Analytics Extended Metadata (XMD) Developer Guide

Salesforce, Summer '25

Last updated: July 11, 2025

CONTENTS

EXTENDED METADATA (XMD) OVERVIEW

Extended metadata (XMD) enables you to customize the formatting of dataset fields and their values in CRM Analytics dashboards and lenses. If you modify the XMD for a dataset, every UI visualization that uses the dataset shows the modified format.

Note: Almost all of the XMD functionality is now supported in the UI for editing datasets and lenses. The **Edit Dataset** page allows you to customize actions for the dataset, and the **Lenses Dataset Fields** section allows you to customize other actions.

You can customize the following with XMD:

- Format measures. Example: Show the decimal and grouping separators for currency.
- Add prefixes and suffixes to measures. Example: Show the percent symbol (%) after each percentage.
- Multiply measures by a factor. Example: Multiply by 100 to convert a decimal to a percent.
- Change display labels for dimensions and measures.
- Customize colors in charts based on field values.
- Define the first day of the week for the calendar year.
- Add action menus to dimensions that let dashboard viewers invoke actions from lenses and dashboards.

BASIC STRUCTURE OF THE XMD JSON FILE

The XMD file is in JSON format. It contains a block of parameters for each dataset field. This design makes it easier to debug specific field behavior and maintain consistent syntax usage, and it streamlines the generation process. XMD doesn't support empty strings.

The file uses this structure.

```
{
  "dataset": {},
  "dates": [],
  "dimensions": [],
  "derivedDimensions": [],
  "measures": [],
  "derivedMeasures": [],
  "organizations": [],
  "showDetailsDefaultFields": []
}
```

The `dataset` field specifies the dataset to which the XMD applies. CRM Analytics sets and maintains this parameter internally. Do not modify it.

For descriptions of the fields, see Extended Metadata (XMD) Reference. To learn how to structure and format the XMD parameters for different purposes, see the use cases.

PACKAGING CONSIDERATIONS FOR XMD

The Standard User XMD file defines custom formatting for dataset fields and values in CRM Analytics.

You can upload the Standard User XMD file through the UI or Xmd REST Resource.

```
/wave/datasets/<datasetID>/versions/<versionID>/xmds/main
```

```
/wave/datasets/<datasetID>/versions/<versionID>/xmds/system
```

```
/wave/datasets/<datasetID>/versions/<versionID>/xmds/user
```

The Standard User XMD file can't be used in a Salesforce package because it's tied to a dataset version that isn't packageable. To support packaging, an alternative Primary XMD file is available. The Primary XMD file can be included in packages because it's tied to a dataset container instead of a dataset version.

The following properties apply to the Primary User XMD file:

- You can update the Primary User XMD by deploying the WaveXmd metadata through MDAPI or by setting the `userXmd` property through the Dataset REST Resource:

  ```
  /wave/datasets/<datasetIdOrApiName>
  ```

- The Primary User XMD is applied to a dataset only after a dataflow that updates the dataset runs (because the dataflow sets the Standard User XMD for the new dataset version).
- Changes to the Primary User XMD don't affect the Standard User XMD.
- If you update the Standard User XMD, the Primary User XMD is updated automatically.
- An MDAPI retrieve operation returns the Primary User XMD file only if the file was deployed using MDAPI.
- If you do either of the following, the MDAPI retrieve operation returns an empty XMD file:
  - Update the Primary User XMD file using REST API.
  - Update the Standard User XMD file through the UI or REST API.

  This result occurs even if the files were originally deployed using MDAPI.

CONFIGURE THE XMD FOR A DATASET

You can configure the XMD file to override the default appearance of dataset fields and field values and to add actions to dimensions in charts and tables. Each dataset has a separate XMD file.

Note: While you can edit the XMD, you can't export it.

Note: You can also use the XMD API endpoints to edit an XMD file. For more information, see the *CRM Analytics REST API Developer Guide*.

1. Edit the dataset.
2. Download the XMD file from the Edit page. If you download an old XMD version, CRM Analytics converts it to the current version.

   Note: CRM Analytics ignores settings that it's unable to convert.

3. Edit the file with a text editor.

   Tip: To ensure that the JSON format is correct, validate it with a JSON editor.

4. Save the file in UTF-8 format to ensure that CRM Analytics visualizations display international characters.
5. Upload the updated file to the Edit page.

   CRM Analytics validates the XMD file. If the XMD isn't valid, an error occurs and the updated XMD settings aren't applied. All formatting reverts to the defaults.

   Note: Each time you upload the XMD file, CRM Analytics overwrites the current dataset customizations. Changes in the XMD aren't appended to previous customizations. Therefore, ensure that your XMD file contains all required customizations.

   The validation rules and related errors are in the Extended Metadata (XMD) 2.0 Validation Rules and Errors knowledge article.

If the dataset metadata changes after you configure the XMD, such as a field is deleted or renamed as a result of changes to the dataflow, you must update the associated XMD. For example, if the XMD refers to the old field names, errors occur when you try to configure actions using the UI. The error also appears in the `errorMessage` field in the XMD file.

SEE ALSO:

Extended Metadata (XMD) Reference

EDITIONS

Available in Salesforce Classic and Lightning Experience.

Available with CRM Analytics, which is available for an extra cost in **Enterprise**, **Performance**, and **Unlimited** Editions. Also available in **Developer** Edition.

USER PERMISSIONS

To edit the XMD:

- Edit CRM Analytics Dataflows OR Upload External Data to CRM Analytics

FORMAT DATASET FIELDS AND FIELD VALUES WITH XMD

These topics explore some common uses of XMD. Almost all of the XMD functionality is now supported in the UI for CRM Analytics dashboards and lenses.

Change Display Labels for Dataset Fields and Values

When you change display labels for fields and values, the changes affect only the appearance in the UI. The changes don't alter the underlying data stored in the dataset or the API names of the fields.

Note: The customizations described in this topic can now be configured using the CRM Analytics UI. It's no longer necessary to change the XMD file. For the UI instructions, see Change the Labels and Colors of Dataset Dimension Values and View and Configure Dataset Columns.

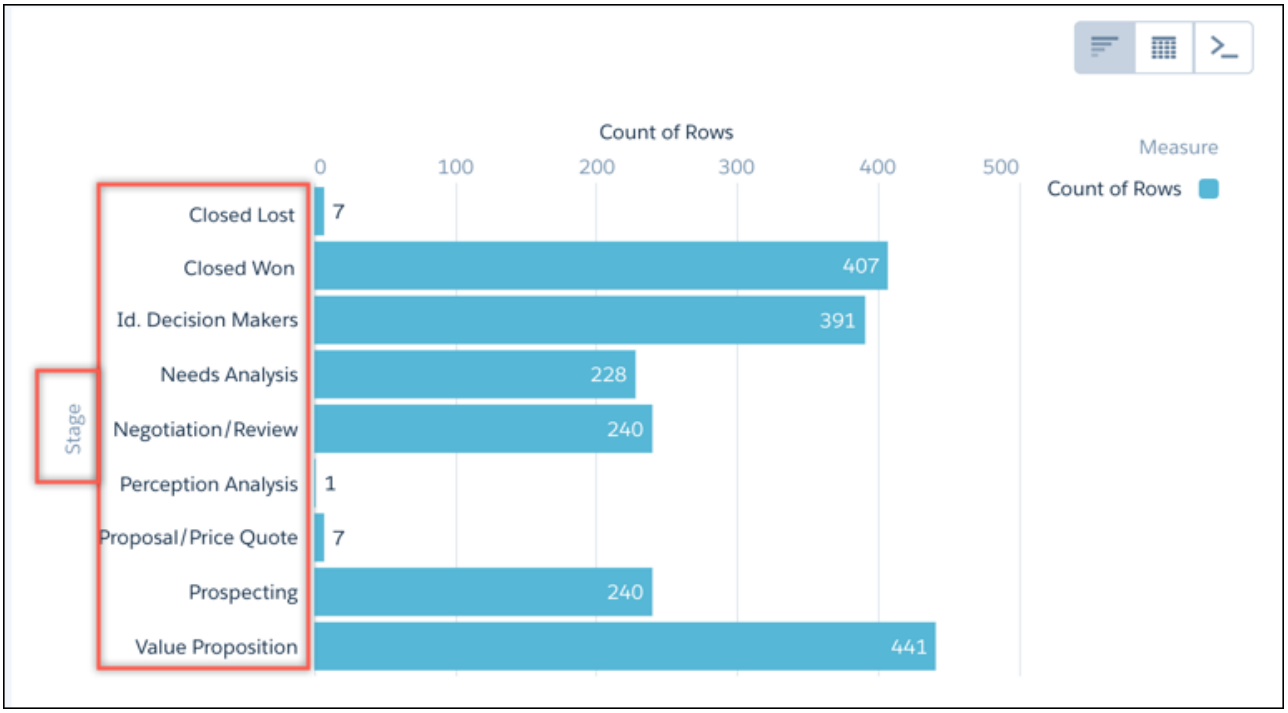
You can customize display labels for:

- Dimensions, derived dimensions, measures, and derived measures.
- Values in dimensions and derived dimensions.

Consider these limitations:

- You can't customize date labels.
- XMD doesn't update formatting for fields that are controlled by user input or context. Formatting can only be applied to a static or preset value.

The following sample chart shows field names and values as they're stored in the dataset.

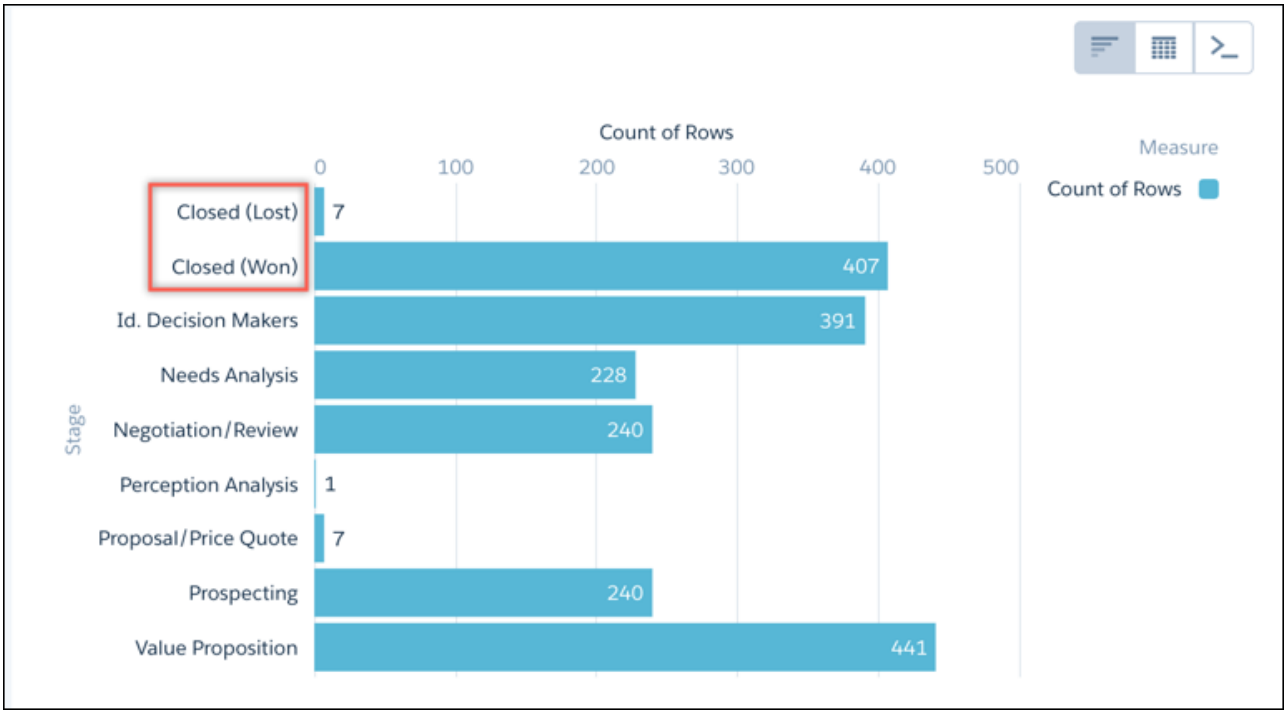


Custom display labels for dimension field values are specified in the `members` section of the XMD file within the section you're modifying (such as `dimensions`). If you have a large XMD file, you can do a text search to find the appropriate `members` section.

For example, the bold text in this XMD snippet shows how to change the labels for two values of the `StageName` field.

```
"field":"StageName",
         "members":[
            {
               "label":"Closed (Lost)",
               "member":"Closed Lost"
            },
            {
               "label":"Closed (Won)",
               "member":"Closed Won"
            }
         ],
```

Here's how the label customizations appear in the chart.



SEE ALSO:

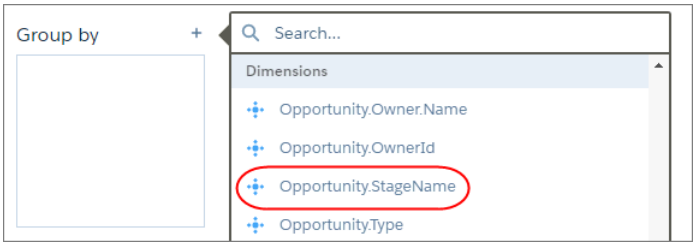
- Dimensions and Derived Dimensions in XMD
- Measures and Derived Measures in XMD

Hide Dataset Fields from the Explorer and Dashboard Designer

By default, all dataset fields are available in the UI. But you can hide fields so that users can't select them when building queries and dashboards.

Note: Although hidden fields aren't available in the interface, users can still manually add them in dashboard JSON and SAQL queries. Users can also access the fields with the CRM Analytics REST API.

For example, the Opportunity.StageName field appears in the explorer.

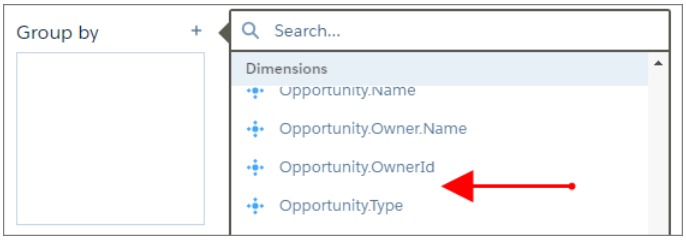


To hide the field, modify the XMD as shown in the following text.

```
"dimensions": [{
  "field": "Opportunity.StageName",
  "showInExplorer": false
 }],
```

Note: To show the field, set **showInExplorer** to **true**.

After applying the change, the field is no longer available for selection.



SEE ALSO:

- Dimensions and Derived Dimensions in XMD
- Measures and Derived Measures in XMD

Format Measures

You can apply letters or symbols before or after the numeric value, such as for currency, perform decimal rounding, and add grouping and decimal separators.

Note: XMD doesn't update formatting for user input or context-driven fields. Formatting can only be applied to a static or preset value.

Formatting a Measure

In this example lens, the values in the Sales column don't include decimals or currency symbols.

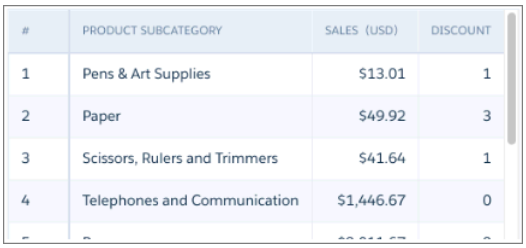
#	PRODUCT SUBCATEGORY	SALES	DISCOUNT
1	Pens & Art Supplies	13	1
2	Paper	50	3
3	Scissors, Rulers and Trimmers	42	1
4	Telephones and Communication	1,447	0
5	Paper	2,012	9

To relabel the Sales field and format its values, modify the XMD as indicated in the bold text.

```
"measures" : [
    {
      "field": "Sales",
      "format": {
        "customFormat": "[\"$#,###,###.##\",1]"
      },
```

```
      "label": "Sales (USD)",
      "showInExplorer": true
    }
],
```

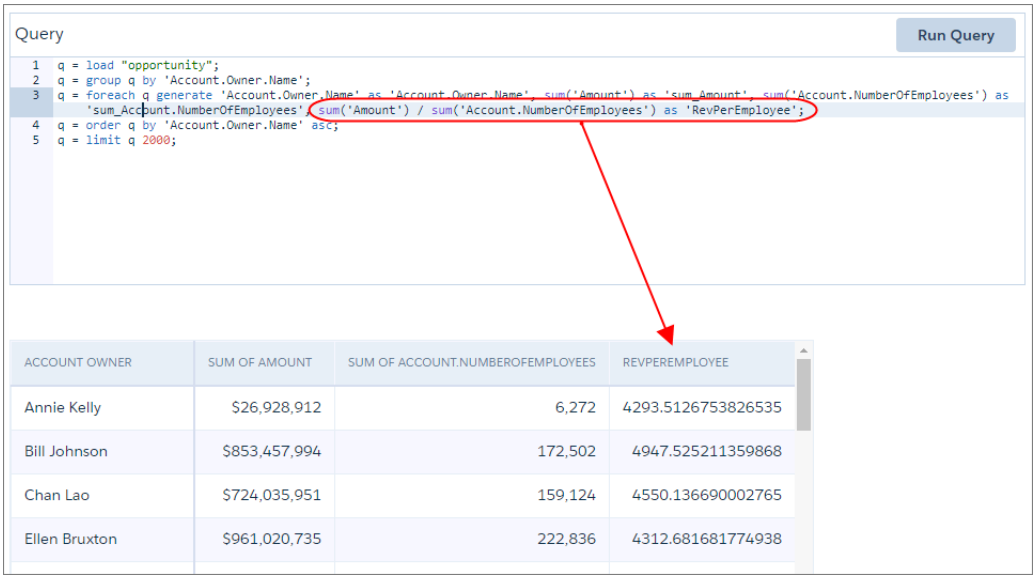
The field now has the label “Sales (USD)” and its values include a currency symbol and two decimal places.



#	PRODUCT SUBCATEGORY	SALES (USD)	DISCOUNT
1	Pens & Art Supplies	$13.01	1
2	Paper	$49.92	3
3	Scissors, Rulers and Trimmers	$41.64	1
4	Telephones and Communication	$1,446.67	0

Formatting a Derived Measure

The following SAQL query contains a derived measure that calculates the average revenue per employee. As shown, the values in this derived field aren’t formatted.

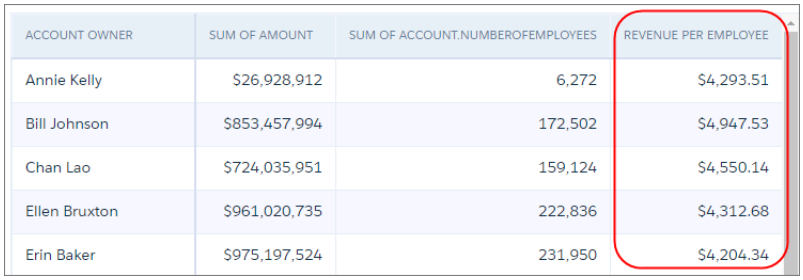


ACCOUNT OWNER	SUM OF AMOUNT	SUM OF ACCOUNT.NUMBEROFEMPLOYEES	REVPEREMPLOYEE
Annie Kelly	$26,928,912	6,272	4293.5126753826535
Bill Johnson	$853,457,994	172,502	4947.525211359868
Chan Lao	$724,035,951	159,124	4550.136690002765
Ellen Bruxton	$961,020,735	222,836	4312.681681774938

To relabel the RevPerEmployee field and format its values, modify the XMD as indicated in the bold text.

```
"derivedMeasures": [
  {
    "field": "RevPerEmployee",
    "format": {
      "customFormat": "[\"$#,###.##\",1]"
    },
    "label": "Revenue Per Employee",
    "showInExplorer": true
  }
],
```

The field now has the label “Revenue Per Employee” and its values include a currency symbol and a grouping separator.



ACCOUNT OWNER	SUM OF AMOUNT	SUM OF ACCOUNT.NUMBEROFEMPLOYEES	REVENUE PER EMPLOYEE
Annie Kelly	$26,928,912	6,272	$4,293.51
Bill Johnson	$853,457,994	172,502	$4,947.53
Chan Lao	$724,035,951	159,124	$4,550.14
Ellen Bruxton	$961,020,735	222,836	$4,312.68
Erin Baker	$975,197,524	231,950	$4,204.34

More Formatting Examples

Check out these examples that illustrate how to use symbols to format measures and derived measures.

Goal	XMD
Display 500000 as $500,000 (prefix with "$")	`"measures": [ { "description" : "Amount", "field" : "Amount", "format" : { "customFormat": "[\"$###0\",1]" }, "label" : "Amount", "showInExplorer" : true } ],`
Display 500000 as $500,000 (prefix with "$", include grouping separator)	`"derivedMeasures": [ { "description" : "Amount", "field" : "Amount", "format" : { "customFormat": "[\"$###,#00\",1]" }, "label" : "Amount", "showInExplorer" : true } ],`
Display 500000 as $500,000.00 (prefix with "$", include grouping separator, apply 2 decimal places)	`"measures": [ { "description" : "Amount", "field" : "Amount", "format" : { "customFormat": "[\"$###,#00.00\",1]" }, "label" : "Amount", "showInExplorer" : true`

Goal	XMD
	}],

Display 500000 as –$500,000.00USD
(prefix with "–$", include grouping separator, apply 2 decimal places, suffix with "USD")
	"measures": [
	{
	"description" : "Negative dollar amount",
	"field" : "Amount",
	"format" : {
	"customFormat": "[\"-$###,#00.00USD\",1]"
	},
	"label" : "Amount",
	"showInExplorer" : true
	}
	],

Display Canadian currency code as a suffix
(include grouping separator, apply 2 decimal places, suffix with "CAD")
	"measures": [
	{
	"description" : "Amount",
	"field" : "Amount",
	"format" : {
	"customFormat": "[\"#,##0.00CAD\",1]"
	},
	"label" : "Amount",
	"showInExplorer" : true
	}
	],

Display -1,234.56 as `–$1,234.56`
(use a semi-colon delimiter for negatives, `pos;neg`)
	"measures": [
	{
	"description" : "Amount",
	"field" : "Amount",
	"format" : {
	"customFormat": "[\"$#,###.##;-$#,###.##\",1]"
	},
	"label" : "Amount",
	"showInExplorer" : true
	}
	],

Display -1,234.56 as `($1,234.56)`
(Optional. Use a semi-colon delimiter, parenthesis for negatives, `pos;(neg)`
	"measures": [
	{
	"description" : "Amount",
	"field" : "Amount",
	"format" : {

Goal	XMD
	"customFormat": "[\"$#,###.##;($#,###.##)\",1]" }, "label" : "Amount", "showInExplorer" : true }],
Display -1,234.56 as `$1,234.56-` (Optional. Use a semi-colon delimiter, '-' after the second delimiter, `pos;neg;zero`)	"measures": [{ "description" : "Amount", "field" : "Amount", "format" : { "customFormat": "[\"$#,###.##;$#,###.##;-\",1]" }, "label" : "Amount", "showInExplorer" : true }],

For more information about using symbols in the `customFormat` field, see Measures and Derived Measures in XMD.

Multiply Measures by a Fixed Amount

You can multiply the values of a measure or derived measure by a fixed amount. For example, you can use the multiplier to convert a field's decimal values to percents.

In this example lens, the values in the Discount column are shown as decimal values.

#	PRODUCT SUBCATEGORY	SALES (USD)	DISCOUNT
1	Pens & Art Supplies	$13.01	0.01
2	Paper	$49.92	0.03
3	Scissors, Rulers and Trimmers	$41.64	0.01
4	Telephones and Communication	$1,446.67	0
5	Paper	$2,011.67	0.09

To change the decimal value to a percentage, modify the XMD file as shown in this example. Add "%" after the value, and change the field label to "Discount %".

```
{
  "Measures" : [
    {
      "field": "Discount",
      "format": {
        "customFormat": "[\"##.##%\",100]"
      },
      "label": "Discount %",
      "showInExplorer": true
    }
],
```

The Discount column now has the label Discount %, and the values are in percentages.

#	PRODUCT SUBCATEGORY	SALES (USD)	DISCOUNT %
1	Pens & Art Supplies	$13.01	1%
2	Paper	$49.92	3%
3	Scissors, Rulers and Trimmers	$41.64	1%
4	Telephones and Communication	$1,446.67	0%

Note: If a measure field has a multiplier of "0", downloading the data to an `.xls` or `.csv` file results in all values for that field displaying as "0". A "0" multiplier has this format: `"format":{"customFormat":"[\"#,###\",0]}`.

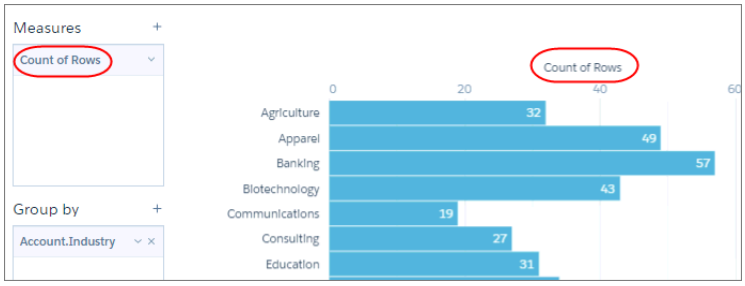
SEE ALSO:

Measures and Derived Measures in XMD

Change the Label for the Row Count Measure

When you add a row count measure, it appears as "Count of Rows" by default. You can change this label to whatever you want.

Here's the default label.

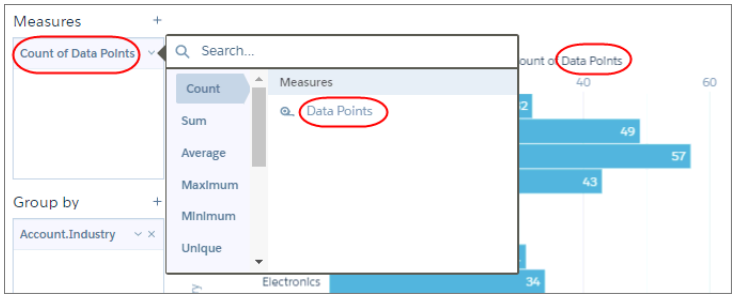


You can specify a new label in the `derivedMeasures` section of the XMD. Because you're counting rows and not a particular field, use `*` as the field name.

```
"derivedMeasures": [{
  "field": "*",
```

```
  "label": "Data Points"
}],
```

This change yields the following results.



SEE ALSO:

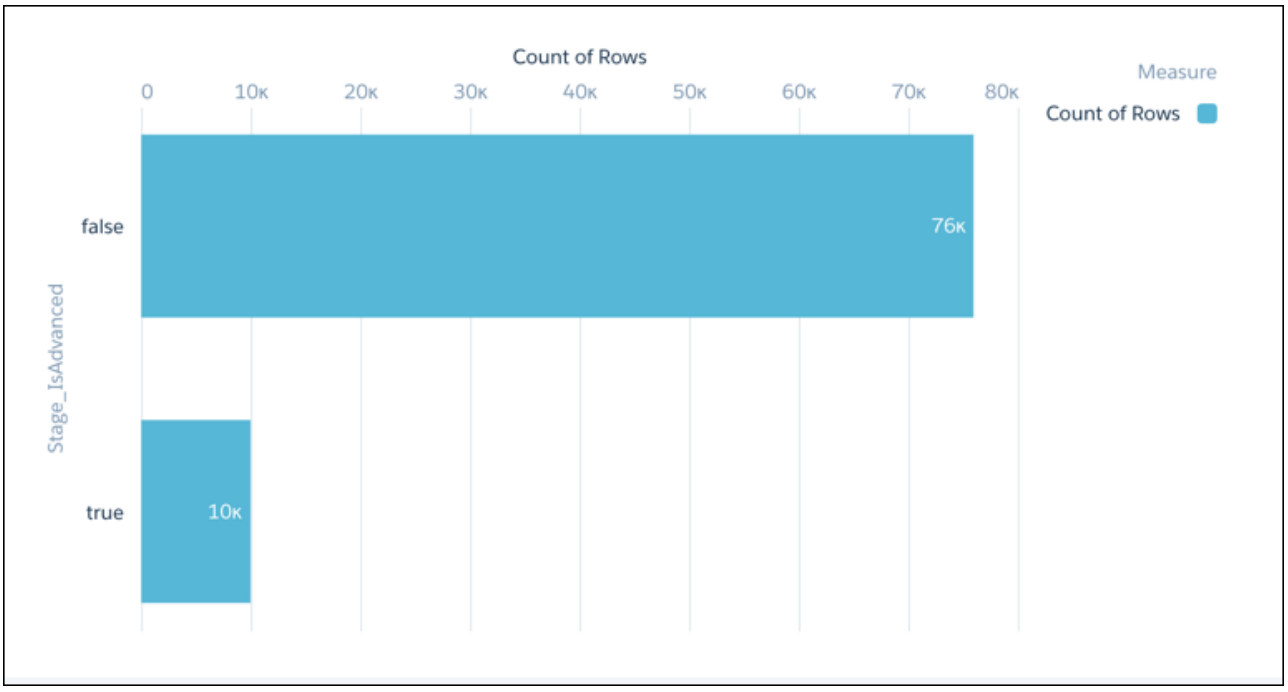
Measures and Derived Measures in XMD

Change Chart Colors for Dimension Values

You can customize the colors of dimension values in a stacked bar, stacked column, or stacked waterfall chart. If you specify one measure and two groups, you can also customize the color for donut, funnel, treemap, stacked pyramid, line, and timeline charts.

Note: The customizations described in this topic can now be configured using the CRM Analytics UI. It is no longer necessary to edit by modifying the XMD file. For the UI instructions, see Change the Labels and Colors of Dataset Dimension Values and View and Configure Dataset Columns

This example shows a bar chart with default colors.

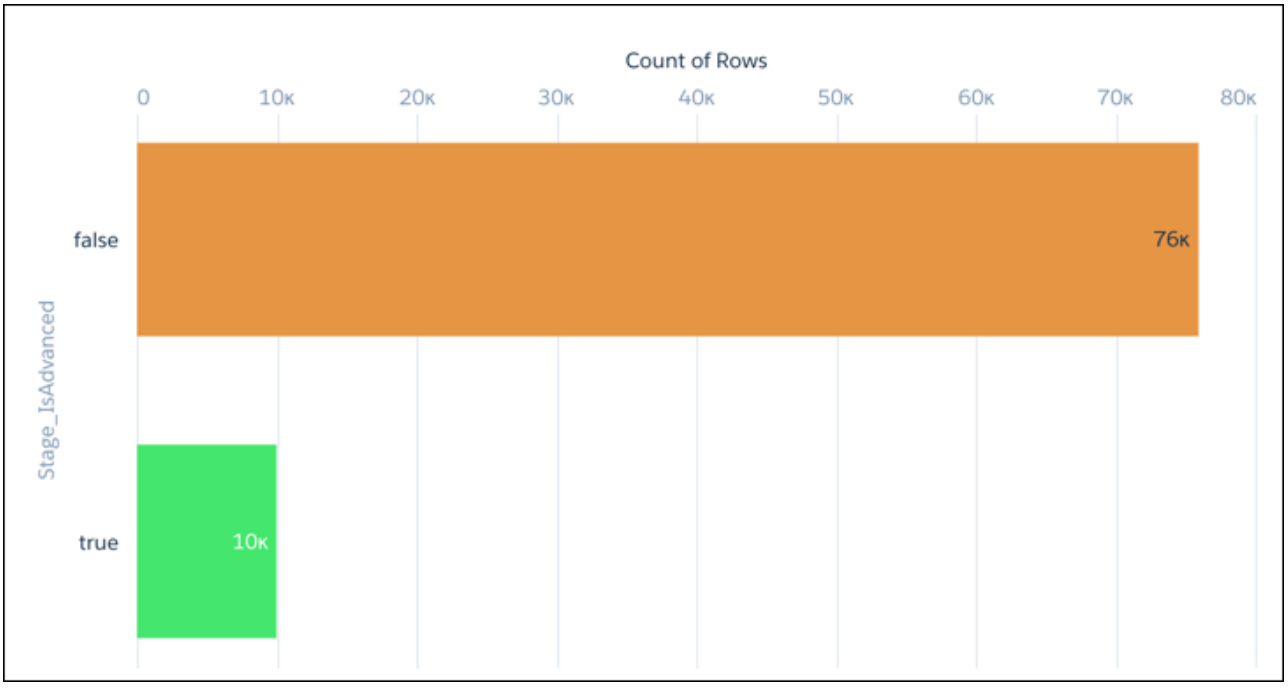


Custom colors are specified in the `chartColor` section of the XMD file. If you have a large XMD file, you can do a text search to find the appropriate `chartColor` section.

For example, the bold text in this XMD snippet shows how to change the colors for the true and false values of the `Stage_IsAdvanced` dimension. The XMD snippet is located in the dimension section of the XMD file.

```
        "conditionalFormatting":{
           "chartColor":{
              "parameters":{
                 "values":[
                    {
                       "formatValue":"#E8963B",
                       "value":"false"
                    },
                    {
                       "formatValue":"#3AE867",
                       "value":"true"
                    }
                 ]
              },
              "referenceField":"Stage_IsAdvanced",
              "type":"categories"
           }
```

Here's how the color customization appears in the chart.



SEE ALSO:

Dimensions and Derived Dimensions in XMD

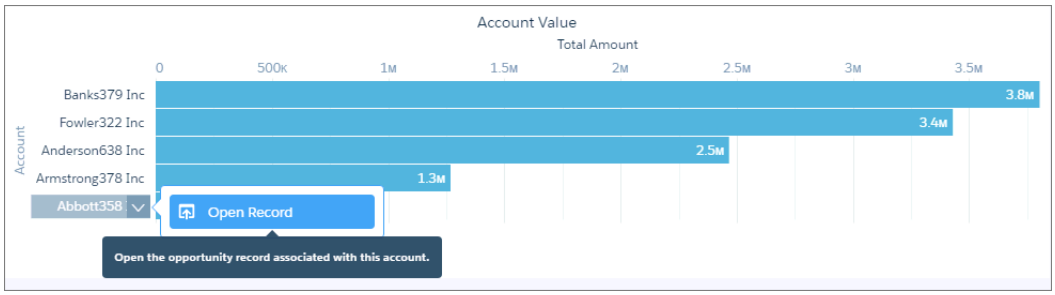
Add Actions to Dimensions

Set up record-level actions on a dimension so that dashboard viewers can perform actions directly from a CRM Analytics chart or table. Each action applies to a single Salesforce record, such as creating a task for an opportunity record. You can also create an action to open the Salesforce record or a URL.

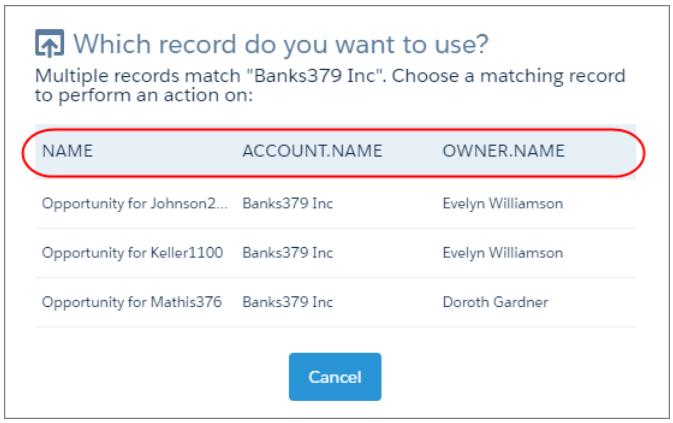
Important: Salesforce recommends that you set up actions using the UI because it's easier. For information about setting up actions with clicks, not code, see Perform Actions on a Salesforce Record from CRM Analytics.

Open a Salesforce Record

You can add a link in the action menu to open a Salesforce record directly from CRM Analytics charts and tables. The link name appears as Open Record. To let the dashboard viewer know the purpose of the link, add a tooltip that appears when the user hovers over the link.



CRM Analytics determines which record to open based on the Salesforce ID provided in the dataset field. When a user tries to open the record and multiple Salesforce records apply to the selected dimension, a popup asks which record to open. For example, the chart shows the value for all opportunities for each account. When the user tries to open the opportunity record for an account and the account has multiple opportunities, the user is prompted to select one. To help the user choose the correct record, the dataset fields show the opportunity name, account name, and owner for each opportunity.



The bold text in the XMD example shows how to set up this type of action.

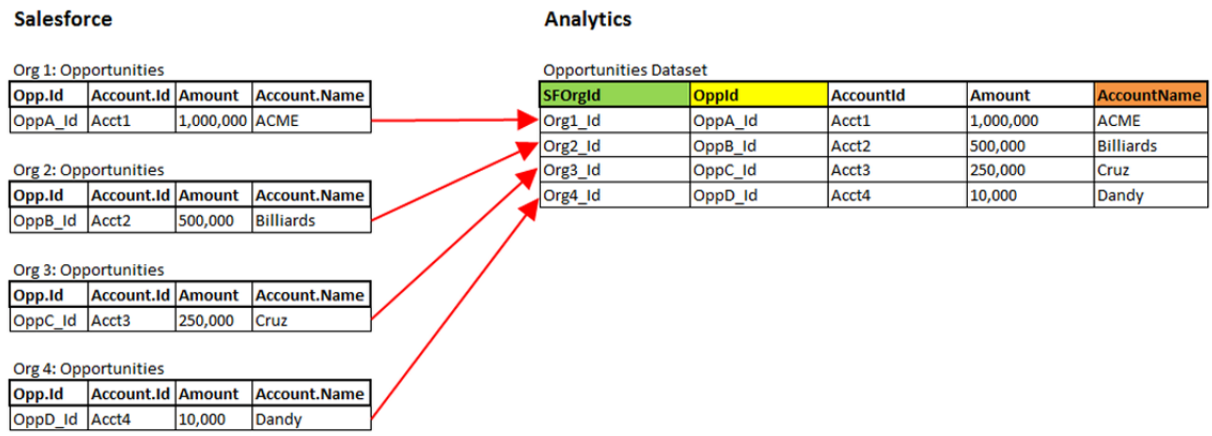
```
"dimensions": [{
  "field": "Account.Name",
  "linkTemplateEnabled": true,
  "linkTooltip": "Open the opportunity record associated with this account.",
```

```
  "members": [],
  "recordDisplayFields": ["Name", "Account.Name", "Owner.Name"],
  "recordIdField": "Id",
  "salesforceActions": [],
  "salesforceActionsEnabled": false
}],
```

Open a Salesforce Record in a Multi-Org Environment

You can configure the action menu in a chart or table to open Salesforce records from multiple orgs. Before we get into how to configure the XMD, let's look at an example.

You previously loaded opportunity records from multiple orgs into a dataset.



Now you want to allow dashboard viewers to open the Salesforce record directly from a dimension in a chart or table. To locate a Salesforce record in a multi-org environment, CRM Analytics needs the dataset fields that identify each Salesforce record and its org. To provide CRM Analytics with this information.

- In the `recordIdField` and `recordOrganizationIdField` fields under `dimensions` specify the dataset fields that contain the record ID and org ID, respectively.

"dimensions"

field	recordIdField	recordOrganizationIdField
AccountName	OppId	SFOrgId

- In the `id` and `instanceURL` fields under `organizations`, map the org IDs to the org URLs. You can also specify a label for each org.

"organizations"

id	label	instanceUrl
Org1_Id	West Region Org	https://westregion.salesforce.com
Org2_Id	East Region Org	https://eastregion.salesforce.com
Org3_Id	South Region Org	https://southregion.salesforce.com
Org4_Id	North Region Org	https://northregion.salesforce.com

When a user clicks the link to open a Salesforce record, CRM Analytics determines which Salesforce record to open by using the org URL and the record ID. CRM Analytics looks up the org ID in the dataset field specified in the `recordOrganizationIdField` of the XMD. It then uses the org ID to look up the org URL in the `organizations` section. CRM Analytics retrieves the record ID from the dataset field specified in the `recordIdField` field of the XMD. For example, if the org URL is https://mydomain.salesforce.com and the record ID is 006f4000002fjpCAAQ, the link to the record in its org is https://mydomain.salesforce.com/006f4000002fjpCAAQ.

The bold text in the XMD example shows how to set up this type of action.

```
"dimensions": [{
  "field": "Account.Name",
  "label": "Account Name",
  "linkTemplateEnabled": true,
  "members": [],
  "recordDisplayFields": [
    "Account.Name",
    "Account.Owner.Name",
    "Account.Owner.Role.ParentRoleId"
  ],
  "recordIdField": "AccountId",
  "recordOrganizationIdField": "SFOrgId",
  "salesforceActions": [],
  "salesforceActionsEnabled": false
}],
```

This XMD snippet shows the `organizations` XMD parameter.

```
"organizations": [
  {
    "id": "00DB00000003brXMAQ",
    "instanceUrl": "https://westregion.salesforce.com",
    "label": "West Region Org"
  },
  {
    "id": "00DB0000000pqd1MAA",
    "instanceUrl": "https://eastregion.salesforce.com",
    "label": "East Region Org"
  },
  {
    "id": "00DB0000000paacMAA",
    "instanceUrl": "https://southregion.salesforce.com",
    "label": "South Region Org"
  },
  {
    "id": "00DB00000001234MAA",
    "instanceUrl": "https://northregion.salesforce.com",
    "label": "North Region Org"
  }
 ]
```

Open a Website

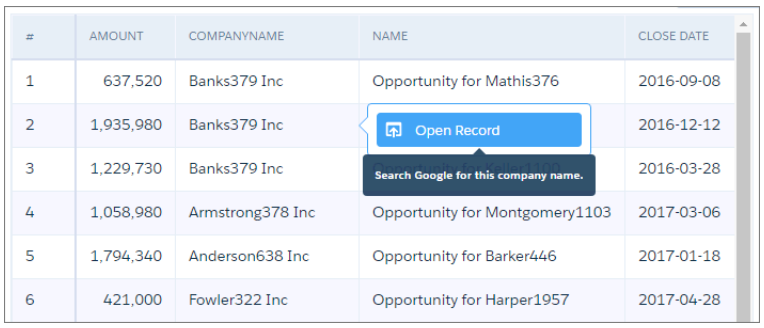
You can add a link to open a website from charts and tables. You can pass dataset field values in the URL using the following syntax.

```
"<website url>{{row.<dataset_field_name>}}"
```

The bold text in the XMD example shows how to set up this type of action.

```
"dimensions": [{
  "field": "CompanyName",
  "linkTemplate": "http://www.google.com/search?q={{row.CompanyName}}",
  "linkTemplateEnabled": true,
  "linkTooltip": "Search Google for this company name.",
  "members": [],
  "recordDisplayFields": [],
  "salesforceActions": [],
  "salesforceActionsEnabled": false
}],
```

When a dashboard viewer clicks the Open Record link, CRM Analytics performs a search in Google based on the company name specified in the CompanyName dataset field.



Perform a Salesforce Action on a Salesforce Record from CRM Analytics

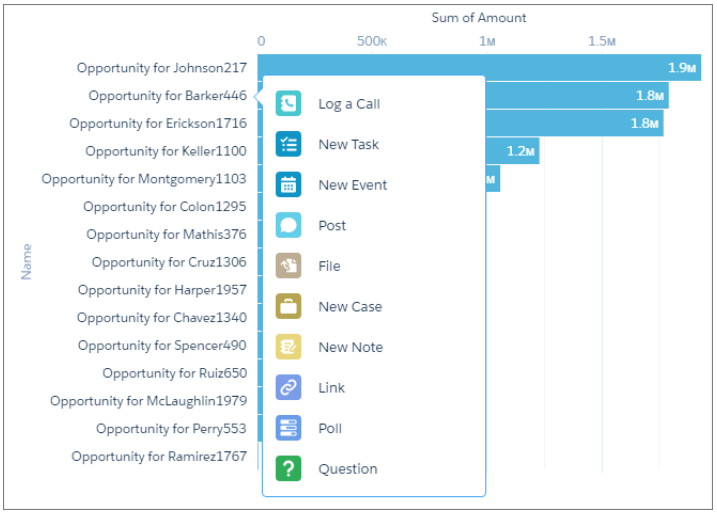
You can add Salesforce actions to the action menu. You can only add actions defined in the page layouts for the corresponding Salesforce object. Actions are only available for the local org, and are not supported for multi-org records.

The bold text in the XMD example shows how to set up this type of action. In this example, all actions defined for any page layout for the object show up in the actions menu.

```
"dimensions": [{
  "field": "Name",
  "linkTemplateEnabled": false,
  "members": [],
  "recordDisplayFields": ["Name", "Owner.Name", "Account.Name"],
  "recordIdField": "Id",
  "salesforceActions": [],
  "salesforceActionsEnabled": true
 }],
```

The list of all actions defined in all page layouts for this object appear in the actions menu.

Note: Each dashboard viewer sees only the actions that are assigned to the viewer's page layout for this object.



In this example, only the specified set of actions defined in the page layouts show up in the actions menu.

```
"dimensions": [{
  "field": "Name",
  "linkTemplateEnabled": false,
  "members": [],
  "recordDisplayFields": ["Name", "Owner.Name", "Account.Name"],
  "recordIdField": "Id",
  "salesforceActions": [{
   "enabled": true,
   "name": "NewCase"
  }, {
   "enabled": true,
   "name": "NewEvent"
  }, {
   "enabled": true,
   "name": "NewContact"
  }, {
   "enabled": true,
   "name": "NewLead"
  }],
  "salesforceActionsEnabled": true
 }],
```

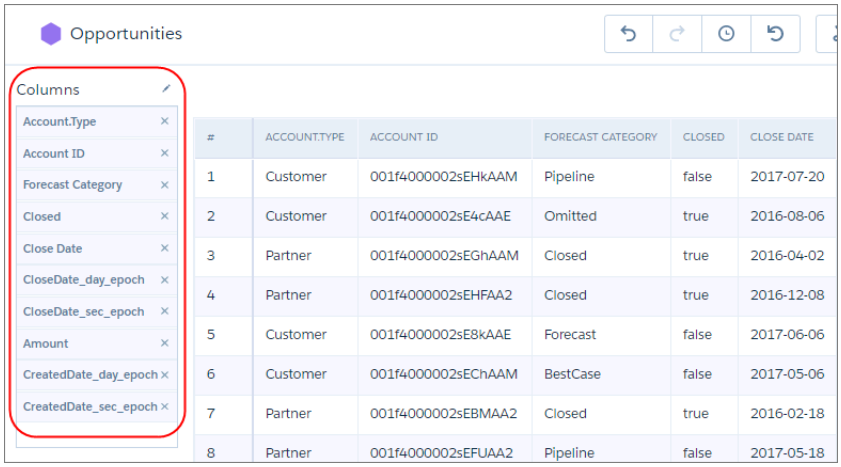
SEE ALSO:

- Dimensions and Derived Dimensions in XMD
- Organizations in XMD

Change the Default Fields for a Values Table

When you create a values table, particular dataset fields are shown by default. When the fields are sorted in alphabetical order, which includes dates, the table shows the first five measures and first five dimensions. You can change the default fields by editing the XMD.

For example, the explorer shows the following default fields.



To change the default fields, specify the field names, not the labels, in the XMD.

```
"showDetailsDefaultFields":[
  "CreatedDate_day_epoch",
  "Id",
  "Type",
  "Name",
  "Owner.Name",
  "Account.Name",
  "Amount"
]
```

After applying the XMD to the dataset, here's the values table with the default fields.

SEE ALSO:

ShowDetailsDefaultFields in XMD

Format the Results of a Query with Multiple Datasets

When a query has multiple datasets, the query results are formatted using the XMD of the first loaded dataset.

For example, the Quota dataset is loaded first so its XMD is used to format the projected columns Amount and Percent Attained.

```
-- The Quota dataset's XMD is used because it is loaded first
quota = load "Quota";
ops = load "Opportunity";
q = cogroup ops by 'Owner.Name', quota by 'Employee';
q = foreach q generate quota.'Employee' as 'Account Owner', sum(ops.'Amount') as 'Amount',
 trunc(sum(ops.'Amount')/sum(quota.'Quota')*100,2) as 'Percent Attained';
```

However, the Quota dataset's XMD doesn't contain the Amount field, so the projected amount is formatted as a number rather than as currency.

Account Owner	Amount	Percent Attained
Admin User	20824640.56	115.69
Emily Dickinson	17867280.34	119.11
Jon Snow	25783382.15	85.94

The Opportunity dataset's XMD contains an Amount field that is formatted as currency. To format the amount as currency, load the Opportunity dataset first.

Account Owner	Amount	Percent Attained
Admin User	$20,824,641	115.69
Emily Dickinson	$17,867,280	119.11
Jon Snow	$25,783,382	85.94

EXTENDED METADATA (XMD) REFERENCE

You can modify the XMD file to customize the formatting of dataset fields and field values that appear in Analytics lenses and dashboard widgets.

Any fields in the XMD that aren't described in this document aren't supported and must not be customized. Configuring unsupported fields might cause unexpected behavior. You also can't export XMD. When saving XMD files, use UTF-8 format to be sure that Analytics visualizations correctly display international characters.

Note: Almost all of the XMD functionality is now supported in the UI for editing datasets and lenses. The **Edit Dataset** page allows you to customize actions for the dataset, and the **Lenses Dataset Fields** section allows you to customize other actions.

SEE ALSO:

Configure the XMD for a Dataset

Dates in XMD

Specify date conventions for Analytics dashboards and lenses.

```
"dates" : [
  {
    "alias" : "Order_Date",
    "label" : "Order Date",
    "firstDayOfWeek" : -1,
    "fiscalMonthOffset":0,
    "fields" : {
      "day" : "Order_Date_Day",
      "epochDay" : "Order_Date_day_epoch",
      "epochSecond" : "Order_Date_sec_epoch",
      "fullField" : "Order_Date",
```

```
      "hour" : "Order_Date_Hour",
      "minute" : "Order_Date_Minute",
      "month" : "Order_Date_Month",
      "quarter" : "Order_Date_Quarter",
      "second" : "Order_Date_Second",
      "week" : "Order_Date_Week",
      "year" : "Order_Date_Year"
    }
  },
  {
    "alias" : "Ship_Date",
    "label" : "Ship Date",
    "firstDayOfWeek" : -1,
    "fiscalMonthOffset":0,
    "fields" : {
      "day" : "Ship_Date_Day",
      "epochDay" : "Ship_Date_day_epoch",
      "epochSecond" : "Ship_Date_sec_epoch",
      "fullField" : "Ship_Date",
      "hour" : "Ship_Date_Hour",
      "minute" : "Ship_Date_Minute",
      "month" : "Ship_Date_Month",
      "quarter" : "Ship_Date_Quarter",
      "second" : "Ship_Date_Second",
      "week" : "Ship_Date_Week",
      "year" : "Ship_Date_Year"
    },
    "showInExplorer" : false
  }
],
```

The `dates` section can have the following parameters.

Parameter	Description
alias	Identifier (API name) for the dataset field used to generate the date part fields in the dataset. For example, Order_Date generates Order_Date_Month and Order_Date_Minute.
fields	Array of the date part fields, like CloseDate_Day, CloseDate_Year, and CloseDate_Hour. Specify all date parts. If `fiscalMonthOffset` is set in the dataflow or XMD file for CSV data, you must also specify fiscal date parts, like CloseDate_Week_Fiscal. To specify a date part, use the format `<date_field_name>_<date_part>`. For example, for the week date part for the CloseDate field, enter *`CloseDate_Week`*.
firstDayOfWeek	This parameter is deprecated at the dataset level. You can set this property in the sfdcDigest transformation for Salesforce data or in the metadata (schema) file for CSV uploads (using the UI or External Data API).
fiscalMonthOffset	This parameter is deprecated at the dataset level. You can set this property in the sfdcDigest transformation for Salesforce data or in the metadata (schema) file for CSV uploads (using the UI or External Data API).
label	Display name for the dataset field, up to 40 characters. Example: `"label": "Closing Date"`

Parameter	Description
	Note: In the dataset XMD file, if the user defines a label for a date field, the label value is used as the alias value for that field when the dataset is generated.
showInExplorer	(Boolean) Indicates whether the dataset field can be selected from the dashboard designer or explorer when creating dashboards and lenses. Even if `showInExplorer` is `false`, you can still use the field for SAQL queries, manually adding it in JSON, and accessing it using the Analytics REST API. Example: `"showInExplorer": true`

For more information about date parts and the first day of the week, see Date Handling in Datasets.

Dimensions and Derived Dimensions in XMD

You can add an action menu to a dimension value in Analytics lens and dashboard charts and tables. Users can then open a record and perform record-level actions. The available XMD parameters are the same for dimensions and derived dimensions.

This XMD snippet shows the parameters used with `dimensions`.

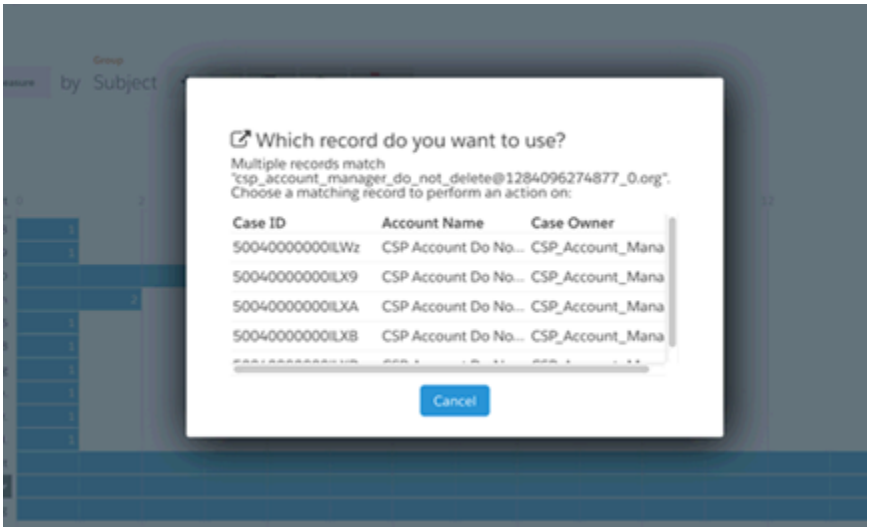
```
        "conditionalFormatting":{
           "chartColor":{
              "parameters":{
                 "values":[
                    {
                       "formatValue":"#E8963B",
                       "value":"false"
                    },
                    {
                       "formatValue":"#3AE867",
                       "value":"true"
                    }
                 ]
              },
              "referenceField":"Stage_IsAdvanced",
              "type":"categories"
           }
```

The `dimensions` and `derived dimensions` sections can have the following parameters.

Parameter	Description
description	Description of the dataset field, no more than 1,000 characters. Example: `"description": "Region tracks where the sale was made."`
field	Identifier for the dataset field, which is the API name.
label	Display name for the dataset field, up to 40 characters. Example: `"label": "Sales Manager"`

Parameter	Description
linkTemplateEnabled	(Boolean) Indicates whether to display the link to open a Salesforce record or URL. If `false` or not set, the menu doesn't display the Open Record link
linkTemplate	The URL to open when the user clicks the link in the actions menu, up to 255 characters. This setting overrides the default URL link, which is `"/{{row.recordIdField}}"`. The default locates the Salesforce record with the record ID specified in the `recordIdField` XMD parameter. To open a Salesforce record in a multi-org environment, enter `{{instanceUrl}}` to populate the org URL specified in the XMD `organizations` section. Example: `"linkTemplate": "/{{row.dimensionNameId}}"`
linkTooltip	The tooltip that a dashboard viewer sees when hovering over the link in a CRM Analytics lens or dashboard. Example: `"linkTooltip": "Click to open the record"`
members	Array of display customizations for specific values of a dataset field. For example, for the Country field, change the label from USA to United States. And change the color for this value in a chart to blue. Note: When you change the label, the new label appears only in the UI. You can't use the label in queries, such as a query filter. Best practice is to modify the actual field values when you create the dataset. Example: `"members": [ { "member": "USA", "label": "United States", "color": "Blue" }, { "member": "MX", "label": "Mexico", "color": "Green" }, ]`
recordIdField	The dataset field that contains the record ID of the Salesforce object that you want to perform the action on.
recordOrganizationField	The dataset field that contains the Salesforce org ID used to apply record-level actions on a record from a multi-org environment. Analytics uses the org ID to look up the org URL in the XMD `organizations` section of the XMD.
recordDisplayFields	Array of dataset fields to help a dashboard viewer identify a Salesforce record when multiple records match the action. For each field, specify its API name. The fields appear in the order in which they are listed in the array. In some instances, a dimension value is associated with multiple IDs and isn't unique. For example, an opportunity with the name "acme" has multiple opportunity IDs and records. But the action or link can only

Parameter	Description

	be directed to one record. In this scenario, the user is given a choice of associated records in a modal. This example specifies the record fields to display.
	`"field": "AccountId.Name",`
	`"recordIdField": "AccountId.Id"`
	`"recordDisplayFields": ["Case_ID","Account_Name","Case_Owner"]`
	 

salesforceActionsEnabled	(Boolean) Indicates whether the Salesforce actions menu appears on the field. If `false` or not set, the menu doesn't display any actions. Example: `"salesforceActionsEnabled": true`

salesforceActions	Array of actions that appear in the action menu. You can only add actions that are defined in the page layouts for the corresponding Salesforce object. If left blank, Analytics shows all actions.
	Example:
	`"salesforceActions": [`
	`{`
	`"enabled": true,`
	`"name": "FeedItem.TextPost"`
	`},`
	`{`
	`"enabled": true,`
	`"name": "FSL__LogACall"`
	`}`
	`],`

showInExplorer	(Boolean) Indicates whether the dataset field can be selected from the dashboard designer or explorer when creating dashboards and lenses. Even if `showInExplorer` is `false`, you can still use the field for SAQL queries, manually adding it in JSON, and accessing it using the Analytics REST API. Example: `"showInExplorer": true`

For more information, see Perform Actions on a Salesforce Record from Analytics.

SEE ALSO:

- Change Display Labels for Dataset Fields and Values
- Hide Dataset Fields from the Explorer and Dashboard Designer
- Change Chart Colors for Dimension Values
- Add Actions to Dimensions

Measures and Derived Measures in XMD

You can specify the format and multiplier for each measure. The XMD parameters are the same for measures and derived measures.

This XMD snippet shows the parameters used with the `measures` XMD parameter.

```
"measures": [
  {
    "description" : "Amount",
    "field" : "Amount",
    "format" : {
      "customFormat": "[\"$###0\",1]",
        "delimiters": "{}"
    },
    "label" : "Amount",
    "showInExplorer" : true
  }
],
```

The `measures` and `derived measures` sections can have the following parameters.

Parameter	Description
customFormat	Specifies the format and multiplier of the measure or derived measure. `"customFormat": "[`***`format,multiplier`***`]"` **format** Format of the measure or derived measure. You can add a prefix, suffix, grouping separator, decimal separator, and leading and trailing zeros. You can also configure the number of digits. You can include any characters in prefixes and suffixes, such as minus signs or currency symbols. Use the following symbols to specify the format. **0** One digit. Use to add leading or trailing 0s. For example, when you apply the custom format `#,###.00` to 56375, the result is 56,375.00. **#** Adds zero or one digit. Use to show digits when applicable. For example, when you apply the custom format `#,###.##` to 56375.56, the result is 56,375.56.

Parameter	Description
	. Decimal separator, like in the number 375.56. The default separator is the decimal symbol (.) A custom separator can be defined in `delimiters` using the `decimal` attribute. The custom separator replaces the (.) for the final formatted result. **,** Grouping separator, like in 56,375. The default separator is the comma symbol (,). A custom separator can be defined in `delimiters` using the `thousands` attribute. The custom separator replaces the (,) for the final formatted result. Example: `"customFormat": "[\"-$#,###.00$\",1]"` **multiplier** Changes a field's values by the same factor—like multiplying by 100 to convert decimals to percents. The multiplier must be a positive number. Example: `"customFormat": "[\"#,###\",100]"` For more examples, see Format Dataset Fields and Field Values with XMD.
delimiters	Allows custom delimiters to be specified for the decimal separator (.) and the thousands separator (,). Custom delimiters will replace the default delimiter values for the final formatted result. Custom delimiters are not honored in CSV downloads. Example: `"delimiters": {"thousands": ".", "decimal": ","}`
description	Description of the dataset field, no more than 1,000 characters. Example: `"description": "Total value for the opportunity."`
field	Identifier for the dataset field, which is the API name.
format	Contains the `customFormat` and the `delimiters` parameters used to format the measure .
label	Display name for the dataset field, up to 40 characters. Example: `"label": "Sales Amount"`
showInExplorer	(Boolean) Indicates whether the dataset field can be selected from the dashboard designer or explorer when creating dashboards and lenses. Even if `showInExplorer` is `false`, you can still use the field for SAQL queries, manually adding it in JSON, and accessing it using the Analytics REST API. Example: `"showInExplorer": true`

SEE ALSO:

- Change Display Labels for Dataset Fields and Values
- Change the Label for the Row Count Measure
- Hide Dataset Fields from the Explorer and Dashboard Designer
- Multiply Measures by a Fixed Amount
- Format Measures

Organizations in XMD

If your datasets combine records from multiple Salesforce orgs, map Salesforce orgs to their URLs. Analytics uses these mappings to locate a record in a multi-org environment. The organizations section is used for opening links, not performing Salesforce actions.

This example shows the parameters for the `organizations` XMD parameter. The ID uses the 18-character format.

```
"organizations": [
  {
    "id": "00DB00000003brXMAQ",
    "instanceUrl": "https://westregion.my.salesforce.com",
    "label": "West Region Org"
  },
  {
    "id": "00DB0000000pqd1MAA",
    "instanceUrl": "https://eastregion.my.salesforce.com",
    "label": "East Region Org"
  },
  {
    "id": "00DB0000000paacMAA",
    "instanceUrl": "https://southregion.my.salesforce.com",
    "label": "South Region Org"
  },
  {
    "id": "00DB00000001234MAA",
    "instanceUrl": "https://northregion.my.salesforce.com",
    "label": "North Region Org"
  }
 ]
```

The `organizations` section can have the following parameters.

Parameter	Description
id	Org ID, up to 18 characters Example: `"id": "00DV0025306tGV5MAM"`
label	Display name for the Salesforce org, up to 40 characters. Example: `"label": "Org1"`
instanceUrl	The org's My Domain login URL. Example: `"instanceUrl": "https://`***`MyDomainName`***`.my.salesforce.com"`

SEE ALSO:

Add Actions to Dimensions

ShowDetailsDefaultFields in XMD

Specify the default fields that appear in a Analytics values table. You can override the defaults and show other fields when you create a values table.

The `ShowDetailsDefaultFields` section doesn't have children parameters.

Parameter	Description
showDetailsDefaultFields	List of fields that display by default in a values table. If not specified, the first five dimensions and first five measures, alphabetically, appear. Example: `"showDetailsDefaultFields":["Sales", "Profit", "Customer_Name", "Product_Category", "Product_Sub_Category"]`

SEE ALSO:

Change the Default Fields for a Values Table