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</tr>
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<tr>
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<td>334</td>
</tr>
<tr>
<td>Access Rights</td>
<td>337</td>
</tr>
</tbody>
</table>
Managing Metadata

This section walks you through the metadata management. Metadata management is done via Metadata Manager. It involves scanning metadata from a data source and storing it in a central repository.

You can preview the data, profile it, generate pattern summary report and provide data quality score.

After performing source to target mappings in the Mapping Manager, you can run Forward or Reverse lineages and perform impact analysis in the Metadata Manager.

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

To access the Metadata Manager, go to Application Menu > Data Catalog > Metadata Manager.

Based on your configuration, either the Dashboard tab or the Explore tab opens. To configure the landing tab, click on the top-right corner to set either of the following tabs as default:

- Dashboard
- Explore

Dashboard

The Dashboard tab displays a snapshot of the underlying data in the Metadata Manager. This includes information about technical assets, their sensitivity, associations, and usage in mappings. For more information about the Dashboard tab, refer to the Viewing Metadata Manager Dashboard topic.
Using Metadata Manager

**Explore**

The Explore tab is the primary work area. It displays the scanned or imported metadata in a hierarchy and lets you manage metadata. On the Explore tab, you can scan metadata from data sources, associate technical assets with other assets, view mind maps, analyze data lineage, and so on.

![Metadata Manager Dashboard](image)

<table>
<thead>
<tr>
<th>UI Section</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Data Catalog</td>
<td>Use this pane to browse through your metadata that is stored in a hierarchical manner, System &gt; Environment &gt; Table &gt; Column.</td>
</tr>
<tr>
<td>2-Right Pane</td>
<td>Use this pane to view or work on the data based on your selection in the Data Catalog.</td>
</tr>
<tr>
<td>3-Metadata Manager Dashboard</td>
<td>Use this pane to view consolidated reports on system overview, system usage in mappings, system summary, data quality, and sensitive data indicators.</td>
</tr>
</tbody>
</table>

On the Explore tab, expand a system node and then, select an environment to view stats about environment on the Statistics section. This section displays environment's Total Primary Key Column, Total Foreign Key Columns, Tables and Columns with Expanded Logical Name, DQ Score, and Impact Score.
Apart from environment statistics, the Data Dictionary tab displays data quality analysis results, such as DQ Score, Impact Score, and Drift Alert from DQLabs. You can drill down and view table or column level data quality analysis.

Managing metadata involves the following:

- **Creating and managing systems**
- **Creating and managing environments**
- **Scanning metadata from data sources**
- **Creating new versions of environments**
- **Downloading and updating data dictionary**
- **Running impact analysis**
- **Running lineage analysis**
- **Previewing and profiling data**
- **Configuring extended properties**
- **Creating and managing test cases for tables**
Using Metadata Manager

- Viewing metadata manager dashboard
- Viewing access rights and data governance reports
Viewing Metadata Manager Dashboard

The Metadata Manager Dashboard displays metrics that help you analyze and track your metadata. It presents this information using charts and graphs in a card format. By default, the dashboard displays information derived from all the assets. You can configure it to display only the information derived from the data that is assigned to you. For more information, refer to the Configuring Asset Settings topic.

To access Metadata Manager Dashboard, go to Application Menu > Data Catalog > Metadata Manager > Dashboard.

Each card is clickable and displays information points using charts or graphs that provide a snapshot of the underlying data.

<table>
<thead>
<tr>
<th>UI Section</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Enterprise Metadata</td>
<td>It displays the number of each type of technical assets (systems, environments, tables, and columns) and the distribution of sensitive metadata across these technical assets.</td>
</tr>
<tr>
<td>2-Data Catalog Distribution</td>
<td>It displays the distribution of environments based on database type.</td>
</tr>
</tbody>
</table>
Viewing Metadata Manager Dashboard

<table>
<thead>
<tr>
<th>UI Section</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-Top &lt;Technical Assets&gt; in Data Lineage</td>
<td>It displays top systems or environments based on number of columns used in mappings.</td>
</tr>
<tr>
<td>4-Sensitive Data Summary</td>
<td>It displays the distribution of sensitive columns based on SDI classification across all the systems.</td>
</tr>
<tr>
<td>5-Sensitive Data Distribution By &lt;Technical Assets&gt;</td>
<td>It displays the number of sensitive columns and their SDI classifications in a system or environment.</td>
</tr>
<tr>
<td>6-Top &lt;Technical Assets&gt; By Associations</td>
<td>It displays top technical assets based on their number of associations.</td>
</tr>
<tr>
<td>7-Top &lt;Technical Assets&gt;</td>
<td>It displays top systems or environments based on their number of tables and columns.</td>
</tr>
<tr>
<td>8-Upcoming Scheduled Scans</td>
<td>It displays a list of environments that are scheduled for a metadata scan.</td>
</tr>
<tr>
<td>9-Last Refereshed Environments</td>
<td>It displays a list of recently refreshed environments.</td>
</tr>
<tr>
<td>10-Data Quality</td>
<td>It displays data quality score for environments, tables or columns.</td>
</tr>
</tbody>
</table>

Enterprise Metadata

The Enterprise Metadata section displays the number of each technical asset and the distribution of sensitive metadata across these technical assets. This section has four clickable technical asset-specific cards. You can use them to drill down further and view technical asset details.

Systems

The Systems card displays the total number of systems and the number of sensitive systems. For example, the following Systems card displays that there are 21 systems, out of which three systems are sensitive.
You can drill down and view the list of systems and their sensitivity. To view the list of systems, on the Systems card, click Total. The System Details page appears. On this page, you can click a system name to navigate to a system and work on it.

To focus on a list of sensitive systems only and view their details, on the Systems card, click Sensitive. The System Details page appears. It displays a list of sensitive systems.

**Environments**

The Environments card displays the total number of environments and the number of sensitive environments. For example, the following Environments card displays that there are 32 environments, out of which five environments are sensitive.

You can drill down and view the list of environments and their DBMS schema. To view the list of environments, on the Environments card, click Total. The Environment Details page...
Viewing Metadata Manager Dashboard

appears. By default, it displays environments in all systems. On this page, you can click an environment name to navigate to an environment and work on it. Also you can use select a system in the Select System list to view environments in a specific system.

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10 SAP</td>
<td>SAP</td>
<td>SAP</td>
<td>MS Excel File</td>
<td></td>
</tr>
<tr>
<td>11 Snowflake</td>
<td>SNOWFLAKE SAMPLE_DATA</td>
<td>SNOWFLAKE SAMPLE_DATA</td>
<td>Snowflake</td>
<td></td>
</tr>
<tr>
<td>12 Snowflake</td>
<td>TechPubs</td>
<td>Test</td>
<td>Snowflake</td>
<td></td>
</tr>
<tr>
<td>13 SQL System</td>
<td>TechPubs</td>
<td>Test</td>
<td>SqlServer</td>
<td></td>
</tr>
<tr>
<td>14 SQL System</td>
<td>Northwind</td>
<td>Northwind</td>
<td>SqlServer</td>
<td></td>
</tr>
<tr>
<td>15 SQL System</td>
<td>SQL Env</td>
<td>SQL Env</td>
<td>SqlServer</td>
<td></td>
</tr>
<tr>
<td>16 TABLEUAU</td>
<td>PRESENTATION_LAYER</td>
<td>PRESENTATION_LAYER</td>
<td>MS Excel File</td>
<td></td>
</tr>
</tbody>
</table>

To focus on a list of sensitive environments only and view their details, on the Environments card, click **Sensitive**. The System Details page appears. By default, it displays a list of sensitive environments in all systems. To view sensitive environments in a specific system, you can use the Select System list.

**Tables**

The Tables card displays the total number of tables and the number of sensitive tables. For example, the following Tables card displays that there are 1312 tables, out of which 16 tables are sensitive.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td><strong>Sensitive</strong></td>
</tr>
<tr>
<td><strong>1312</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

You can drill down and view the list of tables. To view the list of tables, on the Tables card, click **Total**. The Table Details page appears. By default, it displays a list of tables in all systems and environments. On this page, you can click a table name to navigate to a table and...
Viewing Metadata Manager Dashboard

You can select a system in the Select System list and an environment in the Select environment list to view tables in a specific environment.

<table>
<thead>
<tr>
<th>#</th>
<th>System Name</th>
<th>Environment Name</th>
<th>Table Name</th>
<th>Sensitive Data Indicator</th>
<th>Sensitive Data Indicator Classification Name</th>
<th>Logical Table Name</th>
<th>Table Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>enwi DM</td>
<td>DM Landing</td>
<td>Employees</td>
<td></td>
<td>Employees</td>
<td>Employees</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>enwi DM</td>
<td>DM Landing</td>
<td>Citizens</td>
<td></td>
<td></td>
<td>Citizens</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>enwi DM</td>
<td>DM Staging</td>
<td>Claim</td>
<td></td>
<td>Claim</td>
<td>A claim is a std</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>enwi DM</td>
<td>DM Staging</td>
<td>Date</td>
<td></td>
<td>Date</td>
<td>Topic providing</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>enwi DM</td>
<td>DM Staging</td>
<td>Member</td>
<td></td>
<td>Member</td>
<td>A member is a std</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>enwi DM</td>
<td>DM Staging</td>
<td>Claims Analysis</td>
<td></td>
<td>Claims Analysis</td>
<td>This information</td>
<td></td>
</tr>
</tbody>
</table>

To focus on a list of sensitive tables only and view their details, on the **Tables** card, click **Sensitive**. The Table Details page appears. By default, it displays a list of sensitive tables in all environments. To view sensitive tables in a specific environment, you can use the Select System and Select Environment lists.

**Columns**

The Columns card displays the total number of columns and the number of sensitive columns. For example, the following Columns card displays that there are 15813 columns, out of which 50 are sensitive.

<table>
<thead>
<tr>
<th>Columns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
</tr>
<tr>
<td>15813</td>
</tr>
</tbody>
</table>

You can drill down and view the list of columns. To view the list of columns, on the **Columns** card, click **Total**. The Column Details page appears. By default, it displays a list of columns in all tables. On this page, you can click a column name to navigate to a column and work on it. Also, you can select a system in the Select System list, select an environment in the Select Environment list, and view tables in a specific environment.
Viewing Metadata Manager Dashboard

Environment list, and select a table in the Select Table list to view columns in a specific table.

To focus on the list of sensitive columns and view their details, on the Columns card, click Sensitive. The Column Details page appears. By default, it displays a list of sensitive columns in all tables. To view sensitive columns in a specific table, you can use the Select System and Select Environment lists.

You can change the background color of the Enterprise Metadata section. To change the background color, click and then, click Background to select a color from the palette.

Data Catalog Distribution

The Data Catalog Distribution card displays the number of environments based on database types. For example, the following Data Catalog Distribution card displays that there are seven CSV environments, four ERWin environments, six SQL Server environments, and so on.
You can drill down and view a list of environments belonging to a particular database type. For example, to view a list of SQL Server environments, click **Sql Server**. The Data Catalog Distribution page appears. On this page, you can click an environment name to navigate to an environment and work on it.

<table>
<thead>
<tr>
<th>ID</th>
<th>System Name</th>
<th>Environment Name</th>
<th>Database Type</th>
<th>Environment Type</th>
<th>Sensitive Data Indicator</th>
<th>Sensitive Data Indicator Classification Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SQL System</td>
<td>Northwind</td>
<td>SqlServer</td>
<td>Northwind</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>SQL System</td>
<td>SQL Env</td>
<td>SqlServer</td>
<td>SQL Env</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>TALENED</td>
<td>STAGING</td>
<td>SqlServer</td>
<td>STAGING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>SQL System</td>
<td>TechPubs</td>
<td>SqlServer</td>
<td>Test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>SQL TechPubs</td>
<td>SQL TechPubs</td>
<td>SqlServer</td>
<td>Test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>enen DM</td>
<td>Sql Server</td>
<td>SqlServer</td>
<td>Sql Server</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>High</td>
<td>Low</td>
<td>SqlServer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>enen DM</td>
<td>Sales</td>
<td>SqlServer</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Top <Technical_Assets> in Data Lineage**

The Top <Technical_Assets> chart card displays top technical assets based on the number of columns used in mappings. You can switch between the technical assets to view number of columns in systems or environments used in mappings. To switch between systems and
Viewing Metadata Manager Dashboard

environments, click . The available options appear. Click **Change Type** and then click the required technical asset.

For example, the following chart card displays top systems in data lineage. The SQL System on this chart card has 98 columns that are used in mappings.

![Chart Card](image)

To control the number of records appearing on the chart card, click . The available options appear. Click **Records** and then, click the required number.

To view data lineage details of technical assets, on the chart card, click a bar graph. For example, the Top Systems in Data Lineage page appears on clicking a bar graph. On this page, you can click a system name to navigate to a system and work on it.

### Top Systems in Data Lineage

<table>
<thead>
<tr>
<th>#</th>
<th>System Name</th>
<th>Environment Name</th>
<th>Project Name</th>
<th>Map Name</th>
<th>System Usage In Mappings</th>
<th>Database Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SQL System</td>
<td>Northwind</td>
<td>Lineage Demo</td>
<td>TestMap3</td>
<td>22</td>
<td>SqlServer</td>
</tr>
<tr>
<td>2</td>
<td>SQL System</td>
<td>Northwind</td>
<td>DigitalAdoption</td>
<td>Flow Test</td>
<td>10</td>
<td>SqlServer</td>
</tr>
<tr>
<td>3</td>
<td>SQL System</td>
<td>SQL Env</td>
<td>enwikIS</td>
<td>TechPubsBUgTrial</td>
<td>8</td>
<td>SqlServer</td>
</tr>
<tr>
<td>4</td>
<td>SQL System</td>
<td>Northwind</td>
<td>Lineage Demo</td>
<td>TestDataMap1</td>
<td>8</td>
<td>SqlServer</td>
</tr>
<tr>
<td>5</td>
<td>SQL System</td>
<td>Northwind</td>
<td>Lineage Demo</td>
<td>TestMap2</td>
<td>6</td>
<td>SqlServer</td>
</tr>
</tbody>
</table>

### Sensitive Data Summary

The Sensitive Data Summary chart card displays the distribution of sensitive columns based on SDI classification across all systems in a donut chart. Each arc of the donut chart
Viewing Metadata Manager Dashboard

corresponds to an SDI classification. For example, the following donut chart displays that 24.1% of the columns are PII, 20.7% of the columns are confidential, and so on.

Hover over the donut chart to view the absolute number of columns belonging to an SDI classification. To view columns details, click an arc. The Summary of <SDI_Classification> page appears. On this page, you can click a column name to navigate to a column and work on it.

<table>
<thead>
<tr>
<th>#</th>
<th>System Name</th>
<th>Environment Name</th>
<th>Table Name</th>
<th>Column Name</th>
<th>Sensitive Data Indicator</th>
<th>Sensitive Data Indicator Classification Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SQL System</td>
<td>Northwind</td>
<td>dbo Categories</td>
<td>CategoryID</td>
<td>[ ]</td>
<td>Confidential</td>
</tr>
<tr>
<td>2</td>
<td>SQL System</td>
<td>Northwind</td>
<td>dbo Categories</td>
<td>CategoryName</td>
<td>[ ]</td>
<td>Confidential</td>
</tr>
<tr>
<td>3</td>
<td>SQL System</td>
<td>SQL Env</td>
<td>dbo DimAccount</td>
<td>Operator</td>
<td>[ ]</td>
<td>Confidential</td>
</tr>
<tr>
<td>4</td>
<td>SQL System</td>
<td>SQL Env</td>
<td>dbo DimEmployee</td>
<td>FirstName</td>
<td>[ ]</td>
<td>Confidential</td>
</tr>
<tr>
<td>5</td>
<td>TABLEAUU</td>
<td>PRESENTATION LAYER</td>
<td>Account</td>
<td>Number of Records</td>
<td>[ ]</td>
<td>Confidential</td>
</tr>
<tr>
<td>6</td>
<td>SQLTechPubs</td>
<td>SQLTechPubs</td>
<td>dbo Customers</td>
<td>CompanyName</td>
<td>[ ]</td>
<td>Confidential</td>
</tr>
</tbody>
</table>

**Sensitive Data Distribution By <Technical_Assets>**

The Sensitive Data Distribution By <Technical_Assets> chart card displays the number of sensitive columns and their SDI classification in a system or environment. To switch
Viewing Metadata Manager Dashboard

between systems and environments, click and then, click the required technical asset. For example, the following card displays the number of sensitive columns and their classification in erwin DM, Informatica, Oracle, SAP, and other systems.

Each bar in the graph corresponds to a system or environment. You can drill down and view detailed information in the list format. To view detailed information about sensitive columns, click a bar. The Sensitive Data Distribution page appears. On this page, you can click a column name to navigate to a column and work on it.

<table>
<thead>
<tr>
<th>#</th>
<th>System Name</th>
<th>Environment Name</th>
<th>Table Name</th>
<th>Column Name</th>
<th>Sensitive Data Indicator</th>
<th>Sensitive Data Indicator Classification Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SQL System</td>
<td>SQL Env</td>
<td>dbo DimCurrency</td>
<td>CurrencyKey</td>
<td></td>
<td><img src="image.png" alt="Image" /></td>
</tr>
<tr>
<td>2</td>
<td>SQL System</td>
<td>SQL Env</td>
<td>dbo DimCurrency</td>
<td>CurrencyName</td>
<td></td>
<td><img src="image.png" alt="Image" /></td>
</tr>
<tr>
<td>3</td>
<td>SQL System</td>
<td>SQL Env</td>
<td>dbo DimCustomer</td>
<td>YearlyIncome</td>
<td></td>
<td><img src="image.png" alt="Image" /></td>
</tr>
<tr>
<td>4</td>
<td>SQL System</td>
<td>SQL Env</td>
<td>dbo DimOrganization</td>
<td>CurrencyKey</td>
<td></td>
<td><img src="image.png" alt="Image" /></td>
</tr>
<tr>
<td>5</td>
<td>SQL System</td>
<td>SQL Env</td>
<td>dbo FactCurrencyRate</td>
<td>CurrencyKey</td>
<td></td>
<td><img src="image.png" alt="Image" /></td>
</tr>
<tr>
<td>6</td>
<td>SQL System</td>
<td>SQL Env</td>
<td>dbo FactInternetSales</td>
<td>CurrencyKey</td>
<td></td>
<td><img src="image.png" alt="Image" /></td>
</tr>
<tr>
<td>7</td>
<td>SQL System</td>
<td>SQL Env</td>
<td>dbo FactResellerSales</td>
<td>CurrencyKey</td>
<td></td>
<td><img src="image.png" alt="Image" /></td>
</tr>
</tbody>
</table>

Top <Technical_Assets> By Associations

The Top <Technical_Assets> By Associations chart card displays the top technical assets based on the number of associations it has with other assets. You can switch between
Viewing Metadata Manager Dashboard

technical assets to view top systems, environments, tables, or columns based on the number of associations. To switch between technical assets, click . The available options appear. Click Change Type and then, click the required technical asset. For example, the following card displays top tables based on the number of associations.

![Top Tables By Associations](chart-image)

To control the number of records appearing on the chart card, click . The available options appear. Click Records and then click the required number.

Each bar in the graph corresponds to a technical asset. Hover over a bar to view the number of associations.

**Top <Technical_Assets>**

The Top <Technical_Assets> chart card displays top systems or environments based on the number of tables and columns. To switch between systems and environments, click . The available options appear. Click Change Type and then, click the required technical asset. For example, the following chart card displays the top five systems.
To control the number of records available on the chart, click . The available options appear. Click Records and then, click the required number.

Each pair of bars in the graph corresponds to a technical asset. Hover over green and orange bars to view the number of columns and tables respectively.

**Upcoming Scheduled Scans**

The Upcoming Scheduled Scans card displays a list of environments that are scheduled for a metadata scan. This list includes time of the scheduled scan for each environment. To control the number of records available on the chart, click . The available options appear. Click Records and then click the required number.

To customize the card background, click . The available options appear. Click Background and then use the color palette. For example, the following card’s background color is set to orange color.

**Last Refreshed Environments**
Viewing Metadata Manager Dashboard

The Last Refreshed Environments card displays a list of recently refreshed environments. It displays the environment name, date, and time of the environment refresh. This helps in tracking environments that are recently updated. To control the number of records available on the chart, click . The available options appear. Click Records and then click the required number. For example, the following chart card displays a record of five environments:

<table>
<thead>
<tr>
<th>Environment</th>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSV_erwin</td>
<td>Jan, 2021</td>
<td>05:56</td>
</tr>
<tr>
<td>erwinHR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MS Access Con 1</td>
<td>Nov, 2020</td>
<td>06:00</td>
</tr>
<tr>
<td>erwin_MS Access Con</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XMI R1</td>
<td>Nov, 2020</td>
<td>05:53</td>
</tr>
<tr>
<td>XMI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JASON_HR</td>
<td>Nov, 2020</td>
<td>23:46</td>
</tr>
<tr>
<td>erwinHR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sql Server</td>
<td>Oct, 2020</td>
<td>07:00</td>
</tr>
<tr>
<td>erwin DM</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To customize the card background, click . The available options appear. Click Background and then use the color palette.

**Data Quality <Technical_Assets>**

The Data Quality card displays the data quality score for environments, tables, and columns. The card displays data quality score in percentage for environments by default.
To view data quality for tables or columns, click 

Viewing Metadata Manager Dashboard
Creating Systems

You can harvest (scan) metadata from data sources in the Metadata Manager. The scanned metadata is stored in a hierarchical manner (System > Environment > Table > Column) in the Data Catalog.

A System can contain multiple environments and in a typical data integration project a system can be a source or target type. You can create a system and specify data steward, system owner, and its business purpose etc.

To create systems, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, right-click the Metadata node.
3. Click New System.
Creating Systems

The New System 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.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Name</td>
<td>Specifies the physical name of the system. For example, Enterprise Data Warehouse. For more information on naming conventions, refer to the Best Practices section.</td>
</tr>
<tr>
<td>Data Steward</td>
<td>Specifies the name of the data steward responsible for the system. 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.</td>
</tr>
<tr>
<td>Business Purpose</td>
<td>Specifies the business objective of the system. For example: This is a source system to store Sales metadata of the</td>
</tr>
<tr>
<td><strong>Field Name</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>organization</td>
<td>organization for a data integration project.</td>
</tr>
<tr>
<td>Server Platform</td>
<td>Specifies the server platform of the system. For example, Windows.</td>
</tr>
<tr>
<td>DBMS Platform</td>
<td>Specifies the DBMS platform of the system (if the system is an RDBMS source).</td>
</tr>
<tr>
<td></td>
<td>For example, SQL Server.</td>
</tr>
<tr>
<td>File Management Type</td>
<td>Specifies the file management system (if the system is a file-based source).</td>
</tr>
<tr>
<td></td>
<td>For example, MS Excel.</td>
</tr>
<tr>
<td>Owner Name</td>
<td>Specifies the full name of the system owner. For example, Talon Smith.</td>
</tr>
<tr>
<td>Telephone Number</td>
<td>Specifies the telephone number of the system owner. For example, 1-800-783-7946.</td>
</tr>
<tr>
<td>Primary Move Type (Source/Target)</td>
<td>Specifies whether the system is source, target, or both. Valid values are:</td>
</tr>
<tr>
<td></td>
<td>Source</td>
</tr>
<tr>
<td></td>
<td>Target</td>
</tr>
<tr>
<td></td>
<td>Both</td>
</tr>
<tr>
<td>DQ Score</td>
<td>Specifies the overall data quality score of the system. For example, High (7-8).</td>
</tr>
<tr>
<td></td>
<td>For more information on configuring DQ scores, refer to the Con-</td>
</tr>
<tr>
<td></td>
<td>figuring Data Profiling and DQ Scores topic.</td>
</tr>
<tr>
<td>Server OS version</td>
<td>Specifies the OS version of the system's server. For example, Windows Server 2012 R2.</td>
</tr>
<tr>
<td>DBMS Version</td>
<td>Specifies the DBMS version of the system (if the system is an RDBMS source).</td>
</tr>
<tr>
<td></td>
<td>For example, SQL Server 2017.</td>
</tr>
<tr>
<td>File Location</td>
<td>Specifies a file path (if the system is a file-based source). For example, C:\Users\Talon Smith\erwin\Mike - Target System</td>
</tr>
</tbody>
</table>
Creating Systems

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Release</td>
<td>Specifies the system release including the point release number. For example, Oracle 18c.</td>
</tr>
<tr>
<td>Email Address</td>
<td>Specifies the system owner's email address. For example, <a href="mailto:talon.smith@mauris.edu">talon.smith@mauris.edu</a></td>
</tr>
</tbody>
</table>

5. Click the **Miscellaneous** tab and enter appropriate values in the fields. Fields marked with a red asterisk are mandatory. Refer to the following table for field descriptions.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESB Platform Type</td>
<td>Specifies the enterprise platform bus type (if the system is an ESB source). For example, Mule.</td>
</tr>
<tr>
<td>ESB Q Manager Name</td>
<td>Specifies the ESB queue manager's name of the system (if the source is an ESB). For example, John Doe.</td>
</tr>
<tr>
<td>Total DBSize</td>
<td>Specifies the total physical size of the database. For example, 198 GB.</td>
</tr>
<tr>
<td>Total Number of Tables</td>
<td>Specifies the total number of tables associated with the system. For example, 300.</td>
</tr>
<tr>
<td>Definition of the day</td>
<td>Specifies the definition of the system at the end of the day. For example: Extraction of details from the source system is complete.</td>
</tr>
<tr>
<td>Batch Extract Window</td>
<td>Specifies the daily batch extract window of the system. For example: Batch extract from the source system is scheduled at 3:30 P.M. everyday.</td>
</tr>
<tr>
<td>Average User</td>
<td>Specifies the average number of system users. For example, 30.</td>
</tr>
<tr>
<td>Average Concurrent Users</td>
<td>Specifies the average number of concurrent system users. For example, 15.</td>
</tr>
<tr>
<td>Sensitive Data Indicator Classifier</td>
<td>Specifies the sensitivity classification of the system. Also, you can add multiple classifications to the system.</td>
</tr>
</tbody>
</table>
Creating Systems

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specification</td>
<td>For example, PHI, Confidential. For more information on configuring Sensitive Data Indicator (SDI) classifications, refer to the Configuring Sensitivity Classifications topic.</td>
</tr>
<tr>
<td>Special Instructions</td>
<td>Specifies any special instructions or comments about the system. For example: The system acts as a source for creating the mapping specification.</td>
</tr>
</tbody>
</table>

6. Click **Save and Exit**.

A new system is created and added under the system tree.

Once the system is created, you can create environments and scan metadata from different database types.

You can enrich the system further by:

- Adding Documents
- Viewing Workflow Logs
- Associating Systems
- Configuring Expanded Logical Name of Tables/Columns
- Tagging Systems

You can manage a system as per your requirements. **Managing systems** involves:

- Editing or deleting systems
- Exporting systems information
Adding Documents

You can add supporting documents, such as text files, audio files, video files, document links, and so on, to a system.

To add documents to systems, follow these steps:

1. In the Data Catalog pane, right-click a system.

![Data Catalog Pane](image)

2. Click New Document.

   The Upload Document page appears.
3. Enter appropriate values in the fields. Fields marked with a red asterisk are mandatory. Refer to the following table for field descriptions.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Document Name</td>
<td>Specifies the name of the physical document being attached to the system. For example, Source System Details.</td>
</tr>
<tr>
<td>System Document Object</td>
<td>Drag and drop document files or use 🔄 to select and upload document files.</td>
</tr>
<tr>
<td>System Document Owner</td>
<td>Specifies the document owner's name. For example, John Doe.</td>
</tr>
<tr>
<td>Document Link</td>
<td>Specifies the URL of the document. For example, <a href="https://drive.google.com/file/d/1/2sC2_SZIyeFKl7OOn-b5YkMBq4ptA7jhg5/view">https://drive.google.com/file/d/1/2sC2_SZIyeFKl7OOn-b5YkMBq4ptA7jhg5/view</a></td>
</tr>
<tr>
<td>Intended Use Description</td>
<td>Specifies the intended use of the document. For example: The document is to keep a record of system description and its data dictionary.</td>
</tr>
<tr>
<td>Approval Required Flag</td>
<td>Specifies whether the document requires approval. Select the Approval Required Flag check box to select the document status.</td>
</tr>
</tbody>
</table>
Adding Documents

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document Status</td>
<td>Specifies the status of the document. For example, In Progress. This field is available only when the Approval Required Flag check box is selected.</td>
</tr>
</tbody>
</table>

4. Click 📝.

The document is saved on the System Documents tab.

Once a supporting document is added, use the following options:

**Preview (🔍)**

Use this option to preview the document.

**Edit (✍️)**

Use this option to update the document details.

**Delete (🗑️)**

Use this option to delete the document that is not required.
Viewing Workflow Logs

You can view workflow logs and know the current stage of systems. A workflow assigned to a system is applicable to all the environments under it. For more information on managing metadata manager workflows, refer to the Managing Metadata Manager Workflows section.

To view workflow logs of systems, follow these steps:

1. In the Data Catalog pane, right-click a system.

2. Click View Workflow.

   The View Workflow page appears. It displays the current stage of the system.
Use the following options to work on the workflow:

**User Comments (_ball)**

Use this option to view users and the comments entered by the users in each stage.

**Expand/Hide Users and Roles**

Use this option to view or hide users and roles assigned to the stages of the workflow.

**Collapse/Expand Roles**

This option is enabled when you are in the Expand Users and Roles view. Use this to switch between the collapsed and expanded roles view.

**Collapse/Expand Users**

This option is enabled when you are in the Expand Users and Roles view. Use this to switch between the collapsed and expanded users view.

**Export Image**

Use this option to download the workflow in the JPG format.
Associating Systems

You can associate systems with business assets, systems, environments, tables, and columns. You can view these associations on mind maps and analyze association statistics.

Ensure that:

- Business assets are enabled. You can add custom business assets and enable them in the Business Glossary Manager Settings.
- Relationship between system and the asset type is defined. You can define associations and relationships in the Business Glossary Manager Settings.

To associate systems with asset types, follow these steps:

1. In the Data Catalog pane, click the required system.
2. In the central pane, click the Associations tab.
3. In the asset type (business policies, business terms, columns, environments, and tables) list, select an asset type to associate with the system.
4. Click +.

The Relationship Association page appears. Based on the asset type that you select, it
5. Select **Relationship Name**, and the asset type. If you know the term name, use the Search (partial matches) field to look up for it.

6. Click **Save**.

The asset is associated to the system and added to the list of associations. You can define as many associations as required.

Once you have created associations, you can use the following options under the **Actions** column:
Associating Systems

**Add Association** (➕)

Use this option to add associations using a qualifier.

**Edit Association** (✏️)

Use this option to edit the association.

**Delete Association** (🗑️)

Use this option to delete the association.

To view mind map, click the **Mindmap** tab. For more information on mind maps, refer to the [Viewing Mind Maps](#) topic.

You can associate multiple assets with a system, and view the associations based on a qualifier view in the mind map. For more information, refer to the [Setting Up Associations Using Qualifiers](#) topic.
You can update the expanded logical name for multiple tables/columns by scheduling a configuration job. The job updates the expanded logical name based on the table/column name, associated business term's name, and the associated business term's definition.

You should configure expanded logical name of tables and columns after scanning metadata.

You can run the job at both, system and environment levels:

- **System level**: The expanded logical name can be applied to all the tables and columns under the system. This includes all the environments under the system.

- **Environment level**: The expanded logical name can be applied to all the tables and columns under the environment.

For example, consider a scenario where you want to schedule a job to configure the expanded logical name of a table, RM_Resource and a column, Resource_ID. The parameters of the job are a business term catalog that has a business term, Resource, its definition, Sales Representative, and a splitter, Underscore (_). Refer to the following table to understand the parameters and their values:

<table>
<thead>
<tr>
<th>Entity</th>
<th>Value</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Splitter (specified while scheduling the job)</td>
<td>_ (Underscore)</td>
<td>Here, the part after the underscore (splitter), Resource, matches the Business Term. Therefore, it will be replaced with the business term definition and the part before the underscore, RM, will be retained in the expanded logical name.</td>
</tr>
<tr>
<td>Table Name</td>
<td>RM_Resource</td>
<td>Here, the part before the underscore, Resource, matches with the Business Term. Therefore, it will be replaced with the business term definition and the part after the underscore, ID will be retained in the expanded logical name.</td>
</tr>
<tr>
<td>Column Name</td>
<td>Resource_ID</td>
<td>Here, the part before the underscore, Resource, matches with the Business Term. Therefore, it will be replaced with the business term definition and the part after the underscore, ID will be retained in the expanded logical name.</td>
</tr>
</tbody>
</table>
Configuring Expanded Logical Name

<table>
<thead>
<tr>
<th>Entity</th>
<th>Value</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Term</td>
<td>Resource</td>
<td>This should match with a part of the table and column names above.</td>
</tr>
</tbody>
</table>
| Business Term Definition | Sales Representative | In the updated expanded logical name, this will replace the part of the table/column name that matches the business term name. That is:  
  - For the table, RM will be retained and Resource will be replaced with Sales Representative.  
  - For the column, ID will be retained and Resource will be replaced with Sales Representative. |
| Expanded Logical Name | <Blank>         | Expanded logical name is formed from the business term definition and part of table or column names. |

After the job runs successfully, the expanded logical name of the table and column is updated as mentioned in the following table:

<table>
<thead>
<tr>
<th>Entity</th>
<th>Expanded Logical Name</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table</td>
<td>RM Sales Representative</td>
<td>Here, RM retained from the table name and Sales Representative is added from business term definition.</td>
</tr>
<tr>
<td>Column</td>
<td>Sales Representative ID</td>
<td>Here, ID is retained from the column name and Sales Representative is added from business term definition.</td>
</tr>
</tbody>
</table>

To configure expanded logical name, follow these steps:

1. In the **Data Catalog** pane, right-click a system or environment.

   The available options appear.
2. Click **Configure Expanded Logical Name**.

   The Configure Expanded Logical Name page appears.
3. Select or enter appropriate values in the fields. Fields marked with a red asterisk are mandatory. Refer to the following table for field descriptions.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catalogs</td>
<td>Select the catalog containing the required business term.</td>
</tr>
<tr>
<td>Splitter</td>
<td>Select appropriate splitter based on the table name or column name.</td>
</tr>
<tr>
<td>ELN Scope</td>
<td>Select an appropriate scope of the job.</td>
</tr>
</tbody>
</table>

- **Columns**: Indicates that the expanded logical names of all the
### Field Name | Description
--- | ---
| | columns in this system are configured
| | ▪ **Tables**: Indicates that the expanded logical name of all the tables in this system are configured
| | ▪ **Both**: Indicates that the expanded logical names of all the tables and columns in this system are configured

| Job Name | A default job name is autopopulated. You can modify it and enter a job name. |

| Interval | Select an interval of the job. Interval sets the frequency of the job. For example: If you set the interval every week then the job will be executed every week. |

| Local or Server | Select the machine whose clock decides the time of the scheduled scan.
| | ▪ **Local**: Refers to your local machine.
| | ▪ **Server**: Refers to the machine where erwinDIS has been deployed. |

| Schedule Job On | Select date and time of the execution of the job. |

| Notify Me | Turn the **Notify Me** to **ON** to receive a notification email about the scheduled job. |

| Notification Email | This field is autopopulated with your email ID. You receive email notifications about the scheduled job from the Admin Email ID, configured in the Email Settings. For more information on configuring Admin Email ID, refer to the [Configuring Email Settings](#) topic. |

| CC List | Enter a comma-separated list of email IDs that should receive the job notification. |

4. Click ✅.

The job is scheduled and added to the Scheduled Jobs list on the **Scheduled Jobs** tab.
You can edit the job using 🍄 or delete it using 🗑️.

The job is executed at the scheduled time and the expanded logical names of tables and columns are updated.
You can use this job to update the expanded logical name only once. Alternately, you can update expanded logical names under **table properties** and **column properties**.
Managing Systems

Managing systems involves:

- Editing or deleting systems
- Exporting systems information
- Exporting data dictionary report
- Sharing a shortcut link

To manage systems, follow these steps:

1. In the **Data Catalog** pane, right-click a system.
   
   The available options appear.

2. Use the following options:

   **Edit System**
   
   Use this option to edit the system details.

   **Delete System**
   
   Use this option to delete systems that are not required. Ensure that you delete all the environments under a system before deleting it.
Report - System Information

Use this option to view and export system information.
To view system information report, click **Report - System Information**.
The System Information Report page appears.

In the **Select System** list, select a system to view its report.

- **Export to HTML**: Use this option to export the report in the HTML format.
- **Export to PDF**: Use this option to export the report in the PDF format.
- **Export to Excel**: Use this option to export the report in the XLSX format.
- **Export to Word**: Use this option to export the report in the DOCX format.
- **Export to RTF**: Use this option to export the report in the RTF format.

Report - Data Dictionary
Use this option to view and export system catalog and data dictionary report.

**Share Link**

Use this option to share a shortcut link of a system.

- **Copy Link**: Use this option to copy the shortcut link to the system. You can then share this link manually.
- **Email**: Use this option to share the shortcut link to the system via an email.
Creating and Managing Environments

Metadata is stored and categorized into systems and environments. Multiple environments are contained in a system. Whereas environments can denote a database, flat file, data models, etc. Environments contain database objects like Tables, Columns, Views, Synonyms, etc.

You can create environments under a system and scan metadata from a data source by providing connection parameters in the environment.

Creating and managing environments involves:

- Creating environments
- Assigning roles and users
- Managing environments
- Updating Sensitivity
- Uploading documents
- Cloning environments
- Viewing ER diagrams
- Viewing workflow logs
- Associating Environments
- Configuring Business Properties
- Configuring Expanded Logical Name of Tables/Columns
- Tagging Environments
Creating Environments

After creating a system in the Metadata Manager, you can create environments under the system. An environment can be created for different database types and flat files by fulfilling prerequisites and providing the connection parameters.

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, right-click a system.
   The available options appear.

3. Click New Environment.
   The New Environment 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.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Environment Name</td>
<td>Specifies the unique name of the environment. For example, EDW-Test. The following special characters are supported in an environment name: - (hyphen)</td>
</tr>
<tr>
<td></td>
<td>( (opening parenthesis) ) (closing parenthesis) / (slash)</td>
</tr>
<tr>
<td></td>
<td>For more information on naming conventions, refer to the Best Practices section.</td>
</tr>
<tr>
<td>System Environment Type</td>
<td>Specifies the type of the environment. For example, development, test, or production.</td>
</tr>
<tr>
<td><strong>Field Name</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>----------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Data Steward</td>
<td>Specifies the name of the data steward responsible for the environment. 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.</td>
</tr>
<tr>
<td>Server Platform</td>
<td>Specifies the server platform of the environment. For example, Windows.</td>
</tr>
<tr>
<td>Server OS Version</td>
<td>Specifies the OS version of the environment's server. For example, Windows Server 2012 R2.</td>
</tr>
<tr>
<td>File Management Type</td>
<td>Specifies the file management system (if the environment is a file-based source). For example, MS Excel.</td>
</tr>
<tr>
<td>File Location</td>
<td>Specifies a file path (if the environment is a file-based source). For example, C:\Users\Jane Doe\erwin\Mike - Target System</td>
</tr>
<tr>
<td>Production System Name</td>
<td>Specifies the system name being associated with the environment as the production system. For example, Enterprise Data Warehouse.</td>
</tr>
<tr>
<td>Production Environment Name</td>
<td>Specifies the environment name being associated with the environment as the production environment. For example, EDW-PRD.</td>
</tr>
<tr>
<td>Version Label</td>
<td>Specifies the version label of the environment to track change history. For example, Alpha. For more information on configuring version display, refer to the Configuring Version Display of the Environments topic.</td>
</tr>
<tr>
<td>DQ Score</td>
<td>Specifies the overall data quality score of the environment. For example, High (7-8). For more information on configuring DQ scores, refer to the Configuring DQ Scores topic.</td>
</tr>
</tbody>
</table>
**Enable DQ Sync**

Specifies whether to sync data quality analysis results from DQLabs. To view data quality analysis, ensure that you have configured DQLabs connection setting in erwin DI. For more information, refer to the **Configuring DQLabs** topic.

Data quality analysis is available for environments using Oracle, Salesforce, Snowflake, MySQL, MSSQL, Hadoop, and PostgreSQL database types.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitive Data Indicator Classification</td>
<td>Specifies the sensitivity data indicator (SDI) classification of the environment. Also, you can add multiple classifications to the environment.</td>
</tr>
</tbody>
</table>

5. Click ![test_connection](image) to test the connection.

If the connection with database is established successfully then a success message pops up.

6. Click the **Miscellaneous** tab and enter appropriate values in the fields. Fields marked with a red asterisk are mandatory. Refer to the following table for field descriptions.
Creating Environments

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>For example, PHI, Confidential. For more information on configuring SDI classifications, refer to the Configuring Sensitivity Classifications topic.</td>
<td></td>
</tr>
<tr>
<td>Intended Use Description</td>
<td>Specifies the description about the objective of the environment. For example: The environment contains the source metadata for the data integration project.</td>
</tr>
<tr>
<td>Environments Notes</td>
<td>Specifies relevant notes about the environment. For example: The environment uses Sql Server as database to scan the metadata.</td>
</tr>
<tr>
<td>Approval Instructions</td>
<td>Specifies any instructions for the environment's approval. For example: The environment must contain 50 tables from erwin DI database.</td>
</tr>
</tbody>
</table>

7. Click **Save and Exit**.

A new environment is created and stored in the environment tree.

Once an environment is created, you can scan source or target metadata from the database type.

Different database types have different prerequisites and connection parameters:

- **SQL Server** - via SQL or Window authentication mode
- **Oracle and Oracle RAC**
- **MySQL**
- **Snowflake**
- **MS Dynamics CRM**
- **SAP ECC R/3 and IS-U Metadata via JCO Driver**
SQL Server

You can create two types of SQL Server environments:

- SQL authentication
- Windows authentication

Both the environments have same:

- Prerequisites
- Privileges
- JDBC driver details
- TLS connection details

There is a small difference between the two modes in JDBC connection parameters.

Prerequisites

Pre-requisite steps for establishing successful connection:

1. Creation of dedicated service account for erwin with Metadata Read-only privileges in SQL Server Database
2. Firewall connection open between SQL Server and erwin DI application server
3. Opening of SQL Server database port to accept connections from erwin DI application server

Privileges

Following are the privileges given to service account for:

- Metadata scanning: Grant view definition on Schema
- Data preview: Db_datareader

JDBC Driver Details
SQL Server JDBC driver is out of box packaged with erwin DI application. Hence, no JDBC driver configuration is required from end user standpoint.

**TLS Connection Details**

- The SQL Server JDBC driver supports connection via TLS 1.2.
- The TLS protocol parameter needs to be added to JDBC URL string to ensure that the connection is via TLS. Otherwise, the source database will reject any incoming request in non-TLS mode.
- JDBC URL being used to connect via TLS:
  
  ```
  jdbc:sqlserver://SERVER_NAME:PORT#;data-baseName=AdventureWorks;sslProtocol=TLSv1.2
  ```

- Additional parameters to configure (if needed):
  ```
  integratedSecurity=true;encrypt=true;trustServerCertificate=true;
  ```

**JDBC Connection Parameters**

To enter SQL Server (SQL authentication) connection parameters, follow these steps:
1. Select the **Database Type** as **SqlServer** while creating the environment.

When you select database type as Sql Server, the following connection parameters appear on the right hand side.
2. Enter appropriate values in the fields (connection parameters). The fields marked with a red asterisk are mandatory.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driver Name</td>
<td>Specifies the JDBC driver name for connecting to the database.</td>
</tr>
<tr>
<td></td>
<td>For example, com.microsoft.sqlserver.jdbc.SQLServerDriver</td>
</tr>
<tr>
<td>DBMS Name/DSN</td>
<td>Specifies the SQL Server database name being used to connect to the environment.</td>
</tr>
<tr>
<td></td>
<td>For example, ErwinDIS931.</td>
</tr>
<tr>
<td>IP Address/Host Name</td>
<td>Specifies the IP address or server host name of the database.</td>
</tr>
<tr>
<td></td>
<td>For example, localhost.</td>
</tr>
<tr>
<td>Port</td>
<td>Specifies the port to connect with the database.</td>
</tr>
<tr>
<td></td>
<td>1433 is the default port for a Sql Server database type. You can change it, if required.</td>
</tr>
<tr>
<td>User Name</td>
<td>Specifies the SQL Server (Service Account) user name.</td>
</tr>
<tr>
<td></td>
<td>For example, sa.</td>
</tr>
<tr>
<td>Password</td>
<td>Specifies the SQL Server (Service Account) password.</td>
</tr>
<tr>
<td></td>
<td>For example, goerwin@1.</td>
</tr>
<tr>
<td>URL</td>
<td>Specifies the full JDBC URL that is used to establish a connection with the database.</td>
</tr>
<tr>
<td></td>
<td>For example, jdbc:sqlserver://SERVER_NAME:PORT#;databaseName=DatabaseName</td>
</tr>
<tr>
<td></td>
<td>It is autopopulated based on the other parameters.</td>
</tr>
<tr>
<td>DBMS Schema</td>
<td>Specifies the schema of the database.</td>
</tr>
<tr>
<td></td>
<td>Use this option to select multiple or narrow down to single schema.</td>
</tr>
<tr>
<td></td>
<td>For example, DBO.</td>
</tr>
<tr>
<td>Connection Pool Type</td>
<td>Specifies the connection pool type being used to connect via JDBC.</td>
</tr>
<tr>
<td></td>
<td>For example, HIKARICP and BONECP.</td>
</tr>
<tr>
<td>Number of Partitions</td>
<td>Specifies the number of partitions of the database.</td>
</tr>
</tbody>
</table>
|                             | It is autopopulated with default number of partitions. You can edit
### Field Name Description

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Connections Per Partitions</td>
<td>Specifies the minimum connections per partitions of the database. It is autopopulated with default minimum connections per partitions. You can edit and provide the minimum connections per partitions as required. For example, 2.</td>
</tr>
<tr>
<td>Maximum Connections Per Partitions</td>
<td>Specifies the maximum connections per partitions of the database. It is autopopulated with default maximum connections per partitions. You can edit and provide the maximum connections per partitions as required. For example, 3.</td>
</tr>
</tbody>
</table>

To use database options, click 📊.

The Database Options page appears. It displays the available database options.

Select keys and double-click the cells under the **Value** column to set the values of the keys. Use ✔️ to save the database options.

To enter SQL Server (Window authentication) connection parameters, follow these steps:
1. Select the **Database Type** as **Sql Server (Windows Authentication)**.

When you select database type as **Sql Server (Windows Authentication)**, the following connection parameters appear on the right hand side.

![Configuration Details](image)
2. Enter appropriate values in the fields (connection parameters). The fields marked with a red asterisk are mandatory.

<table>
<thead>
<tr>
<th><strong>Field Name</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Driver Name</td>
<td>Specifies the JDBC driver name for connecting to the database. For example, com.microsoft.sqlserver.jdbc.SQLServerDriver</td>
</tr>
<tr>
<td>DBMS Name/DSN</td>
<td>Specifies the SQL Server database name being used to connect to the environment. For example, ErwinDIS931.</td>
</tr>
<tr>
<td>IP Address/Host Name</td>
<td>Specifies the IP address or server host name of the database. For example, localhost.</td>
</tr>
<tr>
<td>Domain</td>
<td>Specifies the network domain name on which database resides. For example, U-DOM1.</td>
</tr>
<tr>
<td>Port</td>
<td>Specifies the port to connect with the database. 1433 is the default port for a Sql Server database type. You can change it, if required.</td>
</tr>
<tr>
<td>User Name</td>
<td>Specifies the SQL Server (Service Account) user name. For example, sa.</td>
</tr>
<tr>
<td>Password</td>
<td>Specifies the SQL Server (Service Account) password. For example, goerwin@1.</td>
</tr>
<tr>
<td>URL</td>
<td>Specifies the full JDBC URL that is used to establish a connection to the database. It is autopopulated based on the other parameters. jdbc:jtds:sqlserver://SERVER_NAME:PORT#;data-baseName=DatabaseName;domain=DomainName;useNTLMv2=true;</td>
</tr>
<tr>
<td>DBMS Schema</td>
<td>Specifies the schema for the database. Use this option to select multiple or narrow down to single schema. For example, DBO.</td>
</tr>
<tr>
<td>Con-</td>
<td>Specifies the connection pool type being used to connect via JDBC.</td>
</tr>
<tr>
<td>Field Name</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Connection Pool Type</td>
<td>For example, HIKARICP and BONECP.</td>
</tr>
<tr>
<td>Number of Partitions</td>
<td>Specifies the number of partitions for the database. It is autopopulated with default number of partitions. You can edit and provide the number of partitions as required. For example, 2.</td>
</tr>
<tr>
<td>Minimum Connections Per Partitions</td>
<td>Specifies the minimum connections per partitions for the database. It is autopopulated with default minimum connections per partitions. You can edit and provide the minimum connections per partitions as required. For example, 3.</td>
</tr>
<tr>
<td>Maximum Connections Per Partitions</td>
<td>Specifies the maximum connections per partitions for the database. It is autopopulated with default maximum connections per partitions. You can edit and provide the maximum connections per partitions as required. For example, 5.</td>
</tr>
</tbody>
</table>

To use database options, click 📄.

The Database Options page appears. It displays the available database options.
Select keys and double-click the cells under the **Value** column to set the values of the keys. Use ✅ to save the database options.
Oracle

You can create Oracle environments and can also enable RAC/Service to:

- Use Oracle cluster database
- Capture Oracle Service name in DSN field

Before creating an Oracle environment, you should take a note of the following:

- Prerequisites
- JDBC driver details
- TLS connection details
- JDBC connection parameters

Prerequisites

Prerequisite steps for establishing successful connection:

- **Creation of dedicated service account** for erwin with Metadata read-only privileges in Oracle database
- **Firewall connection open** between Oracle and erwin DI application server
- **Oracle Database port** opened to accept connections from erwin DI application server

JDBC Driver Details

Oracle JDBC driver is out of box packaged with erwin DI application. Hence, no JDBC driver configuration is required from end user standpoint.

TLS Connection Details

- Oracle JDBC 8 driver provides native TLS 1.2 support and upgrading the driver to JDBC 8 will provide the necessary resolution.
- Once the product is upgraded to the oracle JDBC 8 driver, TLS connectivity can be ensured by setting a few system parameters and also adding TLS parameters to the JDBC URL string to support connectivity using TLS 1.2
Oracle

URL Format: jdbc:oracle:thin:@<Ip Address>:<Port>/< service name>+TLS params

**JDBC Connection Parameters**

To enter Oracle connection parameters, follow these steps:

1. Select Database Type as Oracle while creating the environment.

   You can select the **RAC/Service** check box to:
   - Use Oracle cluster database
   - Capture Oracle Service name in DSN field

   The following connection parameters appear on the right hand side.
2. Enter appropriate values in the fields (connection parameters). The fields marked with a red asterisk are mandatory.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driver Name</td>
<td>Specifies the JDBC driver name for connecting to the database.</td>
</tr>
<tr>
<td></td>
<td>For example, oracle.jdbc.driver.OracleDriver</td>
</tr>
<tr>
<td>DBMS Name/DSN</td>
<td>Name of the Oracle Service – SID or TNS Service Name.</td>
</tr>
<tr>
<td></td>
<td>For example, ErwinDIS931.</td>
</tr>
<tr>
<td>IP Address/Host Name</td>
<td>Enter the IP address or server host name.</td>
</tr>
<tr>
<td></td>
<td>For example, 10.32.445.21</td>
</tr>
<tr>
<td>Port</td>
<td>Specifies the port to connect with the database.</td>
</tr>
<tr>
<td></td>
<td>1521 is the default port for the Oracle database. User can change it, if</td>
</tr>
<tr>
<td></td>
<td>required.</td>
</tr>
<tr>
<td>User Name</td>
<td>Enter the Oracle (Service account) user name.</td>
</tr>
<tr>
<td></td>
<td>For example, erwinuser.</td>
</tr>
<tr>
<td>Password</td>
<td>Enter the Oracle (Service account) password.</td>
</tr>
<tr>
<td></td>
<td>For example, goerwin@1.</td>
</tr>
</tbody>
</table>
### Oracle

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>URL</td>
<td>It is autopopulated based on the other parameters. For example, jdbc:oracle:thin:@&lt;Ip Address&gt;:&lt;Port&gt;/&lt;service name&gt;</td>
</tr>
<tr>
<td>DBMS Instant Schema</td>
<td>Specifies the name of the database schema. For example, DBO. Use this option to select multiple or narrow down to single schema.</td>
</tr>
<tr>
<td>Connection Pool Type</td>
<td>Specifies the connection pool type being used to connect via JDBC. For example, HIKARICP and BONECP. Select the appropriate connection pool type.</td>
</tr>
<tr>
<td>Number of Partitions</td>
<td>Specifies the number of partitions of the database. It is autopopulated with default number of partitions. You can edit and provide the number of partitions as required. For example, 2.</td>
</tr>
<tr>
<td>Minimum Connections Per Partitions</td>
<td>Specifies the minimum connections per partitions of the database. It is autopopulated with default minimum connections per partitions. You can edit and provide the minimum connections per partitions as required. For example, 3.</td>
</tr>
<tr>
<td>Maximum Connections Per Partitions</td>
<td>Specifies the maximum connections per partitions of the database. It is autopopulated with default maximum connections per partitions. You can edit and provide the maximum connections per partitions as required. For example, 5.</td>
</tr>
</tbody>
</table>

3. Click ![Icon](image) to use database options.

The Database Options page appears. It displays the available database options.
To use the database options, select keys and double-click the cells under the **Value** column to set the values of the keys. Use ✅ to save the database options.
MySQL

You can create MySQL environments by providing the necessary connection parameters.

Before creating a MySQL environment, you should take a note of the following:

- Prerequisites
- JDBC driver details
- TLS connection details
- JDBC connection parameters

Prerequisites

Prerequisite steps for establishing successful connection:

- **Creation of dedicated service account** for erwin with Metadata read-only privileges in MySQL database
- **Firewall connection open** between MySQL and erwin DI application server
- **MySQL Database port** opened to accept connections from erwin DI application server

JDBC Driver Details

MySQL JDBC driver is out of box packaged with erwin DI application. Hence, no JDBC driver configuration is required from end user standpoint.

TLS Connection Details

- The MySQL JDBC driver supports connection via TLS 1.2. The TLS protocol parameter needs to be added to JDBC URL string to ensure that the connection is via TLS.
- JDBC URL being used to connect via TLS: jdbc:mysql://IPADDRESS:3306/DATABASENAME ?useSSL=true &enabledTLSProtocols=TLSv1.2

JDBC Connection Parameters
To enter MySQL connection parameters, follow these steps:

1. Select Database Type as MySQL while creating the environment.

The following connection parameters appear on the right hand side:

- Driver Name*: com.mysql.jdbc.Driver
- DB/DS Name/DSN*: Env\nD9931
- IP Address/Host Name*: localhost
- Port: 3306
- User Name*: ia
- Password*: ********
- URI*: jdbc:mysql://localhost/Env\nD9931

- Connection Pool Type*: HKARCP
- Number of Partitions*: 1
- Minimum Connections Per Partitions*: 3
- Maximum Connections Per Partitions*: 3
- Options: 

Note: If you change database type you will change database type.
2. Enter appropriate values in the fields (connection parameters). The fields marked with a red asterisk are mandatory.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driver Name</td>
<td>Specifies the JDBC driver name for connecting to the database. For example, com.mysql.jdbc.Driver</td>
</tr>
<tr>
<td>DBMS Name/DSN</td>
<td>Enter the MySQL database name. For example, ErwinDIS931.</td>
</tr>
<tr>
<td>IP Address/Host Name</td>
<td>Enter the IP address or server host name. For example, 10.32.445.21</td>
</tr>
<tr>
<td>Port</td>
<td>Specifies the port to connect with the database. 3306 is the default port for the MySQL database. You can change it, if required.</td>
</tr>
<tr>
<td>User Name</td>
<td>Enter the MySQL (Service account) user name. For example, erwinuser.</td>
</tr>
<tr>
<td>Password</td>
<td>Enter the MySQL (Service account) password. For example, goerwin@1.</td>
</tr>
<tr>
<td>URL</td>
<td>Specifies the full JDBC URL that is used to establish a connection with the database. It is autopopulated based on the other parameters. For example, jdbc:mysql://IPADDRESS:3306/DATABASENAME</td>
</tr>
<tr>
<td>Connection Pool Type</td>
<td>Specifies the connection pool type being used to connect via JDBC. For example, HIKARICP and BONECP.</td>
</tr>
<tr>
<td>Number of Partitions</td>
<td>Specifies the number of partitions of the database. It is autopopulated with default number of partitions. You can edit and provide the number of partitions as required. For example, 1.</td>
</tr>
<tr>
<td>Minimum Connections Per Partitions</td>
<td>Specifies the minimum connections per partitions of the database. It is autopopulated with default minimum connections per partitions. You can edit and provide the minimum connections per partitions as</td>
</tr>
<tr>
<td>Field Name</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Maximum Connections Per Partitions</td>
<td>Specifies the maximum connections per partitions of the database. It is autopopulated with default maximum connections per partitions. You can edit and provide the maximum connections per partitions as required. For example, 5.</td>
</tr>
</tbody>
</table>

To use the database options, click 

The Database Options page appears. It displays the available database options.

Select keys and double-click the cells under the **Value** column to set the values of the keys. Use ✅ to save the database options.
Snowflake

You can create Snowflake environment by providing the necessary connection parameters. Before creating a Snowflake environment, ensure that you have the following:

- Prerequisites
- JDBC driver configuration
- TLS connection configuration
- JDBC connection parameters

Prerequisites

To establish a connection, ensure that you have:

- **Created a dedicated service account** for erwin with Metadata read-only privileges in Snowflake database
- **Snowflake Database ports, 443 and 80**, available via firewall to accept connections from erwin Data Intelligence (erwin DI) application server

JDBC Driver Configuration

Currently Snowflake JDBC driver is not packaged with erwin DI application. Hence, you can download it [here](#).

Once downloaded, copy the Snowflake drivers to the following location on the erwin DI application server:

\Apache Software Foundation\<Tomcat X.X>\webapps\erwinDISuite\WEB-INF\lib

TLS Connection Configuration

Snowflake JDBC driver version 3.1.x and above implement TLS v1.2 and provide the latest security patches on the protocol. Once configured, the connection uses TLS 1.2 encryption by default.
If required, you can add SSL Parameter in the JDBC connection string as follows:

```
jdbc:snowflake://<accountname>.snowflakecomputing.com/
?warehouse=DataWarehouseName&db=DatabaseName&schema=
SchemaName&ssl=on
```

**JDBC Connection Parameters**

To configure Snowflake connection parameters, follow these steps:

1. While creating the environment, select Database Type as Snowflake.

The following connection parameters appear on the right side.
2. Enter appropriate values in the fields (connection parameters). The fields marked with a red asterisk are mandatory.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driver Name*</td>
<td>Specifies the JDBC driver name for connecting to the database.</td>
</tr>
<tr>
<td></td>
<td>For example, com.snowflake.client.jdbc.SnowflakeDriver</td>
</tr>
<tr>
<td>DBMS Name/DSN*</td>
<td>Enter the Snowflake database name.</td>
</tr>
<tr>
<td></td>
<td>For example, AW2012_DV.</td>
</tr>
<tr>
<td>IP Address/Host Name*</td>
<td>Enter &lt;accountname&gt;.snowflakecomputing.com</td>
</tr>
<tr>
<td></td>
<td>For example, analytixds.us-east-3.snowflakecomputing.com</td>
</tr>
<tr>
<td>Port</td>
<td>Specifies the port to connect with the database.</td>
</tr>
<tr>
<td></td>
<td>443 is the default port for the Snowflake database. You can change it, if</td>
</tr>
<tr>
<td></td>
<td>required.</td>
</tr>
<tr>
<td>User Name</td>
<td>Enter the Snowflake (Service account) username.</td>
</tr>
<tr>
<td></td>
<td>For example, shawn.</td>
</tr>
<tr>
<td>Password</td>
<td>Enter the Snowflake (Service account) password.</td>
</tr>
<tr>
<td></td>
<td>This field is available only when Use KeyPair is not selected.</td>
</tr>
<tr>
<td>Field Name</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Use KeyPair</td>
<td>Specifies whether key pair authentication is used to connect. Click to configure key pair. For more information, refer to the Configuring Key Pairs topic.</td>
</tr>
<tr>
<td>URL</td>
<td>Specifies the full JDBC URL that is used to establish a connection with the database. It is autopopulated based on the other parameters. For example, $jdb-c:snowflake://&lt;accountname&gt;.snowflakecomputing.com/?warehouse=DataWarehouseName&amp;db=DatabaseName&amp;schema=SchemaName$</td>
</tr>
<tr>
<td>DBMS Instance Schema</td>
<td>Specifies the schema of the database. Use this option to select multiple or narrow down to single schema.</td>
</tr>
<tr>
<td>Connection Pool Type</td>
<td>Specifies the connection pool type being used to connect via JDBC. For example, HIKARICP and BONECP.</td>
</tr>
<tr>
<td>Number of Partitions</td>
<td>Specifies the number of partitions of the database. It is autopopulated with default number of partitions. You can edit and provide the number of partitions as required. For example, 1.</td>
</tr>
<tr>
<td>Minimum Connections Per Partitions</td>
<td>Specifies the minimum connections per partitions of the database. It is autopopulated with default minimum connections per partitions. You can edit and provide the minimum connections per partitions as required. For example, 3.</td>
</tr>
<tr>
<td>Maximum Connections Per Partitions</td>
<td>Specifies the maximum connections per partitions of the database. It is autopopulated with default maximum connections per partitions. You can edit and provide the maximum connections per partitions as required. For example, 5.</td>
</tr>
</tbody>
</table>

To configure database options, click 📦.

The Database Options page appears. It displays the available database options.
Select keys and double-click the cells under the Value column to set the values of the keys. Click ✓ to save the database options.

**Configuring Key Pairs**

erwin Data Intelligence (erwin DI) supports key pair authentication for Snowflake. To use this authentication, ensure that you do the following:

1. Generate a private and public key using OpenSSL. You can generate encrypted or unencrypted keys.
2. Configure public and private keys to your Snowflake user account.
3. Move the bc-fips-1.0.2.jar file from \Apache Software Foundation\<Tomcat X.X>\webapps\erwinDISuite\WEB-INF\lib to \Apache Software Foundation\<Tomcat X.X>\lib and restart tomcat.

You can configure a key pair using an encrypted or unencrypted private key.

**Encrypted Keys**

To configure a key pair using encrypted private key in erwin DI, follow these steps:
1. Ensure that Encrypted Private File is switched ON.
   By default, Encrypted Private File and Upload Key Pair File are switched ON.
2. In the Passphrase box, enter the passphrase.
3. Under Key Pair File, click to browse and select the encrypted private key file.
4. Click Upload.
   The private key is uploaded and the key pair is configured.

**Unencrypted Keys**

To configure a key pair using unencrypted private key in erwin DI, follow these steps:

1. Switch Encrypted Private File to OFF.
2. Under Key Pair File, click to browse and select the unencrypted private key file.
3. Click Upload.
   Alternatively, you can switch Upload Key Pair File to OFF and paste the unencrypted private key in the Private Key text box. Then, click Upload.
   The private key is uploaded and the key pair is configured.
MS Dynamics CRM

You can create MS Dynamics CRM environment by providing the necessary connection parameters.

Before creating a MS Dynamics CRM environment, you should take a note of the following:

- Prerequisites
- JDBC driver details
- TLS connection details
- JDBC connection parameters

Prerequisites

Prerequisite steps for establishing successful connection:

- **Creation of dedicated service account** for erwin with Metadata read-only privileges in MS Dynamics CRM database
- **CRM Server IP Address should be mapped with Host Names** in the file called “Hosts” which is available in the location - C:\Windows\System32\drivers\etc
- Generate CRM Domain trusted Certificate in erwin application server using InstallCert.t.java and place the generated “jssecacerts” file in the location - C:\Program Files\AdoptOpenJDK\jdk-XXX\jre\lib\security


JDBC Driver Details

The MS Dynamics CRM JDBC driver is not packaged with erwin DI application. Hence, customers needs to use the jdbc driver available at their end for MS Dynamics CRM (CDATA, Progress etc.)

You can download CDATA driver from the URL mentioned below.

**Download URL:** https://www.cdata.com/drivers/dynamicscrm/download/
MS Dynamics CRM

**Location to configure the JDBC driver:** Once downloaded, the MS Dynamics CRM drivers should be placed in the following path in erwin application server: `\Apache Software Foundation\<Tomcat X.X>\webapps\erwinDISuite\WEB-INF\lib` and restart the Tomcat.

**TLS Connection Details**

The CDATA MS Dynamics CRM driver uses SSL by default, so you will not need to set any additional properties. The connection will use TLS 1.2 encryption.

**JDBC Connection Parameters**

To enter MS Dynamics CRM connection parameters, follow these steps:

1. Select **Database Type** as **Other** while creating the environment.

The following connection parameters appear on the right hand side.
2. Enter appropriate values in the fields (connection parameters). The fields marked with a red asterisk are mandatory.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driver Name</td>
<td>Specifies the JDBC driver name for connecting to the database.</td>
</tr>
<tr>
<td></td>
<td>For example, cdata.jdbc.dynamicscrm.DynamicsCRMDriver</td>
</tr>
<tr>
<td>DBMS Name/DSN</td>
<td>Enter the MS Dynamics CRM Database Name.</td>
</tr>
<tr>
<td></td>
<td>For example, CRM.</td>
</tr>
<tr>
<td>IP Address/Host Name</td>
<td>Enter the IP Address or Host Names of MS Dynamics CRM server.</td>
</tr>
<tr>
<td></td>
<td>For example, 10.45.21.123</td>
</tr>
<tr>
<td>Port</td>
<td>Specifies the port to connect with the database.</td>
</tr>
<tr>
<td></td>
<td>443 is the default port for MS Dynamics CRM. You can change it, if required.</td>
</tr>
<tr>
<td>User Name</td>
<td>Enter the MS Dynamics CRM (Service account) user name.</td>
</tr>
<tr>
<td></td>
<td>For example, domain\erwinuser.</td>
</tr>
<tr>
<td>Password</td>
<td>Enter the MS Dynamics CRM (Service account) password.</td>
</tr>
<tr>
<td>Field Name</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| URL                | Specifies the full JDBC URL that is used to establish a connection with the database.  
It is autopopulated based on the other parameters.  
For example, jdbc:dynamicscrm:User=UserName;Password=XXX;URL=\<MS Dynamics CRM URL\>; 
If user trying to connect CRM online version, then append the following value to above mentioned connection string CRM Version=CRM Online; |
| DBMS Instance Schema | Specifies the schema of the database.  
For example, DynamicsCRM.                                                                                                                                 |
| Connection Pool Type | Specifies the connection pool type being used to connect via JDBC.  
For example, HIKARICP and BONECP.                                                                                                                       |
| Number of Partitions | Specifies the number of partitions of the database.  
It is autopopulated with default number of partitions. You can edit and provide the number of partitions as required. For example, 1. |
| Minimum Connections Per Partitions | Specifies the minimum connections per partitions of the database.  
It is autopopulated with default minimum connections per partitions. You can edit and provide the minimum connections per partitions as required. For example, 3. |
| Maximum Connections Per Partitions | Specifies the maximum connections per partitions of the database.  
It is autopopulated with default maximum connections per partitions. You can edit and provide the maximum connections per partitions as required. For example, 5. |

To use database options, click [ ].

The Database Options page appears displaying the different options available.
Select keys and double-click the cells under the **Value** column to set the values of the keys. Use ✅ to save the database options.
You can create SAP environments by providing the necessary connection parameters.

Before creating a SAP environment, you should take a note of the following:

- **Privileges**
- **Prerequisites**
- **JDBC driver details**
- **TLS connection details**
- **JDBC connection parameters**

**Privileges**

Privileges given to service account:

- User type = System
- User group = SUPER
- Authorization profile = S_DDIC

**Prerequisites**

Prerequisite steps for establishing successful connection:

- **Creation of dedicated service account** for erwin with Metadata read-only privileges in SAP system
- Open Firewall connection between SAP and erwin DI application server
- Get the SAP System Number and Client details

**JDBC Driver Details**

The SAP JCO driver is not packaged with erwin DI application. Hence, customer must get the JCO driver from their respective SAP team and deploy the same in erwin application server.

The following sapjco files are required:
- Sapjco.jar
- Sapjco3.dll

**Location to place these files**
- Copy sapjco.jar into webinf/lib folder
- Copy sapjco3.dll copy into windows/system32 folder

The tool connects to the SAP system directly using SAP JCO drivers and not to SAP backend database.

**TLS Connection Details**

In order to use SSL with the JCO, we will need to:
- Set up the SAP system for SSL (SNC setup)
- Create a certificate (X509) for the user
- Pass the user as $X509CERT$ (check JCO doc)
- Pass some key from the cert as passwd in the JCO

**JCO Connection Parameters**

To enter SAP connection parameters, follow these steps:
1. Select Database Type as SAP while creating the environment.

The following connection parameters appear on the right-hand side.

2. Enter appropriate values in the fields (connection parameters). The fields marked with a red asterisk are mandatory.
<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Number</td>
<td>Specifies the SAP System Instance Number (range 0-99). For example, 24.</td>
</tr>
<tr>
<td>Client</td>
<td>Specifies the SAP Client number (range 000-999). For example, 800.</td>
</tr>
<tr>
<td>IP Address/Host Name</td>
<td>Specifies the IP address or server host name of the database. For example, 192.168.100.200</td>
</tr>
<tr>
<td>User Name</td>
<td>Specifies the SAP (Service account) username. For example, sapuser.</td>
</tr>
<tr>
<td>Password</td>
<td>Specifies the SAP (Service account) password. For example, goerwin@1.</td>
</tr>
<tr>
<td>CSV File Upload</td>
<td>Browse the CSV file which contains name of SAP tables to be harvested.</td>
</tr>
<tr>
<td>Field Delimiter</td>
<td>Select the required delimiter. For example: , [Comma].</td>
</tr>
</tbody>
</table>
Assigning Roles and Users

You can give users the write access to an environment in the following two ways:

- Assign roles to the environment and the users assigned to these roles get write access to the environment
- Assign users directly to an environment

Ensure that you provide necessary permissions to the roles assigned to the users.

Assigning Roles

To assign roles, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, right-click an environment.
   The available options appear.
3. Click **Assign Users or Roles**.

The Assign/Unassign Users or Roles page appears. By default, the Roles tab opens.

You can click View to view users assigned to a role.
Assigning Roles and Users

4. Select the required roles.

5. Click ✯.

The selected roles are assigned to the environment.

Assigning Users

To assign users, on the Assign/Unassign Users or Roles page, click the Users tab.
Assigning Roles and Users

<table>
<thead>
<tr>
<th>#</th>
<th>Select User</th>
<th>User ID</th>
<th>User Full Name</th>
<th>Assigned Roles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>jadams</td>
<td>Joey Adams</td>
<td>Tech Data Steward_GER</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>John Doe</td>
<td>John Doe</td>
<td>Old_DataSteward</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>mjonas</td>
<td>Mike Jones</td>
<td>Data Owner_UK</td>
</tr>
</tbody>
</table>

Select the required users and click 📢.

The users are assigned to the environment.
Managing Environments

Managing Environments involves:

- Editing or deleting environments
- Enable DQ Sync for environments
- Importing metadata from different environments

Editing and Deleting Environments

To edit or delete environments, follow these steps:

1. In the Data Catalog pane, right-click an environment.
   The options available appear.

2. Use the following options:
   **Edit Environment**
   Use this option to update the environment details.
Managing Environments

The status of an environment is displayed according to the workflow assigned to the environment. For more information on assigning workflow to environments, refer to the Managing Metadata Manager Workflows section.

**Delete Environment**

Use this option to delete the environment.

**Enabling DQ Sync**

You can view data quality analysis for an environment, tables, and columns when you enable DQ Sync on your environments.

DQ Sync is available for Oracle, Salesforce, Snowflake, MySQL, MSSQL, Hadoop, and PostgreSQL database types.

To enable DQ sync, follow these steps:

1. Right-click an environment and click Edit Environment.

   The Edit Environment page appears.
2. Switch the **Enable DQ Sync** option On.  
This displays the data quality analysis from DQLabs for an environment in the Metadata Manager.

Ensure that you configure DQLabs the erwin DI to view the **Enable DQ Sync** option. For more information, refer to the [Configuring DQLabs](#) topic.

Once you have enabled DQ Sync for an environment, to data quality analysis results in Metadata Manager, ensure that you do the following:

- Add your environments, tables, and columns as datasets in DQLabs, and run data profiling. For more information, refer to [Run Data Profiling](#) topic.
- Then, schedule a job in erwin DI to sync the data quality analysis results from DQLabs.
Managing Environments

Once the data from DQLabs is synced, DQ Score, Impact Score, and Drift Alert for the environment are displayed.

Importing Metadata from an Environment

To import metadata from an environment, follow these steps:
1. In the **Data Catalog** pane, right-click an environment.

![Diagram of Data Catalog pane with options](image)

2. Click **Import Environment**.

The Import Environment page appears.

![Import Environment dialog box](image)

3. Drag and drop or use ![Drag-n-Drop icon](image) to browse the exported AMP file.

4. Click ![Upload icon](image)
5. Select Schemas and appropriate import metadata options.

Select the **Version Environment** check box to create a version of the environment.

6. Click ➡.

7. Select the tables and click 📌.

The environment is imported.
Marking your technical and business assets as sensitive is an important aspect of metadata management. It is possible to update sensitivity of technical and business assets in bulk.

You can select multiple columns or tables in the Data Dictionary grid and update their sensitivity. For more information on updating sensitivity in bulk at column or table level, refer to the Data Dictionary topic.

Sometimes a column and its associated assets are required to be marked sensitive. You can update sensitivity of the column and its associated assets in a mind map. For more information on updating sensitivity of assets in a mind map, refer to the Mind Map topic.

You can also update sensitivity of columns in a lineage report. For more information on updating sensitivity of columns in a lineage report, refer to the Lineage topic.
Data Dictionary

You can update the sensitivity of tables and columns in an environment in bulk. You can also update the sensitivity of the system and environment containing these tables and columns. Updating sensitivity involves marking, tables and columns as sensitive with an appropriate sensitive data indicator (SDI) classification.

You can configure email notifications to be sent whenever sensitivity is updated in bulk. For more information on configuring email notifications, refer to the Configuring Sensitivity Update Notifications topic.

To update sensitivity of tables or columns from the Data Dictionary tab, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, click an environment.

By default, the Data Dictionary tab opens.

The Data Dictionary tab displays tables and columns in an environment along with the sensitive data indicator. In the grid, sensitive assets are indicated using , and non sensitive assets are indicated using .

On the Data Dictionary tab, you can update sensitivity of the asset(s) as per the following:

- **Bulk**
- **Individual**
Table Level

Bulk Asset Update

You can update the sensitivity in bulk at **table** and **column** levels.

**Table Level**

To update sensitivity of tables in bulk, follow these steps:

1. **On the Data Dictionary tab, select the required rows.**
   
   You can use the check box at top to select all the rows.

2. **Hover over Update Sensitivity.**

   ![Data Dictionary Tab with Select Option](image)

3. **Click Selected Table(s).**

   The Update Sensitivity For Table(s) page appears.
4. Enter or select appropriate values in the fields. Refer to the following table for field descriptions.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitive Data Indicator Classification</td>
<td>Specifies the sensitivity data indicator (SDI) classification of the selected tables. Also, you can add multiple classifications to the selected tables. For example, PHI, Confidential. For more information on configuring SDI classifications, refer to the Configuring Sensitivity Classifications topic.</td>
</tr>
<tr>
<td>Update Sensitivity For</td>
<td>Specifies whether sensitivity is applicable to:</td>
</tr>
<tr>
<td></td>
<td>▪ Column(s): Switch <strong>Column(s)</strong> to <strong>YES</strong> to apply the sensitivity to all the columns in the selected tables.</td>
</tr>
<tr>
<td></td>
<td>▪ Environment: Switch <strong>Environment</strong> to <strong>YES</strong> to apply sensitivity to the environment containing the tables.</td>
</tr>
</tbody>
</table>
Field Name | Description
---|---
System: Switch **System** to **Yes** to apply sensitivity to the system containing the tables.

**Metadata Update Options**

Specifies whether sensitivity is applicable to:

- Unclassified only: Click **Unclassified Only** to apply sensitivity to assets that are not marked sensitive.
- All Classified Only: Click **All Classified Only** to apply sensitivity to assets that are marked sensitive.
- All Classified And Unclassified: Click **All Classified And Unclassified** to apply sensitivity to both the types of assets, sensitive or not sensitive.

5. Click **Update**.

The sensitivity of the metadata is updated based on the options you selected.

**Column Level**

To update sensitivity of columns in bulk, follow these steps:

1. On the **Data Dictionary** tab, select the required rows.
   
   You can use the check box at top to select all the rows.

2. Hover over **Update Sensitivity**.

3. Click **Selected Column(s)**.
4. Enter or select appropriate values in the fields. Refer to the following table for field descriptions.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitive Data Indicator Classification</td>
<td>Specifies the sensitivity data indicator (SDI) classification of the selected columns. Also, you can add multiple classifications to the selected columns. For example, PHI, Confidential. For more information on configuring SDI classifications, refer to the Configuring Sensitivity Classifications topic.</td>
</tr>
<tr>
<td>Update Sensitivity For</td>
<td>Specifies whether sensitivity is applicable to:</td>
</tr>
<tr>
<td></td>
<td>▪ Table(s): Switch <strong>Table(s)</strong> to <strong>YES</strong> to apply sensitivity to the tables containing the columns.</td>
</tr>
<tr>
<td></td>
<td>▪ Environment: Switch <strong>Environment</strong> to <strong>YES</strong> to apply sensitivity</td>
</tr>
</tbody>
</table>
## Table Level

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>to the environment containing the columns.</td>
</tr>
<tr>
<td></td>
<td>- System: Switch <strong>System</strong> to <strong>Yes</strong> to apply sensitivity to the system containing the columns.</td>
</tr>
</tbody>
</table>

**Metadata Update Options**

Specifies whether sensitivity is applicable to:

- Unclassified only: Click **Unclassified Only** to apply sensitivity to assets that are not marked sensitive.
- All Classified Only: Click **All Classified Only** to apply sensitivity to assets that are marked sensitive.
- All Classified And Unclassified: Click **All Classified And Unclassified** to apply sensitivity to both the types of assets, sensitive or not sensitive.

5. Click **Update**.

The sensitivity of the metadata is updated based on the options you selected.

### Individual Asset Update

You can view and update the sensitivity of technical assets (systems, environments, tables, and columns) individually.

To view and update the sensitivity of technical assets individually, follow these steps:

- **Table and Column:**
  In the Data Dictionary tab, you can click `<Column_Name>` and `<Table_Name>` to view and edit the sensitivity of the column and table respectively.

- **Environment:**
  Sensitivity of an environment can be viewed under the Environment Details tab. You
can **edit an environment**, and update its sensitivity under the Miscellaneous tab.

**System:**
The sensitivity of the system can be viewed under the System Details tab. You can **edit**
Table Level

a system, and update its sensitivity.

Table Level Metadata Management Guide

<table>
<thead>
<tr>
<th>Data Dictionary</th>
<th>System Details</th>
<th>Extended Properties</th>
<th>Data Lineage</th>
<th>Impact Analysis</th>
<th>Mindmap</th>
<th>Associations</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Name</td>
<td>SQLTechPubs</td>
<td>Primary Move Type</td>
<td>Source/Target</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Steward</td>
<td>John Doe</td>
<td>DQ Score</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Purpose</td>
<td>It contains sales source data.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Server Platform</td>
<td></td>
<td>Server OS Version</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DBMS Platform</td>
<td></td>
<td>DBMS Version</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>File Management Type</td>
<td></td>
<td>File Location</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESB Platform Type</td>
<td></td>
<td>ESB Manager Name</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total DBSize</td>
<td></td>
<td>Total Number Of Tables</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Definition Of The Day</td>
<td></td>
<td>Batch Extract Window</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average User</td>
<td></td>
<td>Average Concurrent Users</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensitive Data Indicator Classification</td>
<td>Secret</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tags</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Lineage

You can update the sensitivity of columns in a lineage report. You can also update the sensitivity of tables, environments, and systems containing these columns.

You can configure email notifications to be sent whenever sensitivity is updated in bulk. For more information on configuring email notifications, refer to the Configuring Sensitivity Update Notifications topic.

To update sensitivity of columns in lineage reports, follow these steps:

1. In the Data Catalog pane, click an environment.
   By default, the Data Dictionary tab opens.
2. On the Data Dictionary tab, click for the required column.
   By default, dual lineage of the selected table page appears in Graphical View.
3. In the lineage, click a column, and then right-click the column.

4. Use the following options:

**Selected Asset Only**

Use this option to update sensitivity of the column. You can also update sensitivity of the table, environment, and system containing the column.

**All Associated Assets**

Use this option to update sensitivity of multiple columns in the lineage report. You can also update sensitivity of the tables, environments, and systems containing these columns.

Refer to the following table for field descriptions when you use above options.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitive Data Indicator Classification</td>
<td>Specifies the sensitivity data indicator (SDI) classification of the selected columns. Also, you can add multiple classifications to the selected columns. For example, PHI, Confidential. For more information on configuring SDI classifications, refer to the Configuring Sensitivity Classifications topic.</td>
</tr>
<tr>
<td>Auto Update Sensitivity For</td>
<td>Specifies whether the sensitivity is applicable to:</td>
</tr>
<tr>
<td></td>
<td>▪ System: Switch <strong>System</strong> option on to apply sensitivity to all the systems containing the columns.</td>
</tr>
<tr>
<td></td>
<td>▪ Environment: Switch <strong>Environment</strong> option on to apply sensitivity to all the environments containing the columns.</td>
</tr>
</tbody>
</table>
5. Click **Update**.

The sensitivity of the assets is updated based on the options you selected.

To update sensitivity of multiple columns in lineage reports, follow these steps:

1. In the lineage report, right-click the column.
2. Click **All Associated Assets**.

The Sensitive Data Classification - Lineage page appears.
3. **Select the required rows and click** **Next**.

You can filter the rows using the filter box.

The Selected Records page appears. It displays the selected rows for verification. You can clear the check box to remove a row from the selected records.

4. **Click** **Next**.

The following page appears.
5. Enter or select appropriate values in the fields. Refer to the table above for field descriptions.

6. Click Update.

   The sensitivity of the metadata is updated based on the options you selected.
Mind Map

You can update the sensitivity of an asset and its associated technical and business assets through a mind map.

Business assets refer to business terms, business policies, business rules, and other business assets defined in the Business Glossary Manager Settings. Technical assets refer to columns, tables, environments, and systems. A column can be associated with business and technical assets. For more information on associating columns, refer to the Associating Columns topic.

You can configure email notifications to be sent whenever sensitivity is updated in bulk. For more information on configuring email notifications, refer to the Configuring Sensitivity Update Notifications topic.

Selected Asset

You can update sensitivity of an asset individually through a mind map.

To update sensitivity of assets individually through mind maps, follow these steps:

1. In the Data Catalog pane, click an environment.
   
   By default, the Data Dictionary tab opens.

2. On the Data Dictionary tab, click for the required column.
   
   The Mind Map page appears.

3. On the mind map, right-click the required asset.
The options available for the asset appear.

4. Click **Selected Asset Only**.

The Sensitive Data Classification - Mindmap page appears.

The Auto Update Sensitivity For field does not appear for business assets.
5. Enter or select appropriate values in the fields. Refer to the following table for field descriptions:

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitive Data Indicator Classification</td>
<td>Specifies the sensitivity data indicator (SDI) classification of the selected asset. Also, you can add multiple classifications to the selected asset. For example, PHI. For more information on configuring SDI classifications, refer to the Configuring Sensitivity Classifications topic.</td>
</tr>
</tbody>
</table>
| Update Sensitivity For | Specifies whether sensitivity is applicable to:  
  - System: Switch the **System** option on to apply sensitivity to all the systems containing the assets.  
  - Environment: Switch the **Environment** option on to apply sensitivity to all the environments containing the assets.  
  - Table: Switch the **Table** option on to apply sensitivity to the tables containing the assets. |

6. Click **Update**.

The sensitivity of the asset and metadata is updated based on the options you selected.

**Associated Assets**

You can update sensitivity of associated assets in bulk through a mind map.

To update sensitivity of associated assets through mind maps, follow these steps:

1. On the mind map, right-click an asset.

   The options available for the asset appear.
2. Click any one of the following:

- **All Associated Business Assets:**
  Click this option to update sensitivity of associated business assets.

- **All Associated Technical Assets:**
  Click this option to update sensitivity of associated technical assets.

- **All Associated Assets:**
  Click this option to update sensitivity of associated business and technical assets.

For example, if you click All Associated Business Assets then a list of all associated business assets appear. You can filter the assets by entering text in the filter box.
3. Select the required assets and click **Next**.

The Selected Records page appears. You can verify the selected assets and clear the check box if required.

4. Click **Next**.

The following page appears.
The Update Sensitivity For field does not appear if you are updating sensitivity of associated business assets.

5. Enter or select appropriate values in the fields. Refer to the table above for field descriptions.

6. Click Update.

   The sensitivity of the selected assets and metadata is updated based on the options you selected.
Adding Documents

You can add supporting documents, such as text files, audio files, video files, document links, and so on to an environment.

To add documents to environments, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, right-click an environment.
3. Click New document.

   The Environment Documents 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.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document Name</td>
<td>Specifies the name of the physical document being attached to the environment.</td>
</tr>
<tr>
<td></td>
<td>For example, Source Environment Details.</td>
</tr>
<tr>
<td>Document Object</td>
<td>Drag and drop document files or use ![Icon] to select and upload document files.</td>
</tr>
<tr>
<td>Document Owner</td>
<td>Specifies the document owner’s name.</td>
</tr>
<tr>
<td></td>
<td>For example, John Doe.</td>
</tr>
<tr>
<td>Document Link</td>
<td>Specifies the URL of the document.</td>
</tr>
<tr>
<td></td>
<td>For example, <a href="https://drive.google.com/file/d/2sC2_SZIyeFKI7OOnb5YkMBq4ptA7jhg5/view">https://drive.google.com/file/d/2sC2_SZIyeFKI7OOnb5YkMBq4ptA7jhg5/view</a></td>
</tr>
<tr>
<td>Description</td>
<td>Specifies the description about the document.</td>
</tr>
<tr>
<td></td>
<td>For example: The document has information about the environment details.</td>
</tr>
<tr>
<td>Approval Required Flag</td>
<td>Specifies whether the document requires approval.</td>
</tr>
<tr>
<td></td>
<td>Select the <strong>Approval Required Flag</strong> check box to select the document status.</td>
</tr>
</tbody>
</table>
Adding Documents

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document Status</td>
<td>Specifies the status of the document.</td>
</tr>
<tr>
<td></td>
<td>For example, In Progress.</td>
</tr>
<tr>
<td></td>
<td>This field is available only when the Approval Required Flag check box is selected.</td>
</tr>
</tbody>
</table>

5. Click 

The document is saved in the Environment Documents grid.

Once a supporting document is added, use the following options:

**Preview (.GetKeyDown)**

Use this option to preview the document for your information.

**Edit (toggleClass)**

Use this option to update the document details.

**Delete (toggleClass)**

Use this option to delete the document that is not required.
Cloning Environments

You can clone an environment under a system and use the same or different connection parameters in the cloned environment. The cloned environment is saved under the system.

To clone environments, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.

2. In the Data Catalog pane, right-click an environment.

3. Click Clone Environment.

   The New Environment Cloning 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.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Environment Name</td>
<td>Specifies the unique name of the environment. For example, EDW-Test. For more information on naming conventions, refer to the Best Practices section.</td>
</tr>
<tr>
<td>System Environment Type</td>
<td>Specifies the type of the environment. For example, development, test, or production.</td>
</tr>
<tr>
<td>Data Steward</td>
<td>Specifies the name of the data steward responsible for the environment. 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.</td>
</tr>
<tr>
<td>Server Platform</td>
<td>Specifies the server platform of the environment. For example, Windows.</td>
</tr>
<tr>
<td><strong>Field Name</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>--------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Server OS Version</td>
<td>Specifies the OS version of the environment's server.</td>
</tr>
<tr>
<td>File Management Type</td>
<td>Specifies the file management system (if the environment is a file-based source). For example, MS Excel.</td>
</tr>
<tr>
<td>File Location</td>
<td>Specifies a file path (if the environment is a file-based source). For example, C:\Users\Jane Doe\erwin\Mike - Target System</td>
</tr>
<tr>
<td>Production System Name</td>
<td>Specifies the system name being associated with the environment as the production system. For example, Enterprise Data Warehouse.</td>
</tr>
<tr>
<td>Version Label</td>
<td>Specifies the version label of the environment to track change history. For example, Alpha. For more information on configuring version display, refer to the Configuring Version Display of the Environments topic.</td>
</tr>
<tr>
<td>DQ Score</td>
<td>Specifies the overall data quality score of the environment. For example, High (7-8). For more information on configuring DQ scores, refer to the Configuring Data Profiling and DQ Scores topic.</td>
</tr>
<tr>
<td>Database Type</td>
<td>Specifies the database type. For example, Sql Server. Select the type of database from where you wish to scan metadata. Depending upon your choice of database type you need to provide additional fields (connection parameters) appearing on the right hand side.</td>
</tr>
</tbody>
</table>

There are no additional fields for MS Excel File, and XSD.

5. Click 🔄 to test the connection.
Cloning Environments

If the connection with database is established successfully then a success message pops up.

6. Click .

The environment is cloned and the cloned environment is saved under the system.

Different database types have different prerequisites and connection parameters:

- **SQL Server - via SQL or Window authentication mode**
- **Oracle and Oracle RAC**
- **MySQL**
- **Snowflake**
- **MS Dynamics CRM**
- **SAP ECC R/3 and IS-U Metadata via JCO Driver**
Viewing ER Diagram

You can view Entity Relationship (ER) diagram after scanning or importing metadata in an environment. You can view ER diagrams at environment level and export it in the JPG format.

To view entity relationship diagram, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, right-click an environment.
3. Click ER Diagram.
You can download the ER diagram. To download the ER diagram, click **Export Image**.
Viewing Workflow Logs

You can create your own workflow and assign it to a system. A workflow assigned to a system is applicable to all the environments under it. For more information on assigning workflows to environments, refer to the Managing Metadata Manager Workflows section. You can view workflow logs of environments to know the current stage of environments.

To view workflow logs of environments, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.

2. In the Data Catalog pane, click an environment.

3. Click the Workflow Log tab.

The workflow log of the environment appears. You can observe that the current workflow stage of the environment blinks in the diagram.

Use the following options:

User Comments (•)
Viewing Workflow Logs

Use this option to view users and the comments entered by the users in each stage.

Expand/Hide Users and Roles

Use this option to view or hide users and roles assigned to the stages of the workflow.

Collapse/Expand Roles

This option is enabled when you are in the Expand Users and Roles view. Use this to switch between the collapsed and expanded roles view.

Collapse/Expand Users

This option is enabled when you are in the Expand Users and Roles view. Use this to switch between the collapsed and expanded users view.

Export Image

Use this option to download the workflow in the JPG format.
Associating Environments

You can associate environments with business assets, systems, environments, tables, and columns. You can view these associations on mind maps and analyze associations.

Ensure that:

- Business assets are enabled. You can add custom business assets and enable them in Business Glossary Manager Settings.
- Relationship between environment and the asset type is defined. You can define associations and relationships in Business Glossary Manager Settings.

To associate environments with asset types, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, click an environment.
3. Click the Associations tab.
4. In the asset type (business policies, business terms, columns, environments, and tables) list, select an asset type to associate with the environment.
5. Click +.

The Relationship Associations page appears. Based on the asset type that you select, it
6. Select **Relationship Name**, and the asset type.
   If you know the term name, use the Search (partial matches) field to look up for it.

7. Click **Save**.
   The selected terms are associated with the environment and added to the list of associations.
   You can define as many associations as required.

Once you have created associations, you can use the following options under the **Actions** column:

**Add Association (†)**

Use this option to add associations using a qualifier.
Associating Environments

Edit Association (📝)

Use this option to edit the association.

Delete Association (🗑️)

Use this option to delete the association.

To view mind map, click the Mindmap tab. For more information on mind maps, refer to the Viewing Mind Maps topic.

You can associate multiple assets with an environment and view the associations based on a qualifier view in the mind map. For more information, refer to the Setting Up Associations Using Qualifiers topic.
Configuring Business Properties

You can configure business properties of all the tables and columns under an environment. You can also configure business properties at table level and update business properties of a table and business properties of its columns.

You can configure business properties only after importing/scanning metadata into an environment.

To configure business properties at environment level, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, right-click an environment.
3. Click Advanced Business Properties.

The Advanced Business Properties page appears.
4. Double-click cells to enter business properties of tables and columns.

5. Click to apply changes.

6. Click .

The business properties of all the tables and columns under the environment are updated.

To configure business properties at table level, follow these steps:

1. Under the Data Catalog pane, right-click a table.
2. Click **Advanced Business Properties**.

   The Advanced Business Properties page appears.

3. Double-click cells to enter table and column properties.

4. Click ![save](image) to apply changes.

5. Click ![save](image).

   The business properties of the table and its columns are updated.
Configuring Expanded Logical Name

You can update the expanded logical name for multiple tables/columns by scheduling a configuration job. The job updates the expanded logical name based on the table/column name, associated business term's name, and the associated business term's definition.

You should configure expanded logical name of tables and columns after scanning metadata.

You can run the job at both, system and environment levels:

- **System level**: The expanded logical name can be applied to all the tables and columns under the system. This includes all the environments under the system.
- **Environment level**: The expanded logical name can be applied to all the tables and columns under the environment.

For example, consider a scenario where you want to schedule a job to configure the expanded logical name of a table, RM_Resource and a column, Resource_ID. The parameters of the job are a business term catalog that has a business term, Resource, its definition, Sales Representative, and a splitter, Underscore (_). Refer to the following table to understand the parameters and their values:

<table>
<thead>
<tr>
<th>Entity</th>
<th>Value</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Splitter (specified while scheduling the job)</td>
<td>_ (Underscore)</td>
<td>Here, the part after the underscore (splitter), Resource, matches the Business Term. Therefore, it will be replaced with the business term definition and the part before the underscore, RM, will be retained in the expanded logical name.</td>
</tr>
<tr>
<td>Table Name</td>
<td>RM_Resource</td>
<td>Here, the part before the underscore, Resource, matches with the Business Term. Therefore, it will be replaced with the business term definition and the part after the underscore, ID will be retained in the expanded logical name.</td>
</tr>
<tr>
<td>Column Name</td>
<td>Resource_ID</td>
<td></td>
</tr>
</tbody>
</table>
Configuring Expanded Logical Name

<table>
<thead>
<tr>
<th>Entity</th>
<th>Value</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Term</td>
<td>Resource</td>
<td>This should match with a part of the table and column names above.</td>
</tr>
</tbody>
</table>
| Business Term Definition | Sales Representative | In the updated expanded logical name, this will replace the part of the table/column name that matches the business term name. That is:  
  - For the table, RM will be retained and Resource will be replaced with Sales Representative.  
  - For the column, ID will be retained and Resource will be replaced with Sales Representative. |
| Expanded Logical Name | <Blank>             | Expanded logical name is formed from the business term definition and part of table or column names. |

After the job runs successfully, the expanded logical name of the table and column is updated as mentioned in the following table:

<table>
<thead>
<tr>
<th>Entity</th>
<th>Expanded Logical Name</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table</td>
<td>RM Sales Representative</td>
<td>Here, RM retained from the table name and Sales Representative is added from business term definition.</td>
</tr>
<tr>
<td>Column</td>
<td>Sales Representative ID</td>
<td>Here, ID is retained from the column name and Sales Representative is added from business term definition.</td>
</tr>
</tbody>
</table>

To configure expanded logical name, follow these steps:

1. In the **Data Catalog** pane, right-click a system or environment.
   The available options appear.
2. Click **Configure Expanded Logical Name**.

   The Configure Expanded Logical Name page appears.
3. Select or enter appropriate values in the fields. Fields marked with a red asterisk are mandatory. Refer to the following table for field descriptions.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catalogs</td>
<td>Select the catalog containing the required business term.</td>
</tr>
<tr>
<td>Splitter</td>
<td>Select appropriate splitter based on the table name or column name.</td>
</tr>
<tr>
<td>ELN Scope</td>
<td>Select an appropriate scope of the job.</td>
</tr>
<tr>
<td></td>
<td>▪ <strong>Columns</strong>: Indicates that the expanded logical names of all the</td>
</tr>
</tbody>
</table>
### Configuring Expanded Logical Name

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Columns</td>
<td>columns in this system are configured</td>
</tr>
<tr>
<td><strong>Tables</strong></td>
<td>Indicates that the expanded logical name of all the tables in this system are configured</td>
</tr>
<tr>
<td><strong>Both</strong></td>
<td>Indicates that the expanded logical names of all the tables and columns in this system are configured</td>
</tr>
<tr>
<td>Job Name</td>
<td>A default job name is autopopulated. You can modify it and enter a job name.</td>
</tr>
<tr>
<td>Interval</td>
<td>Select an interval of the job. Interval sets the frequency of the job. For example: If you set the interval every week then the job will be executed every week.</td>
</tr>
<tr>
<td>Local or Server</td>
<td>Select the machine whose clock decides the time of the scheduled scan.</td>
</tr>
<tr>
<td><strong>Local</strong></td>
<td>Refers to your local machine.</td>
</tr>
<tr>
<td><strong>Server</strong></td>
<td>Refers to the machine where erwinDIS has been deployed.</td>
</tr>
<tr>
<td>Schedule Job On</td>
<td>Select date and time of the execution of the job.</td>
</tr>
<tr>
<td>Notify Me</td>
<td>Turn the <strong>Notify Me</strong> to <strong>ON</strong> to receive a notification email about the scheduled job.</td>
</tr>
<tr>
<td>Notification Email</td>
<td>This field is autopopulated with your email ID. You receive email notifications about the scheduled job from the Admin Email ID, configured in the Email Settings. For more information on configuring Admin Email ID, refer to the <strong>Configuring Email Settings</strong> topic.</td>
</tr>
<tr>
<td>CC List</td>
<td>Enter a comma-separated list of email IDs that should receive the job notification.</td>
</tr>
</tbody>
</table>

4. Click **Add**.

The job is scheduled and added to the Scheduled Jobs list on the **Scheduled Jobs** tab.
You can edit the job using ✒️ or delete it using 🗑️.

The job is executed at the scheduled time and the expanded logical names of tables and columns are updated.
You can use this job to update the expanded logical name only once. Alternately, you can update expanded logical names under **table properties** and **column properties**.
Scanning and Managing Metadata

You can scan source and target metadata from different databases, data models, or flat files etc. Ensure that you create an appropriate environment depending on the database type. For example, if you want to scan metadata from SQL Server, then you should create the SQL Server environment.

The metadata scan adds data dictionary, table properties, and column properties that can be validated and updated. You can enrich your metadata by assigning codesets to columns as valid values. Tables and columns can be associated with business and technical assets and these associations can be viewed on a mind map. You can also assign workflows to tables and columns using the Workflow Manager and view workflow logs.

Scanning and managing metadata involves:

- Scanning metadata from data sources
- Adding tables
- Adding Columns
- Deleting tables and columns
- Scheduling metadata scans
- Updating table properties
- Updating column properties
- Validating data
- Assigning codesets to columns
- Viewing workflow logs of tables
- Viewing workflow logs of columns
- Associating tables
- Associating columns
Scanning Metadata

After creating systems and environments, the next logical step is to scan source and target metadata. Ensure that the environment database type and connection parameters are correct and the environment is able to establish connection with the database.

To scan source or target metadata, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, right-click the required environment.
3. Click Scan Metadata.
Scanning Metadata

The <Data_Base> Metadata Scan-Step1 page appears. For example, if it is the SQL Server environment, then the SqlServer Metadata Scan - Step1 page appears.

4. In the Database Schema(s) pane, select the database schemas.

5. In the Metadata Content pane, select the appropriate Import Metadata Options.

Refer to the following table for the descriptions of the metadata import options.

<table>
<thead>
<tr>
<th>Import Metadata Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add New</td>
<td>This option adds new objects to the existing object list. The existing metadata is not updated.</td>
</tr>
<tr>
<td>Update Existing + Add New</td>
<td>This option adds new objects to the existing list and at the same time the existing metadata is also updated.</td>
</tr>
<tr>
<td>Update Existing + Add New + Invalidate</td>
<td>This option adds new objects to the existing list, updates existing and invalidates table/column during the scanning process.</td>
</tr>
<tr>
<td>Delete &amp; Reload</td>
<td>This option deletes all existing metadata and scans only the new objects that have been selected.</td>
</tr>
</tbody>
</table>
### Scanning Metadata

<table>
<thead>
<tr>
<th><strong>Import Metadata Options</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Import Comments</td>
<td>Select the check box to import comments.</td>
</tr>
<tr>
<td>Import Sensitive Data</td>
<td>Select the check box to import sensitivity classification of the metadata from the data source.</td>
</tr>
<tr>
<td>Table(s)</td>
<td>Select the check box to import Tables.</td>
</tr>
<tr>
<td>View(s)</td>
<td>Select the check box to import Views.</td>
</tr>
<tr>
<td>Synonym(s)</td>
<td>Select the check box to import Synonyms.</td>
</tr>
<tr>
<td>Version Environment</td>
<td>Select the check box to create a version of the environment.</td>
</tr>
</tbody>
</table>

6. Click ➡️.

The `<Database_Name>` Metadata Scan Step-2 page appears. It pulls up the objects selected in Metadata Scan Step-1, such as Tables, Views and Synonyms.

7. Select the required objects.

8. Click ✓.

The metadata is scanned successfully and saved under the environment node.

You can also import metadata from:
Scanning Metadata

- MS Excel File
- JSON
- CSV (Flat File)
- XMI
- MS Access File
- XSD
MS Excel

You can import metadata from MS Excel files into an MS Excel environment.

To import metadata from MS Excel files, follow these steps:

1. In the Data Catalog pane, right-click an MS Excel environment.

2. Click Scan Metadata.
   The Excel Metadata Scan - Step1 page appears.
3. Drag and drop or use 📁 to browse and select the MS Excel file.

4. Use the following options to import metadata.

   **Default Template Import**

   Use this option to import metadata from the standard Excel template. To download the standard excel template, click 🗠.

   **Enable header selection**

   Use this option to allow header selection for the Excel file. Click **Enable header selection** and click ➜.

   The Excel Metadata Scan - Step2 page appears.
To select headers, on the Excel Metadata Scan - Step2 page, double-click the NOT IN USE cell.

**Skip & Assume first row as header**

You can use this option only when you click Enable header selection. Use this option to select the first row in the Excel file as headers.

Select the **Skip & Assume first row as header** check box and click .

The Excel Metadata Scan - Step2 page appears. The first row in the Excel file appears as headers.

To select alternate headers, double-click the header cell.

**Advance Template Import**

Use this option to import metadata from an advanced template. You can use the following import options with the advance template:
Import Extended Properties:
Use this option to import the extended properties into tables and columns.

Import Valid Values:
Use this option to import valid values into columns.

Import Indexes:
Use this option to import the indexes into columns.

5. Use the following update options.

Add New
Use this option to insert new metadata.

Update Existing + Add New
Use this option to update the existing metadata based on tables and columns in
the Excel file.

Update Existing + Add New + Invalidate
Use this option to update the existing metadata without deleting it.

Delete & Reload
Use this option to delete all the business properties and data dictionary stored
as metadata for this environment.

6. Click ➔.

The Excel Metadata Scan - Step2 page appears.

7. Select the required schema and tables.

8. Click ➔.

The metadata is imported and saved in the environment.
You can import metadata from JSON files into a JSON environment.

To import metadata from JSON files, follow these steps:

1. In the Data Catalog pane, right-click a JSON environment.

2. Click Scan Metadata.

   The JSON Metadata Scan - Step1 page appears.
3. Under the **JSON Schema** section, drag and drop or use 🗄 to browse and select the JSON schema file.

4. Under the **Data File [JSON]** section, drag and drop or use 🗄 to browse and select the JSON data file.

5. Use the following scan options:

   **Add New**
   
   Use this option to insert new metadata into the environment.

   **Update Existing + Add New**
   
   Use this option to update the existing metadata based on tables and columns in the JSON file.

   **Update Existing + Add New + Invalidate**
   
   Use this option to update the existing metadata without deleting it.

   **Delete & Reload**
   
   Use this option to delete all the business properties and data dictionary stored as metadata for this environment.

6. Click the appropriate **Import Model Type**.

7. Click ➡️.

   The JSON Metadata Scan - Step2 page appears.
8. Select the required schema and tables.

9. Click 🔄.

The metadata is imported and saved in the environment.
You can import metadata from CSV files into a CSV environment.

To import metadata from CSV files, follow these steps:

1. In the Data Catalog pane, right-click a CSV environment.

2. Click Scan Metadata.

   The CSV Metadata Scan - Step1 page appears.
3. Drag and drop or use to browse and select the delimiter file.

4. In the File Path(s) box, enter the file path.

5. Use the following scan options:

   **Add New**
   
   Use this option to insert new metadata into the environment.

   **Update Existing + Add New**
   
   Use this option to update the existing metadata based on table and columns in the CSV file.

   **Update Existing + Add New + Invalidate**
   
   Use this option to update the existing metadata without deleting it.

   **Delete & Reload**
   
   Use this option to delete all the business properties and data dictionary stored as metadata for this environment.

6. Click.

   The CSV Metadata Scan - Step2 page appears.
7. Select the required tables.

8. Click 

   The metadata is imported and saved in the environment.
You can import metadata from XMI files into a XMI environment.

To import metadata from XMI files, follow these steps:
1. In the Data Catalog pane, right-click a XMI environment.

2. Click Scan Metadata.

   The XMI Metadata Scan - Step1 page appears.
3. Drag and drop or use to browse and select the XMI file.

4. Use the following scan options:

   **Add New**
   - Use this option to insert new metadata into the environment.

   **Update Existing + Add New**
   - Use this option to update the existing metadata based on tables and columns in the XMI file.

   **Update Existing + Add New + Invalidate**
   - Use this option to update the existing metadata without deleting it.

   **Delete & Reload**
   - Use this option to delete all the business properties and data dictionary stored as metadata for this environment.

5. Click .

   The XMI Metadata Scan - Step2 page appears.
6. Select the required tables.

7. Click.

The metadata is imported and saved in the environment.
MS Access File

You can import metadata from MS Access files into a MS Access environment.

To import metadata from MS Access files, follow these steps:

1. In the Data Catalog pane, right-click a MS Access environment.
2. Click Scan Metadata.

   The MS Access Metadata Scan - Step1 page appears.
3. Drag and drop or use to browse and select the MS Access file.

4. Use the following scan options:

   **Add New**
   
   Use this option to insert new metadata into the environment.

   **Update Existing + Add New**
   
   Use this option to update the existing metadata based on tables and columns in the MS Access file.

   **Update Existing + Add New + Invalidate**
   
   Use this option to update the existing metadata without deleting it.

   **Delete & Reload**
   
   Use this option to delete all the business properties and data dictionary stored as metadata for this environment.

5. Click.

   The MS Access Metadata Scan - Step2 page appears.
6. Select the required tables.

7. Click ![button]

The metadata is imported and saved in the environment.
You can import metadata from XSD files into XSD environments.

To import metadata from XSD files, follow these steps:

1. In the Data Catalog pane, right-click a XSD environment.

2. Click Scan Metadata.
   The XSD Metadata Scan - Step1 page appears.
3. Under the Metadata File [XSD] section, use to browse or drag and drop the metadata file with .xsd extension.

4. Under the Data File [XML] section, use to browse or drag and drop the data file with .xml extension.

5. Use the following scan options:

   **Add New**
   
   Use this option to insert new metadata into the environment.

   **Update Existing + Add New**
   
   Use this option to update the existing metadata based on tables and columns in the XSD file.

   **Update Existing + Add New + Invalidate**
   
   Use this option to update the existing metadata without deleting it.

   **Delete & Reload**
   
   Use this option to delete all the business properties and data dictionary stored as metadata for this environment.

6. Click .

   The XSD Metadata Scan - Step2 page appears.
7. Select the required tables.

8. Click.

   The metadata is imported and saved in the environment.
Adding Tables

You can add tables in an environment manually and define their technical and business properties. You can also use User-Defined Fields to define additional properties of a table. UI labels of the User-Defined fields can be configured in Language Settings.

To add tables, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, right-click an environment.
3. Click Add Table/Component.

   The Add New Table page appears.
Adding Tables

4. Enter or select appropriate values in the fields. Refer to the following table for field description.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Sub-Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schema Name</td>
<td></td>
<td>Specifies the schema name of the table. For example, dbo.</td>
</tr>
<tr>
<td>Name</td>
<td></td>
<td>Specifies the physical name of the table. For example, Account or Currency.</td>
</tr>
<tr>
<td>System Name</td>
<td></td>
<td>Specifies the physical name of the system under which the table exists. For example, Enterprise Data Warehouse. You cannot edit this field.</td>
</tr>
<tr>
<td>Synonym Reference</td>
<td></td>
<td>Specifies the synonym reference of the table. For example, Sales_Reps _Information. This field is autopopulated during the metadata scan. You</td>
</tr>
<tr>
<td>Field Name</td>
<td>Sub-Field</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td></td>
<td><strong>Entity Type</strong></td>
<td>Specifies the entity type of the new component. It is auto-populated with <strong>Table</strong>.</td>
</tr>
<tr>
<td></td>
<td><strong>Environment Name</strong></td>
<td>Specifies the physical name of the environment under which the table exists. For example, EDW-Test. You cannot edit this field.</td>
</tr>
<tr>
<td></td>
<td><strong>No of Rows</strong></td>
<td>Specifies the total number of rows in the table. For example, 100.</td>
</tr>
<tr>
<td></td>
<td><strong>File Type</strong></td>
<td>Specifies the file type of the table if the table is in a file-based environment.</td>
</tr>
<tr>
<td><strong>Business Properties</strong></td>
<td><strong>Data Steward</strong></td>
<td>Specifies the name of the data steward responsible for the 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.</td>
</tr>
<tr>
<td></td>
<td><strong>Definition</strong></td>
<td>Specifies the definition of the table. For example: The table contains five columns with emp ID column as the primary key.</td>
</tr>
<tr>
<td></td>
<td><strong>Comments</strong></td>
<td>Specifies comments about the table. For example: The table contains details of the employees.</td>
</tr>
<tr>
<td></td>
<td><strong>Class</strong></td>
<td>Specifies the table class property. For more information on configuring table class, refer to <strong>Configuring Table and Column Class</strong> topic.</td>
</tr>
<tr>
<td></td>
<td><strong>DQ Score</strong></td>
<td>Specifies the overall data quality score of the table. For example, High (7-8).</td>
</tr>
<tr>
<td>Field Name</td>
<td>Sub-Field</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For more information on configuring DQ scores, refer to the Configuring Data Profiling and DQ Scores topic.</td>
</tr>
<tr>
<td>Logical Table Name</td>
<td>Specifies the logical name of the table. For example, if the physical name of a table is DIM_Customer, then the logical name of the table is Customer Dimension.</td>
<td></td>
</tr>
<tr>
<td>Expanded Logical Name</td>
<td>Specifies the expanded logical name of the table. For example, if the physical name of a table is RM_Resource, then the expanded logical name of the table is RM Sales Representative. You can configure expanded logical name of tables in bulk at system and environment level.</td>
<td></td>
</tr>
<tr>
<td>JSON Physical Name</td>
<td>Specifies the JSON physical name of the table if the table is in a JSON environment. For example, account.</td>
<td></td>
</tr>
<tr>
<td>Used in Gap Analysis</td>
<td>Specifies whether the table is being used as part of a gap analysis to check table usage in mappings. Select the check box if the table is used in gap analysis. For more information on performing table gap analysis, refer to the Performing Table Gap Analysis topic.</td>
<td></td>
</tr>
<tr>
<td>Sensitive Data Indicator (SDI) Flag</td>
<td>Specifies whether the table is sensitive. Switch Sensitive Data Indicator (SDI) Flag to to mark the table sensitive.</td>
<td></td>
</tr>
<tr>
<td>Sensitive Data Indication</td>
<td>Specifies the SDI classification of the table. For example, PHI.</td>
<td></td>
</tr>
</tbody>
</table>
### Adding Tables

<table>
<thead>
<tr>
<th><strong>Field Name</strong></th>
<th><strong>Sub-Field</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitive Data Indicator (SDI) Classification</td>
<td></td>
<td>This list is enabled when <strong>Sensitive Data Indicator (SDI) Flag</strong> is switched to 🔒. For more information on configuring SDI classifications, refer to the <a href="#">Configuring Sensitive Data Indicator Classifications</a> topic.</td>
</tr>
<tr>
<td>Sensitive Data Indicator (SDI) Description</td>
<td></td>
<td>Specifies the description of the SDI classification. For example: Protected Health Information. It is enabled when <strong>Sensitive Data Indicator (SDI) Flag</strong> is switched to 🔒. The field autopopulates based on the SDI classification.</td>
</tr>
<tr>
<td>Alias</td>
<td></td>
<td>Specifies the alias name of the table. For example, Sales_Representative_Table.</td>
</tr>
</tbody>
</table>

5. **Click 🔄.**

The table is added to the environment.
Adding Columns

You can add columns in a table manually and enter technical and business properties of a column. You can also use user defined fields to enter additional properties of the column. UI labels of user defined fields can be configured in Language Settings.

To add columns in tables manually, follow these steps:

1. Go to **Application Menu > Data Catalog > Metadata Manager > Explore**.
2. In the **Data Catalog** pane, right-click a table.
   
   The available options appear.

3. Click **Add Column/Field**.
   
   The Add New Column page appears.
4. Enter or select appropriate values in the fields. Refer to the following table for field description.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Sub-Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Properties</td>
<td>Name</td>
<td>Specifies the physical name of the column.</td>
</tr>
<tr>
<td></td>
<td>For example, Object_ID.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Data Domain</td>
<td>Specifies the data domain values for the column.</td>
</tr>
<tr>
<td></td>
<td>For example, data domain of a Gender column is M and F.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Precision</td>
<td>Specifies the precision of the column.</td>
</tr>
<tr>
<td></td>
<td>For example: 5, the number 123.45 has a precision of 5 and a scale of 2.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DB Default Value</td>
<td>Specifies the default value of the column in the database.</td>
</tr>
<tr>
<td></td>
<td>For example, True.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nullable Flag</td>
<td>Specifies whether the column allows null values.</td>
</tr>
<tr>
<td></td>
<td>Select the check box if the column allows null values.</td>
<td></td>
</tr>
<tr>
<td>Field Name</td>
<td>Sub-Field</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Natural Key Flag</td>
<td></td>
<td>Specifies whether the column is a natural key. Select the check box if the column is a natural key.</td>
</tr>
<tr>
<td>Foreign Key Flag</td>
<td></td>
<td>Specifies whether the column is a foreign key. Select the check box if the column is a foreign key.</td>
</tr>
<tr>
<td>Foreign Key Column Name</td>
<td></td>
<td>Specifies the actual column name where the column is listed as a PK (in case the current column being an FK). For example, ID.</td>
</tr>
<tr>
<td>Minimum Value</td>
<td></td>
<td>Specifies the minimum value of the column. For example, minimum value of ID column can be 424.</td>
</tr>
<tr>
<td>File Starting Position</td>
<td></td>
<td>Specifies the starting position in the file.</td>
</tr>
<tr>
<td>Attribute Type</td>
<td></td>
<td>Specifies the attribute type of the new component. It is auto-populated with <strong>Column</strong>.</td>
</tr>
<tr>
<td>Data Type</td>
<td></td>
<td>Specifies the physical data type of the column. For example, varchar.</td>
</tr>
<tr>
<td>Storage Type</td>
<td></td>
<td>Specifies the storage type of the column. For example, row store/column store in the case of SAP systems.</td>
</tr>
<tr>
<td>Length</td>
<td></td>
<td>Specifies the physical length of the column. For example, if the column datatype is char(5), then its physical length is 5.</td>
</tr>
<tr>
<td>Scale</td>
<td></td>
<td>Specifies the physical scale of the column. For example: The number 123.45 has a precision of 5 and a scale of 2.</td>
</tr>
<tr>
<td>Identity Flag</td>
<td></td>
<td>Specifies whether the column is used as an identity flag. Select the check box if the column is used as an identity flag.</td>
</tr>
<tr>
<td>Percent Null Value</td>
<td></td>
<td>Specifies the percentage of null values in the column. For example, 10%.</td>
</tr>
</tbody>
</table>
## Adding Columns Metadata Management Guide

<table>
<thead>
<tr>
<th><strong>Field Name</strong></th>
<th><strong>Sub-Field</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Key Flag</td>
<td>Specifies whether the column is a primary key. Select the check box if the column is used as the primary key.</td>
<td></td>
</tr>
<tr>
<td>Foreign Key Table Name</td>
<td>Specifies the actual table name where the column is listed as a PK (in case of the current column being an FK).</td>
<td></td>
</tr>
<tr>
<td>ETL Default Value</td>
<td>Specifies the default ETL value of the column during the load process.</td>
<td></td>
</tr>
<tr>
<td>Maximum Value</td>
<td>Specifies the maximum value of the column. For example, maximum value of ID column can be 1503.</td>
<td></td>
</tr>
<tr>
<td>Data Steward</td>
<td>Specifies the data steward responsible for the column. 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.</td>
<td></td>
</tr>
<tr>
<td>Definition</td>
<td>Specifies the definition of the column. For example: The column is a primary key that allows 5 alpha-numeric characters.</td>
<td></td>
</tr>
<tr>
<td>Comments</td>
<td>Specifies the comments about the column. For example: The column provides unique identification of employee in the employee table.</td>
<td></td>
</tr>
<tr>
<td>Sensitive Data Indicator (SDI) Flag</td>
<td>Specifies whether the column is sensitive. Switch <strong>Sensitive Data Indicator (SDI) Flag</strong> to  to mark the column sensitive.</td>
<td></td>
</tr>
<tr>
<td>Sensitive Data Indicator (SDI)</td>
<td>Specifies the SDI classification of the column. For example, PHI. This list is enabled when <strong>Sensitive Data Indicator (SDI) Flag</strong> is set.</td>
<td></td>
</tr>
<tr>
<td>Field Name</td>
<td>Sub-Field</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>Classification</td>
<td>is switched to 🔒. For more information on configuring SDI classifications, refer to the <a href="#">Configuring Sensitive Data Indicator Classifications</a> topic.</td>
<td></td>
</tr>
<tr>
<td>Sensitive Data Indicator (SDI) Description</td>
<td>Specifies the description of the SDI classification. For example: Protected Health Information. It is enabled when Sensitive Data Indicator (SDI) Flag is switched to 🔒. The field autopopulates based on the SDI classification.</td>
<td></td>
</tr>
<tr>
<td>Class</td>
<td>Specifies the column class property. Select a column class. For more information on configuring column class, refer to the <a href="#">Configuring Table and Column Class</a> topic.</td>
<td></td>
</tr>
<tr>
<td>DQ Score</td>
<td>Specifies the overall data quality score of the column. For example, High (7-8). For more information on configuring DQ scores, refer to the <a href="#">Configuring Data Profiling and DQ Scores</a> topic.</td>
<td></td>
</tr>
<tr>
<td>Logical Name</td>
<td>Specifies the logical name of the column. For example, if the physical name of the table is CUST_ID_NUM, then the logical name of the table is Customer Identification Number.</td>
<td></td>
</tr>
<tr>
<td>Expanded Logical Name</td>
<td>Specifies the expanded logical name of the column. For example, if the physical name of the column is Resource_ID, then the logical name of the . You can also configure expanded logical name of columns in bulk at system and environment level.</td>
<td></td>
</tr>
</tbody>
</table>
### Adding Columns

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Sub-Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSON Physical Column Name</td>
<td>Specifies the JSON physical name of the column if the column is in a JSON environment. For example, objectID.</td>
<td></td>
</tr>
<tr>
<td>Used in Gap Analysis</td>
<td>Specifies whether the column is being used in a gap analysis for usage in mappings. Select the check box if the column is used in the gap analysis. For more information on performing column gap analysis, refer to the <a href="#">Performing Column Gap Analysis</a> topic.</td>
<td></td>
</tr>
<tr>
<td>Alias</td>
<td>Specifies the alias name of the column. For example, Resource_ID.</td>
<td></td>
</tr>
<tr>
<td>Business Key Flag</td>
<td>Specifies whether the column is a business key. Select the check box if the column is a business key.</td>
<td></td>
</tr>
</tbody>
</table>

5. Click ![Click](button.png)

The column is added to the table.
Deleting Tables and Columns

You can delete tables and columns that are not required.

Tables

To delete tables from environments, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, right-click an environment.
   
   The available options appear.

3. Click Delete Table(s)/Components.
   
   The Delete Tables page appears.
Deleting Tables and Columns

4. Select the required tables.
5. Click .

The selected tables are deleted from the environment.

Columns

To delete columns from tables, follow these steps:

1. In the Data Catalog, right-click a column.

   The available options appear.

   ![Data Catalog with options]

2. Click **Delete Column(s)/Fields**.

   The column is deleted.
Scheduling Metadata Scans

You can schedule a metadata scan for an environment whose schema was selected or it was scanned at least once.

To schedule a metadata scan, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, right-click an environment.
3. Click Schedule Metadata Scan.
   The Job Scheduler 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.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Name</td>
<td>Specifies the job name. For example, Administrator1585030550001. This field autopopulates with a job name. You can edit it and enter a different job name.</td>
</tr>
<tr>
<td>Interval</td>
<td>Specifies the frequency of the job. For example, Every Week.</td>
</tr>
<tr>
<td>Schedule Job On</td>
<td>Set the date and time of the job using . For example, 03-24-2020 11:45.</td>
</tr>
</tbody>
</table>

Note*: Please provide CC List with comma(,) separated values.
### Field Name | Description
--- | ---
Local or Server | Select whether the job uses local or server time.  
- **Local:** Refers to your local machine.  
- **Server:** Refers to the machine where your application is deployed.

Import Metadata Options |  
- **Add New:** This option adds new objects to the existing object list. Existing metadata is not updated.  
- **Update Existing + Add New:** This option adds new objects to the existing list and at the same time the existing metadata is also updated.  
- **Delete & Reload:** This option deletes all the existing metadata and scans only the new objects that have been selected.  
- **Import Comments:** Select the check box to import comments.  
- **Table(s):** Select the check box to import Tables.  
- **View(s):** Select the check box to import Views.  
- **Synonym(s):** Select the check box to import Synonyms.  
- **Version:** Select the check box to create a new version of the environment. To enter version label and change description, click ![Edit].

### Notify Me | Switch **Notify Me** to ON to receive a job notification.  
For more information on configuring notifications, refer to the Configuring Notifications on Scanning Metadata topic.

### Notification Email | This field is autopopulated with your email ID. You receive email notifications about the scheduled job from the administrator's email ID. For more information on configuring the administrator's email ID, refer to the Configuring Email Settings topic.

### CC List | Enter a comma-separated list of email IDs that should receive email notifications about the scheduled job.  
For example, ab.dav@xyz.com, cal.kai@xyz.com

5. Click **Schedule**.
Scheduling Metadata Scans

The metadata scan is scheduled and the scheduled job is listed on the **Scheduled Jobs** tab.

The metadata is scanned at the scheduled time and the environment is updated.

If you have opted to create new version of the environment, then a new version is created and the old version is archived.

Use the following options to work on the scheduled job list:

**Edit (🖌)**

Use this option to update the scheduled job.

**Delete (🗑️)**

Use this option to delete the scheduled job.
Updating Table Properties

Table properties are classified as technical and business properties. You can update these properties for a table and use user defined fields to enter additional properties of a table.

To update Table Properties, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, click a table.
   By default, the Columns tab opens.

3. Click the Properties tab.
4. Click 📲.

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

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Sub-Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fully Qualified Table</td>
<td></td>
<td>Specifies the qualified table name.</td>
</tr>
<tr>
<td>Name</td>
<td></td>
<td>Specifies the qualified table name.</td>
</tr>
<tr>
<td>Schema</td>
<td></td>
<td>Specifies the schema name of the table.</td>
</tr>
<tr>
<td>Fully Qualified Table</td>
<td></td>
<td>Specifies the qualified table name.</td>
</tr>
<tr>
<td>Name</td>
<td></td>
<td>Specifies the qualified table name.</td>
</tr>
<tr>
<td>Schema</td>
<td></td>
<td>Specifies the schema name of the table.</td>
</tr>
</tbody>
</table>
# Updating Table Properties

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Sub-Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Name</td>
<td>Specifies the physical name of the table. For example, Account or Currency.</td>
</tr>
<tr>
<td></td>
<td>System Name</td>
<td>Specifies the physical name of the system under which the table exists. For example, Enterprise Data Warehouse. You cannot edit this field.</td>
</tr>
<tr>
<td></td>
<td>Synonym Reference</td>
<td>Specifies the synonym reference for the table. For example, Sales_Rep_Information. This field is autopopulated during the metadata scan. You cannot enter it manually.</td>
</tr>
<tr>
<td></td>
<td>Environment Name</td>
<td>Specifies the physical name of the environment under which the table exists. For example, EDW-Test. You cannot edit this field.</td>
</tr>
<tr>
<td></td>
<td>No of Rows</td>
<td>Specifies the total number of rows in the table. For example, 100.</td>
</tr>
<tr>
<td></td>
<td>File Type</td>
<td>Specifies the file type of the table if the table is in a file-based environment. For example, MS Excel.</td>
</tr>
<tr>
<td></td>
<td>Workflow Status</td>
<td>Specifies the workflow status of the table. For example, draft. By default, Metadata_Manager_Default_Workflow_1 is assigned to all the tables in the Metadata Manager. You can create and re-assign a workflow to all the tables in an environment. For more information on workflow status, refer to the <a href="#">Assigning Workflows to Tables</a> topic.</td>
</tr>
</tbody>
</table>
### Updating Table Properties

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Sub-Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Properties</td>
<td>Data Steward</td>
<td>Specifies the name of the data steward responsible for the 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.</td>
</tr>
<tr>
<td></td>
<td>Definition</td>
<td>Specifies the definition of the table. For example: The table contains five columns with emp ID column as the primary key.</td>
</tr>
<tr>
<td></td>
<td>Comments</td>
<td>Specifies comments about the table. For example: The table contains details of the employees.</td>
</tr>
<tr>
<td></td>
<td>Class</td>
<td>Specifies the table class property. For more information on configuring table class, refer to Configuring Table and Column Class topic.</td>
</tr>
<tr>
<td></td>
<td>DQ Score</td>
<td>Specifies the overall data quality score of the table. For example, High (7-8). For more information on configuring DQ scores, refer to the Configuring Data Profiling and DQ Scores topic. This option is not available when the Enable DQ Sync option is switched on for an environment.</td>
</tr>
<tr>
<td>Business Entity Type</td>
<td>Tags</td>
<td>Specifies tags of the table. For example, Data Integration 2021. Click Tags and select an existing tag or enter a tag name to create one on the fly.</td>
</tr>
</tbody>
</table>
### Updating Table Properties

<table>
<thead>
<tr>
<th><strong>Field Name</strong></th>
<th><strong>Sub-Field</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Logical Table Name</td>
<td>Specifies the logical name of the table. For example, if the physical name of a table is DIM_Customer, then the logical name of the table is Customer Dimension.</td>
<td></td>
</tr>
<tr>
<td>Expanded Logical Name</td>
<td>Specifies the expanded logical name of the table. For example, if the physical name of a table is RM_Resource, then the expanded logical name of the table is RM Sales Representative. You can configure expanded logical name of tables in bulk at system and environment level.</td>
<td></td>
</tr>
<tr>
<td>JSON Physical Name</td>
<td>Specifies the JSON physical name of the table if the table is in a JSON environment.</td>
<td></td>
</tr>
<tr>
<td>Used in Gap Analysis</td>
<td>Specifies whether the table is being used as part of a gap analysis to check table usage in mappings. Select the check box if the table is used in gap analysis. For more information on performing table gap analysis, refer to the Performing Table Gap Analysis topic.</td>
<td></td>
</tr>
<tr>
<td>Sensitive Data Indicator Classification</td>
<td>Specifies the sensitivity data indicator (SDI) classification of the table. Also, you can add multiple classifications to a table. For example, PHI, Confidential. For more information on configuring SDI classifications refer to the Configuring Sensitive Data Indicator Classifications topic.</td>
<td></td>
</tr>
<tr>
<td>Tags</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Table Alias</td>
<td>Specifies the alias name of the table. For example, Sales_Representative_Table.</td>
<td></td>
</tr>
</tbody>
</table>

6. Click ![Click](image). The table properties are updated.
You can use user defined fields with different UI labels. For more information on using UI labels for user defined fields, refer to the Configuring Language Settings topic.

You can also hide user defined fields. For more information on hiding user defined fields, refer to the Displaying User Defined Fields topic.
Updating Column Properties

Column properties are classified as technical and business properties. You can update these properties for a column and use user defined fields to enter additional properties of a column.

To update Column Properties, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, click a column.
   
   By default, the Properties tab opens.

3. Click 

   The Edit Column Properties 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.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Sub-Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Properties</td>
<td>Name</td>
<td>Specifies the physical name of the column. For example, Object_ID.</td>
</tr>
<tr>
<td></td>
<td>Data Domain</td>
<td>Specifies the data domain values for the column. For example, data domain of a Gender column is M and F.</td>
</tr>
<tr>
<td></td>
<td>Precision</td>
<td>Specifies the precision of the column. For example: 5, the number 123.45 has a precision of 5 and a scale of 2.</td>
</tr>
<tr>
<td></td>
<td>DB Default Value</td>
<td>Specifies the default value of the column in the database. For example, True.</td>
</tr>
<tr>
<td></td>
<td>Nullable Flag</td>
<td>Specifies whether the column allows null values. Select the check box if the column allows null values.</td>
</tr>
<tr>
<td></td>
<td>Natural Key Flag</td>
<td>Specifies whether the column is a natural key. Select the check box if the column is a natural key.</td>
</tr>
<tr>
<td></td>
<td>Foreign Key</td>
<td>Specifies whether the column is a foreign key.</td>
</tr>
</tbody>
</table>
### Updating Column Properties

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Sub-Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flag</td>
<td>Select the check box if the column is a foreign key.</td>
<td></td>
</tr>
<tr>
<td>Field Name</td>
<td>Sub-Field</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>---------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Foreign Key Column Name</td>
<td></td>
<td>Specifies the actual column name where the column is listed as a PK (in case the current column being an FK). For example, ID.</td>
</tr>
<tr>
<td>Minimum Value</td>
<td></td>
<td>Specifies the minimum value of the column. For example, minimum value of ID column can be 424.</td>
</tr>
<tr>
<td>File Starting Position</td>
<td></td>
<td>Specifies the starting position in the file.</td>
</tr>
<tr>
<td>Attribute Type</td>
<td></td>
<td>Specifies the attribute type of the column. It is auto-populated with ENTITY_ELEMENT.</td>
</tr>
<tr>
<td>Workflow Status</td>
<td></td>
<td>Specifies the workflow status of the column. For example, draft. By default, Metadata_Manager_Default_Workflow is assigned to all the columns in the Metadata Manager. You can create and re-assign a workflow to all the columns in a table. For more information on the workflow status, refer to the Assigning Workflows to the Columns topic.</td>
</tr>
<tr>
<td>Data Type</td>
<td></td>
<td>Specifies the physical data type of the column. For example, varchar.</td>
</tr>
<tr>
<td>Storage Type</td>
<td></td>
<td>Specifies the storage type of the column. For example, row store/column store in the case of SAP systems.</td>
</tr>
<tr>
<td>Length</td>
<td></td>
<td>Specifies the physical length of the column. For example, if the column datatype is char(5), then its physical length is 5.</td>
</tr>
<tr>
<td>Scale</td>
<td></td>
<td>Specifies the physical scale of the column. For example: The number 123.45 has a precision of 5 and a scale of 2.</td>
</tr>
<tr>
<td>Identity Flag</td>
<td></td>
<td>Specifies whether the column is used as an identity flag. Select the check box if the column is used as an identity flag.</td>
</tr>
</tbody>
</table>
### Updating Column Properties

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Sub-Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent Null Value</td>
<td>Specifying the percentage of null</td>
<td>Specifies the percentage of null values in the column. For example, 10%.</td>
</tr>
<tr>
<td>Primary Key Flag</td>
<td>Specifying whether the column is</td>
<td>Specifies whether the column is a primary key. Select the check box if the column is used as the primary key.</td>
</tr>
<tr>
<td>Foreign Key Table Name</td>
<td>Specifying the actual table name</td>
<td>Specifies the actual table name where the column is listed as a PK (in case of the current column being an FK).</td>
</tr>
<tr>
<td>ETL Default Value</td>
<td>Specifying the default ETL value</td>
<td>Specifies the default ETL value of the column during the load process.</td>
</tr>
<tr>
<td>Maximum Value</td>
<td>Specifying the maximum value of</td>
<td>Specifies the maximum value of the column. For example, maximum value of ID column can be 1503.</td>
</tr>
<tr>
<td>Data Steward</td>
<td>Specifying the data steward</td>
<td>Specifies the data steward responsible for the column. 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.</td>
</tr>
<tr>
<td>Column Definition</td>
<td>Specifying the definition of the</td>
<td>Specifies the definition of the column. For example: The column is a primary key that allows 5 alpha-numeric characters.</td>
</tr>
<tr>
<td>Column Comments</td>
<td>Specifying the comments about the</td>
<td>Specifies the comments about the column. For example: The column provides unique identification of employee in the employee table.</td>
</tr>
<tr>
<td>Sensitive Data Indicator (SDI)</td>
<td>Specifies whether the column is</td>
<td>Specifies whether the column is sensitive. Switch <strong>Sensitive Data Indicator (SDI) Flag</strong> to to mark the column sensitive.</td>
</tr>
<tr>
<td>Sensitive Data Indicator (SDI)</td>
<td>Specifies the SDI classification</td>
<td>Specifies the SDI classification of the column. For example, PHI.</td>
</tr>
<tr>
<td>Sensitive Data Indicator (SDI)</td>
<td>of the column.</td>
<td></td>
</tr>
</tbody>
</table>

**Business Properties**

**Data Steward**
- Specifies the data steward responsible for the column.
- 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.

**Column Definition**
- Specifies the definition of the column.
- For example: The column is a primary key that allows 5 alpha-numeric characters.

**Column Comments**
- Specifies the comments about the column.
- For example: The column provides unique identification of employee in the employee table.
## Updating Column Properties

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Sub-Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitive Data Indicator (SDI) Classification</td>
<td>This list is enabled when <strong>Sensitive Data Indicator (SDI) Flag</strong> is switched to 🔒. For more information on configuring SDI classifications, refer to the <a href="#">Configuring Sensitive Data Indicator Classifications</a> topic.</td>
<td></td>
</tr>
<tr>
<td>Sensitive Data Indicator (SDI) Description</td>
<td>Specifies the description of the SDI classification. For example: Protected Health Information. It is enabled when <strong>Sensitive Data Indicator (SDI) Flag</strong> is switched to 🔒. The field autopopulates based on the SDI classification.</td>
<td></td>
</tr>
<tr>
<td>Column Class</td>
<td>Specifies the column class property. Select a column class. For more information on configuring column class, refer to the <a href="#">Configuring Table and Column Class</a> topic.</td>
<td></td>
</tr>
<tr>
<td>DQ Score</td>
<td>Specifies the overall data quality score of the column. For example, High (7-8). For more information on configuring DQ scores, refer to the <a href="#">Configuring Data Profiling and DQ Scores</a> topic.</td>
<td></td>
</tr>
<tr>
<td>Tags</td>
<td>Specifies tags of the column. For example, PII. Click <strong>Tags</strong> and select an existing tag or enter a tag name to create one on the fly.</td>
<td></td>
</tr>
<tr>
<td>Logical Column Name</td>
<td>Specifies the logical name of the column. For example, if the physical name of the table is CUST_ID_NUM, then the logical name of the table is Customer Identification Number.</td>
<td></td>
</tr>
<tr>
<td>Expanded</td>
<td>Specifies the expanded logical name of the column.</td>
<td></td>
</tr>
</tbody>
</table>

This option is not available when the **Enable DQ Sync** option is switched on for an environment.
### Updating Column Properties

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Sub-Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logical Name</td>
<td></td>
<td>For example, if the physical name of the column is Resource_ID, then the logical name of the column is Resource_ID. You can also configure expanded logical name of columns in bulk at system and environment level.</td>
</tr>
<tr>
<td>JSON Physical Column Name</td>
<td></td>
<td>Specifies the JSON physical name of the column if the column is in a JSON environment. For example, objectID.</td>
</tr>
<tr>
<td>Used in Gap Analysis</td>
<td></td>
<td>Specifies whether the column is being used in a gap analysis for usage in mappings. Select the check box if the column is used in the gap analysis. For more information on performing column gap analysis, refer to the Performing Column Gap Analysis topic.</td>
</tr>
<tr>
<td>Column Alias</td>
<td></td>
<td>Specifies the alias name of the column. For example, Resource_ID.</td>
</tr>
<tr>
<td>Business Key Flag</td>
<td></td>
<td>Specifies whether the column is a business key. Select the check box if the column is a business key.</td>
</tr>
</tbody>
</table>

5. Click ☐. The column properties are updated.

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

You can also hide user defined fields on the Column Properties tab. For more information on hiding user defined fields, refer to the Displaying User Defined Fields topic.
Validating Data

You can validate the data in the environment at table and column levels. The data is validated against the forms (Table Properties or Column Properties) associated with the environment. The forms can be created, configured, and associated with environments in the Form Validation Settings.

To validate data, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, right-click an environment.
3. Hover over Validate Data.
4. Use the following options:
   - **Table**
     - To validate tables in the environment, click Table.
   - **Column**
Validating Data

To validate columns in the environment, click **Column**.

**Both**

To validate tables and columns both, click **Both**.

The data is validated.

The columns or tables that fail mandatory field criterion are marked with red.

The columns or tables that fail regular expression criterion are marked with orange.

You can download the validation report in the XLSX format. To download the validation reports, click **Export to Excel**.
Assigning Codesets to Columns

You can create codesets in the Codeset Manager and assign them to a source or target column as valid values. You can also export the valid values in the XLSX format.

To assign codesets to columns, follow these steps:

1. In the Data Catalog pane, click a column.
2. Click the Valid Values tab.
3. On the Valid Values tab, click Assign/Remove Codesets.

The Codesets page appears.

Note: Assigning/Removing codeset will reset workflow status of column(s) to initial stage.
Assigning Codesets to Columns

4. Select the required codesets and click **Save**.

The codesets are saved on the **Valid Values** tab.

You can download the assigned codesets in the XLSX format. To download the assigned codesets, click **Export to Excel**.

For more information on managing codesets, refer to the [Maintaining Enterprise Codesets](#) section.
Viewing Workflow Logs of Tables

You can view workflow logs of a table in the Metadata Manager. It displays the current state of the table in the workflow. By default, the Metadata_Manager_Default_Workflow_1 is assigned to all the tables. You can create your own workflow and assign it to tables. For more information, creating and assigning workflows to tables, refer to the Managing Metadata Manager Workflows section.

To view workflow log of tables, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, click a table.
3. In the central pane, click the Workflow Log tab.

The current workflow stage blinks in the diagram.

Use the following options:

User Comments

To view users and the comments entered by the users in each stage, hover over.

Metadata Management Guide 204
Viewing Workflow Logs of Tables

**Expand/Hide Users and Roles**

Use this option to view or hide users and roles assigned to the stages of the workflow.

**Collapse/Expand Roles**

This option is enabled when you are in the Expand Users and Roles view. Use this option to collapse or expand roles.

**Collapse/Expand Users**

This option is enabled when you are in the Expand Users and Roles view. Use this option to collapse or expand users.

**Export Image**

Use this option to download the workflow in the JPG format.
Viewing Workflow Logs of Columns

You can view workflow logs of a column in the Metadata Manager. It displays the current state of the column in the workflow. By default, the Metadata_Manager_Default_Workflow is assigned to all the columns. You can create your own workflow and assign it to columns. For more information, creating and assigning workflows to columns, refer to the Managing Metadata Manager Workflows section.

To view workflow log of columns, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, click a column.
3. In the central pane, click the Workflow Log tab.

   The current workflow stage blinks in the diagram.

   Use the following options:

   **User Comments**

   To view users and the comments entered by the users in each stage, hover over 🦁.

Metadata Management Guide 206
Viewing Workflow Logs of Columns

**Expand/Hide Users and Roles**

Use this option to view or hide users and roles assigned to the stages of the workflow.

**Collapse/Expand Roles**

This option is enabled when you are in the Expand Users and Roles view. Use this option to collapse or expand roles.

**Collapse/Expand Users**

This option is enabled when you are in the Expand Users and Roles view. Use this option to collapse or expand users.

**Export Image**

Use this option to download the workflow in the JPG format.
Associating Tables

You can associate tables with business assets, systems, environments, tables, and columns. You can also view mind map and association statistics.

Ensure that:

- Business assets are enabled. You can add custom business assets and enable them in Business Glossary Manager Settings.
- Relationship between table and the asset type is defined. You can define associations and relationships in Business Glossary Manager Settings.

To associate tables with asset types, follow these steps:

1. In the Data Catalog pane, click the required table.
2. In the central pane, click the Associations tab.
3. Select an asset type from the drop down.
4. Click +.

The Relationship Associations page appears.
5. Select **Relationship Name** and the asset type. If you know the term name, use the Search (partial matches) field to look up for it.

6. Click **Save**.

The asset is added to the table.

Once you have created associations, you can use the following options under the **Actions** column:

**Add Association (++)**
Associating Tables

Use this option to add associations using a qualifier.

**Edit Association (✏️)**

Use this option to edit the association.

**Delete Association (🗑️)**

Use this option to delete the association.

To view mind map, click the **Mindmap** tab. For more information on mind maps, refer to the [Viewing Mind Maps](#) topic.

You can associate multiple assets with tables and view the associations based on a qualifier view in the mind map. For more information, refer to the [Setting Up Associations Using Qualifiers](#) topic.
Associating Columns

You can associate columns with business assets, systems, environments, tables, and columns. You can also view mind map and association statistics.

Ensure that:

- Business assets are enabled. You can add custom business assets and enable them in Business Glossary Manager Settings.
- Relationship between column and the asset type is defined. You can define associations and relationships in Business Glossary Manager Settings.

To associate columns with asset types, follow these steps:

1. In the Data Catalog pane, click the required column.
2. In the central pane, click the Associations tab.
3. Select an asset type from the drop down.
4. Click +.
   The Relationship Associations page appears.
5. Select **Relationship Name**, and asset type.
   If you know the term name, use the Search (partial matches) field to look up for it.

6. Click **Save**.
   
The asset is added to the column.

Once you have created associations, you can use the following options under the **Actions** column:

**Add Association**

Use this option to add associations using a qualifier.
Associating Columns

Edit Association (📝)

Use this option to edit the association.

Delete Association (☐)

Use this option to delete the association.

To view mind map, click the Mindmap tab. For more information on mind maps, refer to the Viewing Mind Maps topic.

You can associate multiple assets with column and view the associations based on a qualifier view in the mind map. For more information, refer to the Setting Up Associations Using Qualifiers topic.
Versioning Environments

You can create versions of an environment and keep a legacy of old metadata. You can also track changes by comparing the two versions of the environment.

To create new versions of environments, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, right-click an environment.
3. Click New Version.

   The New Version page appears.
Versioning Environments

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

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment Name</td>
<td>Specifies the name of the environment. For example, EDW-Test.</td>
</tr>
<tr>
<td>Version</td>
<td>Specifies the new version of the environment. For example, 1.02.</td>
</tr>
<tr>
<td>Version Label</td>
<td>Specifies the version label of the environment. For example, Beta. For more information on configuring version display of environments, refer to the Configuring Version Display topic.</td>
</tr>
<tr>
<td>Change Description</td>
<td>Specifies the description of the changes made in the environment. For example: A new table, EMP_Details was added in the environment.</td>
</tr>
</tbody>
</table>

5. Click .

A new version of the environment is created and stored in the environment tree.

The old version of the environment is archived. You can also compare the two versions of the environment.
Comparing Environments

You can compare two environments and trace the table and column level changes. Comparing two environments enables you to debug scanned metadata and makes your data integration project efficient.

To compare environments, follow these steps:

1. In the Data Catalog pane, select any two environments. You can use CTRL or Shift Key to select two environments.

2. Click Compare Environments.
Comparing Environments

The Compare Environments page appears. By default, it opens the Table Level Changes tab.

To view column level changes, on the Compare Environments page, click the Column Level Changes tab.

Column level changes are displayed.

To download the comparison report, click ![Download].

The comparison report is downloaded in the XLSX format.
**Downloading Data Dictionaries**

Once the metadata is scanned and stored in the repository, you can instantly view and export data dictionary at the environment and table levels.

A data dictionary at environment level includes definitions of all the tables and columns available in the environment. Whereas, a data dictionary at table level includes the definitions of the table and its columns.

**Environment Level**

To download data dictionaries at environment level, follow these steps:

1. Go to **Application Menu > Data Catalog > Metadata Manager > Explore**.
2. In the **Data Catalog** pane, right-click an environment.
3. Hover over **Data Dictionary**.

![Image of a menu with options such as Validate Data, Import Environment, Export Environment, etc. with a drop-down menu option selected as Download Data Dictionary.]
4. Click Download.

The Data Dictionary-Download Options page appears.

5. Use the following options:

**Default Template Download**
Use this option to download the data dictionary in a default template. The default template includes technical and business properties of tables and columns.

**Advanced Template Download**
Use this option to download the data dictionary in an advanced template. You can customize an advanced template to include additional information, such as Indexes Summary, Extended Properties for Tables, Valid Values, and Extended Properties for columns.

6. Click Download.

Data dictionary is downloaded in the XLSX format.

**Table Level**

To download data dictionaries at table level, follow these steps:
1. In the Data Catalog pane, right-click a table.

2. Hover over Data Dictionary.

3. Click Download.

   The data dictionary of the selected table is downloaded in the XLSX format.

You can also view data dictionary report at system level and update data dictionary at environment level.
Uploading Data Dictionary

You can update and upload a data dictionary at environment level in the XLSX format. To update data dictionary, you can either use an existing XLSX file or download a data dictionary file from a suitable environment. Ensure that the XLSX file follows the correct template. For more information on downloading a data dictionary in XLSX, refer to the Downloading Data Dictionary topic.

To upload data dictionaries at environment level, follow these steps:

1. In the Data Catalog pane, right-click an environment.
2. Hover over Data Dictionary.
3. Click Upload.

The Upload Metadata page appears.
4. Drag and drop the updated data dictionary file or use ☝️ to upload the file.

You can use the following options to select headers for the XLSX file:

**Enable Header Selection**

Use this option to select headers for the XLSX file. Select the check box and click ☝️.

The Upload Metadata page appears.

To select headers, double-click the **NOT IN USE** cell.

**Skip & Assume first row as header**
Uploading Data Dictionary

You can use this option only when the Enable Header Selection check box is selected. Use this check box to use the first row as header.

Select the check box and click [ ].

The Upload Metadata page appears. The first row in the XLSX file appears as the header.

```
<table>
<thead>
<tr>
<th>Table Name</th>
<th>Table Definition</th>
<th>Table SDI Reg</th>
<th>Table SDI Classification</th>
<th>Table SDI Description</th>
<th>Table Comments</th>
<th>Logical Table Name</th>
<th>Column Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citizens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Citizens</td>
<td>CitizenID</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Others</td>
<td>CitizenName</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Others</td>
<td>EmployeeID</td>
</tr>
<tr>
<td>Employees</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Employees</td>
<td>EmployeeName</td>
</tr>
<tr>
<td>Employees</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Employees</td>
<td>EmployeeID</td>
</tr>
</tbody>
</table>
```

To select alternate headers, double-click the header cell.

5. Click [ ]

The data dictionary is updated at the environment level.
Viewing Data Dictionary Report

You can view a data dictionary report at the system level. The data dictionary report includes all the environments in the system and it can be exported in various formats, such as HTML, PDF, and MS Excel.

It is meaningful to view data dictionary report after scanning metadata into an environment.

To view data dictionary at system level, follow these steps:

1. In the Data Catalog pane, right-click a system.

2. Click Report - Data Dictionary.

   The Data Dictionary Report appears. You can use Select System to view the data dictionary reports of any system.
Use the following options to export the data dictionary report:

**HTML**

Use this option to export the report in the HTML format.

**PDF**

Use this option to export the report in the PDF format.

**MS Excel**

Use this option to export the report in the XLSX format.

**MS Word**

Use this option to export the report in the DOCX format.

**RTF**

Use this option to export the report in the RTF format.
Running Impact Analysis

After mapping source metadata with target metadata, you can run impact analysis on the technical assets. The impact analysis helps you understand upstream and downstream dependencies of technical assets and impacts linked to business assets. It helps you assess the impact of transformations and source or target-level changes.

Also, view lineages based on selected asset and export impact analysis.

You can run impact analysis at the following levels:

- System
- Environment
- Table
- Column
Impact analysis helps you understand upstream and downstream dependencies of the linked business and technical assets. You can perform impact analysis on an environment or system, and analyze its impact as source and target.

This topic walks you through the steps to view impact analysis from an environment. Similarly, you can view impact from a system, table, and column.

To view impact analysis at environment level, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, click an environment.
3. Click the Impact Analysis tab.
   Impact analysis for the environment appears.
   It displays the asset hierarchy, sensitivity data indicator (SDI) classification, data quality analysis, and environment's impact based on related assets in your metadata.

4. On the Environments tile, click Downstream.
   The downstream dependencies of the environment appears in a grid format.
Similarly, switch to the **Upstream** tab to view upstream dependencies.

5. In the Upstream or Downstream tab, click an asset in the grid to view its lineage or impact analysis from that asset. For more information on running lineage analysis on assets, refer to the [Running Lineage Analysis](#) topic.

You can also view the upstream and downstream dependencies of other impacted assets from selected environment’s perspective. For example, the image below displays upstream system dependencies from the environment's perspective.
Additionally, use the following options:

**Lineage**

Use this option to view lineage based on the asset type in a pop-up.

**Export**

Use this option to export the impact analysis in .XLS format.
Impact analysis helps you understand upstream and downstream dependencies of the linked business and technical assets. You can perform impact analysis on a table or column, and analyze its impact as source and target.

This topic walks you through the steps to view impact analysis of a table. Similarly, you can view impact of a column, system, and environment.

A table can be a source, target, or both in a mapping specification. It can also be used for transformations, such as business rules and lookups in a mapping project. The impact analysis on a table helps you identify these impacts of the table on mapping projects.

To run impact analysis at table level, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, click a table.
3. Click the Impact Analysis tab.
   Impact analysis of the table appears.
   It displays the asset hierarchy, sensitivity data indicator (SDI) classification, data quality analysis, and table's impact based on related assets in your metadata.
4. On the Tables tile, click Upstream.
   The upstream dependencies of the environment appears in a grid format.
Similarly, switch to the **Downstream** tab to view upstream dependencies.

5. In the Upstream or Downstream tab, click an asset in the grid to view its lineage or impact analysis from that asset. For more information on running lineage analysis on assets, refer to the **Running Lineage Analysis** topic.

Use the Other Impacts tile, and click one of the following to view them:

- Business rules
- Source Extract SQL
- Lookups
Tables and Columns

For example, the image below displays the In Lookups tab with lookup conditions that impacts the asset type. Also, you can switch between In Source Extract SQL and In Business Rules tabs to view relevant impacts.

![Image showing In Lookups tab](image)

You can also view the upstream and downstream dependencies of other impacted assets from selected tablet's perspective. For example, the image below displays upstream column dependencies from the table's perspective.
Additionally, use the following options:

**Lineage**

Use this option to view lineage based on the asset type in a pop-up.

**Export**

Use this option to export the impact analysis in .XLS format.
Running Lineage Analysis

After mapping source metadata with target metadata, you can run lineage analyzer in Metadata Manager. The generated lineage report helps you trace the data's origin, its transformations, and its destination after source to target mappings.

You can run the lineage at the following levels:

- System
- Environment
- Table
- Column
You can run forward and reverse lineage analysis to trace metadata at the system level. Forward lineage analysis generates lineage with the system as source. And, reverse lineage analysis generates lineage with the system as target. The Dual lineage analysis generates a lineage, which includes both forward and reverse lineage.

This topic walks you through the following:

- Viewing Lineage
- Working on Lineage

**Viewing Lineage**

To run lineage at the system level, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, click a system.
3. Click the Data Lineage tab.

By default, the dual lineage of the system appears in Graphical View.
4. You can click **Graphical View** or **Grid View** to switch between them:

- **Graphical View**: The graphical view displays the lineage of a system in a graphical format. Selecting a system on the graphical view displays its properties in the Node Properties pane and Legends.

  On the Node Properties pane, click 🌐 to view the selected object’s properties in a new window.

- **Grid View**: The grid view displays the lineage of a system in a tabular format. You can view the source and target system associated with the selected system.

5. Use the following options to work on the lineage in graphical view:

   ![Options](image)
System

Use this option to view lineage types, business properties and customizations options. For more information on lineage options, refer to the Working on Lineage section.

Export to Image (🔗)

Use this option to download the lineage view as an image, in the .jpg format. Ensure that you expand the required nodes in a lineage before downloading the lineage image.

Export to PDF (🔗)

Use this option to download the lineage report in the .pdf format. Ensure that you expand the required nodes in a lineage before downloading the lineage report as PDF.

Export to Excel (🔗)

Use this option to download the lineage report in the .xlsx format. Ensure that you expand the required nodes in a lineage before downloading the report.

On the lineage, expand a system node, and select an environment to view its lineage path. The environment is highlighted in orange color, its forward lineage path appears in red, and
its reverse lineage path appears in blue. Systems that are not part of a lineage path disappear.

Right-click a path around the selected object to highlight its path of the source or target in the lineage.

**Working on Lineage**

Lineage of a system shows how metadata moves through systems. It provides a summary of environments used as source and target in a graphical view. Also, it gives you information about the systems and environments involved in the lineage.

Use the following options to work on lineage:

**Forward Lineage**

Use this option to view forward lineage of the system.
Reverse Lineage

Use this option to view reverse lineage of the system.

Dual Lineage

Use this option to view dual lineage, which includes both forward and reverse lineage of the system.
**Sensitivity Indicator**

Use this option to view sensitivity of the environments in the lineage. You can expand a system node to view sensitive environments. The sensitive system and environments are indicated using 🔒.

**Logical Name**

Use this option to view expanded logical names of the tables and columns in an environment in the lineage. You can expand a system node to view environments and tables.

For example, the following image displays the table's logical name in the lineage.
**Expanded Logical Name**

Use this option to view expanded logical names of the tables and columns in an environment in the lineage. You can expand a system node to view environments, tables, and columns. For more information, on configuring extended properties of a system, refer to the **System** topic.

For example, the following image displays the table's expanded logical name in the lineage.
DQ Tool Score

Use this option to view the data quality score of the environments, tables, and columns in the lineage. You can expand a system node to view data quality scores for environments, tables, and columns.

For example, the following image displays the data quality score in the lineage.

Auto Layout

Use this option to rearrange the layout of the lineage automatically. For example, the following image displays the rearranged object layout with respect to the previous screenshot.
Overview Lineage

Use this option to view the lineage excluding systems and environments that do not exist in the Metadata Manager. When this option is switched off, the views include systems and environments, that do not exist in the Metadata Manager.

For example, the following image displays lineage excluding assets that do not exist in Metadata Manager.
System

Overview Pane

Use this option to remove the overview pane from the graphical view.
Environment

You can run forward and reverse lineage analysis to trace metadata at the environment level. Forward lineage analysis generates lineage with the environment as source. And, reverse lineage analysis generates lineage with the environment as target. The Dual lineage analysis generates a lineage, which includes both forward and reverse lineage.

This topic walks you through the following:

- **Viewing Lineage**
- **Working on Lineage**

Viewing Lineage

To run lineage at the environment level, follow these steps:

1. Go to **Application Menu > Data Catalog > Metadata Manager > Explore**.
2. In the **Data Catalog** pane, click an environment.
3. Click the **Data Lineage** tab.

   By default, dual lineage of the environment appears in Graphical View.

![Dual Lineage Diagram](image-url)
4. You can click **Graphical View** or **Grid View** to switch between them:

- **Graphical View**: The graphical view displays the lineage of the environment in a graphical format. Selecting an environment on the graphical view displays its properties in the Node Properties pane and Legends. On the Node Properties pane, click to view the selected object’s properties in a new window.

- **Grid View**: The grid view displays the lineage of the environment system in a tabular format. You can view the source and target system associated with the selected system.

5. Use the following options to work on the lineage in graphical view:

**Options (💬)**

Use this option to view lineage types, business properties and customizations options. For more information on lineage options, refer to the *[Working on](#)*.
Environment

**Lineage** section.

![Lineage section](image)

**Export to Image (📸)**

Use this option to download the lineage view as an image, in the .jpg format. Ensure that you expand the required nodes in a lineage before downloading the lineage image.

**Export to PDF (🖨)**

Use this option to download the lineage report in the .pdf format. Ensure that you expand the required nodes in a lineage before downloading the lineage report as PDF.

**Export to Excel (💾)**

Use this option to download the lineage report in the .xlsx format. Ensure that you expand the required nodes in a lineage before downloading the report.

On the lineage, expand a system node, and select a table to view its lineage path. The environment is highlighted in blue color, its forward lineage path appears in red, and its reverse lineage path appears in blue. Systems and environments that are not part of a lineage path disappear.
Right-click a path around the selected object to highlight its path of the source or target in the lineage.

**Working on Lineage**

Lineage of an environment shows how metadata moves through environments. It provides a summary of tables used as source and target. Also, it gives information about the environments and tables involved in the lineage.

Use the following options to work on lineage:

**Forward Lineage**

Use this option to view forward lineage of the environment.

**Reverse Lineage**

Use this option to view reverse lineage of the environment.
Environment

Dual Lineage

Use this option to view dual lineage, which includes both forward and reverse lineage of the environment.

Sensitivity Indicator

Use this option to view sensitivity of the environments in the lineage. You can expand the environment node to view sensitive tables. The sensitive assets are indicated using 🔒.
Logical Name

Use this option to view expanded logical names of the tables and columns in an environment in the lineage. You can expand a system node to view environments and tables.

For example, the following image displays the table's logical name in the lineage.

Expanded Logical Name

Use this option to view expanded logical names of the tables and columns in an environment in the lineage. You can expand a system node to view environments, tables, and columns.

For example, the following image displays the table's expanded logical name in the lineage.
DQ Tool Score

Use this option to view the data quality score of the environments, tables, and columns in the lineage. You can expand a system node to view data quality scores for environments, tables, and columns.

For example, the following image displays the data quality score in the lineage.

Auto Layout

Use this option to rearrange the layout of the lineage automatically. For example, the following image displays the rearranged object layout with respect to the previous screenshot.
Overview Lineage

Use this option to view the lineage excluding systems and environments that do not exist in the Metadata Manager. When this option is switched off, the views include systems and environments, that do not exist in the Metadata Manager.

For example, the following image displays lineage excluding assets that do not exist in Metadata Manager.

Overview Pane

Use this option to remove the overview pane from the graphical view.
Table

You can run forward and reverse lineage analysis to trace metadata at the table level. Forward lineage analysis generates lineage with the table as source. And, reverse lineage analysis generates lineage with the table as target. The Dual lineage analysis generates a lineage, which includes both forward and reverse lineage.

This topic walks you through the following:

- Viewing Lineage
- Working on Lineage

Viewing Lineage

To run lineage at the table level, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, click a table.
3. Click the **Data Lineage** tab. By default, dual lineage of the table appears.

4. You can click **Graphical View** or **Grid View** to switch between them:
   - **Graphical View**: The graphical view displays the lineage of the table in a graphical format. Selecting a column on the graphical view displays its properties in the Node Properties pane and Legends. On the Node Properties pane, click 📦 to view the selected object's properties in a new window.
**Grid View**: The grid view displays the lineage of the table in a tabular format. You can view the source and target system associated with the selected system.

<table>
<thead>
<tr>
<th>#</th>
<th>Source System Name</th>
<th>Source Environment Name</th>
<th>Source Table Name</th>
<th>Source Column Name</th>
<th>Target System Name</th>
<th>Target Environment Name</th>
<th>Target Table Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SQL System</td>
<td>TechPubs</td>
<td>SQL System</td>
<td>Northwind</td>
<td>SQL System</td>
<td>TechPubs</td>
<td>Northwind</td>
</tr>
<tr>
<td>2</td>
<td>SQL System</td>
<td>TechPubs</td>
<td>SQL System</td>
<td>Northwind</td>
<td>SQL System</td>
<td>SQL System</td>
<td>Northwind</td>
</tr>
<tr>
<td>3</td>
<td>SQL System</td>
<td>SQL Env</td>
<td>dbo AdventureWorks</td>
<td>dWBuild Version</td>
<td>SQL System</td>
<td>TechPubs</td>
<td>SQL System</td>
</tr>
<tr>
<td>4</td>
<td>wvndOoc</td>
<td>wvndOoc</td>
<td>CustDetails</td>
<td></td>
<td>TABLZ1A0U</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>SQL System</td>
<td>TechPubs</td>
<td>SQL TechPubs</td>
<td>SQLTechPubs</td>
<td>SQLTechPubs</td>
<td>SQLTechPubs</td>
<td>dbo Categories</td>
</tr>
<tr>
<td>6</td>
<td>SQL System</td>
<td>TechPubs</td>
<td>SQLTechPubs</td>
<td>SQLTechPubs</td>
<td>SQLTechPubs</td>
<td>SQLTechPubs</td>
<td>dbo Categories</td>
</tr>
<tr>
<td>7</td>
<td>SQLTechPubs</td>
<td>SQLTechPubs</td>
<td>dbo Categories</td>
<td>Picture</td>
<td>SQL System</td>
<td>TechPubs</td>
<td>SQL System</td>
</tr>
<tr>
<td>8</td>
<td>SQL System</td>
<td>TechPubs</td>
<td>SQLTechPubs</td>
<td>SQLTechPubs</td>
<td>SQLTechPubs</td>
<td>dbo Categories</td>
<td></td>
</tr>
</tbody>
</table>

5. Use the following options to work on the lineage in graphical view:

**Options (🎯)**

Use this option to view lineage types, business properties and customizations options. For more information on lineage options, refer to the Working on.
Export to Image

Use this option to download the lineage view as an image, in the .jpg format. Ensure that you expand the required nodes in a lineage before downloading the lineage image.

Export to PDF

Use this option to download the lineage report in the .pdf format. Ensure that you expand the required nodes in a lineage before downloading the lineage report as PDF.

Export to Excel

Use this option to download the lineage report in the .xlsx format. Ensure that you expand the required nodes in a lineage before downloading the report.

On the lineage, expand a table node, and select a column to view its lineage path. The column is highlighted in blue color, its forward lineage path appears in red, and its reverse lineage path appears in blue. The assets that are not part of a lineage path disappear.
Click a path around the selected object to highlight its path of the source or target in the lineage.

**Viewing Transformations**

Transformations between columns are indicated using 📈 in the lineage. Hover over 📈 to view transformation rules for the columns on a pop-up. Or, click the path between the columns to highlight it to view detailed transformations between them in the Transformation Details pane.
You can expand the transformation node to view the transformation details that includes Business Rule, Extended Business Rule, Trans lookup Condition, Lookup On, and more relevant properties.

**Working on Lineage**

Lineage of a table shows how metadata moves through tables. It provides a summary of columns used as source and target. Also, it gives you information about the technical and business properties of columns involved in the lineage.

Use the following options to work on lineage:

**Forward Lineage**

Use this option to view forward lineage of the table.

**Reverse Lineage**

Use this option to view reverse lineage of the table.
**Dual Lineage**

Use this option to view dual lineage, which includes both forward and reverse lineage of the table.

**Sensitivity Indicator**

Use this option to view sensitivity of the table in the lineage. You can expand the table node to view sensitive columns. The sensitive assets are indicated using 🔐.
Logical Name

Use this option to view expanded logical names of the tables and columns in an environment in the lineage. You can expand a system node to view environments and tables.

For example, the following image displays the table's logical name in the lineage.

Expanded Logical Name

Use this option to view expanded logical names of the tables and columns in an environment in the lineage. You can expand a system node to view environments, tables, and columns.

For example, the following image displays the table's expanded logical name in the lineage.
**DQ Tool Score**

Use this option to view the data quality score of the environments, tables, and columns in the lineage. You can expand a system node to view data quality scores for environments, tables, and columns.

For example, the following image displays the data quality score in the lineage.

**Auto Layout**

Use this option to rearrange the layout of the lineage automatically.

For example, the following image displays the rearranged object layout with respect to the previous screenshot.
Overview Lineage

Use this option to view the lineage excluding systems and environments that do not exist in the Metadata Manager. When this option is switched off, the views include systems and environments, that do not exist in the Metadata Manager.

For example, the following image displays lineage excluding assets that do not exist in Metadata Manager.

Overview Pane

Use this option to remove the lineage overview pane from the graphical view.
Column

You can run forward and reverse lineage analysis to trace metadata at the column level. Forward lineage analysis generates a lineage with the column as source. And, reverse lineage analysis generates a lineage with the column as target. The Dual lineage analysis generates a lineage, which includes both forward and reverse lineage.

This topic walks you through the following:

- [Viewing Lineage](#)
- [Working on Lineage](#)

**Viewing Lineage**

To run lineage at the column level, follow these steps:

1. Go to [Application Menu > Data Catalog > Metadata Manager > Explore](#).
2. In the [Data Catalog](#) pane, click a column.
3. Click the **Data Lineage** tab. By default, dual lineage of the column appears.

4. You can click **Graphical View** or **Grid View** to switch between them:
   - **Graphical View**: The graphical view displays the lineage of the column in a graphical format. Selecting a column on the graphical view displays its properties in the Node Properties pane and Legends. On the Node Properties pane, click ☰ to view the selected object's properties in a new window.
Grid View: The grid view displays the lineage of the environment system in a tabular format. You can view the source and target system associated with the selected system.

5. Use the following options to work on the lineage in graphical view:
   
   Options (☉)

   Use this option to view lineage types, business properties and customizations options. For more information on lineage options, refer to the Working on
On the lineage, expand a system node, and select a table to view its lineage path. The environment is highlighted in blue color, its forward lineage path appears in red, and its reverse lineage path appears in blue. Systems and environments that are not part of a lineage path disappear.
Right-click a path around the selected object to highlight its path of the source or target in the lineage.

**Viewing Transformations**

Transformations between columns are indicated using in the lineage. Hover over to view transformation rules for the columns on a pop-up. Or, click the path between the columns to highlight it to view detailed transformations between them in the Transformation Details pane.
You can expand the transformation node to view the transformation details that includes Business Rule, Extended Business Rule, Trans lookup Condition, Lookup On, and more relevant properties.

**Working on Lineage**

Lineage of a column shows how metadata moves through columns. It provides a summary of columns used as source and target. Also, it gives information about technical and business properties of columns involved in the lineage.

Use the following options to work on lineage:

**Forward Lineage**

Use this option to view forward lineage of the column.

**Reverse Lineage**

Use this option to view reverse lineage of the column.
Dual Lineage

Use this option to view dual lineage, which includes both forward and reverse lineage of the column.
Sensitivity Indicator

Use this option to view sensitivity of the columns in the lineage. You can expand the environment node to view sensitive columns. The sensitive assets are indicated using 🗝️.
Logical Name

Use this option to view expanded logical names of the tables and columns in an environment in the lineage. You can expand a system node to view environments and tables.

For example, the following image displays the table's logical name in the lineage.

Expanded Logical Name
**Column**

Use this option to view expanded logical names of the tables and columns in an environment in the lineage. You can expand a system node to view environments, tables, and columns. For more information on configuring extended properties of columns, refer to the **Column** topic.

For example, the following image displays the table's expanded logical name in the lineage.

![Diagram showing expanded logical names of tables and columns](image)

**DQ Tool Score**

Use this option to view the data quality score of the environments, tables, and columns in the lineage. You can expand a system node to view data quality scores for environments, tables, and columns.

For example, the following image displays the data quality score in the lineage.

![Diagram showing data quality score](image)
Auto Layout

Use this option to rearrange the layout of the lineage automatically. For example, the following image displays the rearranged object layout with respect to the previous screenshot.

Overview Lineage
Column

Use this option to view the lineage excluding systems and environments that do not exist in the Metadata Manager. When this option is switched off, the views include systems and environments, that do not exist in the Metadata Manager.

For example, the following image displays lineage excluding assets that do not exist in Metadata Manager.

Overview Pane

Use this option to remove the lineage overview pane from the graphical view.
Previewing Data

You can preview data at table level using SQL queries. Data previewing capability at table level enables you to view data instantly and profile the data. You can also schedule a data profiling job and view data profiling summary report at the scheduled time.

Data Quality tab is not available if the Enable DQ Sync option is enabled for environments.

To preview table data, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, click a table.
3. Click the Data Quality tab.
4. Click the Preview Data tab.

By default, the Data Profiling tab opens.

The User Credentials page appears. For more information on enforcement of user credentials, refer to the Enforcing Credentials for Data Access or Preview topic.
5. Enter credentials to connect with the database.

Data at table level can be viewed. You can use SQL Editor to execute a SQL query to preview data.

You can also profile data at table level and provide data quality score.
Profiling Data at Table Level

You can assess your data quality by profiling the data at table level. You need to schedule a data profiling job and provide the data quality score by assessing the data quality.

Data Quality tab is not available if the Enable DQ Sync option is enabled for environments.

To profile data at table level, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, click a table.
3. Click Data Quality.

By default, the Data Profiling tab opens.

4. Select columns.
5. Click the Profile Data button.

The User Credentials page appears. For more information on enforcement of user credentials, refer to the Enforcing Credentials for Data Access or Preview topic.
6. Enter credentials to connect with the database.

The Job Scheduler page appears.
7. Enter appropriate values in the fields. Fields marked with a red asterisk are mandatory. Refer to the following table for field descriptions.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Name</td>
<td>Specifies the job name. For example, Administrator1585030550001. This field autopopulates with a job name. You can edit it and enter a different job name.</td>
</tr>
<tr>
<td>Interval</td>
<td>Specifies the frequency of the job. For example, Every Week.</td>
</tr>
<tr>
<td>Scheduled Job On</td>
<td>Set the date and time of the job using 📅. For example, 03-24-2020 11:45.</td>
</tr>
<tr>
<td>Local or Server</td>
<td>Select whether the job uses local or server time.</td>
</tr>
<tr>
<td></td>
<td>- Local: Refers to your local machine.</td>
</tr>
<tr>
<td></td>
<td>- Server: Refers to the machine where your application is deployed.</td>
</tr>
<tr>
<td>Data Profile Preferences</td>
<td>Select the corresponding check boxes to give your data profile preferences in the profile grid report.</td>
</tr>
<tr>
<td></td>
<td>- <strong>Total Values</strong>: Select the check box to display the total number of rows in the selected columns.</td>
</tr>
<tr>
<td></td>
<td>- <strong>Distinct Values</strong>: Select the check box to display the number of distinct values in the selected columns.</td>
</tr>
<tr>
<td></td>
<td>- <strong>Repeated Values</strong>: Select the check box to display the number of repeated values in the selected columns.</td>
</tr>
<tr>
<td></td>
<td>- <strong>Null Values</strong>: Select the check box to display the number of null values in the selected columns.</td>
</tr>
<tr>
<td></td>
<td>- <strong>Minimum Value</strong>: Select the check box to display the minimum value in the selected columns. You can enable or disable analysis of minimum value for character data. For more information on this, refer to the <a href="#">Configuring Data Profiling and DQ Scores</a> topic.</td>
</tr>
<tr>
<td></td>
<td>- <strong>Maximum Value</strong>: Select the check box to display the maximum value in the selected columns.</td>
</tr>
</tbody>
</table>
### Option Description

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most Frequent Value</td>
<td>Select the check box to display the most frequent values in the selected columns. For more information on this, refer to the Configuring Data Profiling and DQ Scores topic.</td>
</tr>
<tr>
<td>Least Frequent Value</td>
<td>Select the check box to display the least frequent values in the selected columns.</td>
</tr>
<tr>
<td>Most Frequent Patterns</td>
<td>Select the check box to display the most frequent patterns in the selected columns. For more information on this, refer to the Configuring Data Profiling and DQ Scores topic.</td>
</tr>
<tr>
<td>Least Frequent Patterns</td>
<td>Select the check box to display the least frequent patterns in the selected columns. For more information on this, refer to the Configuring Data Profiling and DQ Scores topic.</td>
</tr>
<tr>
<td>Notify Me</td>
<td>Switch <strong>Notify Me</strong> to <strong>ON</strong> to receive email notification. For more information on email notification, refer to the Configuring Notification on Profiling Data topic.</td>
</tr>
<tr>
<td>Notification Email</td>
<td>This field is autopopulated with your email ID. If you enable notifications in the Metadata Manager Settings, you can receive email notifications from the administrator's email ID about the scheduled job.</td>
</tr>
<tr>
<td>CC list</td>
<td>Enter a comma-separated list of email IDs that should receive email notifications about the scheduled job. For example, <a href="mailto:ab.dav@xyz.com">ab.dav@xyz.com</a>, <a href="mailto:cal.kai@xyz.com">cal.kai@xyz.com</a></td>
</tr>
</tbody>
</table>

8. Click **Schedule**.

The data profiling job is scheduled.

The data profiling job is completed at the scheduled time and the job state changes to **COMPLETED**.
9. Use the following options:

**Data Profiling Summary Report**

To view data profiling summary, click **Data Profiling Summary Report**.

Data Profiling Summary page appears.

**Data Profiling Pattern Summary**

To view data profiling pattern summary report, click **Data Profiling Pattern Summary Report**.
Data Profiling Pattern Summary page appears.

To view data profile statistics, click **Data Profile Statistics**.

The data profile statistics appears in a bar graph.
Click **DQ Score**.
The Update DQ Score page appears.

Select **DQ Score** and click **Save**. The DQ Score is updated.
Viewing Mind Maps

A mind map displays the pictorial representation of a technical asset and its association with other business and technical assets. Technical assets refer to systems, environments, tables, and columns. Business assets refer to business terms, business policies, business rules, and other business assets as defined in the Business Glossary Manager Settings.

You can view and analyze Mind Maps in following views:

- Logical View
- Conceptual View

You can select an asset on a mind map and view its properties, association statistics, and sensitivity under the Object Properties pane.

To view mind maps, follow these steps:

1. Go to **Application Menu > Data Catalog > Metadata Manager**.
2. In the **Data Catalog** pane, click a `<Technical_Aset>`.
3. In the right pane, click the **Mind Map** tab.

   The Mind Map page appears and the Logical View opens by default.

   For example, if you click an environment in the Data Catalog pane and then click the Mind Map tab, the mind map of the environment appears.

4. On the Mind Map page, you can click **Logical View** or **Conceptual View** to switch between them:

   - **Logical View**: The logical view displays the associated technical assets on the left side and associated business assets on the right of the business asset. Selecting an asset on the mind map displays it properties in the Object Properties pane.
Viewing Mind Maps

- **Conceptual View**: The logical view displays the associated technical assets in non-hierarchical representation. Selecting an asset on the mind map displays its properties in the Object Properties pane.

5. Use the following options to work on the mind map:

   **Reload Diagram (↻)**

   Use this option to reload the mind map.

   **Expand Diagram (▲)**

   Use this option to expand the mind map to view the associated technical and business assets.

   **Reset Diagram to Original View (×)**

   Use this option to collapse the expanded nodes and restore the mind map to its original form.
Viewing Mind Maps

**Export (出口)**

Use this option to export the mind map. Hover over Export and use the following options:

- **Mind Map - Excel Report**: Use this option to download the mind map in the .xlsx format. Ensure that you expand the mind map before downloading the report.
- **Mind Map - Image**: Use this option to download the mind map as an image, in the .jpg format. Ensure that you expand the mind map before downloading the mind map image.
- **Sensitivity Details - Excel Report**: Use this option to download the sensitivity report of all associated assets in the .xlsx format. This report includes sensitive data indicator (SDI), SDI classification, and SDI description of the associated assets.

You can use the following panes to view properties and configure preferences for the mind map:

- **Legend**
- **View My Preferences**
- **Object Properties**
- **Overview**

**Legends**

Use legends to identify the list of components on the mind map.
View My Preferences

You can set your preferences to view the mind map according to your requirements. The available settings differ based on the logical and conceptual view. Expand the View My Preferences pane and use the following options:

Qualifier

Use the Show Qualified View option to display associated assets with other business and technical assets that are created using a unique qualifier. For more information about creating associations using a qualifier, refer to the Setting Up Associations Using Qualifiers topic.

Asset Hierarchy

Use the following options to view asset hierarchy:

- **Gray Background**: Use this option to display gray colored background for the asset hierarchy nodes. For example, the following mind map displays nodes in the hierarchy with a gray-colored background.

  ![Gray Background Example](image)

  This option is only available for Logical View.

- **Show Asset Hierarchy/Show Hierarchy**: Use this option to view hierarchy of all the assets in a mind map.
Relationship Options

Use the following options to configure relationship options:

- **Include Relationships**: Select the check box to display relationships between the assets on the mind map.

- **Switch to Enterprise Relationship configuration**: Select the check box to apply the selected line color and type configured in the [Business Glossary Manager Settings](#).

For example, in the following mind map, the relationships (is a Synonym of and is Parent Of) and the line color as set in Business Glossary Manager Settings appear on the mind map.

View Logical Names

Use the following options to view logical and expanded logical names of tables and columns on the mind map:

- **Logical Names**: Select the check box to view logical names of tables and columns on the mind map.

- **Expanded Logical Names**: Select the check box to view expanded logical names of tables and columns on the mind map.

You can configure logical names and expanded logical names of tables and columns in Metadata Manager.

For example, the following mind map displays logical names and expanded
Viewing Mind Maps

logical names.

View Sensitivity

Use the following options to view sensitivity details of the assets on the mind map:

Filters

Use the following filter options to select information availability on mind maps:

- **By Asset Type**: Use this option to filter and display asset types on the mind map.
- **By Relationship**: Use this option to filter and display assets on the mind map based on relationships.

For example, in the By Asset Type list, select Column and in the By Relationship list select is associated with. Doing this displays only those columns that have the is associated type of relationship with the asset.

- **Sensitivity Data Indicator (Y/N)**: Select the check box to indicate whether an asset is classified as sensitive.
- **Sensitive Data Classification**: Select the check box to view the sensitivity classification of assets.

For example, the following mind map displays the sensitive data indicator as sensitive (حساس) and sensitive data classification as Confidential.

For more information on updating asset's sensitivity in mind maps, refer to the [Updating Sensitivity](#) topic.
Viewing Mind Maps

**Object Properties**

Expand the Object Properties pane to view the selected asset's information such as its path, type, association statistics, data governance responsibilities, and sensitivity classification of an asset.

**Overview**

Expand this pane to open a panned view of the mind map. You can drag the purple box to move across the mind map and focus on specific areas.
Configuring Extended Properties

You can configure user-defined properties for technical assets. First, you need to set up a form and then use it to configure user-defined extended properties.

At the system level, you can configure extended properties for three objects, environments, tables, and columns. Extended properties configured at the system level for these objects are applicable to all objects under the system. For example, extended properties configured at system level for environments are applicable to all the environments under the system.

To configure extended properties at the system level, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, click the required system.
3. Click the Configure Extended Properties tab.

The Configure Extended Properties tab contains the following sections:

- **Field Controls**: Use this pane to get the required UI elements.
- **Configure Form**: Use this pane to design forms using the UI elements available in the Field Controls pane.
- **Properties**: Use this pane to view the properties of the UI element selected in the Configure Form pane.

4. Use the following tabs:

   **Environment**

   Use this tab to configure extended properties for environments under the selected system.

   **Table**
Configuring Extended Properties

Use this tab to configure extended properties for tables under the selected system.

Column

Use this tab to configure extended properties for columns under the selected system.

5. On these tabs, click Edit. Then, double-click or drag and drop the required UI elements from the Field Controls pane to the Configure Form pane.

6. Select UI elements, one at a time, and configure their properties in the Properties pane.

The available properties differ based on the type of UI element.

Refer to the following table for property descriptions:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Published</td>
<td>Switch <strong>Published</strong> to <strong>ON</strong> to publish the field.</td>
</tr>
<tr>
<td>Field</td>
<td>Specifies the field label.&lt;br&gt;To change the field labels, double-click the corresponding <strong>Value</strong> cell.</td>
</tr>
</tbody>
</table>
### Configuring Extended Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Property</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>Type</td>
<td>Specifies the type of the field. To select field types, double-click the corresponding Value cell.</td>
</tr>
<tr>
<td>Dependencies</td>
<td>Defines the pick list fields that can be used as controlling fields. It works only with the Reference Data Manager connector. To define pick list fields, select the fields from the drop down option.</td>
</tr>
<tr>
<td>Configure Values</td>
<td>Specifies the connectors for the field. To configure option values, click Configure Values. Use the following options:</td>
</tr>
<tr>
<td></td>
<td>- Default connector: Use this option to enter option values manually or using an XLSX file.</td>
</tr>
<tr>
<td></td>
<td>- Reference Data Manager: Use this option to pull option values from reference tables in the Reference Data Manager.</td>
</tr>
<tr>
<td>Mandatory</td>
<td>Specifies whether the field is mandatory.</td>
</tr>
<tr>
<td>Description</td>
<td>Specifies the field description. To enter field descriptions, double-click the corresponding Value cell.</td>
</tr>
<tr>
<td>Visible in Extended Properties</td>
<td>Switch Visible in Extended Properties to ON to make it visible on the Extended Properties tab.</td>
</tr>
<tr>
<td>Order</td>
<td>Specifies the order of the field on the Extended Properties tab. To enter the order number, double-click the corresponding Value cell. You can also drag and move fields in the Configure Form pane to change their order.</td>
</tr>
</tbody>
</table>

7. Click **Save**.

The form is saved and is available on the Extended Properties tab of the selected object (Environment, Table, or Column).

To use the form, follow these steps:
Configuring Extended Properties

1. In the Data Catalog pane, click the required object (Environment, Table, or Column).
2. Click the Extended Properties tab.
3. Click Edit and set extended properties.
4. Click Save.

The extended properties are saved.

You can download extended properties in the XLSX format and use it as a template to import extended properties. To download extended properties, on the Extended Properties tab, click Export To Excel.

You can also configure extended properties specific to:

- Systems
- Environments
- Tables
- Columns
Default Connector

When you configure extended properties using UI elements, such as combo box, radio button, and list, you also need to configure their option values. You can use the default connector to import option values from an MS Excel file or enter them manually.

To configure option values using the default connector, follow these steps:

1. In the **Configure Form** section, click the required UI element.
   Ensure that you are in edit mode.

2. In the **Properties** section, click **Configure**.
   The Connectors page appears.

3. On the **Connectors** page, ensure that the Default Connector option is selected. Then, click **Next**.
   The `<UI_Element>` Options page appears. For example, if the UI element is Combo Box, the Combo Box Options page appears.
4. Use the following options:

Add

Use this option to enter text and value manually.

Import Excel

Use this option to import options from MS Excel files.

5. After configuring option values, click Save.

To add option values manually, follow these steps:

1. Click Add.

2. Enter values to the Text and Value fields.

   The Text corresponds to options whereas the Value corresponds to underlying value of an option. You can add as many values as needed.
3. Click **Save**.

The option values appear in the UI element under the Configure Form section.

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

1. Click **Import Excel**.

The Upload Excel page appears.
2. Click Choose File and select the required MS Excel file.

The Upload Excel page appears. It displays the data in the MS Excel file.

3. Double-click the Select Column To Import cell in the required column.

The available options appear.
4. Select the appropriate option.

Field corresponds to options and Value corresponds to value of an option. You can import multiple columns. Use Clear Selection to undo the selection.

5. Click 🔼.

The `<UI_Element>` Options page appears. It displays the imported columns. You can delete a row that is not required. To delete rows, click a row and then click Delete.

6. Click Save.

The option values appear in the UI element under the Configure Form section.
Reference Data Manager

When you configure extended properties using UI elements, such as combo box, radio button, and list, you also need to configure their option values. You can use the Reference Data Manager connector to import option values from tables in the Reference Data Manager.

To configure option values using reference data manager connector, follow these steps:

1. In the **Configure Form** section, click the required UI element.
   
   Ensure that you are in edit mode.

2. In the **Properties** section, click **Configure**.
   
   The Connectors page appears.

3. On the **Connectors** page, click **Reference Data Manager** and then click **Next**.
   
   The Reference Data Manager page appears. It displays the reference folders in the Connector View pane.
4. In the **Connector View** pane, expand a reference folder and select a reference table.

   The Parameters pane displays the columns in the reference table. You can also click Preview to view the data in the reference table.
5. In the **Parameters** pane, click the radio button next to the required column.

You can select the controlling field from the drop down option. Ensure that you define the required dependencies in the Properties pane and that the option values for controlling field are configured using the same reference column.

6. Click **Finish**.

The Extended Properties Configuration page appears.
7. Under the **Properties** section, switch **Load on Startup** to **ON**.

8. Click **Save**.

   The option values are configured. For example, in the following form the List of Cities is the controlling field for Selected City. Both the fields get their option values from the same reference column.
Importing from Excel

You can import user-defined properties for technical assets from an XLSX file. You can either use an existing XLSX file or download an extended properties file from the Extended Properties tab. Ensure that the XLSX file follows the correct template.

To import extended properties from XLSX files, follow these steps:

1. On the Extended Properties tab, click Import From Excel. The Upload Excel page appears.

2. Click Choose File.

3. Browse and select the XLSX file.

4. Click.

The Upload Excel page appears. It displays the data in the XLSX file.

5. Double-click the Select Column To Import cell in the required column.

The available options appear.
6. Select an appropriate option.

For example, if you select Field, then the selected column is imported as Field.

Similarly, you can also select the Value, Type, and Parentfield columns. Ensure that you at least select a Field column.

7. Click ✪.

The extended properties are imported.
You can configure extended properties specific to a system. To configure system specific extended properties, follow these steps:

1. In the Data Catalog pane, click a system.
2. Click the Extended Properties tab.
3. Click Configure.
The **Extended Properties Configuration** page contains the following sections:

- **Field Controls**: Use this pane to get the required UI elements.
- **Configure Form**: Use this pane to design forms using the available UI elements in the **Field Controls** pane.
- **Properties**: Use this pane to view the properties of the UI element selected in the **Configure Form** pane.

4. Click **Edit**. Then, double-click or drag and drop the required UI elements from the **Field Controls** pane to the **Configure Form** pane.

5. Select UI elements, one at a time, and configure their properties in the **Properties** pane.

6. Click **Save**.

The form is saved, and is available on the **Extended Properties** tab.

You can download the extended properties in the XLSX format and use it as a template to **import extended properties**. To download extended properties, on the **Extended Properties** tab, click **Export To Excel**.
Environment

You can configure extended properties specific to an environment.

To configure environment specific extended properties, follow these steps:

1. In the Data Catalog pane, click an environment.

2. Click the Extended Properties tab.

3. Click Configure.
The Extended Properties Configuration page contains the following sections:

- **Field Controls**: Use this pane to get the required UI elements.
- **Configure Form**: Use this pane to design forms using the available UI elements in the Field Controls pane.
- **Properties**: Use this pane to view the properties of the UI element selected in the Configure Form pane.

4. Click **Edit**. Then, double-click or drag and drop the required UI elements from the Field Controls pane to the Configure Form pane.

5. Select UI elements, one at a time, and configure their properties in the Properties pane.

6. Click **Save**.

The form is saved, and is available on the Extended Properties tab.

You can download the extended properties in the XLSX format and use it as a template to **import extended properties**. To download extended properties, on the Extended Properties tab, click **Export To Excel**.
Table

You can configure extended properties specific to a table.

To configure table specific extended properties, follow these steps:

1. In the Data Catalog pane, click a table.
2. Click the Extended Properties tab.
3. Click Configure.

The Extended Properties Configuration page contains the following sections:
Table

- **Field Controls**: Use this pane to get the required UI elements.
- **Configure Form**: Use this pane to design forms using the available UI elements in the **Field Controls** pane.
- **Properties**: Use this pane to view the properties of the UI element selected in the **Configure Form** pane.

4. Click **Edit**. Then, double-click or drag and drop the required UI elements from the **Field Controls** pane to the **Configure Form** pane.

5. Select UI elements, one at a time, and configure their properties in the **Properties** pane.

6. Click **Save**.

The form is saved, and is available on the **Extended Properties** tab.

You can download the extended properties in the XLSX format and use it as a template to import extended properties. To download extended properties, on the **Extended Properties** tab, click **Export To Excel**.
Column

You can configure and use extended properties specific to a column.

To configure column specific extended properties, follow these steps:

1. In the Data Catalog pane, click a column.
2. Click the Extended Properties tab.
3. Click Configure.

The Extended Properties Configuration page contains the following sections:

- **Field Controls**: Use this pane to get the required UI elements.
- **Configure Form**: Use this pane to design forms using the available UI elements in the Field Controls pane.
Column

- **Properties**: Use this pane to view the properties of the UI element selected in the Configure Form pane.

4. Click **Edit**. Then, double-click or drag and drop the required UI elements from the Field Controls pane to the Configure Form pane.

5. Select UI elements, one at a time, and configure their properties in the Properties pane.

6. Click **Save**.

The form is saved under the Extended Properties tab.

You can download the extended properties in the XLSX format and use it as a template to import extended properties. To download extended properties, on the Extended Properties tab, click **Export To Excel**.
Creating and Managing Test Cases for Tables

You can define test cases for a table in the Metadata Manager and determine the testing type, expected and actual results, SQL script, and more. You can also enrich a test case by adding validation steps and supporting documents to it.

The metadata-level test cases are stored in the Test Manager under a project. This project follows the <System_Name>_<Environment_Name> nomenclature format.

Creating and managing test cases involves:

- Creating test cases
- Adding validation steps
- Adding documents
- Managing test cases
Creating Test Cases

In the Metadata Manager, you can define test cases for tables. You can also add documents and multiple validation steps to the test cases.

To create table-level test cases, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager > Explore.
2. In the Data Catalog pane, expand a system, and click a table.
3. Click the Test Specification tab.
4. Click the +

The Add New Test Case 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.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Case Name</td>
<td>Specifies the name of the test case. For example, Verifying Log in Page.</td>
</tr>
<tr>
<td>Test Case Label</td>
<td>Specifies the unique label for the test case. For example, Log in Page.</td>
</tr>
<tr>
<td>Type of Testing</td>
<td>Specifies the type of testing. For example, PERFORMANCE-TEST.</td>
</tr>
<tr>
<td>Test SQL Script</td>
<td>Specifies the SQL script required in the test execution. For example, select * from dbo.RM_Resource.</td>
</tr>
<tr>
<td>Description</td>
<td>Specifies the test objective in brief. For example: The objective of the test case is to verify log in page with a</td>
</tr>
</tbody>
</table>
Creating Test Cases

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>valid user name and password.</td>
<td>Specifies the expected result of the test case in detail. For example: All the users can log on to erwin DI with their user name and password.</td>
</tr>
<tr>
<td>Expected Result</td>
<td>Specifies the actual test result after the execution of the test. For example: One user cannot log on to erwin DI.</td>
</tr>
<tr>
<td>Actual Result</td>
<td>Specifies the testing comments about the test case. For example: The user name and passwords are saved in the dbo.RM_Resource table.</td>
</tr>
<tr>
<td>Testing Comments</td>
<td></td>
</tr>
</tbody>
</table>

6. Click **Save and Exit**.

The test case is created.

Once the test case is created, you can enrich it further by:

- Adding validation steps
- Adding documents

Managing test cases involves:

- Updating test cases
- Exporting test cases
- Deleting test cases
Adding Validation Steps

In Metadata Manager, you can add multiple validation steps to a table. You can also specify actual and expected results for each validation step.

To add validation steps to table-level test cases, follow these steps:

1. In Data Catalog, click a table, and click the Test Specification tab. The Test Case Overview appears in the bottom pane.

2. In the bottom pane, click the Validation Steps tab.

3. Click .
Adding Validation Steps

The Add New Test Step page appears.

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

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Validation Step Type</td>
<td>Select the validation step type from the drop-down.</td>
</tr>
<tr>
<td>Step Name</td>
<td>Enter an unique name of each step.</td>
</tr>
<tr>
<td>Description</td>
<td>Describe the object in brief.</td>
</tr>
<tr>
<td>Expected Result</td>
<td>Enter the SQL script to run the test case.</td>
</tr>
<tr>
<td>Actual Result</td>
<td>Enter the actual test result after the execution of the test.</td>
</tr>
<tr>
<td>Expected Result</td>
<td>Enter the expected result in detail, including the error-message that is</td>
</tr>
<tr>
<td></td>
<td>displayed on screen.</td>
</tr>
<tr>
<td>Test Step Comments</td>
<td>Enter relevant test step comments.</td>
</tr>
</tbody>
</table>
Adding Validation Steps

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ments</td>
<td></td>
</tr>
</tbody>
</table>

5. Click **Save**.

The validation step is added to the test case.
Adding Documents

You can upload supporting documents such as text files, audio files, videos, and so on to table-level test cases.

To add documents to table-level test cases, follow these steps:

1. In the Data Catalog pane, click a table, and click Test Specification.

   The Test Case Overview appears.

2. In the bottom pane, click Document Upload.
3. Click \(\text{+}\).

The Add Test Case Document 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.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document Name</td>
<td>Specifies the name of the physical document being attached to the test case. For example, Resource Details.</td>
</tr>
<tr>
<td>Document Object</td>
<td>Drag and drop document files or use (\text{+}) to select and upload document files.</td>
</tr>
<tr>
<td>Document Owner</td>
<td>Specifies the document owner's name. For example, John Doe.</td>
</tr>
<tr>
<td>Document Link</td>
<td>Specifies the URL of the document. For example, <a href="https://drive.google.com/file/d/2sC2_SZIyeFKI7OOnb5YkMBq4ptA7jhg5/view">https://drive.google.com/file/d/2sC2_SZIyeFKI7OOnb5YkMBq4ptA7jhg5/view</a></td>
</tr>
<tr>
<td>Intended Use Description</td>
<td>Specifies the intended use of the document. For example: The document has information about the resources of the application.</td>
</tr>
<tr>
<td>Approval</td>
<td>Specifies whether the document requires approval.</td>
</tr>
</tbody>
</table>
## Adding Documents

<table>
<thead>
<tr>
<th><strong>Field Name</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Flag</td>
<td>Select the <strong>Approval Required Flag</strong> check box to select the document status.</td>
</tr>
<tr>
<td>Document Status</td>
<td>Specifies the status of the document. For example, In Progress. This field is available only when the <strong>Approval Required Flag</strong> check box is selected.</td>
</tr>
</tbody>
</table>

5. Click **Save**.

The document is added to the test case.
Managing Test Cases

Managing table-level test cases involves:

- Updating test cases
- Exporting test cases
- Deleting test cases

To update table-level test cases, follow these steps:

1. Go to Application Menu > Data Catalog > Metadata Manager.
2. In the Data Catalog pane, click a table.
3. Click the Test Specification tab and double-click a test case.

4. In the Test Case Overview tab, click .

You can update the test case.

To export a test case, click the test case in the Test Case Summary pane, and click .

To delete a test case, click the test case in the Test Case Summary pane, and click .
Viewing Metadata Manager Dashboard

The Metadata Manager Dashboard displays metrics that help you analyze and track your metadata. It presents this information using charts and graphs.

To access Metadata Manager Dashboard, follow these steps:

1. Go to **Application Menu > Data Catalog > Metadata Manager > Explore**.

2. Click the **Metadata Manager Dashboard** pane.
**Viewing Metadata Manager Dashboard**

The Metadata Manager Dashboard pane appears.

![Metadata Manager Dashboard](image)

<table>
<thead>
<tr>
<th>UI Section</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1-System Overview</strong></td>
<td>It displays number of columns in each system.</td>
</tr>
<tr>
<td><strong>2-System Usage in Mappings</strong></td>
<td>It displays usage of each system in mappings.</td>
</tr>
<tr>
<td><strong>3-System Summary</strong></td>
<td>It displays number of environments, tables, and columns in each system.</td>
</tr>
<tr>
<td><strong>4-Sensitive Data Indicators</strong></td>
<td>It displays number of sensitive columns in each system.</td>
</tr>
</tbody>
</table>
System Overview

The System Overview pane displays the number of columns in each system in a pie chart. To open the chart in the Dashboard View, click the pie chart.

Each slice of the pie chart corresponds to a system. You can drill down and view detailed information in the list format.

To view detailed information about a system, click a slice. The Details View tab opens. It includes system name, enviro-nment name, table name, and column name.
System Usage in Mappings

The System Usage in Mappings pane displays the number of instances each system is used in mappings in a pie chart. To open the chart in Dashboard View, click the pie chart.
Each slice of the pie chart corresponds to a system. You can drill down and view detailed information in the list format.

To view detailed information about a system, click a slice. The Details View tab opens. It displays system name, project name, map name, and system usage in mappings.

### System Summary

The System Summary pane displays the number of environments, tables, and columns in each system in a bar graph. To open the bar graph in the Dashboard View, click the bar...
Each set of three bars corresponds to a system and represents the number of environments, tables, and columns in the system. You can drill down and view detailed information in the list format.

To view the detailed information, click a bar.

For example, if you click a table bar, then the Tables tab opens.
### Sensitive Data Indicators

The Sensitive Data Indicators pane displays the number of sensitive columns in each system in a bar graph. To open the bar graph in the Dashboard View, click the bar graph.
Each bar of the bar graph corresponds to a system. You can drill down and view detailed information in the list format.

To view detailed information about sensitive columns in a system, click a bar. The Details View tab opens. It displays system name, environment name, table name, column name, and SDI flag.
## Viewing Metadata Manager Dashboard

<table>
<thead>
<tr>
<th>#</th>
<th>System Name</th>
<th>System Environment</th>
<th>TableName</th>
<th>ColumnName</th>
<th>SDI Flag</th>
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</tbody>
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Viewing Access Rights and Data Governance Reports

From the Access to Enterprise Access Rights and Data Governance Documentation Reports page, you can view:

- **Access rights**
- **Data governance reports**

To view access rights and data governance reports, click 🗂️ from the top navigation pane. Reports page appears. From the Reports page, you can view governed assets and access rights. For more information on viewing access rights and data governance reports, follow the below topics.

![Diagram of governed assets and access rights]

**Data Governance Report**

A successful data governance program demands an efficient grouping of roles based on the responsibilities. It is also important to assign appropriate users and roles to catalogs and then assign governance responsibilities to business assets. The governance responsibilities report helps you track assignments of these governance responsibilities to the business assets in the Business Glossary Manager.
To view reports, click the **Governed Assets** tab.

Use the following two views to view reports:

- **Graphical View:**
  The graphical view displays the governance responsibilities in a tree structure.

- **Tabular View:**
  The tabular view displays the governance responsibilities in a grid format.

By default, the graphical view opens.

To view report details in the graphical view, use the following options:

- **Expand/Collapse (↑)**
  Use this option to switch between the expanded or collapsed view. For example, the report displays the governance responsibilities in the expanded view.
**Pan View**

Use this option to focus on a part of the governance responsibilities tree.

**Export (⬇️)**

Use this option to download the report in the JPG format.

The Tabular View displays the governance responsibilities in a grid that includes, roles group, role, user details, asset name, asset type, and catalogs.
To download the report in the XLSX format, click 🕒.

Access Rights

The Access Rights tab displays the roles and user assignments. You can view these assignments in the graphical and tabular views. The graphical view displays the assigned asset types and names in a tree structure that can be expanded. Whereas the tabular view displays the assigned asset types and names in a grid format.

To view access rights, follow these steps:
1. From the **Reports** page, click the **Access Rights** tab.

![Graphical View of Access Rights](image)

2. Use the following options:

   **By Roles Assignments/By Users Assignments**
   
   Use this option to switch between the roles and user's assignments.

   **Graphical View/Tabular View**
   
   Use this option to switch between the graphical and tabular views.

   The graphical view displays the assignments in a tree structure. You can expand the tree to view the asset types and names. For example, the following graphical view displays the users assignment.

   ![Graphical View of Assignments](image)

   Use the following options on the Graphical View:
Viewing Access Rights and Data Governance Reports

- **Show Pan View/Hide Pan View**

  Use this option to show or hide the pan view. The pan view facilitates navigation across the expanded assignment tree. To navigate across the expanded, on the Pan View, move the purple box.

- **Expand/Collapse ( 확인 )**

  Use this option to switch between the expanded or collapsed view. For example, the following assignment tree appears in the expanded view.
Expand Node Level

Use this option to expand the assignment tree at the node level. Hover over a node and click the plus (+) icon.

Export Image

Use this option to download the assignment tree in the JPG format.

The Tabular View displays the assignment details in a grid format. For example, the following roles assignments are displayed in the grid format.
You can download the assignment details in the XLSX format. To download the assignments, on the Tabular View, click 📂.