



CHAPTER 11

Managing Trends

Trends provides historical data of a node in the network over a period of time. When the value of a node in the specified trend changes, the changes are recorded in the trend logs and displayed in real-time, animated graphs.

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About Trends

The Mediator web client provides an interface to configure and manage trends. You can use the Mediator web client to modify the appearance of the trend graphs, view the trends, and also export the trend data in MS Excel format.

For example, if you want to view and compare the room temperatures of two roof top units (RTU), you can use the web client to view the real-time data and also historical data over a period of time.

The Trends page appears as shown in [Figure 11-1](#).

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Figure 11-1 Trends Page



Table 11-1 describes the buttons as shown in the Trends page.

Table 11-1 Trends Page- Description

Button	Description
+	Allows you to add trends.
-	Allows you to delete trends.
view trend	Allows you to view trends. This button will remain disabled until the points are configured.
configure points	Allows you to configure points for a trend.
trend preferences	Allows you to set preferences for your trend.

Creating Trends

To create a new trend, perform the following steps:

Step 1 In the Mediator web client, click **Trends**.

The Trends pane appears displaying a list of currently configured trends.



Note Periodic log nodes that are configured using the configTOOL also appear in the Trends pane. However, the **configure points** button remains disabled and you cannot edit the point.

Step 2 Click the plus symbol (+) button located below the last trend in the table.

A new trend is added to the table in the Trends pane. The default name is the next trend in numerical order. The view trend button is disabled for the newly created trend.

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Note The Mediator uses the default name to identify the trend internally. If you examine the node tree (for example, with nodes), you will find the node listed by number, not by name. However, you can change the default name. When specifying a trend name, we recommend avoiding the use of special characters in trend names.

Step 3 Click **configure points**.

The Configure Points dialog box appears.

Step 4 In the Configure Points dialog box, do the following:

- a. In the Point Name text box, enter a name for the point.

The name should identify the function of the point.

- b. Click the ellipsis (...) button in the first row of the table.

In the Node Selector dialog box, perform the following steps:

1. Navigate to and select the node you want to include in the trend.
2. Click **SAVE**.



Note If you select the cache check box, the Mediator saves the location of the selected node, and automatically returns to it the next time you open the Node Selector dialog box. This feature is useful when you are configuring multiple nodes for a trend.

The node path appears in the Node location text box in the Configure Points dialog box.

- c. Repeat Step 4b for each file you want to include in the trend. Alternatively, you can enter the pathname in the Node Path text box instead of using the Node Selector option.



Note Do not leave blank rows between rows containing file configurations.

- d. In the Period text box of the Configure Points dialog box, enter the interval in seconds at which the Mediator logs the values of the nodes you selected. The default value is 60 seconds.
- e. Click **commit** to save the configuration.

The Configure Points dialog box closes and the Trends pane reappears. The view trend button is now enabled.



Note Trends that are not associated with any points are not saved after restarting the Mediator.

Viewing Trends

To view an existing trend, perform the following steps:

Step 1 In the Mediator web client, click **Trends**.

The Trends pane appears displaying a list of currently configured trends.

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Step 2 Click **view trend** next to the trend you want to view.

A window appears displaying a MacroMedia Flash graph of the trend. The graph scrolls and shows the trend node logging the selected nodes in real time.



Note Periodic log nodes that are configured using the configTOOL also appear in the Trends pane. However, if more than nine points are associated with the trend, you cannot view the graph of the trend. This limitation will be addressed in future releases.

Step 3 To stop the scrolling of the graph, right-click anywhere in the graph, and choose **Stop Auto-Scroll** from the menu. To restart scrolling, right-click the graph, and choose **Start Auto-Scroll** from the menu.

Step 4 Click the **Legend** link.

The Legend lists the assigned point names and indicates the colors of their trend lines.

Step 5 Use the slider at the bottom of the graph to select different time periods in the graph.

The plus (+) and minus (-) buttons to the right of the slider allows you to zoom in and out in the graph. The X and Y axis scales are automatically adjusted.

Step 6 To reload the graph, right-click anywhere in the graph, and choose **Reload** from the menu.

The graph in the window is refreshed.

Step 7 To navigate back to the Trends pane, right-click anywhere in the graph, and choose **Trend Manager** from the menu.

A new window appears displaying the Trends pane.



Note After creating and viewing a trend in the Mediator web client, if both the time and time zone of the Mediator are changed using an SSH client, such as PuTTY, the trend in the Mediator web client does not reflect this change in the time. However, if only the time is changed, the trend in the Mediator web client is updated with the changed time. This occurs because a change in the time zone of the Mediator constitutes a change in the system configuration, and for this change to be reflected, you need to restart the Mediator Framework.

Editing Trends

You can control the appearance of the trend graphs by editing and specifying trend parameters.

To edit an existing trend, perform the following steps:

Step 1 In the Mediator web client, click **Trends**.

The Trends pane appears displaying a list of currently configured trends.

Step 2 Click **trend preferences** next to the trend you are configuring.



Note Periodic log nodes that are configured using the configTOOL also appear in the Trends pane. However, if more than nine points are associated with the trend, you cannot edit the trend. This limitation will be addressed in future releases.

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The Trend Preferences dialog box appears containing the General Preferences, Point Preferences and Axis Preferences areas.

Use the three areas in the Trend Preferences dialog box to define your settings:

- General Preferences: Specify the name of the trend and configure the dimensions, colors, type font, and initial time span of the trend.
- Point Preferences: Specify the display color of the nodes in the trend, and the XY axes on which they are plotted.
- Axis Preferences: Configure the parameters of the XY axes. The Axis Preferences area contains a table with entries for the parameters that define the two Y axes. The Y axes are numbered as 1 and 2.

Step 3 In the Trend Preferences dialog box, perform the following steps:

- a. In the Display Name text box, enter a name that identifies the trend.



Note This name identifies the trend for system users. You should select a descriptive name that identifies the function of the trend. The Mediator identifies the trend node internally by the default number, not by this name.

- b. In the Width and Height text boxes, enter the dimensions of the trend graph in pixels.
- c. In the Background Color text box, click the color block next to the text box.
The Select Color dialog box appears.
- d. Click the color you want for the background of the trend graph.
The Select Color dialog box closes.
- e. In the Text Color text box, click the color block next to the text box.
The Select Color dialog box appears.
- f. Click the color you want for the text that appears in the trend graph.



Note Choose a color that is readable against the background color you selected in Step 3d. For example, black shows up well on white or light grey, whereas red on black does not appear clear.

The Select Color dialog box closes.

- g. In the Text Size text box, enter the size for the text that appears in the trend graph.
- h. In the Font text box, enter the font for the text that appears in the trend graph.



Note Arial, Verdana, and Times New Roman fonts work well. Accept the defaults if you do not have experience specifying fonts.

- i. In the Initial Timespan text boxes, set the initial time period of the X (horizontal) axis when the trend is first started. Choose the unit of the time period (samples taken, hours, minutes, or seconds) from the drop-down list.

In the Point Preferences area, perform the following steps:

- j. Choose the time stamp from the Time Reference drop-down list.
- k. In the Color text box, click the color block next to the text box.

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The Select Color dialog box appears.

- i. Click the color you want for the background of the trend graph.

The Select Color dialog box closes.

You should select colors that will contrast against the background color that you selected in Step 3d.

In the Axis Preferences area, perform the following steps:

- m. Choose the **Y** (vertical) axis from the Axis Status drop-down list. The Y axis is used for reading the plot of each node in the trend graph.

You can have two Y axes: Y axis 1, with its scale on the left side of the graph, and Y axis 2, with its scale on the right side of the graph. Choose 1 for the left Y axis or 2 for right Y axis from the drop-down list in the first row.

Repeat this activity for each of the other nodes in the trend.

- n. In the first row of the Axis Status column, Y axis 1 is set to enabled and cannot be changed.
- o. In the second row of the Axis Status column, Y axis 2 defaults to disabled. Choose **enabled** from the drop-down list if you want your trend graph to have two Y axes.
- p. In the Range area, specify the range of the Y axis scales by entering the minimum value in the From text box and the maximum value in the To text box.

The default for both the values is auto, which allows Trends to automatically set the scales from the minimum to the maximum values output by the nodes, with an appropriate increment.

- q. From the Type drop-down list, choose **numeric** for nodes with numeric values or **binary** for nodes with binary values (1 or 0, On or Off, and so on).



Note You cannot set the axis type as binary for both the axes.

- r. Click **commit** to save the configurations.
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Downloading Trends

To download a trend, perform the following steps:

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- Step 1** In the Mediator web client, click **Trends**.
The Trends pane appears displaying a list of currently configured trends.
 - Step 2** Display a trend graph. To learn more about displaying graphs, see [Viewing Trends, page 11-3](#).
 - Step 3** To save the complete trend log, right-click anywhere in the graph, and choose **Save All** from the menu.
Alternatively, to save only the part of the log that is currently visible in the graph, right-click anywhere in the graph, and choose **Save Visible** from the menu.
The Download File dialog box appears.
 - Step 4** Click **Download** to choose a location on your local system, and save the trend log as a .csv (Comma Separated Value) file.
 - Step 5** Open the saved file.

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The file contains a line for each event recorded in the log.

Deleting Trends

To delete an existing trend, perform the following steps:

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- Step 1** In the Mediator web client, click **Trends**.
The Trends pane appears displaying a list of currently configured trends.
 - Step 2** Click the minus symbol (-) button on the trend you want to delete.
A dialog box appears prompting you to confirm the operation.
 - Step 3** Click **OK** to remove the trend.
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