The following table presents details about the buttons related to the auto-suggest feature.

Buttons	Description
	Click this button to activate the auto-suggest feature. The other auto-suggest buttons are not available unless you have pressed this button down.
C	Click this button to preselect the common values from the source record row to fill the golden record row. Once this button is pressed down, this feature is activated for each task opened to be dealt with.
	A common value is the value appearing in the sources most frequently.
T	Click this button to preselect the most trusted values to fill the golden record row on condition that no common value is found in the source record row. Each time when you select a value manually or the auto-suggest feature preselects a value from one of the multiple sources, the source of the value selected gets one point for its trusted score.
C	This button is available only when you have pressed down the Use Trusted Score button Then click this button to display a dialog box to reset the trusted scores ranked for a source to zero.
lts	Click this button to refill the target panel with the auto-suggested values. The common values and the most-trusted values are subject to the priority of the values you enter or select manually, so if you need to reuse the auto-suggested values, click this button.
	Reapplying the auto-suggest values using this button does not increase the trusted score for any sources.

Having resolved the data from multiple sources, the next step is to read the record stored in the stewardship console database and populate the master database with this master data record. If the matches were identified by a Match Rule, this forms part of the validation process. If the matches were identified by a Job containing the **tMatchGroup** component, it can be done with a second **Talend** Job using a **tStewardshipTaskInput** component and a **tMDMOutput** component.

3.2. Resolving data problems resulting from a data integration Job

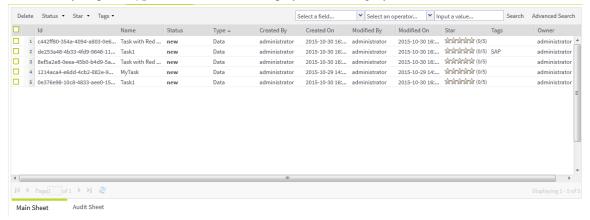
As data arrives from sources such as databases and older applications, it must be analyzed and coordinated so that the data is represented only once and correctly. Integrity processes done on data will point out any problematic or incomplete data and will list it, using the **tStewardshipOutput** component, in the stewardship console. *Talend Data Stewardship Console* provides the process to manually resolve these data problems.

Prerequisite(s): You have logged in to *Talend Data Stewardship Console* and accessed the stewardship console. At least one data task is assigned to you by the administrator. For further information, see *Assigning a task*.

To resolve problems related to incomplete or incorrect data, complete the following:

1. In the **Task Navigator** panel, expand **Common** and click **New** to display all new tasks.

Alternatively, expand Types and click Data to display all data integrity tasks, whether new or resolved.

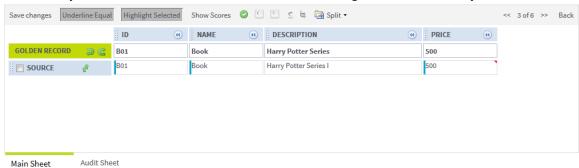




Your list will show only the tasks that have been assigned to you by the administrator. For further information, see *Assigning a task*.

2. Double-click the data task that holds the data records you want to coordinate.

All data items of the selected task are displayed in a table. The rows are the source record(s) together with the golden record, which is shown at the top, and the columns are data record fields. The **SOURCE** record is automatically written into the **GOLDEN RECORD** since the original data task has only one source record.





You can use the « and » buttons in the upper right corner of the task detail view in order to open the detail view of the previous or next task in the task list.

In this example, the results of the integration Job are listed in the data task and they reveal that the values contained in the record are incorrect, incomplete or completely missing.

If required, you can drag-and-drop the rows or columns to the exact position you want to place them in the table. To do so, firstly hover the pointer over the left-hand side of a row or column until the pointer turns into two crossing arrows, then drag the row or column to the desired position and hold the pointer until the desired position becomes totally blank, and finally drop the row or column.





If you change the positions of rows or columns in a table, this change will be maintained and will also be applied to any other existing tasks with the same rows (source records) and columns (fields).

4. Now you need to manually coordinate the data: in the **GOLDEN RECORD** row, click each of the values that need correction and modify it as required.





If any of the values in the **SOURCE** row has a red mark, place your pointer on this mark to display the attached information in this task. Such information can help in resolving the data record.



5. Click on **Save Changes** to confirm the operation.

A confirmation dialog box pops up.

6. Click **Yes** if you want to close the task.

The task is closed and its status is changed to *Resolved*. The data values held in the task will be stored in the stewardship console database.

A second **Talend** Job using a **tStewardshipTaskInput** components is needed now to read the record stored in the stewardship console database and populate the target application/database/file with this final data set.

For further information about the above component, see the *Talend Components* Reference Guide.





Chapter 4. Managing tasks

This chapter describes the most common operations performed on the tasks listed in *Talend Data Stewardship Console*. These tasks are the output of the data matching and data integrity processes done on data.

4.1. Creating a task

All tasks that are listed in *Talend Data Stewardship Console* are the output of the data matching and data integrity processes done on data using different **Talend Jobs**. A **Talend Job** is a graphical design, of one or more components connected together, that allows you to set up and run dataflow management processes.

However, it is also possible to create a task manually from the stewardship console. These tasks are mainly for testing and debugging purposes.

The following sections describe how to list tasks in *Talend Data Stewardship Console* automatically (by **Talend** Jobs) or manually by an administrator.

4.1.1. How to create tasks automatically

The **tStewardshipTaskOutput** component allows you to create either resolution or data tasks and list them in the stewardship console database.

When you use this component in a data matching Job, all data resolution tasks corresponding to the existing data conflicts are listed in the stewardship console waiting to be resolved. An authorized data steward can then intervene in order to merge/resolve this data coming from heterogeneous sources.

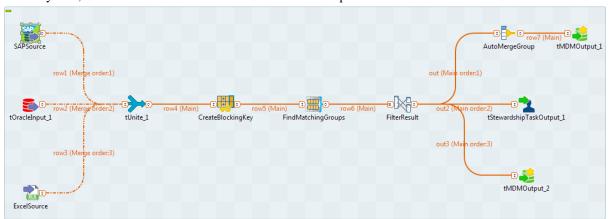
When you use this component in a data integration Job, data tasks are also listed in the stewardship console waiting for a stewards intervention to insure that data is consistent and complete.

Below is an example of a possible lifecycle of the data resolution tasks listed in *Talend Data Stewardship Console*:

When multiple sources exist for the same data records and those sources conflict, you must choose one source, or merge data from these different sources to reach the valid records. A matching for these records is necessary. Where a match is not found, problematic data is listed in *Talend Data Stewardship Console* where a manual composite matching through human intervention is required. This composite matching will resolve the conflicts and reach the final set of data that will be placed in the MDM hub if it is master data or in any other database/application/file.

This overall flow is translated in one or more **Talend** Jobs that will gather data from multiple sources, use the **tMatchGroup** component to match data. Where a match is not find, a **tStewardshipTaskOutput** will list the data in *Talend Data Stewardship Console*. An authorized steward can then do the composite matching on the listed data to reach the final set of data that will be written in the stewardship console database.

Consider as an example that a **Talend** Job using the **tMatchGroup** component has been designed and executed in the **Integration** perspective in *Talend Studio* to match customer records coming from three different sources: a SAP system, an Oracle database and an excel file. Exact and possible matches have been found in the data.



In this Job:

- a tUnite component merges the data coming from the three sources,
- a tGenkey component generates a functional key for each input column,
- a **tMatchGroup** component compares the columns in the input flow by using a defined matching method and groups similar encountered duplicates together,
- a tMap component filters the matching results and sends the unique records to a tMDMOutput component to write them in the MDM hub.
- a **tSurviveFields** component receives the flow from **tMap** and merges it based on one or more columns to have the golden records that are sent to the MDM hub via a **tMDMOutput**,
- another tMDMOutput that writes the unique records directly in the MDM hub,
- a **tStewardshipTaskOutput** component creates the data resolution task that details all the match and possible match record values, that could not be resolved automatically, and lists them in *Talend Data Stewardship Console*.

An authorized steward will then intervene to manually track/merge/resolve the tasks listed in the task list in order to composite the valid data records and store them in the stewardship console database. Another **Talend** Job using a **tStewardshipTaskInput** and an output component is used to write the data in the MDM hub or in any MDM target application. The **tStewardshipTaskInput** component will read resolved tasks from the stewardship console database and send the records stored in the tasks to the output component that will populate the MDM hub or any other MDM target application with these data records.

For further information about the **Talend** components necessary to design such a Job, see the *Talend Components* Reference Guide, especially the data quality and MDM component chapters.

For an example scenario, see the scenario of **tStewardshipTaskOutput** in the *Talend Components* Reference Guide.

4.1.2. How to create tasks manually

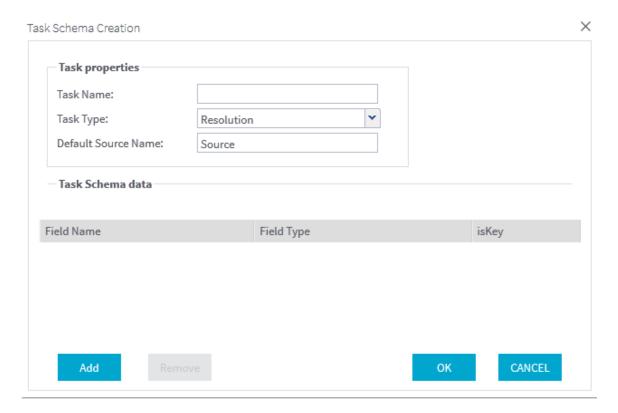
Talend Data Stewardship Console enables you to create tasks manually from the stewardship console. These tasks are mainly for testing and debugging purposes.

Prerequisite(s): You have logged in to Talend Data Stewardship Console as an administrator.

To create a data resolution or a data integrity task, complete the following:

In the Task Navigator panel, expand the Administration node and select Create Task.

The [Task Schema Creation] dialog box pops up.



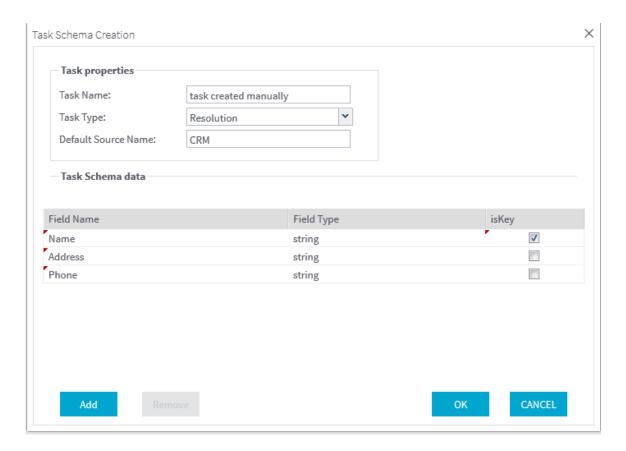
2. In the **Task Name** field, enter a name for the task you want to create.

From the **Task Type** list, select a type for the task you want to create, **Resolution** or **Data**.

In the **Default Source Name** field, enter a name for the first data source.

Click the **Add** button in the lower left corner of the dialog box.

A line is added in the Task Schema Data list.



3. In the **Field Name** field, enter a name for the first data column.

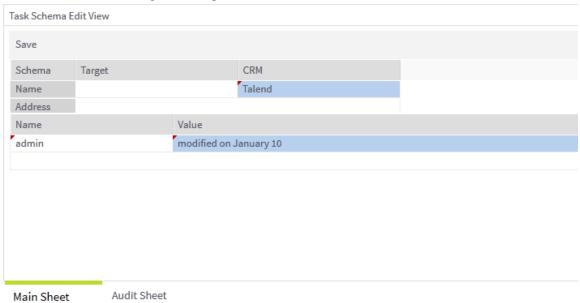
Click in the **Field Type** and select from the list a type for the column.

Select the **isKey** check box if you want to define the corresponding column as a key column.

Click **Save** to save your changes.

4. Repeat the above steps to create as many data columns as needed.

Click OK to close the dialog box and open the Task Schema Edit View.

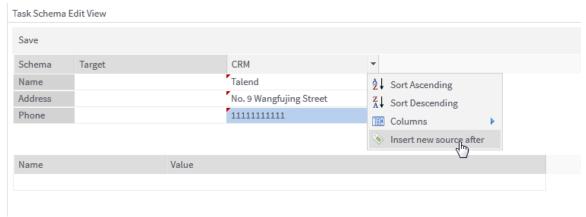


5. Click in the source fields and fill in the required data.

If required, click in the **Name** and **Value** fields in the lower half of the view and add any additional information on the source you have defined.

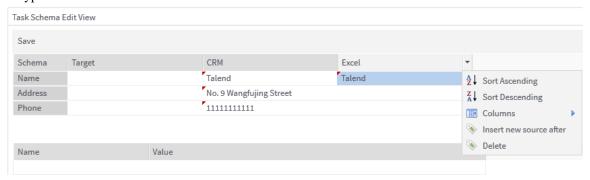
This information will be attached to the task to help the data steward in taking a more informed decision when resolving the task. The data steward can display this information if he/she places the pointer on the corresponding column in the task detail view. For further information, see *Resolving data conflicts and data problems*.

6. Put the pointer on the source column and click the arrow to open a contextual menu.



7. Select **Insert new source after** to open a dialog box where you can enter a name for the second data source and then click **OK** to close the dialog box.

A typical schema is added for the second data source.



8. Click in the fields and fill in data as desired.

Repeat the steps to add as many data sources as desired and then click Save on the menu bar.

A message pops up to confirm that the new task is successfully stored in the stewardship console database.

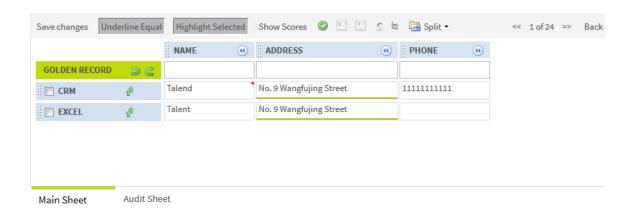


You can delete any of the data sources if you put your pointer on the source name, click the arrow and select **delete** from the contextual menu.

9. Click **OK** to close the message.

The newly created task is listed in the task list.

If required, select **New Tasks** in the **Task Navigator** panel and double click the task in the task list to open its details.



4.2. Assigning a task

Tasks can be assigned to data stewards automatically via the **tStewardshipTaskOutput** component. For further information, see the **tStewardshipOutput** section in *Talend Components* Reference Guide.

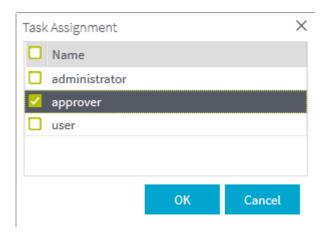
However, an administrator can also assign a task to a data steward manually from the data stewardship console.

Prerequisite(s): You have logged in to Talend Data Stewardship Console as an administrator.

To assign a task to a data stewardship from the stewardship console, complete the following:

- 1. In the task list, select the check box of the task(s) you want to assign to a specific user.
- 2. In the **Task Navigator**, expand the **Administration** node and then select **Assign Task**.

A dialog box pops up.



3. Select the check box of the user for whom you want to assign the selected task.



When you use the stewardship console integrated in *Talend MDM Web User Interface*, the users that have been already defined in *Talend Studio* to access the web user interface are shared with *Talend Data Stewardship Console*. Thus, the **Task Assignment** list will include the default *user* and *Administrator* in addition to any other user role that have been defined in *Talend Studio*.

4. Click **OK** to validate the changes and close the dialog box.

The selected task will only be displayed in the task list of the selected user.

4.3. Creating one or more new tasks from source records

Talend Data Stewardship Console enables you to create one or multiple separate new tasks after choosing the source record(s) you want to include in the new task(s).

Sometimes the task list may contain one task that has been created with one or several records that should not be there in the first place. *Talend Data Stewardship Console* enables you to create one single new task for all selected source records or create a separate new task for each selected source record.



After sending one or more records to the new task(s), if the original task is left with only one record in it, this remaining record is automatically written in the **Target** column of the original task. A message asks if it is fine to close the task, and the task status is set to resolved.

Prerequisite(s): You have logged in to *Talend Data Stewardship Console*. At least one task with more than one source record is listed in your **New Tasks** list.

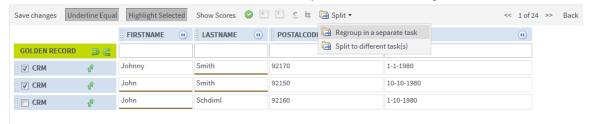
For more information about how to create one new task for all of the selected source records, see *Creating one new task for all of the selected source records*.

For more information about how to create one new task for each of the selected source record, see *Creating one new task for each selected source record*.

4.3.1. Creating one new task for all of the selected source records

To create a new separate task for all of the selected source records, complete the following:

1. In the task list, double-click the desired task from which you want to create a separate new task.



- 2. Select the check box of the source rows from which you want to create a new task.
- 3. On the toolbar, click the **Split** button and from the list select the **Regroup in a separate task** option to create one new separate task for all of the selected source records.



Make sure at least two source records are selected and at least one source record is left with the current task. Otherwise, the **Regroup in a separate task** option will not be available.

A confirmation message appears.

4. Click **Yes** to close the confirmation message.

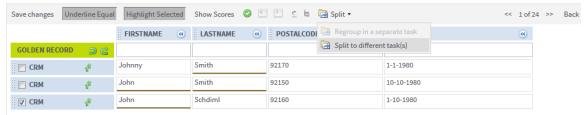
An information message pops up to indicate that a new task has been created with the selected source rows.

This new task will be listed in the New Tasks list.

4.3.2. Creating one new task for each selected source record

To create one new task for each selected source record, proceed as follows:

1. In the task list, double-click the desired task to display its source records.



- 2. Select one or more source records which you want to split into different task(s).
- 3. On the toolbar, click the **Split** button and from the list select the **Split to different task(s)** option to create one separate task for each selected source record.



Make sure at least one source record is left with the current task. Otherwise, the **Split to different task(s)** option will not be available.

A confirmation message opens.

4. Click **Yes** to close the confirmation message.

An information message pops up to indicate that one new task is created for each selected source record.

One or more tasks will be listed in the **Resolved Tasks** list, and each selected source record is written into the **GOLDEN RECORD** row of each newly created task.

4.4. Changing a task status

The status of all listed tasks is **New** by default. This status is automatically changed to **Resolved** when the data steward merge/resolve the data in the data record associated with the task.

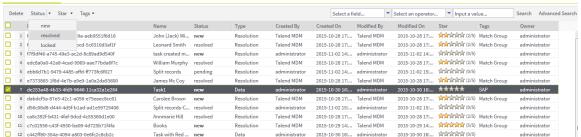
When required, an administrator can change the status of a task via the **Status** menu in the stewardship console.

Prerequisite(s): You have logged in to *Talend Data Stewardship Console*. At least one task is listed in your task list.

To change a task status, complete the following:

- 1. From the task list, select the check box of the task of which you want to change the status.
- 2. On the menu bar, click the arrow next to the **Status** menu.

A contextual menu is displayed.



3. Select the status you want to assign to the selected task.

An information bar is displayed to show the progress of the operation and then the task status is changed accordingly in the **Status** column.

4.5. Deleting a task

You can delete any of the tasks listed in the stewardship console.

Prerequisite(s): You have logged in to *Talend Data Stewardship Console* as an administrator. At least one task is listed in your task list.

To delete a task from the task list, complete the following:

- 1. From your task list, select the check box(es) of the task(s) you want to delete.
- 2. Click **Delete** on the menu bar.

A confirmation message displays.

3. Click **Yes** to confirm the operation and close the message.

The selected task is removed from the task list.

4.6. Associating tags with tasks

Talend Data Stewardship Console enables authorized users to create hierarchical, multi-level categories of tags. They can then assign one or more tag categories to a task as they need in order to organize and filter these tasks in a variety of ways.

4.6.1. How to create a tag

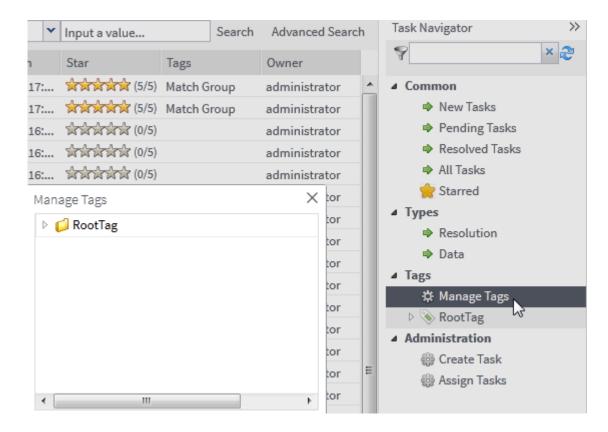
Before being able to assign a task one or more tags, you need to create these tags.

Prerequisite(s): You have logged in to *Talend Data Stewardship Console*.

To create hierarchical and multi-level categories of tags, complete the following:

1. In the Task Navigator panel, expand the Tags node and then click Manage Tags.

The [Manage Tags] dialog box displays.



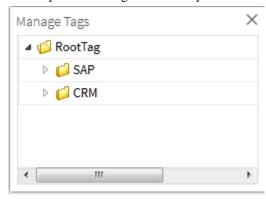
2. Right-click the **RootTag** folder and select **Insert tag** from the contextual menu.

A new folder is listed below the selected one labeled as *new Tag*.

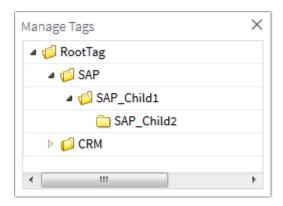
3. Double-click the new folder and replace the existing text with the name you want to give to this new tag, *SAP* in this example.

The new tag is listed under the **RootTag** folder.

4. Repeat the operation to create as many level-one tags as necessary.

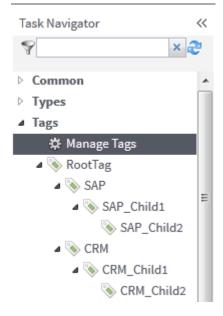


5. Right-click any of the first-level tags and in the same way create as many second-level tags as needed.



6. Repeat the operation to create as many different level tags as needed.

The Task Navigator shows a tree view of the created tags under the RootTag folder.



You can now assign any of these tags to any of the tasks in the task list. For further information, see *How to assign a tag to a task*.

4.6.2. How to assign a tag to a task

Talend Data Stewardship Console offers the ability to assign one or more of the listed tags to a specific task in the task list. This enables you to create a light weight categorization of tasks in your task list.

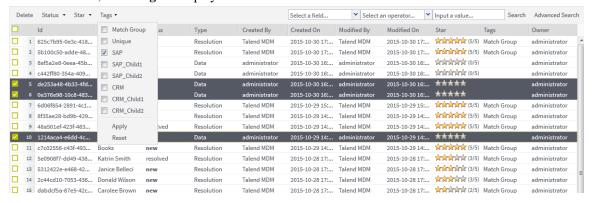
Tags can also be assigned to a task automatically via the **tStewardshipTaskOutput** component. For further information, see the **tStewardshipOutput** section in the *Talend Components* Reference Guide.

However, you can also assign a tag to a task manually from the data stewardship console. For instance, you could create a tag named *CRM* and assign that tag to all tasks dealing with data problems in the *CRM*. You could then list all the tasks tagged with *CRM* in the task list in *Talend Data Stewardship Console*.

Prerequisite(s): You have logged in to *Talend Data Stewardship Console*. At least one tag is defined and inserted under the **Tags** node in the **Task Navigator** panel.

To assign a tag to a task in the task list, complete the following:

- 1. In the task list, select the check box(es) of the task(s) for which you want to assign one or more tags.
- 2. On the menu bar, click **Tags** to display a contextual menu.



3. Select the check box(es) of the tag(s) you want to assign to the task(s).



If you want to clear the selected check boxes and restart tag assignment, click Reset.

4. Click Apply.

A message pops up to confirm that the assignment operation ended successfully.

5. Click **OK** to close the message.

You can now filter the task list to display only the tasks that are associated with the same tag. For information on how to list all the tasks associated with a specific tag, see *How to list the tasks that have the same tag*.

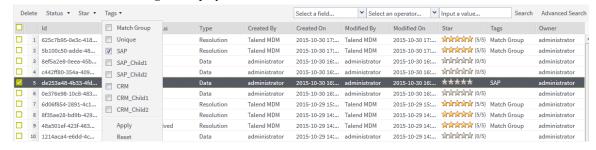
4.6.3. How to remove a tag from a task

You can remove a tag from a specific task in order to categorize your tasks differently or simply to leave the task untagged.

Prerequisite(s): You have logged in to *Talend Data Stewardship Console*. At least one tag is assigned to one or more tasks in the task list.

To remove a tag from a task in the task list, complete the following:

- 1. In the task list, select the check box(es) of the task(s) from which you want to remove the tag.
- 2. On the menu bar, click **Tags** to display a contextual menu.



3. In the contextual menu, clear the check box(es) of the tag(s) you want to remove from the selected task(s) and then click **Apply**.

The tag is removed from the selected task(s).

4.6.4. How to modify a tag

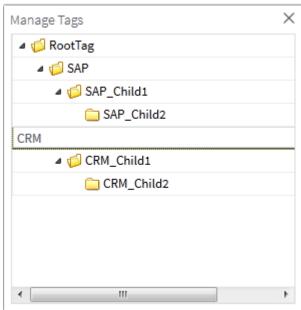
You can modify the name of any of the tags listed in the Tags folder.

Prerequisite(s): You have logged in to Talend Data Stewardship Console. At least one tag has been created.

To modify a tag name, complete the following:

1. In the **Task navigator** panel, expand **Tags** and click **Manage Tags**.

The [Manage Tags] dialog box pops up.



2. Double-click the name of the task you want to modify and then replace the old name with the new one.

The tag name is modified accordingly in the hierarchical view in the dialog box and in the **Task Navigator** panel.

4.6.5. How to delete a tag

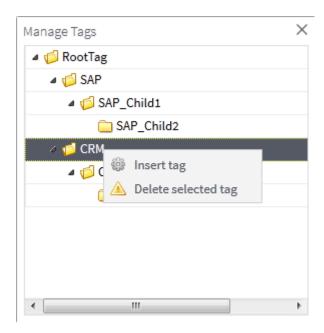
It is possible to delete any of the tags listed in the **Tags** folder.

Prerequisite(s): You have logged in to *Talend Data Stewardship Console*. At least one tag has been created. The tag is not assigned to any of the tasks in the task list.

To delete a tag, complete the following:

1. In the Task navigator panel, expand Tags and click Manage Tags.

The [Manage Tags] dialog box displays.



2. Right-click the name of the task you want to delete and click **Delete selected tag**.

The tag is deleted from the hierarchical view in the [Manage Tags] dialog box and from the Tags folder in the Task Navigator panel.



A warning message will be displayed if you try to delete a tag that is still assigned to one or more tasks.

4.6.6. How to list the tasks that have the same tag

After your tag tasks with specific tag categories, you can filter the view of the task list to show only the tasks that have the same tag. This way, you create light weight categories of tasks.

Prerequisite(s): You have logged in to *Talend Data Stewardship Console*. At least one task has been assigned a tag.

To list only the tasks that have the same tag, complete the following:

- 1. In the **Task navigator** panel, expand **Tags** and **RootTag** and browse to the tag according to which you want to filter your task list.
- 2. Click the tag name.

Only tasks that are tagged with the selected tag are listed in your task list.

4.7. Assigning roles to data stewards

In the standalone version of the *Talend Data Stewardship Console*, administrators can share or assign tasks within a team of data stewards by setting up roles-based controls and assigning them to specific users.



The stewardship console embedded in the *Talend MDM Web User Interface* already provides the possibility to manage roles. For more information, see the *Talend MDM Web User Interface* User Guide.

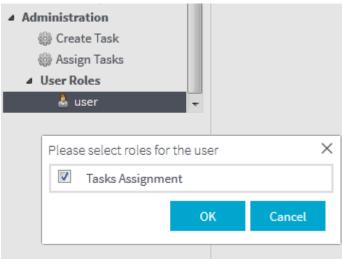
To assign roles to a user in the standalone version of the *Talend Data Stewardship Console*, do the following:

1. In the **Task Navigator**, in the **Administration** node, expand the **User Roles** sub-node and click the user name of the data steward to whom you want to assign a role.



A dialog box pops up.

2. In the dialog box, select the role or roles you want to assign to the user, and then click **OK**.



The next time the user logs in to the *Talend Data Stewardship Console*, he or she will be able to perform the actions related to the role or roles assigned.

For example, if you assign a user the Tasks Assignment role, this user will then be able to assign tasks to another data steward.



Chapter 5. Managing the task list

This chapter describes the most common operations performed on the task list in *Talend Data Stewardship Console*.

It also describes how to access a journal, *Audit Sheet*, that provides a complete audit trail for any action taken on any task listed in the task list in the stewardship console and managed by the authorized user.

5.1. Browsing/filtering the task list

Talend Data Stewardship Console enables you to search through tasks on many characteristics. The search panel at the top of the task list allows you to set various search criteria to narrow down the number of the tasks displayed in the task list.

This search panel helps you to browse your tasks depending on the listed criteria including assignment, status, type, creation date, or modification date. For further information, see *Assigning a task*.

You can also use the tags you create to search tasks. For further information, see Assigning a task.

Prerequisite(s): You have logged in to *Talend Data Stewardship Console*. More than one task is listed in your task list.

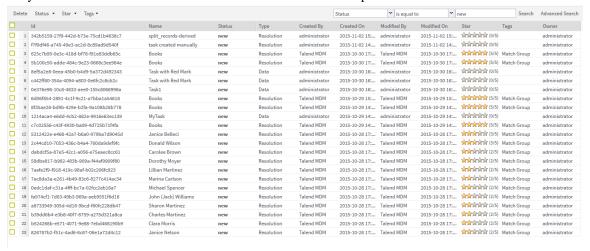
To search for specific tasks, complete the following:

- 1. Click the arrow of the first search field in the upper right corner of the console.
- 2. In the drop-down list, select:

Item	То
Task Id	filter the task list according to the task ID.
Task Name	filter the task list according to the task functional name.
Created By	filter the task list according to the task creator.
Created On	filter the task list according to the task creation date and time.
Modified By	filter the task list according to the task modifier.
Modified On	filter the task list according to the task modification date and time.
Owner	filter the task list according to the task owner.
Status	filter the task list according to the task status.

- 3. Select **Status** in the first field as we want to list only the new tasks in this example.
- 4. Click the arrow of the second search field in the upper right corner of the console.
- 5. In the drop-down list, select one of the available search operators, **is equal to** in this example.
- 6. Click in the third search field and set the value corresponding to your search criteria, *new* in this example.
- 7. Click the **Search** button in the upper right corner of the stewardship console.

Only the tasks which has **new** as status are listed in the stewardship console.



Now that you have a list of the tasks which interest you, you can double-click any of them to open the task detail.



You can filter the task list in the same way if you click the **Advanced Search** tab in the upper right corner of the stewardship console. This will open a panel where you can set your search criteria with the possibility to set a date range for the **Modified On** and **Created On** items.



It is also possible to list tasks by type, data resolution tasks or data integrity tasks, if you click **Resolution** or **Data** in the **Task Navigator** panel respectively.

5.2. Managing the task list display

On the stewardship console, you can choose to sort the tasks alphabetically in an ascending or descending order. You can also decide what columns to show/hide in the list.

Prerequisite(s): You have logged in to *Talend Data Stewardship Console*. More than one task is listed in your task list.

To order the task list according to specific criteria, complete the following:

1. In the task list, move the pointer over a column name and click on the arrow which appears.

A drop-down list displays.

2. In the drop-down list, select:

Item	То
Sort Ascending	arrange the task list in an ascending order
Sort Descending	arrange the task list in an descending order
Columns	display a drop-down list where you can select/clear the check box next to the column(s) you want to show/hide

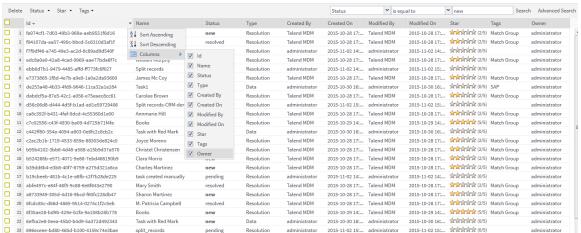
To show or hide any of the columns in the task list, complete the following:

1. Move the pointer over any of the column headings and click on the arrow.

A drop down menu appears.

2. Place the pointer on **Columns**.

A list of all the column names appears.



All of the visible columns have their corresponding check boxes selected in the list. Select or clear the check boxes next to the name of the column, according to the view you want to create.

5.3. Accessing the Audit Sheet of the task list

The **Audit Sheet** is the journal of all operations done on data resolution and data integrity tasks. This sheet provides a complete audit trail for any action taken on any type of tasks listed in the task list "**Main Sheet**" in the stewardship console and managed by the authorized steward.

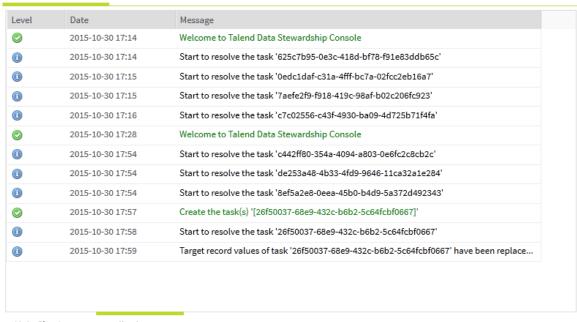
Prerequisite(s): You have logged in to *Talend Data Stewardship Console*. At least one action is taken on one of the listed tasks.

To open the audit sheet, complete the following:

- 1. Open the task list.
- Click the Audit Sheet tab at the bottom of the page.

The sheet opens to display all information on all the events associated with the task list "Main Sheet".

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Main Sheet Audit Sheet

The table below explains the information presented in this sheet:

Column	Description
Level	The state of the event
	: Indicates that an event is correctly completed.
	①: Indicates that an event is not completed yet.
	①: Indicates that an event is not completed correctly.
Date	The date and time of the event.
Message	The message corresponding to the event.