

# Understanding Graphing

## Graphing in up.time

You can graph performance information to learn about the behavior of a system in your environment. Graphs visualize information about CPU, memory, and process usage; as well as network, disk, and user activity. For more information about specific graphs, see [Using Graphs](#).

*up.time* can generate performance data graphs in two ways:

- In Internet Explorer, the graph is generated using an ActiveX graphing control.
- In any Java-enabled Web browser on any operating system - for example, in Firefox, on Linux - the graph is generated using a Java graphing applet.

You can click any line in the graph or any item in either axis to zoom in on a particular time period or value. Click the *R* key on your keyboard to return to the original view.



*Note - You can modify ActiveX graphs after they have been generated. You cannot modify Java graphs.*

## Graphing Tool

After you generate an ActiveX graph, you can customize it using *up.time*'s graphing tool. With the graphing tool, you can do the following:

- apply graphing line styles
- apply graphing and charting formats
- apply titles, text, and dimensioning
- manipulate a graphing axis
- apply dynamic motion to a graph

## Using the Graph Editor

The Graph Editor enables you to manipulate the presentation of your graphs, as well as apply a variety of effects to a graph to change its overall look.

Use the Graph Editor to do the following:

- exclude graph lines
- change the style of the graph
- re-arrange the order of lines on your graph, or the actual data, to highlight specific Elements in your data
- copy lines
- change the title of a line or of the graph
- change the style of graph lines, margins, titles, and the X and Y axis information

The Graph Editor contains the following subtabs:

- Series subtab

Enables you to select the data series that the graph will display. If, for example, you have a graph that displays the following data series:

- total memory
- percentage of memory used by system processes
- percentage of memory used by user processes

You can choose to display any or all of the data series.

- General subtab

Adjusts the graphs margins, and controls the focus and scrolling functions.

- Axis subtab

Manipulates the graph axis, inverts the graph, scales the data points on the axis, and sets the position of the graph.

- Titles subtab

Enables you to add, delete, or modify all labels and titles in the graph. You can, for example, change the generic title *LRX-234* to *Main Email Server*.

- Legend subtab

Enables you to manipulate the legend - which describes the graphed information - for a graph. You can add, adjust, and delete legend information. You can also change position of the legend, and manipulate its size and format.

- Panel subtab

Enables you to add, delete, and change the graph's background; add images or color; and apply logos to customize the look of your graph.

- Paging subtab

Enables you to define the number of pages that your graph contains; choose to display a numeric index; and determine the number of data points that will be displayed on each page.

- Walls subtab

Enables you to adjust the left, right, bottom, and back walls of your graph.

- 3D subtab

Enables you to apply the following effects to graphs:

- rotation, elevation, and zoom to adjust the depth of the graph
- horizontal and vertical offsets
- changes to perspective

## Working with Trend Lines

A trend line is a line on a graph that indicates a statistical trend. Typically, a trend line connects multiple points on a graph. A trend line extends into the future, and you can use it to identify current and potential increases or decreases in server performance.

You can create a trend line when you need to clarify graphed information. A trend line can help you obtain a comprehensive view of the data and pinpoint any tendencies in server performance.

### Creating a Trend Line

To create a trend line, do the following:

1. Create a graph.  
See [Using Graphs](#) for more information.
2. In the graph window, click *Show Editor Dialog*.
3. Click *Add*.  
The *Chart Gallery* dialog box appears.
4. Click the *Functions* tab, and then click the *Extended* subtab.
5. Click *Trend* and then click *OK*.  
The *Editing* dialog box appears.
6. In the *Source Series* subtab, select one or more of the available data series and then click the *Add* button.  
The data series that you select are the ones for which a trend line will be generated.
7. Click *Apply*.  
*up.time* creates a trend line for each data series that you selected in step 6.

## Formatting Individual Graph Elements

You can format individual graph Elements using the options available on the *Series* tab, and apply a different graph chart style to each Element.

Using your graphed line data, perform any of the following activities:

- Apply styles

Changes the style of lines - for example, solid, variety of dashes, variety of dots, line thickness, visible, not visible, shape, and width.

- Apply colors and color styles

Applies any color, image, or logo to your graphed data.

- Apply data point effects

Makes data points visible or invisible, or displays them in two or three dimensions. You can change the following attributes of data points: style, width, height, color, border, and pattern, and image.

- Apply value formatting styles and masking

Applies formats and masks to your data by value, percentages, horizontal axis, vertical axis, and cursor.

- Marks

Graphs any of the following: every data point of every statistic, every data point of any statistic, and every *n* *th* data point.

- Data Source

Lists all data points by value and time. Using Data Source you can perform calculations on retrieved statistics and graph the result. You can import, perform calculations, perform contrasts and comparisons, and graph external data with collected statistics.

## Exporting Graphs

Using the *Export* tab, you can send your graph by e-mail, or save it to a directory on your computer or network. You can export your graph in three ways:

- A one of the following formats: Bitmap, Metafile, SVG, Postscript, PDF, PCX, GIF, PNG, or JPEG.
- In the native *up.time* graph format.
- In one of the following data formats: text, HTML table, XML, or Excel.

*Note - If you export the graph as a text file, you can choose the following delimiters to separate your data points: space, tab, comma, colon, or your own custom delimiter.*

## **Changing the Look and Feel of a Graph**

Using the Themes tab, you can change the appearance of a graph. You can select one of eight styles for the graph, as well as specify whether the graph should be in 3D or if it should be to scale.