Metrics Explorer

Learn how to use the Metrics Explorer to query your metrics.

This page describes the Metrics Explorer UI and how to use it.
If you prefer to use the Classic metrics UI, see Switch to the Classic metrics UI.

About the UI

The Metrics Explorer appears when you open a new metrics tab. The page has two modes:

- **Basic.** Basic Mode provides a query builder UI: you can construct metric queries by selecting metadata fields, dimensions, metrics, and operators from pull-down lists. This makes it easier to create your search scope and to apply operators to the metrics that are returned. You’ll still want to understand the functionality of metric operators, but the Metrics Explorer helps you by prompting you with a list of available operators, and after you choose an operator, the options or qualifiers that the operator supports. For more information about the Basic UI, see About Basic Mode UI.

- **Advanced.** In Advanced Mode, you can enter free-form metric queries instead of making your selections from pull-down lists. For more information, see About the Advanced Mode UI.

Switch between Basic and Advanced Mode

When you open a new metric tab, it is displayed in Basic Mode. You can switch to Advanced Mode by clicking the three-dot icon, and selecting Advanced Mode. When you are in Advanced Mode, you can switch back to Basic Mode from the same options menu.

Switch to the Classic metrics UI

If you prefer to use the Classic metrics UI, you can switch to it, and switch back the Metrics Explorer interface at any point. To switch to Classic metrics, click the three-dot icon near the upper right corner of the page and click Switch to Classic Metrics.

Not all of the features available in the Metrics Explorer are found in the Classic UI.
You'll be asked to confirm your choice. Click **Switch to Classic UI** to proceed. After you switch to the Classic UI, you can return to the Metrics Explorer UI by clicking the three-dot icon again, and selecting **Switch to New Metrics**. While you are in the Classic UI, new metric tabs you open will display the Classic UI.

**Switch to Classic Metrics UI**

You're switching to the classic metrics UI, which doesn't support newer metrics features. New metric tabs will appear in the classic UI. Any metrics saved in the new UI will remain until you switch it back. You may need to reconfigure some chart settings after switching. Metric queries, time range and chart type will not be affected.

You can switch back to the new metrics UI from the options menu.

**Go Back**  **Switch to Classic UI**

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**About Basic Mode UI**

This section is a brief introduction to the Basic Mode of the Metrics Explorer. This screenshot shows the UI with a query already built.

The key components of the UI are:

a. In the **Metric** area, you select the metric you want to return. When you click in this area, you're presented with a list of metrics. In our example query, we selected the `CPU_LoadAvg_15min` metric.

b. In the **Filters** area, you can narrow down the scope of your query, using metadata and metric dimensions. When you click in this area, you’re presented with a drop down list of the metadata fields and dimensions associated with the metric you selected. When you select a metadata field or dimension, you’re presented with a list of values for the selected field or dimension. In our example query, we selected one metadata field, `_sourceCategory=bloomfilter`. The more metadata fields and dimensions you select, the narrower your query will be.

c. In this area, you can apply one or more metric operators to metric query results. When you click the plus (+) sign, you’re presented with a list of metric operators. In our example query, we selected the `topk` operator.

d. By default, the left pane below the query builder section presents a Preview Table of the time series returned by
your query. You can click **Chart** to view a visualization instead. When you switch to the chart view, by default, a time series plot is presented. You can select a different visualization method, although not all visualizations make sense for every query.

e. In the **Panel Type** area, you can select a different chart type: Categorical, Single Value, Map, and Honeycomb. The **Visual Settings** options allow you to customize your chart.

f. The icons on the right of the **Panel Type** area allow you to add a query, hide a query, clear a query, enter advanced mode, and duplicate a query.

g. The icons in this area allow you to add another query row, hide a query, and open the more options menu.

h. The icons in this area allow you to save and share metric queries.

**About Advanced Mode UI**

In Advanced Mode, you can enter a free-form metric query. There are no selector for choosing metrics, metadata, and operators.

![Metrics Explorer](image)

**Keyboard shortcuts**

You can use keyboard shortcuts in the Metrics Explorer to navigate quickly among multiple metric queries, hide or show queries, switch to advanced mode, and so on. Use **Shift ?** display a list of keyboard shortcuts.
What's in the Preview Table?

The screenshot below shows a portion of the **Preview Table** for a metric query. (There are too many columns to show in a screenshot.)

**Tip** You can drag the columns in the table to rearrange them, and double-click a column to expand it.
The **Preview Table** contains a row for each time series returned by a query. A row contains the following information:

- **Row label.** Indicates which query returned the time series, for example #A or #B.
- **Metric name.** The name of the metric returned, for example `CPU_LoadAvg_15min`.
- **An array of metadata fields and metric dimensions associated with the time series, in `key=value` format.**
  - The metadata fields that appear includes standard Sumo Logic metadata fields, such as `_sourceCategory`, `_collectorId`, `_sourceHost`, `_sourceName`, and so on.
  - The dimensions that appear are whatever dimensions were attached to the incoming metrics, or added to the metrics in Sumo Logic using the Metric Rules Editor. The query in the screenshot above returns metrics that were collected by a host metric source running on an Installed Collector on an AWS EC2 instance. Such metrics are automatically tagged with the following EC2 tags:
    - InstanceID
    - Instance type
    - Availability Zone
    - Region
    - AccountID
- **Metric value stats.** The rightmost columns of the table present the current value of the metric, and minimum, maximum, average, current, and sum of the metric value over the query time range.

### Create a metric query

1. In the Sumo Logic UI, click **+ New** and choose **Metrics** from the drop-down list.
2. The Metrics Explorer opens. Click the **Metric** field. A list of metrics appears. You can scroll through the list, or begin typing to dynamically narrow the list. Click the desired metric.

![Metrics Explorer](image)

3. Click the **Filters** field. A list of metadata fields and metric dimensions appears. Scroll through the list, or begin typing to dynamically narrow the list. Click a field or dimension. In the screenshot below, we clicked the `_sourcecategory` metadata field. A drop down list of values for the selected item appears.

![Drop down list](image)
The screenshot above shows a “Too many time series…” message. That message appears when a query is not selective enough. Adding filters or applying an aggregation operator will reduce the number of time series returned.

4. Scroll through the list, or begin typing to dynamically narrow the list. Click the desired value. The Filter field now contains the key-value pair you selected, and the metrics that match your selector are listed in the Preview Table.

5. As desired, repeat the previous steps to add additional filters to the query.

6. At any time, you can click Chart to see a visualization of the metrics.

7. The chart area now displays a visualization of the selected metric.
8. If you want to apply an operator, click the plus sign to the right of the Filters field. A list of metric operators appears. Note that when you hover over an operator, a tool tip displays the Advanced Mode syntax and a description of the operator.

9. Choose an operator from the list. Note that if you choose an operator that supports or requires arguments, you are prompted to supply them.

10. The chart area updates to show your query results with the operator applied.
11. Apply additional operators to the query, as desired.

Add another metric query

You can specify up to six queries in the same Metrics tab.

To add an additional query

1. Click the plus sign (+) to the right of the query builder area.

2. A new row, labeled #B, is added to the query builder area.

3. Follow the steps in Create a metric query to build another query.

4. Your visualization is updated to chart the additional query.
Join metric queries

Metric query joins are only supported in Advanced Mode. The instructions below show how to switch to Advanced mode and enter a join query.

You can perform basic math operations (+, -, *, /) on two or more metrics queries, and use an additional query to apply an operation to the results of the other queries. For example, in the metric query tab below, the two queries return the incoming and outgoing network byes across all containers.

To join the queries, we add a third query row, and then switch to Advanced mode, by choosing Advanced Mode from the three-dot menu in that row.

Once we're in Advanced mode, we enter:

\[#B - #A\]

which returns the difference between the incoming rate and the outgoing rate. Note that in the visualization, display of the first two queries is toggled off, so only the join results are shown.
Hide a query

You can hide a query so that it is not visualized in the chart.

1. Click the eye icon to the right of the query builder area in the row that contains the query you want to hide.

2. The visualization for the query is hidden. Note that the query label for a hidden query is faded out.

3. To make the query visible, click the eye icon again.

Add a monitor to a metric query

1. Select **Create alert** from the more options menu.
2. Follow the instructions on Create a monitor and alert.

**Duplicate a metric query**

1. Select **Duplicate Query** from the more options menu.

2. Your query will be copied to a new row in the query builder area.

**Tailoring charts**

For information about tailoring charts, see [Chart Panel Types](#).

**Add a metric chart to a dashboard**

To add a metric chart to a dashboard, click the **Add to Dashboard** button in the upper right corner of the Metric tab.