

# Adding graphs and multigraphs

Graphs are plotted automatically for all numeric values from the [Data](#) table.

The possibility to add graphs is used in the following cases:

- the needed graph was removed;
- data structure has been changed and new metrics start to come;
- a multigraph (several graphs on a single panel) needs to be plotted;
- a graph for a metric of another object needs to be plotted;
- a graph based on math operations needs to be plotted.

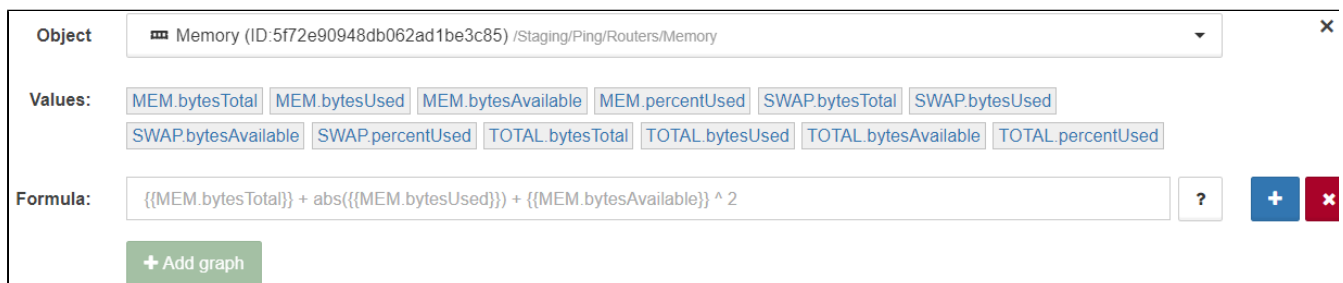
These cases can be combined.

## Adding a new graph

In order to add a new graph it is necessary to:

1. Click the button  over the list of graphs.

The panel with the current object and its numeric metrics will appear:




The screenshot shows a configuration panel for a graph. At the top, there is a dropdown menu for the 'Object' set to 'Memory (ID: 5f72e90948db062ad1be3c85) /Staging/Ping/Routers/Memory'. Below this, a 'Values:' section contains a list of metrics: MEM.bytesTotal, MEM.bytesUsed, MEM.bytesAvailable, MEM.percentUsed, SWAP.bytesTotal, SWAP.bytesUsed, SWAP.bytesAvailable, SWAP.percentUsed, TOTAL.bytesTotal, TOTAL.bytesUsed, TOTAL.bytesAvailable, and TOTAL.percentUsed. A 'Formula:' field contains the expression  $\{(MEM.bytesTotal)\} + \text{abs}(\{(MEM.bytesUsed)\}) + \{(MEM.bytesAvailable)\}^2$ . To the right of the formula field are buttons for help (a question mark), add (a blue plus sign), and delete (a red X). At the bottom left of the panel is a green '+ Add graph' button.

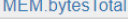

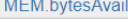
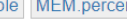
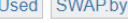
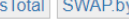
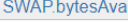


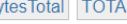

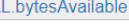
2. Choose the metric from the current object or any other one.

There are two ways to do this:

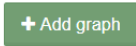
- to click on the needed metric;
- to start entering the name of the metric in braces in the field **Formula**, and select the metric from the filtered list.

3. Click the button :

Object:  Memory (ID:5f72e90948db062ad1be3c85) /Staging/Ping/Routers/Memory

Values:  MEM.bytesTotal  MEM.bytesUsed  MEM.bytesAvailable  MEM.percentUsed  SWAP.bytesTotal  SWAP.bytesUsed  
 SWAP.bytesAvailable  SWAP.percentUsed  TOTAL.bytesTotal  TOTAL.bytesUsed  TOTAL.bytesAvailable  TOTAL.percentUsed

Formula: {{{MEM.percentUsed}}} ? + -




 The objects in the dropdown list are sorted with the following way:

1. The current object.
2. Its child objects from all of the levels in alphabetical order.
3. Its child links from all of the levels in alphabetical order.
4. Other objects in alphabetical order.
5. Other links in alphabetical order.




|

-- Not selected --


Current object

 PC (ID:5f806df56ddb985e98edec63) /ROOT/BASIC/PC




Child objects

-  CPU (ID:5f806dff6ddb985e98edec74) /ROOT/BASIC/PC/CPU
-  File System (ID:5f806e146ddb985e98edec88) /ROOT/BASIC/PC/File System
-  Memory (ID:5f806e066ddb985e98edec7c) /ROOT/BASIC/PC/Memory



Child links

-  Memory - CPU (ID:5f806e1c6ddb985e98edec94) /ROOT/BASIC/PC/Memory - CPU

Other objects

-  Agent (ID:5f805d6ba499334f2a9e6da1) /ROOT/BASIC/Agent
-  BASIC (ID:5f805d2aa499334f2a9e6d9a) /ROOT/BASIC
-  Info (ID:5f8060b4a499334f2a9e6dac) /ROOT/BASIC/Info

## Adding a multigraph

In order to add a multigraph, several metrics from the current object or any other ones must be selected, using  and  buttons:

Object: Memory (ID:5f72e90948db062ad1be3c85) /Staging/Ping/Routers/Memory ✕

Values: MEM.bytesTotal MEM.bytesUsed MEM.bytesAvailable MEM.percentUsed SWAP.bytesTotal SWAP.bytesUsed SWAP.bytesAvailable SWAP.percentUsed TOTAL.bytesTotal TOTAL.bytesUsed TOTAL.bytesAvailable TOTAL.percentUsed

Formula:  ? + ✕

Formula:  ? + ✕

+ Add graph

Multigraphs can be used to plot additional graphs for constant values, for instance, to display max and min levels for metrics:

Object: Memory (ID:5f72e90948db062ad1be3c85) /Staging/Ping/Routers/Memory ✕

Values: MEM.bytesTotal MEM.bytesUsed MEM.bytesAvailable MEM.percentUsed SWAP.bytesTotal SWAP.bytesUsed SWAP.bytesAvailable SWAP.percentUsed TOTAL.bytesTotal TOTAL.bytesUsed TOTAL.bytesAvailable TOTAL.percentUsed

Formula:  ? + ✕

Formula:  ? + ✕

Formula:  ? + ✕

+ Add graph