

Widgets

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You can use widgets to create visual representations of your data in custom dashboards and war rooms.

This page describes the widgets available with Application Performance Monitoring. If your platform is licensed for Analytics, you can display the results of Analytics searches on custom dashboards as well. See [Visualize Analytics Data](#) for more information.

Widget Types

Most of the widgets types available in custom dashboards and war rooms will be familiar to you if you have worked with numeric charts before. This section provides information for certain widget features that may require additional explanation.

Time Series Graph

The standard time series graph displays one or more values over time in various formats: line, area, column, scatter diagram.

If you configure a widget for a war room that examines metrics on a Java node, consider the streaming graph widget described in [Virtual War Rooms](#). The streaming widget updates more frequently (every 5 seconds) than the standard time series widget (every 60 seconds) for collaborative real-time troubleshooting.

Events are grouped by time of resolution at the bottom of the graph. You can choose what events to display when you enable the *Events Overlay* and configure the event queries for the graph.

Pie Chart

Pie charts or doughnut charts display multiple values as proportional slices of a whole. The data series should meaningfully total 100% of some series. For example, CPU Busy + CPU Idle + CPU Stolen on a single node or tier.

Gauge Widget

The gauge widget displays the magnitude of a metric value with respect to minimum and maximum values, both by the extent to which the gauge is filled and by the color of the fill.

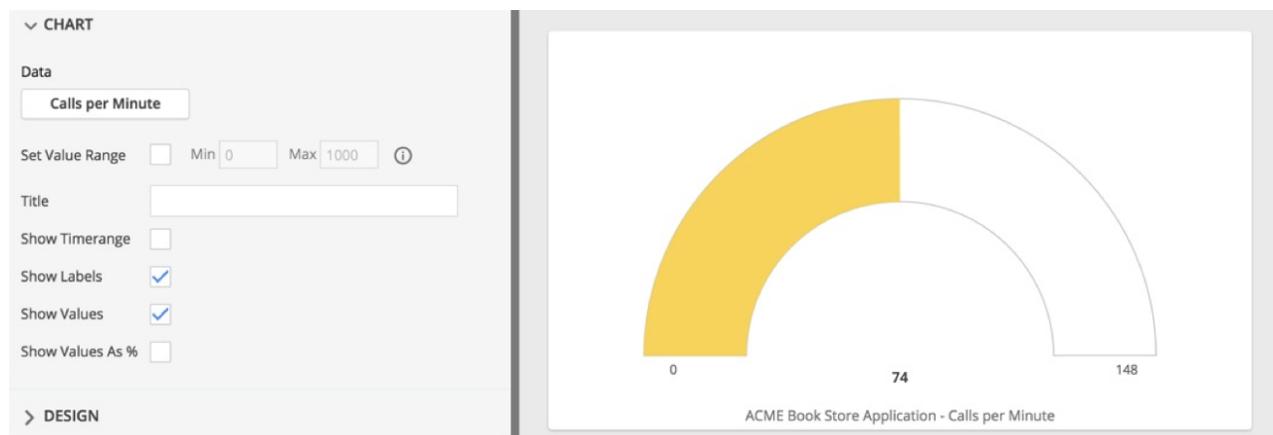
You can set the minimum and maximum values displayed by the widget. Set the maximum to the highest acceptable maximum or a

value close to it so that the gauge is configured for metrics within acceptable values for your site. If you do not set them, default values are used.

The following table explains the color coding for gauge widgets:

Percentage	Color	Status
0-10%	Green	OK
10-50%	Gradient from green to yellow	OK trending to WARNING
50-90%	Gradient from yellow to red	WARNING trending to CRITICAL
90-100%	Red	CRITICAL

For example, the following gauge displays the calls per minute metric without any special configuration for minimum and maximum values. The current value is 74 cpm, which is midway between the minimum, 0 and maximum, 148 for the time period, in the WARNING range.



If you set the max value to 1000, the gauge color changes to green because 74 falls within the OK range.

Streaming Graph Widget

A streaming graph widget is similar visually to a time series graph, but it is updated every five seconds in contrast to every 60 seconds in the time series graph.

For Java nodes only, war room supports the streaming graph widget. It displays data from only a single specified node and only a Java node. This feature is not supported for any of the other agents. To display streaming data from multiple nodes you need to create multiple widgets.

Log Tail Widget

The war room supports a log tail widget used for Java nodes only to share a log file or parts of one.

The log tail widget displays the contents of the file specified by its Path property. The Path is the absolute path to the log file on the machine on which the selected node is running. If you provide a regular expression in the widget properties, the widget displays only those lines in the log file that match the regular expression. If no regular expression is provided, the widget displays the entire log file. Note that applying a regular expression filter will only adjust lines that come after you have specified the filter. Previous lines will remain filtered based on the previous rule. The widget uses the Java conventions for regular expressions.

If the log file rolls over during the request, the response to the log tail request is undefined.

Metric Value

You can specify a title for the widget as well as a format string that adds the name of the selected metric, the time range, or the name of the function. Alternately, you can use a separate label widget to explain the metric value.

You have the option of formatting metric values by abbreviating them, setting a decimal limit, and removing trailing zeros. Abbreviations only apply to numbers over one million. The ability to set the number of decimal places allows you to display decimal values less than one, as well as decimals for larger numbers. If your decimal limit is set to zero, then the remove trailing zeros feature is turned off by default.

Health Status

This is a health bar, filtered table, or status light circle of health statuses for entities, such as applications, business transactions, tiers, nodes, databases, servers, and health rules. After choosing an entity type to show the health for, you have the option to narrow the scope or simply display all.

It is important to note that when selecting tiers as your entity, the color of the health status depends on the statuses of all the health rules that are configured for the tiers. For example, if there are four health rules for the tiers, then the color of the widget will reflect the cumulation of all of their statuses. The widget displays green for normal, yellow for warning, and red for critical status. See [Configure Health Rule Conditions in Configure Health Rules](#) for information on how the metrics that define warning and critical health status are set.

When using the circle visual, you have the option of manipulating the display by choosing its aggregation type: either Ratio Graph or Most Severe Status.

Event List

This is a filtered table of events that occurred within the specified time range.

IFrame

You may want to include a shared custom dashboard in another custom dashboard when you have different operators who focus on particular dashboards and you want to roll them all up into a master dashboard for management.

To display information from another dashboard or from another website inside this custom dashboard, you need the URL. You can get the URL for a screen by clicking **Settings > Copy a link to this screen to the clipboard**.

The iframe widget is sandboxed. Advanced HTML features, such as forms and Javascript, will not work with the iframe widget.

Widget Data

Some widgets, such as a time series graph, can display a single value or multiple values. Some widgets, such as a doughnut, must display multiple values to make sense. Others, such as a gauge or a metric value, display only a single value.

Specifying a function of a metric value for a single entity

When you specify the data to be displayed in a widget, you use a pulldown menu in the Add Series window to select which function of the value to display :

- Minimum: Minimum value, only available for averaged metrics
- Maximum: Maximum value, only available for averaged metrics
- Value: Contains the average or the sum across the time range depending on the metric
- Sum: Aggregated value of the metric over the time range
- Count: Count of the observed values over the time range
- Current: Sum of the most recent minute's metric data values across all the included nodes

You can also use a metric expression to specify a metric. The behavior is similar to using an expression for a health rule. For more information about how to use metric expressions, see how to build an [expression for Health Rules](#).

Dashboard widget metric expressions currently cannot properly handle fraction or float constants that are less than 1. These metrics are treated as 0. They work fine when they are fraction or float values greater than 1.

Specifying metrics in multiple entities using a wildcard

You can use a wildcard to specify a metric that evaluates across several similar entities for metrics in the following branches in the metric hierarchy:

- Hardware Resource
- JVM
- CLR
- Custom Metrics

See [Using Wildcards in Metric Definitions](#) for instructions on how to do this.

Empty Data Series

It is possible that no data is available for a particular metric within the specified time range while for other time ranges valid data is reported. When this occurs, the label for the empty data series appears in the legend but no data is displayed. For example, no line in a time series graph or slice in a pie chart.

Enabling limits on the number of JMX instances or nodes for a single entity

You can use account level configurations to enable dashboard or widget limits on large numbers of JMX instances or nodes instrumented in one application while returning widget data. This also includes threshold checks for business transactions, errors, servers, and backend data. This applies to the JMX type metric in the widget *Type of Nodes* menu. The *All Nodes in the Application* option becomes disabled if the number of nodes exceeds the threshold. An error is returned if the number of any threshold is exceeded on the backend. This should help prevent outages.

Widget Properties

Widget properties vary to some extent based on the type of the widget.

Most of the widget properties in the configuration forms are self-explanatory. The following list describes some of the less obvious properties:

- **Metric Display Name:** You can choose the display name for the metrics in a widget. Specify one or more of the following substitution variables to determine the metric display name:
 - $\{#\}$: Number the displayed metrics based on sorting with the rollup value.
 - $\{m\}$: Metric name.
 - $\{e\}$: Entity name.

For example, if specify $\{m\}$, the widget displays the full metric name.

- **Static Thresholds:** You can create static threshold with a specific value for graph widgets. The threshold appears as a line on the graph.
- **Double click action:** Some widgets have an option to define the result of double-clicking the widget. You can configure the double click action to open the Metric Browser or a URL specified by the *Drilldown URL* value.
- **Drilldown URL:** The Drilldown URL specifies the URL of an AppDynamics window you want the widget to open when you double-click the widget. For example, if you see an increase in slow requests and want to investigate the cause, you may want to jump to the App Servers List of all tiers from your dashboard by double-clicking a widget. To get the URL for a specific screen, click *Settings > Copy a link to this screen to the clipboard*.
- **Time Range:** Widgets can use the global or dashboard time range or a time range that is specific to the widget. If you choose a widget-specific time range, select the widget time range from the pulldown menu.
- **Events Overlay:** You can configure specific events to overlay on the graph widget to show how specific events may correlate with performance. Check the *Show Events* check box and create the query to define which events should be overlaid.

Configuring Widgets

Set up or modify widgets with the widget palette in edit mode.

If you configure widgets for a war room, you will see an additional category for Streaming Data widgets. To add widgets to the war room space the presenter must be in edit mode. To enter edit mode, click edit toggle button which is always visible. If it is not visible and you are the presenter, you are already in edit mode. You can duplicate one or more widgets at a time and delete any widget as required.

To configure a new widget:

1. Click **Edit**.
2. Click **Add Widget**. The widget palette appears.
3. Click the widget in the palette.
The configuration form appears on the left side of the configuration window.
4. Configure both the widget data and the widget properties.
After you configure the data, a preview of the widget appears. The preview updates as you set more properties.
5. Click **Save**.

To modify an existing widget:

1. Click **Edit**.
2. Click the widget in the dashboard.
3. Click the settings icon in the upper right corner of the widget.
4. Use the form to modify the widget.
5. Click **Save**.