

# Edit a chart with the Metric Explorer

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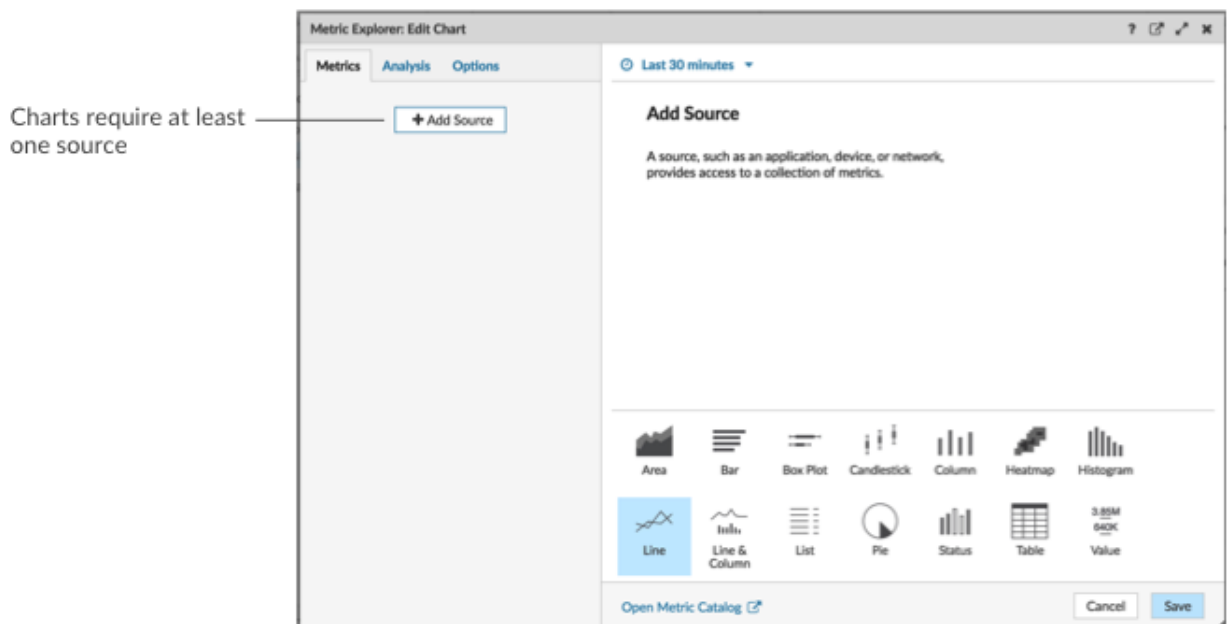
The Metric Explorer is a tool for creating and editing charts, which lets you construct dynamic visualizations of device and network behavior.

## Create and edit a basic chart

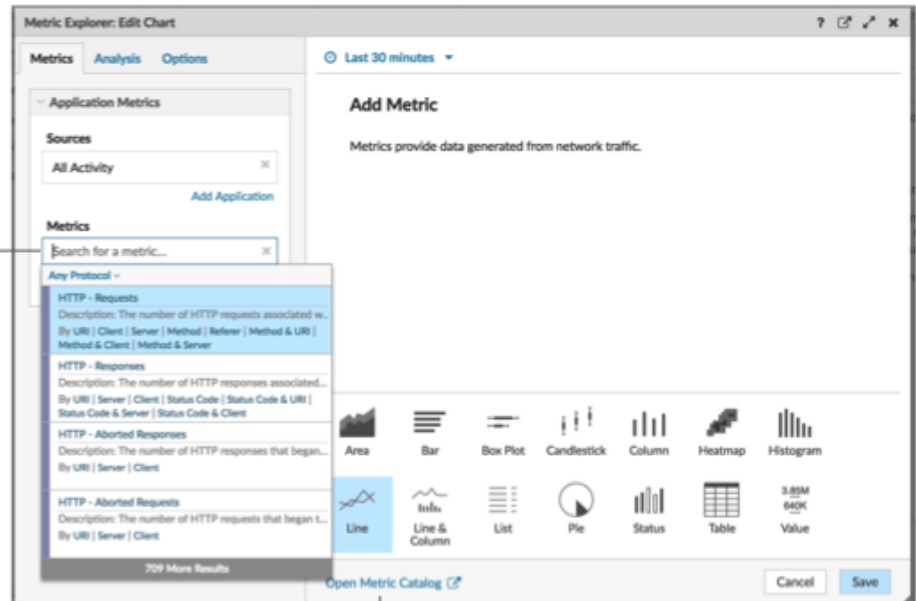
With the Metric Explorer, you can edit chart components, such as sources, metrics, and data calculations, and then preview how metric data appears in different chart types. When you are satisfied with your selections, save your chart to a dashboard.

The following steps show you the basic workflow and minimum requirements for completing a new chart.

1. Click **Add Source** and then select a source.



- You can select a static source for the chart by typing the name of an application, device, or network.
  - You can also select a dynamic source that can be dynamically modified by dashboard viewers by typing \$ and selecting a variable from the Source Type Variable list. For more information about source type variables and dashboard templates, see [Create a dashboard with dynamic sources](#).
2. Select the source from the list of results.
  3. In the Metrics field, type a protocol and metric name. Then select the metric from the list of results, as shown in the following figure.



If you are not sure about the name of a metric, you can search the Metric Catalog.

- Select a chart from the bottom of the Metric Explorer, as shown in the following figure.

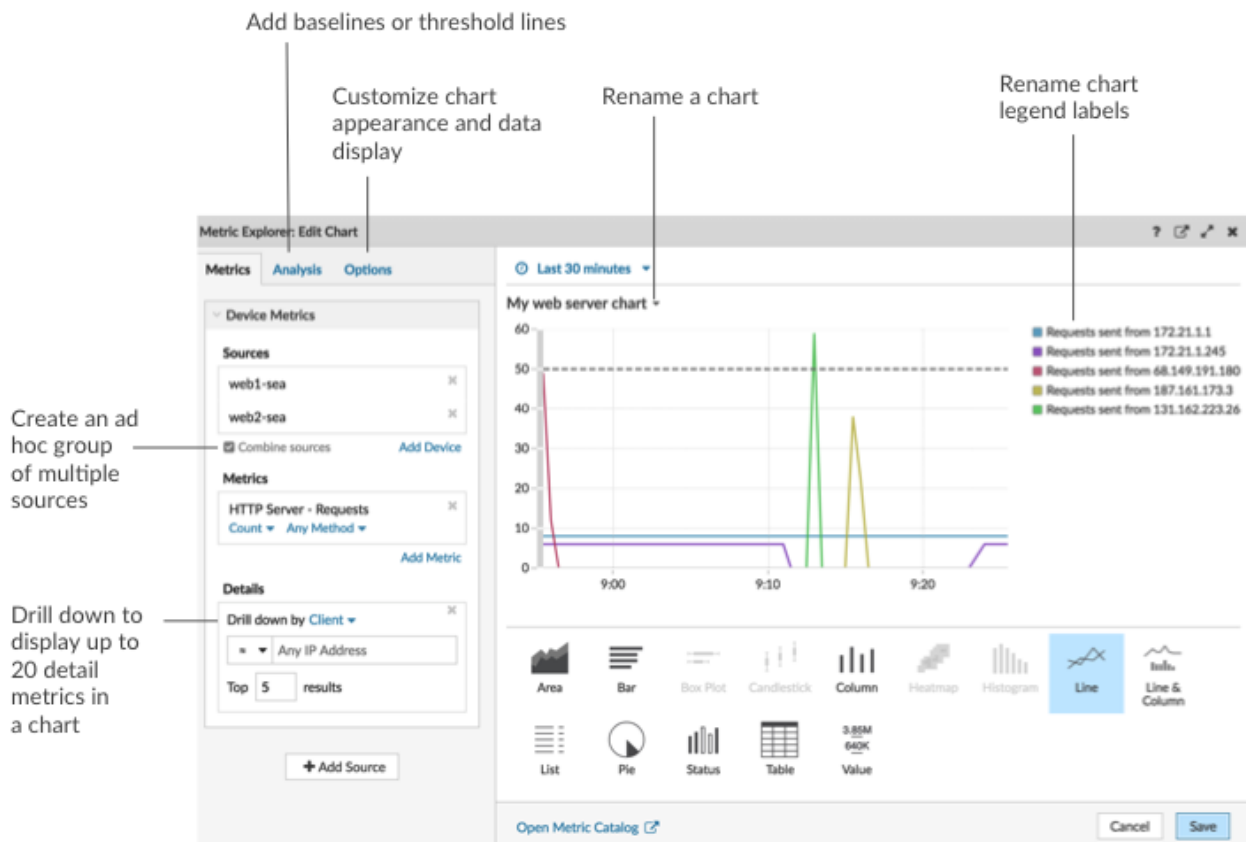


Some chart types are only compatible with specific metric types. If a chart is not compatible with selected metrics, you cannot select it.

- Optional: Click the drop-down link below the metric name to [display a count or rate](#) or [percentile](#).
- Complete one of the following steps:
  - Click **Save** when creating or editing a chart from a dashboard. Your dashboard is updated with your basic chart.
  - Click **Add to Dashboard** when creating or editing a chart from a protocol page. Then select an existing dashboard from the list, or select **Create Dashboard**.

## Configure advanced options for data analysis and chart customization

Depending on the metrics and chart type you select, you can configure advanced options for creating sophisticated visualizations with the Metric Explorer, as shown in the following figure.



### Drill down on metric data and sources to display details

In the Details section from the Metrics tab, you can [drill down to display detail metrics](#) or [drill down on a device group](#) to display individual devices within the chart. You can also filter detail metrics for exact matches, or create a [regex filter](#).

### Add a baseline or threshold line from the Analysis tab

You [add a dynamic baseline](#) or [static threshold line](#) to your chart. Baselines are calculated after the chart is saved. To see a line that represents a threshold, such as a service level agreement (SLA) value, add a static threshold line to your chart.

### Rename legend labels and the chart title

For charts that display a legend, you can change a metric name in the chart legend with a [custom label](#). In the Metric Explorer, click the label in the preview pane then select **Rename**. To rename a chart, click the chart title and select **Rename**.

### Customize your chart from the Options tab

You can access the following options for customizing chart properties and the display of metric data in your chart:

- Convert metric data from bytes to bits
- Convert metric data from base 2 (Ki=1024) to base 10 (K = 1000)
- Change the y-axis in a time-series chart from linear to log scale

- Abbreviate metric values in a chart (for example, abbreviate 16,130,542 bytes to 16.1 MB)
- Sort metric data in ascending or descending order in a bar, list, or value chart
- Change the percentile precision in a pie chart
- Hide or display a chart legend
- Hide inactive metrics with a zero value so that these metrics are not visible in the chart, including the legend and label
- Include sparkline in a list or value chart
- Show the alert status for data displayed in list or value charts (for more information, see [Alerts](#))
- Switch the color display for metric data to grayscale (with exception to charts that display an alert status)
- For IP address labels, display the hostname (if detected from DNS traffic in wire data) or origin IP address (if a proxy is detected from wire data)
- Show the relative time for an expiration date, such as the number of days until an SSL certificate expires.



**Note:** Some options are only available for specific chart types. For example, the option to include a sparkline only appears in the Options tab for list and value charts.

### Create an ad hoc group to combine data from multiple sources

From the Metric tab, you can create an ad hoc group of multiple sources within a set by selecting **Combine Sources**. For example, you can combine two applications and then view a single metric value in the chart for both of these applications.

#### Next steps

Practice building charts by completing the following walkthroughs:

- [Monitor DNS errors in a dashboard](#)
- [Monitor database health in a dashboard](#)
- [Monitor web performance in a dashboard](#)

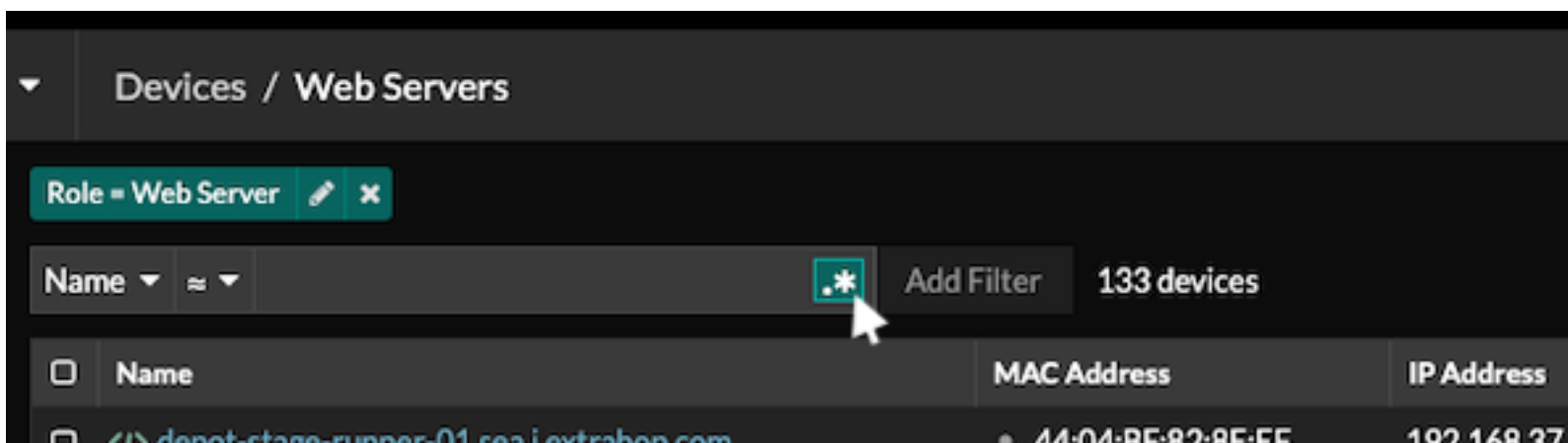
## Regular expression filters

Filter your search results by writing regular expression (regex) strings in certain search fields throughout the ExtraHop Web UI. For example, you can filter for parameters in a detail metric key, such as a number within an IP address. You can also filter by excluding specific keys or combination of keys from charts.

Regex-capable search fields have visual indicators throughout the system and accept standard syntax. If you want to configure record relationships for a custom detail metric, the regex syntax has advanced requirements. For more information, see the section on [Additional Filters](#).

### Search fields with an asterisk

Click the asterisk in the field to enable regex strings.

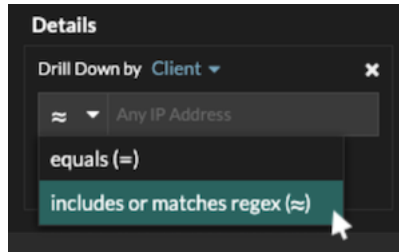


This type of field is available from the following system pages:

- Filtering a table of devices
- Creating filter criteria for a dynamic device group

### Certain search fields with a trifold operator

Click the operator drop-down to see the regex option.

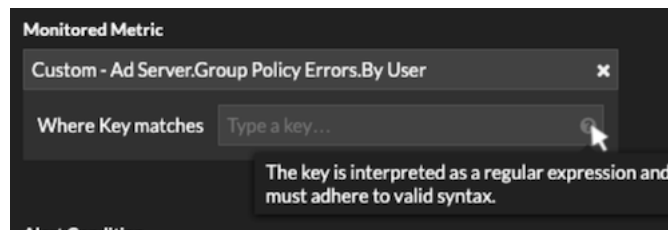


This type of field is available from the following system page:

- Editing a chart in Metric Explorer

### Certain search fields with a tooltip

Hover over the tooltip in the field to see the regex option.



This type of field is available from the following system page:

- Creating a threshold alert

The following table includes examples of standard regex syntax.

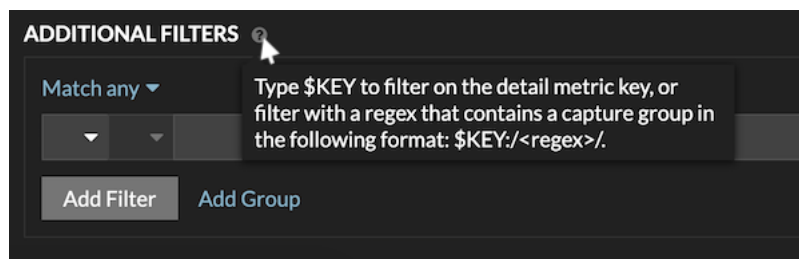
Chart Scenario	Regex filter	How it works
Compare HTTP status codes 200 to 404.	<code>( 200   404 )</code>	Matches <b>200</b> and <b>404</b> codes where the <code> </code> symbol serves as an OR function.
Display any HTTP status code that contains a <b>4</b> .	<code>[ 4 ]</code>	Matches any value that contains a <b>4</b> . For example, this filter can return <b>204</b> and <b>400</b> status codes.
Display all <b>500</b> -level HTTP status codes.	<code>^[ 5 ]</code>	Matches any value that begins with a <b>5</b> . For example, this filter can return <b>500</b> and <b>502</b> status codes.
Display all <b>400</b> and <b>500</b> -level HTTP status codes.	<code>^[ 45 ]</code>	Matches all values that begin with a <b>4</b> or <b>5</b> . For example, this filter can return <b>400</b> , <b>403</b> , and <b>500</b> status codes.
Display any HTTP status codes except <b>200</b> -level status codes.	<code>^(?! 2)</code>	Matches all values except values beginning with a <b>2</b> , where <code>^(?! )</code> specifies the range of results to

Chart Scenario	Regex filter	How it works
Display any IP address with a 187.	187.	exclude. For example, this filter can return 400, 500, and 302 status codes.
Review all IP addresses containing 187.18.	187\.18\.	Matches 1, 8, and 7 characters in the IP address.
Display any IP address except 187.18.197.150.	[^187.18.197.150]	Matches 187 and the character . that follows the 187. For example, this filter returns results for 187.18.0.0.0, 180.187.0.0.0, or 187.180.0.0.0/16.
Exclude a list of specific IP addresses	[^187.18.197.150   187.18.197.151   187.18.197.152]	Matches anything except 187.18.197.150, where [^] specifies the exact value to exclude.
Exclude a list of specific IP addresses	[^187.18.197.150   187.18.197.151   187.18.197.152]	Matches anything except 187.18.197.150, 187.18.197.151, and 187.18.197.152, where the   symbol serves as an OR function and [^] specifies the exact values to exclude.

### Additional filters

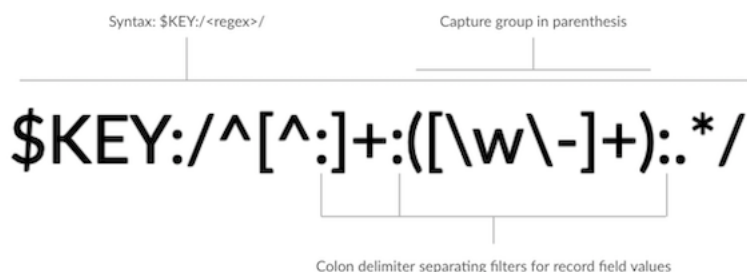
When you [create a custom detail metric](#) from the Metric Catalog, you can add advanced regex syntax to the Additional Filters search field in the Record Relationships section.

The tooltip appears after you select **Detail Metric** and is not available when **Base Metric** is selected.



The regex syntax in this field must meet the following requirements:

- If your key contains multiple values, your regex syntax must include a single capture group. A capture group is designated by parenthesis. Your capture group determines the filter value.




- If you want to return a specific value from a detail metric key that contains multiple record field values, the regex must follow this syntax:

**\$KEY: / <regex> /**

For example, if your detail metric key is ipaddr:host:cipher and you only want to return the IP address value, you would type the following:

**\$KEY: / ^ ( [ ^ : ] + ) : . + /**

- If your key contains multiple record field values, the values are separated by a delimiter that is specified in the trigger that is generating the key. The placement of the delimiters in your regex syntax must match the delimiters in the detail key. For example, if you have a key with three values that are separated by a delimiter that is a colon, the three values for the key in your regex syntax must be separated by two colons.

 **Tip:** If you want to return all record field values in a detail metric key, type **\$KEY**. For example, if your detail metric key is ipaddr:host:cipher, type **\$KEY** in the search field to return all three of those field record values (IP address, hostname, and SSL cipher suite).