erwin Data Intelligence Suite

Reference Data Management Guide

Release v11.0

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Managing Reference Data

This section walks you through reference data and codeset management.

- Reference data management is done via Reference Data Manager. It involves creating database like structures to maintain all your reference data. You can add reference data in a reference table from a spreadsheet, manually or via a DB scan. To validate reference tables for data quality tests, you can use SQL queries. You can also version, publish (to environments like production, development, test etc.), and link the reference tables to relevant mappings.

  For further information on accessing and using the Reference Data Manager, refer to the Using Reference Data Manager topic.

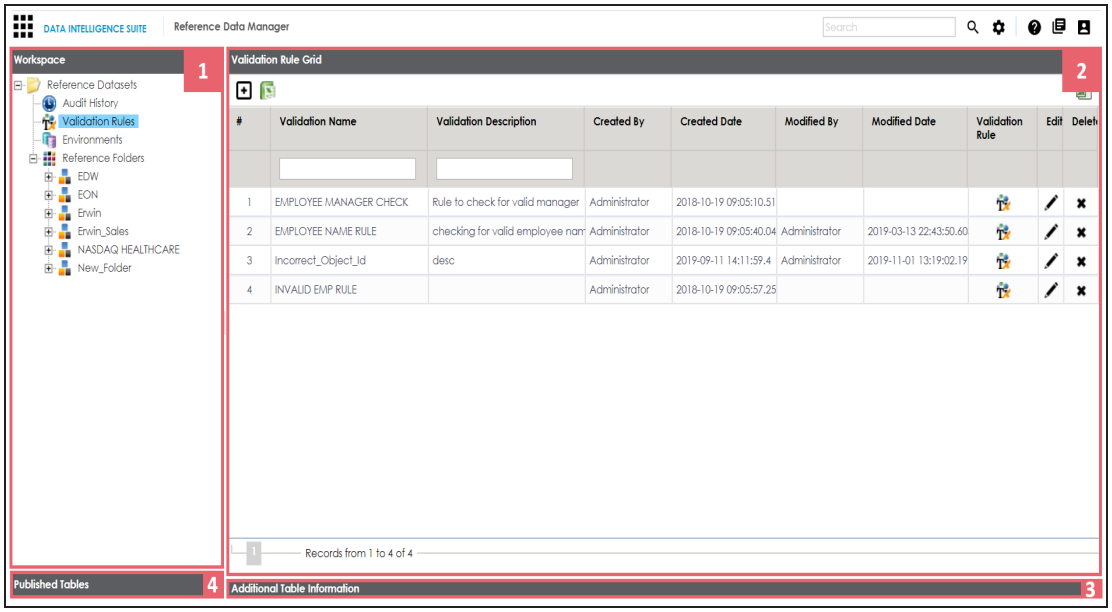
- Codeset management is done via Codeset Manager. It involves creating, managing, and mapping codesets in the Codeset Manager. It has two sections:

  - **Enterprise Codesets**: Under the Enterprise Codesets section, you can create and manage codesets. It involves importing legacy codesets, categorizing codesets, defining code values, versioning codesets, and publishing codesets to various environments.
  - **Codeset Mappings**: Under the Codeset Mappings section, you can create and manage code crosswalks (mappings). It involves categorizing code mappings, defining code crosswalks, versioning code crosswalks, and publishing code crosswalks to various environments.

  For further information on accessing and using the Codeset Manager, refer to the Using Codeset Manager topic.

Using Reference Data Manager

To access the Reference Data Manager, go to **Application Menu** > **Data Catalog** > **Reference Data Manager**. The Reference Data Manager dashboard appears:



UI Section	Function
1-Workspace	Use this pane to browse and work on validation rules, environments, reference folders, and reference tables.
2-Right Pane	Use this pane to work on the data based on your selection in the Workspace pane.
3-Additional Table Information	Use this pane to view or work on additional information of a reference table selected in the Workspace pane.
4-Published Tables	Use this pane to browse, view, and export published reference tables.

Managing reference data involves the following:

- Creating reference folders
- Creating reference tables
- Creating publish environments
- Adding validation rules
- Associating codesets with reference tables
- Versioning reference tables

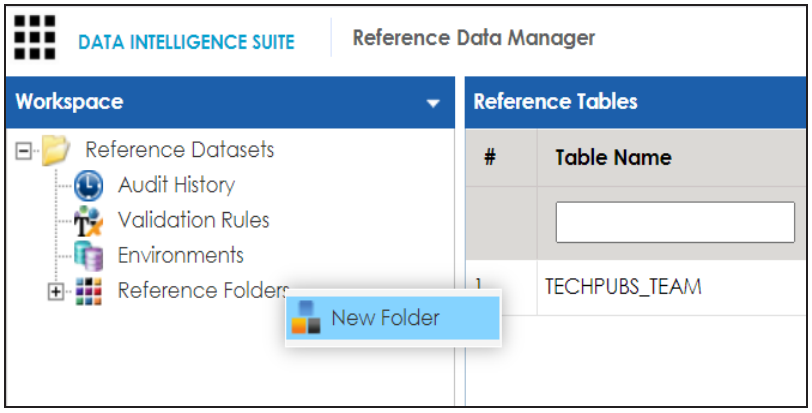
- Publishing reference tables
- Associating reference tables with mappings

Creating Reference Folders

Reference folders group reference tables based on your data integration project. Therefore, before creating reference tables, you need to create a reference folder. You can also create sub-folders to group reference tables further.

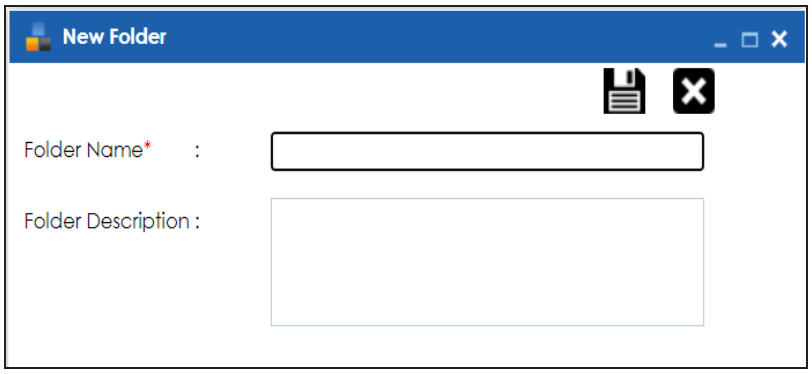
To create reference folders, follow these steps:

1. Go to **Application Menu** > **Data Catalog** > **Reference Data Manager**.
2. In the **Workspace** pane, right-click the **Reference Folders** node.



3. Click **New Folder**.

   The New Folder page appears.



4. Enter the **Folder Name** and **Folder Description**.

For example:

- **Folder Name**: City Names
- **Folder Description**: This folder contains reference tables for city names.

5. Click .

   The folder is created and saved in the Reference Folders tree.

Once a reference folder is created, you can manage it using the options available on right-clicking the reference folder. Managing reference folders involves:

- Creating sub-folders
- Editing reference folders
- Assigning users
- Deleting reference folders

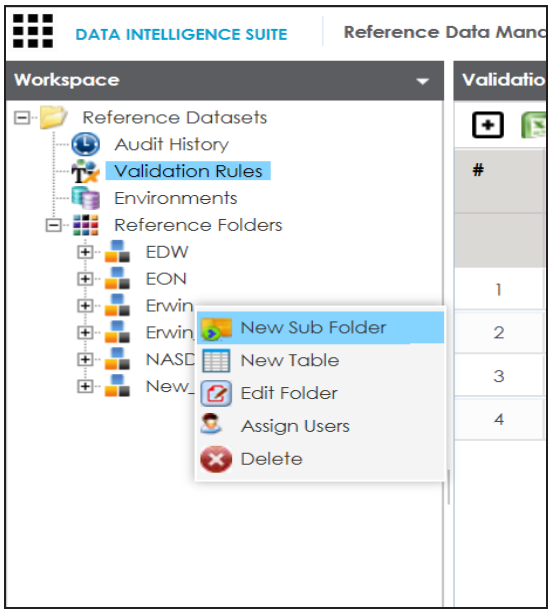
Managing Reference Folders

Managing reference folders involves:

- Creating sub-folders
- Editing reference folders
- Assigning users
- Deleting reference folders

To manage reference folders, follow these steps:

1. In the **Workspace** pane, right-click a reference folder.



2. Use the following options:

New Sub Folder

Use this option to create sub-folders and group reference tables further.

Edit Folder

Use this option to update reference folder's name and description.

Assign Users

Use this option to assign users to a reference folder based on project, departments, functions, and so on. On the Assign Users page, select user IDs under **User ID** list-box and move them to **Assigned Users** list-box using the arrows (or). Similarly, to change existing user assignment, select user IDs under **Assigned Users** list-box and move them back to **User ID** list-box using the arrows (or).

Delete

Use this option to delete a reference folder that is no more required.

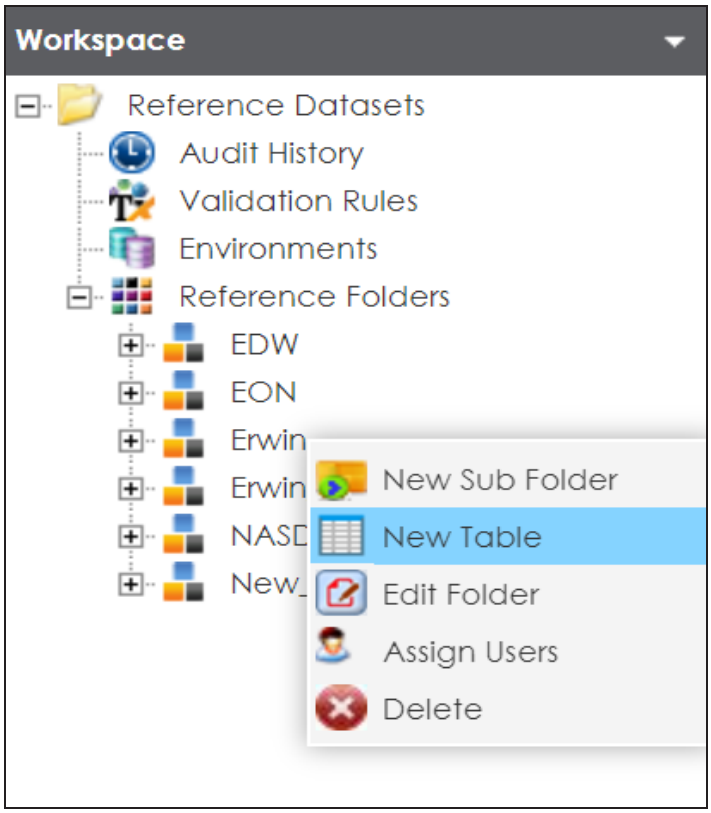
Creating Reference Tables

Reference tables store reference data. You can create reference tables in new or existing reference folders. You can also create reference tables under the reference sub-folders.

To create reference tables, follow these steps:

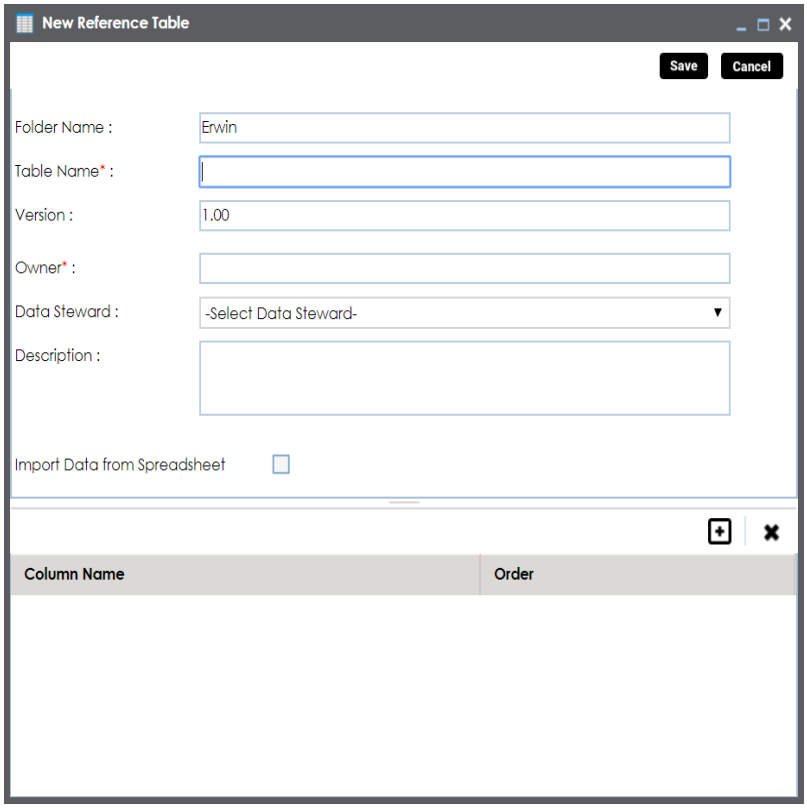
1. Go to **Application Menu** > **Data Catalog** > **Reference Data Manager**.
2. In the **Workspace** pane, right-click a reference folder or sub-folder.

   For example, if you right-click a reference folder the following options appear.



3. Click **New Table**.

   The New Reference Table page appears.



4. Enter appropriate values in the fields. Fields marked with a red asterisk are mandatory. Refer to the following table for field descriptions.

Field Name	Description
Folder Name	Specifies the name of the reference folder. For example, NASDAQ Healthcare. It is autopopulated and cannot be edited.
Table Name	Specifies the name of the reference table. For example, Data_Classifications_Levels.
Version	Specifies the version of the reference table. For example, 1.00. It is autopopulated and cannot be edited.
Owner	Specifies the reference table owner's name. For example, Talon Smith.

Field Name	Description
Data Steward	Specifies the name of the data steward responsible for the reference table. For example, Jane Doe. Users assigned with the Legacy Data Steward role appear as drop down options. You can assign this role to a user in the Resource Manager. To assign data steward, select a data steward from the drop down options.
Description	Specifies the description about the reference table. For example: This reference table serves as domain for the data classification column.
Import Data from Spreadsheet	Use this check box to import reference data into the reference table from the XLSX file. For more information, refer to the Importing Data from Spreadsheets section below.

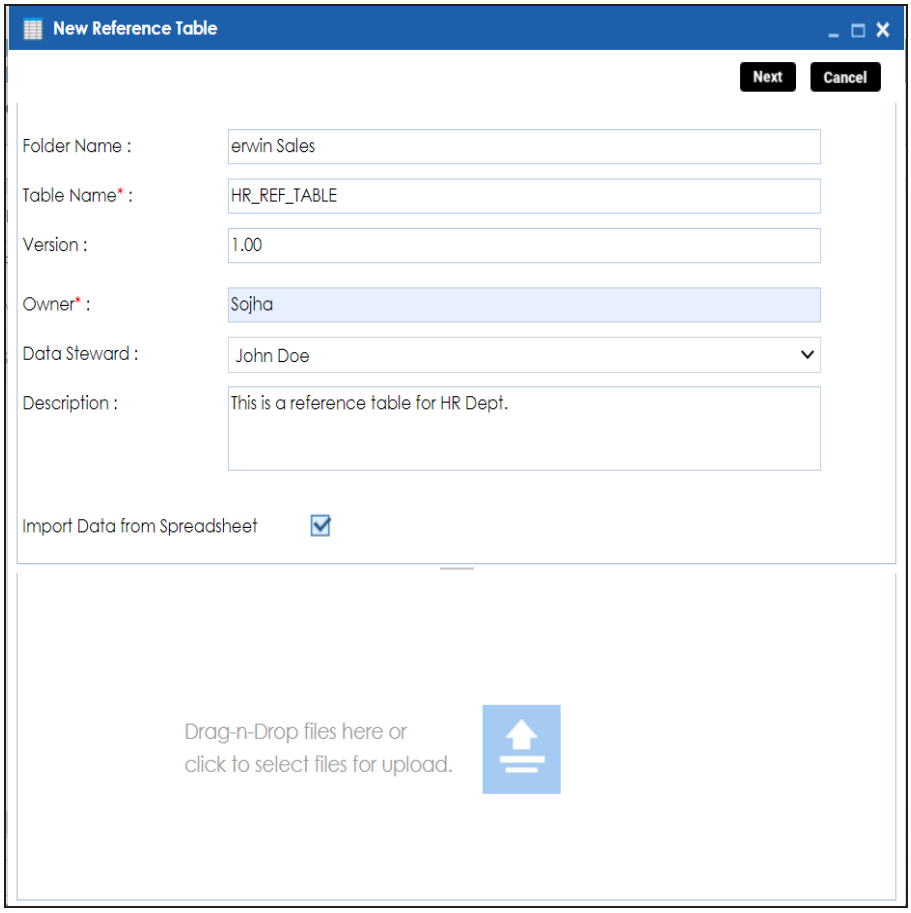
5. Click .

   A reference table is created and saved in the Reference Tables tree.

Importing Data from Spreadsheets

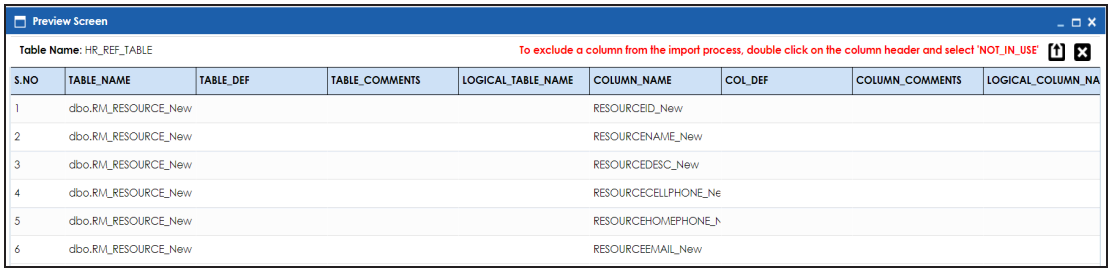
To import reference data from MS Excel files, follow these steps:

1. On the **New Reference Table** page, click the **Import Data from Spreadsheet** check box.



2. Drag and drop or use to browse and select the XLSX file.
3. Click **Next**.

   The Preview Screen page appears. To exclude a column from the import process, double-click the column header and click **NOT_IN_USE**.



4. Click .

   The reference data is imported into the reference table.

If you do not click the Import Data from Spreadsheet check box, you need to add columns to the reference table and then add column values:

- Manually
- From MS Excel files
- Through DB scans

You can manage a reference table using the options available on right-clicking the reference table. Managing reference tables involves:

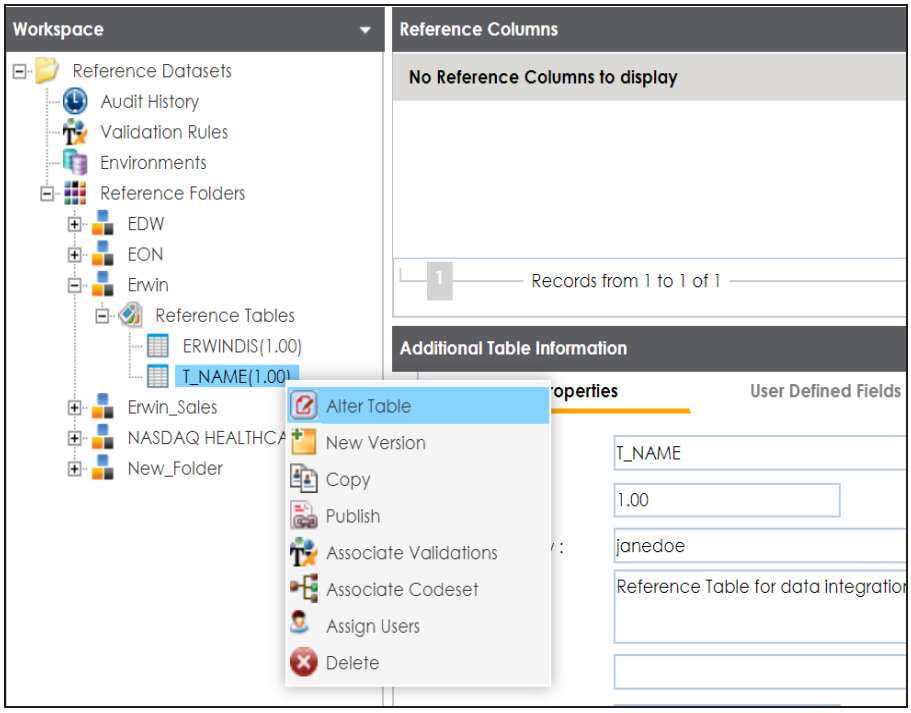
- Altering reference tables
- Copying reference tables
- Assigning users to reference tables
- Deleting reference tables

Adding Columns to Reference Tables

After creating a reference table, you can add columns to the reference table.

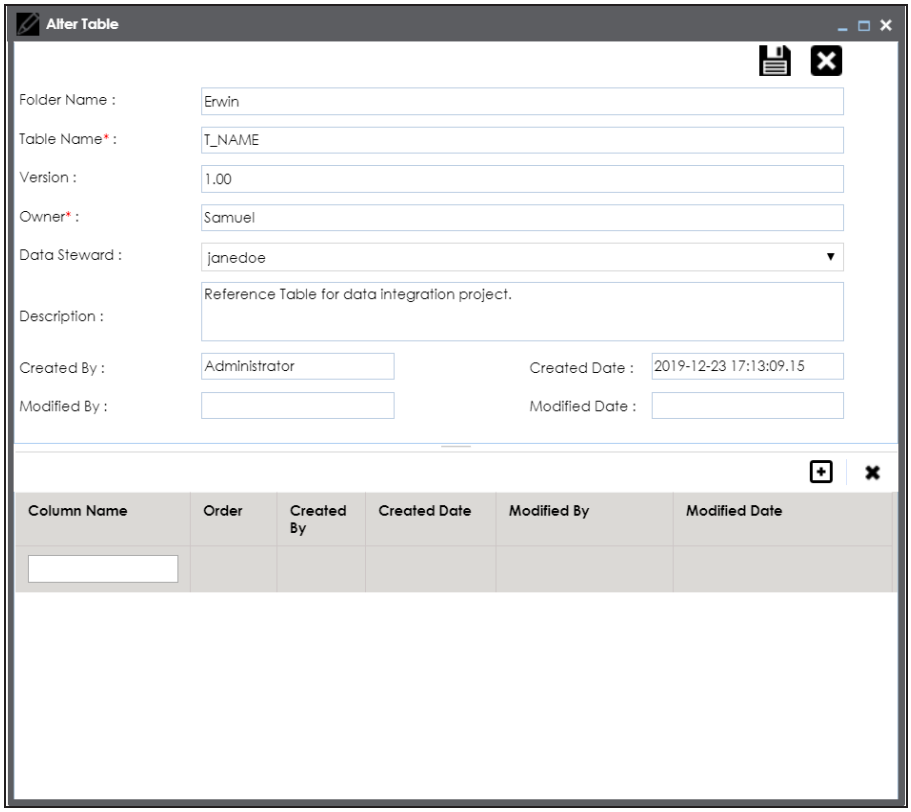
To add columns to reference tables, follow these steps:

1. In the **Workspace** pane, right-click a reference table.



2. Click **Alter Table**.

   The Alter Table page appears.

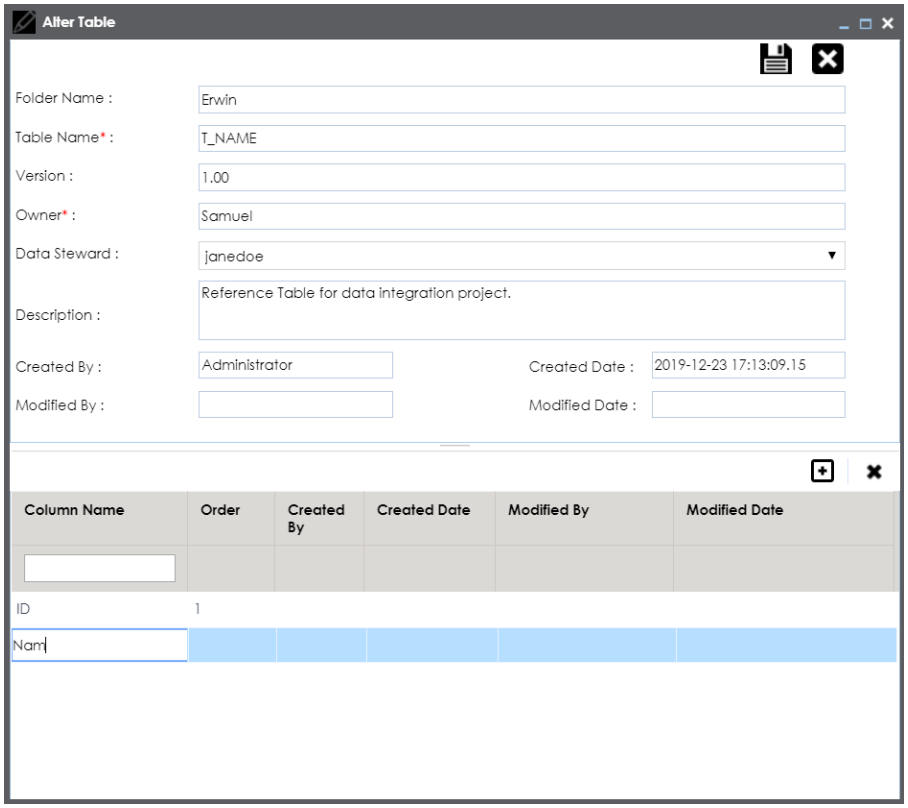


3. Click .

   A new row is added to the grid.

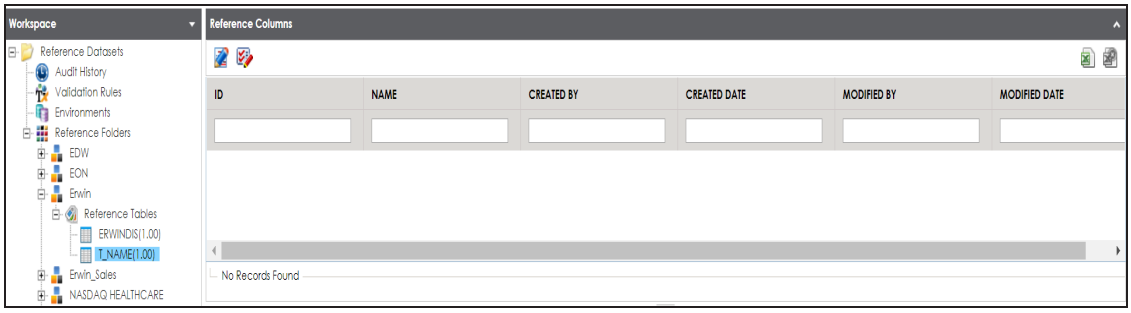
4. Double-click the cell under the **Column Name** and enter the column name.

   You can add multiple columns.



5. Click .

   The columns are added to the reference table.



Once columns are added to a reference table, you can import column values:

- Manually
- From MS Excel files
- Through DB scans

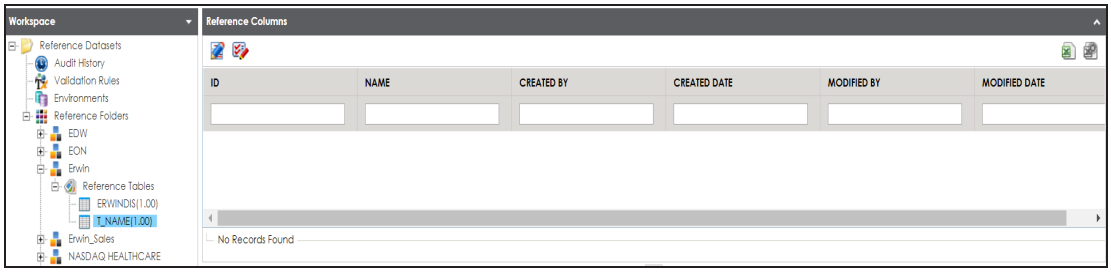
Adding Column Values Manually

You can add data to a reference table manually. It involves adding columns to the reference table and then adding column values. For more information on adding columns to reference tables, refer to the Adding Columns to Reference Tables topic.

To add column values manually, follow these steps:

1. In the **Workspace** pane, click a reference table.

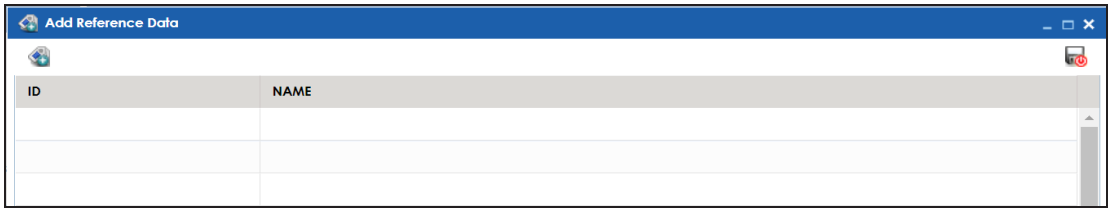
   Columns in the reference table appears.



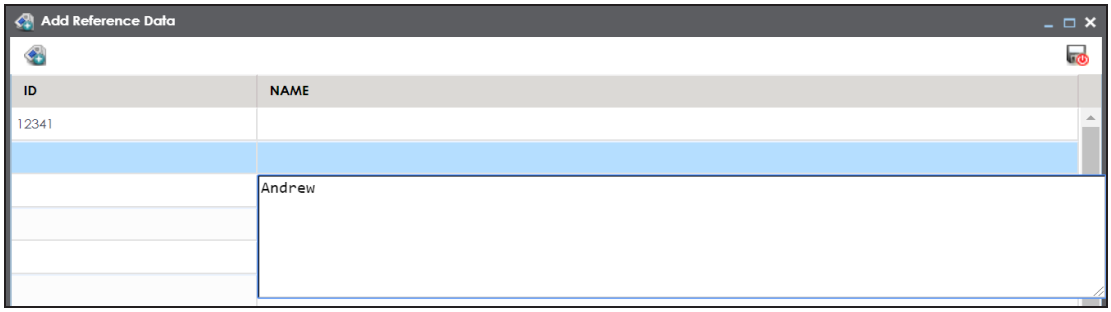
2. Click .

3. Click .

   The Add Reference Data page appears.



4. Double-click the cells under the columns and type the respective column values.



5. Click .

   The column values are added to the reference table.

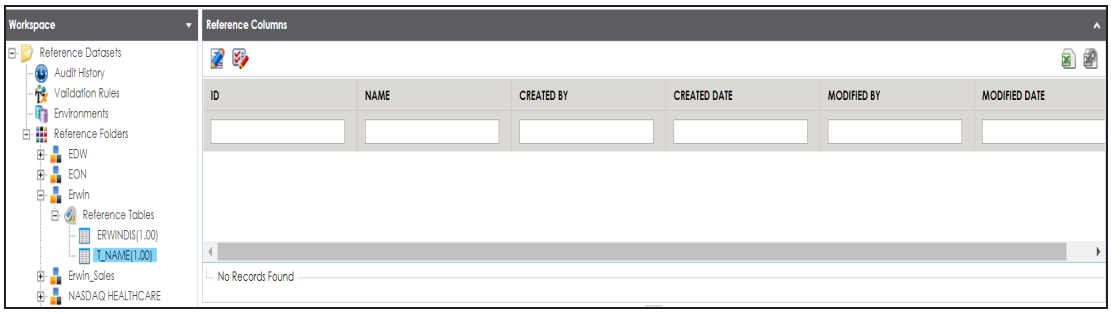
Importing Column Values from MS Excel Files

You can import reference data from MS Excel files into reference tables. First, you need to add columns to a reference table and then import column values from an MS Excel file. For more information on adding columns to reference tables, refer to the Adding Columns to Reference Tables topic.

To import column values from MS Excel files, follow these steps:

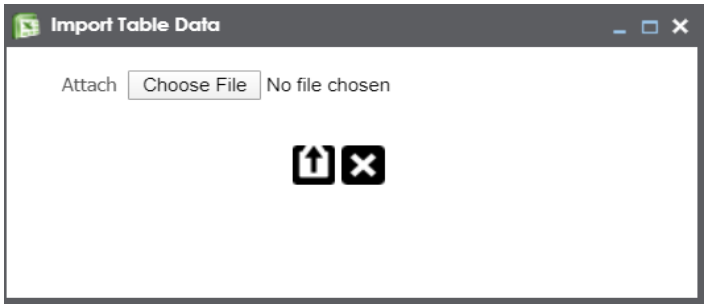
1. In the **Workspace** pane, click a reference table.

   Columns in the reference table appear.



2. Click .
3. Click .

   The Import Table Data page appears.



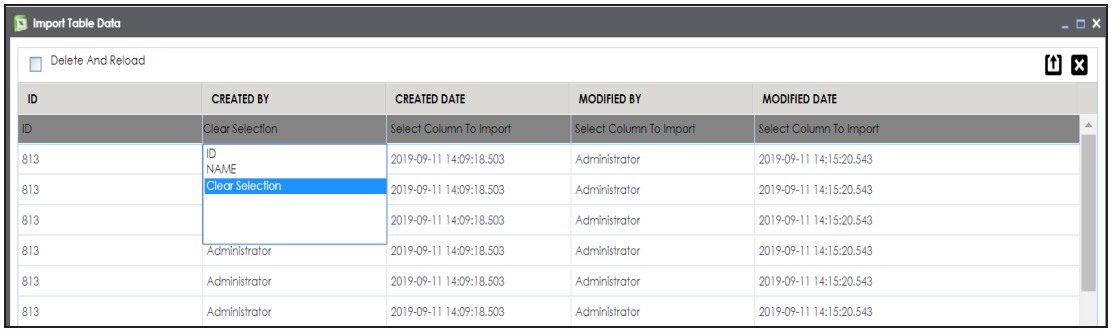
4. Click **Choose File** and browse and select the XLSX file.

5. Click .

   The Import Table Data page appears.

6. Double-click the **Select Column to Import** cell of the required column.

   Column names added by you in the previous steps appear as options.



7. Select the appropriate <Column_Name>.

   You can select multiple columns.

8. Click .

   The column values are imported from the XLSX file.

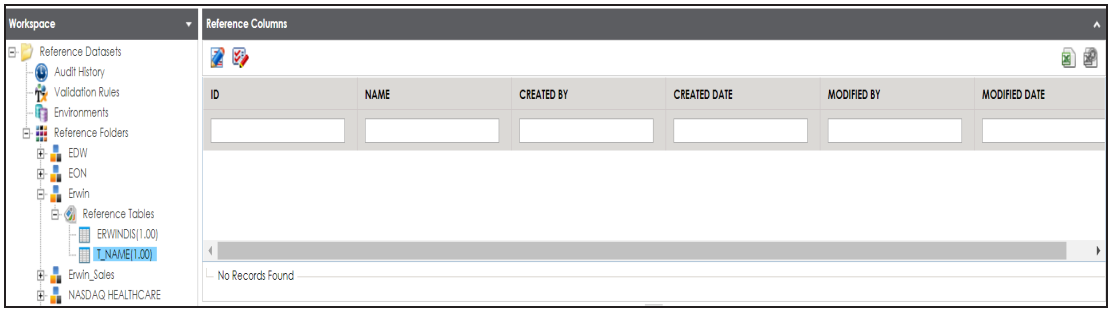
Importing Column Values Through DB Scans

You can import reference data from a database to a reference table by connecting the database to the application. It involves adding columns to reference table and then importing column values from the database. For more information on adding columns to reference tables, refer to the Adding Columns to Reference Tables topic.

To import column values from databases, follow these steps:

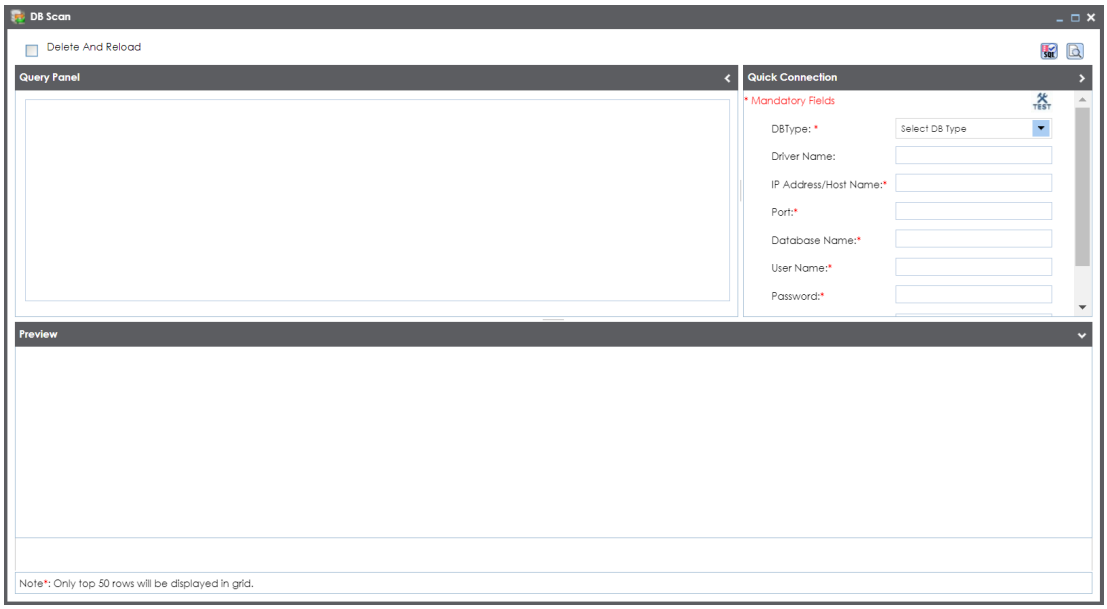
1. In the **Workspace** pane, click a reference table.

   Columns in the reference table appear.



2. Click .
3. Click .

   The DB Scan page appears.



4. Enter appropriate values in the fields on the **Quick Connection** tab to establish a connection with a database. Fields marked with a red asterisk are mandatory. Refer to the following table for field descriptions.

Field Name	Description
DB Type	Specifies the database type. For example, Sql Server.
Driver Name	Specifies the JDBC driver name for connecting to the database.

Field Name	Description
	For example, com.microsoft.sqlserver.jdbc.SQLServerDriver The field is autopopulated based on the DB Type.
IP Address/Host Name	Specifies the IP address or server host name of the database. For example, localhost.
Port	Specifies the port to connect with the database. For example: 1433 is the default port for a Sql Server database type.
Database Name	Specifies the database name being used to connect to the reference table. For example, ErwinDIS931.
User Name	Specifies the user name to connect with the database. For example, sa.
Password	Specifies the password to connect with the database. For example, goerwin@1.

5. Click to test the connection.

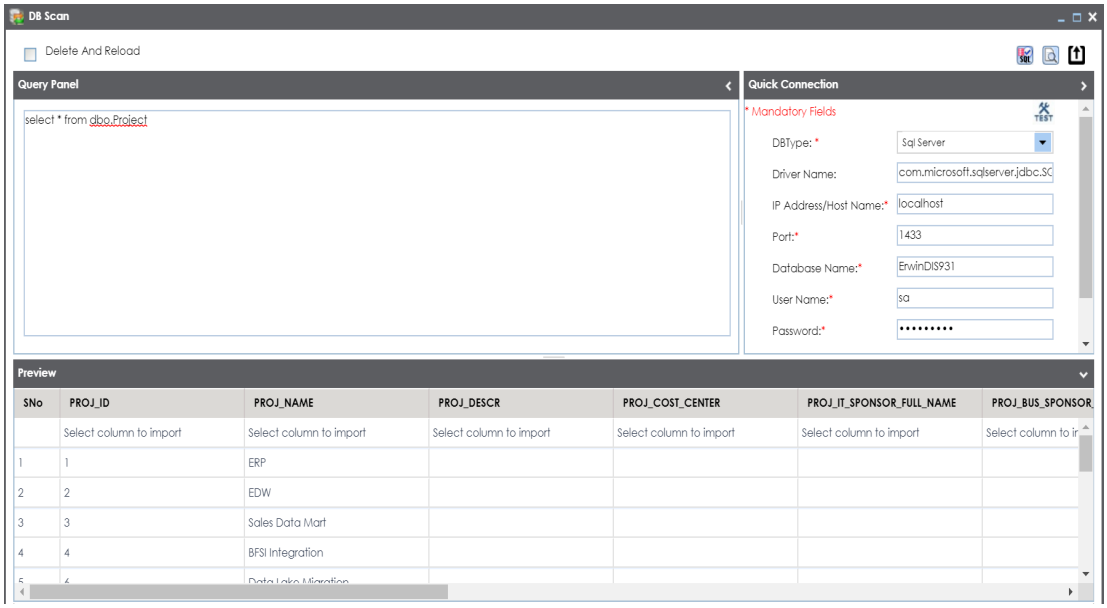
   If the connection is established, the success message appears.

6. Write a query in the **Query Panel** to pull the data from the database.

7. Click to validate the query.

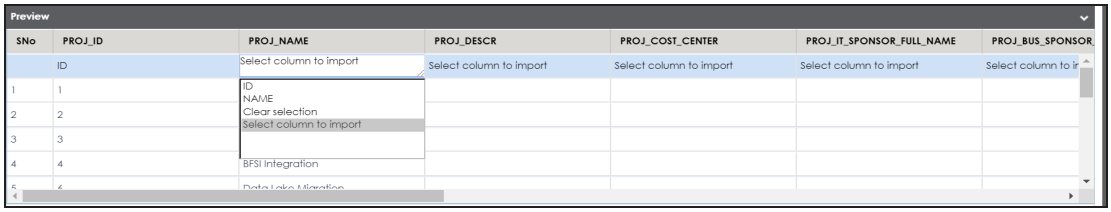
8. Click to preview the data.

   The data is previewed.



9. Double-click the **Select Column to Import** cell under the required column.

   A drop-down option appears displaying the reference columns.



10. Choose an appropriate <Reference_Column_Name> from the drop-down.

    You can import multiple columns from the database.

11. Click .

    The column values from the database are imported into the selected reference columns.

Managing Reference Tables

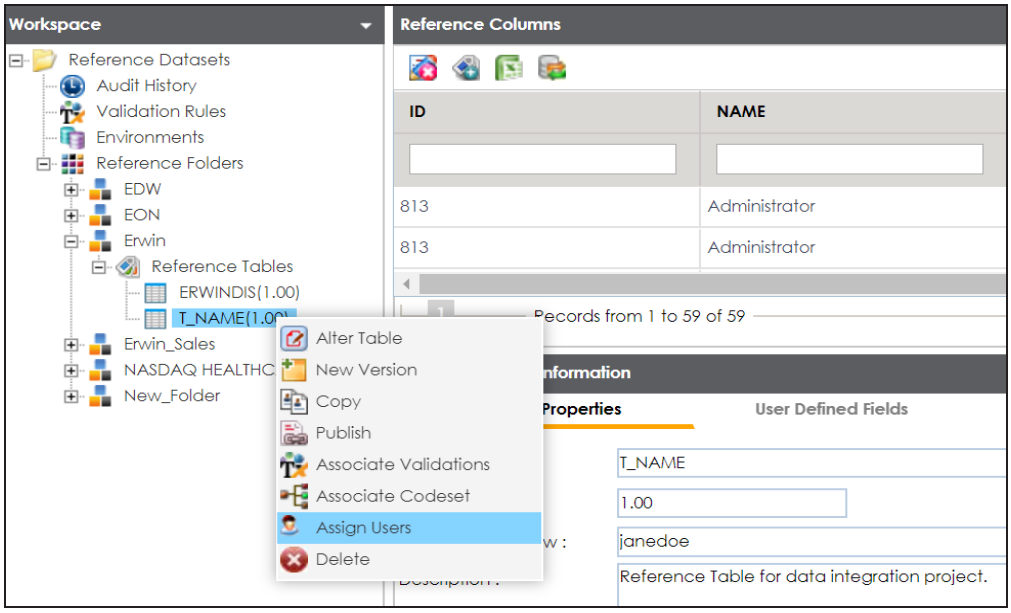
Managing reference tables involves:

- Altering
- Copying

- Assigning users
- Deleting

To manage reference tables, follow these steps:

1. In the **Workspace** pane, right-click a reference table.



2. Use the following options:

Alter Table

Use this option to update a reference table. You can edit table name, owner, data steward, and add or remove columns.

Copy

Use this option to copy a reference table. You can paste the copied reference table in a reference folder. To paste the reference table, right-click the reference folder and click **Paste**.

Assign Users

Use this option to assign users to reference tables. Before, you assign a user to a reference table, ensure that the user is assigned to the corresponding reference folder.

On the Assign Users page, select user IDs under **User ID** list-box and move them to **Assigned Users** list-box using the arrows (or). Similarly, to change

existing user assignment, select user IDs under **Assigned Users** list-box and move them back to **User ID** list-box using the arrows (or).

Delete

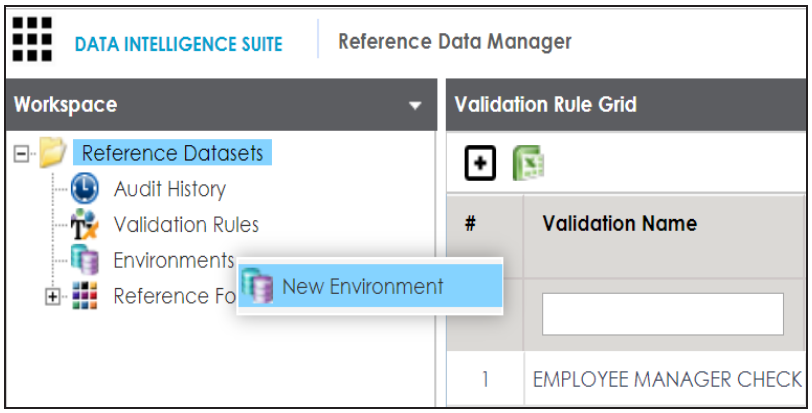
Use this option to delete a reference table that is no longer required.

Creating Publish Environments

You can publish reference tables to various environments like development, production, test etc. You can also specify the schema of the environment, for example, DBO.

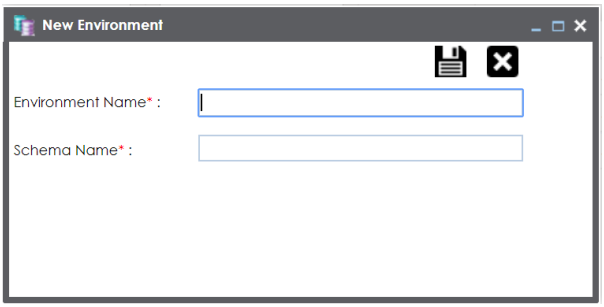
To create publish environments, follow these steps:

1. Go to **Application Menu** > **Data Catalog** > **Reference Data Manager**.
2. In the **Workspace** pane, right-click the **Environments** node.



3. Click **New Environment**.

   The New Environment page appears.



4. Enter the **Environment Name** and **Schema Name**.

For example:

- **Environment Name**: Production
- **Schema Name**: DBO

5. Click .

   The publish environment is created and saved on the Publish Environments page.

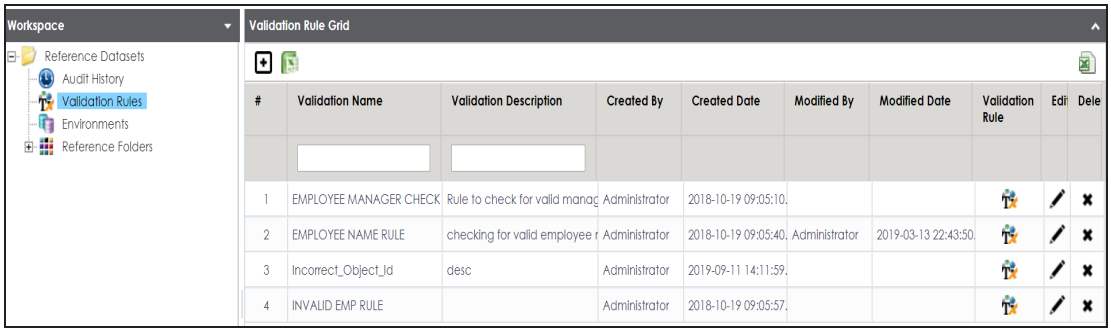
Adding Validation Rules

You can define a validation rule in the form of SQL queries and use it to validate reference tables.

To add validation rules, follow these steps:

1. Go to **Application Menu** > **Data Catalog** > **Reference Data Manager**.
2. In the **Workspace** pane, click the **Validation Rules** node.

   The Validation Rule Grid page appears.



3. Click .

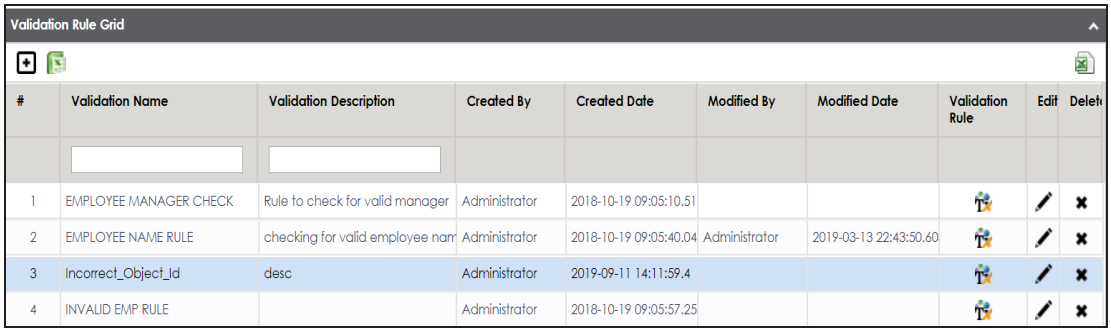
   The New Validation Rule page appears.

4. Enter appropriate values in the fields. Fields marked with a red asterisk are mandatory. Refer to the following table for field descriptions.

Field Name	Description
Validation Name	Specifies the name of the validation rule. For example, Incorrect_Object_ID.
Validation Description	Specifies the description about the validation rule. For example: This validation rule validates the ERWIN_SALES reference table.
Validation Rule	Specifies the SQL query of the validation rule. For example: select * from ERWIN_SALES where ID = 1000000.

5. Click .

   The validation rule is created and saved in the Validation Rule Grid.



Use the following options to work on the Validation Rule Grid page:

Validation Rule ( )

Use this option to view validation rule queries.

Edit ( )

Use this option to update validation rules.

Delete ( )

Use this option to delete validation rules that are no longer required.

Once a validation rule is added, you can:

1. Associate it with a reference table
2. Run validation against the reference table

Associating Validation Rules with Reference Tables

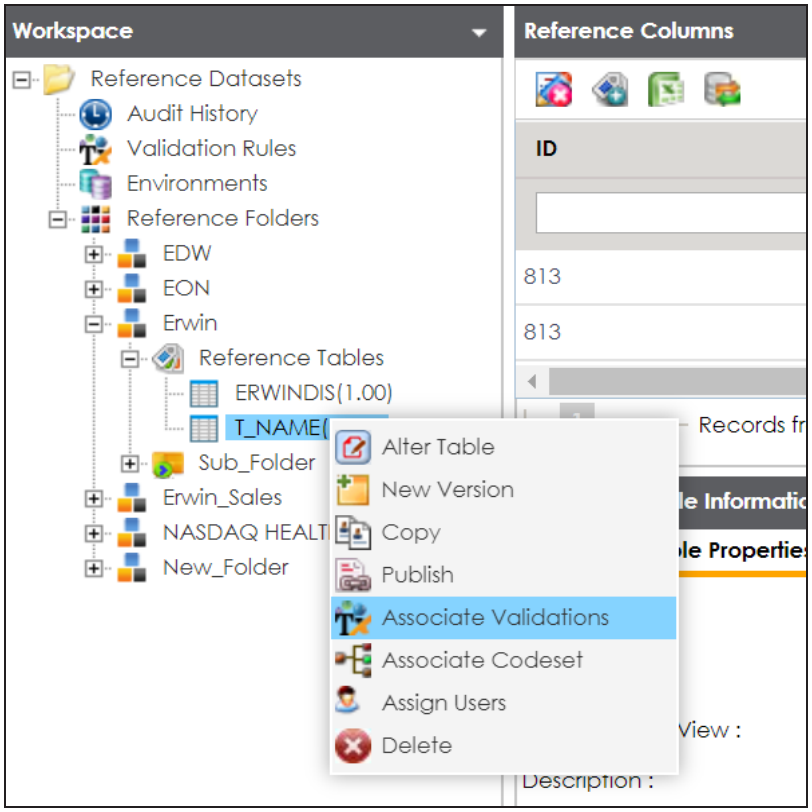
After creating a validation rule, you need to associate the validation rule with a reference table.

This allows you to execute the validation rule to validate data in the reference table.

To associate validation rules with reference tables, follow these steps:

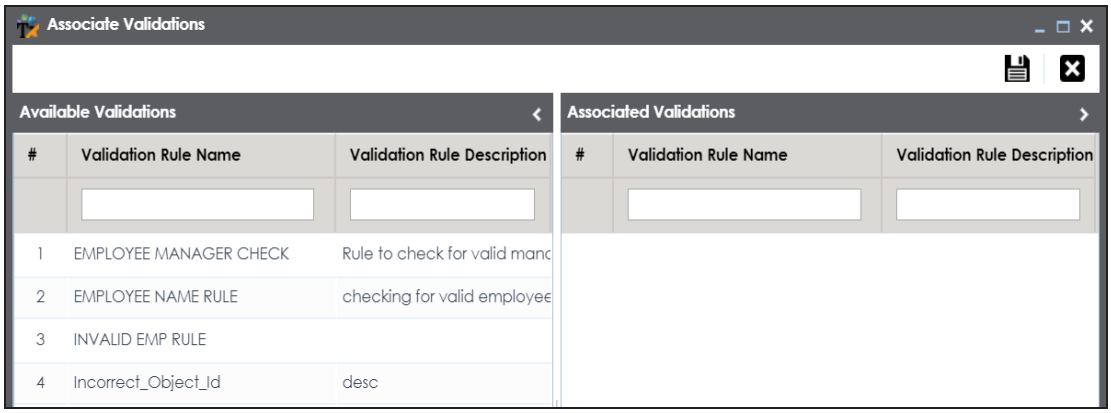
1. In the **Workspace** pane, right-click a reference table.

   The available options appear.



2. Click **Associate Validations**.

   The Associate Validation page appears.

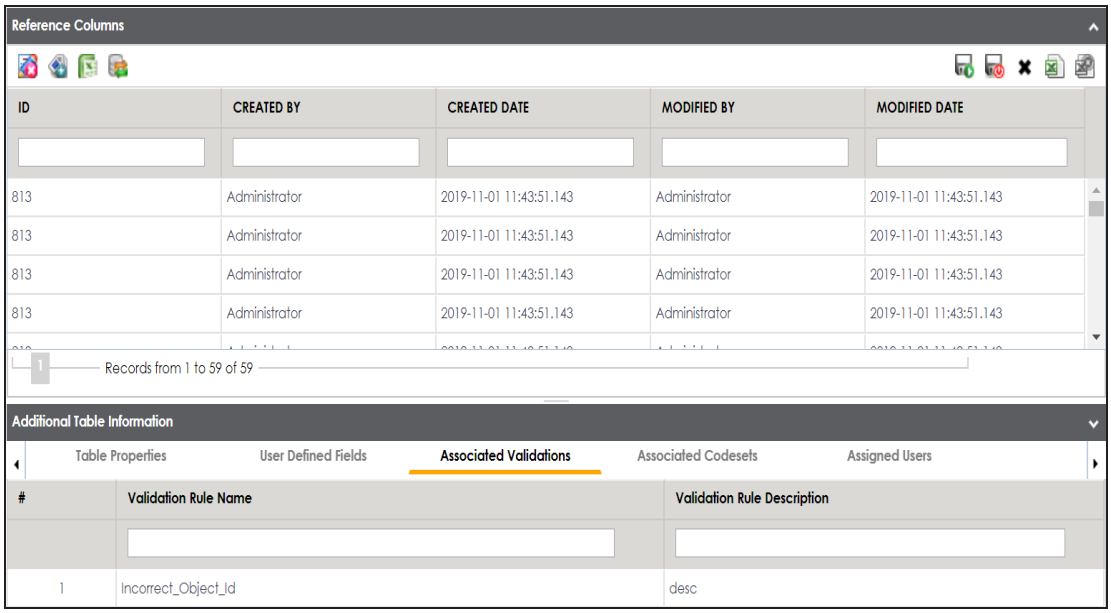


3. Drag and drop the required validation rule from the **Available Validation** pane to the **Associated Validation** pane.

For more information on adding validation rules, refer to the Adding Validation Rules topic.

4. Click .

   The associated validation rules appear on the Associated Validations tab.



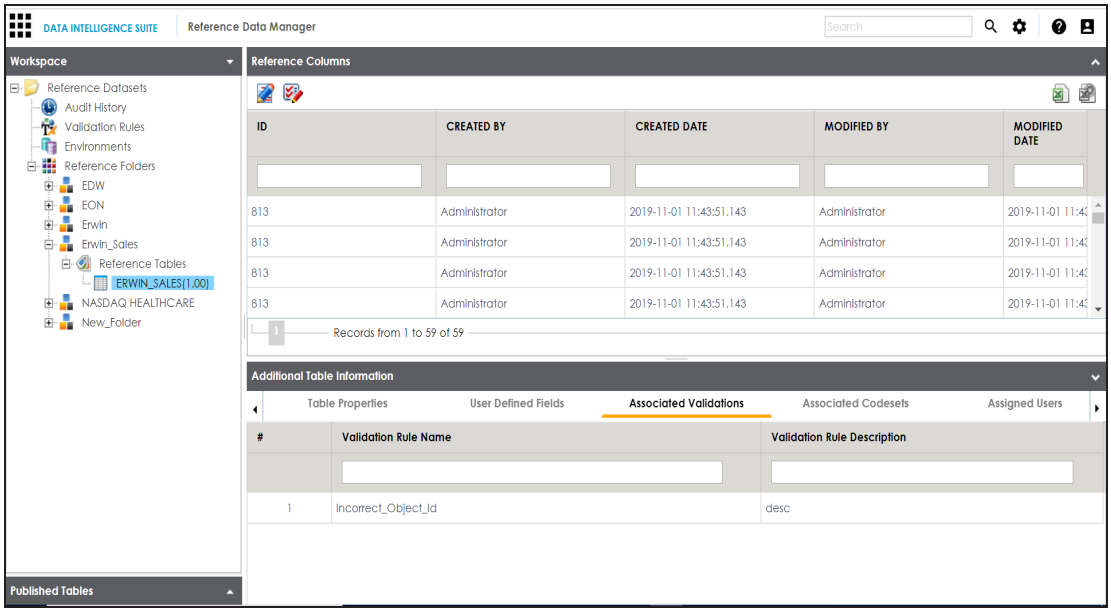
Running Validations Against Reference Tables

You can run a validation rule query against a reference table after associating the table with the validation rule. Executing validation rule validates the data in the reference table.

To run validation rules against reference tables, follow these steps:

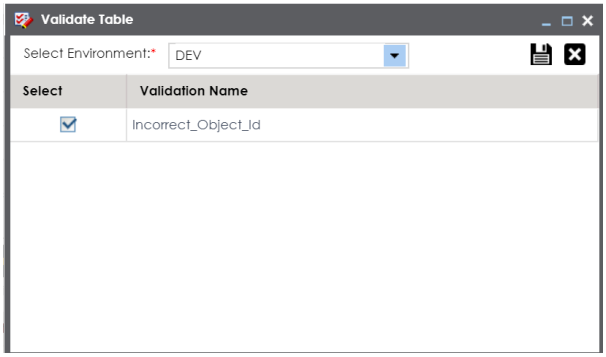
1. In the **Workspaces** pane, click a reference table.

   The following page appears. Ensure that you are not in edit mode. If you are in edit mode, click to cancel edit.



2. Click .

   The Validate Table page appears.



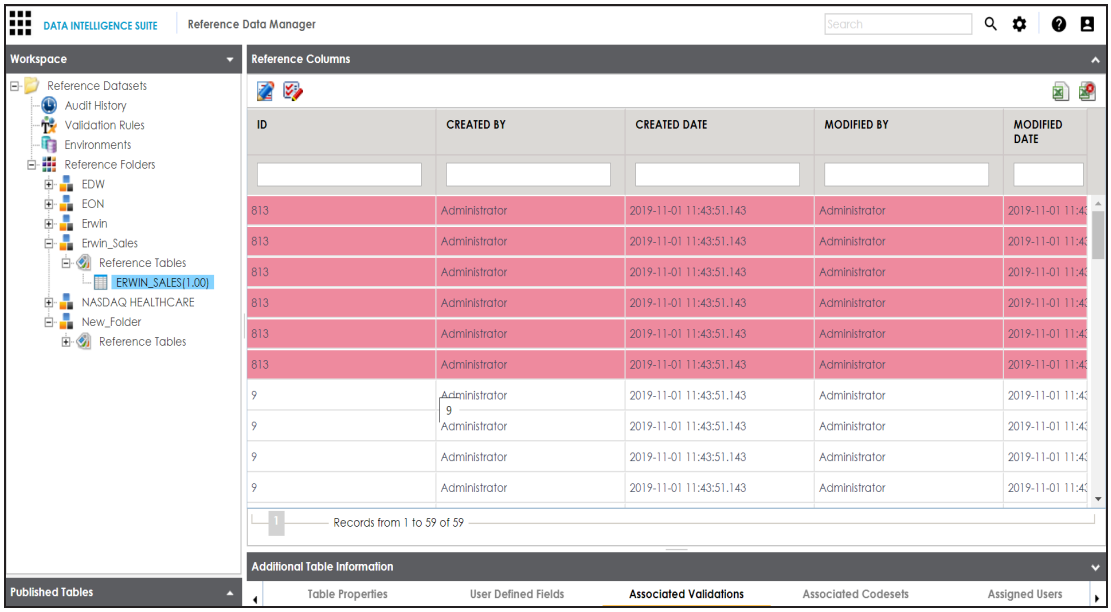
3. Select an environment and a validation rule.

   For more information on creating environments, refer to the Creating Publish Environments topic.

4. Click .

   Validation is successfully executed.

   The error rows returned by executing the validations are highlighted in red color.



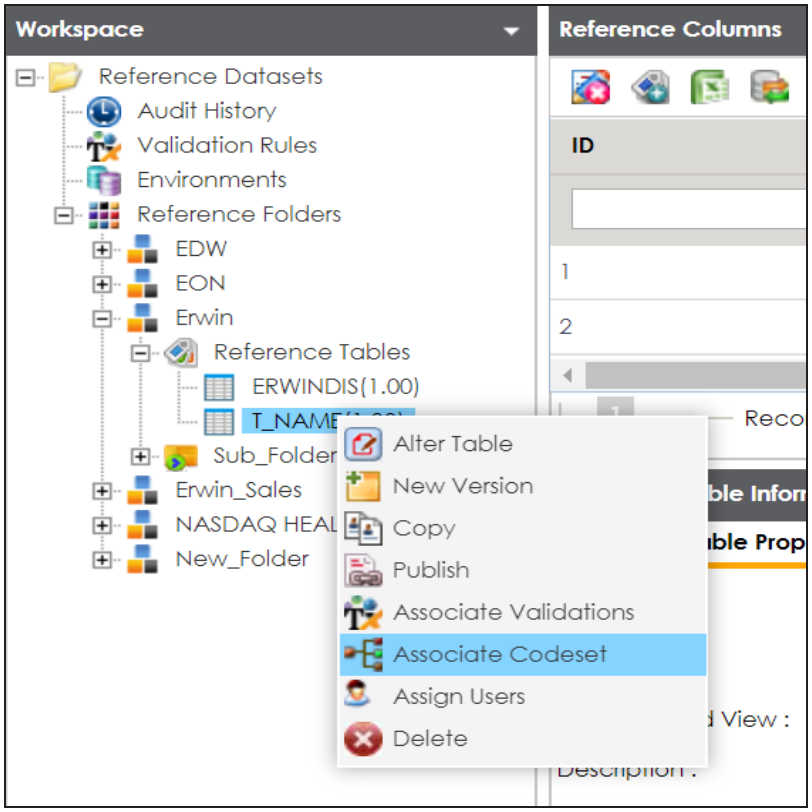
Associating Codesets With Reference Tables

You can associate codesets with columns of a reference table. Codesets can be used as configurable pick lists so that data can be selected from the drop-down.

To associate codesets with columns of reference tables, follow these steps:

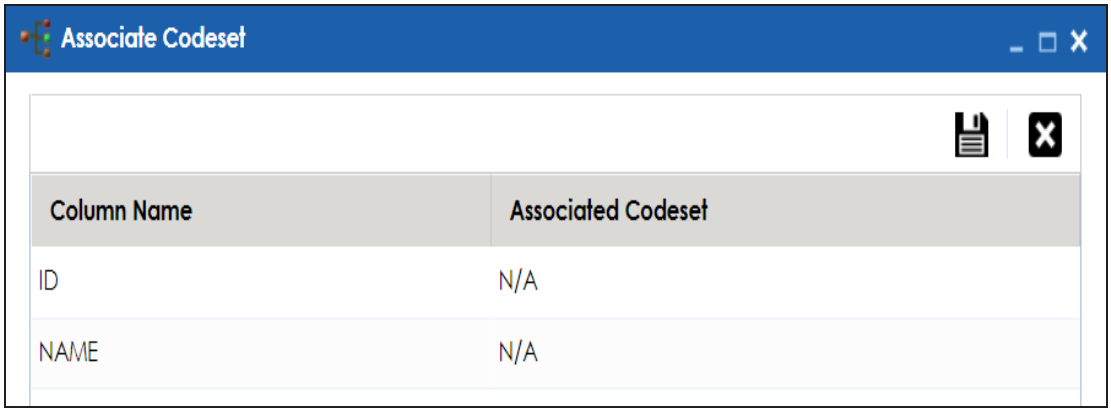
1. Go to **Application Menu** > **Data Catalog** > **Reference Data Manager**.
2. In the **Workspace** pane, right-click a reference table.

   The available options appear.



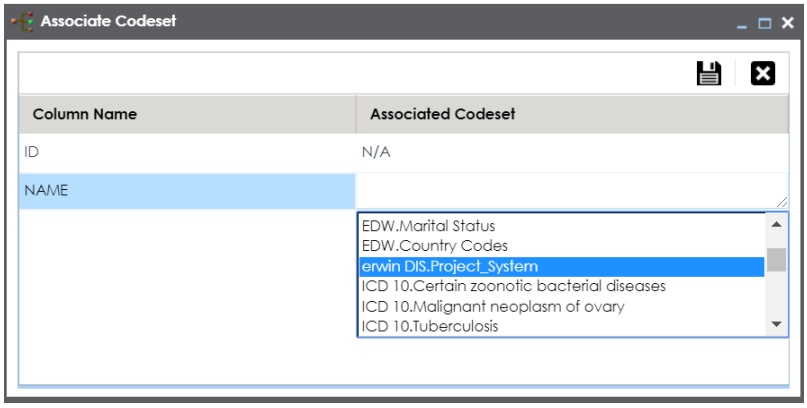
3. Click **Associate Codesets**.

   The Associate Codeset page appears.



4. Double-click the cell for the required column and select an appropriate codeset.

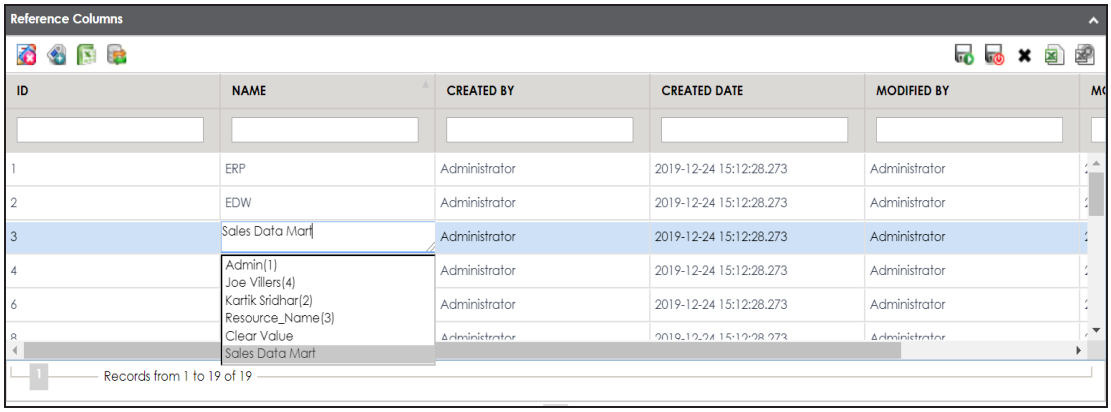
For more information on codesets, refer to the Maintaining Enterprise Codesets section.



5. Click .

   The codeset is associated with the column of the reference table.

   The corresponding column in the reference table is now configured as a drop-down and populated with values from the selected codeset.



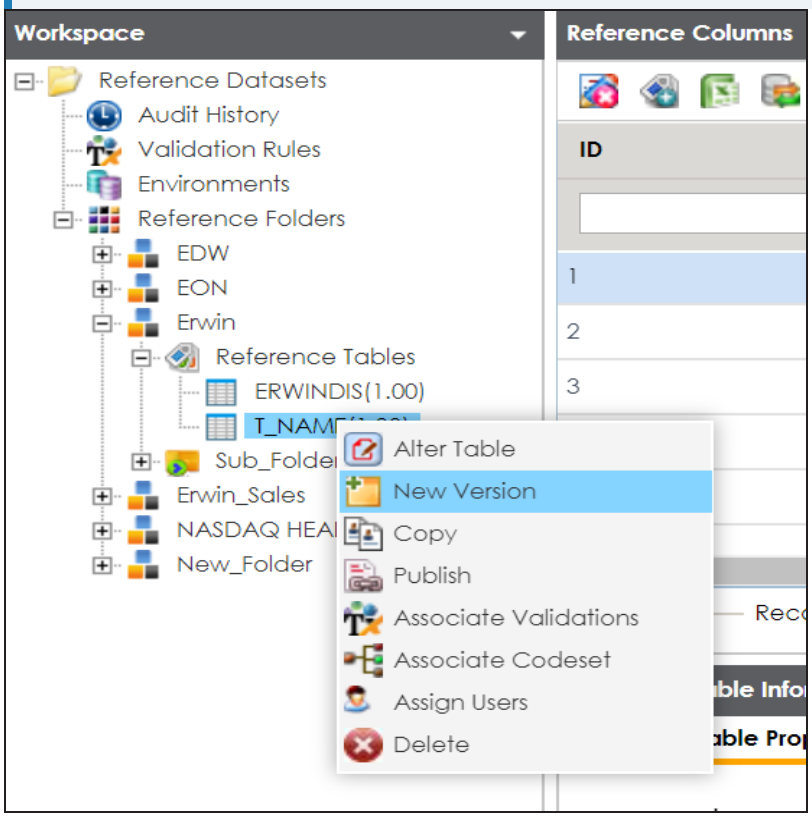
Versioning Reference Tables

You can create versions of reference tables and track the legacy of reference tables. The old version is archived and new version is added to the Reference Table tree in the Workspace pane.

To create versions of the reference tables, follow these steps:

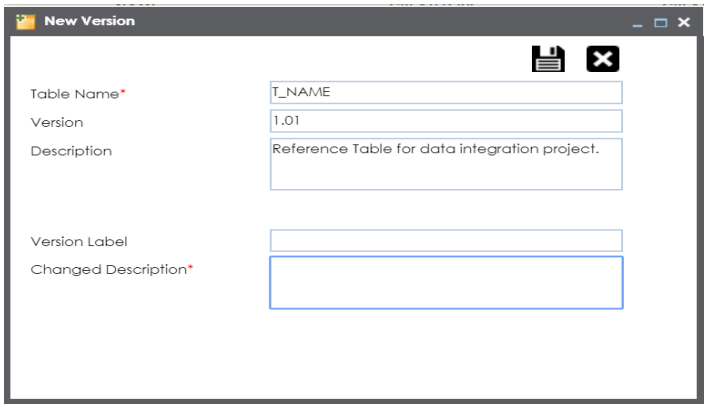
1. Go to **Application Menu** > **Data Catalog** > **Reference Data Manager**.
2. In the **Workspace** pane, right-click a reference table.

> Ensure that the reference table is not in edit mode (locked condition). If it is in edit mode, click to cancel edit.



3. Click **New Version**.

   The New Version page appears.



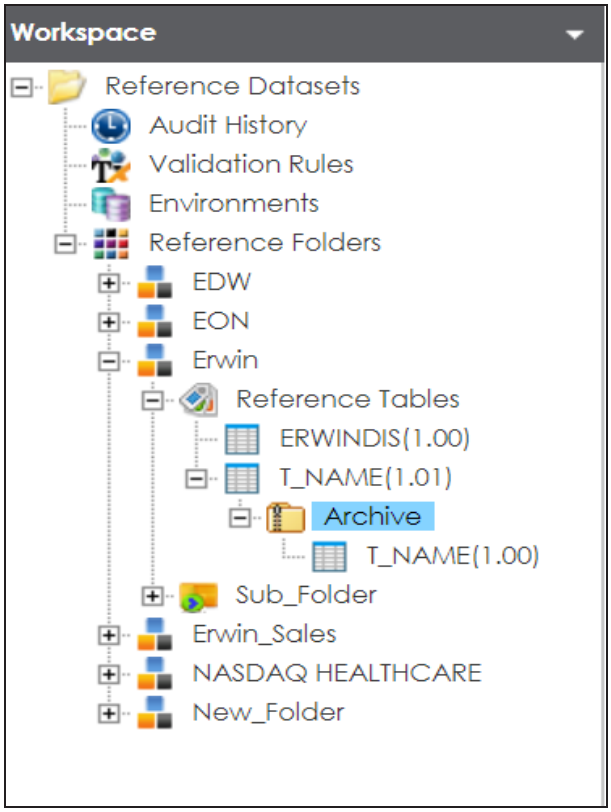
4. Enter appropriate values in the fields. Fields marked with a red asterisk are mandatory. Refer to the following table for field descriptions.

Field Name	Description
Table Name	Specifies the name of the reference table. For example, Data_Classifications_Levels.
Version	Specifies the new version of the reference table. For example, 1.02.
Description	Specifies the description about the reference table. For example: This reference table serves as domain for the data classification column.
Version Label	Specifies the version label of the reference table. For example, Beta.
Changed Description	Specifies the description of the changes made in the reference table. For example: A new column, Object_ID was added in the reference table.

5. Click .

   The new version of the reference table is created and saved under the Reference Table tree.

   The previous version of the reference table is archived.

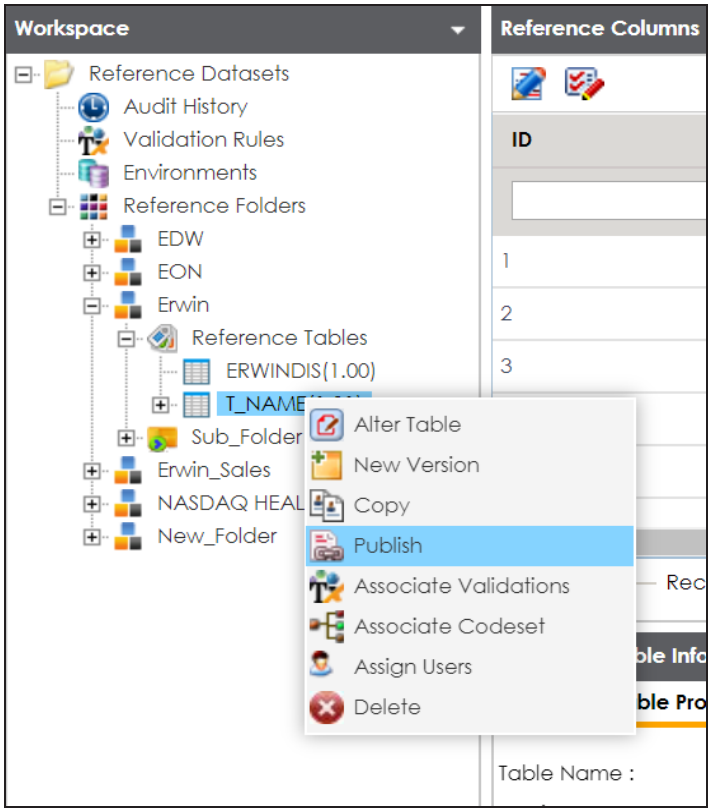


Publishing Reference Tables

You can publish a reference table to a publish environment. Before publishing a reference table, you must ensure that the table has passed all validations successfully.

To publish reference tables, follow these steps:

1. Go to **Application Menu** > **Data Catalog** > **Reference Data Manager**.
2. In the **Workspace** pane, right-click a reference table.

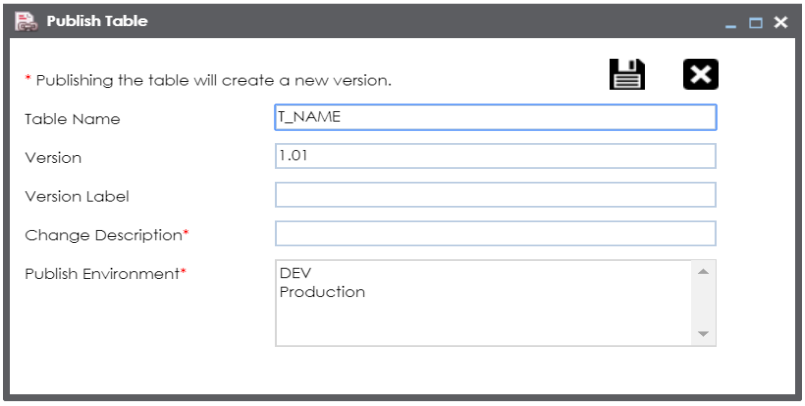


3. Click **Publish**.

   A warning message appears.

4. Click **Yes**.

   The Publish Table page appears.

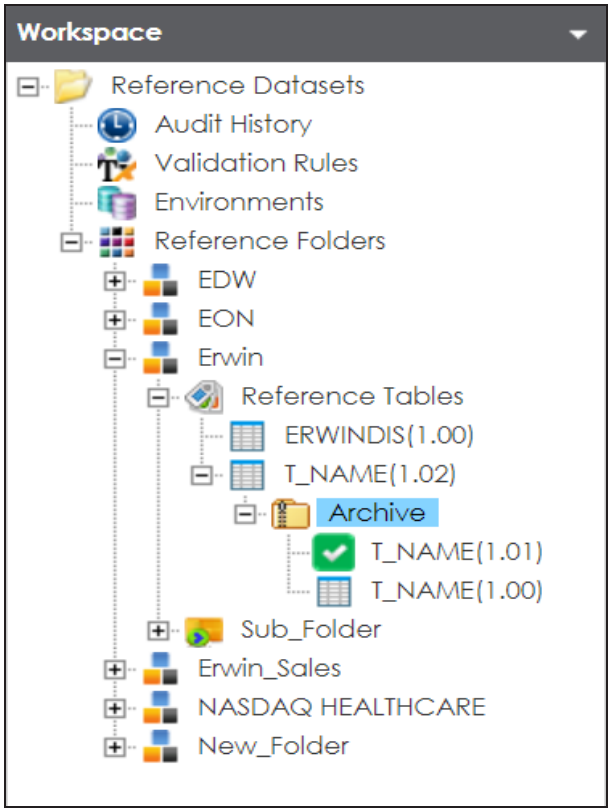


5. Enter appropriate values in the fields. Fields marked with a red asterisk are mandatory. Refer to the following table for field descriptions.

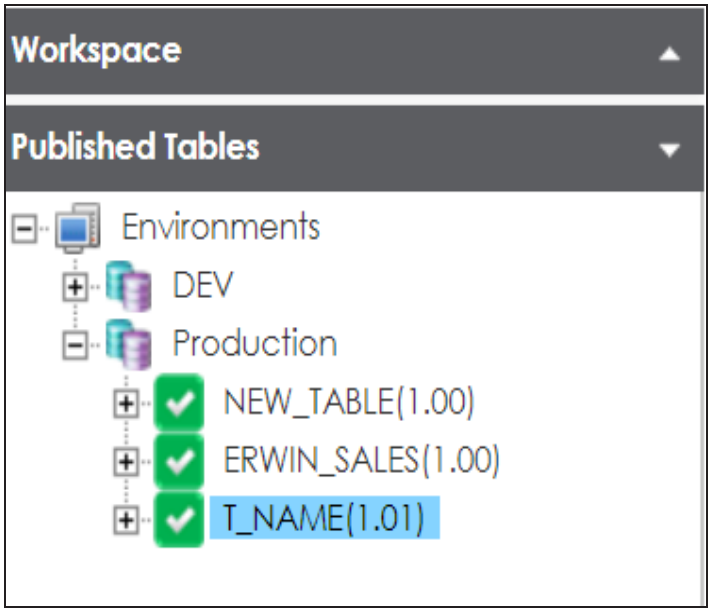
Field Name	Description
Table Name	Specifies the name of the reference table. For example, Data_Classifications_Levels. It is autopopulated and cannot be edited.
Version	Specifies the current version of the reference table. For example, 1.00. It is autopopulated and cannot be edited.
Version Label	Specifies the version label of the reference table. For example, Beta.
Change Description	Specifies the description about the changes made in the reference table. For example: A new column, Object_ID was added in the reference table.
Publish Environment	Specifies the environment to which the reference table would be published. For example, Production. For more information on creating publish environment, refer to the Creating Publish Environments topic.

6. Click .

   The reference table is published. The published version is archived and a new version of the reference table is created in the Workspace pane.



The published version is also saved in the Published Tables pane.



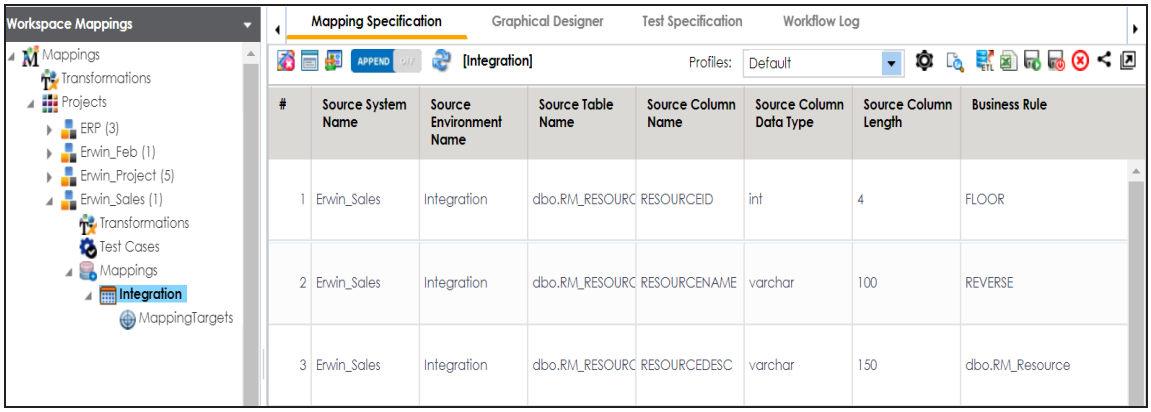
Associating Reference Tables with Mappings

Reference data sets the permissible values for other data fields. To standardize your data, you can associate a reference table with mappings. Ensure that you publish the required reference table before associating it with mappings.

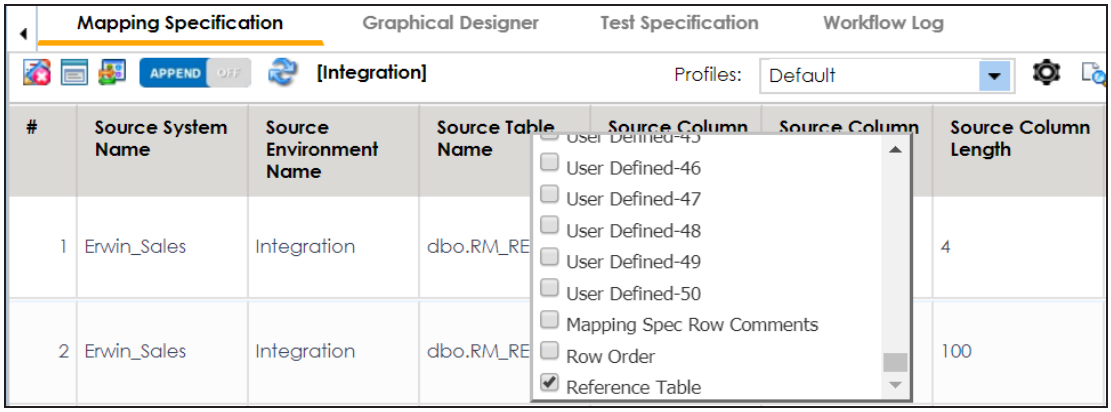
To associate reference tables with Mappings, follow these steps:

1. Go to **Application Menu** > **Data Catalog** > **Mapping Manager**.
2. In the **Workspace Mappings** pane, click a map.

   The Mapping Specification grid appears.



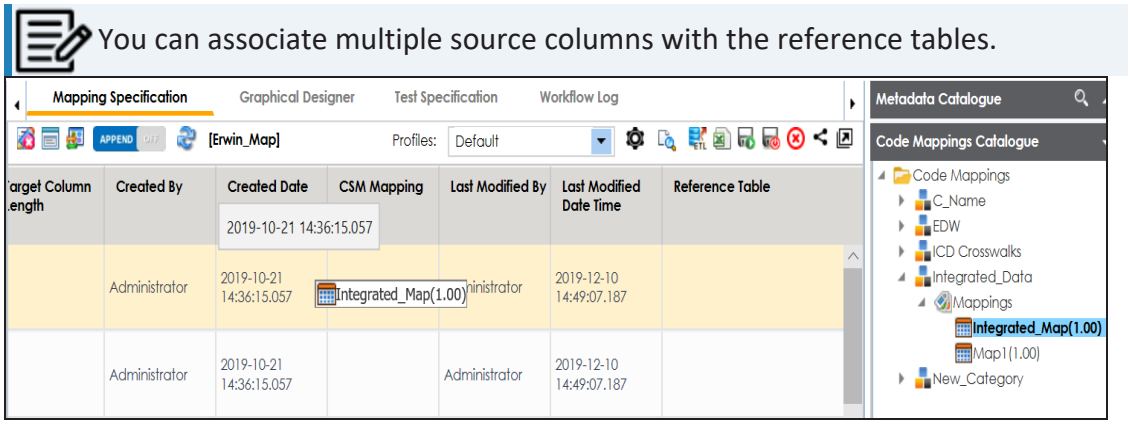
3. Click .
4. Right-click the header menu.



5. Select the **Reference Table** check box.

The Reference Table column appears in the Mapping Specification grid.

6. Drag the reference table from **Reference Table Catalogue** and drop it on the required row under the **Reference Table** column.

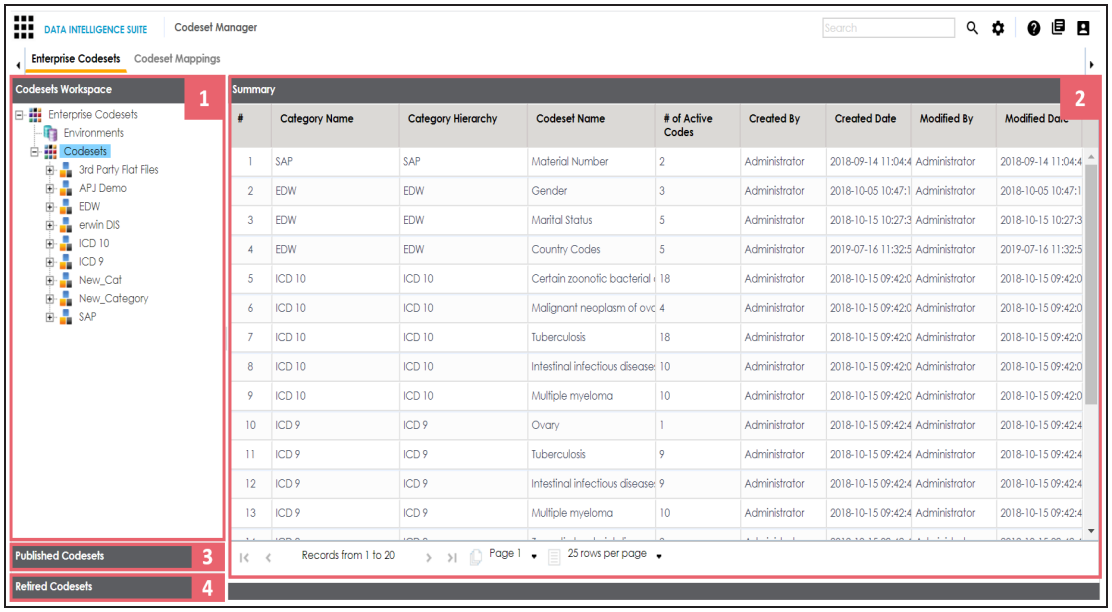


7. Click .

The reference table is associated with the mappings.

Using Codeset Manager

To access the Codeset Manager, go to **Application Menu** > **Data Catalog** > **Codeset Manager**. The Codeset Manager dashboard appears:



UI Section	Function
1-Work-space	Use this pane to browse through Codesets Workspace and Code Mappings Workspace panes. Codesets Workspace enables you to create and categorize codesets. Code Mappings Workspace enables you to create and categorize code mappings.
2-Right Pane	Use this pane to work on the data based on your selection in the Workspace pane.
3-Published Codesets	Use this pane to browse, view, and export published codesets.
4-Retired Codesets	Use this pane to browse, view, and export retired codesets.

Managing codesets involves the following:

- Maintaining enterprise codesets
- Maintaining code mappings

Maintaining Enterprise Codesets

You can create and maintain codesets using the Enterprise section of the Codeset Manager. Under the Enterprise section, you can create codesets, add code name and code value pairs, and version them. You can also publish the codesets to various environments such as development, test, or production and used it create code crosswalks (mappings).

Maintaining enterprise codeset involves:

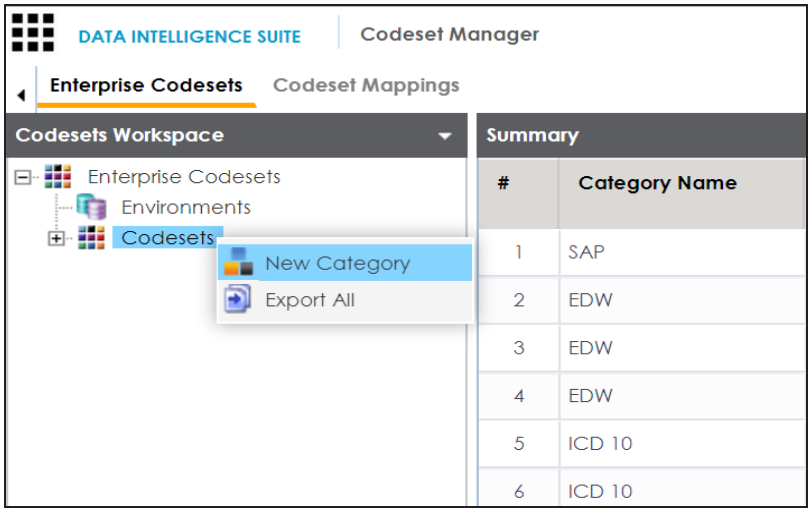
- Creating categories
- Adding codesets
- Versioning codesets
- Deleting codes and codesets
- Publishing codesets

Creating Categories

Codes are stored in a hierarchical manner Categories > Codesets. You can group codesets into categories based on your organization's projects, departments, or functions. Therefore, before creating codesets, you need to create a category. You can also create sub-categories to group codesets further.

To create categories, follow these steps:

1. Go to **Application Menu** > **Data Catalog** > **Codeset Manager**.
2. In the **Codesets Workspace** pane, right-click the **Codesets** node.



3. Click **New Category**.

   The New Category page appears.

4. Enter the **Category Name** and **Category Description**.

   For example:

   - **Category Name** - EDW
   - **Category Description** - This category contains three codesets, Country Codes, Gender, and Marital Status.

5. Click .

   A category is created and saved in the category tree.

Once a category is created, you can:

- Assign users to the category
- Add codesets to the category

You can also manage it using the options available on the right-clicking category. Managing categories involves:

- Updating categories
- Creating sub categories
- Deleting categories
- Creating new codesets
- Exporting codesets
- Deleting codesets
- Exporting category codesets
- Importing codesets
- Assigning users

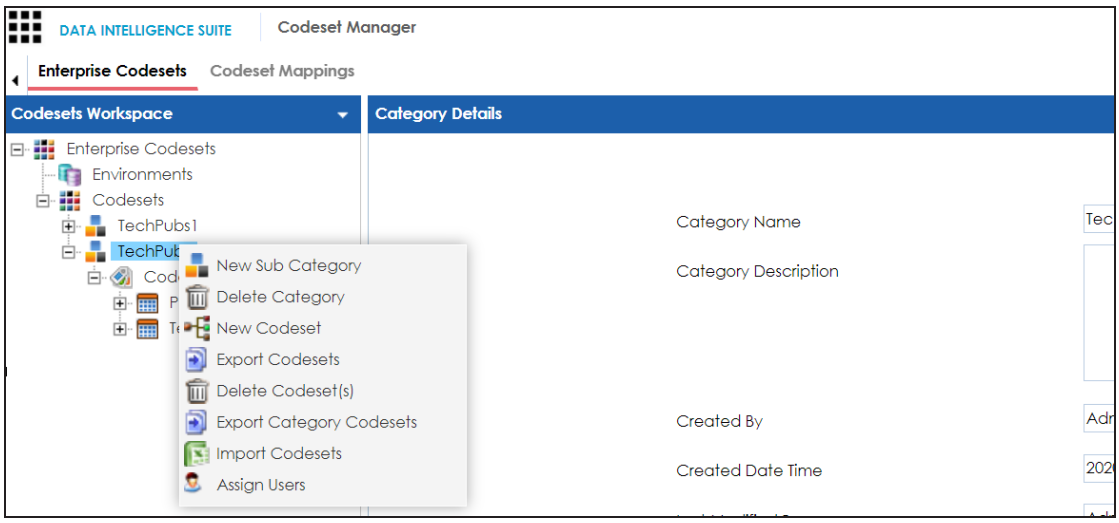
Managing Categories

Managing categories involves:

- Updating categories
- Creating sub categories
- Deleting categories
- Creating new codesets
- Exporting codesets
- Deleting codesets
- Exporting category codesets
- Importing codesets
- Assigning users

To manage categories, follow these steps:

1. In the **Codesets Workspace** pane, right-click a category.



2. Use the following options:

New Sub Category

Use this option to create a sub-category and group codesets further.

Delete Category

Use this option to delete a category that is no longer required. Deleting a category also deletes codesets in it.

New Codesets

Use this option to create new codesets. For more information on creating new codesets, refer to the Adding Codesets topic.

Export Codesets

Use this option to export codesets to an XLSX file.

Delete Codeset(s)

Use this option to delete one or multiple codesets in a category. On the Delete Codesets page select a codeset(s) and delete them.

Export Category Codesets

Use this option to export the category codesets to an XLSX file.

Import Codesets

Use this option to import codesets from another category. On the Import Codesets page you can browse and upload files.

Assign Users

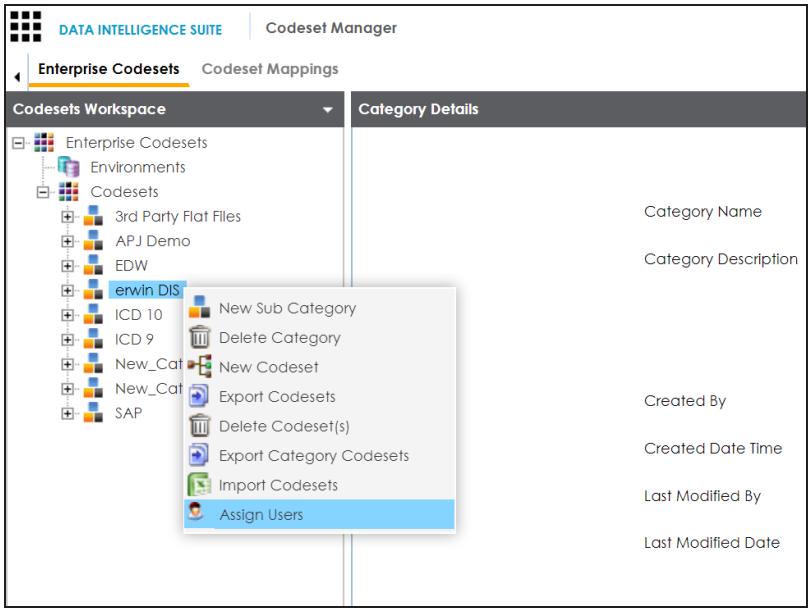
Use this option to assign users to a category based on your organization's projects, departments, functions, and so on. On the Assign/Unassign Users page, select or remove users and click . For more information on assigning users, refer to Assigning Users topic.

Assigning Users

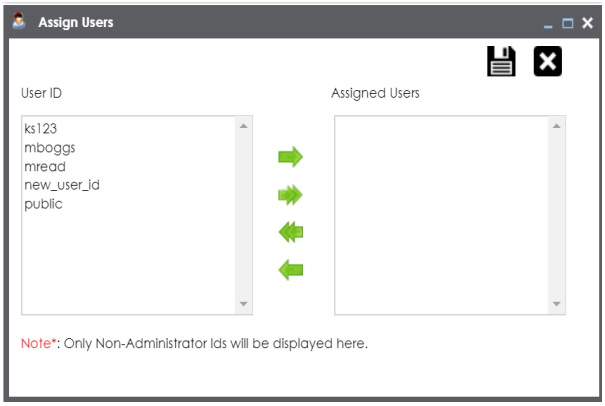
You can assign users to a category and enable write access to all sub-folders and codesets within the category.

To assign users, follow these steps:

1. In the **Codesets Workspace** pane, right-click a category.



2. Click **Assign Users**.



3. Use (or) to move users from **User ID** box to **Assigned Users** box and use (or) to move users from **Assigned Users** box to **User ID** box.
4. Click .

   The users are assigned to the category.

   Follow the same procedure to add/remove users to/from the category.

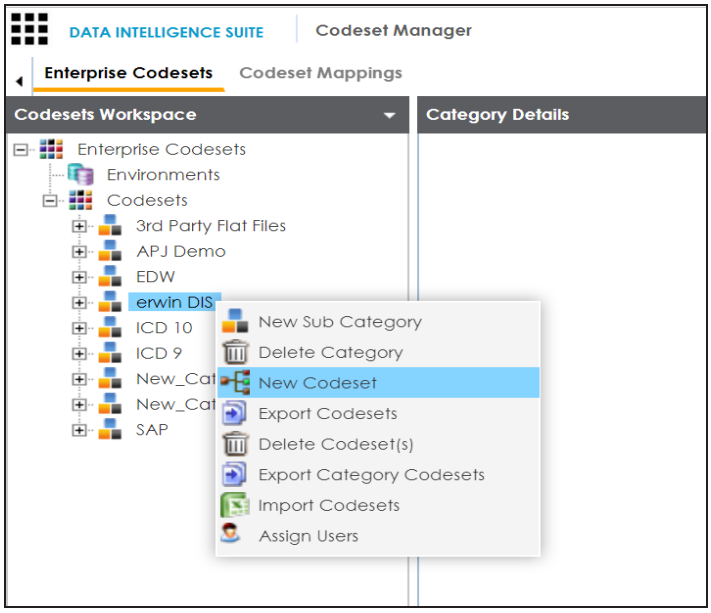
Adding Codesets

After creating a category, you can add codesets to enter codes.

Codesets store codes in a code value grid.

To add new codesets, follow these steps:

1. Go to **Application Menu** > **Data Catalog** > **Codeset Manager**.
2. In the **Codesets Workspace** pane, right-click a category.



3. Click **New Codeset**.

   The New Codeset page appears.

4. Enter **Codeset Name** and **Codeset Description**.

   For example:

   - **Codeset Name**: Country Codes
   - **Codeset Description**: This codeset has code names and code values for four countries.

5. Click .

   A new codeset is created and saved under the Codesets tree.

Once a codeset is created you can add codes to the code value grid in the following ways:

- Entering codes manually
- Importing codesets from a MS Excel file
- Importing codesets through a DB scan

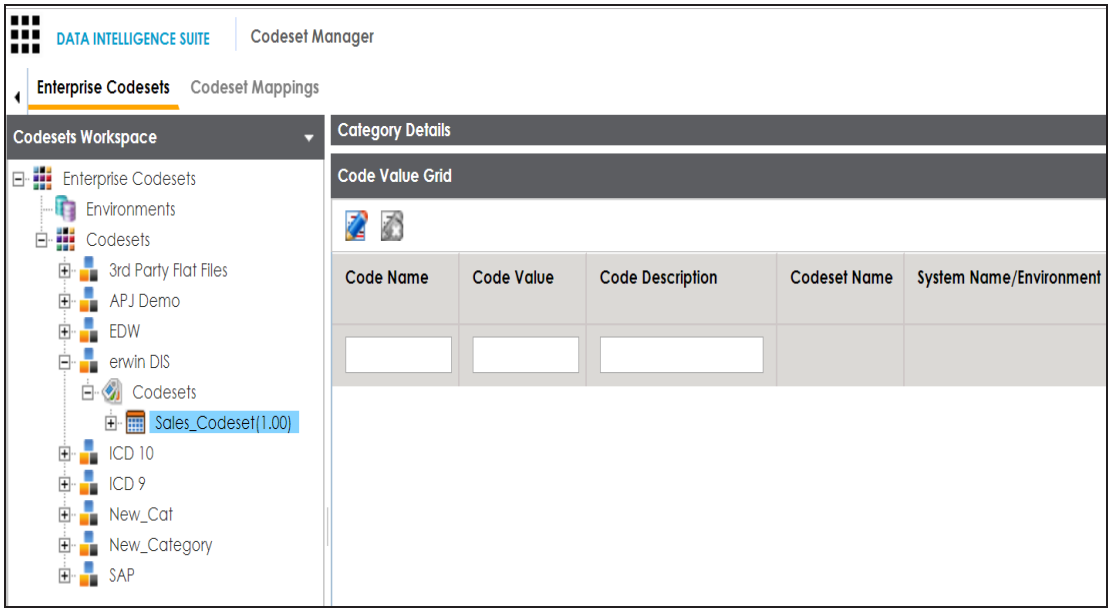
Entering Codes Manually

After creating codesets, you can add codes manually in the code value grid.

To enter codes manually, follow these steps:

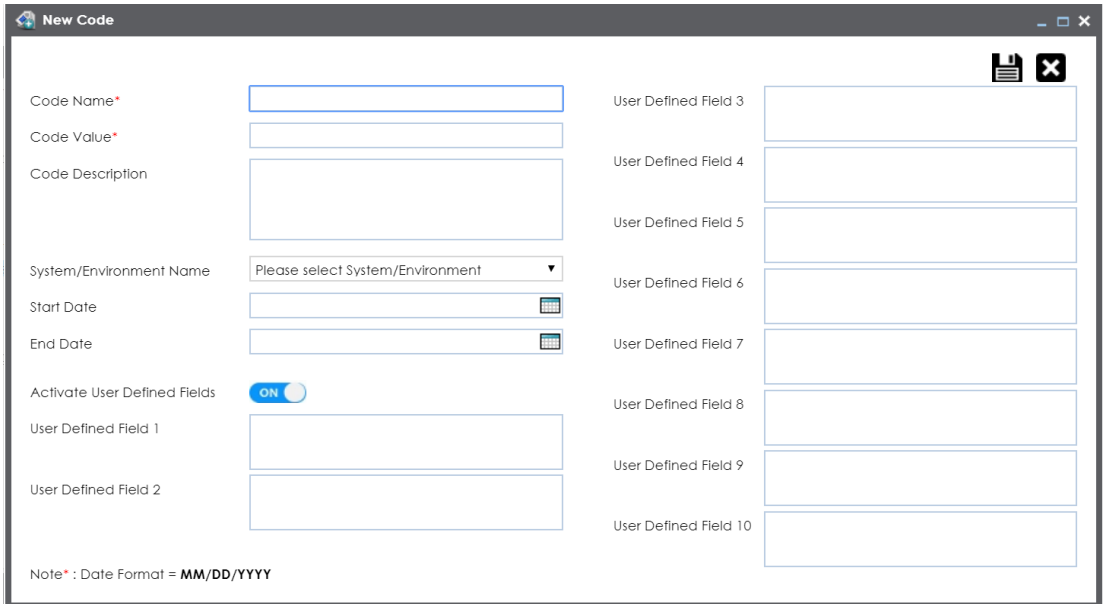
1. Go to **Application Menu** > **Data Catalog** > **Codeset Manager**.
2. In the **Codesets Workspace** pane, click a required.

   The Code Value Grid appears.



3. Click .
4. Click .

   The New Code page appears.



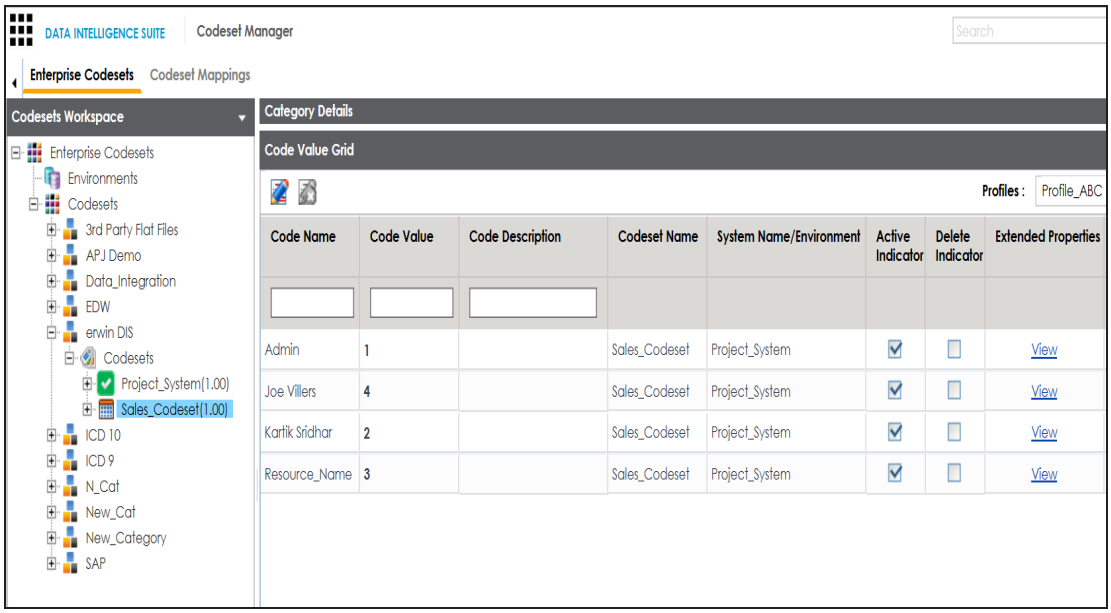
5. Enter appropriate values in the fields. Fields marked a with red asterisk are mandatory. Refer to the following table for field descriptions.

Field Name	Description
Code Name	Specifies the code name. For example, Admin.
Code Value	Specifies the code value of the code name. For example, 1.
Code Description	Specifies the description about the code. For example: The code value for Admin is 1.
System/ Environment Name	Specifies the system and environment related with the code. For example, EDW.EDW-DEV. Select the System/Environment name.
Start Date	Specifies the start date of the code validity. For example, 02/24/2020. Enter the start date using .
End Date	Specifies the end date of the code validity. For example, 03/22/2021.

Field Name	Description
	Enter the end date using .
Activate User Defined Fields	Turn **Activate User Defined Fields** to **ON** to use the user defined fields in the Code Value Grid.
User Defined Field 1-10	You can use your own UI labels for user defined fields. For more information on using UI labels for user defined fields, refer to the Configuring Language Settings topic.

6. Click .

   The codes are entered into the Code Value Grid.



7. Use the following options:

   Maximize

   To maximise the Code Value Grid view, click .

   Export to Excel

   To download the codeset, click .

Managing codesets involves:

- Editing Codesets
- Copying Codesets
- Editing Code Value Grid
- Retiring Codesets

Importing Codes using MS Excel Files

You can import codes into Code Value Grid using .xlsx files. The .xlsx file template must be compatible with the Code Value Grid. To ensure the compatibility, download the template and enter the codes and upload it to the Code Value Grid.

To import codes using MS Excel Files, follow these steps:

1. In the **Codesets Workspace** pane, click a codeset.

   The Code Value Grid appears.

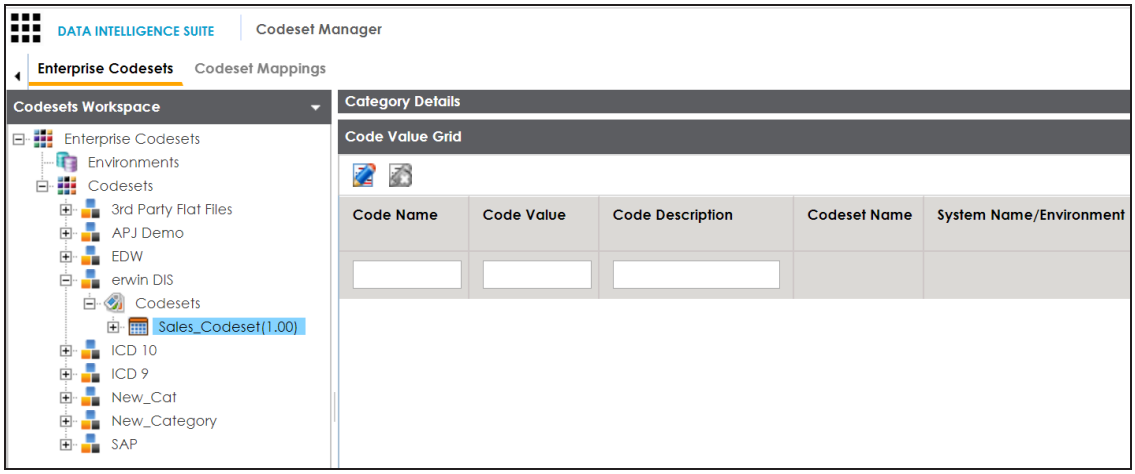
2. Click to download the template file.

   The template in .xlsx format is downloaded.

3. Enter relevant data in the template.

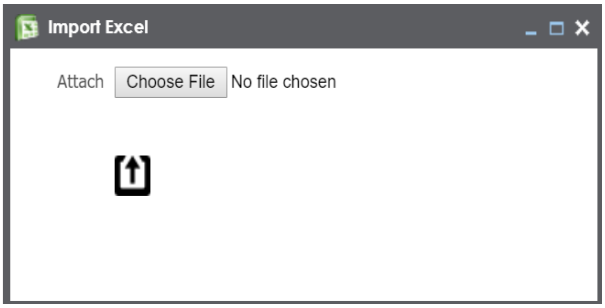
   > Set the ACTIVE_FLAG column values to Y, and set the DELETE_FLAG column values to N.

   You can use your own UI labels for user defined fields. For more information on using UI labels for user defined fields, refer to the Configuring Language Settings topic.



4. Click to enable the edit mode.
5. Click .

   The Import Excel page appears.



6. Browse the updated .xlsx file using **Choose File**.
7. Click .

   The codes are uploaded into the Code Value Grid.

Once you upload the codes in the Code Value Grid, you can manage the codesets.

Managing codesets involves:

- Editing Codesets
- Copying Codesets
- Editing Code Value Grid
- Retiring Codesets

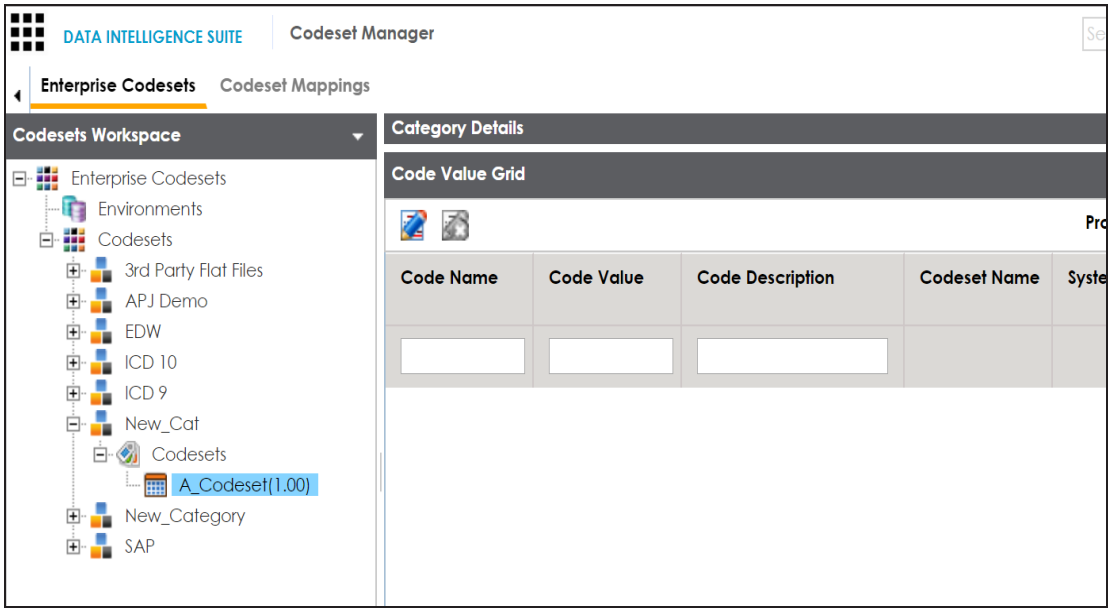
Importing Codes into Code Value Grid using DB Scan

You can import codes into Code Value Grid by scanning a database. Enter connection parameters and establish a connection between the database and erwin DI Suite. Once the connection is established, write an SQL query to preview the required data. You can select the required columns and import them as codes into the Code Value Grid.

To import codes using DB scan, follow these steps:

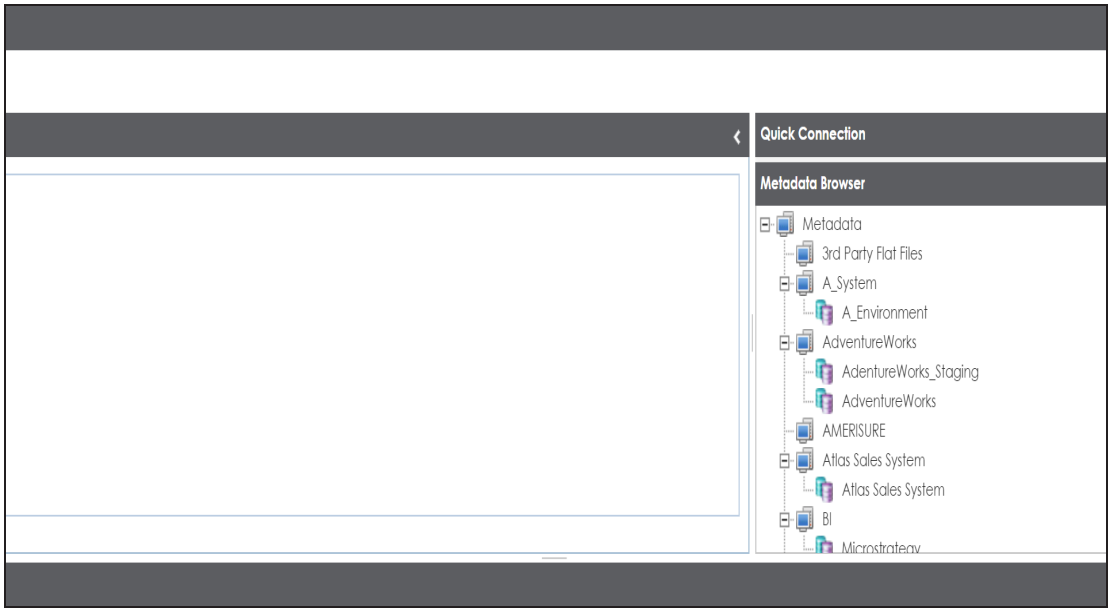
1. In the **Codesets Workspace** pane, click the required codeset.

   The Code Value Grid page appears.

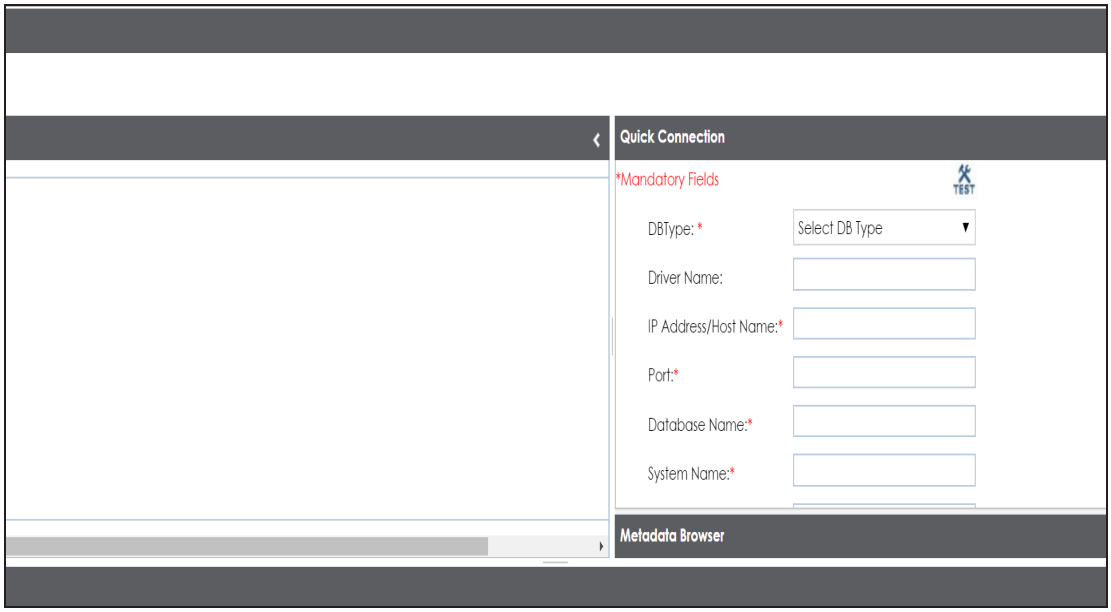


2. Click , to enable edit mode.
3. Click .

   The Following page appears.



4. Expand the **Quick Connection** pane.



5. Enter appropriate values in the fields (connecting parameters). Fields marked with a red asterisk are mandatory. Refer to the following table for field description.

Field Name	Description
DBType	Specifies the database type. For example, Sql Server. Select the database type from which you wish to scan codes.
Driver Name	Specifies the JDBC driver name for connecting to the database. For example, com.microsoft.sqlserver.jdbc.SQLServerDriver It is autopopulated depending on the DB type. You can also update the driver name.
IP Address/Host Name	Specifies the IP address or server host name of the database. For example, localhost.
Port	Specifies the port to connect with the database. For example: 1433 is the default port for a Sql Server database type.
Database Name	Specifies the database name being used to connect to the code-set. For example, ErwinDIS931.
System Name	Specifies the name of the system related with the codeset. For example, EDW. The name of the system should be same as provided in Metadata Manager.
System Envir-onment Name	Specifies the name of the environment related with the codeset. For example, EDW-DEV. The name of the environment should be same as provided in Metadata Manager.
User Name	Specifies the user name to connect with database. For example, sa.
Password	Specifies the password to connect with database. For example, goerwin@1.
URL	Specifies the full JDBC URL that is used to establish a connection with the database.

Field Name	Description
	For example, **jdbc:sqlserver://SERVER_ NAME:PORT#;data-baseName=DatabaseName** It is autopopulated based on the other parameters.

6. Click to test the connection.

   On a successful connection, Connection Successful pop-up appears.

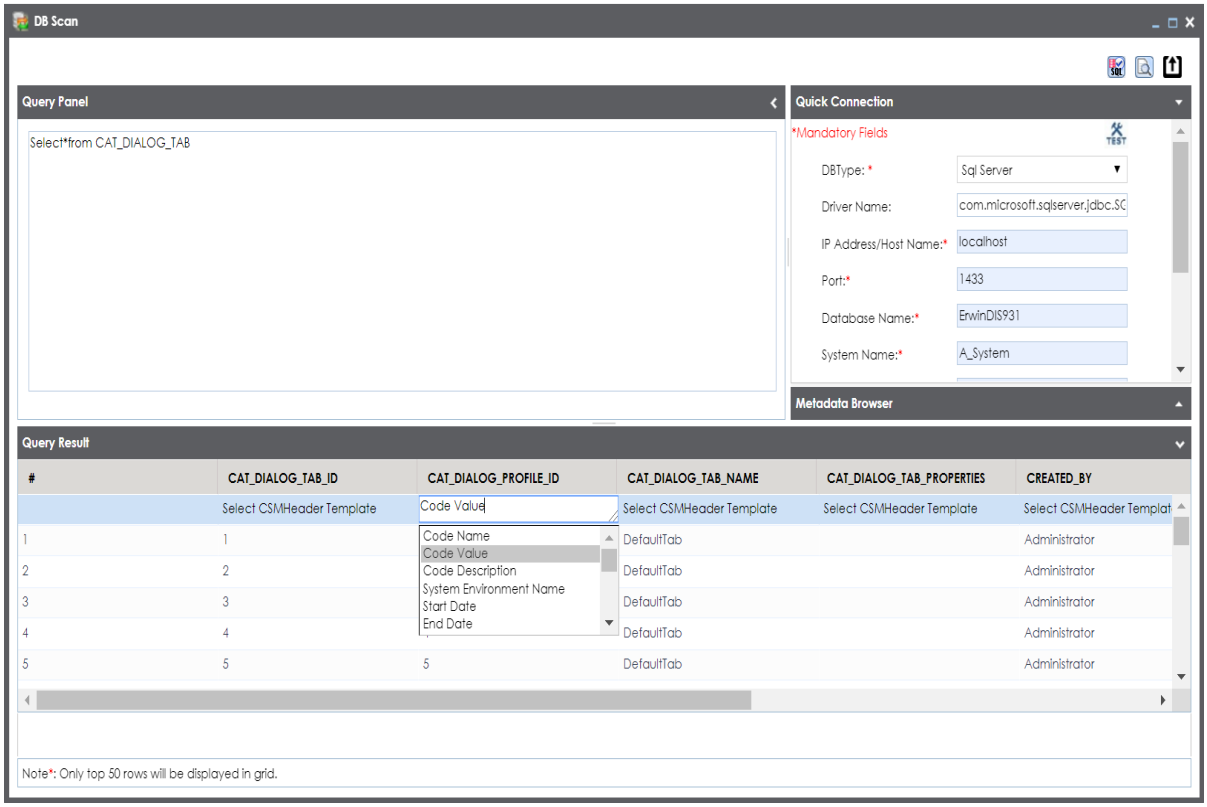
7. Write an SQL query in the **Query Panel** to fetch the required data from the database.

8. Click to validate the query.

9. Click to preview the data.

10. Double-click the **Select CSMHeader Template** cell of the required column.

    The columns of the Code Value Grid appears as an option list.



11. Select the required Code Value Grid column.

    You can select multiple columns from the database.

12. Click to import the selected columns into the **Code Value Grid**.

    The selected columns are imported in the **Code Value Grid**.

Once you import the codes in the Code Value Grid, you can manage codesets.

Managing codesets involves:

- Editing Codesets
- Copying Codesets
- Editing Code Value Grid
- Retiring Codesets

Managing Codesets

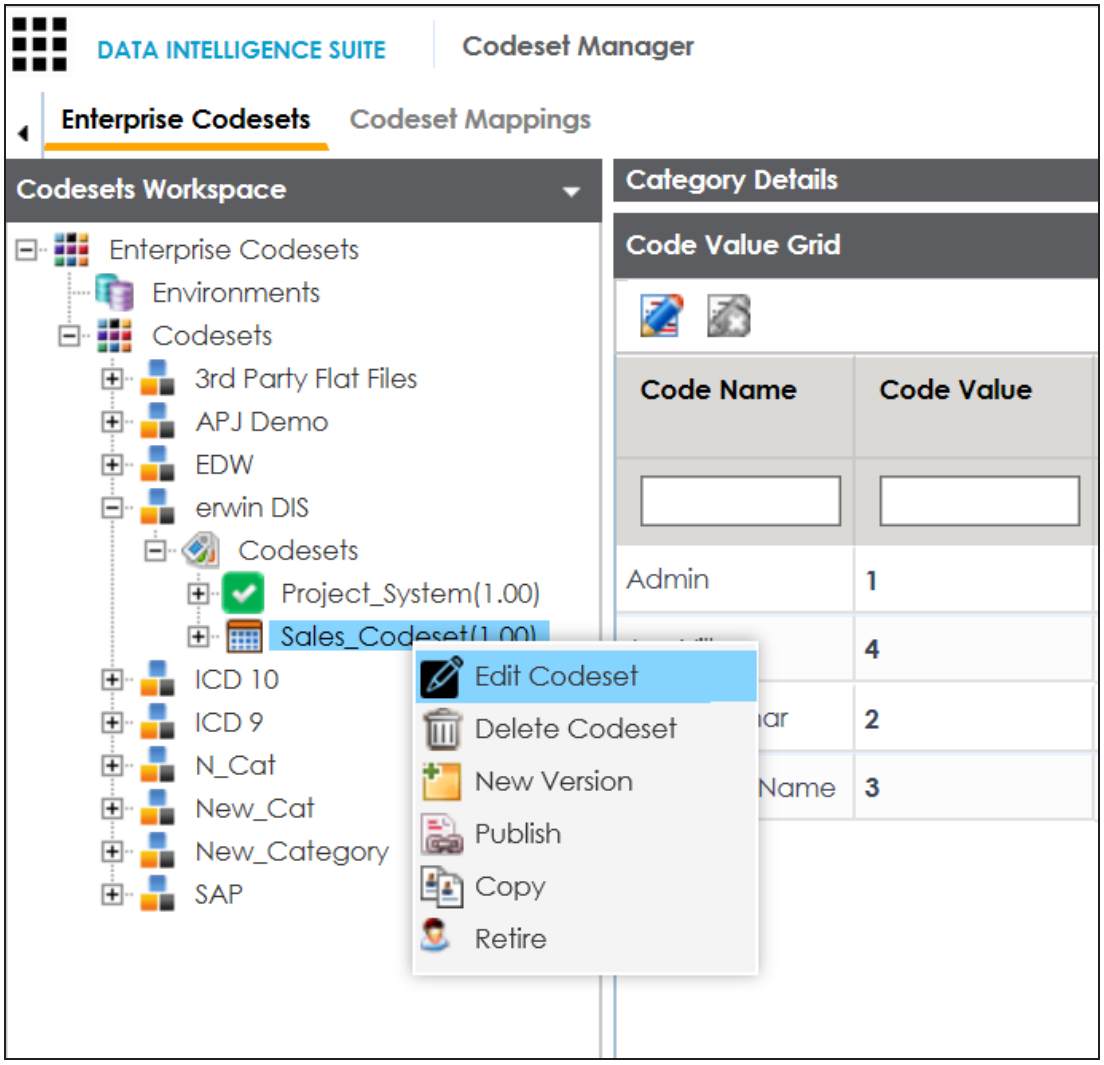
Managing Codesets involves the following:

- Editing codesets
- Deleting codesets
- Creating new codeset version
- Publishing codesets
- Copying codesets
- Retiring codesets

You can manage the codesets and update its details.

To manage codesets, follow these steps:

1. In the **Codesets Workspace** pane, expand a category.
2. Expand the **Codesets** node, and right-click a codeset.



3. Use the following options:

Edit Codeset

Use this option to update codeset's details.

Delete Codeset

Use this option to delete a codeset.

New Version

Use this option to create a new codeset version. For more information on creating new codeset version, refer to Versioning Codesets topic.

Publish

Use this option to publish the codesets. For more information on publishing codesets, refer to Publishing Codesets topic.

Copy

Use this option to copy the selecte codeset and paste it in different category.

Retire

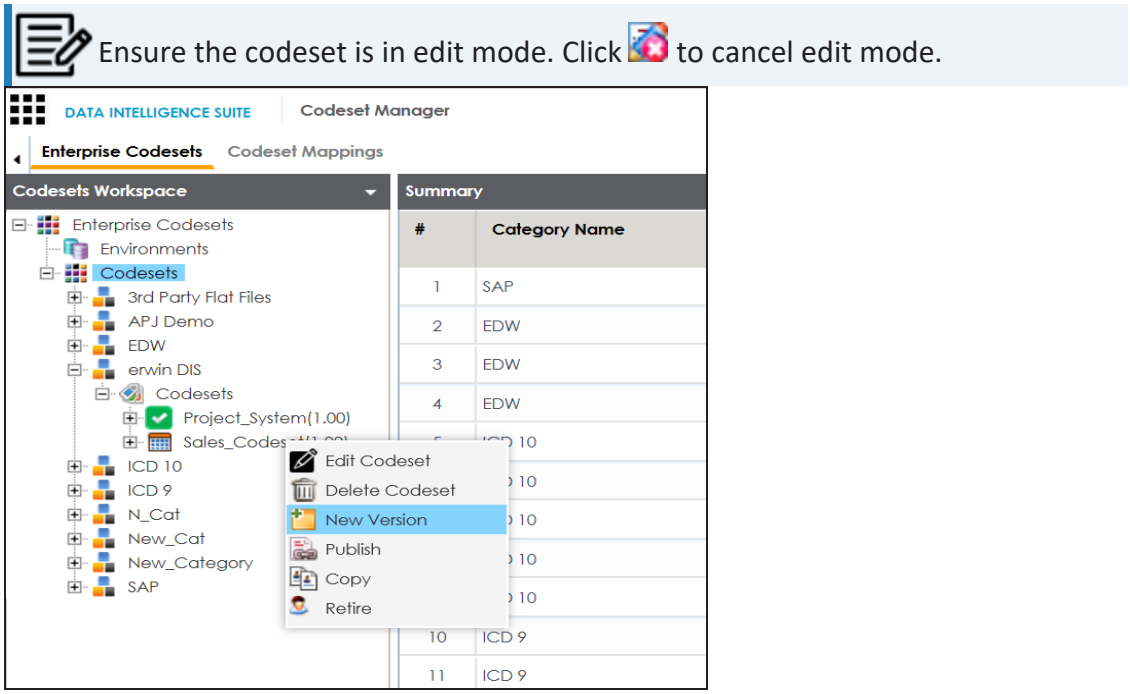
Use this option to retire a codeset and it is moved to Retired Codesets pane. After you retire a codeset, you cannot retrieve that codeset.

Versioning Codesets

You can version codesets and maintain the legacy of codesets with a record of changed description.

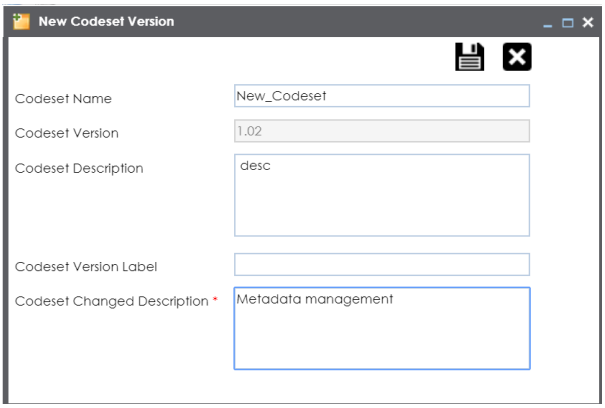
To create new versions of codesets, follow these steps:

1. Go to **Application Menu** > **Data Catalog** > **Codeset Manager**.
2. In the **Codesets Workspace** pane, right-click a codeset.



3. Click **New Version**.

   The New Codeset Version page appears.



4. Enter appropriate values in the fields. Fields marked with a red asterisk are mandatory. Refer to the following table for field description.

Field Name	Description
Codeset Name	Specifies the name of the codeset whose version is being created. For example, Country Codes. It is autopopulated with the codeset name and cannot be edited.
Codeset Version	Specifies the new version of the codeset. For example, 1.03.
Codeset Description	Specifies the description about the codeset. For example: This codeset has code names and code values for four countries. It is autopopulated with the codeset description and cannot be edited.
Codeset Version Label	Specifies the version label of the codeset. For example, Beta.
Codeset Changed Description	Specifies the description about the changes in the codeset. For example: Code Value for CANADA was changed to CAN.

5. Click .

   The new version is created and the older version is archived.

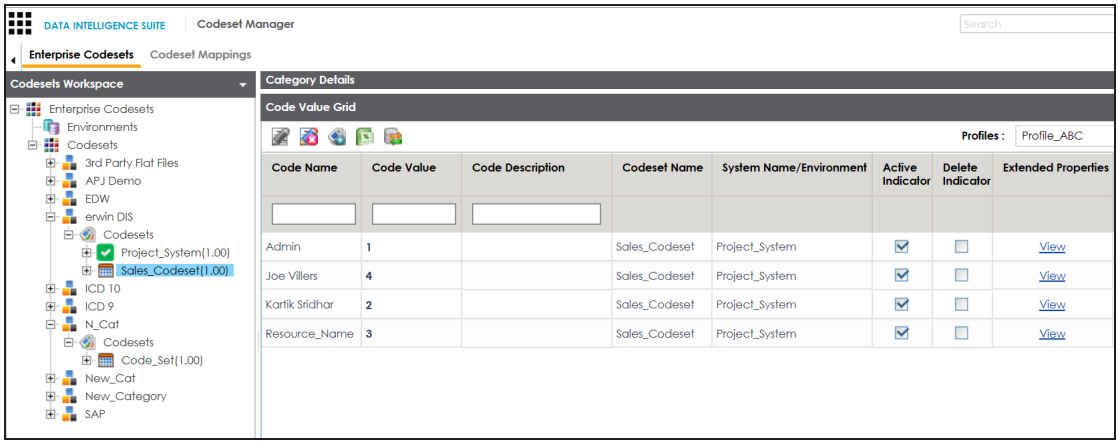
Deleting Codes and Codesets

You can logically delete and restore the codes, and also permanently delete the codesets.

To delete codesets, follow these steps:

1. Go to **Application Menu** > **Data Catalog** > **Codeset Manager**.
2. In the **Codesets Workspace** pane, expand a category.
3. Expand a **Codesets** node and click a codeset.

   The Code Value Grid appears



4. Select **Delete Indicator** check box for relevant Codeset Name from the Codeset Value Grid.

   A warning message appears.

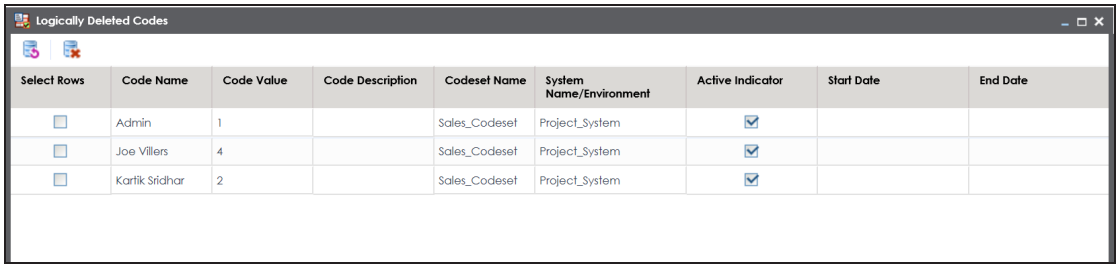
5. Click **Yes**.

   The code is logically deleted and can be restored or purged.

To restore or purge logically deleted codes, follow these steps:

1. Click .

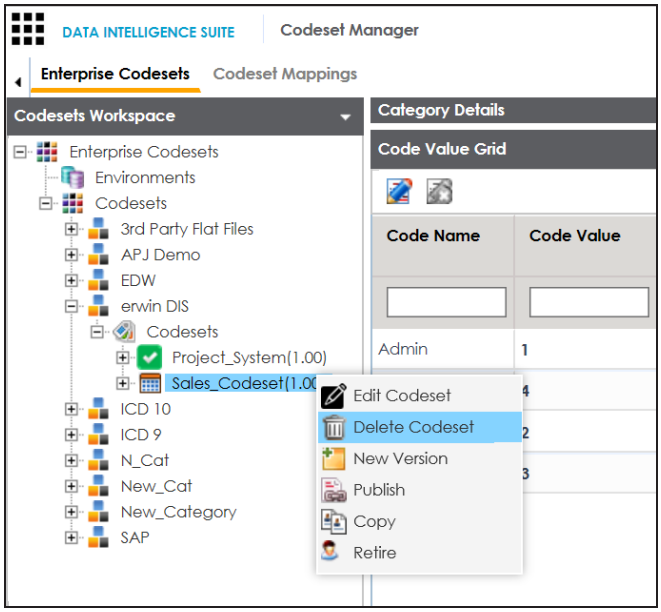
   The Logically Deleted Codes page appears.



2. Select required rows.
3. Click , to delete the selected rows.
4. Click , to restore the selected rows.

To permanently delete codesets, follow these steps:

1. Right-click a codeset.



> To delete a codeset, ensure the codeset is in edit mode. Click to cancel edit mode.

2. Click **Delete Codesets**.

   A warning message appears.

3. Click **Yes**.

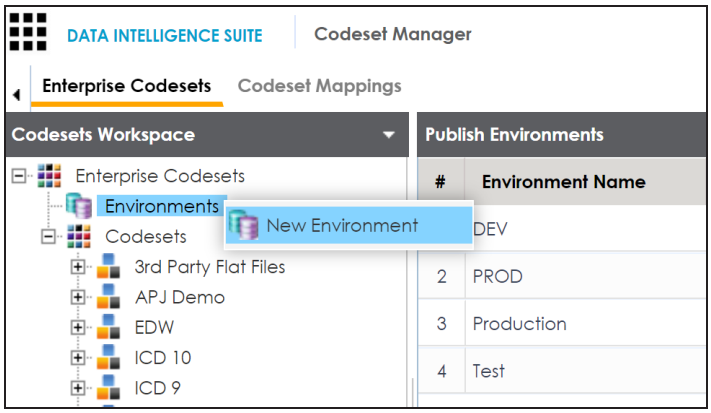
   The codeset is deleted.

Publishing Codesets

You can publish your codesets to an environment. To publish the codesets, ensure that you have created and setup an environment.

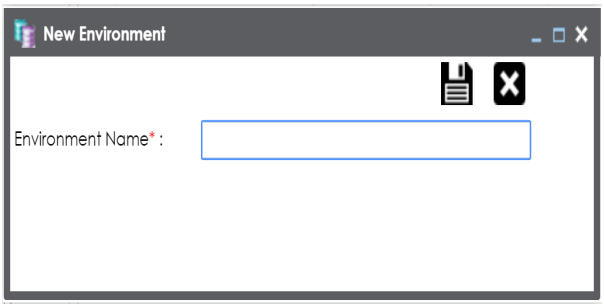
To create publish environments, follow these steps:

1. Go to **Application Menu** > **Data Catalog** > **Codeset Manager**.
2. In the **Codesets Workspace** pane, right-click the **Environments** node.



3. Click **New Environment**.

   The New Environment page appears.



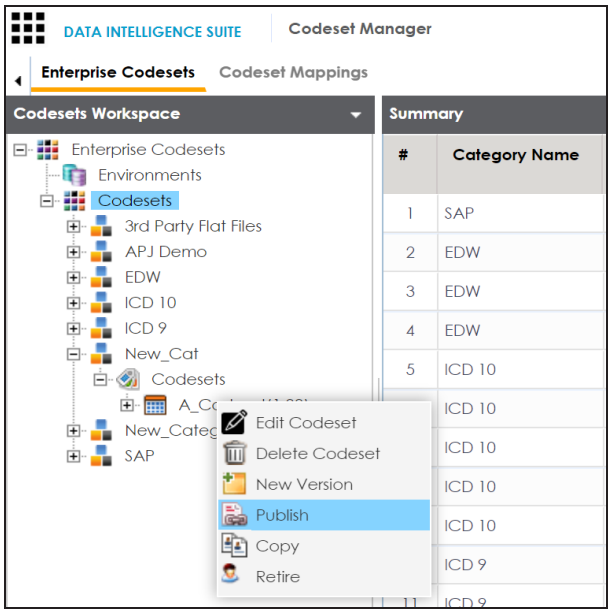
4. Enter **Environment Name**.

5. Click .

   A new publish environment is created and saved in the Publish Environments pane.

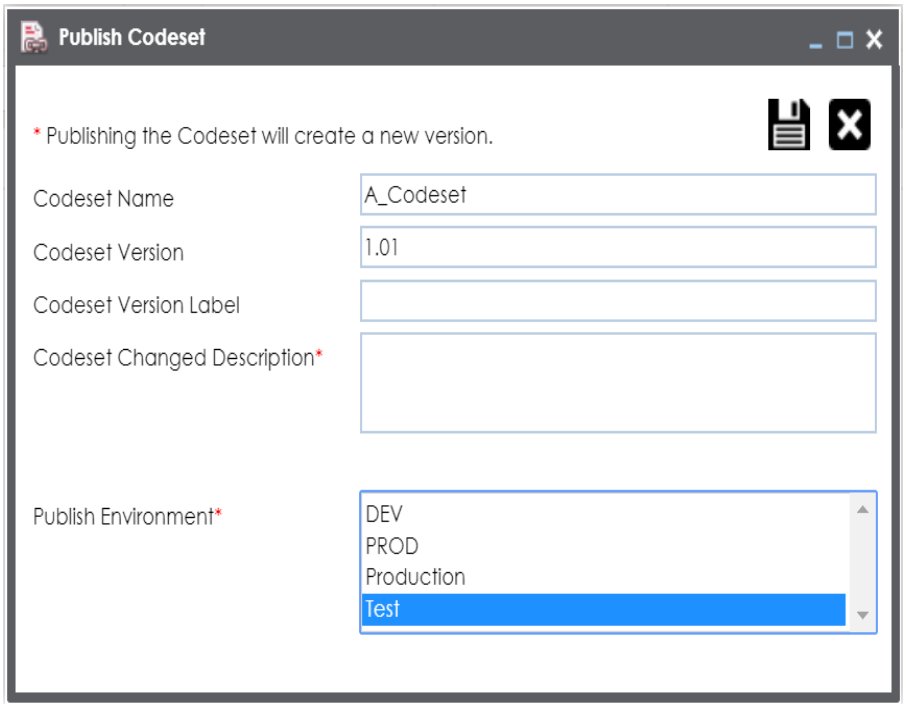
To publish codesets, follow these steps:

1. Go to **Application Menu** > **Data Catalog** > **Codeset Manager**>.
2. In the **Codesets Workspace** pane, right-click a codeset.



3. Click **Publish**.

   The Publish Codesets page appears.



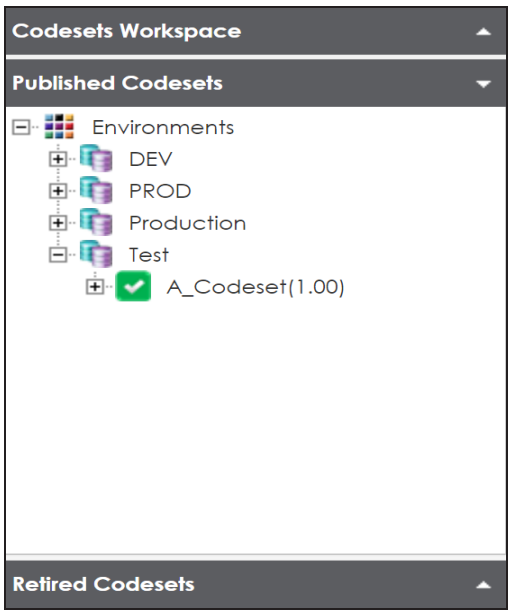
4. Enter appropriate values in the fields. Fields marked with a red asterisk are mandatory. Refer to the following table for field description.

Field Name	Description
Codeset Name	Specifies the name of the codeset which is being published. For example, Country Codes. It autopopulates with the codeset name and cannot be edited.
Codeset Version	Specifies the new version of the codeset. For example, 1.03. It autopopulates with the new version and cannot be edited.
Codeset Version Label	Specifies the version label of the codeset. For example, Beta.
Codeset Changed Description	Specifies the description about the changes in the codeset. For example: Code Value for CANADA was changed to CAN.
Publish Environment	Specifies the publish environment to which the codeset is

Field Name	Description
	being published. For example, Production.

5. Click .

   The codeset is published successfully and the published codesets move under Published Codesets pane.



Once the source and target codesets are published, you can create code mappings.

> You can create code mappings without publishing source or target codesets, but it is recommended that you create code mappings after publishing the codesets.

Maintaining Code Mappings

The Codeset Mappings section in Codeset Manager allows you to define and categorize code mappings. The process is standardized with ability to version and publish code mappings to various environments. Further, these published code mappings can be associated with data item mappings in the Mapping Manager.

Maintaining Code Mapping involves:

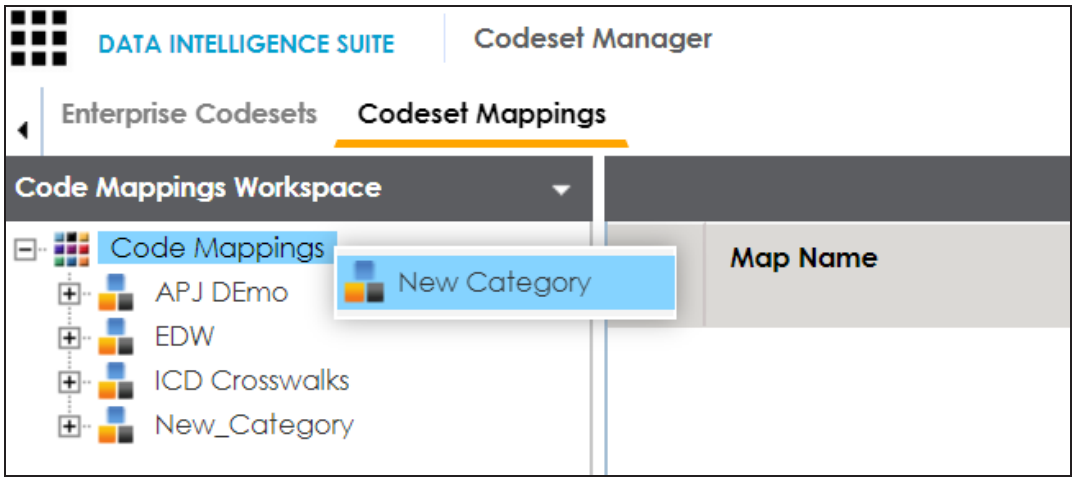
- Creating Categories
- Creating code maps
- Versioning codemaps
- Publishing and association codemaps

Creating Categories

Code maps are stored in a hierarchical manner Categories > Mappings. You can also create sub-categories under a category to provide one more level of categorization to mappings.

To create a category, follow these steps:

1. Go to **Application Menu** > **Data Catalog** > **Codeset Manager** > **Codeset Mappings**.
2. In the **Code Mappings Workspace** pane, right-click the **Code Mappings** node.



3. Click **New Category**.

   The New Category page appears.

4. Enter **Category Name** and **Category Description**.

   For example:

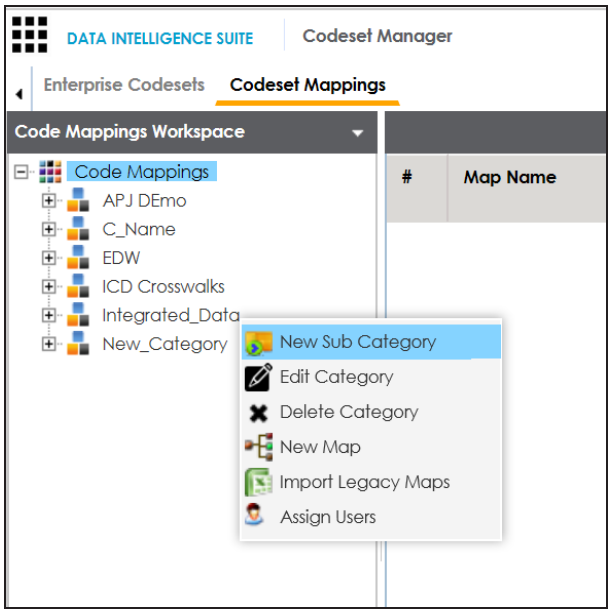
   - **Category Name**: EDW
   - **Category Description**: This category contains two code mappings, Gender Cross-walk and Marital Status Crosswalk.

5. Click .

   A new category is created and saved under the category tree.

To create sub-categories under a category, follow these steps:

1. Under the **Code Mappings Workspace** pane, right-click the required category.



2. Click **New Sub Category**.

   The New Category page appears.

3. Enter **Category Name** and **Category Description**.

   For example:

   - **Category Name**: EDW-Finance
   - **Category Description**: This sub-category contains two code mappings, Gender Crosswalk and Marital Status Crosswalk.

4. Click .

   A new sub-category is created and saved under the sub-category tree.

Once a category is created, you can:

- Creating code crosswalks for mappings
- Verisoning code maps
- Associating code maps with data item mappings

You can also manage it using the options available on the right-clicking category. Managing categories involves:

- Updating categories
- Deleting categories
- Importing legacy maps
- Assigning users

Managing Categories

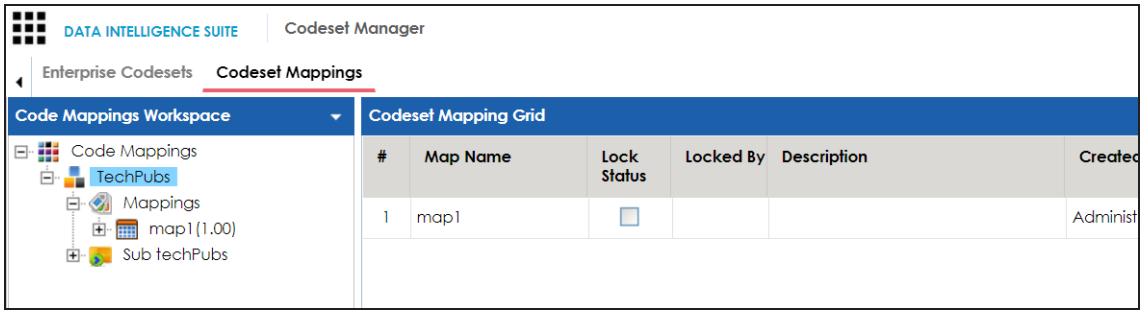
Managing categories involves:

- Updating categories
- Deleting categories
- Importing legacy maps
- Assigning users

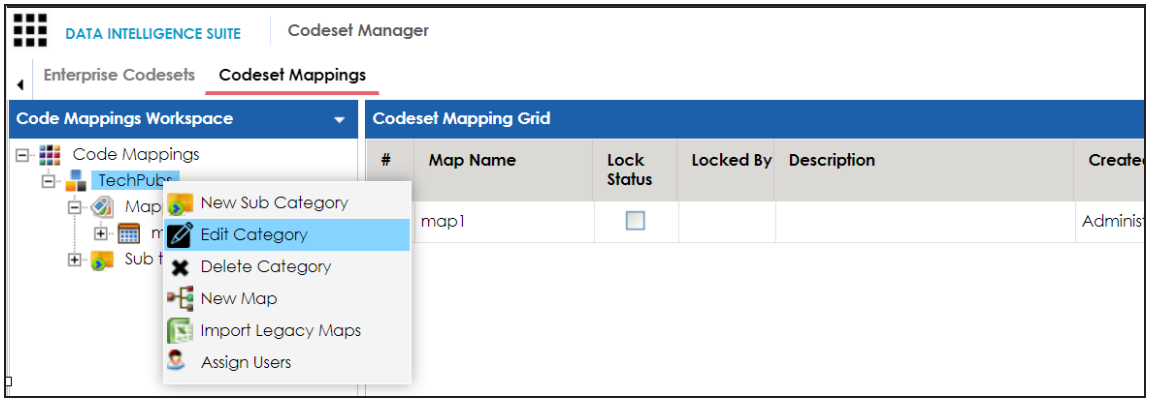
To manage categories, follow these steps:

1. In the **Codesets Mappings** pane, click a category.

   The Category Mapping Grid appears.



2. Right-click a category.



3. Use the following options:

   Edit Category

   Use this option to update the category's details.

   Delete Category

   Use this option to delete a category. Deleting a category also deletes the maps in it.

   Import Legacy Maps

   Use this option to import old maps to the catalog.

   Assign Users

   Use this option to assign users to a category based on your organization's projects, departments, functions, and so on.

Creating Code Crosswalks (Mappings)

You can create code crosswalks (mappings) for the source and target codesets in the Codeset Manager. These codesets can have the same or different code values. Using the Auto-Map functionality, you can map source and target codesets with:

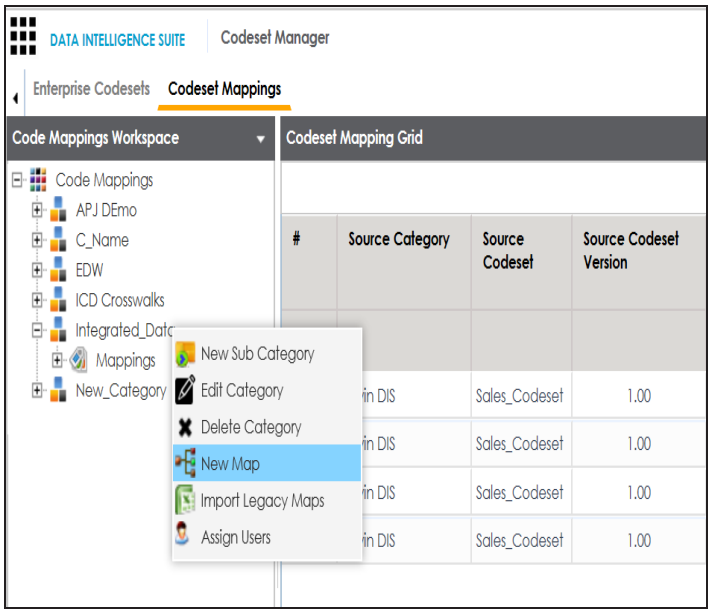
- Same code values
- Different code values

Creating Code Crosswalks - Source and Target Codesets with Same Code Value

You can use Auto-Map functionality to map source and target codesets having same code values.

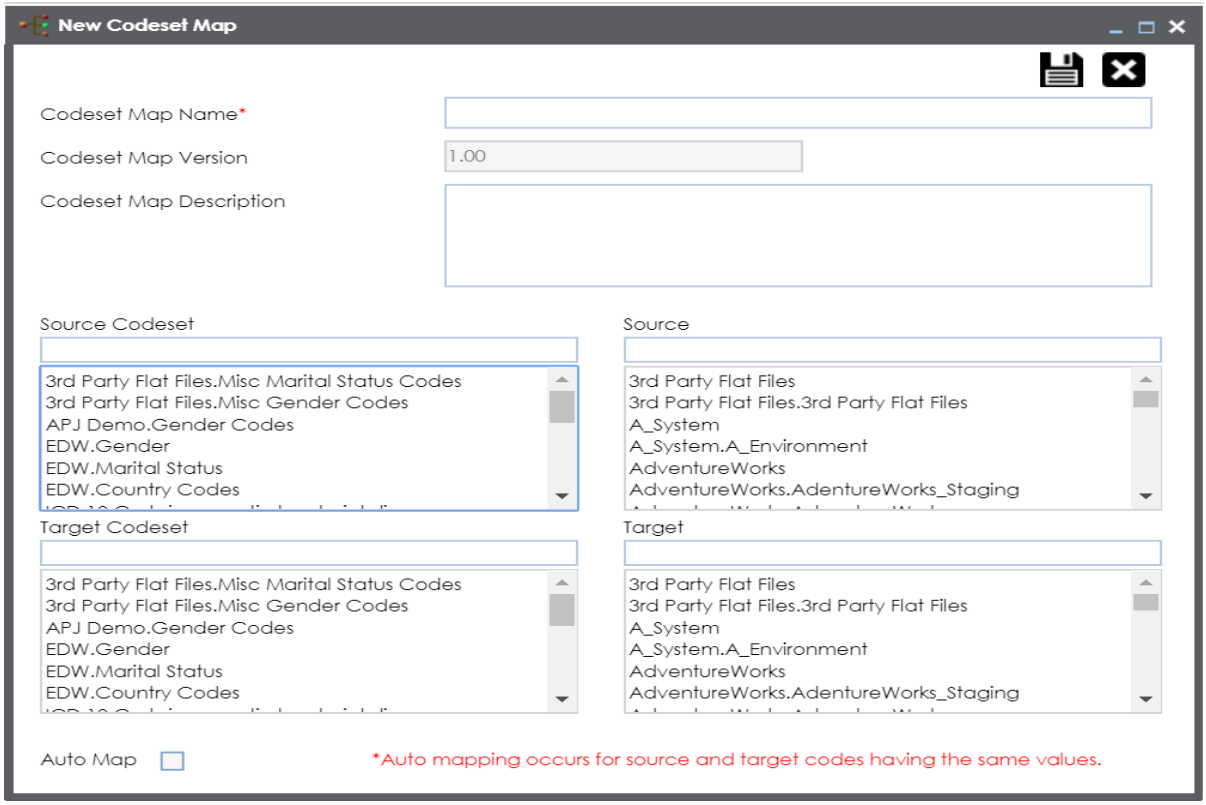
To create code mappings when source and target codesets have same code values, follow these steps:

1. Right-click the required category.



2. Click **New Map**.

   The New Codeset Map page appears.



3. Enter the **Codeset Map Name** and **Codeset Map Description**.

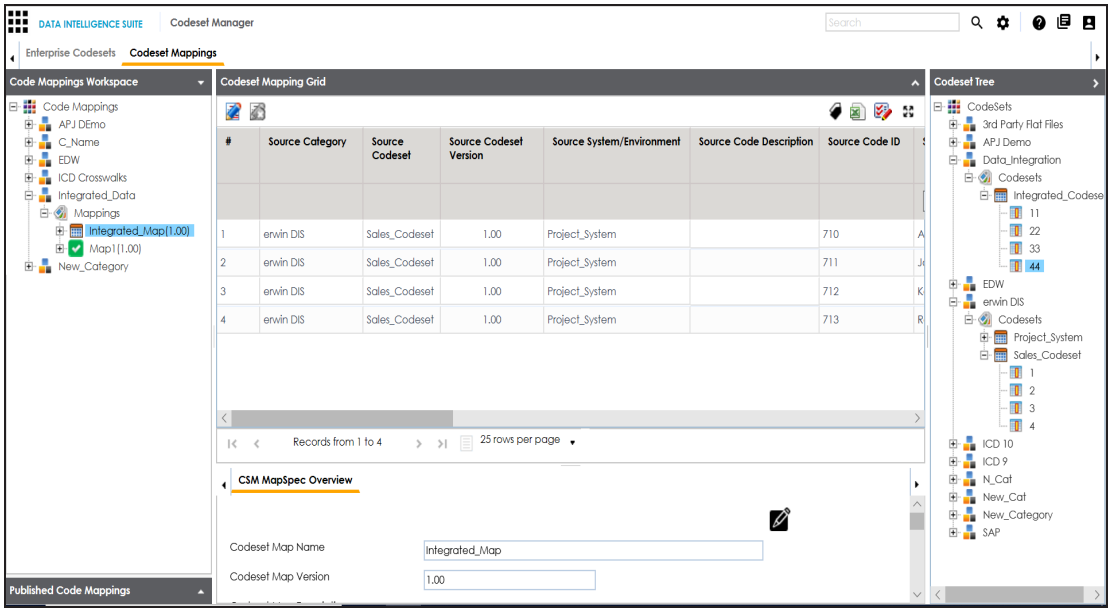
   For example:

   - **Codeset Map Name**: Gender Crosswalk
   - **Codeset Map Description**: The codeset map is the code mappings between the two codesets, Misc Gender Codes and Gender.

4. Select the **Source Codeset/System** and **Target Codeset/System**.

5. Select the Auto Map check box and click .

   A new code mapping is created and source and target codesets are mapped in the Codeset Mapping Grid.



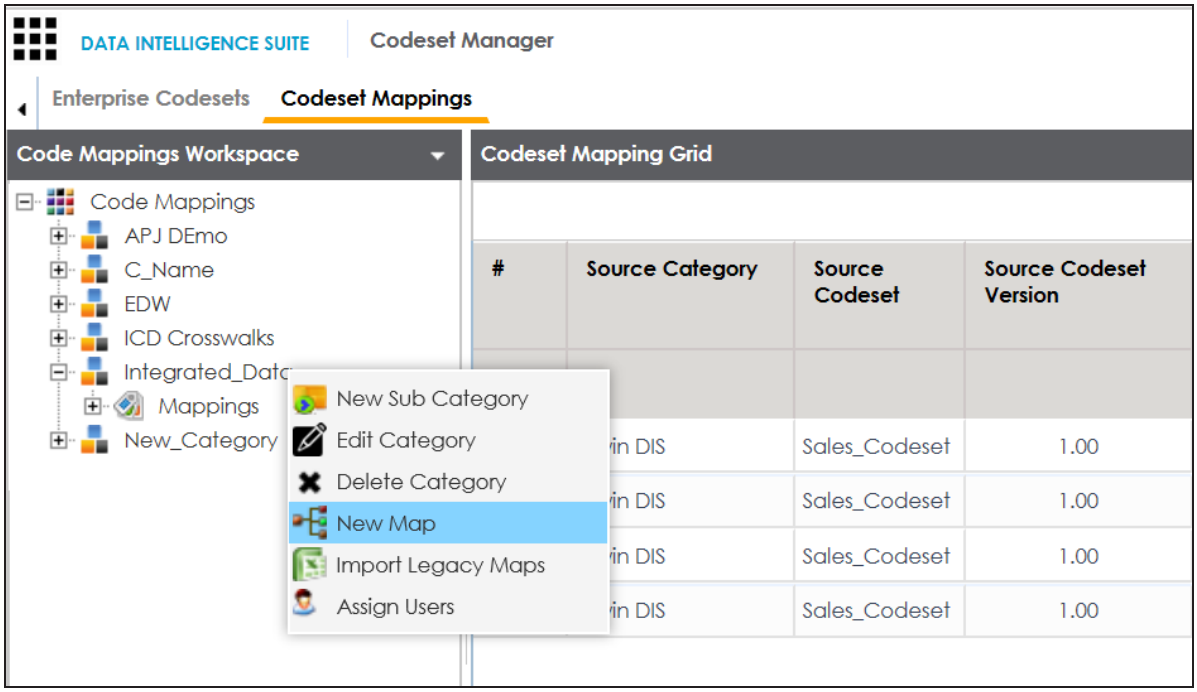
6. Click to validate the code mapping.

Creating Code Crosswalks - Source and Target Codesets with Different Code Value

Codesets having different code values can be mapped using the drag and drop method.

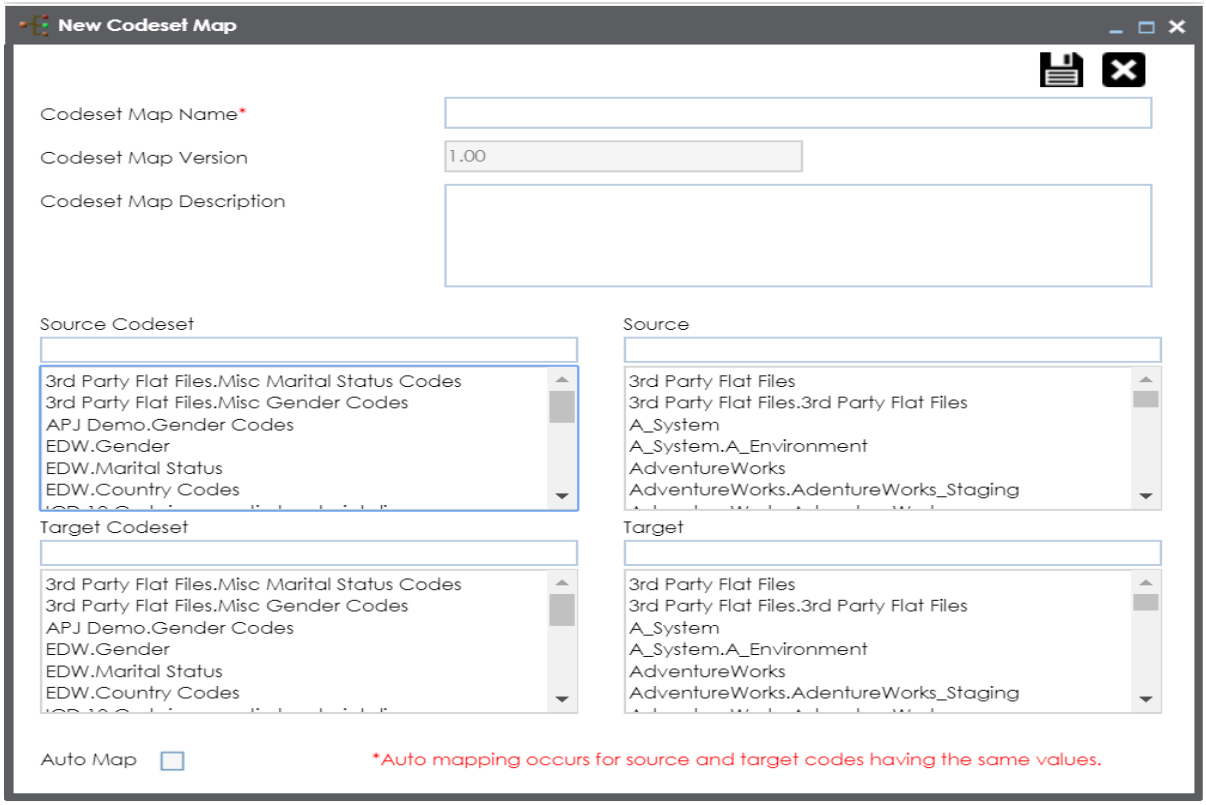
To create code mappings when source codesets and target codesets have different code values, follow these steps:

1. Right-click the category.



2. Click **New Map**.

   The New Codeset Map page appears.



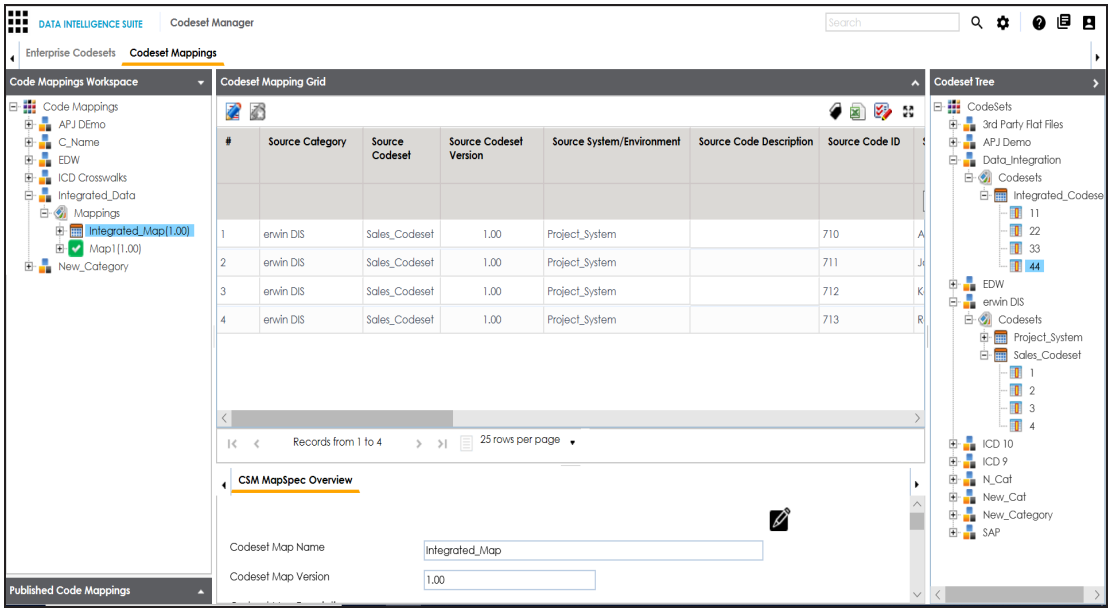
3. Enter the **Codeset Map Name** and **Codeset Map Description**.

   For example:

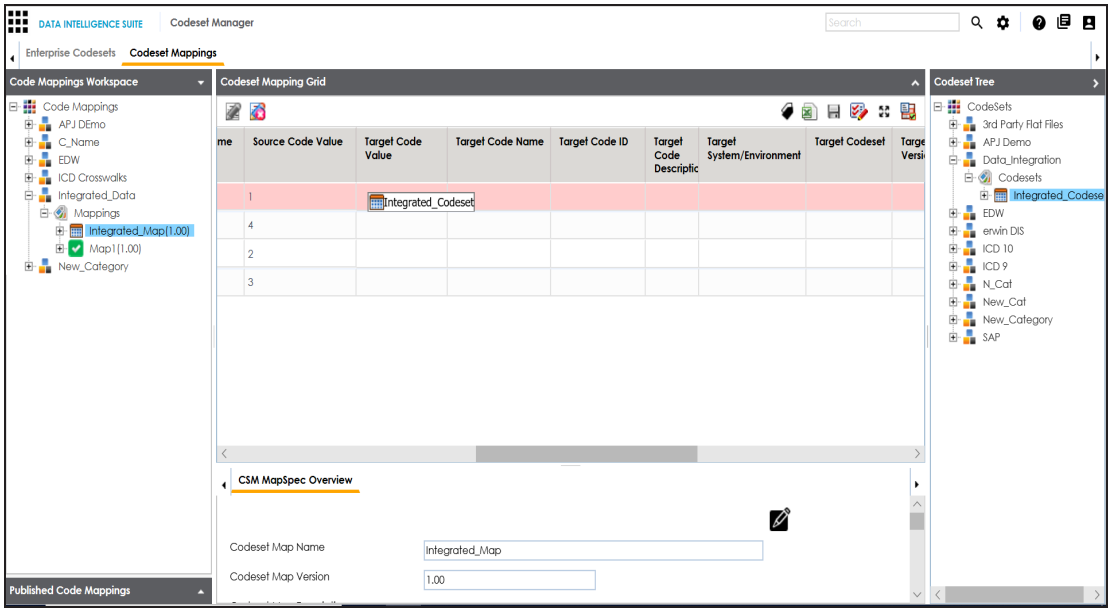
   - **Codeset Map Name**: Gender Crosswalk
   - **Codeset Map Description**: The codeset map is the code mappings between the two codesets, Misc Gender Codes and Gender.

4. Select the Source Codeset/System.
5. Click .

   The source codesets details are updated in the Codeset Mapping Grid.



6. Click .
7. Scroll to right of the Codeset Mapping Grid to see the Target Code Value column.
8. In **Codeset Tree**, expand the target category and the Codesets node.
9. Drag and drop the target codeset into the Code Set Mapping Grid under the Target Code Value column.



10. Click .

    The code mappings are successfully saved.

11. Click to validate the code mapping.

    The code map is validated. Ensure that all the required codes are mapped.

    Use the following options:

    Export

    To download the code map details in .xlsx format, click .

    Extend Mapping Grid

    To extend the Codeset Mapping Grid, click .

Once the code map is created, you can:

- Edit Code Mappings
- Create new version of the code map
- Publish and associate the code map with data item mappings

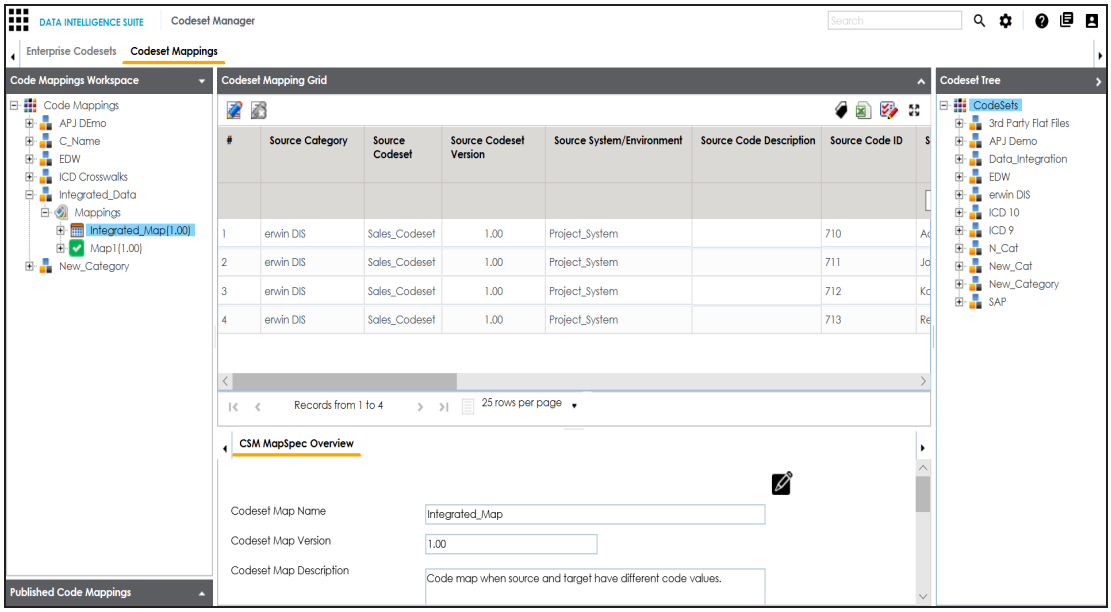
Editing Code Mappings

You can update source codesets and target codesets in the Codeset Mapping Grid.

To update source codesets, follow these steps:

1. Go to **Application Menu** > **Data Catalog** > **Codeset Manager** > **Codeset Mappings**.
2. In the **Code Mappings Workspace** pane, expand a category and click a codemap.

   The Codeset Mapping Grid and CSMMapSpec Overview pane appears.



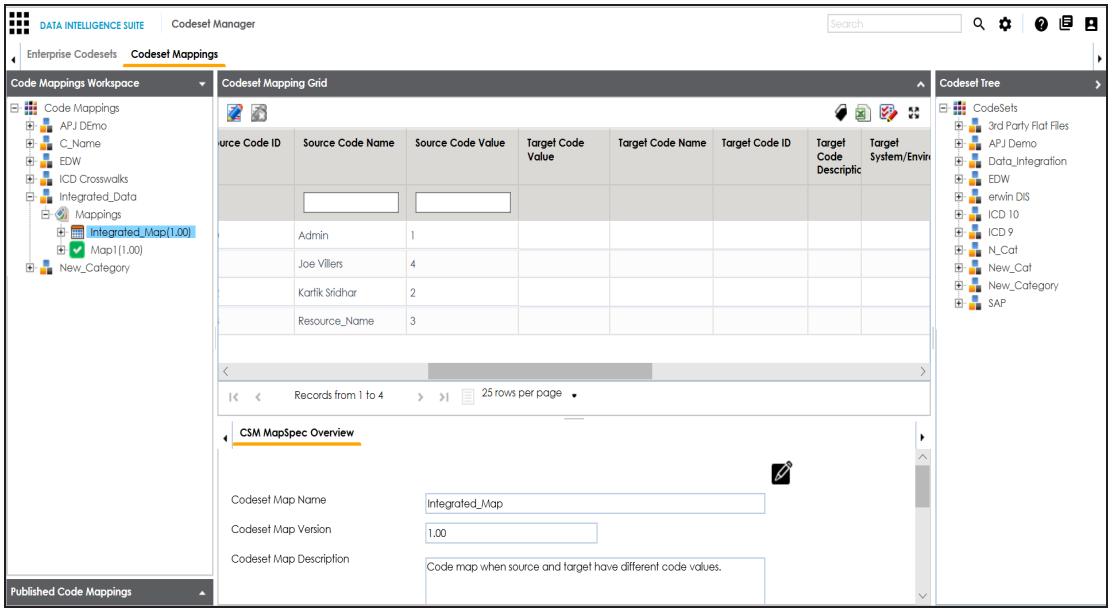
3. In **CSM Mapping Overview** pane, click .

   You can update Codeset Map Name and Codeset Map Description.

   You cannot edit Codeset Map Version.

4. Select a new Source Codeset and Source System/Environment.
5. Select a Target Codeset and Target System/Environment.
6. Click .

The Codeset Mapping Grid is updated with the new source codeset. But, the target codeset doesn't update in the Codeset Mapping Grid. You need to drag and drop target codeset from the Codeset Tree to Codeset Mapping Grid.



To update target codeset in the Codeset Mapping Grid, follow these steps:

1. In the Codeset Mapping Grid, click .

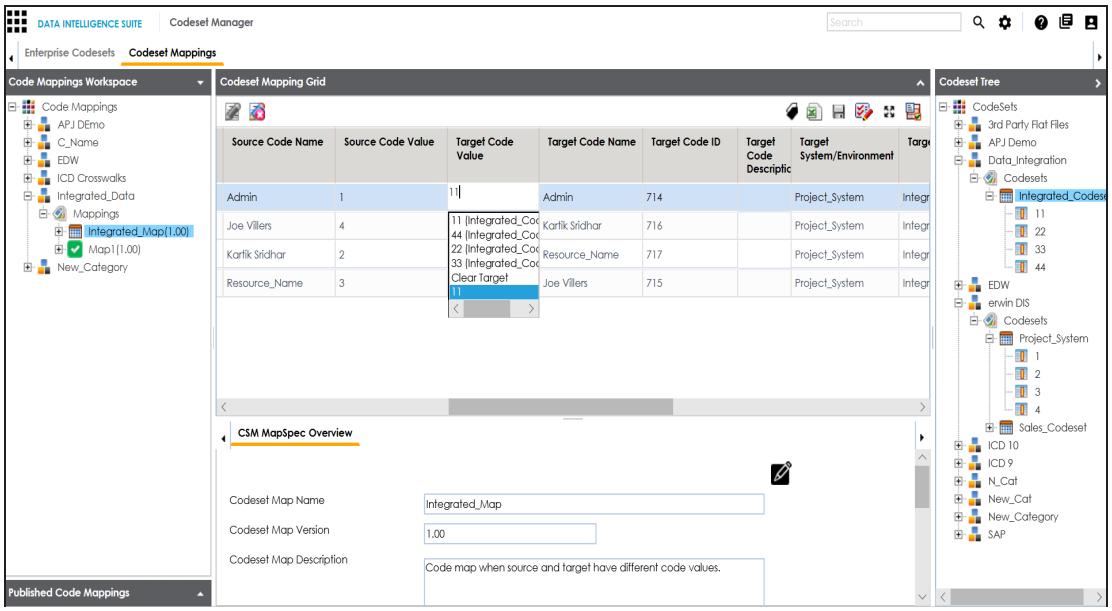
   The Codeset is locked and other users cannot make changes.

2. In the Codeset Tree, expand the target category and the **Codesets** node.
3. Drag and drop the target codeset into the Code Set Mapping Grid under the Target Code Value column.
4. Click .

The target codeset is updated in the Codeset Mapping Grid.

To update target code values in the Codeset Mapping Grid, follow these steps:

1. In the Codeset Mapping Grid, click .
2. Double-click a cell under the Target Code Value column and update it with the one of the options available.



3. Click .

   The target code values are updated.

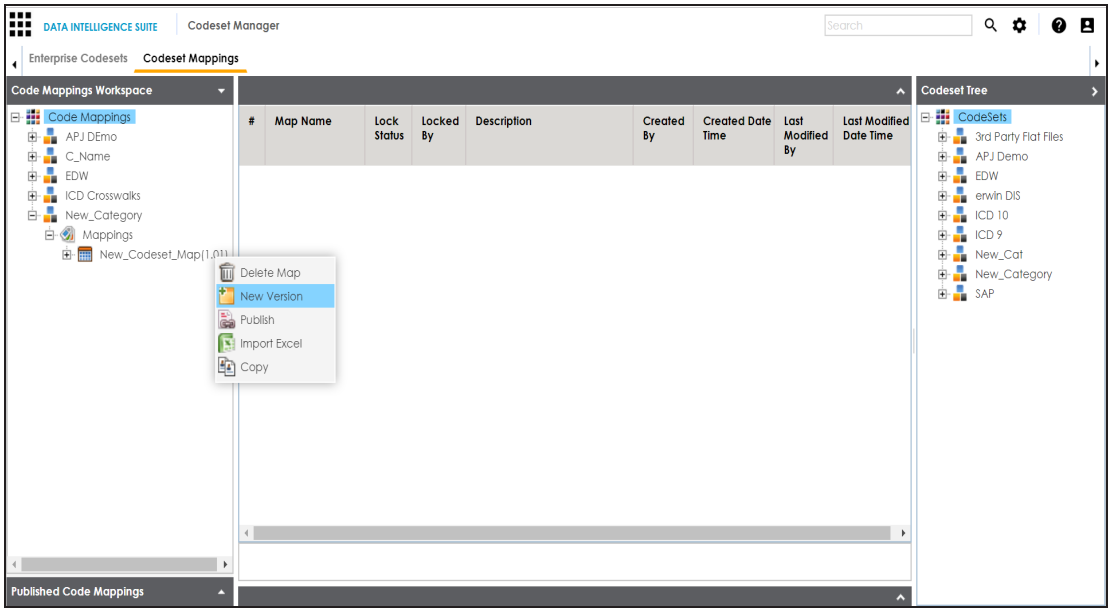
Versioning Code Mappings

You can create versions of code mappings and track legacy of a code map.

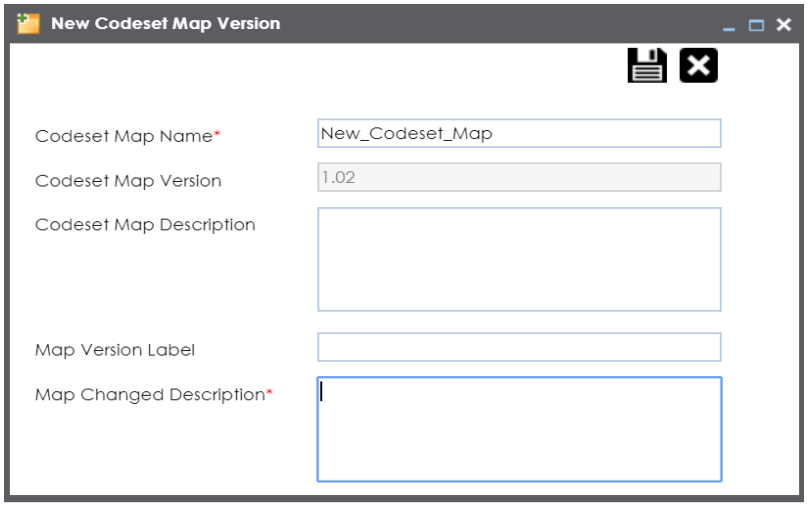
The new version is available in the Code Mappings Workspace under the Mappings tree.

To create new versions of code mappings, follow these steps:

1. Go to **Application Menu** > **Data Catalog** > **Codeset Manager** > **Codeset Mappings**.
2. In the **Code Mappings Workspace** pane, right-click a codeset map.



3. Click **New Version**.
4. The New Codeset Map Version page appears.



5. Enter appropriate values in the fields. Fields marked with a red asterisk are mandatory. Refer to the following table for field descriptions.

Field Name	Description
Codeset Map Name	Specifies the name of the codeset map.

Field Name	Description
	For example, Gender Crosswalk.
Codeset Map Version	Specifies the new version of the codeset map. For example, 1.02.
Codeset Map Description	Specifies the description about the codeset map. For example: The codeset map is the code mappings between the two codesets, Misc Gender Codes and Gender.
Map Version Label	Specifies the version label of the codeset map. For example, Beta.

6. Click .

   The new version is created and saved in the Mappings tree while the older version is archived.

Associating Code Maps with Data Item Mappings

A code map can be associated with a data item mapping to standardize data across the organization. These code maps are maintained in Codesets Manager. For more information on codesets and code mappings, refer to the Using Codesets Manager section.

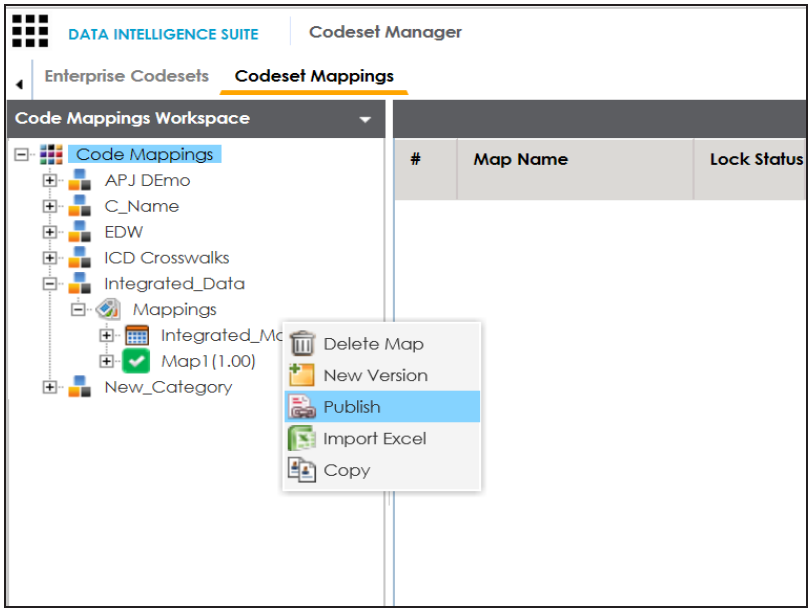
Before associating a code map with data item mappings, ensure that you publish the code map.

Publishing Code Maps

To publish code maps, follow these steps:

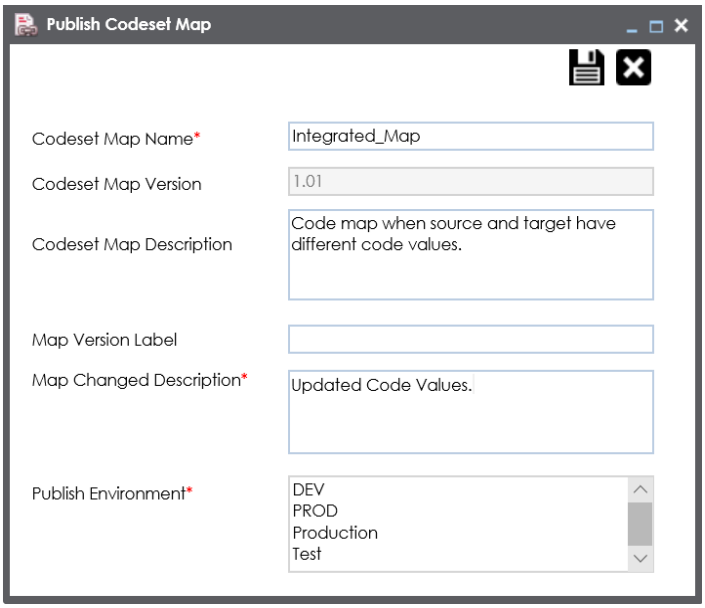
1. Go to **Application Menu** > **Data Catalog** > **Codeset Manager** > **Codeset Mappings**.
2. In the **Code Mappings Workspace** pane, right-click a code map.

   The available options appear.



3. Click **Publish**.

   The Publish Codeset Map page appears.



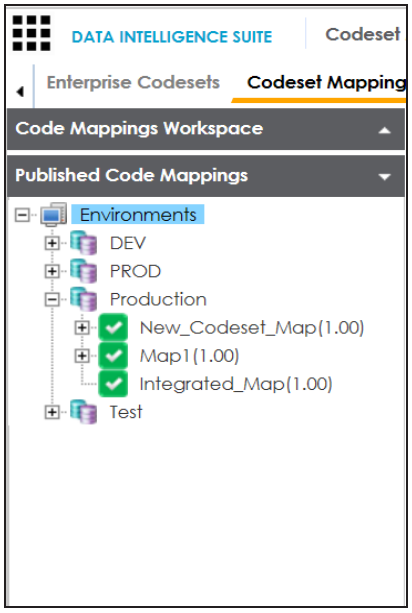
4. Enter appropriate values in the fields. Fields marked with a red asterisk are mandatory. Refer to the following table for field descriptions.

Field Name	Description
Codeset Map Name	Specifies the name of the code map. For example, Gender Crosswalk.
Codeset Map Version	Specifies the new version of the code map. For example, 1.02.
Codeset Map Description	Specifies the description about the code map. For example: The codeset map is the code mappings between the two codesets, Misc Gender Codes and Gender.
Map Version Label	Specifies the version label of the code map. For example, Beta.
Map Changed Description	Specifies the description about the changes made in the code map. For example: Code values were updated.
Publish Environment	Specifies the environment where the code map is being published. For example, test. You can create publish environments in Enterprise Codesets. For more information on creating publish environments, refer to the Publishing Codesets topic.

5. Click .

   The code map is published and it can be found in the Published Code Mappings pane under the selected Publish Environment.

   A new version of the code map is created under the Mappings tree.



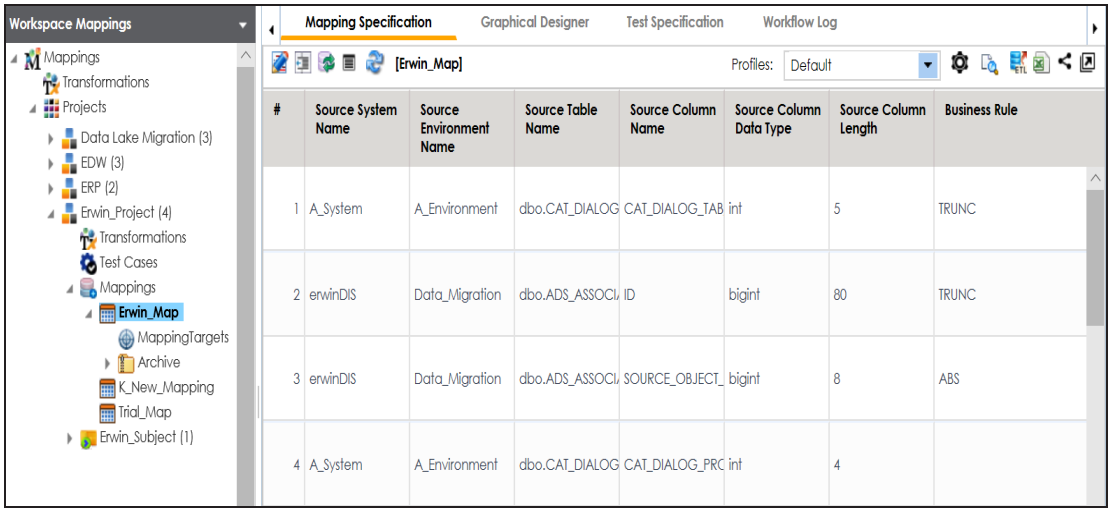
A published code map can be associated with a mapping in the Mapping Manager. The published code map is available under the Code Mappings Catalogue.

Associating Code Maps

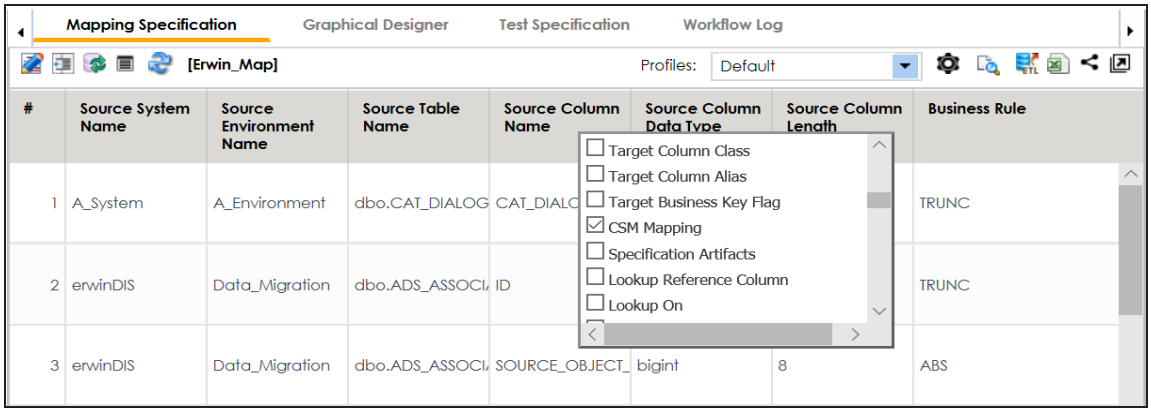
To associate published code maps with data item mappings, follow these steps:

1. Go to **Application Menu** > **Data Catalog** > **Mapping Manager**.
2. In the **Workspace Mappings** pane, click the required map.

   The Mapping Specification grid appears.



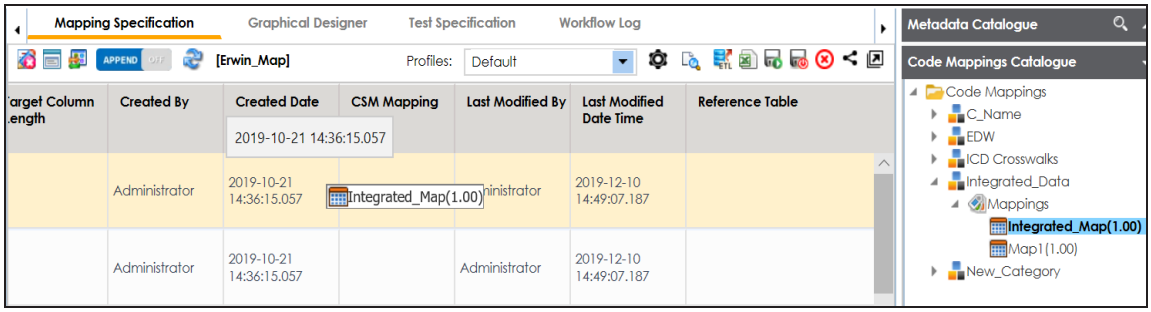
3. Click .
4. In the **Mapping Specification** grid, right-click the header menu.



5. Select the **CSM Mapping** check box.

   The CSM Mapping Column appears in the Mapping Specification grid.

6. In the right pane, expand **Code Mapping Catalogue**.
7. Drag the code map into the **Mapping Specification** grid and drop it under the **CSM Mapping** column for the required row.



8. Click .

   The code map is associated with the data item mappings.