How-To Library

Configuring charts for a Data Director dashboard

Abstract

Charts visually display data about business entity records, tasks, and other types of information. Charts are secondary components that you can configure and add to a page layout in the Provisioning tool. This article explains how to configure charts and add them to a page layout in the Provisioning tool.

Supported Versions

- Multidomian MDM 10.4 or later

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Overview of Chart Component

The Chart component is a secondary component that you can add to a **Home** page layout or additional page layout. The component displays report data in a chart, such as a bar graph or pie graph.

You populate charts with data collected from reports. You can filter and group the report data used in charts. You can also customize the appearance of charts.

Chart components display a single layer of data. To show another layer of data granularity, you can link data in a chart to a drilldown chart. To show the referenced records or tasks, you can link data in a chart to an interface in Data Director. You can link to the **Query** tab, **Search** tab, or Task Manager.

Before you add the Chart component to a **Home** page layout or additional page layout, create the component in the Component Editor. After you create the component, the component appears in the Layout Designer.

The following image shows a **Home** page in Data Director with Chart components:
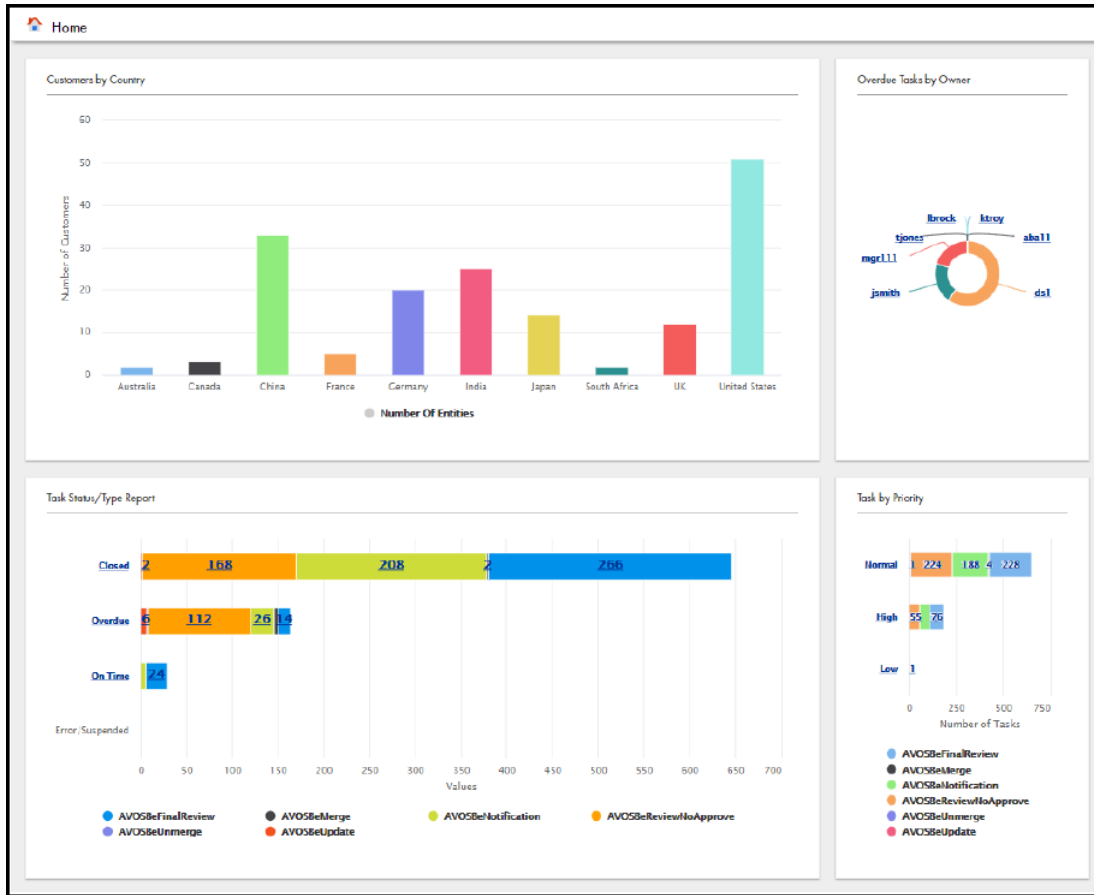
Note: To populate charts with report data, you must register the reports that you want to use to collect data. For more information on report data, see "Using REST APIs to Manage Reports" on page 5.

Source Data

You choose the source data that you want to use in the chart. The source data comes from reports that collect information about your master data. You can also filter or group the source data used in charts.

Note: Before you can generate reports or populate charts, you must configure the data mart database connection. Then you can populate the data mart with the report data. To populate the data mart with report data, run a java command to populate the data mart for all available reports, or for specific report. For more information about how to configure the data mart database connection, see the *Multidomain MDM Resource Kit Guide*.

1. Open a command prompt.
2. To populate the data mart with data for all available reports, run the following command:

    ```
    java -jar populate_datamart.jar
    ```
3. To populate the data mart with data for a specific report, run the following command:

    ```
    java -jar populate_datamart.jar exec <report name>
    ```

The C_REPOS_RPT_DETAIL table is populated with report data.

Reports

You can use the out of the box reports to collect information about your records and tasks. The out of the box reports are available by default and collect information about predefined criteria. If you need to collect other types of information about your master data, you can create custom reports.

For example, you might use a report to collect information about the number of tasks assigned to each user. Or, you might use a report to collect information about the number of records added for each business entity type.

Note: You must register the out of the box reports and custom reports that you want to use. For more information about out of the box reports, see "Out of the Box Reports" on page 8.
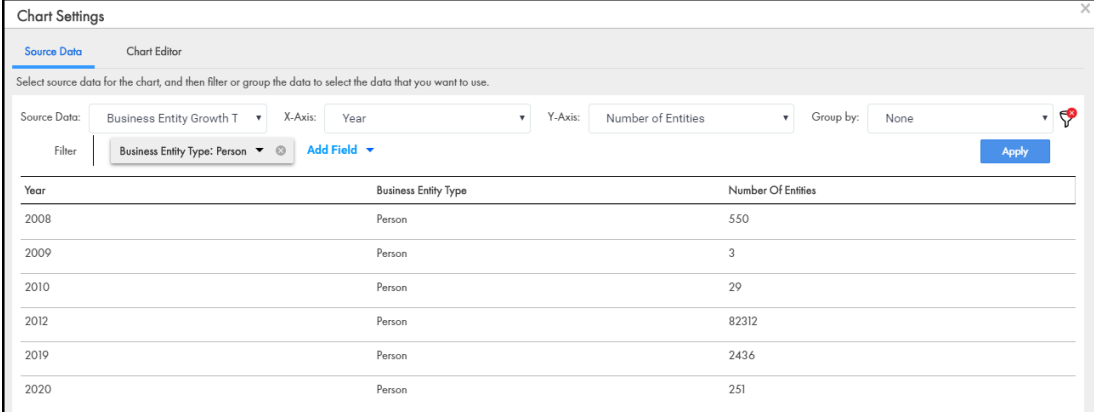
Filters

To narrow the focus of a chart, you can filter the source data used in the chart. You can filter the source data by data dimensions collected in the report.

For example, you might populate the chart with data collected by the out of the box Business Entities Added report. The report collects information about the number of records added for each business entity type and breaks down the records by year. The chart shows business entity growth trends for all business entity types. You can filter the source data to only include records created for the Person business entity type. Then the chart shows business entity growth trends for the Person business entity type.

You can also use filters to ensure that new data is included in the chart. For example, you might populate the chart with data collected by the Business Entities Added report and filter the data to only included records created for the Person business entity type. Then when users create new records for the Person business entity type, the chart displays the new data in the chart.

The following image shows a chart that displays the number of records created for the Person business entity type and breakdowns the records by year:

Group by

To segment data in a data series into groups, you can group the source data displayed in a chart by a criteria in the underlying data. The grouped data appears side by side or stacked. You might want to use the group by criteria for bar graphs.

For example, you might create a chart that shows tasks by status and then grouped by task type. The chart displays the tasks by status, with the data about each status grouped by task type.

The following image shows a chart with grouped data:
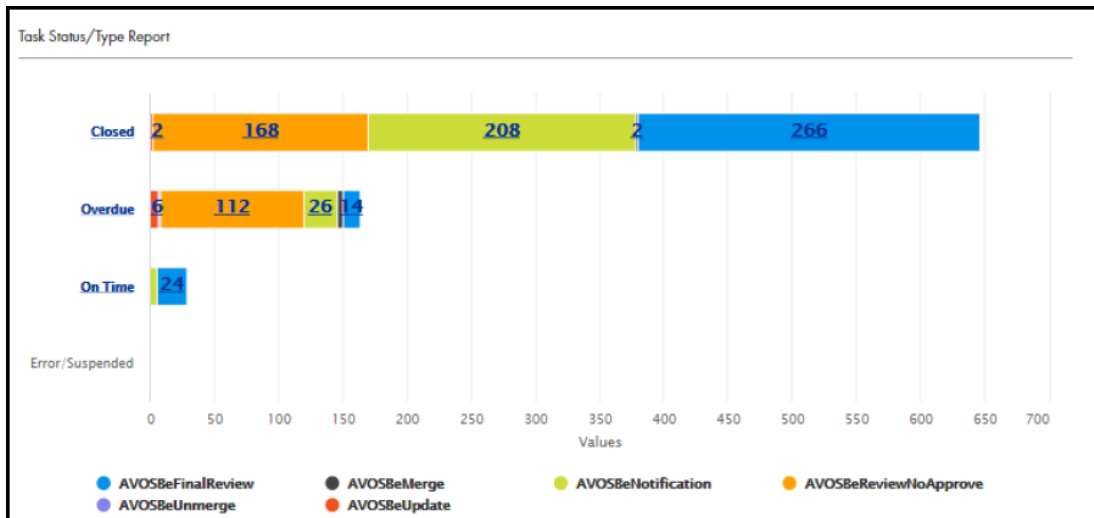
Using REST APIs to Manage Reports

You can use REST APIs to manage the out of the box reports and custom reports that collect information about your master data. Later, in the Provisioning tool, you can populate Chart components with the report data. Then in Data Director, users can view the charts to analyze data about their master data.

The out of the box reports collect information about predefined criteria. If you want to collect other information about your master data, use custom reports.

REST APIs for Reports

You can use a set of REST APIs to manage reports.

The following table lists the REST APIs for reports:

REST API	Description
List Reports	Returns a list of registered reports and the configuration of the reports.
Get Report Configuration and Data	Returns the report configuration and data.
Get Report Configuration and Drilldown Reports	Returns the report configuration and associated drilldown reports.
Register Report	Registers custom reports. Returns the report ID for the report, which you can use in other APIs.
Update Report Configuration	Updates the configuration of a report.
Add or Update Report Data	Adds or updates data entries in a report.
Delete Report	Deletes a report.
Run Report Update Job	Starts the batch jobs associated with the out of the box reports.
Get Status of Report Update Job	Returns the status of a report update job.

Report Configuration

The report configuration consists of multiple parameters, such as the report name, description, dimensions, and metric name. The report configuration of the out of the box reports is preconfigured. If you want to use custom reports, you must specify the report configuration of your custom reports.

The following table describes the parameters in a report configuration:

Parameter	Description
ROWID_RPT_CONFIG	ID of report.
DIMENSION_NAME_1	The name of a dimension of data in the report. For example, a dimension might be User Name, Review task type, or business entity type.
DIMENSION_NAME_2	Optional. The name of a dimension of data in the report. For example, a dimension might be User Name, Review task type, or business entity type.
TIMEPERIOD_NAME	Optional. Name of the period of time to which the data applies. For example, you might specify `Month`.
RPT_NAME	Name of the report.
METRIC_NAME	Label for the type of data collected by the report. By default, the value specified for this parameter appears as the name of the y-axis in the chart. For example, you might have a report that collects information about closed tasks by user. You might use the metric name `Number of closed tasks`.
RPT_DESC	Description of the report.
RPT_TYPE	Indicates whether the report is a drilldown report. If the value is `null`, then the report is a root report. If the value is anything other than `null`, then the report is a drilldown report.

Report Data

Add data to a report so that you can populate charts with the report data. For the out of the box reports, you use the report update jobs associated to the reports to collect and add report data. If you use custom reports, you must manually add the data entries in the custom reports.

The following table describes the parameters you must configure for each data entry in a report:

Parameter	Description
DIMENSION_NAME_1	The name of a dimension of data in the report. For example, a dimension might be User Name, Review task type, or business entity type.
DIMENSION_NAME_2	Optional. The name of a dimension of data in the report. For example, a dimension might be User Name, Review task type, or business entity type.
TIMEPERIOD_NAME	Optional. Name of the period of time to which the data applies. For example, you might specify `Month`.

Parameter	Description
METRIC_VALUE	Number that represents the dimensions of data. For example, you might have a report that collects information about closed tasks by user. One dimension of the report is the user John Smith, and another dimension is the Review task type. The metric value might be 5. This means that John Smith closed five tasks of the Review task type.
DRILLDOWN_RPT_ID	ID of a drilldown report. If the value is null, then there is no drilldown report configured.

The following example shows three data entries in a report:

```
[
  {
    "DIMENSION_VALUE_1": "High",
    "DIMENSION_VALUE_2": "AVOSBeMerge",
    "TIMEPERIOD_VALUE": "null",
    "METRIC_VALUE": "3",
    "DRILLDOWN_RPT_ID": "null"
  },
  {
    "DIMENSION_VALUE_1": "High",
    "DIMENSION_VALUE_2": "AVOSBeReviewNoApprove",
    "TIMEPERIOD_VALUE": "null",
    "METRIC_VALUE": "0",
    "DRILLDOWN_RPT_ID": "null"
  },
  {
    "DIMENSION_VALUE_1": "High",
    "DIMENSION_VALUE_2": "AVOSBeUpdate",
    "TIMEPERIOD_VALUE": "null",
    "METRIC_VALUE": "0",
    "DRILLDOWN_RPT_ID": "null"
  }
  ...
]
```

Drilldown Reports

A drilldown report contains another layer of data about a data entry in a report. You can use the drilldown reports associated to the out of the box reports or configure drilldown reports for your custom reports.

When you create custom reports, you register a root report. You can create and associate drilldown reports to data entries in the root report or data entries in other drilldown reports.

For example, you might have a report that collects information about the number tasks per each status. You can associate a drilldown report to the number of Closed tasks. The drilldown report contains the number of Closed tasks for each user. You can also associate a drilldown report to the number of Approved tasks. The drilldown report contains the number of Approved tasks for each user.

In Data Director, users might see a parent chart that shows the number of tasks per each status. Then when they select the number of Closed tasks, they drill down to a drilldown chart that shows the number of Closed tasks for each user.

The following image shows the drilldown report structure:

Root Report

Value 1 — Value 2 — Value 3 — Value 4

Drilldown Report 1 | Drilldown Report 2 | Drilldown Report 3

Value 1.1 | Value 1.2 | Value 1.3 | Value 1.4
Value 2.1 | Value 2.2 | Value 2.3 | Value 2.4
Value 3.1 | Value 3.2 | Value 3.3 | Value 3.4
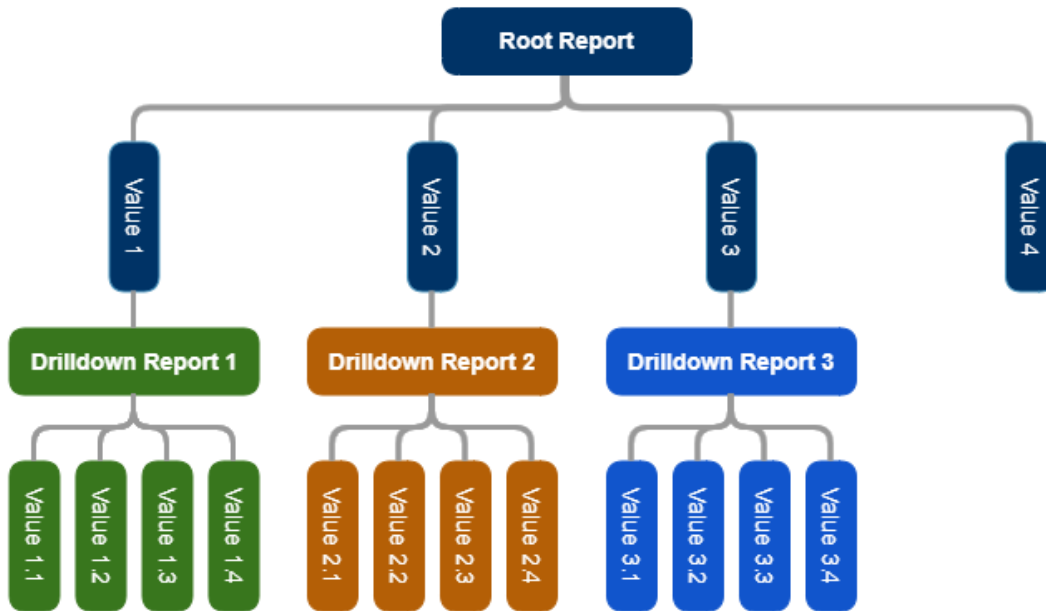
For information about the drilldown reports associated to the out of the box reports, see .

Out of the Box Reports

The out of the box reports collect information about your master data. Some out of the box reports also have drilldown reports. Drilldown reports contain another layer of data about the report data.

For example, the Tasks Overview by Status report collects information about the number of tasks by status. Drilldown reports associated to the report shows the users assigned tasks for each status.

To use the out of the box reports, you must run the report update job associated to the report that you want to use. The report update job registers the report and collects information about your master data based on the report criteria. Then in the Provisioning tool, you can populate Chart components with the report data. If there are drilldown reports associated to the out of the box report, you can link your chart to a drilldown chart.

The following table describes the out of the box reports and lists the ID of each report:

Report ID	Report	Description
MDM.RPT.1	Tasks Overview by Status	Displays the total number of tasks and breaks down the tasks by status. You can drill down to users assigned for each task status.
MDM.RPT.2	Task Overview by Priority	Displays the total number of tasks and breaks down the tasks by priority. You can drill down to users assigned for each task priority.
MDM.RPT.4	Business Entities Added by Year	Displays the number of records added for each business entity type and breaks down the records by year.
MDM.RPT.5	Customer Onboarding Time	Displays how long it took to qualify records.
MDM.RPT.6	Business Entities by Source Systems	Displays the total number of records for each business entity type that comes from each source system. The detailed report breaks down the records for each pair of business entity type and source system by year.

Report ID	Report	Description
MDM.RPT.7	Assigned Tasks by Users	Displays the total number of tasks assigned to each user.
MDM.RPT.8	Open Tasks by User Roles	Displays the total number of tasks that are open by user roles.
MDM.RPT.10	Closed Tasks by Users	Displays the total number of tasks that are closed by each user.

Managing the Out of the Box Reports

To use the out of the box reports to collect data about your master data, run the update jobs associated to the out of the box reports. After you run the update jobs, in the Provisioning tool, you can populate Chart components with the report data.

Before you begin, review the out of the box reports and determine the reports that you want to use. For more information, see "Out of the Box Reports" on page 8.

1. To run the update job associated to the out of the box report, in the browser address bar, enter the REST URL from the Run Report Update Job REST API.
   For example, the following REST URL runs the update job associated to the Tasks Overview by Status report:

   ```
   http://localhost:8080/cmx/report/localhost-orcl-DS_UI1/data/collect/MDM.RPT.1
   ```

   You registered the report and started collecting data based on the report criteria. The following sample response shows the status of the report update job:

   ```
   {
      "status": "PROCESSING"
   }
   ```

2. To retrieve the status of the report update job, in the browser address bar, enter the REST URL from the Get Status of Report Update Job REST API.
   For example, following REST URL retrieves the status of the update job:

   ```
   http://localhost:8080/cmx/report/localhost-orcl-DS_UI1/data/collect/MDM.RPT.1/status
   ```

   The following sample response shows the status of the report update job:

   ```
   {
      "status": "COMPLETED_SUCCESSFULLY",
      "jobId": "SVR1.2X9N1 ",
      "lastUpdateDate": "2019-10-31T14:37:11.846-04:00",
      "startRunDate": "2019-10-31T14:37:09.120-04:00"
   }
   ```

3. To retrieve the report configuration and data, in the browser address bar, enter the REST URL from Get Report Configuration and Data REST API.
   For example, the following REST URL retrieves the report configuration and data:

   ```
   http://localhost:8080/cmx/report/localhost-orcl-DS_UI1/data/MDM.RPT.1
   ```

   The following sample response shows the report configuration and data:

   ```
   {
      "metadata":{
         "fieldsMetadata":[
            "DIMENSION_VALUE_1",
            "DIMENSION_VALUE_2",
            "TIMEPERIOD_VALUE",
            "METRIC_VALUE",
            "DRILLDOWN_RPT_ID"
         ],
         "ROWID_RPT_CONFIG":"MDM.RPT.1       ",
         "DIMENSION_NAME_1":"Task Status",
         "METRIC_NAME":"Number of tasks",
         "DIMENSION_NAME_2":"Task Type",
   ```

```
      "TIMEPERIOD_NAME":null,
      "RPT_NAME":"Task Status/Type Report",
      "RPT_DESC":"Metrics for task status/type",
      "RPT_TYPE":null
    },
    "data":[
      [
        "Overdue",
        "AVOSBeMerge",
        null,
        "36",
        "SVR1.4FCA2     "
      ],
      [
        "Overdue",
        "AVOSBeReviewNoApprove",
        null,
        "189",
        "SVR1.4FC8E     "
      ],
      [
        "Overdue",
        "AVOSBeUpdate",
        null,
        "1",
        "SVR1.4FCAQ     "
      ],
      [
        "Overdue",
        "AVOSBeFinalReview",
        null,
        "1",
        "SVR1.4FC9W     "
      ]
                    ...
    ]
  }
```

4. To retrieve the report configuration and drilldown reports, use the Get Report Configuration and Drilldown Reports REST API.

   For example, the following REST URL retrieves the report configuration and drilldown reports:

   ```
   http://localhost:8080/cmx/report/localhost-orcl-DS_UI1/meta/MDM.RPT.1
   ```

   The following sample response shows the report configuration and drilldown reports:

```
{
  "ROWID_RPT_CONFIG":"MDM.RPT.1",
  "DIMENSION_NAME_1":"Task Status",
  "METRIC_NAME":"Number of tasks",
  "DIMENSION_NAME_2":"Task Type",
  "TIMEPERIOD_NAME":null,
  "RPT_NAME":"Task Status/Type Report",
  "RPT_DESC":"Metrics for task status/type",
  "RPT_TYPE":null,
  "DRILLDOWN":[
    {
      "RPT_NAME":"Task's Owner per Task Status and Task Type",
      "DETAILED_RPT_IDS":[
        "SVR1.4FCA3",
        "SVR1.4FCA4",
        "SVR1.4FCA5",
        "SVR1.4FCA6",
        "SVR1.4FCA7",
        "SVR1.4FC8F",
        "SVR1.4FC8G",
        "SVR1.4FC8H",
        "SVR1.4FC8I",
        "SVR1.4FC8J",
        "SVR1.4FCAR",
        "SVR1.4FCAS",
```

```
                    "SVR1.4FCAT",
                    "SVR1.4FCAU",
                    "SVR1.4FCAV",
                    "SVR1.4FC9X",
                    "SVR1.4FC9Y",
                    "SVR1.4FC9Z",
                    "SVR1.4FCA0",
                    "SVR1.4FCA1",
                    "SVR1.4FC9L",
                    "SVR1.4FC9M",
                    "SVR1.4FC9N",
                    "SVR1.4FC9O",
                    "SVR1.4FC9P",
                    "SVR1.4FC8L",
                    "SVR1.4FC8M",
                    "SVR1.4FC8N",
                    "SVR1.4FC8O"
                ],
                "CONFIG_RPT_IDS":[
                    "SVR1.4FCA2",
                    "SVR1.4FC8E",
                    "SVR1.4FCAQ",
                    "SVR1.4FC9W",
                    "SVR1.4FC9K",
                    "SVR1.4FC8K",
                    "SVR1.4FCAW",
                    "SVR1.4FC9E",
                    "SVR1.4FC88",
                    "SVR1.4FC8W",
                    "SVR1.4FC82",
                    "SVR1.4FC92",
                    "SVR1.4FC98",
                    "SVR1.4FCAE",
                    "SVR1.4FCA8",
                    "SVR1.4FCB8",
                    "SVR1.4FC9Q",
                    "SVR1.4FCAK",
                    "SVR1.4FC8Q",
                    "SVR1.4FCB2"
                ]
            }
        ]
    }
```

Custom Reports

If the out of the box reports do not meet your business requirements, you can configure custom reports to collect other information about your master data. For example, you might want to collect information about the number of closed tasks by priority.

To use custom reports, you must configure and register the reports, and then add data entries to the report. To associate drilldown reports to the report data, you configure and register the drilldown reports. Then you can associate the drilldown report to a data entry in the custom report.

Managing Custom Reports

Register and configure the custom reports that you want to use to collect information about your master data. Then in the Provisioning tool, you can populate the Chart component with the report data.

Before you begin, determine the data you want to collect.

1. To review the registered reports, use the List Reports REST API.
   For example, the following request lists the registered root reports:
   ```
   GET http://localhost:8080/cmx/report/localhost-orcl-DS_UI1/list
   ```

2. To register a custom report, use the Register Report REST API.

   For example, the following request registers a custom report:

```
POST http://localhost:8080/cmx/report/localhost-orcl-DS_UI1/list
{
  "DIMENSION_NAME_1": "Task Priority",
  "DIMENSION_NAME_2": "Task Type",
  "TIMEPERIOD_NAME": "null",
  "RPT_NAME": "Task Priority/Type Report",
  "RPT_DESC": "Metrics for task status/type",
  "METRIC_NAME": "Number of tasks"
}
```

   The following sample response shows the registered report:

```
{
  "ROWID_RPT_CONFIG": "SVR1.2X9N0",
  "DIMENSION_NAME_1": "Task Priority",
  "DIMENSION_NAME_2": "Task Type",
  "TIMEPERIOD_NAME": "null",
  "RPT_NAME": "Task Priority/Type Report",
  "RPT_DESC": "Metrics for task status/type",
  "METRIC_NAME": "Number of tasks",
  "RPT_TYPE": "null"
}
```

   The request returns the report ID in the `ROWID_RPT_CONFIG` parameter.

3. To add data entries in a report, use the Add or Update Report Data REST API.

   For example, the following request adds data entries in a report:

```
POST http://localhost:8080/cmx/report/localhost-orcl-DS_UI1/data/SVR1.2X9N0
[
  {
    "DIMENSION_VALUE_1": "High",
    "DIMENSION_VALUE_2": "AVOSBeMerge",
    "TIMEPERIOD_VALUE": "null",
    "METRIC_VALUE": "3",
    "DRILLDOWN_RPT_ID": "null"
  },
  {
    "DIMENSION_VALUE_1": "High",
    "DIMENSION_VALUE_2": "AVOSBeReviewNoApprove",
    "TIMEPERIOD_VALUE": "null",
    "METRIC_VALUE": "0",
    "DRILLDOWN_RPT_ID": "null"
  },
  {
    "DIMENSION_VALUE_1": "High",
    "DIMENSION_VALUE_2": "AVOSBeUpdate",
    "TIMEPERIOD_VALUE": "null",
    "METRIC_VALUE": "0",
    "DRILLDOWN_RPT_ID": "null"
  }
  ...
]
```

4. To retrieve the report configuration and data, use the Get Report Configuration and Data REST API.

   For example, the following request retrieves the report configuration and data:

```
GET http://localhost:8080/cmx/report/localhost-orcl-DS_UI1/data/SVR1.2X9N0
```

   The following sample response shows the report configuration and the data:

```
{
  "metadata":{
    "fieldsMetadata":[
      "DIMENSION_VALUE_1",
      "DIMENSION_VALUE_2",
      "TIMEPERIOD_VALUE",
      "METRIC_VALUE",
      "DRILLDOWN_RPT_ID"
```

```
        ],
        "ROWID_RPT_CONFIG": "MDM.RPT.2",
        "DIMENSION_NAME_1": "Task Priority",
        "METRIC_NAME": "Number of tasks",
        "DIMENSION_NAME_2": "Task Type",
        "TIMEPERIOD_NAME": "null",
        "RPT_NAME": "Task Priority/Type Report",
        "RPT_DESC": "Metrics for task status/type",
        "RPT_TYPE": "null"
    },
    "data":[
      [
        "High",
        "AVOSBeMerge",
        "null",
        "3",
        "SVR1.48P5G"
      ],
      [
        "High",
        "AVOSBeReviewNoApprove",
        "null",
        "0",
        "null"
      ],
      [
        "High",
        "AVOSBeUpdate",
        null,
        "0",
        "null"
      ],
      [
        "High",
        "AVOSBeFinalReview",
        null,
        "0",
        "null"
      ]
      ...
    ]
}
```

5. To delete a report, use the Delete Report REST API.
    For example, the following request deletes a report:

    ```
    DELETE http://localhost:8080/cmx/report/localhost-orcl-DS_UI1/data/SVR1.2X9N0
    ```

Managing Custom Reports with Drilldown Reports

Register the custom reports that you want to use and add data entries to your report. Then register the drilldown reports and add data entries to the drilldown reports. When you add or update data entries in your root reports, you can associate your drilldown reports to the data entries. Then in the Provisioning tool, you can populate the Chart component with the report data and link the root chart to a drilldown chart.

Before you begin, determine the data you want to collect. Also, determine the drilldown reports you want to configure and associate to your data entries in your custom report.

1. To review the registered reports, use the List Reports REST API.
    For example, the following request lists the registered root reports and drilldown reports:

    ```
    GET http://localhost:8080/cmx/report/localhost-orcl-DS_UI1/list?show=all
    ```

2. To register a custom report, use the Register Report REST API.
    For example, the following request registers a custom report:

    ```
    POST http://localhost:8080/cmx/report/localhost-orcl-DS_UI1/list
    {
    ```

```
        "DIMENSION_NAME_1": "Task Priority",
        "DIMENSION_NAME_2": "Task Type",
        "TIMEPERIOD_NAME": "null",
        "RPT_NAME": "Task Priority/Type Report",
        "RPT_DESC": "Metrics for task status/type",
        "METRIC_NAME": "Number of tasks"
      }
```

The following sample response shows the registered report:

```
{
  "ROWID_RPT_CONFIG": "SVR1.2X9N0",
  "DIMENSION_NAME_1": "Task Priority",
  "DIMENSION_NAME_2": "Task Type",
  "TIMEPERIOD_NAME": "null",
  "RPT_NAME": "Task Priority/Type Report",
  "RPT_DESC": "Metrics for task status/type",
  "METRIC_NAME": "Number of tasks",
  "RPT_TYPE": "null"
}
```

The request returns the report ID in the `ROWID_RPT_CONFIG` parameter.

3. To add data entries in a root report, use the Add or Update Report Data REST API.

   Later, you can associate a drilldown report to a data entry.

   For example, the following request adds data entries in a report:

```
POST http://localhost:8080/cmx/report/localhost-orcl-DS_UI1/data/SVR1.2X9N0
[
  {
    "DIMENSION_VALUE_1": "High",
    "DIMENSION_VALUE_2": "AVOSBeMerge",
    "TIMEPERIOD_VALUE": "null",
    "METRIC_VALUE": "3",
    "DRILLDOWN_RPT_ID": "null"
  },
  {
    "DIMENSION_VALUE_1": "High",
    "DIMENSION_VALUE_2": "AVOSBeReviewNoApprove",
    "TIMEPERIOD_VALUE": "null",
    "METRIC_VALUE": "0",
    "DRILLDOWN_RPT_ID": "null"
  },
  {
    "DIMENSION_VALUE_1": "High",
    "DIMENSION_VALUE_2": "AVOSBeUpdate",
    "TIMEPERIOD_VALUE": "null",
    "METRIC_VALUE": "0",
    "DRILLDOWN_RPT_ID": "null"
  }
  ...
]
```

4. To register a drilldown report, use the Register Report REST API.
   For example, the following request registers the drilldown report:

```
POST http://localhost:8080/cmx/report/localhost-orcl-DS_UI1/list
{
  "DIMENSION_NAME_1": "Task's Owner",
  "DIMENSION_NAME_2": "null",
  "TIMEPERIOD_NAME": "null",
  "RPT_NAME": "Task's Owner per Task Priority and Task Type",
  "RPT_DESC": "Number of tasks for each users for Task Priority/Task Type",
  "METRIC_NAME": "Number of Tasks"
  }
```

The following sample response shows the registered drilldown report:

```
{
  "ROWID_RPT_CONFIG": "SVR1.48P5G",
  "DIMENSION_NAME_1": "Task's Owner",
```

```
        "DIMENSION_NAME_2": "null",
        "TIMEPERIOD_NAME": "null",
        "RPT_NAME": "Task's Owner per Task Priority and Task Type",
        "RPT_DESC": "Number of tasks for each users for Task Priority/Task Type",
        "METRIC_NAME": "Number of Tasks",
        "RPT_TYPE": "High/AVOSBeMerge"
    }
```

The request returns the drilldown report ID in the `ROWID_RPT_CONFIG` parameter.

5. To add data entries in a drilldown report, use the Add or Update Report Data REST API.

    For example, the following request adds data entries in a drilldown report:

```
POST http://localhost:8080/cmx/report/localhost-orcl-DS_UI1/data/SVR1.48P5G
[
    {
      "DIMENSION_VALUE_1": "admin",
      "DIMENSION_VALUE_2": "null",
      "TIMEPERIOD_VALUE": "null",
      "METRIC_VALUE": "0",
      "DRILLDOWN_RPT_ID": "null"
    },
    {
      "DIMENSION_VALUE_1": "srmgr2",
      "DIMENSION_VALUE_2": "null",
      "TIMEPERIOD_VALUE": "null",
      "METRIC_VALUE": "0",
      "DRILLDOWN_RPT_ID": "null"
    },
    {
      "DIMENSION_VALUE_1": "mgr2",
      "DIMENSION_VALUE_2": "null",
      "TIMEPERIOD_VALUE": "null",
      "METRIC_VALUE": "0",
      "DRILLDOWN_RPT_ID": "null"
    }
]
```

6. To associate a drilldown report to a data entry in a report, use the Add or Update Report Data REST API. Specify the drilldown report ID in `DRILLDOWN_RPT_ID` parameter.

    For example, the following request associates a drilldown report to the data entry:

```
POST http://localhost:8080/cmx/report/localhost-orcl-DS_UI1/data/SVR1.2X9N0
[
    {
      "DIMENSION_VALUE_1": "High",
      "DIMENSION_VALUE_2": "AVOSBeMerge",
      "TIMEPERIOD_VALUE": "null",
      "METRIC_VALUE": "5",
      "DRILLDOWN_RPT_ID": "SVR1.48P5G"
    }
]
```

7. To retrieve the report configuration and data, use the Get Report Configuration and Data REST API.

    For example, the following request retrieves the report configuration and data:

```
GET http://localhost:8080/cmx/report/localhost-orcl-DS_UI1/data/SVR1.2X9N0
```

The following sample response shows the report configuration and the data:

```
{
  "metadata":{
    "fieldsMetadata":[
      "DIMENSION_VALUE_1",
      "DIMENSION_VALUE_2",
      "TIMEPERIOD_VALUE",
      "METRIC_VALUE",
      "DRILLDOWN_RPT_ID"
    ],
    "ROWID_RPT_CONFIG": "SVR1.2X9N0",
    "DIMENSION_NAME_1": "Task Priority",
```

```
                 "METRIC_NAME": "Number of tasks",
                 "DIMENSION_NAME_2": "Task Type",
                 "TIMEPERIOD_NAME": "null",
                 "RPT_NAME": "Task Priority/Type Report",
                 "RPT_DESC": "Metrics for task status/type",
                 "RPT_TYPE": "null"
            },
            "data":[
               [
                 "High",
                 "AVOSBeMerge",
                 "null",
                 "3",
                 "SVR1.48P5G"
               ],
               [
                 "High",
                 "AVOSBeReviewNoApprove",
                 "null",
                 "0",
                 "null"
               ],
               [
                 "High",
                 "AVOSBeUpdate",
                 "null",
                 "0",
                 "null"
               ],
               [
                 "High",
                 "AVOSBeFinalReview",
                 "null",
                 "0",
                 "null"
               ]
               ...
            ]
         }
```

8. To retrieve the registered reports, including your custom reports and drilldown reports, use the List Reports REST API.

    For example, the following request lists the registered root reports and drilldown reports:

    ```
    GET http://localhost:8080/cmx/report/localhost-orcl-DS_UI1/list?show=all
    ```

    The following sample response shows the registered root reports and drilldown reports:

    ```
    [
       {
         "ROWID_RPT_CONFIG": "SVR1.2X9N0",
         "DIMENSION_NAME_1": "Task Priority",
         "METRIC_NAME": "Number of tasks",
         "DIMENSION_NAME_2": "Task Type",
         "TIMEPERIOD_NAME": "null",
         "RPT_NAME": "Task Priority/Type Report",
         "RPT_DESC": "Metrics for task status/type",
         "RPT_TYPE": "null"
       },
       {
         "ROWID_RPT_CONFIG": "SVR1.48P5G",
         "DIMENSION_NAME_1": "Task's Owner",
         "DIMENSION_NAME_2": "null",
         "TIMEPERIOD_NAME": "null",
         "RPT_NAME": "Task's Owner per Task Priority and Task Type",
         "RPT_DESC": "Number of tasks for each users for Task Priority/Task Type",
         "METRIC_NAME": "Number of Tasks",
         "RPT_TYPE": "High/AVOSBeMerge"
       }
    ]
    ```

9. To delete a report, use the Delete Report REST API.

For example, the following request deletes a report:

```
DELETE http://localhost:8080/cmx/report/localhost-orcl-DS_UI1/data/SVR1.2X9N0
```

Chart Editor

You can customize the look and feel of your charts. You can choose the chart template, colors, and titles. You can also preview your chart to see how the source data might appear based on your configurations.

The following image shows the **Chart Editor** tab in the **Chart Settings** dialog box:
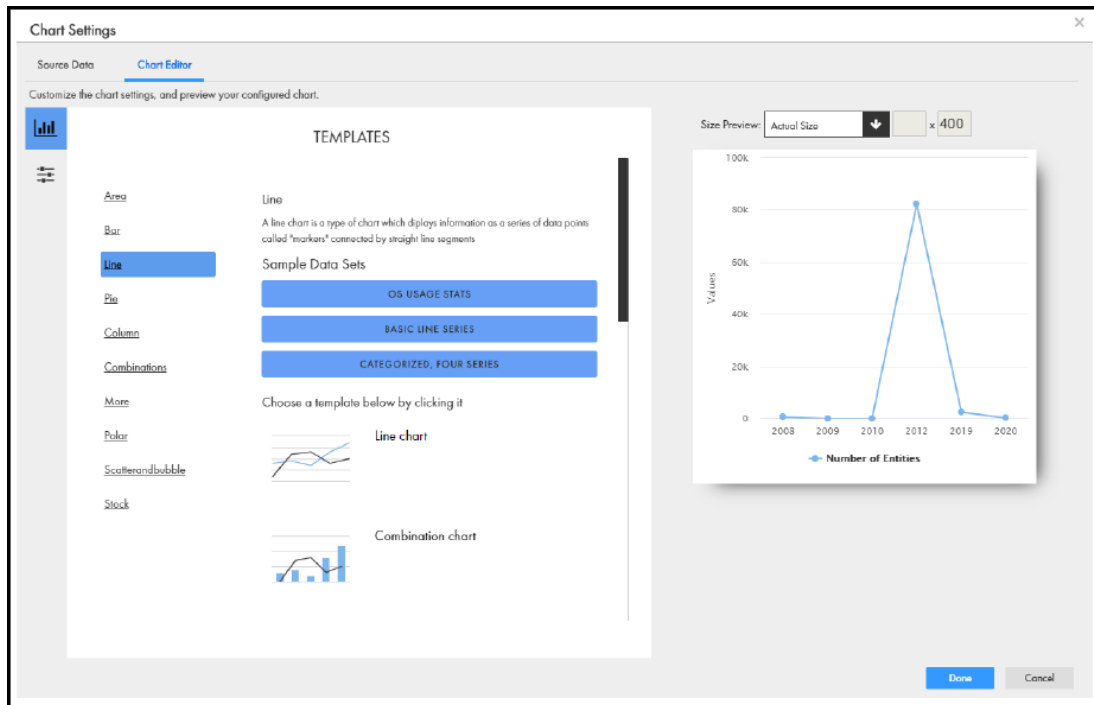
Linked Charts

When you configure the Chart component, you create a root chart. The root chart shows a single layer of data. You can link data in the root chart to a drilldown chart to show another layer of data granularity. Or, you can link data in a chart to another interface in Data Director, such as the **Queries** tab, **Search** tab, or Task Manager.

When you link data in a root chart to a drilldown chart, you can continue to link drilldown charts to other drilldown charts. Or, you can link a drilldown chart to another interface. If you link a root chart or drilldown chart to an interface, you cannot create a link to another chart or another interface.

When users select data in a chart that is linked to a drilldown chart, they drill down to a drilldown chart that provides more information about the selected data. When users select data in a chart that is linked to an interface, they navigate to a linked interface, such as the **Queries** tab, **Search** tab, or Task Manager. The configured interface opens with predefined search criteria or filters. For example, the Task Manager might open with predefined filters that show the open tasks for the Person business entity type.

The following table describes the charts and interfaces you can link your chart to:

Link to	Description	Example
Drilldown Chart	Provides another layer of data granularity about the selected data.	You might have a chart that displays open tasks by task type. When users select the data segment for Automerge tasks, they drill down to see the total number of Automerge tasks assigned to each user in a drilldown chart.
Query tab	Opens the **Query** tab with predefined query parameters and shows the relevant records.	You might have a chart that displays business entities added. When users select the data segment for Person business entity types, they navigate to the **Query** tab. The **Query** tab shows records for the Person business entity type.
Search tab	Opens the **Search** tab with predefined search criteria and shows the relevant records.	You might have a chart that displays business entities added. When users select the data segment for Household business entity types added in 2019, they navigate to the **Search** tab. The **Search** tab shows records added in 2019 for the Household business entity type.
Task Manager	Opens the Task Manager with the predefined quick filter tab and filter criteria and shows the relevant tasks.	You might have a chart that displays assigned tasks by priority. When users select the data segment for high priority tasks, they navigate to the Task Manager. The Task Manager shows the assigned high priority tasks.

Process Flow to Configure Charts

The following image shows the process flow to configure a chart:
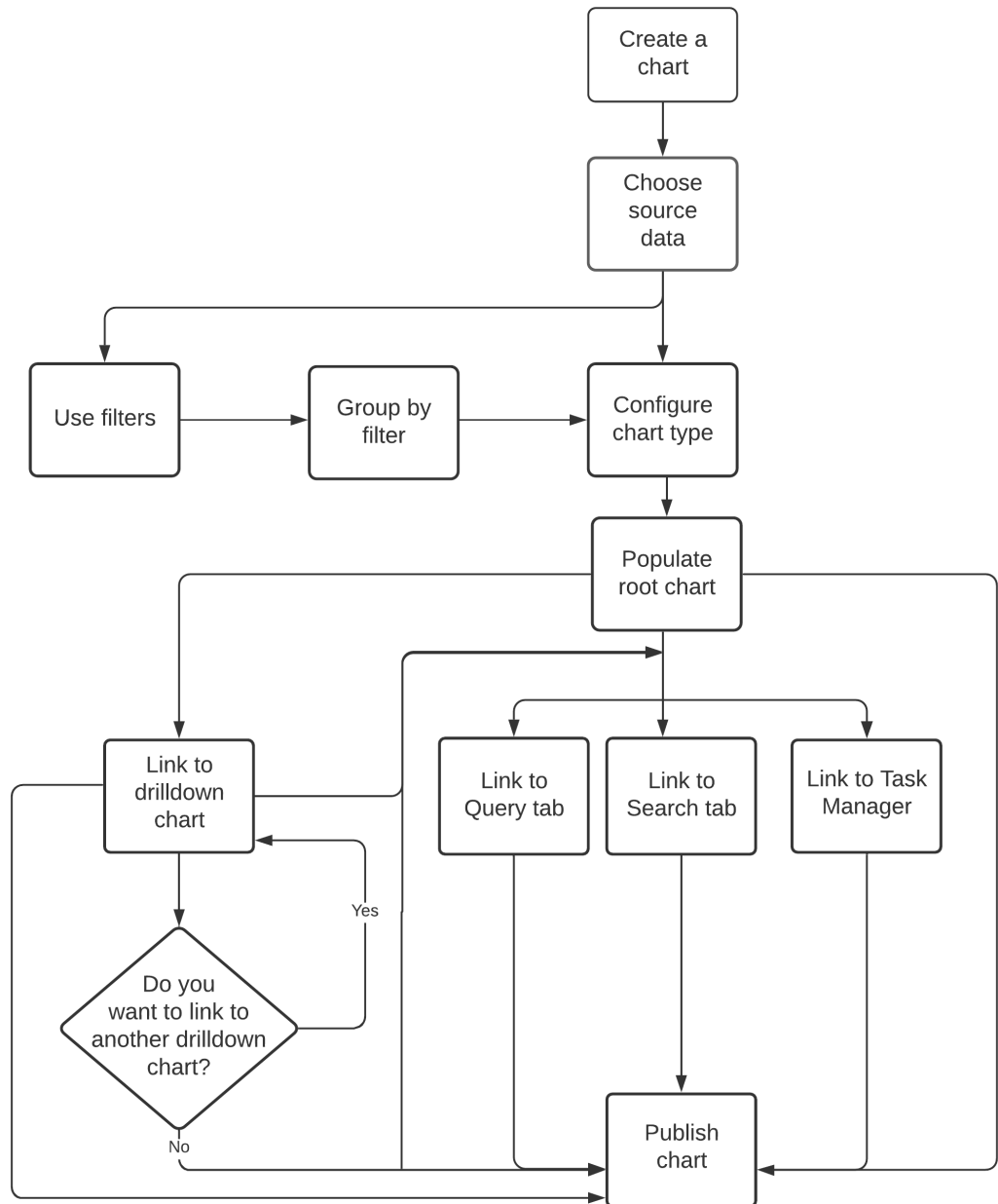
Creating the Chart Component in the Provisioning Tool

Create the Chart component in the Component Editor of the Provisioning tool. You can configure the source data that you want to use in the chart and the appearance of the chart. After you create the Chart component, the component appears in the Layout Designer.

Before you begin, register the report that you want to use in the chart. For more information about registering reports, see the *Multidomain MDM Business Entity Services Guide*.

1.   Click **Configuration** > **Component Editor**.

The **Component Editor** appears.

2. From the component type list, select **Chart**, and then click **Create**.

    A chart node appears in the tree view panel.

3. In the properties panel, enter a name for the chart in the **Chart Name** field.

4. In the **Display Name** field, enter a display name for the chart.

5. To configure the chart, in the **Source Data** field, select **Select**.

    The **Chart Settings** dialog box appears.

6. Configure the source data that you want to use.

    a. From the **Source Data** list, select the report with data that you want to use in the chart.

        Note: Your registered reports appear in the **Source Data** list. For more information about registering reports, see the *Multidomain MDM Business Entity Services Guide*.

        The **X-Axis** and **Y-Axis** lists display the axes defined for the report.

    b. To filter the report data that you want to use in the chart, click the **Filter** icon, and then add filters.

        The table filters the report data based on the selected filters.

    c. To group the report data by a criteria in the underlying data, in the **Group by** list, select a criteria.

   The table groups the report data based on the selected group by criteria.

    The following image shows the **Source Data** tab with filtered report data:
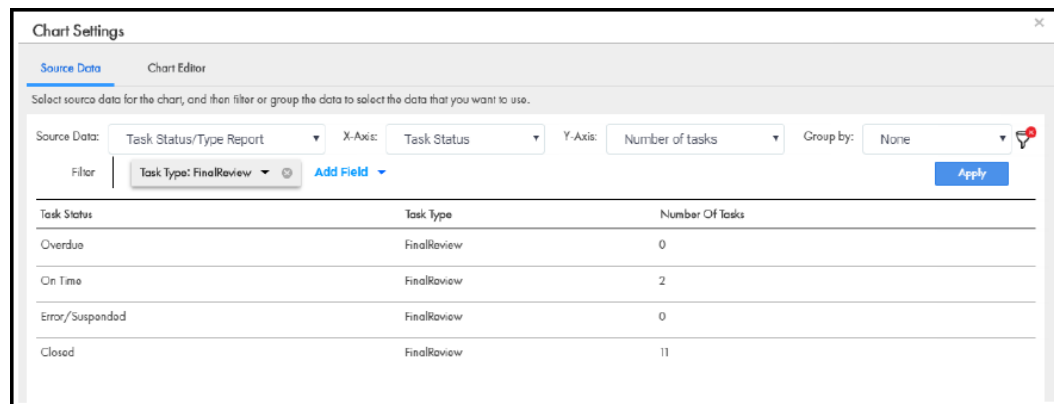
The **Source Data** tab displays the report data you want to use in the chart.

7. Configure the chart template and customize the chart.

    a. Click **Chart Editor**.

    b. Select the chart template that you want to use.

    c. Click the **Customize Chart** tab, and then customize the chart.

        For example, you might want to configure the chart titles and appearance.

    d. Preview the chart to ensure it appears as expected.

    The following image shows the **Chart Editor** tab with a chart preview:
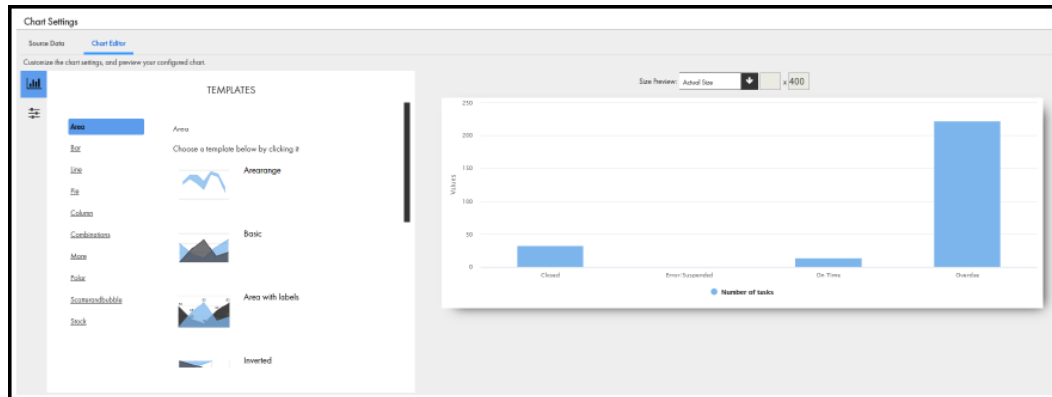
The Chart Editor tab displays a preview of the chart.

8. Click **Done**.

   In the properties panel, the fields display your selections.

9. Click **Apply**.

10. Publish the changes to the MDM Hub.

    a. Click **Publish**.

       A confirmation dialog box appears that prompts you to publish or review the changes.

    b. Review the changes or publish without a review.

       - To publish without a review, click **Publish**.
       - To publish after a review, click **Review Changes** and follow the instructions that appear on the screen.

The Chart component that you created and published appears in the **Component Editor** panel. You can add the Chart component to a **Home** page layout or additional page layout.

You can link a chart to a drilldown chart or to another interface in Data Director.

For information about linking a chart to the **Query** tab, see .

For information about linking a chart to the **Search** tab, see .

For information about linking a chart to the Task Manager, see .

Linking a Chart to a Drilldown Chart

Link a chart to a drilldown chart. When Data Director users select data in the chart, they drill down to view another layer of data granularity in the drilldown chart.

Before you begin, create the Chart component. For more information, see the *Multidomain MDM Business Entity Services Guide*.

1. Click **Configuration** > **Component Editor**

   The **Component Editor** appears.

2. From the component type list, select **Chart**, and then select the Chart component you want to configure.

   The Chart node appears in the tree view panel.

3. Link the chart to a drilldown chart and then configure the drilldown chart.

    a. In the tree view panel, click the **Add** icon, and then select the drilldown chart to which you want to link to the chart.

        Note: The available drilldown charts depend on your report configuration. For more information about report configuration, see the *Multidomain MDM Business Entity Services Guide*.
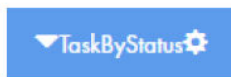
        The drilldown chart node appears in the tree view panel.

    b. Optionally, configure the source data that you want to use. In the **Source Data** field, click the source data link, and then configure the source data.

        For example, you might want to configure the axes, group by criteria, or filters.

    c. Optionally, customize the chart. Click **Chart Editor**, and then customize the chart.

        For example, you might want to configure the chart template or the appearance of the chart.

    d. Click **Done**.

    The following image shows an example of a chart linked to a drilldown chart:

    The drilldown chart node appears in the tree view panel.

4. Optionally, to link the drilldown chart you configured to a drilldown chart, repeat step 3.

    The drilldown chart node appears in the tree view panel.

5. Click **Apply**.

6. Publish the changes to the MDM Hub.

    a. Click **Publish**.

        A confirmation dialog box appears that prompts you to publish or review the changes.

    b. Review the changes or publish without a review.

        -   To publish without a review, click **Publish**.

        -   To publish after a review, click **Review Changes** and follow the instructions that appear on the screen.

You updated the Chart component and linked the chart to a drilldown chart. You can add the Chart component to a **Home** page layout or additional page layout.

Linking a Chart to the Query Tab

Link a chart to the **Query** tab, and configure the search criteria for the query. When Data Director users select data in the chart, they navigate to the **Query** tab. The **Query** tab displays query results based on the search criteria.

Before you begin, create the Chart component.

1. Click **Configuration** > **Component Editor**.

    The **Component Editor** appears.

2. From the component type list, select **Chart**, and then select the Chart component you want to configure.

    A chart node appears in the tree view panel.

3. In the tree view panel, click the **Add** icon, and then select **Query**.

   The Query node appears in the tree view panel.

4. In the properties panel, click the**Add** icon.

   The **New Query** dialog box appears.

5. Configure the search criteria for the query.

   a. From the **Business Entity** list, select the business entity within which you want to perform the search.

   b. Select a query type.

Query Type	Description
Basic	Uses simple text comparisons to find records that contain the query values.
Extended	Uses matching logic and match-enabled attributes to find records that contain the query values.

   c. If you selected the extended query type, from the **Match Rule Set** list, select a match rule set.

   d. Select the fields that you want to include as the search criteria for the query.

   e. In the **Selected Fields** section, drag to rearrange the sequence of the fields.

   f. To make the query case sensitive, enable the **Case sensitive** option.

   g. To sort search results, from the **Sort By** list, select a field name by which you want the search results sorted.

   h. Select the sort order of the query to be ascending or descending.

   i. From the **Business Entity** list, select the business entity within which you want to perform the search.

   j. Click **OK**.

6. Click Apply.

7. Publish the changes to the MDM Hub.

   a. Click **Publish**.

      A confirmation dialog box appears that prompts you to publish or review the changes.

   b. Review the changes or publish without a review.

      - To publish without a review, click **Publish**.
      - To publish after a review, click **Review Changes** and follow the instructions that appear on the screen.

You updated the Chart component and linked the chart to the **Query** tab. You can add the Chart component to a **Home** page layout or additional page layout.

Linking a Chart to the Search Tab

Link a chart to the **Search** tab, and configure the search criteria. When Data Director users select data in the chart, they navigate to the **Search** tab. The **Search** tab displays search results based on the search criteria.

Before you begin, create the Chart component.

1. Click **Configuration** > **Component Editor**.

   The **Component Editor** appears.

2. From the component type list, select **Chart**, and then select the Chart component you want to configure.

   The Chart node appears in the tree view panel.

3. In the tree view panel, click the **Add** icon, and then select **Search**.

   The Search node appears in the tree view panel.

4. Configure the search criteria.

   a. In the **Business Entity** field, select the business entity type that you want to use as the search criteria.

   b. In the **Search Input** field, select the underlying data in the report that you want to use as the search criteria

   For example, if you have a Customers Distributed by City report, you might select the Customer business entity and the City Names search input.

5. Click **Apply**.

6. Publish the changes to the MDM Hub.

   a. Click **Publish**.

      A confirmation dialog box appears that prompts you to publish or review the changes.

   b. Review the changes or publish without a review.

      • To publish without a review, click **Publish**.

      • To publish after a review, click **Review Changes** and follow the instructions that appear on the screen.

You updated the Chart component and linked the chart to the **Search** tab. You can add the Chart component to a **Home** page layout or additional page layout.

Linking a Chart to the Task Manager

Link a chart to the Task Manager, and configure the filter criteria. When Data Director users select data in the chart, they navigate to the **Task Manager** tab. The **Task Manager** tab displays tasks based on the configured filter criteria.

Before you begin, create the Chart component.

1. Click **Configuration** > **Component Editor**.

   The **Component Editor** appears.

2. From the component type list, select **Chart**, and then select the Chart component you want to configure.

   The Chart node appears in the tree view panel.

3. In the tree view panel, click the **Add** icon, and then select **Task Manager**.

   The Task Manager node appears in the tree view panel.

4. Configure the filter criteria for the Task Manager.

   a. In the **Task Manager Tab** field, select the quick filter tab that you want to open in the Task Manager.

   b. Optionally, to filter the tasks using a search term, in the **Search Criteria** field, enter the search term.

   c. Optionally, to filter the tasks using custom filters, in the **Filters** section, click the **Add** icon, and then configure filters.

   For example, you might select the **All Tasks** tab, enter John as the search team, and add the Task Type filter.

5. Click **Apply**.

6. Publish the changes to the MDM Hub.

   a. Click **Publish**.

      A confirmation dialog box appears that prompts you to publish or review the changes.

b. Review the changes or publish without a review.

- To publish without a review, click **Publish**.
- To publish after a review, click **Review Changes** and follow the instructions that appear on the screen.

You updated the Chart component and linked the chart to the Task Manager. You can add the Chart component to a **Home** page layout or additional page layout.

Author

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