

Creating custom metrics and alerts

What is a custom metric?

By default, SQL Monitor collects a standard set of Machine, SQL Server and Database metrics from every monitored object. It does so by running a T-SQL query against the objects at regular intervals and displaying the collected values as data points on the Analysis page.

Custom metrics are different; you add your own T-SQL query, choose the instances and databases to collect from, and specify the frequency of collection. This means data unique to your server environment can be collected and analyzed. Each time the query runs, a single, numeric value is collected. Values are displayed as data points on the Analysis page when you select a custom metric from the **Show** drop-down list:

The screenshot shows the configuration interface for creating a custom metric. It includes a 'Show' dropdown menu with options like 'Log bytes flushed/sec', 'Log flushes/sec', 'Log flush waits/sec', 'Custom metrics', 'CPU signal wait time' (selected), 'Downloads (per hour)', 'Availability group metrics', 'Log bytes received/sec', 'Log send queue', and 'Redo queue'. Below this are buttons for 'ADD ANOTHER METRIC' and 'CLEAR ALL'. The 'For' dropdown menu shows 'win2012cluster.testnet.red'. The 'instances' dropdown shows 'windows2012a\sql2012'. The 'databases' dropdown shows '(All)' with a list of databases: 'master', 'model', 'msdb', 'tempdb', 'AGDB99', 'RGDB1', 'RGDB2', and 'RGDB3'.


What is a custom alert?

A custom alert warns you when a custom metric value passes a specified threshold for a certain duration. Adding a custom alert is optional, but it is a useful way of finding out if the values collected by a custom metric suggest problems with your databases.

Custom alerts are **Continuous** alerts that are raised at a defined level (Low, Medium or High). They can have the following status:

- **Active:** the issue that triggered the alert is still a problem
- **Ended:** the issue has been resolved


You can configure multiple thresholds so that if the collected metric value changes, the Active alert will automatically escalate or downgrade from the threshold level at which it was raised.

 You can only add an alert to a single custom metric; multiple alerts based on the same metric are not supported.

Once created, the custom alert behaves just like the alerts provided by default and displayed in the [Alert Inbox](#) or the [Alert settings](#) page (Configuration > Alert settings).

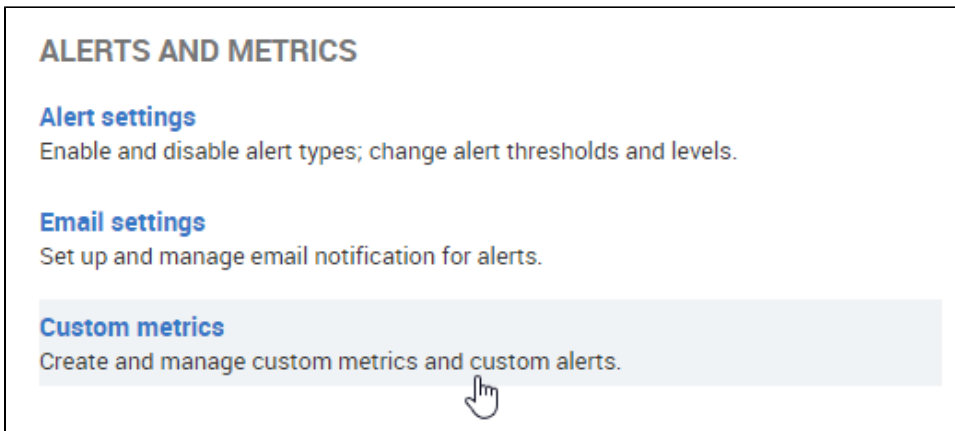
How do I create a custom metric and alert?

A simple wizard guides you through each step of the creation process.

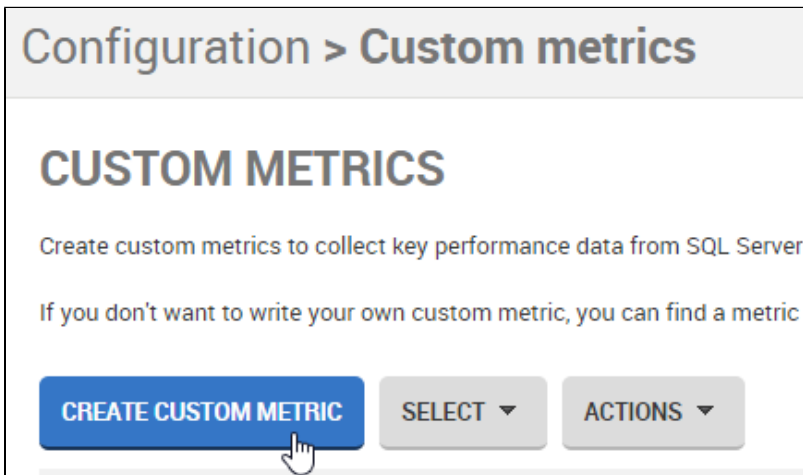
 If you don't want to create a custom metric and alert from scratch, we've provided a website, [SQL Monitor Metrics](#), containing a range of metrics that you can install automatically.

To create a custom metric:

1. Go to the **Configuration** tab. Under **Alerts and metrics**, select **Custom metrics**:



2. Click the **Create custom metric** button:



The first page of a simple, three-step wizard is displayed. The steps are:

Step 1. Define metric - includes sections for defining the metric, and entering and testing the T-SQL query on which the metric is based.

Step 2. Add an alert - optionally base an alert on the metric by completing sections similar to those displayed on the Alert settings page (Configuration > Alert settings).

Step 3. Create - creates the custom metric and alert.