IP/MPLSView Web-Based Graphical User Interface Reference

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Documentation Conventions

Table 1 on page xvi defines notice icons used in this guide.

Table 1: Notice Icons

Icon	Meaning	Description
	Informational note	Indicates important features or instructions.
	Caution	Indicates a situation that might result in loss of data or hardware damage.
	Warning	Alerts you to the risk of personal injury or death.
	Laser warning	Alerts you to the risk of personal injury from a laser.
	Tip	Indicates helpful information.
	Best practice	Alerts you to a recommended use or implementation.

Table 2 on page xvi defines the text and syntax conventions used in this guide.

Table 2: Text and Syntax Conventions

Convention	Description	Examples
Bold text like this	Represents text that you type.	To enter configuration mode, type the **configure** command: user@host> **configure**
`Fixed-width text like this`	Represents output that appears on the terminal screen.	`user@host>` **show chassis alarms** `No alarms currently active`
Italic text like this	• Introduces or emphasizes important new terms. • Identifies guide names. • Identifies RFC and Internet draft titles.	• A policy *term* is a named structure that defines match conditions and actions. • *Junos OS CLI User Guide* • RFC 1997, *BGP Communities Attribute*
Italic text like this	Represents variables (options for which you substitute a value) in commands or configuration statements.	Configure the machine's domain name: [edit] root@# **set system domain-name** *domain-name*

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Table 2: Text and Syntax Conventions (continued)

Convention	Description	Examples
Text like this	Represents names of configuration statements, commands, files, and directories; configuration hierarchy levels; or labels on routing platform components.	• To configure a stub area, include the **stub** statement at the **[edit protocols ospf area area-id]** hierarchy level. • The console port is labeled **CONSOLE**.
< > (angle brackets)	Encloses optional keywords or variables.	**stub <default-metric *metric*>;**
| (pipe symbol)	Indicates a choice between the mutually exclusive keywords or variables on either side of the symbol. The set of choices is often enclosed in parentheses for clarity.	**broadcast | multicast** **(*string1* | *string2* | *string3*)**
# (pound sign)	Indicates a comment specified on the same line as the configuration statement to which it applies.	**rsvp { # Required for dynamic MPLS only**
[ ] (square brackets)	Encloses a variable for which you can substitute one or more values.	**community name members [*community-ids*]**

Indention and braces ({ })	Identifies a level in the configuration hierarchy.	[edit]
		routing-options {
		static {
		route default {
		nexthop *address*;
		retain;
		}
		}
		}

; (semicolon)	Identifies a leaf statement at a configuration hierarchy level.	
GUI Conventions		
Bold text like this	Represents graphical user interface (GUI) items you click or select.	• In the Logical Interfaces box, select **All Interfaces**. • To cancel the configuration, click **Cancel**.
> (bold right angle bracket)	Separates levels in a hierarchy of menu selections.	In the configuration editor hierarchy, select **Protocols>Ospf**.

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We encourage you to provide feedback, comments, and suggestions so that we can improve the documentation. You can provide feedback by using either of the following methods:

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Requesting Technical Support

Technical product support is available through the Juniper Networks Technical Assistance Center (JTAC). If you are a customer with an active J-Care or Partner Support Service support contract, or are covered under warranty, and need post-sales technical support, you can access our tools and resources online or open a case with JTAC.

- JTAC policies—For a complete understanding of our JTAC procedures and policies, review the *JTAC User Guide* located at https://www.juniper.net/us/en/local/pdf/resource-guides/7100059-en.pdf.
- Product warranties—For product warranty information, visit https://www.juniper.net/support/warranty/.
- JTAC hours of operation—The JTAC centers have resources available 24 hours a day, 7 days a week, 365 days a year.

Self-Help Online Tools and Resources

For quick and easy problem resolution, Juniper Networks has designed an online self-service portal called the Customer Support Center (CSC) that provides you with the following features:

- Find CSC offerings: https://www.juniper.net/customers/support/
- Search for known bugs: https://prsearch.juniper.net/
- Find product documentation: https://www.juniper.net/documentation/
- Find solutions and answer questions using our Knowledge Base: https://kb.juniper.net/
- Download the latest versions of software and review release notes: https://www.juniper.net/customers/csc/software/
- Search technical bulletins for relevant hardware and software notifications: https://kb.juniper.net/InfoCenter/
- Join and participate in the Juniper Networks Community Forum: https://www.juniper.net/company/communities/
- Open a case online in the CSC Case Management tool: https://www.juniper.net/cm/

To verify service entitlement by product serial number, use our Serial Number Entitlement (SNE) Tool: https://entitlementsearch.juniper.net/entitlementsearch/

Opening a Case with JTAC

You can open a case with JTAC on the Web or by telephone.

- Use the Case Management tool in the CSC at https://www.juniper.net/cm/.
- Call 1-888-314-JTAC (1-888-314-5822 toll-free in the USA, Canada, and Mexico).

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For international or direct-dial options in countries without toll-free numbers, see https://www.juniper.net/support/requesting-support.html.

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CHAPTER 1

Introduction

- IP/MPLSView Document Conventions on page 21
- IP/MPLSView Initial Landing Page Overview on page 23
- IP/MPLSView Main Window Overview on page 25

IP/MPLSView Document Conventions

Document Conventions

- Window titles, field names, menu name, menu options, and graphical user interface buttons are represented by a bold font.
- Command -line text is indicated by the use of a **constant width type**.

Keyboard, Window, and Mouse Terminology and Functionality

- Window. Any framed screen that appears on the interface.
- Cursor. The symbol marking the mouse position that appears on the workstation interface. The cursor symbol changes; for example, in most cases, it is represented as an arrow; in a user-input field, the cursor symbol is represented as a vertical bar.
- Click. Refers to single clicking (pressing and releasing) a mouse button. Used to select (highlight) items in a list, or to press a button in a window.
- Double-click. Refers to two, quick clicks of a mouse button.
- Highlight. The reverse-video appearance of an item when selected (via a mouse click).
- Pop-up menu. The menu displayed when right-clicking in or on a specific area of a window. Move the cursor and click the mouse button to make a selection.
- Pull-down menu. The Main Window window menus on the tool bar. Move the cursor and click the mouse button to make a selection.
- Radio button. An indented or out-dented button that darkens when selected.

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- Check box. A square box inside of which you click to alternately check or uncheck the box; a check mark symbol is displayed inside the box when it is “checked.” The check mark symbol disappears when the box is “unchecked.”
- Navigation. When you type text into a field, use the <Tab> key or the mouse to move to the next logical field. Click inside a field using the mouse to move directly to that field.
  - Gray or Grayed-out. A button or menu selection is described as gray or grayed-out when it is inactive or inaccessible.

NOTE: **In the documentation, mouse button means left mouse button unless otherwise stated.**

The Keyboard

The cursor keys located on the lower two rows of this keypad perform cursor movement functions for the window cursor. They are labeled with four directional arrows on the key caps. IP/MPLSView makes use of these keys for cursor movement within files.

The following keys or key combinations can be used in the except where noted:

- Click on a file then hold down the <Shift> key while clicking on another file to select the file first clicked on and all files in between.
- Click on a file and then hold down the <Ctrl> key while clicking on another file to select the file first clicked on and the file next clicked on without selecting any of the files in between. You can continue to <Ctrl>-click to select additional, single files.

The Mouse

The following terms describe operations that can be performed with the mouse.

- Point. Position a mouse pointer (cursor) on an object.
- Click. Quickly press and release the left mouse button without moving the mouse pointer.
- Right-click. Quickly press and release the right mouse button without moving the mouse pointer.
- Double-click. Quickly click a mouse button twice in succession without moving the mouse pointer.
- Press. Hold down the mouse button. (Unless otherwise specified, the left mouse button is implied.)
- Release. Release a mouse button after it has been pressed.
- Drag. Move the mouse while a mouse button is pressed and an item is selected.

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Informational Notes, Cautions, and Warnings

Informational notes are special notes placed in a document to alert you of an important point.

NOTE: **This is an informational note.**

Instances where there is the possibility of inconvenience, temporary loss of functionality, unwanted data loss, or other undesirable outcomes are indicated as Caution notes.

CAUTION: **This is a caution-type note.**

A Warning note indicates very important information which needs to be followed to avoid risk of permanent hardware or software damage or personal injury.

WARNING: **This is a warning-type note.**

Changing the Size of a Window

You can change the size of windows (with some exceptions such as dialog boxes) by pointing to a border or corner of the window's frame, pressing the left mouse button, and dragging the window's frame until the window has reached the desired size. You also can click on the minimize, maximize, and exit buttons in the upper right-hand portion of the window:

Moving a Window

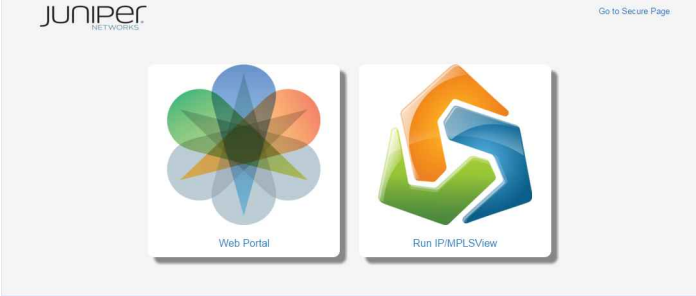
You can move a window by pressing your mouse down when your pointer is on a window's top border. Keep your mouse's left button pressed down and drag the selected window to the place of your choice. When you are satisfied, release the mouse button.

IP/MPLSView Initial Landing Page Overview

To access the IP/MPLSView user interface, type the host external IP address, followed by port number 8091 or 8443 in the address bar of your browser, for example, **http://192.168.153.29:8091**.

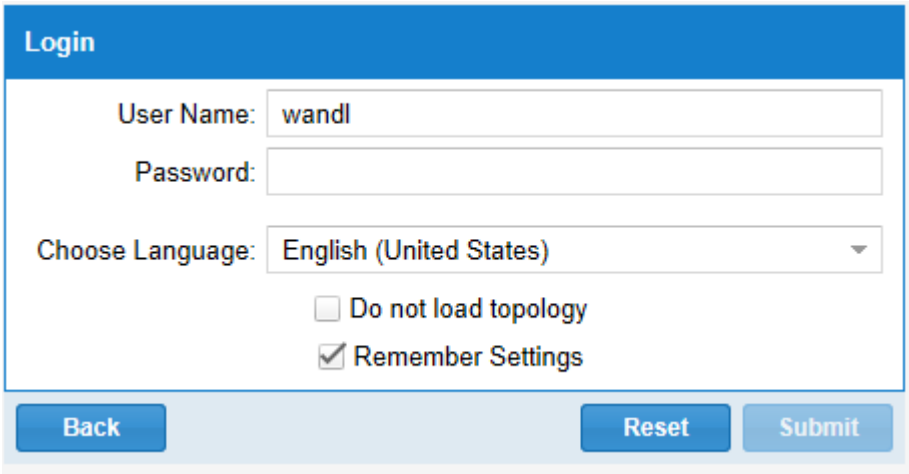
The initial landing page for IP/MPLSView is displayed. Figure 1 on page 24 shows the initial landing page.

Figure 1: Initial Landing Page



From the initial landing page, click **Web Portal**. The Login dialog box is displayed. Figure 2 on page 24 shows the Login dialog box.

Figure 2: Login Dialog Box



The default language is English (United States). To change the language the first time you log in, select **Choose Language > Chinese (Simplified)** or **Choose Language > Russian**. Select **Do not load topology** to not load the topology map. Select **Remember Settings** to save the selection.

Enter your login credentials and click **Submit** to display the main window of the IP/MPLSView Web interface. For information about the **Run IP/MPLSView** option, see the *IP/MPLSView Java-based Graphical User Interface Reference*.

Figure 3 on page 25 shows the main window of the IP/MPLSView Web interface.

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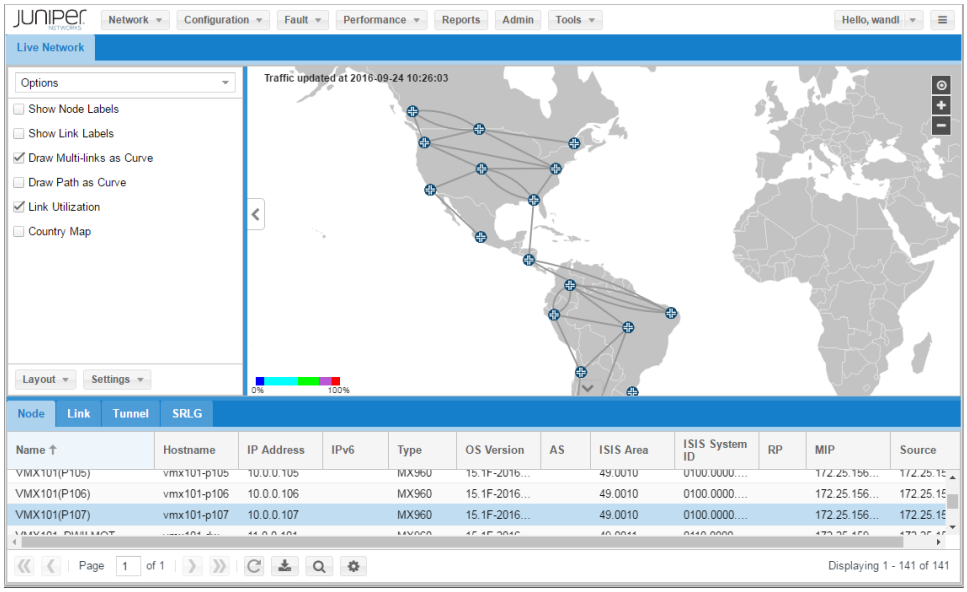
Figure 3: Main Window



Related Documentation

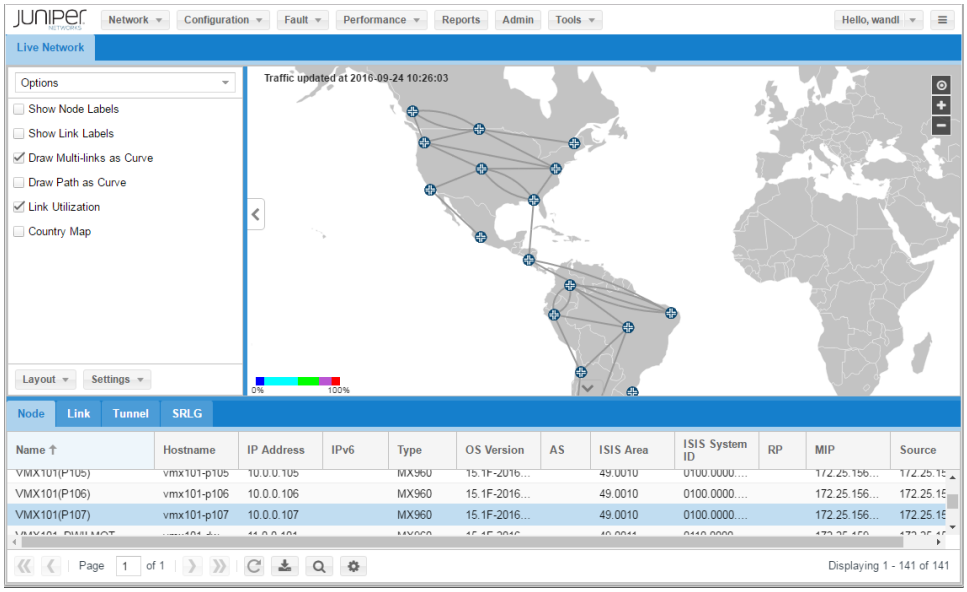
- IP/MPLSView Main Window Overview on page 25

IP/MPLSView Main Window Overview

This topic describes the main window of the IP/MPLSView Web interface, the workspace from which all IP/MPLSView windows are launched or opened.

Figure 4 on page 25 shows the main window of the IP/MPLSView Web interface.

Figure 4: Main Window



The main window consists of the following elements: menus, topology map panes, and network information tables. Note that many functions and features do not become available until a network is loaded. Menu options may also vary depending on your license, user permissions, or modules.

Table 3 on page 26 describes each element in the main window.

Table 3: Main Window Drop-down Menus

Element Name	Description	Link to More Information
Topology Map	The topology map is a graphical representation of the baseline network. IP/MPLSView can display the topology in several views, depending on the network.	"Topology Map Window Overview" on page 29 "Topology Map Right Pane" on page 30
Topology Map Left Pane	The left pane of the topology map contains expandable menus for filtering what is and is not displayed in the map. Menu selections include: Options, Types, Groups, Protocols, Events, AS, ISIS Areas, OSPF Areas, Links status, and Device/Network Performance.	"Topology Map Left Pane" on page 33
Network Menu	The Network menu provides comprehensive details on network elements, such as nodes, links, interfaces, and tunnels. Detailed information is available on services, protocols, and paths.	"Main Window Network Menu" on page 83
Configuration Menu	The Configuration menu provides access to configuration files, network data, network reports, integrity check reports, and hardware inventory reports.	"Main Window Configuration Menu" on page 95
Fault Menu	The Fault menu provides access to the Event Browser, event summary reports, event charts, and event options.	"Main Window Fault Menu" on page 109
Performance Menu	The Performance menu provides access to traffic-related features such as live traffic, aggregated traffic, live VPN traffic, real-time status, real-time usage, the Traffic Collection Manager, device performance, network performance, diagnostics and reports.	"Main Window Performance Menu" on page 127
Reports Button	The Report menu is used to access the Report Manager which contains detailed network, tunnel, simulation, configuration, and user-customized reports.	"Main Window Reports Window" on page 193
Admin Button	The Admin button displays the Administration pane. From which you can access log files, login statistics, a system monitor, and release information. These functions are normally used by IP/MPLSView administrators.	"Main Window Admin Button" on page 165
Tools Menu	The Tools menu provides access to the Task Manager, MIB Browser, device profiles display, the User Administration functions and a file browser.	"Main Window Tools Menu" on page 177
Help-About Menu	Displays the About window. Displays the IP/MPLSView documentation Web page. Launches the IP/MPLSView client using Java WebStart technology.	"Main Window Hello Menu and Help-About Menu" on page 197

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Table 3: Main Window Drop-down Menus (continued)

Element Name	Description	Link to More Information
Network Node Table	Displays a list of the nodes in your network. Clicking on a node highlights it on the map.	"Main Window Node Table" on page 41
Network Link Table	Displays a list of links for the selected subview. Clicking on a link highlights it on the map.	"Main Window Link Table" on page 44
Network Tunnel Table	Displays the node name, IPv4 address, and IPv6 address for the node A and node Z endpoints of a tunnel.	"Main Window Tunnel Table" on page 47
Hello Menu Help-About Menu	Hello menu is used to logout. Help About menu is used to displays the software revision, license limits, license expiration date, and the licenses enabled. The Help About menus is used to launch the Java-based user interface.	"Main Window Hello Menu and Help-About Menu" on page 197

Related Documentation

- IP/MPLSView Initial Landing Page Overview on page 23

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CHAPTER 2

Topology Map Window

- Topology Map Window Overview on page 29
- Topology Map Right Pane on page 30
- Topology Map Left Pane on page 33

Topology Map Window Overview

This topic describes the topology map window of the IP/MPLSView Web interface.

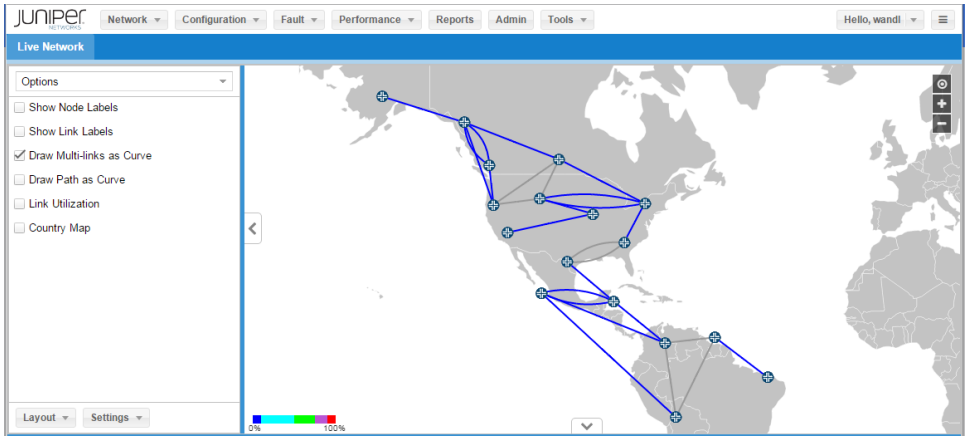
The topology map is the main work area in IP/MPLSView and displays important link and node properties. Links are color-coded according to a specified link property such as protocol, events, or status. Links can be displayed by link utilization. Nodes are displayed as icons differentiated by vendor.

The topology incorporates collapsible node-group views. You can also view node locations on the world map.

Topology Map Window Layout

The topology map window is divided into two areas. The left pane is used to change the settings of the topology view. The right pane map displays the network. Right-clicking on the map opens a pop-up menu for more functions. Move the map by holding the left mouse button and dragging. Zoom in and out by using the mouse scroll wheel. Figure 5 on page 30 shows the topology map window layout.

Figure 5: Topology Map Window



You can close the left pane or network information tables by clicking the arrow tabs at the left or bottom of the topology map window right pane.

Related Documentation

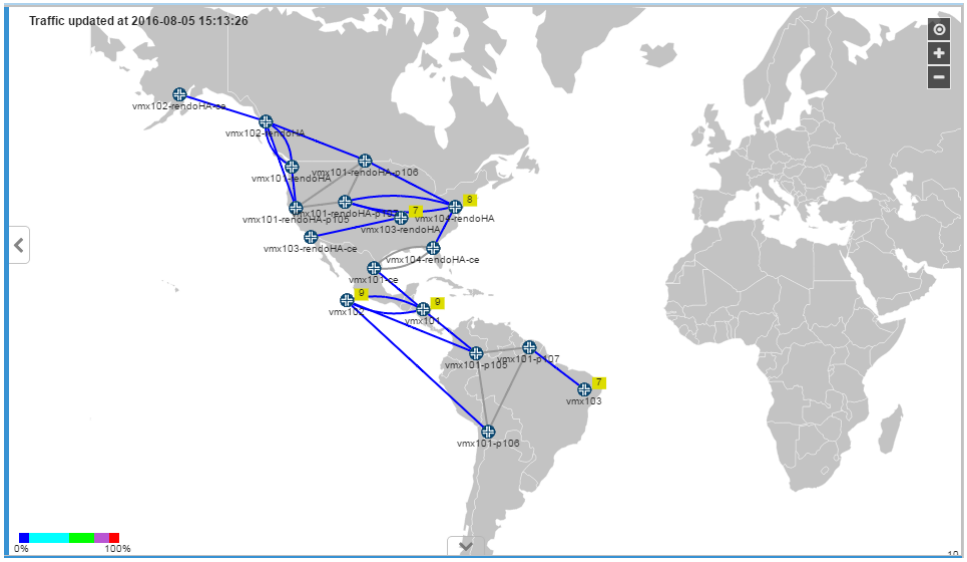
- IP/MPLSView Main Window Overview on page 25
- Topology Map Right Pane on page 30

Topology Map Right Pane

The topology map is a graphical representation of the baseline network. IP/MPLSView can display the topology in several views.

Figure 6 on page 30 shows the topology map right pane with some additional pop-up displays.

Figure 6: Topology Map Right Pane



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The topology map pane has the following capabilities:

- The color of the links indicates the real-time link utilization. Click on the utilization legend to adjust the utilization percent for each color.
- When the cursor is positioned over a network element in the topology map, the network element label is displayed.
- When you double-click a network element in the topology map, a description of the element is displayed in a pop-up window in the map pane.
- When you right-click a network element in the topology map, a pop-up menu of additional actions is displayed. For example a router element might display actions such as Show Config, Run CLI, Diagnostic Manager, Traceroute, Real Time Tunnel Traffic, Real Time Performance, Protocol Status, Events at Node, Historical Device Performance, Historical Network Performance, Interfaces at Node, Tunnels Starting at Node, and Tunnels On or Thru Node. A link element might display actions such as Traffic Chart, Real Time Tunnel Traffic, and Tunnels On or Thru Node.
- To zoom in or out, click the + or - icons in the upper right corner. Alternatively, use your mouse wheel.
- To select a group of nodes and links, Shift click and drag a rectangle around the nodes and links you want to select. Alternatively, Shift Click and select individual elements. You can also Shift Click and select multiple nodes.
- To recenter the elements in the pane, click the bulls eye icon in the upper right corner.
- To move all elements at the same time, click, hold, and drag the elements in the topology map pane.

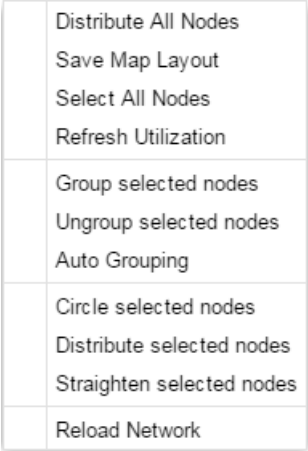
NOTE: **When you move nodes in the map area, you are changing the graphical coordinates rather than the geographical coordinates. Graphical coordinates are the positions of the nodes in the topology window. Geographical coordinates are positions of the nodes according to actual physical locations (for example, latitude and longitude).**

The Topology Map Right-Click Menu

When you right-click in the topology map right pane, a menu is displayed.

Figure 7 on page 32 shows the topology map right-click menu.

Figure 7: Topology Map Right-Click Menu



From the topology map right-click menu, you can select the following:

Distribute All Nodes—The system repositions the elements in an equally distributed manner.

Save Map Layout—Save the current map layout to the map view entry that has been marked as Default. If there is no map view marked as Default, then it automatically loads that saved map layout the next time the topology is loaded.

Select All Nodes—Select all nodes in the map.

Refresh Utilization—Update the utilization display with the most recent information.

Group/Ungroup selected nodes—Collapse the selected nodes under a group icon. Double-click the group icon to expand the group.

Auto Grouping—In the AutoGroup window, select how the nodes should be grouped. Selections include AS, ISIS Area, and Regular Expression. Selecting Regular Expression allows you to specify hostnames, IP addresses, or node types to match. Nodes matching the expression are collapsed under a group icon. Double-click the group icon to expand the group.

Reload Network—Reloads the latest network topology from the server. A timestamp is displayed in the upper right of the map.

Related Documentation

- Topology Map Window Overview on page 29
- Topology Map Left Pane on page 33
- Main Window Node Table on page 41
- Main Window Link Table on page 44
- Main Window Tunnel Table on page 47

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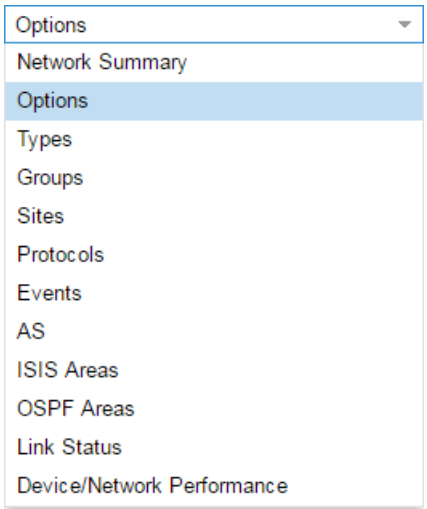
Topology Map Left Pane

The IP/MPLSView topology map can display the topology in several ways. The left pane of the topology map window controls what is displayed in the topology map right pane.

Figure 8 on page 33 shows the topology map left pane menu.

Figure 8: Topology Map Left Pane Menu

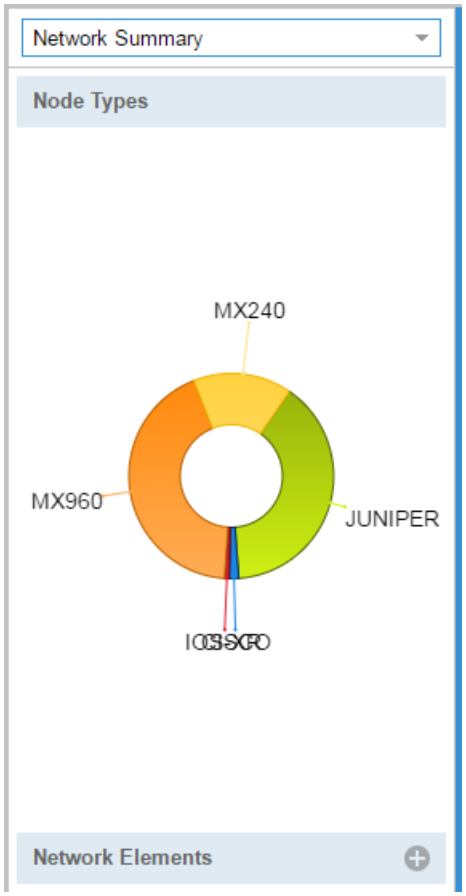


Topology Map Left Pane Network Summary

Select **Network Summary** to display high-level information about the types of devices in your network by vendor or model.

Figure 9 on page 34 shows the Network Summary Pane.

Figure 9: Network Summary Pane



Mouse over a section of the pie chart to display the number of nodes for that vendor.

Expand the Network Elements pane to display the total number of nodes, links, tunnels, and interfaces in your network.

Options

Use the Options menu to select which labels are displayed in the topology map, how links and paths are displayed, and whether to display utilization and a background map.

Figure 10 on page 35 shows the topology map left pane Options menu.

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Figure 10: Topology Map Left Pane Options Menu

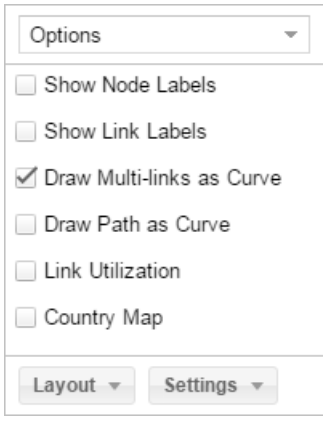

Table 4 on page 35 describes each option.

Table 4: Topology Map Left Pane Options

Item	Description
Show Node Labels	Displays or hides the node labels configured for each node.
Show Link Labels	Displays or hides the link labels.
Draw Multi-links as Curve	Toggles between displaying parallel links as a single line or as multiple lines.
Draw Path as Curve	Toggles between displaying multiple paths between a given node pair as a single line or as multiple lines.
Link Utilization	Displays the measured link utilization using the colors of the color bar.
Country Map	Displays or hides a background image. The default image is a world map.

Topology Map Left Pane Menus

Figure 11 on page 35 shows the remaining topology map left pane menus.

Figure 11: Topology Map Left Pane Menus

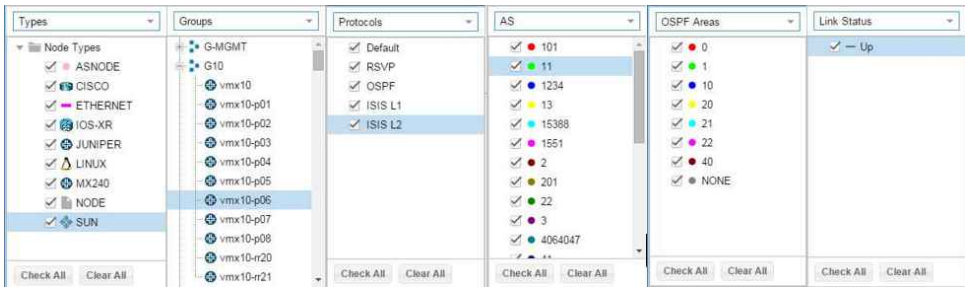

Table 5 on page 36 descries each of the remaining topology map left pane menus.

Table 5: Topology Map Left Pane Menus

Menu Item	Description
Types	A list of vendors. Select a vendor from the list to display that vendor's nodes in the topology map.
Groups	An expandable list of nodes organized by groups. Select a node in the list to highlight it in the topology map.
Sites	An expandable list of sites. Select a site from the list to highlight it in the topology map.
Protocols	A list of protocols. Select a protocol from the list to display links in the topology map that transport that protocol.
Events	A list of event severities. Select the severity you want, and the nodes in the topology map with events of that severity display a count of events in the color of the severity.
AS	A list of BGP autonomous system numbers. Select an AS from the list to color nodes in the topology map that are members of that AS.
ISIS Areas and OSPF Areas	The IS-IS areas menu item displays a list of IS-IS area numbers. The OSPF Areas menu displays a list of OSPF area numbers. Select an area in from the list to color and display nodes and links in the topology map that are in that area.
Link Status	Displays or hides links that are in the Up state.
Device/Network Performance	Select CPU Usage, CPU Temperature, Memory Usage, or Link Latency to change how nodes and links are colored and displayed in the map. The colors indicate a range of values in percent or absolute values automatically calibrated based on the type of measurements. You can change the range by double-clicking the color legend in the topology pane. Double-click the highlighted element in the topology to display the measured value or chart the values over time.

Topology Map Left Pane Layout Menu

Use the topology map left pane Layout menu to change the way the map icons are arranged. The Layout menu is available when the left pane Options menus is selected.

Figure 12 on page 36 shows the topology map left pane Layout menu.

Figure 12: Topology Map Left Pane Layout Menu

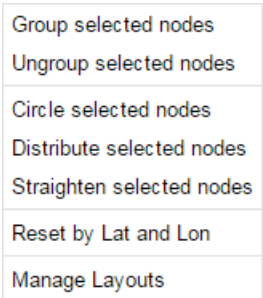

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Table 6 on page 37 descries the topology map Layout menu items.

Table 6: Topology Map Left Pane Layout Menu

Menu Item	Description
Group selected nodes Ungroup selected nodes	To group nodes and links, Shift-click and drag a rectangle around the nodes and links you want. Select **Layout > Group selected nodes**. A Group Name dialog is displayed. Type the name of the group and click **OK**. The nodes icons are replaced with a group icon in the topology map. To expand the group, Select **Layout > Ungroup selected nodes** or use the topology map left pane Groups menu.
Circle selected nodes	To arrange selected nodes in a circle, Shift click and drag a rectangle around the nodes and links you want. Select **Layout > Circle selected nodes**.
Distribute selected nodes	To distribute nodes in a non-circular or non-straighten layout, Shift-click and drag a rectangle around the nodes and links you want. Select **Layout > Distribute selected nodes**.
Straighten selected nodes	To arrange selected nodes onto a equally-spaced horizontal line, select **Layout > Straighten selected nodes**.
Reset by Lat and Lon	To position selected nodes by latitude and longitude, select the nodes you want. Select **Layout> Reset by Lat and Lon**. This function is useful when you want to view the network in its geographical layout according to previously specified latitude and longitude values.
Manage Layouts	To save, edit, or load a topology map view, select **Layout > Manage Layouts**.

When you select **Layout > Manage Layouts**, the Map View dialog box is displayed.

Figure 13 on page 38 shows the Map View dialog box and the Save Map dialog box.

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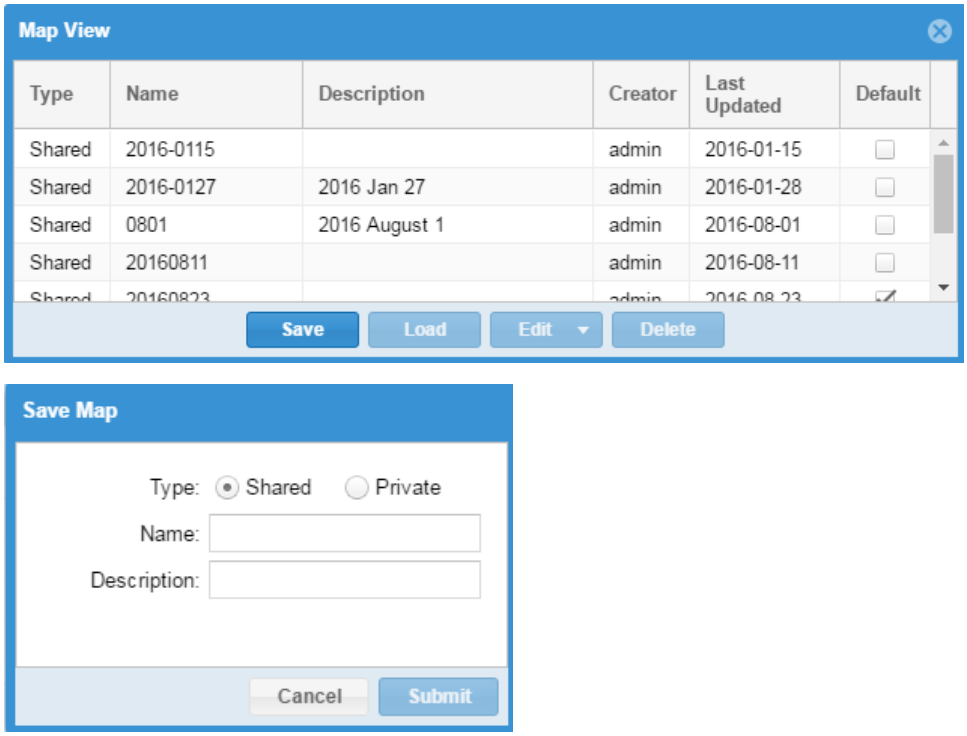
Figure 13: Map View and Save Map Dialog Boxes



To save a map view, select **Save**. The Save Map dialog box is displayed. Select **Private** or **Shared** and type a name and description. Click **OK**. After you save a map view, it is listed in the Map View dialog box.

To make a view the default view when IP/MPLSView is started, check **Default**.

To change the view name or description, select **Edit > Rename** or **Edit > Change Description**.

To load a previously saved map view, select the view in the Map View dialog box and click **Load**.

To delete a previously saved map view, select the view in the Map View dialog box and click **Delete**.

Topology Map Left Pane Settings Menu

Use the topology map left pane Settings menu to set node labels, link labels, and adjust the utilization legend. The Settings menu is available when the left pane Options menus is selected.

Figure 14 on page 39 shows the topology map left pane Settings menu and the dialog boxes for node and link labels.

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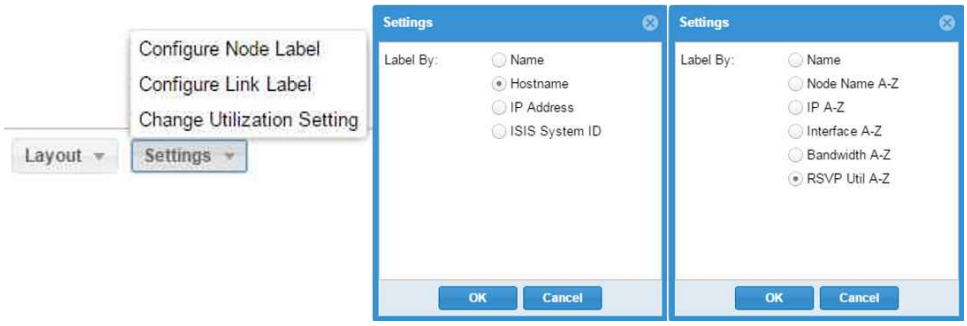
Figure 14: Topology Map Left Pane Settings Menu and Dialog Boxes



To set which type of label is used for nodes, select **Settings Configure Node Label**. A Settings Label By dialog box is displayed. Select Name, Hostname, IP Address, or ISIS System ID, and click **OK**. The labels are stored in the **/u/wandl/data/.network/nodeparam.x** file.

To set which type of label is used for links, select **Settings Configure Link Label**. A Settings Label By dialog box is displayed. Select the label you want and click **OK.** The A-Z selection identifies the nodes at each end of the link.

Table 7 on page 39 describes the link label settings.

Table 7: Link Label Settings

Menu Item	Description
Name	The link is labeled with the node A hostname and the physical and logical interface identifier.
Node Name A-Z	The link is labeled with the node A and node Z hostnames.
IP A-Z	The link is labeled with the node A and node Z IP addresses.
Interface A-Z	The link is labeled with the node A and node Z physical and logical interface identifiers.
Bandwidth A-Z	The link is labeled with the configured bandwidth.
RSVP Util A-Z	The link is labeled with the RSVP bandwidth.

To change the percent utilization for each color, select **Settings > Change Utilization Setting**. The Utilization slider bar is displayed. Figure 15 on page 40 shows the Utilization slider bar.

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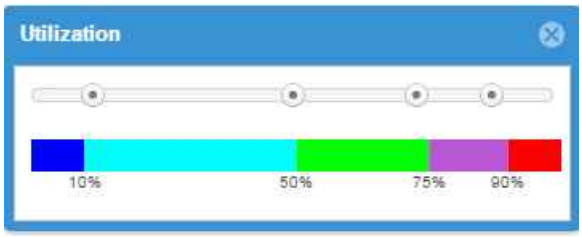
Figure 15: Utilization Slider Bar



Adjust the percentages for each color and close the slider bar. The legend in the topology map is updated.

Related Documentation

- Topology Map Window Overview on page 29
- Topology Map Right Pane on page 30

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CHAPTER 3

Main Window Tables

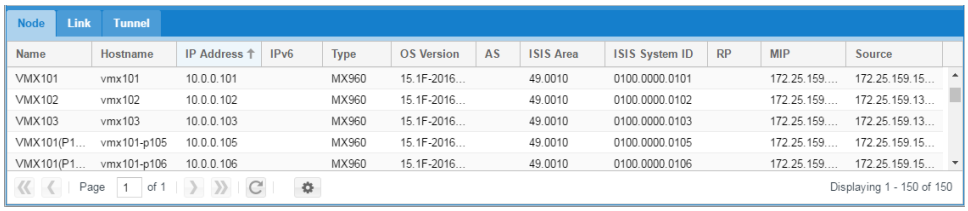
- Main Window Node Table on page 41
- Main Window Link Table on page 44
- Main Window Tunnel Table on page 47
- Main Window SRLG Table on page 49

Main Window Node Table

The IP/MPLSView main window has network information tables that contain detailed information about nodes, links, tunnels, and shared risk link groups (SRLGs).

Figure 16 on page 41 shows the main window Node table.

Figure 16: Main Window Node Table



Node | Link | Tunnel

Name	Hostname	IP Address	IPv6	Type	OS Version	AS	ISIS Area	ISIS System ID	RP	MIP	Source
VMX101	vmx101	10.0.0.101		MX960	15.1F-2016...		49.0010	0100.0000.0101		172.25.159....	172.25.159.15...
VMX102	vmx102	10.0.0.102		MX960	15.1F-2016...		49.0010	0100.0000.0102		172.25.159....	172.25.159.13...
VMX103	vmx103	10.0.0.103		MX960	15.1F-2016...		49.0010	0100.0000.0103		172.25.159....	172.25.159.13...
VMX101(P1...	vmx101-p105	10.0.0.105		MX960	15.1F-2016...		49.0010	0100.0000.0105		172.25.159....	172.25.159.15...
VMX101(P1...	vmx101-p106	10.0.0.106		MX960	15.1F-2016...		49.0010	0100.0000.0106		172.25.159....	172.25.159.15...

Page 1 of 1 Displaying 1 - 150 of 150

Each column head has a menu. From the menu within each column, the element information can be sorted in ascending or descending order. You can select which columns are displayed or hidden. Columns can also be resized and the order can be rearranged.

Table 8 on page 41 describes the Node table columns.

Table 8: Main Window Node Table Columns

Column Name	Description
Name	Displays the name of the node. If the node is a logical system configured on a physical device, the logical system name is displayed in parentheses.
Hostname	Displays the name of the node. If the node is a logical system configured on a physical device, the logical system name is hyphenated.
IP Address	Displays the IPv4 address of the node.

Table 8: Main Window Node Table Columns (continued)

Column Name	Description
IPv6	Displays the IPv6 address of the node if configured.
Type	Displays the name of the node vendor.
OS Version	Displays the release number of the node operating system.
AS	Displays the BGP autonomous system number of the node, if configured.
ISIS Area	Displays the IS-IS area number of the node, if configured.
ISIS System ID	Displays the IS-IS system identifier number of the node, if configured.
RP	Displays the IPv4 address of the multicast rendezvous point.
MIP	Displays the management IP (MIP) address, if configured. This is the IP address that was used from the router profile to collect information for this router.
Source	Displays the source of the information displayed in the table, if configured. This might be the filename of the node configuration file (172.25.159.157.VMX101.cfg) or the SNMP host discovery file (172.25.159.157.snmp).

Double click an node in the table to display the Node details window. Figure 17 on page 43 shows the Node details window.

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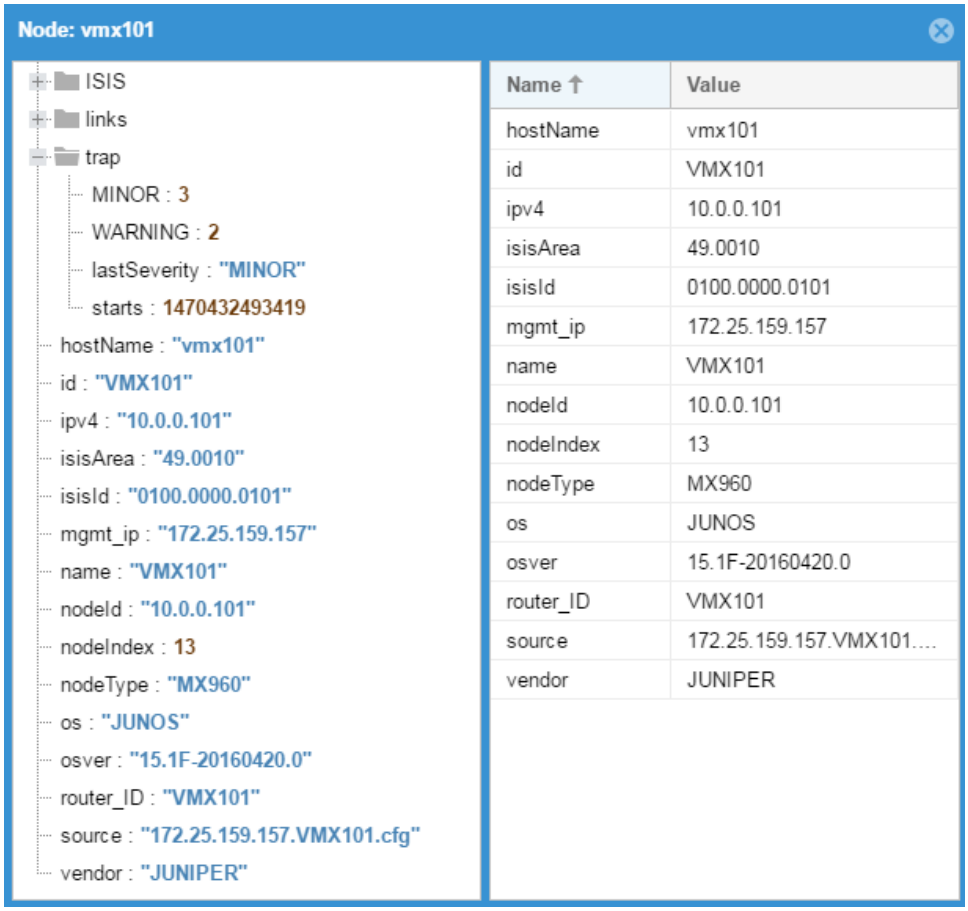
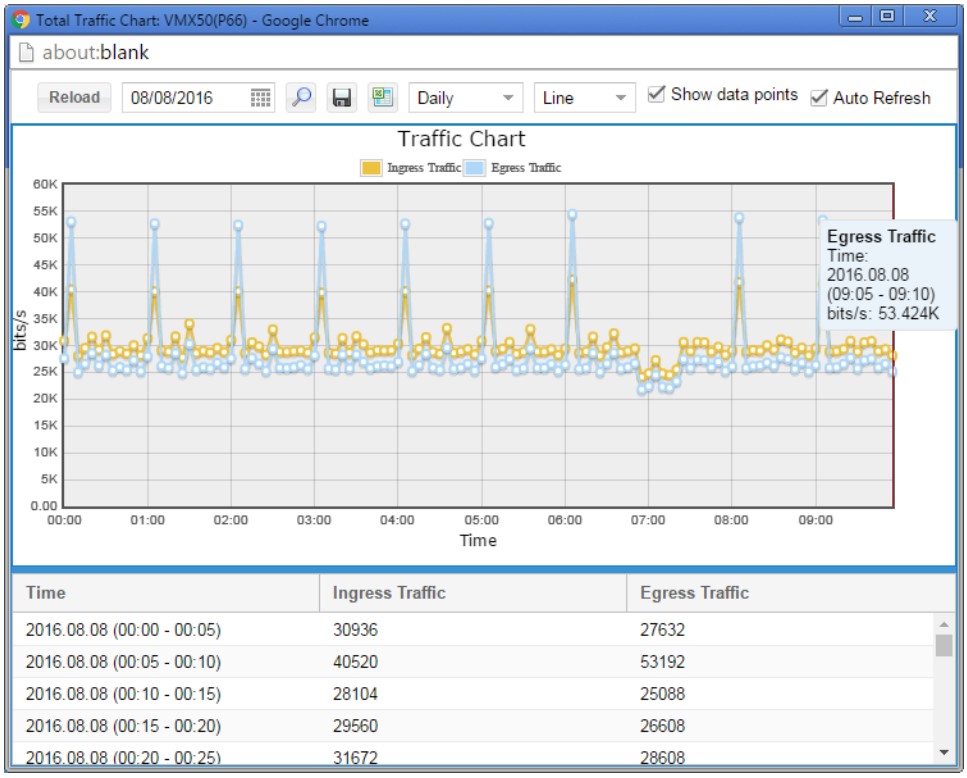
Figure 17: Node Details Window



Expand the lists in the left pane to display additional information about the protocols, links, and trap events configured on or associated with this node. Select the information in the left pane to display that same information in the right pane. This is useful when there are multiple elements, such as protocols, displayed in the left pane.

Select a node in the table, right-click, and select **Display Total Traffic Chart** to display the total node traffic chart. select **Display Tunnel Traffic Chart** to display the node tunnel traffic chart. Figure 18 on page 44 shows the total node traffic chart for both ingress traffic and egress traffic.

Figure 18: Total Node Traffic Chart



In the chart window, you can use the controls at the top of the window to reload the chart, select the date, reset the zoom, save the chart as an image, export to Excel, select the chart time period, select the chart style, show or hide the data points, and enable automatic refresh. Hold your mouse pointer over a data point to display a pop-up pane that shows the time and traffic value. Drag your mouse over a section of the chart to zoom in.

The table in the lower pane displays the time the traffic sample was taken and the bits per second reported for the sample.

Related Documentation

- Topology Map Window Overview on page 29
- Main Window Link Table on page 44
- Main Window Tunnel Table on page 47

Main Window Link Table

The IP/MPLSView main window has network information tables that contain detailed information about nodes, links, tunnels, and shared risk link groups (SRLGs).

Figure 19 on page 45 shows the main window Link table.

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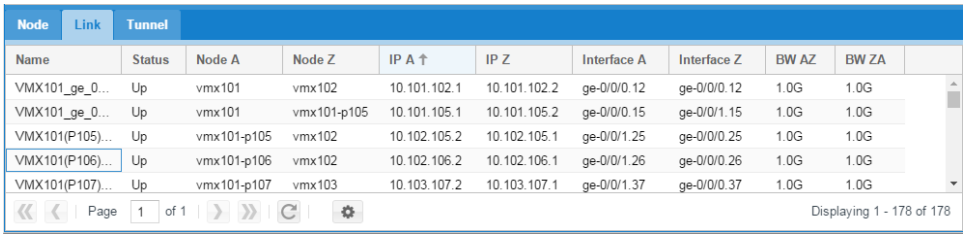
Figure 19: Main Window Link Table



Node | Link | Tunnel

Name	Status	Node A	Node Z	IP A ↑	IP Z	Interface A	Interface Z	BW AZ	BW ZA
VMX101_ge_0...	Up	vmx101	vmx102	10.101.102.1	10.101.102.2	ge-0/0/0.12	ge-0/0/0.12	1.0G	1.0G
VMX101_ge_0...	Up	vmx101	vmx101-p105	10.101.105.1	10.101.105.2	ge-0/0/0.15	ge-0/0/1.15	1.0G	1.0G
VMX101(P105)...	Up	vmx101-p105	vmx102	10.102.105.2	10.102.105.1	ge-0/0/1.25	ge-0/0/0.25	1.0G	1.0G
VMX101(P106)...	Up	vmx101-p106	vmx102	10.102.106.2	10.102.106.1	ge-0/0/1.26	ge-0/0/0.26	1.0G	1.0G
VMX101(P107)...	Up	vmx101-p107	vmx103	10.103.107.2	10.103.107.1	ge-0/0/1.37	ge-0/0/0.37	1.0G	1.0G

Page 1 of 1 Displaying 1 - 178 of 178

Each column head has a menu. From the menu within each column, the element information can be sorted in ascending or descending order. You can select which columns are displayed or hidden. Columns can also be resized and the order can be rearranged.

Table 9 on page 45 describes the Link table columns.

Table 9: Main Window Link Table Columns

Column Name	Description
Name	Name of the link.
Status	Status of the link.
Node A	Name of node A at one end of the link.
Node Z	Name of node Z at one end of the link.
IP A	IP address of node A at one end of the link.
IP Z	IP address of node Z at one end of the link.
Interface A	Physical and logical interface on node A at one end of the link.
Interface Z	Physical and logical interface on node Z at one end of the link.
BW AZ	Allocated bandwidth from node A to node Z.
BW ZA	Allocated bandwidth from node Z to node A.
Util AZ	Percent of link bandwidth utilized by the traffic from node A to node Z.
Util ZA	Percent of link bandwidth utilized by the traffic from node Z to node A.

Double click a link in the table to display the link details window. Figure 20 on page 46 shows the Link details window.

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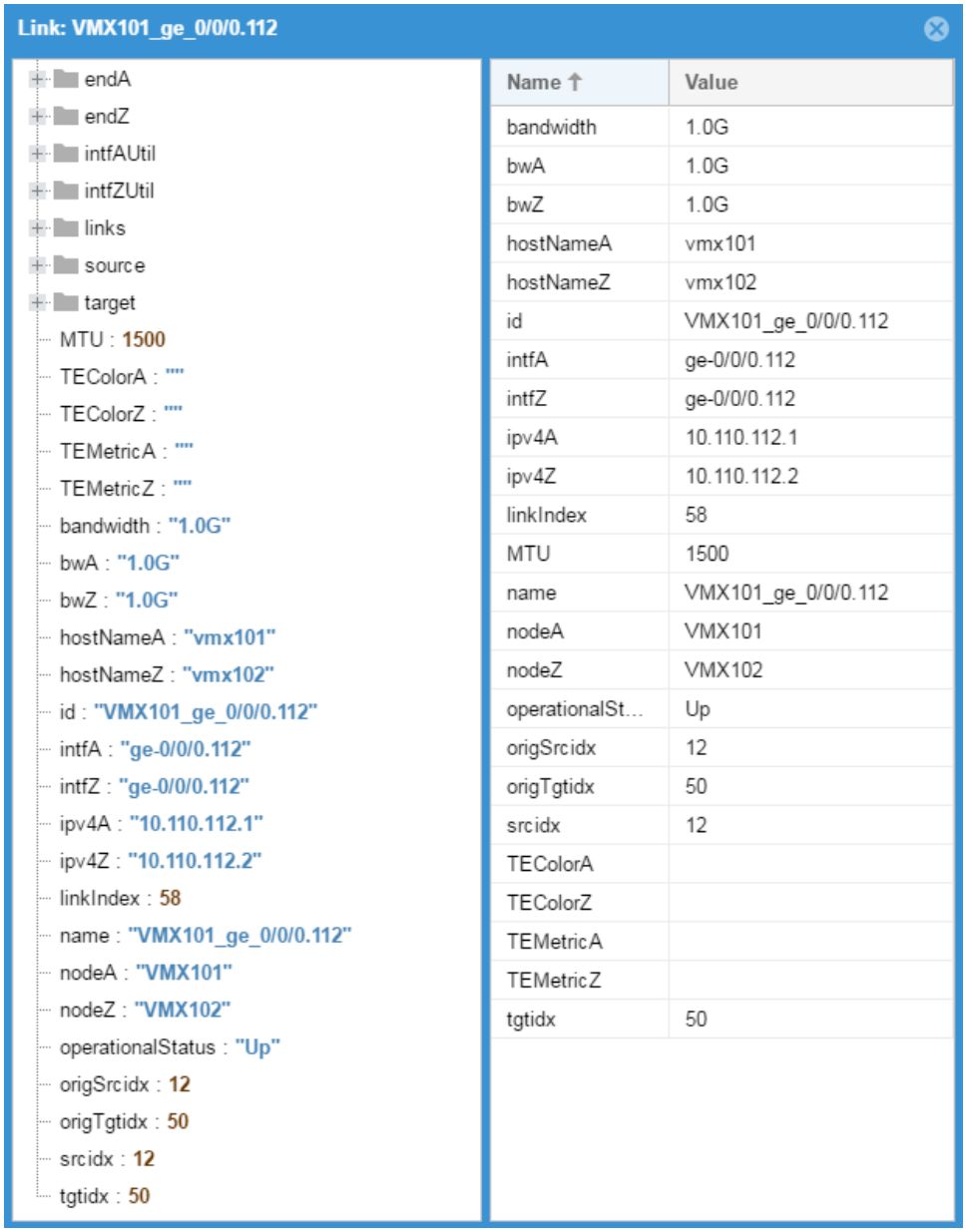
Figure 20: Link Details Window



Expand the lists in the left pane to display additional information about the interface the link is coming from (endA), the interface the link is going to (endZ), the interface utilization at each end of the link, the node the link is coming from, and the node the link is going to. Select the information in the left pane to display that same information in the right pane. This is useful when there are multiple elements, such as links, displayed in the left pane.

Related Documentation

- Topology Map Window Overview on page 29
- Main Window Node Table on page 41

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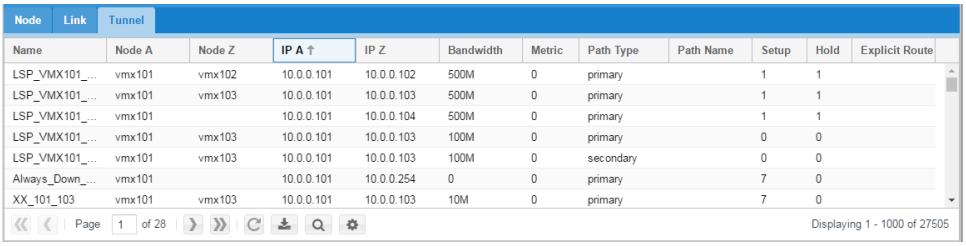
• Main Window Tunnel Table on page 47

Main Window Tunnel Table

The IP/MPLSView main window has network information tables that contain detailed information about nodes, links, tunnels, and shared risk link groups (SRLGs).

Figure 21 on page 47 shows the main window Tunnel table.

Figure 21: Main Window Tunnel Table



Name	Node A	Node Z	IP A	IP Z	Bandwidth	Metric	Path Type	Path Name	Setup	Hold	Explicit Route
LSP_VMX101_...	vmx101	vmx102	10.0.0.101	10.0.0.102	500M	0	primary		1	1	
LSP_VMX101_...	vmx101	vmx103	10.0.0.101	10.0.0.103	500M	0	primary		1	1	
LSP_VMX101_...	vmx101		10.0.0.101	10.0.0.104	500M	0	primary		1	1	
LSP_VMX101_...	vmx101	vmx103	10.0.0.101	10.0.0.103	100M	0	primary		0	0	
LSP_VMX101_...	vmx101	vmx103	10.0.0.101	10.0.0.103	100M	0	secondary		0	0	
Always_Down_...	vmx101		10.0.0.101	10.0.0.254	0	0	primary		7	0	
XX_101_103	vmx101	vmx103	10.0.0.101	10.0.0.103	10M	0	primary		7	0	

Each column head has a menu. From the menu within each column the element information can be sorted in ascending or descending order. You can select which columns are displayed or hidden. Columns can also be resized and the order can be rearranged.

Table 10 on page 47 describes the Tunnel table columns.

Table 10: Main Window Tunnel Table Columns

Column Name	Description
Name	Name of the tunnel.
Node A	Name of node A at one end of the tunnel.
Node Z	Name of node Z at one end of the tunnel.
IP A	IP address of node A at one end of the tunnel.
IP Z	IP address of node Z at one end of the tunnel.
Bandwidth	Bandwidth required by the tunnel.
Metric	The routing tunnel metric.
Path Type	Type of path: Primary, Secondary, or Standby.
Path Name	Pathname, if configured..
Setup	RSVP setup priority for the tunnel traffic.
Hold	RSVP hold priority for the tunnel traffic.

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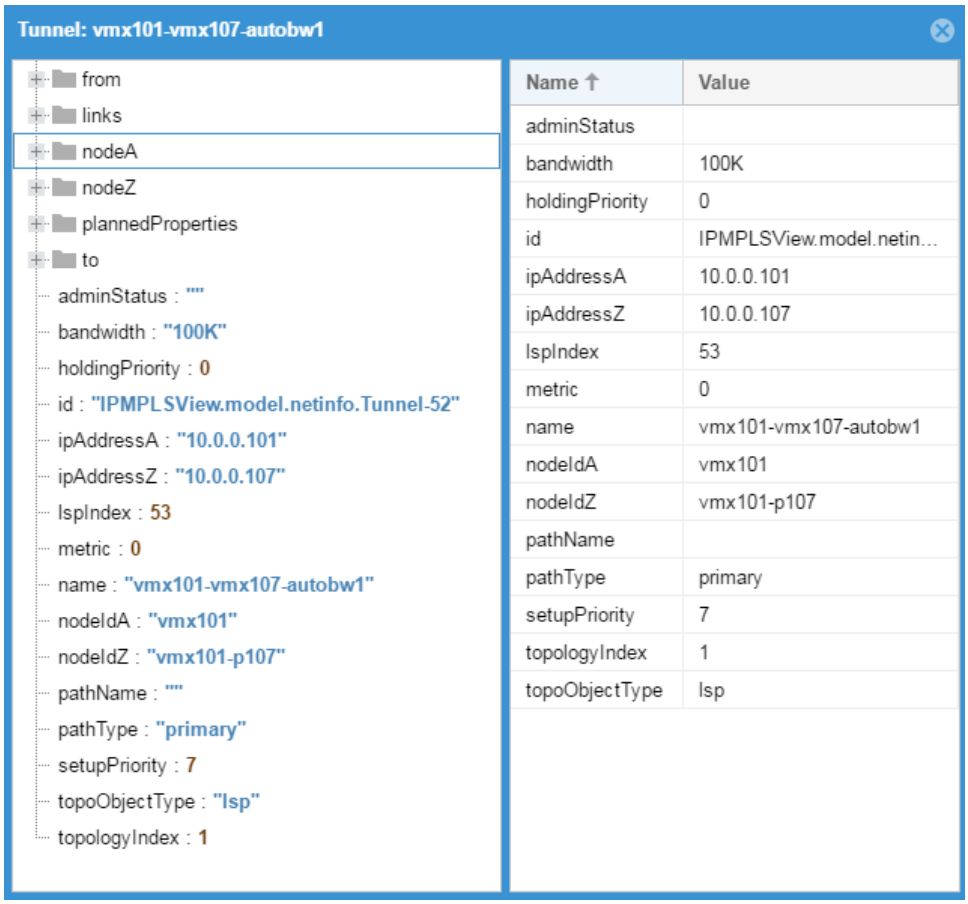
Table 10: Main Window Tunnel Table Columns (continued)

Column Name	Description
Explicit Route	RSVP explicit route object for the tunnel, if configured.

Double-click a tunnel in the table to display the Tunnel details window. Figure 22 on page 48 shows the Tunnel details window.

Figure 22: Tunnel Details Window



Expand the lists in the left pane to display additional information about the node the link is coming from, the node the link is going to, IPv4 address, nodeA and nodeZ at each end of the tunnel, and the planned tunnel properties. Select the information in the left pane to display that same information in the right pane. This is useful when there are multiple elements, such as links, displayed in the left pane.

Select a tunnel in the table, right-click, and select **Display Tunnel Traffic Chart** to display the tunnel traffic chart. Figure 23 on page 49 shows the tunnel traffic chart for ingress traffic.

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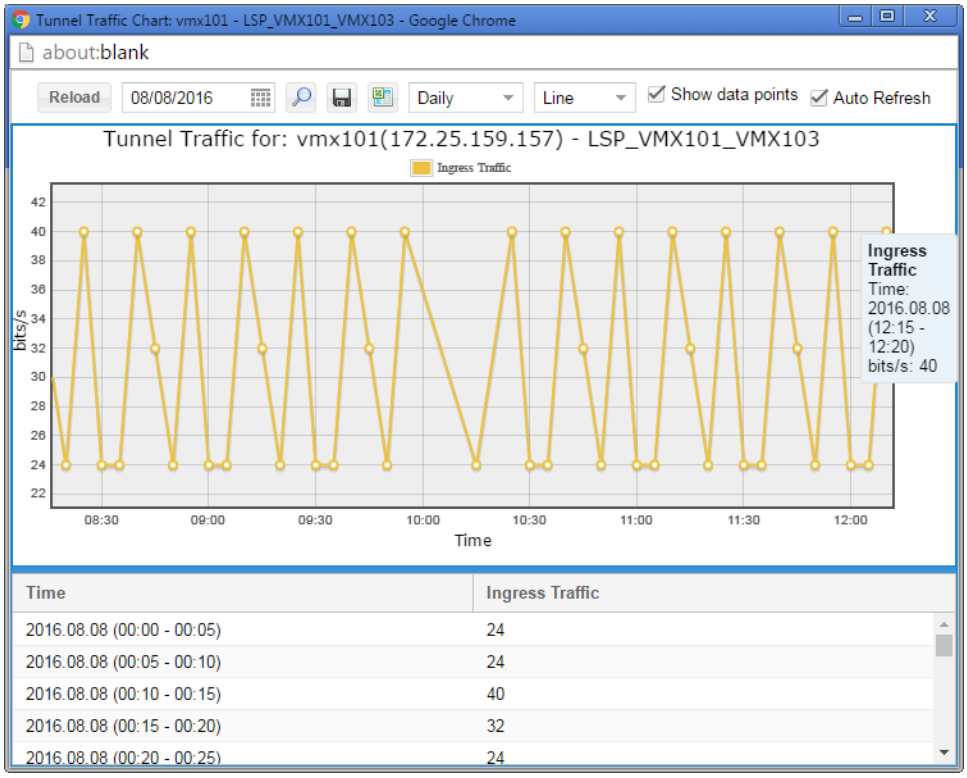
Figure 23: Tunnel Traffic Chart



In the chart window, you can use the controls at the top of the window to reload the chart, select the date, reset the zoom, save the chart as an image, export to Excel, select the chart time period, select the chart style, show or hide the data points, show bandwidth (if configured), and enable automatic refresh. Hold your mouse pointer over a data point to display a pop-up pane that shows the time and traffic value. Drag your mouse over a section of the chart to zoom in.

Related Documentation

- Node Menu on page 51
- Node Menu Tunnels at Node on page 71
- Node Menu Interfaces at Node on page 69

Main Window SRLG Table

The IP/MPLSView main window has network information tables that contain detailed information about nodes, links, tunnels, and shared risk link groups (SRLGs).

Identifying SRLGs is important when planning MPLS label-switched path (LSP) diversity.

Figure 24 on page 50 shows the main window SRLG table, the SRLG details window, and the SRLG links highlighted in the topology map.

Figure 24: Main Window SRLG Table

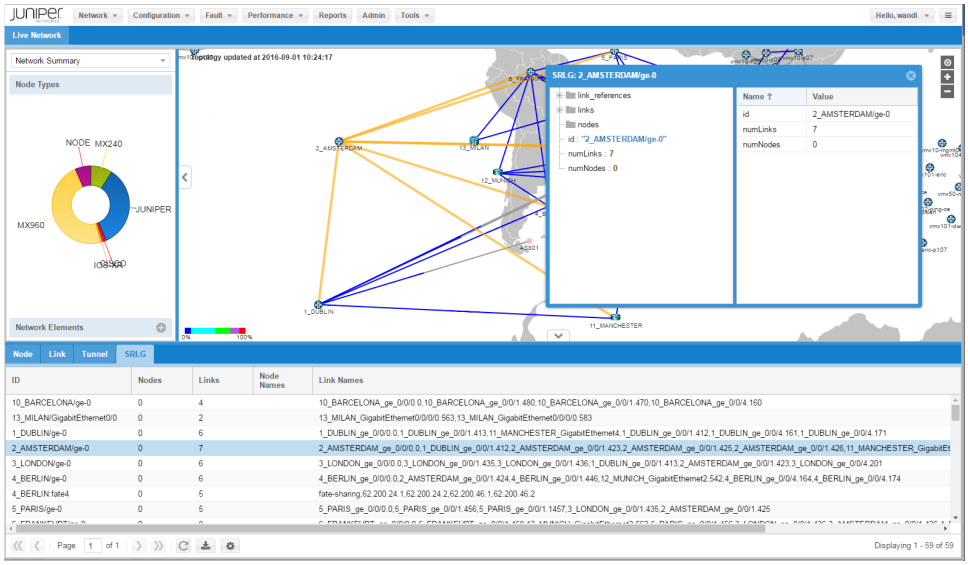


Table 11 on page 50 describes the SRLG table columns.

Table 11: Main Window SRLG Table Columns

Column Name	Description
ID	Identifier of the SRLG. For SRLGs created automatically, the name is derived from the node name and common part of the interface names. If you create the SRLGs, you configure the name.
Nodes	Number of nodes. SRLGs created automatically do not include the nod and the display is 0. SRLGs created manually might include nodes and links.
Links	Number of links that are in the shared risk group.
Node Names	The name of the node in manually created SRLGs.
Link Names	Name of the links that are in the shared risk group.

Double-click the SRLG identifier. An SRLG detail window is displayed and the SRLG links are highlighted in the topology map.

In the SRLG details window, expand the lists to display information such as the name of the links, the protocols configured on the links, and the RSVP bandwidth on the source node and the target (destination) nodes at each end of the links.

Related Documentation

- Topology Map Window Overview on page 29
- Main Window Tunnel Table on page 47
- Node Menu on page 51
- Node Menu Interfaces at Node on page 69

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CHAPTER 4

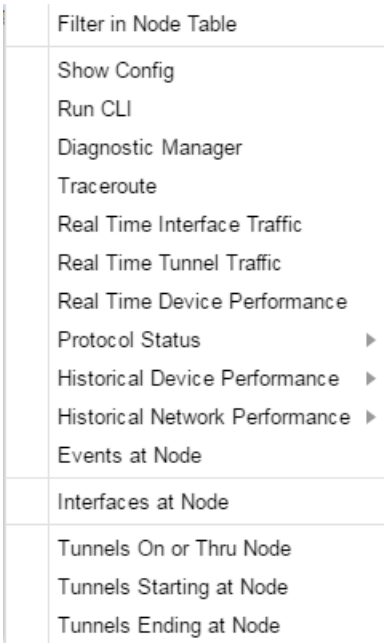
Main Window Node Menu

- Node Menu on page 51
- Node Menu Show Config on page 53
- Node Menu Protocol Status on page 54
- Node Menu Historical Device Performance on page 58
- Node Menu Historical Network Performance on page 59
- Node Menu Run CLI on page 63
- Node Menu Diagnostic Manager on page 65
- Node Menu Traceroute on page 65
- Node Menu Real Time Interface Traffic on page 66
- Node Menu Real Time Tunnel Traffic on page 66
- Node Menu Real Time Device Performance on page 67
- Node Menu Interfaces at Node on page 69
- Node Menu Tunnels at Node on page 71

Node Menu

In the IP/MPLSView main window, select a node in the map, and right-click. The Node menu is displayed. Figure 25 on page 52 shows the Node menu.

Figure 25: Main Window Node Menu



To display this single node in the nodes table, select **Filter in Node Table**. To display the historical event browser with the nodes filtered for the selected nodes, select **Events at Node**. For more information about the Historical Event Browser, see "Fault Menu Historical Event Browser" on page 114.

For more information about the other items in the Node menu, see the related topics listed.

Related Documentation

- Node Menu Show Config on page 53
- Node Menu Protocol Status on page 54
- Node Menu Historical Device Performance on page 58
- Node Menu Historical Network Performance on page 59
- Node Menu Run CLI on page 63
- Node Menu Diagnostic Manager on page 65
- Node Menu Traceroute on page 65
- Node Menu Real Time Interface Traffic on page 66
- Node Menu Real Time Tunnel Traffic on page 66
- Node Menu Real Time Device Performance on page 67
- Node Menu Interfaces at Node on page 69
- Main Window Tunnel Table on page 47

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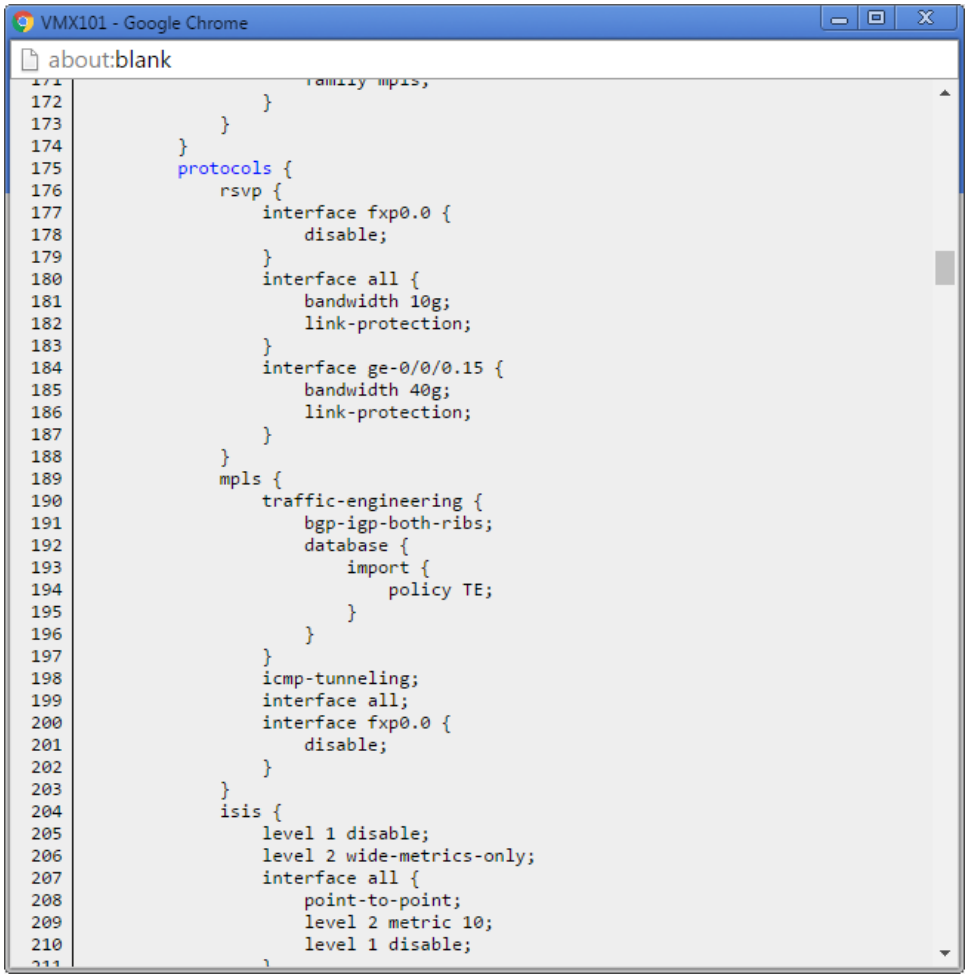
Node Menu Show Config

In the IP/MPLSView main window, select a node in the map, right-click and select **Show Config**. The Show Config window is displayed. Figure 26 on page 53 shows the Show Config window.

Figure 26: Show Config Window



If your PC has Adobe Acrobat installed, you can right-click in the window and select **Adobe Acrobat > Convert Web Page to Adobe PDF**. You can also print the config or copy text from the config using the right-click menu.

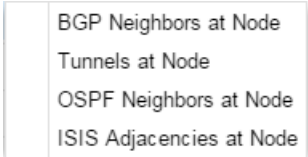
Related Documentation

- Node Menu on page 51

Node Menu Protocol Status

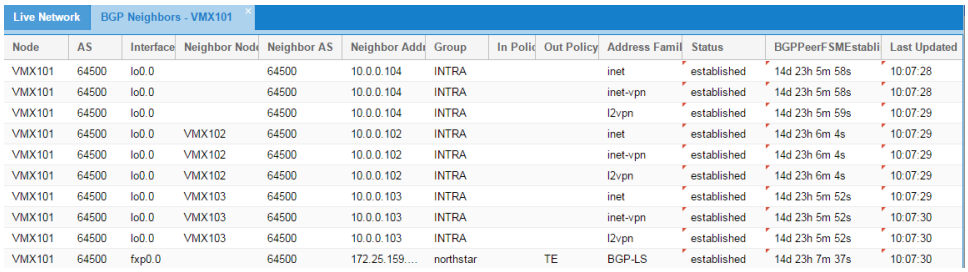
In the IP/MPLSView main window, select a node in the map, right-click, and select **Protocol Status**. The Protocol Status menu is displayed. Figure 27 on page 54 shows the Protocol Status menu.

Figure 27: Protocol Status Menu



In the IP/MPLSView main window, select a node in the map, right-click, and select **Protocol Status>BGP Neighbors at Node**. The BGP Neighbors at Node window is displayed. Figure 28 on page 54 shows the BGP Neighbors at Node window.

Figure 28: Protocol Status BGP Neighbors Window



Live Network | BGP Neighbors - VMX101

Node	AS	Interface	Neighbor Node	Neighbor AS	Neighbor Addr	Group	In Polic	Out Policy	Address Famil	Status	BGPPeerFSMEstabli	Last Updated
VMX101	64500	lo0.0		64500	10.0.0.104	INTRA			inet	established	14d 23h 5m 58s	10:07:28
VMX101	64500	lo0.0		64500	10.0.0.104	INTRA			inet-vpn	established	14d 23h 5m 58s	10:07:28
VMX101	64500	lo0.0		64500	10.0.0.104	INTRA			l2vpn	established	14d 23h 5m 59s	10:07:29
VMX101	64500	lo0.0	VMX102	64500	10.0.0.102	INTRA			inet	established	14d 23h 6m 4s	10:07:29
VMX101	64500	lo0.0	VMX102	64500	10.0.0.102	INTRA			inet-vpn	established	14d 23h 6m 4s	10:07:29
VMX101	64500	lo0.0	VMX102	64500	10.0.0.102	INTRA			l2vpn	established	14d 23h 6m 4s	10:07:29
VMX101	64500	lo0.0	VMX103	64500	10.0.0.103	INTRA			inet	established	14d 23h 5m 52s	10:07:29
VMX101	64500	lo0.0	VMX103	64500	10.0.0.103	INTRA			inet-vpn	established	14d 23h 5m 52s	10:07:30
VMX101	64500	lo0.0	VMX103	64500	10.0.0.103	INTRA			l2vpn	established	14d 23h 5m 52s	10:07:30
VMX101	64500	fxp0.0		64500	172.25.159....	northstar		TE	BGP-LS	established	14d 23h 7m 37s	10:07:30

Table 12 on page 54 describes the BGP Neighbors at Node table columns.

Table 12: BGP Neighbors at Node Table Columns

Column Name	Description
Name	Name of the node that is a BGP speaker. If the node is a logical system configured on a physical device, the logical system name is displayed in parentheses.
AS	Autonomous system number of the node.
Interface	Interface used to establish the neighbor peer session.
Neighbor Node	Name of the node that is the BGP neighbor peer.
Neighbor AS	Autonomous system number of the node that is the BGP neighbor peer.
Neighbor Address	IP address of the node that is the BGP neighbor peer.
Group	The name of the peer group, if applicable. The BGP group is configured under **[edit protocols bgp group ibgp_peers]** on Juniper devices.
In Policy	All policies that are applied to incoming routes from the neighbor.

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Table 12: BGP Neighbors at Node Table Columns (continued)

Column Name	Description
Out Policy	All policies that are applied to outgoing routes from the node.
Address Family	The protocol address families supported on the router and configured on the interface (inet, inet-vpn, L2vpn, BGP-LU, ipv6).
Status	The state of the BGP peer relationship. *Established* is the key state which indicates peers are operationally up and BGP route updates are exchanged. BGP Peering Operation Status is Up only if peering state is established. Any other peering state collected (idle, connect, active, opensent, or openconfirm) implies BGP Peering Operational Status is Down.
BGPPeerFsmEstablishedTime	How long this peer has been in the established state or how long since this peer was last in the established state. It is set to zero when a new peer is configured or the router is booted.
Last Updated	The time the information was last updated.

In the IP/MPLSView main window, select a node in the map, right-click, and select **Protocol Status>OSPF Neighbors at Node**. The OSPF Neighbors at Node window is displayed. Figure 29 on page 55 shows the OSPF Neighbors at Node window.

Figure 29: Protocol Status OSPF Neighbors Window

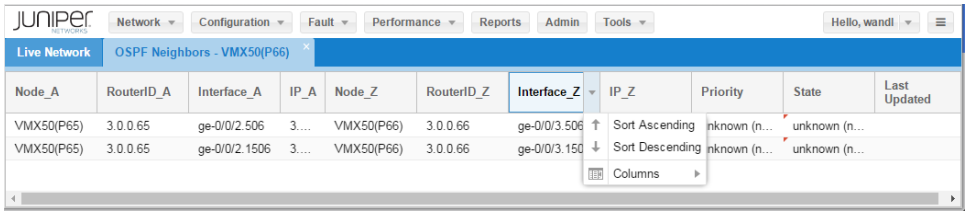

Table 13 on page 55 describes the OSPF Neighbors at Node table columns.

Table 13: OSPF Neighbors at Node Table Columns

Column Name	Description
Node A	Name of the node.
RouterID_A	OSPF router ID of the node.
Interface_A	Interface used to establish the OSPF neighbor adjacency.
IP_A	IP address of node A used to establish the OSPF neighbor adjacency.
Node_Z	Name of the node that is the OSPF neighbor.
RouterID_Z	OSPF router ID of the neighbor node.
Interface_Z	Interface on the neighbor node used to establish the OSPF neighbor adjacency.
IP_Z	IP address of the neighbor node used to establish the OSPF neighbor adjacency.

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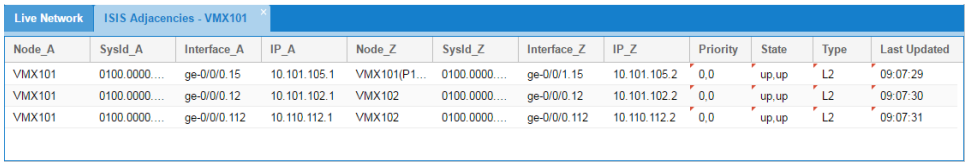
Table 13: OSPF Neighbors at Node Table Columns (continued)

Column Name	Description
Priority	The OSPF priority used to determine which router is selected as the designated router (DR) or backup designated router (BDR) of the area.
State	The state of the OSPF neighbor adjacency (down, attempt, init, twoWay, exchangeStart, exchange, loading, full, or unknown).
Last Updated	The time the information was last updated.

In the IP/MPLSView main window, select a node in the map, right-click, and select **Protocol Status>ISIS Adjacencies at Node**. The ISIS Adjacencies at Node window is displayed. Figure 30 on page 56 shows the ISIS Adjacencies at Node window.

Figure 30: Protocol Status ISIS Adjacencies Window



Node_A	SysId_A	Interface_A	IP_A	Node_Z	SysId_Z	Interface_Z	IP_Z	Priority	State	Type	Last Updated
VMX101	0100.0000....	ge-0/0/0.15	10.101.105.1	VMX101(P1...	0100.0000....	ge-0/0/1.15	10.101.105.2	0,0	up,up	L2	09:07:29
VMX101	0100.0000....	ge-0/0/0.12	10.101.102.1	VMX102	0100.0000....	ge-0/0/0.12	10.101.102.2	0,0	up,up	L2	09:07:30
VMX101	0100.0000....	ge-0/0/0.112	10.110.112.1	VMX102	0100.0000....	ge-0/0/0.112	10.110.112.2	0,0	up,up	L2	09:07:31

Table 14 on page 56 describes the ISIS Adjacencies at Node table columns.

Table 14: ISIS Adjacencies at Node Table Columns

Column Name	Description
Node A	Name of the node.
SysIdA	IS-IS system ID of the node.
Interface_A	Interface used to establish the IS-IS neighbor adjacency.
IP_A	IP address used to establish the IS-IS neighbor adjacency.
Node Z	Name of the node that is the ISIS neighbor.
SysIdZ	IS-IS system ID of the neighbor node.
Interface_Z	Interface on the neighbor node used to establish the ISIS neighbor adjacency.
IP_Z	IP address of the neighbor node used to establish the ISIS neighbor adjacency.
Priority	The IS-IS priority used to determine the designated router on a broadcast network.
State	The state of the IS-IS neighbor adjacency (up, down, initializing, failed, or unknown).
Type	Adjacency type (L1, L2, or L12).
Last Updated	The time the information was last updated.

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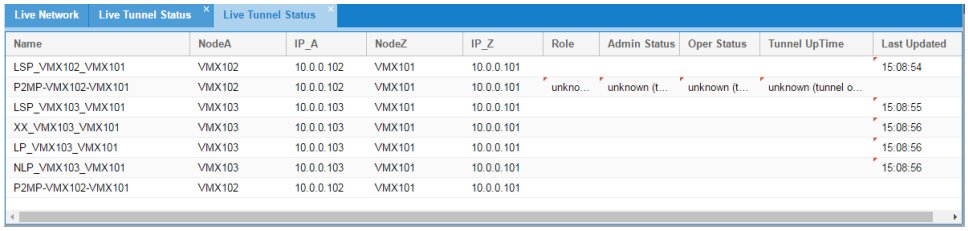
In the IP/MPLSView main window, select a node in the map, right-click, and select **Protocol Status>Tunnels at Node**. The Tunnels at Node window is displayed. Figure 31 on page 57 shows the Tunnels at Node window.

Figure 31: Protocol Status Tunnels at Node Window



Name	NodeA	IP_A	NodeZ	IP_Z	Role	Admin Status	Oper Status	Tunnel UpTime	Last Updated
LSP_VMX102_VMX101	VMX102	10.0.0.102	VMX101	10.0.0.101					15:08:54
P2MP-VMX102-VMX101	VMX102	10.0.0.102	VMX101	10.0.0.101	unkno...	unknown (t...	unknown (t...	unknown (tunnel o...	
LSP_VMX103_VMX101	VMX103	10.0.0.103	VMX101	10.0.0.101					15:08:55
XX_VMX103_VMX101	VMX103	10.0.0.103	VMX101	10.0.0.101					15:08:56
LP_VMX103_VMX101	VMX103	10.0.0.103	VMX101	10.0.0.101					15:08:56
NLP_VMX103_VMX101	VMX103	10.0.0.103	VMX101	10.0.0.101					15:08:56
P2MP-VMX102-VMX101	VMX102	10.0.0.102	VMX101	10.0.0.101					

Table 15 on page 57 describes the Tunnels at Node table columns.

Table 15: Tunnels at Node Table Columns

Column Name	Description
Name	Name of the tunnel.
Node A	Name of node A at one end of the tunnel.
IP_A	IP address of node A at one end of the tunnel.
Node Z	Name of node Z at one end of the tunnel.
IP_Z	IP address of node Z at one end of the tunnel.
Role	The MPLS-TE tunnel role (head, transit, tail, or headTail).
Admin Status	Current status of the tunnel (Unknown, Install, Active, Live, Order, or Planned).
Oper Status	The operational status of the tunnel. (up, down, testing, unknown, dormant, notpresent, or lowerLayerDown)
Tunnel Up Time	The elapsed time since the tunnel came up.
Last Updated	The time the information was last updated.

Related Documentation

- Node Menu on page 51
- Real Time Status on page 139
- Main Window Tunnel Table on page 47

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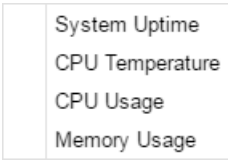
Node Menu Historical Device Performance

In the IP/MPLSView main window, select a node in the map, right-click, and select **Historical Device Performance**. The Historical Device Performance menu is displayed. Figure 32 on page 58 shows the Protocol Status menu.

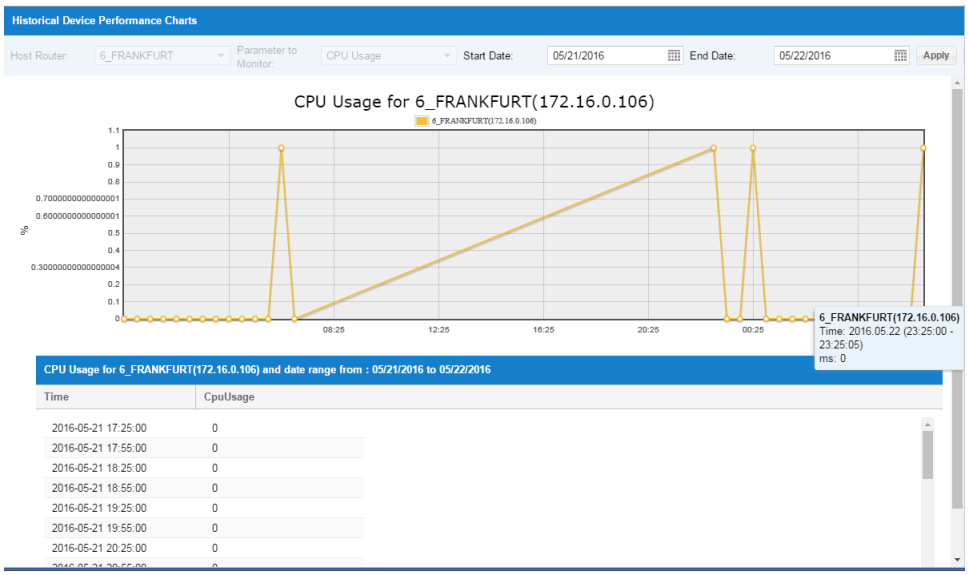
Figure 32: Historical Device Performance Menu



NOTE: To display historical device performance results, you must first schedule a corresponding task in the Task Manager.

In the IP/MPLSView main window, select a node in the map, right-click and select **Historical Device Performance>CPU Usage**. The Historical Device Performance Chart for CPU Usage is displayed. Figure 33 on page 58 shows the CPU Usage Chart.

Figure 33: CPU Usage Chart



Select the Start Date and End Date and click **Apply**. The percent CPU Usage for the selected time is displayed. Hold your mouse pointer over a data point to display a pop-up pane that shows the time and usage value.

In the IP/MPLSView main window, select a node in the map, right-click, and select **Historical Device Performance>System Uptime** to display a chart of the system uptime. Select **Historical Device Performance>CPU Temperature** to display a chart of the system temperature. Select **Historical Device Performance>Memory Usage** to display a chart of

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the system memory usage. The charts displayed operate the same as the CPU Usage chart.

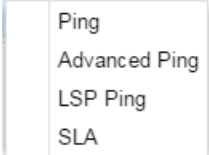
Related Documentation

- Node Menu on page 51
- Device Performance on page 157

Node Menu Historical Network Performance

In the IP/MPLSView main window, select a node in the map, right-click and select **Historical Network Performance**. The Historical Network Performance menu is displayed. Figure 34 on page 59 shows the Historical Network Performance menu.

Figure 34: Historical Network Performance Menu

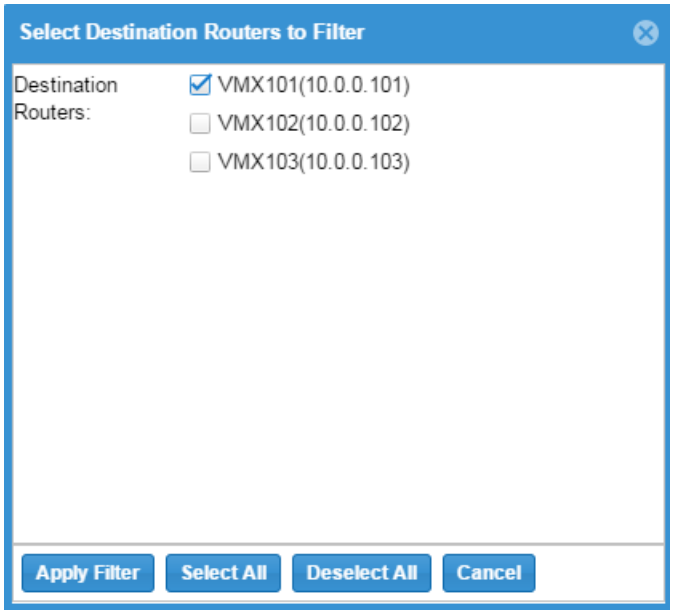


NOTE: **To display historical network performance results, you must first schedule a corresponding task in the Task Manager.**

In the IP/MPLSView main window, select a node in the map, right-click, and select **Historical Network Performance>Ping**. The Enter Start and End Date window is displayed for the selected device. Select a start date and end date for which to display the ping data, then click **OK**.

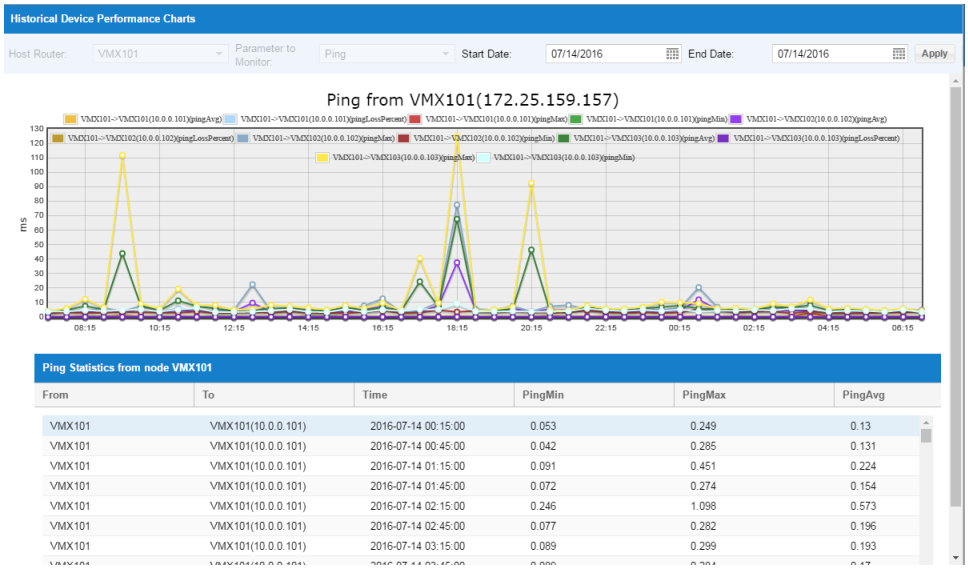
The Select Destination Routers to Filter window is displayed. Figure 35 on page 60 shows the Select Destination Routers to Filter window.

Figure 35: Select Destination Routers to Filter



Select one or more destination routers for which to display ping data, then click **Apply Filter**. The Historical Device Performance Chart for Ping is displayed. Figure 36 on page 60 shows the Ping Chart and the table that displays the source and destination of the ping test, the time the ping test was executed, the minimum ping response time, the maximum ping response time, the average ping response time, and the percent of ping responses that were not received.

Figure 36: Historical Device Performance Ping Chart



In the IP/MPLSView main window, select a node in the map, right-click, and select **Historical Network Performance>Advanced Ping**. The Enter Start and End Date window

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is displayed for the selected device. Select a start date and end date to collect the ping data, then click **OK**.

The Select Source Destination Pairs to Filter window is displayed. Select one source and one destination router for which to display ping data, then click **Apply Filter**. The Historical Device Performance Advanced Ping Chart is displayed. Figure 37 on page 61 shows the Advanced Ping Chart.

Figure 37: Historical Device Performance Advanced Ping Chart

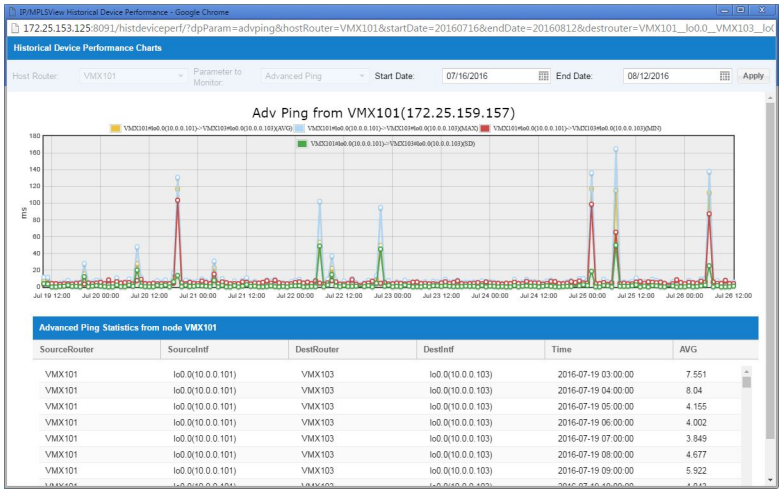


Table 9 on page 45 describes the Advanced Ping Statistics table columns.

Table 16: Advanced Ping Table Statistics Columns

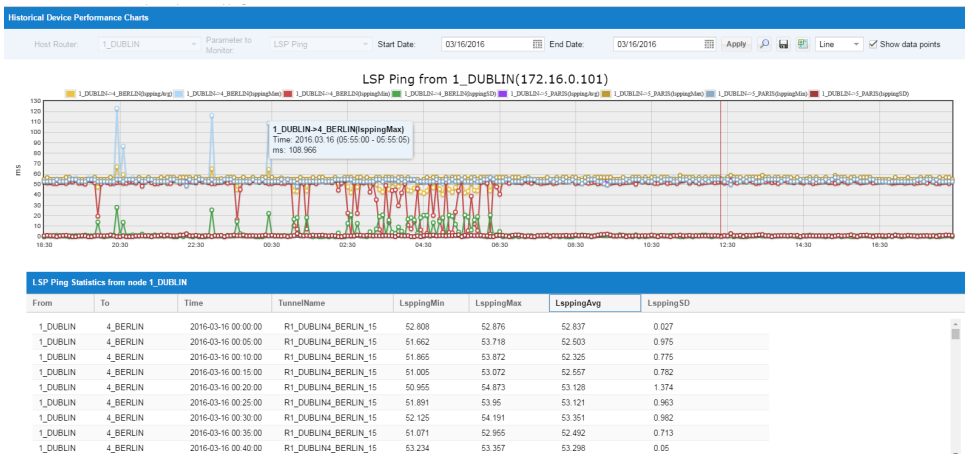
Column Name	Description
SourceRouter	Source node name.
SourceIntf	Source node interface and IP address
DestRouter	Destination node name.
DestIntf	Destination node interface and IP address.
Time	Time the ping test was executed.
AVG	Average ping response time.
MIN	Minimum ping response time.
MAX	Maximum ping response time.
SD	Standard deviation (SD) value.
PingParameters	Ping test parameters used. Advanced Ping test parameters include repeat count, packet size, type of service, and hexadecimal fill pattern.

In the IP/MPLSView main window, select a node in the map, right-click, and select **Historical Network Performance>LSP Ping**. The Enter Start and End Date window is displayed for the selected device. Select a start date and end date to collect the LSP ping data, then click **OK**.

The Tunnels to filter window is displayed. Select one or more tunnels to display, then click **Apply Filter**.

The Historical Device Performance Chart for LSP Ping is displayed. Figure 38 on page 62 shows the LSP Ping Chart and the table that displays the source node name, destination node name, the time the test was executed, the tunnel name, the minimum LSP ping response time, the maximum LSP ping response time, the average LSP ping response time, and the LSP ping standard deviation value (LsppingSD).

Figure 38: Historical Device Performance LSP Ping Chart



In the IP/MPLSView main window, select a node in the map, right-click, and select **Historical Network Performance>SLA**. The Enter Start and End Date window is displayed for the selected device. Select a start date and end date to collect the LSP ping data, then click **OK**.

The Select Destination router and probe name to filter window is displayed. Select one or more nodes to display SLA data for, then click **Apply Filter**.

The Historical Device Performance Chart for SLA is displayed. Figure 39 on page 63 shows the SLA Chart and the table that displays the time the SLA test was executed, the source node name, the destination node name and IP address, the SLA probe type, the SLA probe name, the task owner, the count of probe packets sent, the count of probe packets received, the percent of responses lost, the minimum SLA test response time, the maximum SLA test response time, the average SLA test response time, and the round-trip jitter value, in milliseconds.

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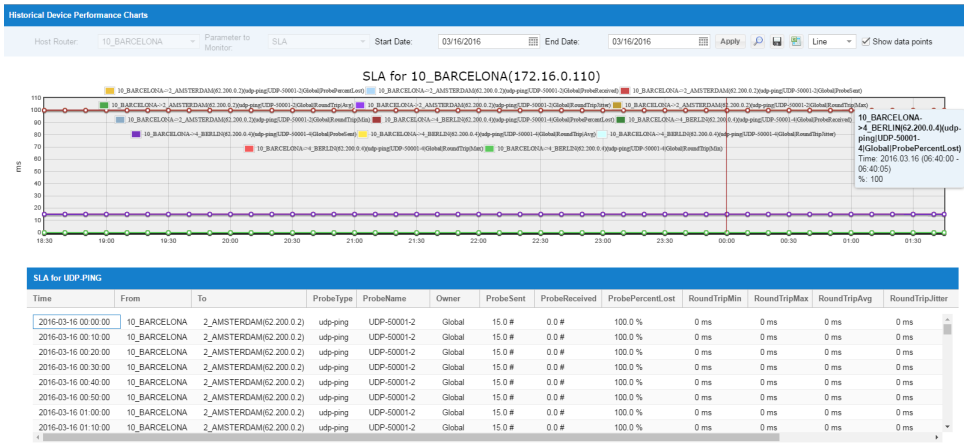
Figure 39: Historical Device Performance Charts for SLA



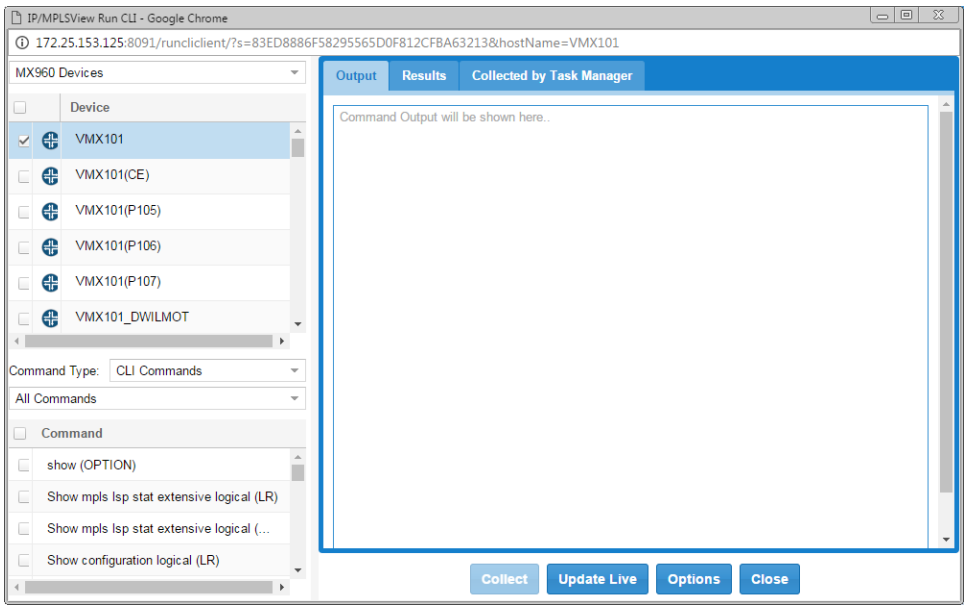
Related Documentation

- Node Menu on page 51
- Network Performance on page 158
- Diagnostics on page 148

Node Menu Run CLI

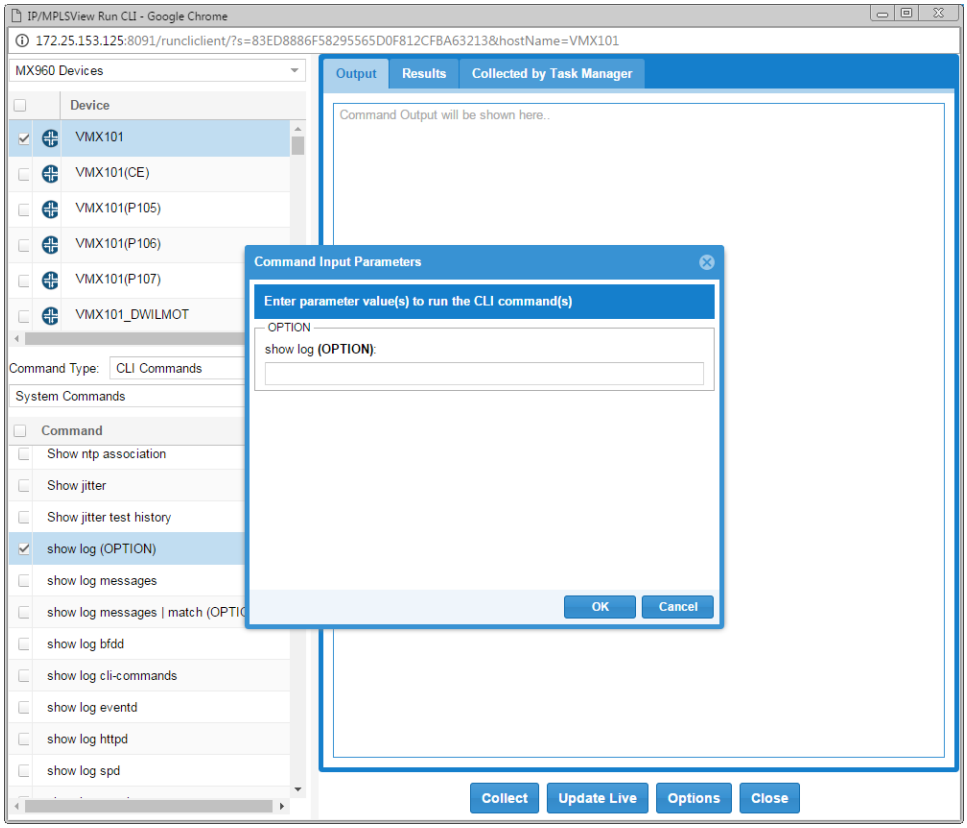
In the IP/MPLSView main window, select a node in the map, right-click, and select **Protocol Status>Run CLI**. The Run CLI window is displayed. Figure 40 on page 63 shows the Run CLI window.

Figure 40: Run CLI Window



From the Device menu, select the device you want. From the CLI Commands list, select the commands you want to run and click **Collect**. The Please input parameters window is displayed. Figure 41 on page 64 shows the Please input parameters window.

Figure 41: Command Input Parameters Window



Type the necessary parameters and click **Run CLI**. The command results are displayed in the Output pane. You can print, save, and clear the results.

Select **Traceroute**. You are prompted to select a destination node. Select the node in the topology. The Traceroute results window is displayed. Figure 42 on page 64 shows the Traceroute results window.

Figure 42: Traceroute Results Window

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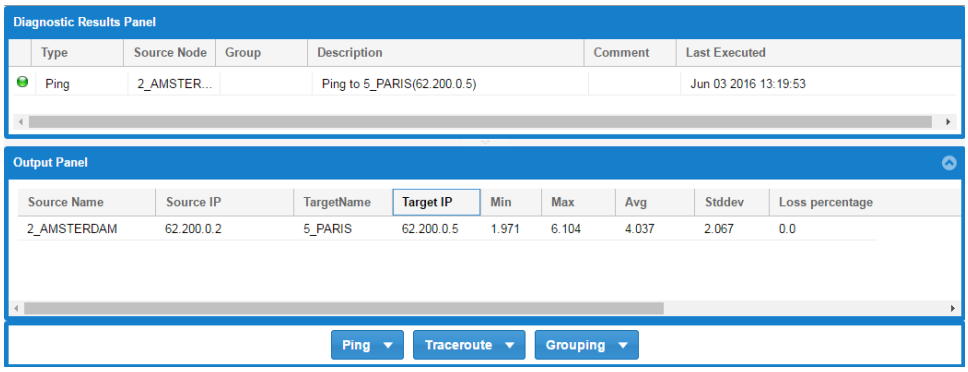
Related Documentation

- Node Menu on page 51
- Diagnostics on page 148
- Diagnostic Manager on page 152

Node Menu Diagnostic Manager

In the IP/MPLSView main window, select a node in the map, right-click, and select **Diagnostic Manager**. The Diagnostic Manager window is displayed. Figure 43 on page 65 shows the Diagnostic Manager window.

Figure 43: Node Menu Diagnostic Manager



For more information about the Diagnostic Manager see "Diagnostic Manager" on page 152.

Related Documentation

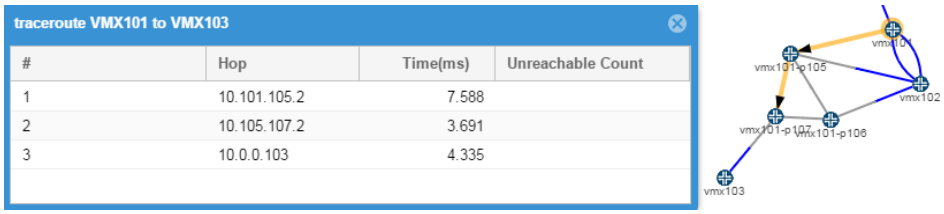
- Diagnostic Manager on page 152
- Network Performance on page 158
- Diagnostics on page 148

Node Menu Traceroute

In the IP/MPLSView main window, select a node in the map, right-click, and select **Traceroute**. The system prompt you to select a destination node.

Select the destination node in the topology map. The system displays the traceroute results window and highlights the path in the topology map.

Figure 44: Traceroute Results Window



Each hop is listed and identified by the node IP address and the response time in milliseconds.

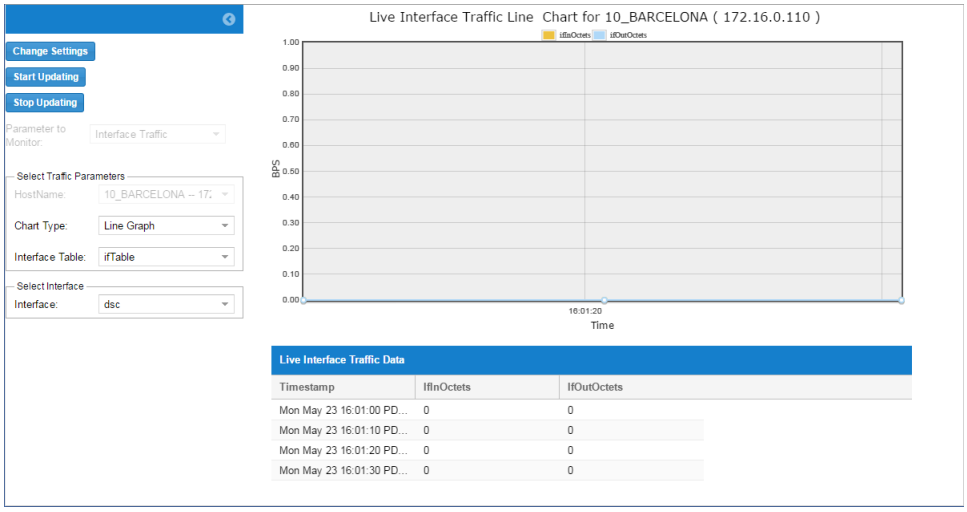
Related Documentation

- Node Menu Diagnostic Manager on page 65
- Diagnostics on page 148

Node Menu Real Time Interface Traffic

In the IP/MPLSView main window, select a node in the map, right-click, and select **Real Time Interface Traffic**. The Live Interface Traffic chart is displayed. Figure 45 on page 66 shows the Live Interface Traffic Chart.

Figure 45: Live Interface Traffic Chart



Select the type of chart you want, the interface table to use, (ifxTable for a 64-bit counter) and the interface identifier. If you want to change the polling time interval or maximum values, click **Change Settings**. Click **Start Updating**.

The Live Interface Traffic Data table displays the date and time the interface was polled, the octets in (IfInOctet) count , and the octets out (IfOutOctet) count.

Click **Stop Updating** to stop the interface polling.

Related Documentation

- Node Menu on page 51
- Live Traffic on page 128

Node Menu Real Time Tunnel Traffic

In the IP/MPLSView main window, select a node in the map, right-click, and select **Real Time Tunnel Traffic**. The Live Tunnel Traffic chart is displayed. Figure 46 on page 67 shows the Live Tunnel Traffic chart.

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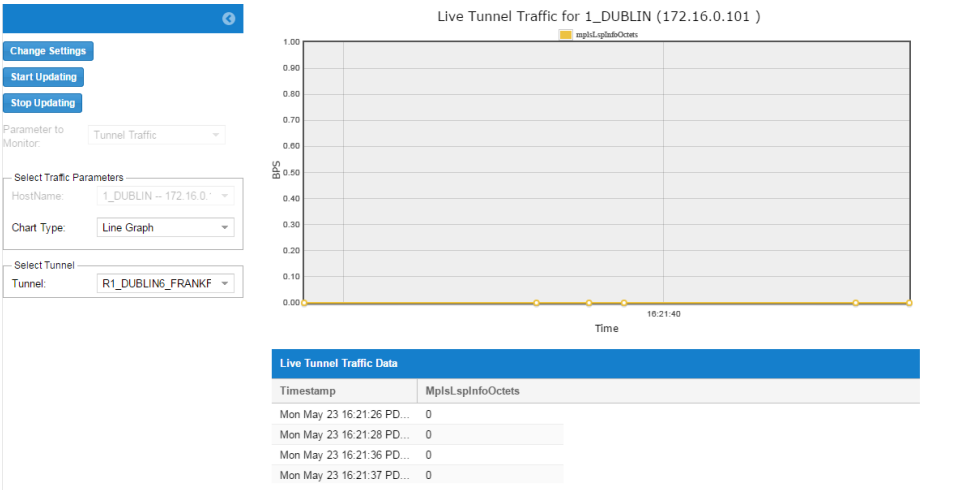
Figure 46: Live Tunnel Traffic Chart



Select the type of chart you want and the tunnel name. If you want to change the polling time interval or maximum values, click **Change Settings**. Click **Start Updating**.

The Live Tunnel Traffic Data table displays the date and time the node was polled, and the MPLS octets count.

Click **Stop Updating** to stop the interface polling.

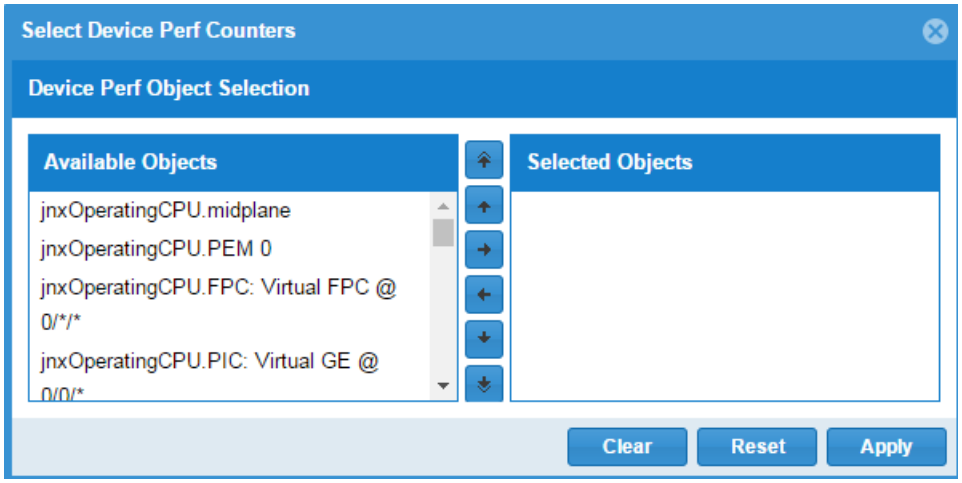
Related Documentation

- Node Menu on page 51
- Network Performance on page 158

Node Menu Real Time Device Performance

In the IP/MPLSView main window, select a node in the map, right-click, and select **Real Time Device Performance**. The Select Device Perf Counters window is displayed. Figure 47 on page 68 shows the Select Device Perf Counters window.

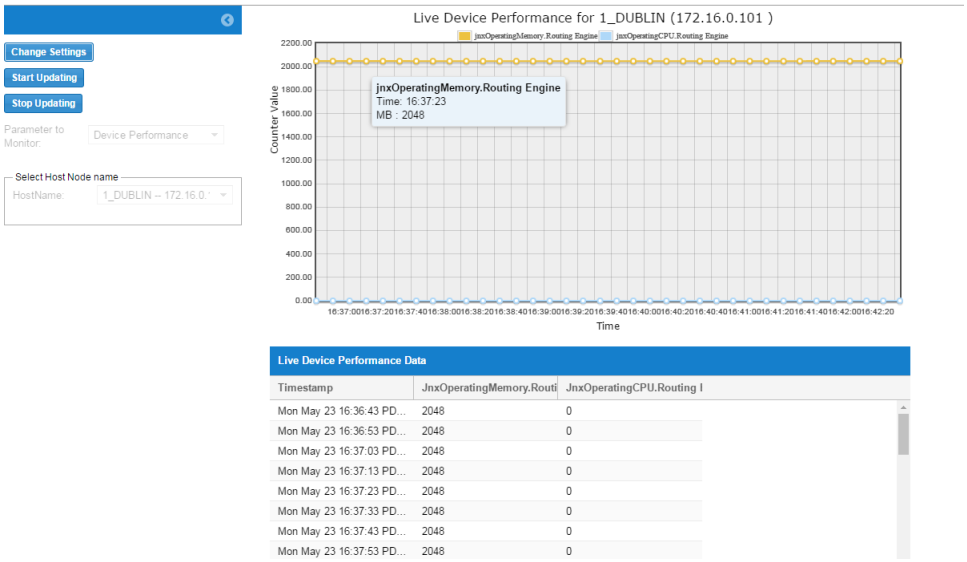
Figure 47: Select Device Perf Counters Window



Select one or more objects to monitor, and click the right arrow to move it to the Selected Objects pane. Click **Apply**.

The Live Device Performance chart is displayed. Figure 48 on page 68 shows the Live Device Performance window.

Figure 48: Live Device Performance Chart



The Live Device Performance Data table displays the date and time the node was polled, and the count for the object you selected.

Click **Stop Updating** to stop the object polling. If you want to change the polling time interval or maximum values, click **Change Settings**. Click **Start Updating**.

Related Documentation

- Node Menu on page 51
- Node Menu Historical Device Performance on page 58

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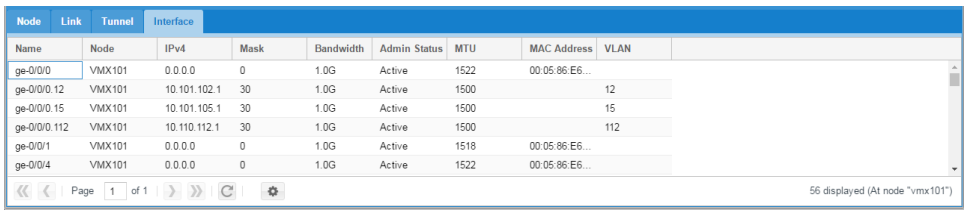
- Network Performance on page 158

Node Menu Interfaces at Node

In the IP/MPLSView main window, select a node in the map, right-click and select **Interfaces at Node**. The Interface table is displayed. Figure 49 on page 69 shows the main window Interface table.

Figure 49: Main Window Interface Table



Each column head has a menu. From the menu within each column, the element information can be sorted in ascending or descending order. You can select which columns are displayed or hidden. Columns can also be resized and the order can be rearranged.

Table 10 on page 47 describes the Interface table columns.

Table 17: Main Window Interface Table Columns

Column Name	Description
Name	Name of the physical interface. If the interface is a logical interface configured on a physical interface, the logical interface number is appended.
Node	Name of the node where the interface is configured.
IPv4	IPv4 address configured on the interface.
Mask	Subnetwork mask configured for the IP address.
Bandwidth	Bandwidth configured on the interface.
Admin Status	Current administrative status of the interface: Active, Up, Down or Testing.
MTU	The maximum transmission unit configured on the interface.
MAC Address	The MAC (Ethernet) address of the interface.
VLAN	The VLAN ID configured on the interface.

Double-click an interface in the table to display the Interface details window. Figure 50 on page 70 shows the Interface details window.

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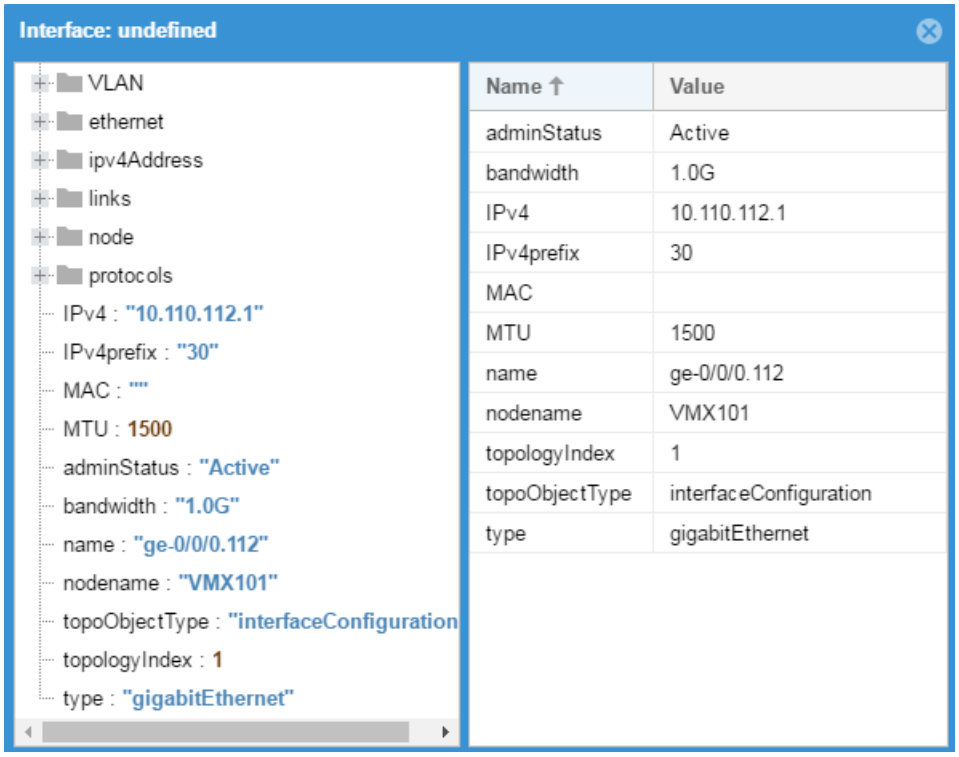
Figure 50: Interface Details Window



Expand the lists in the left pane to display additional information about the VLANs, IPv4 address, links, node, and protocols configured on or associated with this interface. Select the information in the left pane to display that same information in the right pane. This is useful when there are multiple elements, such as protocols, displayed in the left pane.

Select an interface in the table, right-click, and select **Display Traffic Chart** to display the interface traffic chart. Figure 23 on page 49 shows the interface traffic chart for both ingress and egress traffic.

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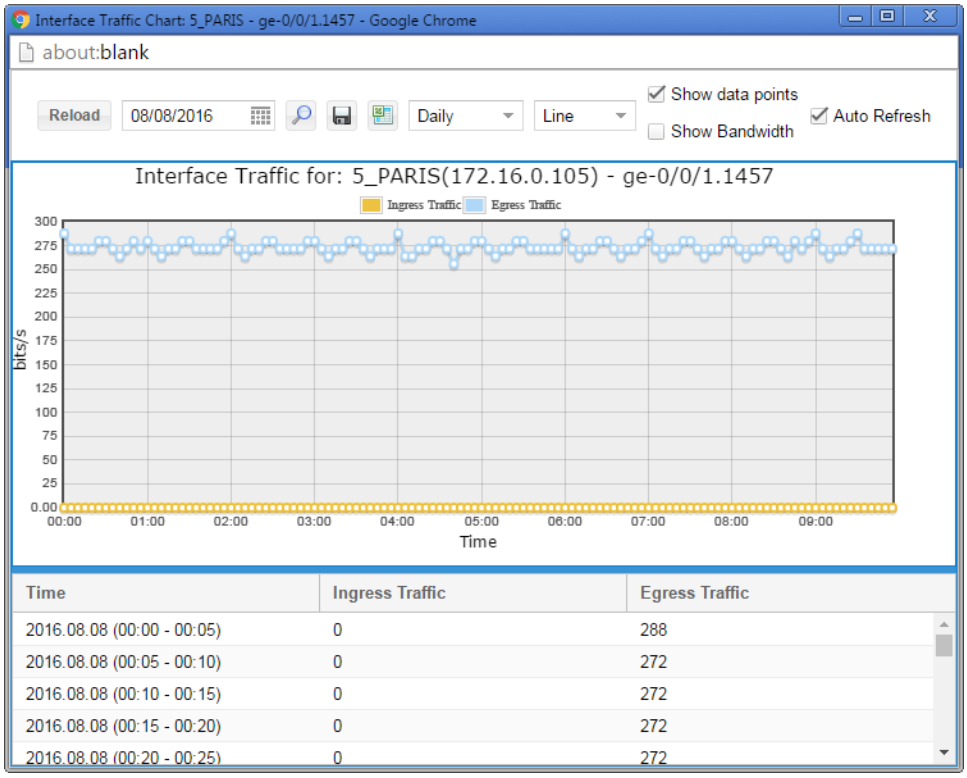
Figure 51: Interface Traffic Chart



In the chart window, you can use the controls at the top of the window to reload the chart, select the date, reset the zoom, save the chart as an image, export to Excel, select the chart time period, select the chart style, show or hide the data points, show policed bandwidth, and enable automatic refresh. Hold your mouse pointer over a data point to display a pop-up pane that shows the time and traffic value. Drag your mouse over a section of the chart to zoom in.

Related Documentation

- Node Menu on page 51
- Topology Map Window Overview on page 29
- Main Window Node Table on page 41
- Main Window Link Table on page 44
- Main Window Tunnel Table on page 47

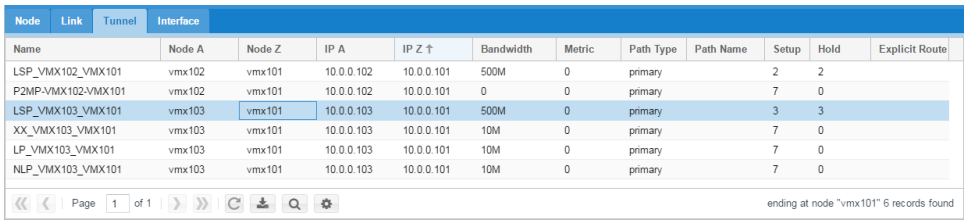
Node Menu Tunnels at Node

The IP/MPLSView main window has network information tables that contain detailed information about nodes, links, and tunnels.

In the IP/MPLSView main window, select a node in the map, right-click, and select **Tunnels On or Thru Node**, **Tunnels Starting at Node**, or **Tunnels Ending at Node**. The Tunnel table for the selected node is displayed.

Figure 52 on page 72 shows the node menu tunnel table for tunnels ending at the node.

Figure 52: Node Menu Tunnels Ending at Node Table



Node | Link | Tunnel | Interface

Name	Node A	Node Z	IP A	IP Z	Bandwidth	Metric	Path Type	Path Name	Setup	Hold	Explicit Route
LSP_VMX102_VMX101	vmx102	vmx101	10.0.0.102	10.0.0.101	500M	0	primary		2	2	
P2MP-VMX102-VMX101	vmx102	vmx101	10.0.0.102	10.0.0.101	0	0	primary		7	0	
LSP_VMX103_VMX101	vmx103	vmx101	10.0.0.103	10.0.0.101	500M	0	primary		3	3	
XX_VMX103_VMX101	vmx103	vmx101	10.0.0.103	10.0.0.101	10M	0	primary		7	0	
LP_VMX103_VMX101	vmx103	vmx101	10.0.0.103	10.0.0.101	10M	0	primary		7	0	
NLP_VMX103_VMX101	vmx103	vmx101	10.0.0.103	10.0.0.101	10M	0	primary		7	0	

Page 1 of 1 ending at node "vmx101" 6 records found

Each column head has a menu. From the menu within each column, the element information can be sorted in ascending or descending order. You can select which columns are displayed or hidden. Columns can also be resized and the order can be rearranged.

Table 18 on page 72 describes the Tunnel table columns.

Table 18: Node Menu Tunnel Table Columns

Column Name	Description
Name	Name of the tunnel.
Node A	Name of node A at one end of the tunnel.
Node Z	Name of node Z at one end of the tunnel.
IP A	IP address of node A at one end of the tunnel.
IP Z	IP address of node Z at one end of the tunnel.
Bandwidth	Bandwidth required by the tunnel.
Metric	The routing tunnel metric.
Path Type	Type of path: Primary, Secondary, or Standby.
Path Name	Path name, if configured.
Op Status	The operational status of the path.
Admin Status	Current status of the tunnel: Unknown, Install, Active, Live, Order, or Planned.
Setup	RSVP setup priority for the tunnel traffic.
Hold	RSVP hold priority for the tunnel traffic.
Explicit Route	RSVP explicit route object for the tunnel, if configured.

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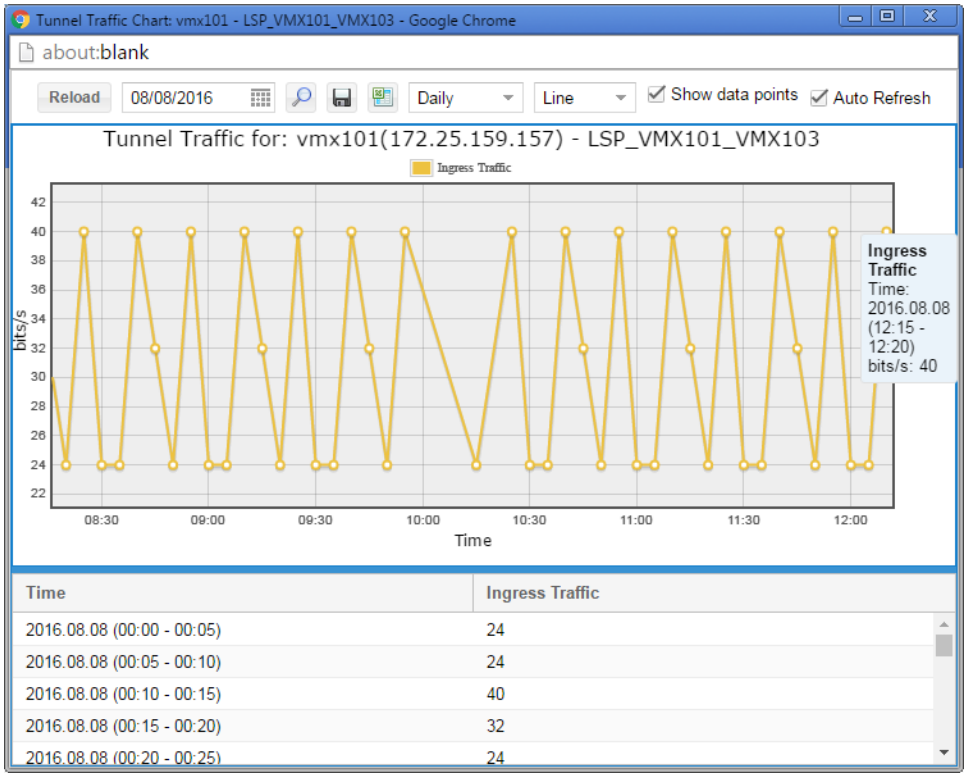
Select a tunnel in the table, right-click, and select **Display Tunnel Traffic Chart** to display the tunnel traffic chart. Figure 23 on page 49 shows the tunnel traffic chart for ingress traffic.

Figure 53: Tunnel Traffic Chart



In the chart window, you can use the controls at the top of the window to reload the chart, select the date, reset the zoom, save the chart as an image, export to Excel, select the chart time period, select the chart style, show or hide the data points, and enable automatic refresh. Hold your mouse pointer over a data point to display a pop-up pane that shows the time and traffic value. Drag your mouse over a section of the chart to zoom in.

Related Documentation

- Node Menu on page 51
- Main Window Tunnel Table on page 47

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CHAPTER 5

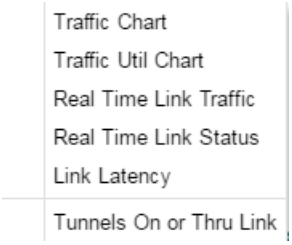
Main Window Link Menu

- Link Menu on page 75
- Link Menu Traffic Chart on page 76
- Link Menu Traffic Utilization Chart on page 76
- Link Menu Real Time Link Traffic on page 77
- Link Menu Real Time Link Status on page 78
- Link Menu Link Latency on page 79
- Link Menu Tunnels On or Thru Link on page 80

Link Menu

In the IP/MPLSView main window, select a link in the map, and right-click. The Link menu is displayed. Figure 54 on page 75 shows the Link menu.

Figure 54: Main Window Link Menu



For more information about the items in the Link menu, see the related topics listed.

Related Documentation

- Link Menu Traffic Chart on page 76
- Link Menu Traffic Utilization Chart on page 76
- Link Menu Real Time Link Traffic on page 77
- Link Menu Real Time Link Status on page 78
- Link Menu Link Latency on page 79
- Link Menu Tunnels On or Thru Link on page 80

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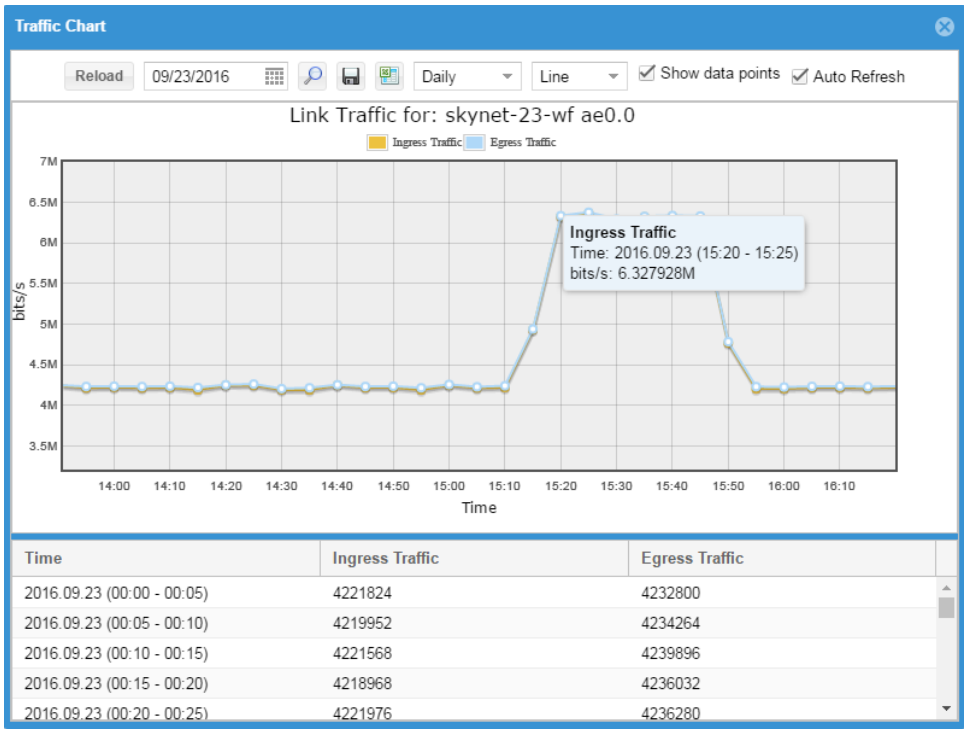
Link Menu Traffic Chart

In the IP/MPLSView main window, select a link in the map, right-click, and select **Traffic Chart**. The Link Traffic Chart is displayed. Figure 55 on page 76 shows the Link Traffic Chart.

Figure 55: Link Traffic Chart



In the chart window, you can use the controls at the top of the window to reload the chart, select the date, reset the zoom, save the chart as an image, export to Excel, select the chart time period, select the chart style, show or hide the data points, show bandwidth, and enable automatic refresh. Hold your mouse pointer over a data point to display a pop-up pane that shows the time and traffic value.

The table in the lower pane displays the time the traffic sample was taken and the bits per second reported for each interface.

Related Documentation

- Link Menu on page 75

Link Menu Traffic Utilization Chart

In the IP/MPLSView main window, select a link in the map, right-click, and select **Traffic Util Chart**. The Link Traffic Utilization Chart is displayed. Figure 56 on page 77 shows the Link Traffic Utilization Chart.

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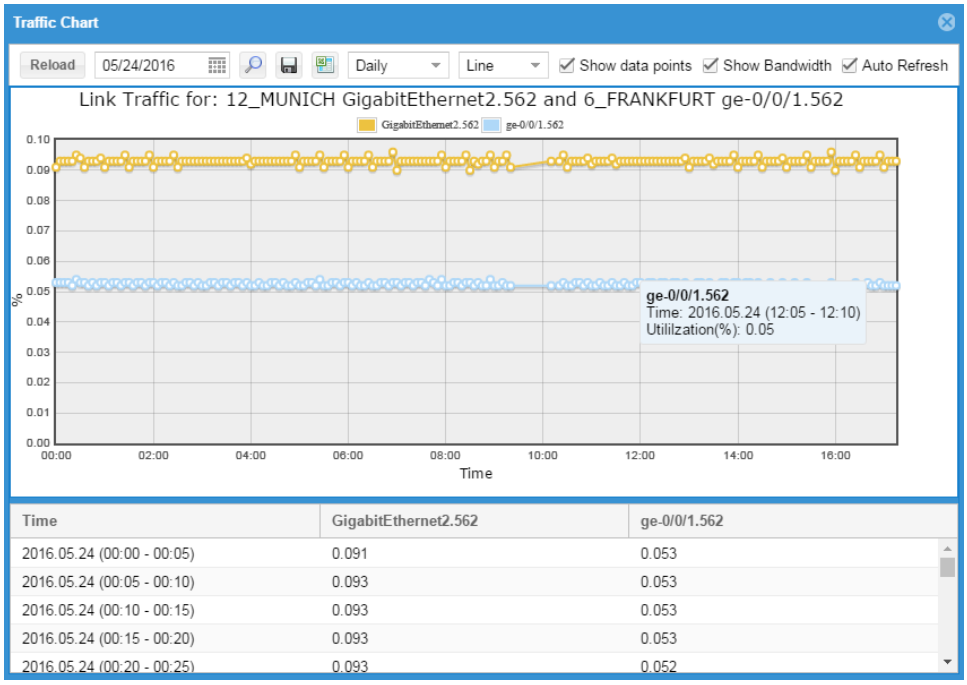
Figure 56: Link Traffic Utilization Chart



In the chart window, you can use the controls at the top of the window to reload the chart, select the date, reset the zoom, save the chart as an image, export to Excel, select the chart time period, select the chart style, show or hide the data points, show bandwidth, and enable automatic refresh. Hold your mouse pointer over a data point to display a pop-up pane that shows the time and traffic value. Drag your mouse over a section of the chart to zoom in.

The table in the lower pane displays the time the traffic sample was taken and the percent of interface bandwidth utilization used for each interface.

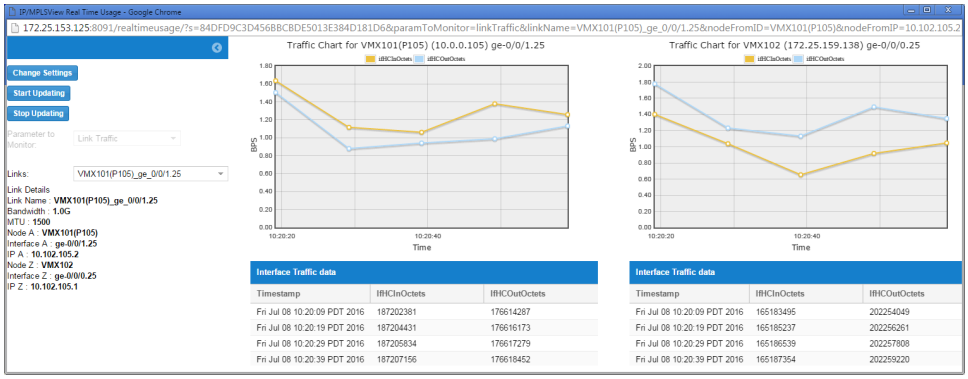
Related Documentation

- Link Menu on page 75
- Link Menu Traffic Chart on page 76

Link Menu Real Time Link Traffic

In the IP/MPLSView main window, select a link in the map, right-click, and select **Real Time Link Traffic**. The Real Time Link Traffic Chart is displayed. Figure 57 on page 78 shows the Real Time Link Traffic Chart.

Figure 57: Real Time Link Traffic Chart



The chart displays the octets in and out for each node connected by the link. The table displays the octets in and out for each node and the timestamp for each traffic sample.

Select the link you want from the Links menu. If you want to change the polling time interval or maximum values, click **Change Settings**.

The table in the lower pane displays the time the traffic sample was taken and the bits per second reported for each interface.

Click **Stop Updating** to stop the interface polling.

Related Documentation

- Link Menu on page 75
- Link Menu Traffic Chart on page 76
- Link Menu Traffic Utilization Chart on page 76

Link Menu Real Time Link Status

In the IP/MPLSView main window, select a link in the map, right-click, and select **Real Time Link Status**. The Link Status is displayed in a window on the topology map. Figure 58 on page 78 shows the Link Status window.

Figure 58: Link Status Window

Link status is based on real-time SNMP polling of the interface administrative and operational status from both end devices.

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NOTE: The Link Status window is displayed when you select the link. It is refreshed when you select **Real Time Link Status**.

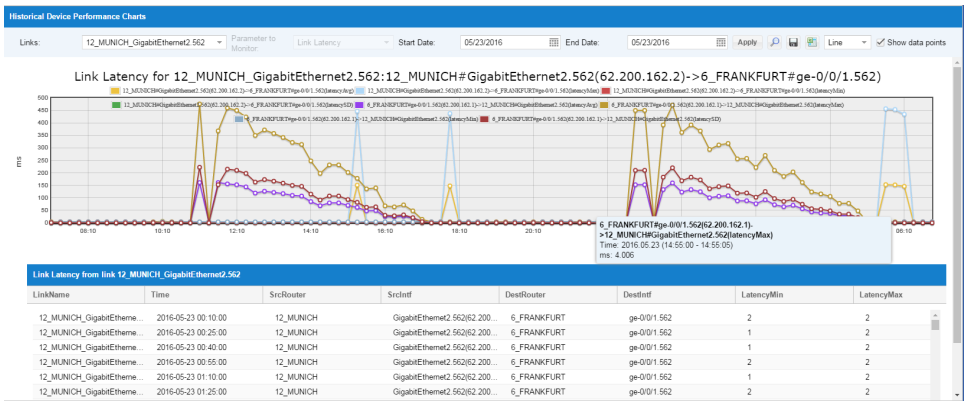
Related Documentation

- Link Menu on page 75
- Topology Map Right Pane on page 30

Link Menu Link Latency

In the IP/MPLSView main window, select a link in the map, right-click and select **Link Latency**. The Link Latency Chart is displayed. Figure 59 on page 79 shows the Link Latency Chart.

Figure 59: Link Latency Chart



NOTE: To display historical link latency results, you must first schedule a corresponding task in the Task Manager.

In the chart window, you can use the controls at the top of the window to select the link, select the start and end dates, reset the zoom, save the chart as an image, export to Excel, select the chart time period, select the chart style, and show or hide the data points. Hold your mouse pointer over a data point to display a pop-up pane that shows the time and traffic value.

Table 19 on page 79 describes the Link Latency table columns.

Table 19: Link Latency Table Columns

Column Name	Description
LinkName	Name of the link derived from the node name.
Time	Time the latency data represents.

Table 19: Link Latency Table Columns (continued)

Column Name	Description
SrcRouter	Name of the node at one end of the link
SrcIntf	IP address of the interface at one end of the link.
DestRouter	Name of the node at one end of the link
DestIntf	Interface identifier at one end of the link
LatencyMin	The minimum link latency reported.
LatencyMax	The maximum link latency reported.

Related Documentation

- Link Menu on page 75
- Main Window Link Table on page 44
- Node Menu Historical Device Performance on page 58
- Node Menu Historical Network Performance on page 59
- Network Performance on page 158

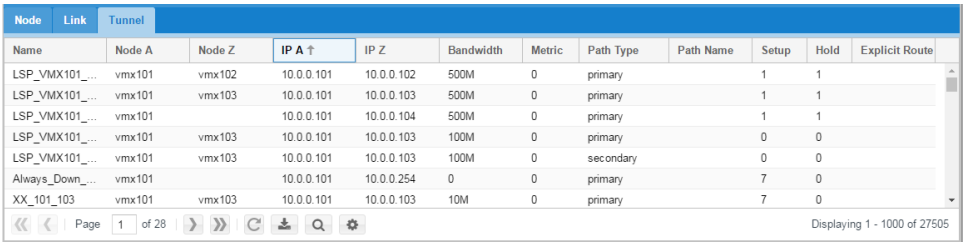
Link Menu Tunnels On or Thru Link

The IP/MPLSView main window has network information tables that contain detailed information about nodes, links, and tunnels.

In the IP/MPLSView main window, select a link in the map, right-click, and select **Tunnels On or Thru Link**. The Tunnel table is displayed.

Figure 60 on page 80 shows the main window Tunnel table.

Figure 60: Main Window Tunnel Table



Node | Link | Tunnel

Name	Node A	Node Z	IP A ↑	IP Z	Bandwidth	Metric	Path Type	Path Name	Setup	Hold	Explicit Route
LSP_VMX101_...	vmx101	vmx102	10.0.0.101	10.0.0.102	500M	0	primary		1	1	
LSP_VMX101_...	vmx101	vmx103	10.0.0.101	10.0.0.103	500M	0	primary		1	1	
LSP_VMX101_...	vmx101		10.0.0.101	10.0.0.104	500M	0	primary		1	1	
LSP_VMX101_...	vmx101	vmx103	10.0.0.101	10.0.0.103	100M	0	primary		0	0	
LSP_VMX101_...	vmx101	vmx103	10.0.0.101	10.0.0.103	100M	0	secondary		0	0	
Always_Down_...	vmx101		10.0.0.101	10.0.0.254	0	0	primary		7	0	
XX_101_103	vmx101	vmx103	10.0.0.101	10.0.0.103	10M	0	primary		7	0	

Page 1 of 28 Displaying 1 - 1000 of 27505

Each column head has a menu. From the menu within each column, the element information can be sorted in ascending or descending order. You can select which columns are displayed or hidden. Columns can also be resized and the order can be rearranged.

Table 20 on page 81 describes the Tunnel table columns.

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Table 20: Main Window Tunnel Table Columns

Column Name	Description
Name	Name of the tunnel.
Node A	Name of node A at one end of the tunnel.
Node Z	Name of node Z at one end of the tunnel.
IP A	IP address of node A at one end of the tunnel.
IP Z	IP address of node Z at one end of the tunnel.
Bandwidth	Bandwidth required by the tunnel.
Metric	The routing tunnel metric.
Path Type	Type of path: Primary, Secondary, or Standby.
Path Name	Path name, if configured.
Op Status	The operational status of the path.
Admin Status	Current status of the tunnel: Unknown, Install, Active, Live, Order, or Planned.
Setup	RSVP setup priority for the tunnel traffic.
Hold	RSVP hold priority for the tunnel traffic.
Explicit Route	RSVP explicit route object for the tunnel, if configured.

Related Documentation

- Link Menu on page 75
- Main Window Tunnel Table on page 47
- Main Window Tunnel Table on page 47

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CHAPTER 6

Network Menu

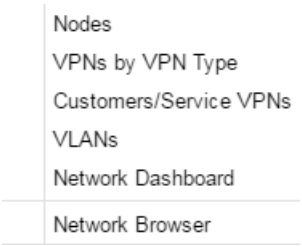
- Main Window Network Menu on page 83
- Network Node Info Actions Window on page 84
- Network Menu VPNs Window on page 87
- Network Menu Customer and Service VPNs Window on page 89
- Network Menu VLANs Window on page 89
- Network Menu Network Dashboard on page 90

Main Window Network Menu

The IP/MPLSView main window has a Network menu used to display details about selected nodes, VPNs, VLANs, the network dashboard, and the live network topology.

Figure 61 on page 83 shows the main window Network menu.

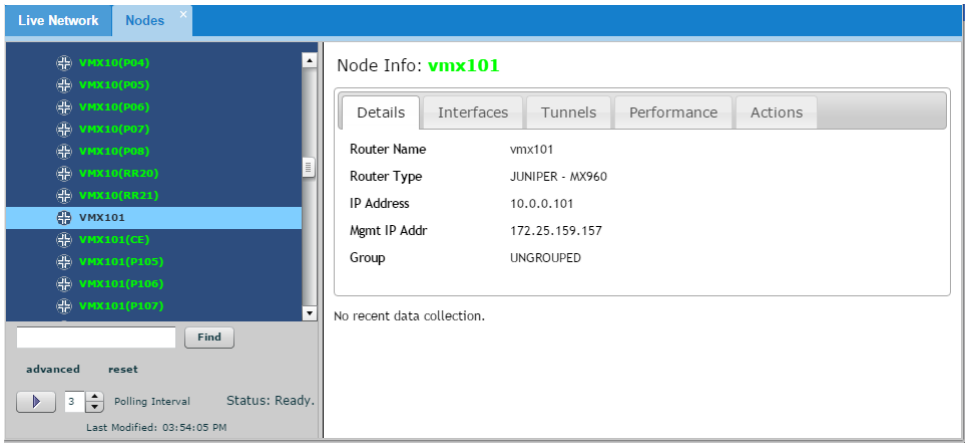
Figure 61: Main Window Network Menu



Select **Network>Nodes** to display an expandable list of nodes. The list organizes the nodes under groups if groups are used. Expand the list and select a node to display details about that node.

Figure 62 on page 84 shows the Node Info window with the Details tab selected.

Figure 62: Node Info Details Windows



In the Node Info window, select the **Interfaces** tab to display details about the interfaces on the selected node. Select the **Tunnels** tab to display details about the tunnels on the selected node. Select the **Performance** tab to display details about the performance of the selected node.

Related Documentation

- Topology Map Window Overview on page 29
- Network Node Info Actions Window on page 84

Network Node Info Actions Window

The IP/MPLSView main window has a Network menu used to display details about a selected node. There is also a window for performing actions on the node. Select **Network>Nodes** to display the Nodes list. Select a node from the list to display the Node Info window.

In the Node Info window, select the **Actions** tab to display an interactive window where you can access the CLI of the selected node, ping the node, and display jitter information.

Figure 63 on page 85 shows the Node Info Actions window.

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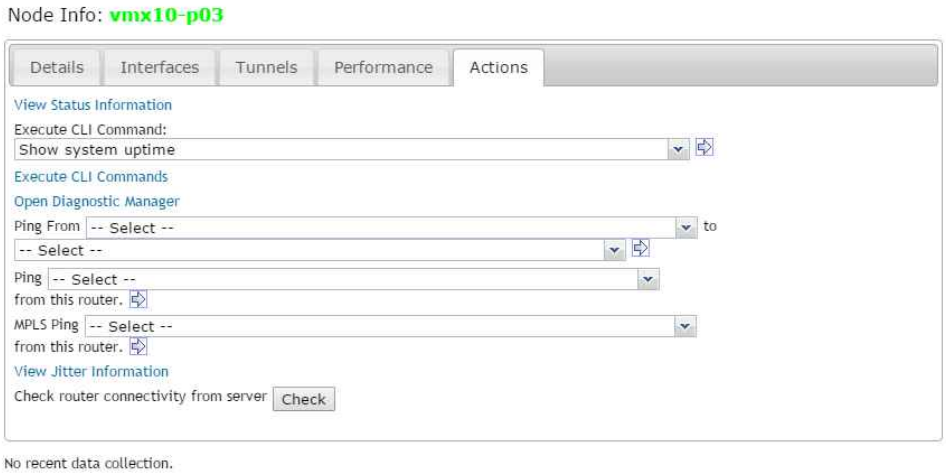
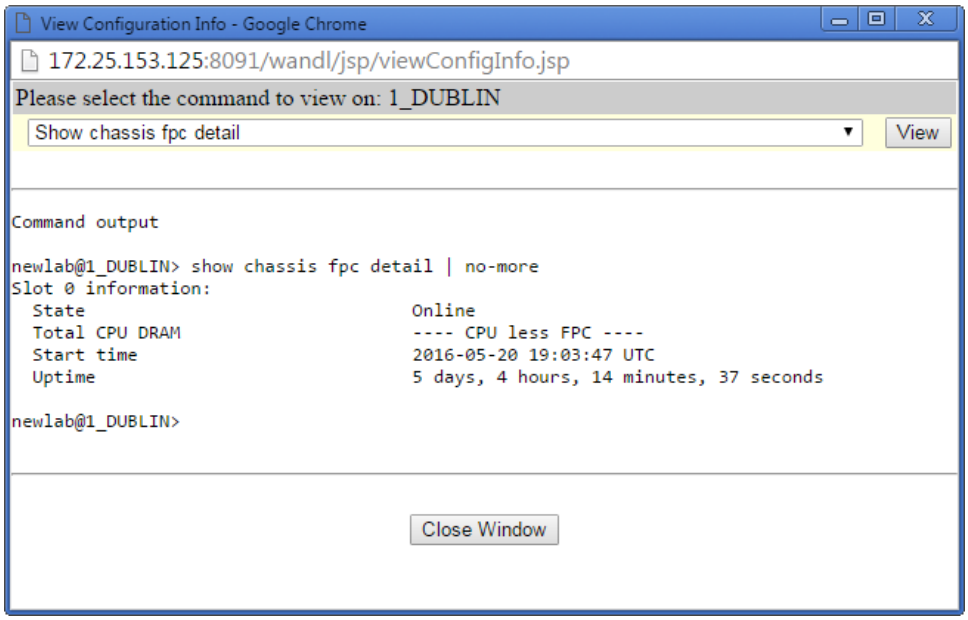
Figure 63: Node Info Actions Window



From the Execute CLI Command menu, select the command you want and click the right arrow icon. There are hundreds of show commands available. A View Configuration Info window is displayed.

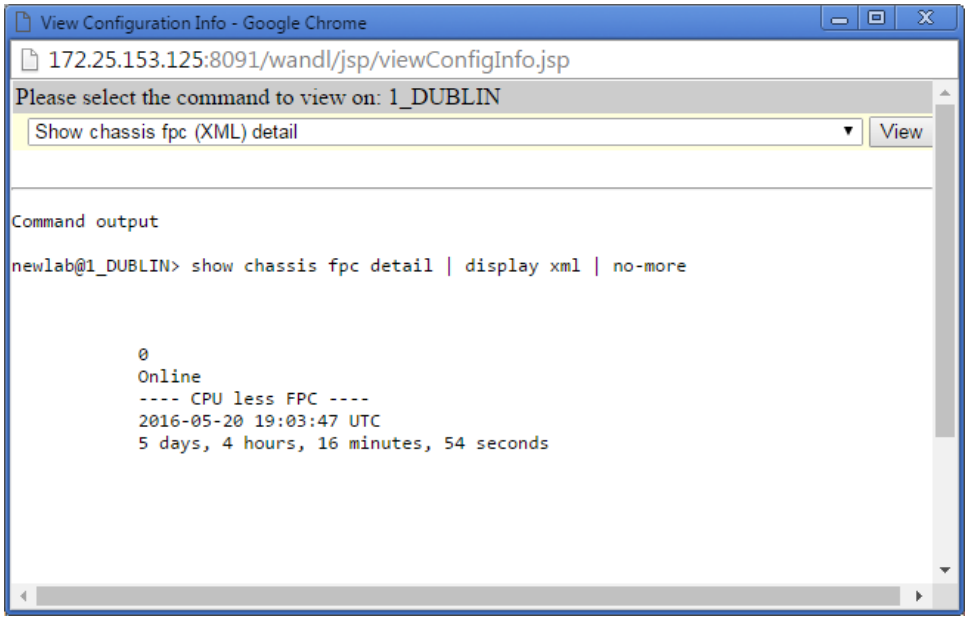
Figure 64 on page 85 shows the View Configuration Info window results of a **show chassis fpc detail** command.

Figure 64: View Configuration Info Window



From the menu, select the command you want to display with XML formatted output. Figure 65 on page 86 shows the View Configuration Info window results of a **show chassis fpc | display xml | no-more** command.

Figure 65: View Configuration Info Window with XML Format

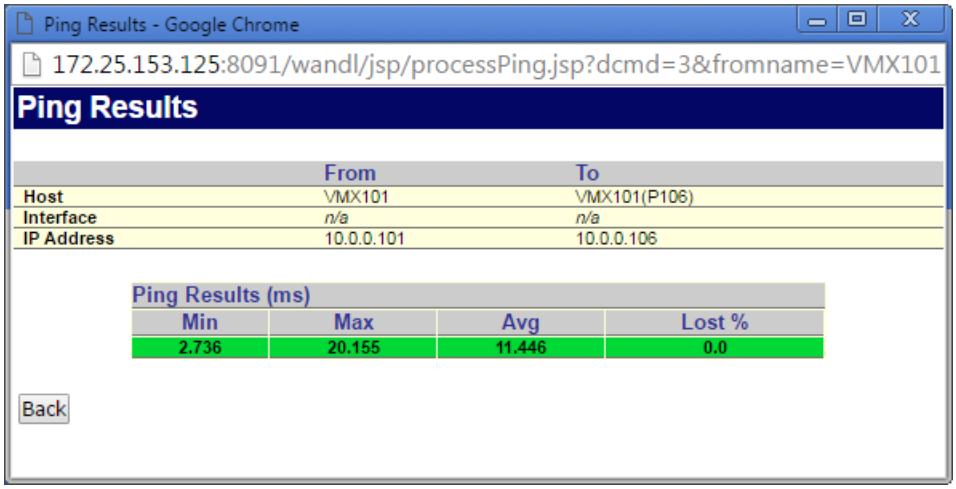


You can ping from one node to another or ping from the selected node to another.

Select a node from the Ping From menu. Select a node from the to menu and click the right arrow icon.

The Ping Results window is displayed. Figure 66 on page 86 shows the Ping Results window.

Figure 66: Ping Results Window



To ping from the selected node to another node, select the destination node and click the right arrow icon at the end of the Ping from this router menu.

To perform an MPLS ping from the selected node to another node, select the destination node and click the right arrow icon at the end of the MPLS Ping from this router menu.

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To display the jitter value for the selected node, click **View Jitter Information**. To confirm connectivity from the server to the selected node, click **Check**. The results (up or down) are displayed next to the Check button. The jitter value is displayed only if SLA probes are configured on the device.

Related Documentation

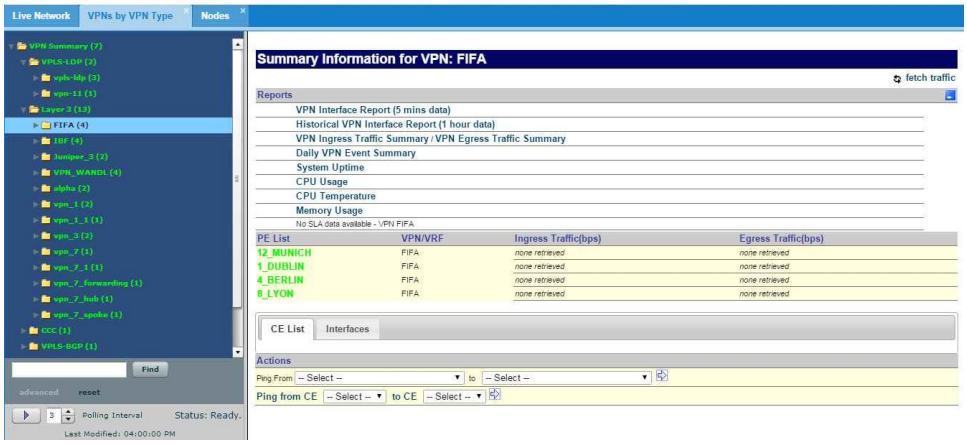
- Main Window Network Menu on page 83

Network Menu VPNs Window

The IP/MPLSView main window has a Network menu used to display details about VPNs. Select **Network > VPNs by VPN Type** to display the VPN list. Select a VPN from the list to display the VPN Summary Information window.

Figure 67 on page 87 shows the Network menu VPN Summary Information window.

Figure 67: VPN Summary Information Window



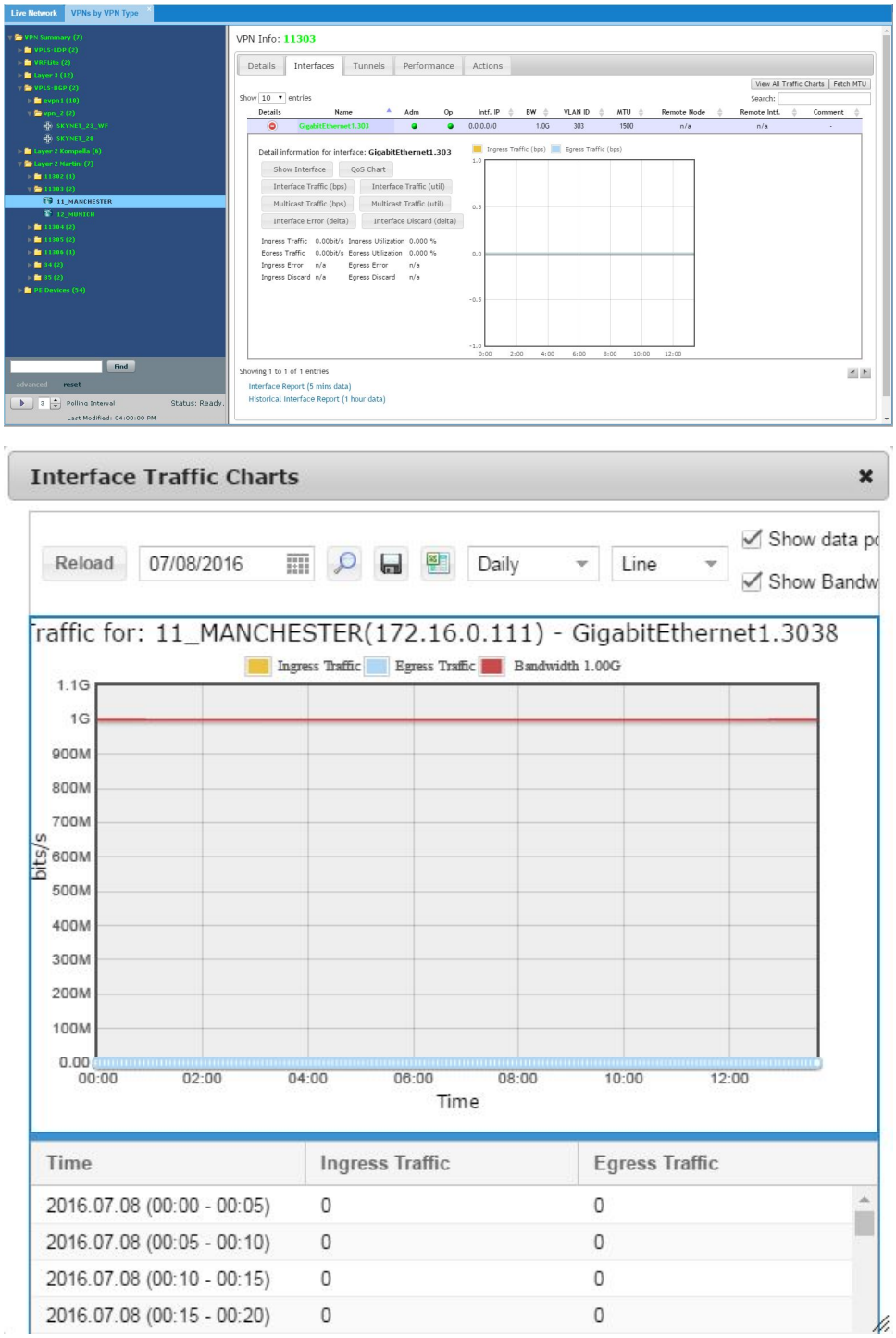
From the VPN Summary Information window, you can display reports, ping from a PE or CE router to another router, display interfaces associated with the VPN, or select a PE device to display details about that device.

Select the Interfaces tab to display information about the interfaces associated with this VPN. Click the + icon under details to display detailed information about the interface and the traffic on that interface.

Click on any of the buttons to display Interface Traffic charts.

Figure 68 on page 88 shows the VPN Interfaces window with interface details and an Interface Traffic chart.

Figure 68: VPN Interfaces Window



Expand the VPN list to access a list of nodes. From the list of nodes, you can perform the actions described in "Network Node Info Actions Window" on page 84.

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Related Documentation

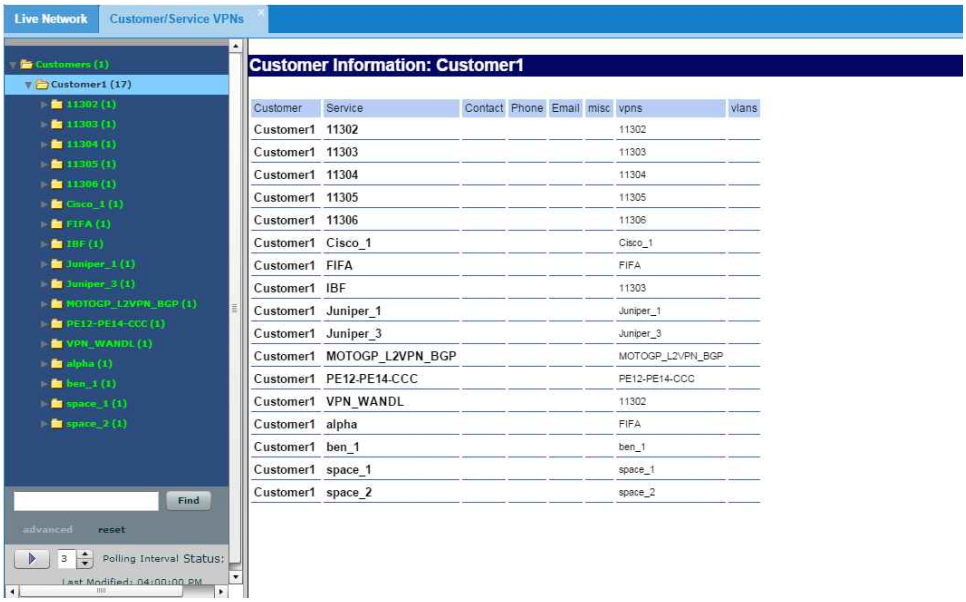
- Main Window Network Menu on page 83
- Network Node Info Actions Window on page 84

Network Menu Customer and Service VPNs Window

The IP/MPLSView main window has a Network menu used to display details about customers and services. Select **Network > Customer/Service VPNs** to display the customer list. Select a customer from the list to display the Customer/Service VPN Information window.

Figure 69 on page 89 shows the Network menu Customer/Service VPN Information window.

Figure 69: Customer/Service VPN Information Window



Select a customer or service to filter the list.

Expand the customer list to access a list of nodes. From the list of nodes, you can perform the actions described in "Network Node Info Actions Window" on page 84.

Related Documentation

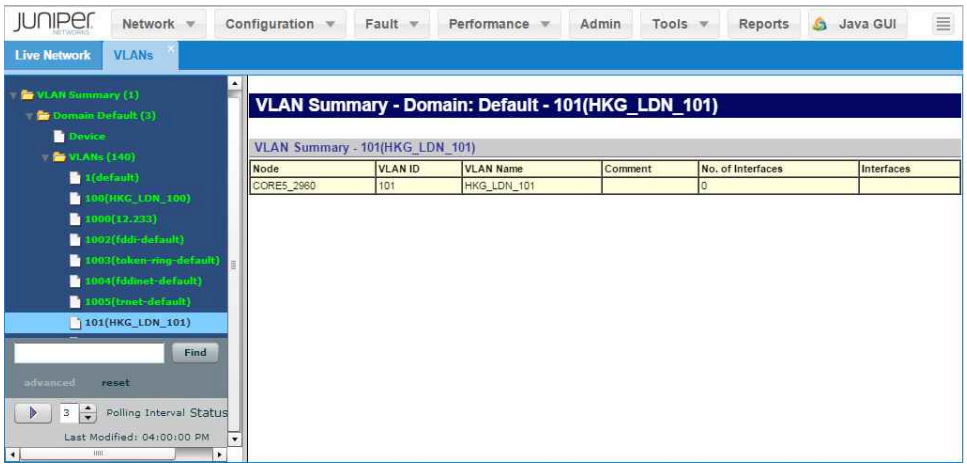
- Main Window Network Menu on page 83
- Network Node Info Actions Window on page 84

Network Menu VLANs Window

The IP/MPLSView main window has a Network menu used to display details about VLANs. Select **Network > VLANs** to display the VLANs list. Select a VLAN from the list to display the VLAN Summary window.

Figure 70 on page 90 07 shows the Network menu VLAN Summary window.

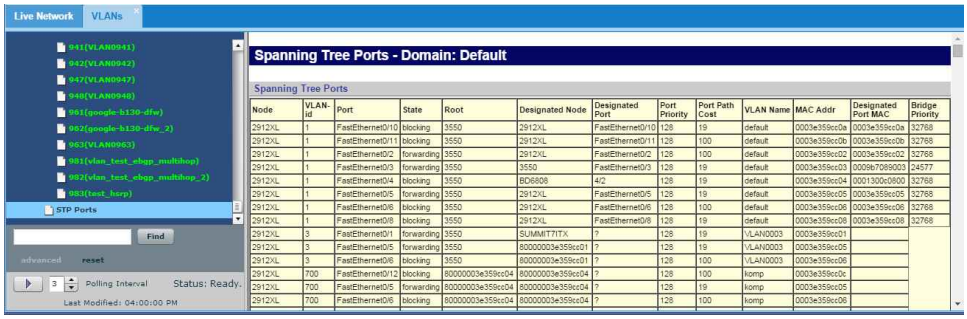
Figure 70: VLAN Summary Window



Scroll to the bottom of the VLANs list and select **STP Ports** to display the list of spanning-tree ports.

Figure 71 on page 90 shows the Spanning Tree Ports window.

Figure 71: Spanning Tree Ports Window



Related Documentation

- Main Window Network Menu on page 83

Network Menu Network Dashboard

The IP/MPLSView main window has a Network menu used to display the Network Dashboard. Select **Network>Network Dashboard** to display the Network Dashboard.

Figure 72 on page 91 shows the Network Dashboard.

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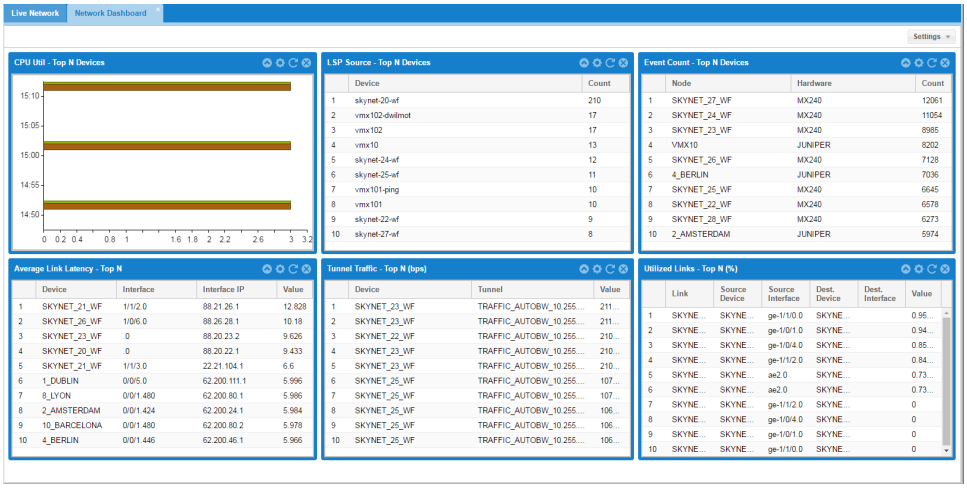
Figure 72: Network Dashboard

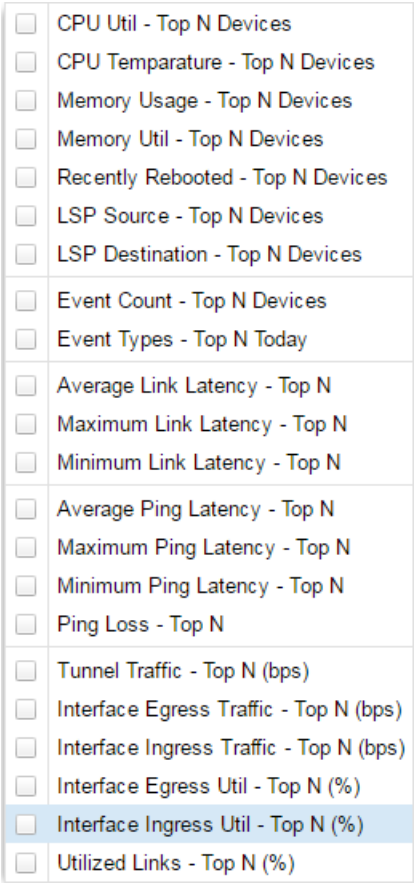


In each pane there are icons at the top that allow you to hide the pane, change the display from tabular to a bar graph or pie chart, reload the data, and close the pane.

Open the settings menu to select two columns or three columns and to restore the default settings.

From the settings menu, select **Options**. Figure 73 on page 92 shows the options menu.

Figure 73: Network Dashboard Options Menu



The options menu allows you to display top devices for the items listed in Table 21 on page 92.

Table 21: Network Dashboard Options

Top N Devices Selections	Top N Devices Selections
CPU Util	Average Ping Latency
CPU Temperature	Maximum Ping Latency
Memory Usage	Minimum Ping Latency
Memory Util	Ping Loss
Recently Rebooted	Tunnel Traffic
LSP Source	Interface Egress Traffic
LSP Destination	Interface Ingress Traffic
Event Count	Interface Egress Util

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Table 21: Network Dashboard Options (continued)

Top N Devices Selections	Top N Devices Selections
Event Types	Interface Ingress Util
Average Link Latency	Utilized Links
Maximum Link latency	
Minimum Link latency	

Related Documentation

- Main Window Network Menu on page 83

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CHAPTER 7

Configuration Menu

- Main Window Configuration Menu on page 95
- Network Data Reports on page 96
- Network Reports on page 97
- Integrity Check Reports on page 99
- Hardware Inventory Reports on page 100
- Equipment View on page 102
- Configuration Revision Manager on page 103
- Device Library Manager on page 105
- Misc Reports on page 106

Main Window Configuration Menu

The IP/MPLSView main window has a Configuration menu used to display network data, network reports, integrity checks, hardware inventory, equipment views, the configuration manager, the device library manager, and other miscellaneous reports.

Figure 74 on page 95 shows the main window Configuration menu.

Figure 74: Main Window Configuration Menu

Related Documentation

- IP/MPLSView Main Window Overview on page 25
- Network Data Reports on page 96
- Network Reports on page 97

- Integrity Check Reports on page 99
- Hardware Inventory Reports on page 100
- Equipment View on page 102
- Configuration Revision Manager on page 103

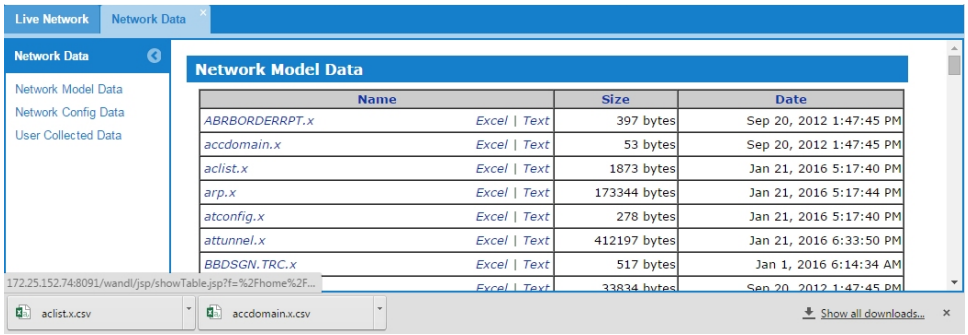
Network Data Reports

The IP/MPLSView main window has a Configuration menu used to display network data, network reports, integrity checks, hardware inventory, equipment views, the configuration manager, and other miscellaneous reports.

Select **Configuration>Network Data** to display the Network Data window. The Network Model Data report is displayed by default.

Figure 75 on page 96 shows the Network Model Data report.

Figure 75: Network Model Data Report

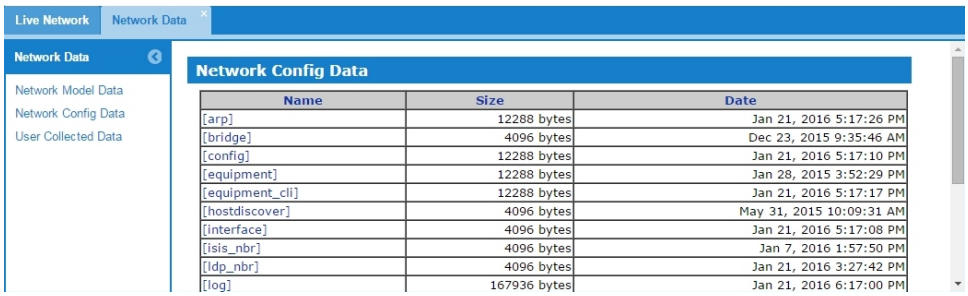


Click **Excel** to download a .cvs file for the named report. Click **Text** to display the text of the named report.

Select **Network Config Data** to display the Network Config Data report.

Figure 76 on page 96 shows the Network Config Data report.

Figure 76: Network Config Data Report



Click a report name to open a list of reports of that type. Click on the device name to display the report contents.

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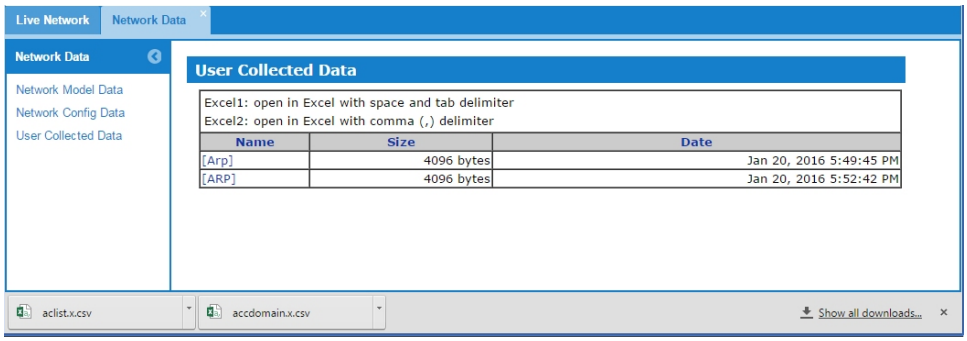
Select **User Collected Data** to display the User Collected Data reports list.

Figure 77 on page 97 shows the User Collected Data reports.

Figure 77: User Collected Data Report



Click a report name to open a list of reports of that type. Click on the device name to display the report contents.

Related Documentation

- Main Window Configuration Menu on page 95

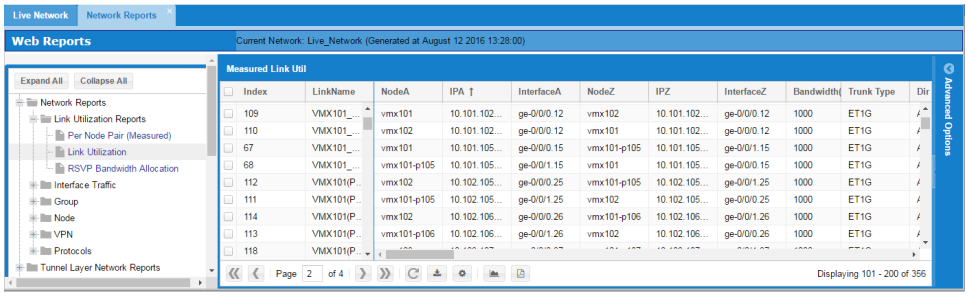
Network Reports

The IP/MPLSView main window has a Configuration menu used to display network data, network reports, integrity checks, hardware inventory, equipment views, the configuration manager, and other miscellaneous reports.

Select **Configuration>Network Reports** to display the Web Reports window for network reports. Expand the menu items to list individual reports. Click the report name to display the report.

Figure 78 on page 97 shows the Web Reports window with the Link Utilization Report selected.

Figure 78: Web Reports Window for Network Reports

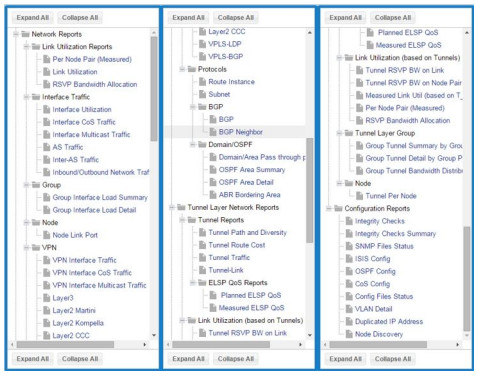


Click **Advanced Options** to display an explanation of how the information is obtained, restore the original order of the information, or perform a search of the information. Click **Export** to download a .cvs file or text file. From the menu within each column, the element

information can be sorted in ascending or descending order. You can select which columns are displayed or hidden. Columns can also be resized and the order can be rearranged.

Click **Expand All** to expand all the menu items. Figure 79 on page 98 shows all of the reports available in the Web Reports list.

Figure 79: All Available Web Report

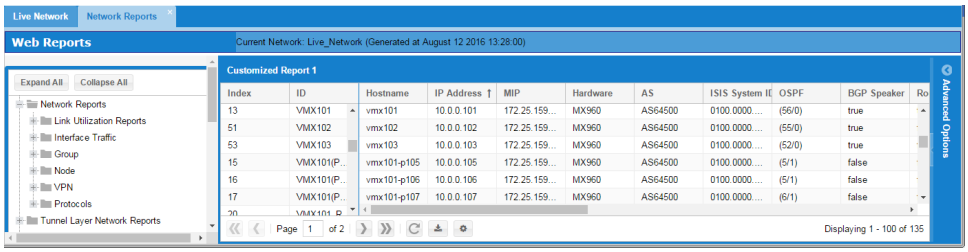


Select **Configuration>Network Reports>Customized Reports>Network Summary** to display the Network Summary window for network reports.

Expand the menu items to list individual reports. Click the report name to display the report.

Figure 80 on page 98 shows the Web Reports window with the Link Utilization Report selected.

Figure 80: Network Summary Report Window



In the bottom of the window, you can download the reports, set the number of lines to display, or go to a specified page.

NOTE: **Web reports are only available if a wWeb report task is created to run at a scheduled time.**

Related Documentation

- Main Window Configuration Menu on page 95

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Integrity Check Reports

The IP/MPLSView main window has a Configuration menu used to display network data, network reports, integrity checks, hardware inventory, equipment views, the configuration manager, and other miscellaneous reports.

Select **Configuration>Integrity Check Reports** to display the Web Reports window for integrity check reports.

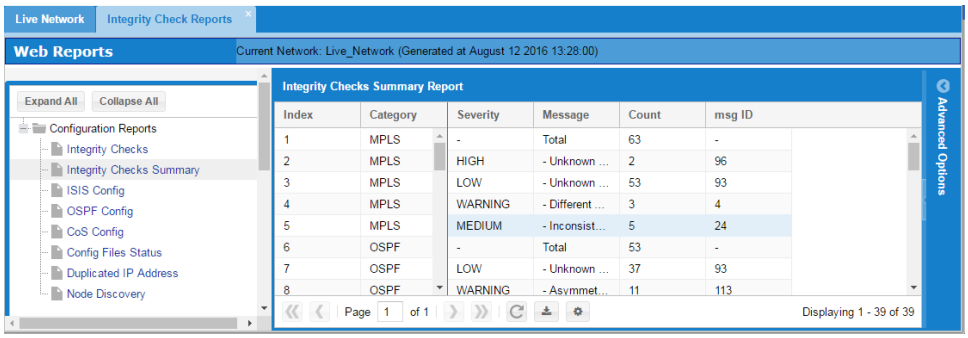
Available configuration reports include:

- Integrity Checks
- Integrity Checks Summary
- ISIS Config
- OSPF Config
- CoS Config
- Config Files Status
- Duplicate IP Address
- Node Discovery

Click the report name to display the report.

Figure 81 on page 99 shows the Web Reports window with the Integrity Checks Summary Report selected.

Figure 81: Integrity Checks Summary Report



Click **Advanced Options** to display an explanation of how the information is obtained, restore the original order of the information, or perform a search of the information. Click **Export** to download a .cvs file or text file. From the menu within each column, the element information can be sorted in ascending or descending order. You can select which columns are displayed or hidden. Columns can also be resized and the order can be rearranged.

Click **Expand All** to expand all the menu items.

Related Documentation

- Main Window Configuration Menu on page 95

Hardware Inventory Reports

The IP/MPLSView main window has a Configuration menu used to display network data, network reports, integrity checks, hardware inventory, equipment views, the configuration manager, and other miscellaneous reports.

Select **Configuration>Hardware Inventory Reports** to display the Hardware Inventory Reports window. In the reports, you can select columns to determine what is displayed in the report. Options include IPv6 addresses, autonomous system (AS) numbers, serial numbers, and other SKU information. Figure 82 on page 100 displays some of these column options.

Figure 82: Hardware Inventory Transceivers Window

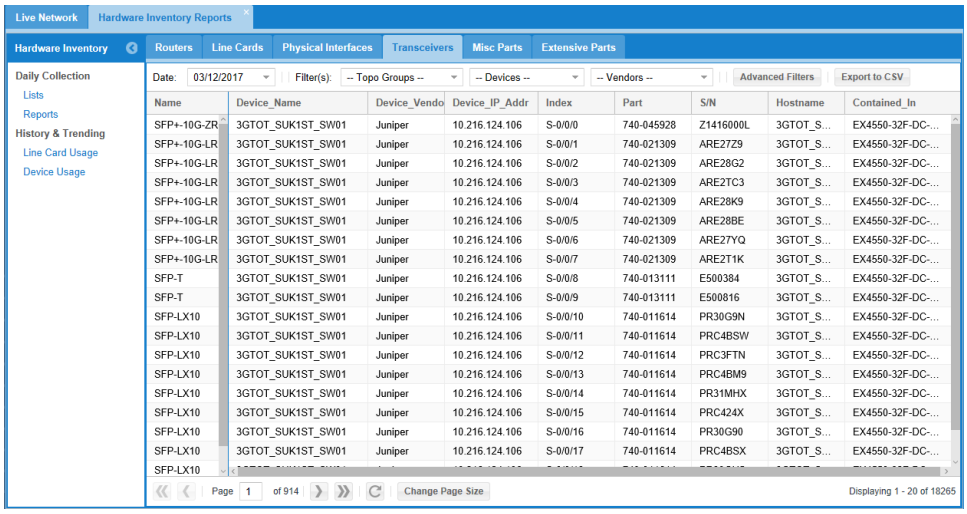
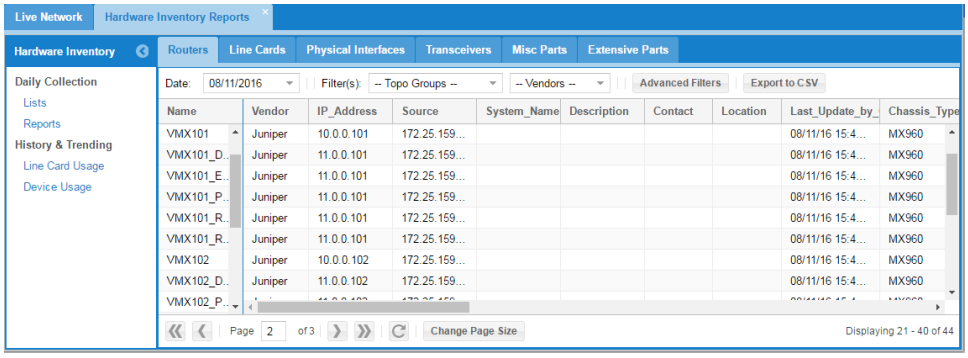


Figure 83 on page 100 shows the Hardware Inventory Reports window with the Routers tab selected.

Figure 83: Hardware Inventory Reports Window



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Select the tab for the level of report you want, such as **Line Cards**, **Physical Interfaces**, and **Transceivers**. Select **Misc Parts** to display power supplies and fan trays. Select **Extensive Parts** to display estimated cost.

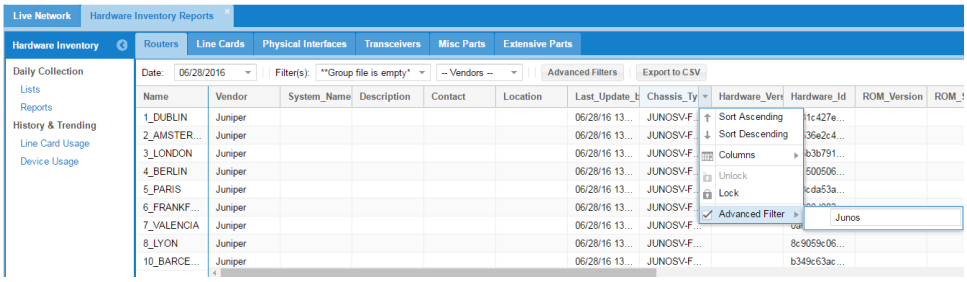
From the header menus, you can select a date, a topology group, or a vendor to filter the reports.

Click **Export to CVS** to download a **.cvs** file. Click **Advanced Filters** to display instructions on how to use advance filters.

To search using advanced-filter regular expressions, open the menu in the column header, and select **Advanced Filter**. Then type the text to search for.

Figure 84 on page 101 shows the Advanced Filter results.

Figure 84: Hardware Inventory Reports Advanced Filters



In the left navigation pane, select **Reports** to display device-specific reports. Select the **Hardware Inventory**, **Device Usage**, **Line Card Usage**, **CapEx**, or **CapEx by Parts** tabs to display daily usage and estimated cost reports.

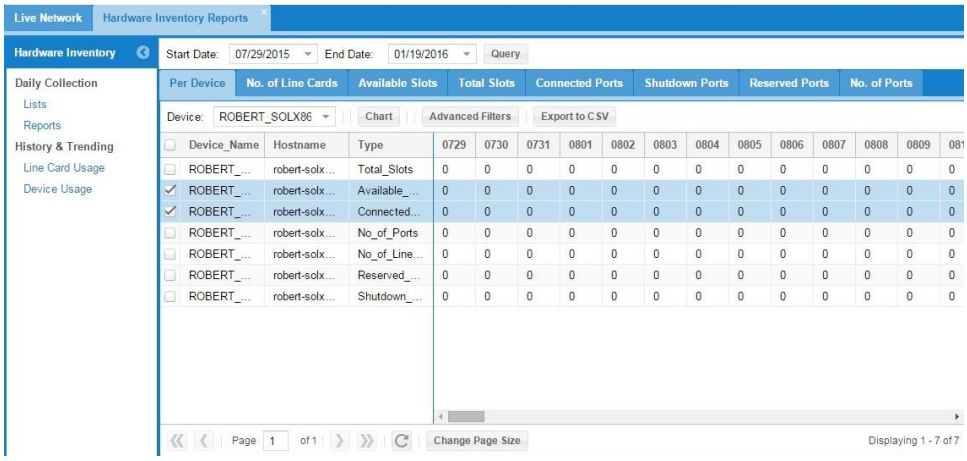
In the left navigation pane, select **Line Card Usage** or **Device Usage** to display usage reports for a specified time period.

You can display reports for elements such as devices, line cards, slots, and ports.

Select the start date and end date, and click **Query**. A list of reports is displayed. Check the reports you want, and click **Chart**. A chart of the selected device, time period, and report type is displayed.

Figure 85 on page 102 shows the Hardware Inventory Reports window with **Device Usage Per Device** selected.

Figure 85: Hardware Inventory Device Usage per Device Reports



NOTE: Hardware inventory reports are only created if a hardware inventory task is created to run at a scheduled time.

Related Documentation

- Main Window Configuration Menu on page 95

Equipment View

The IP/MPLSView main window has a Configuration menu used to display network data, network reports, integrity checks, hardware inventory, equipment views, the configuration manager, and other miscellaneous reports.

Select **Configuration>Equipment View** to display the Equipment View window. Expand the Devices list in the Hardware Inventory pane and select the equipment to view. The equipment Logical View is displayed, as shown in Figure 86 on page 103.

There are two main views in the device's Equipment View window. The Logical View depicts a graphical view of the cards and ports in the device. The Tabular View depicts the information in tabular format, details such as interface status, ingress bandwidth, and egress bandwidth.

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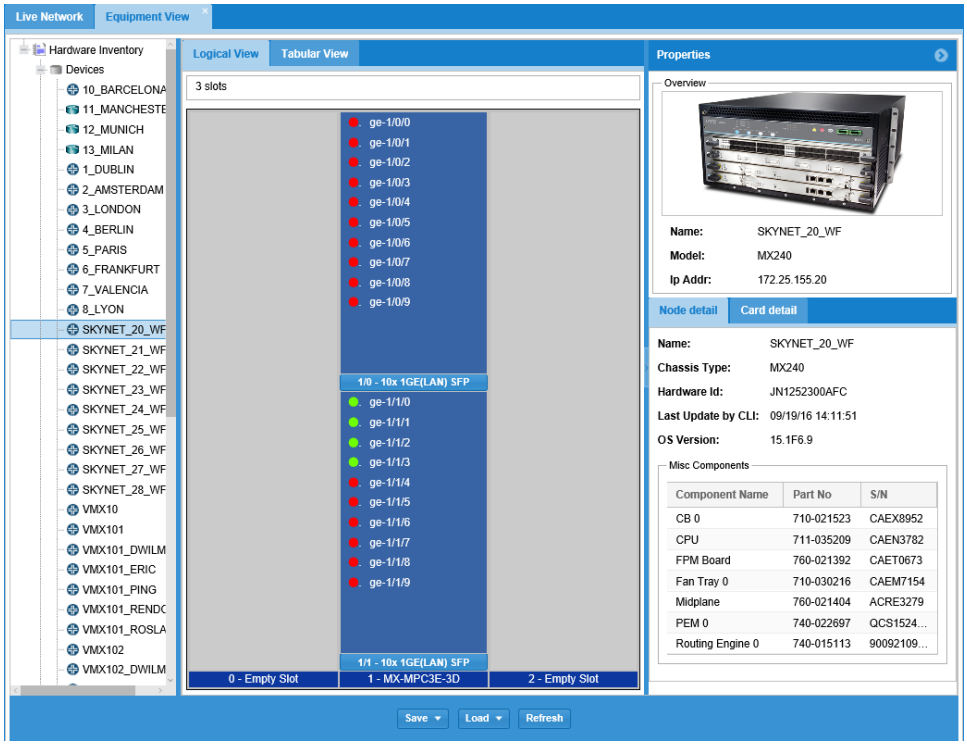
Figure 86: Hardware Inventory Logical View



The Equipment View window includes:

Hardware Inventory pane—Select Devices to display a list of devices.

Logical View pane—Displays the number of slots. Select an interface to display the IP address and bandwidth.

Tabular View pane—Provides details such as interface status and bandwidth.

Properties Overview—Provides a picture of the equipment and the hostname, model, and IP address.

Node detail—Lists the device name, chassis type, hardware ID, last update by CLI, OS Version and miscellaneous components such as board, CPU, and Routing Engine.

Card detail—Lists the slot, card ID, description, part number, serial number, and ports.

Related Documentation

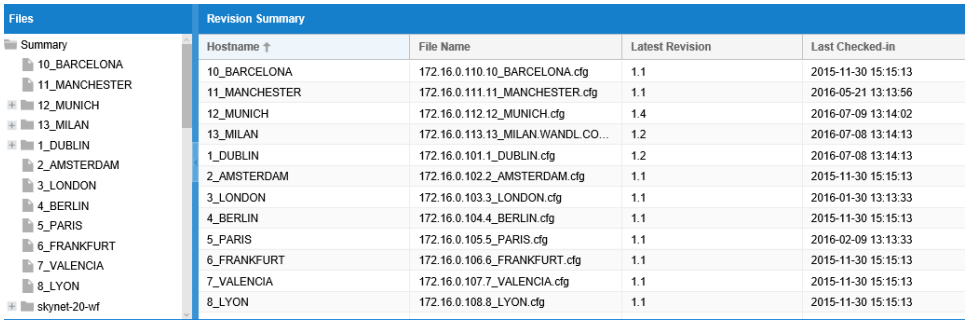
- Main Window Configuration Menu on page 95
- Hardware Inventory Reports on page 100

Configuration Revision Manager

The IP/MPLSView main window has a Configuration menu used to display network data, network reports, integrity checks, hardware inventory, equipment views, the configuration manager, and other miscellaneous reports.

Select **Configuration>Config Revision Manager**. The Revision Summary page is displayed showing the hostname, filename, latest revision, and the date that revision was checked-in. Devices are listed in the right pane. Figure 87 on page 104 shows the Revision Summary window.

Figure 87: Revision Summary Window

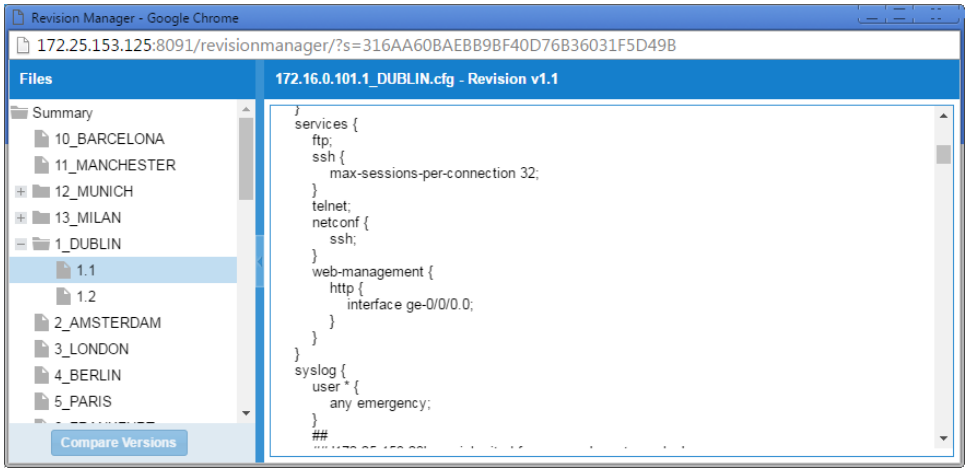


Hostname	File Name	Latest Revision	Last Checked-in
10_BARCELONA	172.16.0.110.10_BARCELONA.cfg	1.1	2015-11-30 15:15:13
11_MANCHESTER	172.16.0.111.11_MANCHESTER.cfg	1.1	2016-05-21 13:13:56
12_MUNICH	172.16.0.112.12_MUNICH.cfg	1.4	2016-07-09 13:14:02
13_MILAN	172.16.0.113.13_MILAN.WANDL.CO...	1.2	2016-07-08 13:14:13
1_DUBLIN	172.16.0.101.1_DUBLIN.cfg	1.2	2016-07-08 13:14:13
2_AMSTERDAM	172.16.0.102.2_AMSTERDAM.cfg	1.1	2015-11-30 15:15:13
3_LONDON	172.16.0.103.3_LONDON.cfg	1.1	2016-01-30 13:13:33
4_BERLIN	172.16.0.104.4_BERLIN.cfg	1.1	2015-11-30 15:15:13
5_PARIS	172.16.0.105.5_PARIS.cfg	1.1	2016-02-09 13:13:33
6_FRANKFURT	172.16.0.106.6_FRANKFURT.cfg	1.1	2015-11-30 15:15:13
7_VALENCIA	172.16.0.107.7_VALENCIA.cfg	1.1	2015-11-30 15:15:13
8_LYON	172.16.0.108.8_LYON.cfg	1.1	2015-11-30 15:15:13

Select a device in the Files pane to display the configuration file. If a device has multiple revisions, you can expand the menu item in the side pane to list the individual revisions.

Figure 88 on page 104 shows the device configuration file contents.

Figure 88: Configuration File Contents



To compare two revisions side-by-side, hold the control key and select two revisions. Then select **Compare Versions**. Figure 89 on page 105 shows the Version difference window.

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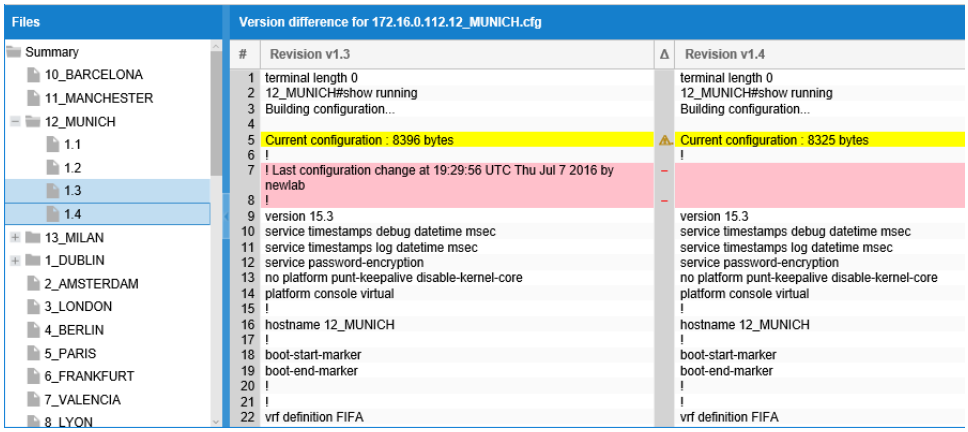
Figure 89: Version Difference Comparison



The configuration changes are color-coded:

Yellow—Indicates changes in the newer version.

Green—Indicates additions in the newer version.

Red—Indicates changes that were deleted in the newer version.

Related Documentation

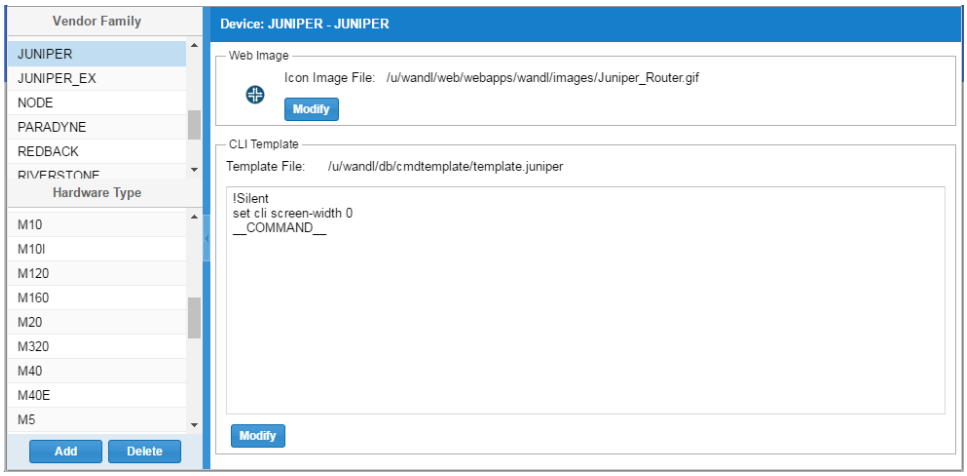
- Main Window Configuration Menu on page 95

Device Library Manager

The IP/MPLSView main window has a Configuration menu used to display network data, network reports, integrity checks, hardware inventory, equipment views, the configuration manager, the device library manager, and other miscellaneous reports.

Select **Configuration>Device Library Manager**. The Device Library Manager window is displayed. Figure 87 on page 104 shows the Device Library Manager window.

Figure 90: Device Library Manager Window

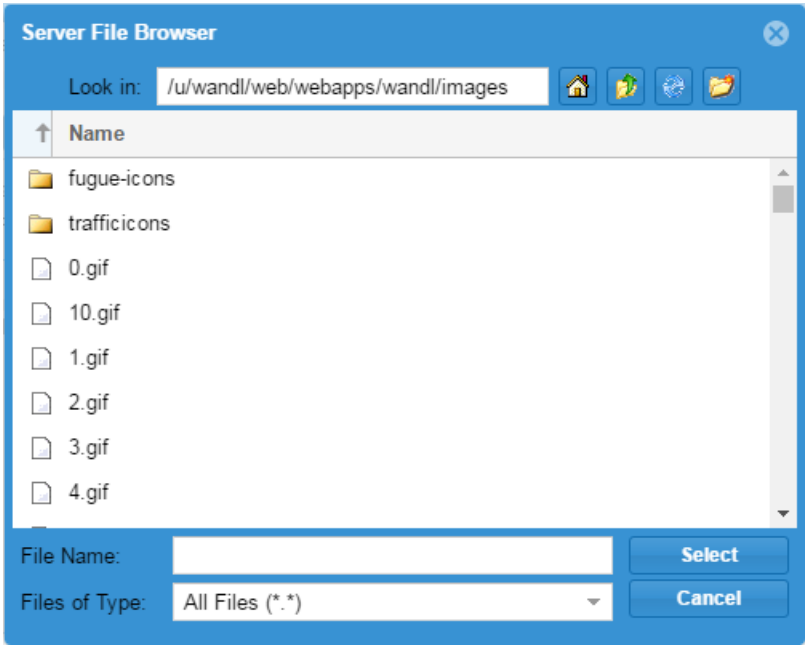


The CLI Template pane shows the file path to the template file used for CLI commands. Select **Modify** to change the CLI screen width used.

The Web Image pane shows the file path to the icon file for the device selected. Select **Modify** to change the icon file used.

Figure 91 on page 106 shows the Device Library Server File Browser window.

Figure 91: Device Library Server File Browser Window



To display the contents of a sub-directory, double-click the directory name. To return to the default directory, select the home icon. To refresh the display, select the blue-circle icon. To move up to the parent directory, select the up arrow icon.

To add a new hardware type, select **Add**. The New Hardware Type window is displayed. Select the vendor from the Vendor Family menu, type the name of the new hardware type, and select **Save**. To delete a hardware type, select the type, and select **Delete**.

The **vendortemplatefile.csv** file the in **/u/wandl/db/config/** directory contains the mapping of vendor, command template, and icon used.

Related Documentation

- Main Window Configuration Menu on page 95
- Admin View Menu on page 172

Misc Reports

The IP/MPLSView main window has a Configuration menu used to display network data, network reports, integrity checks, hardware inventory, equipment views, the configuration manager, and other miscellaneous reports.

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To access Miscellaneous Reports, select **Configuration > Misc Reports**.

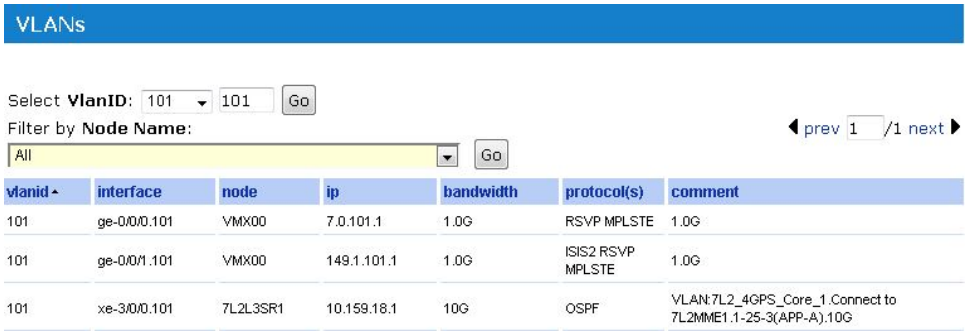
The Interface VLANs Assignment feature provides a list of the interfaces in the Live Network and the virtual LAN that each belongs to (if any). The data within the View VLANs page is derived from the IP/MPLSView interface map (intfmap) file. The intfmap file is created automatically when configuration files are collected and parsed.

Select **Configuration > Misc Reports > Interface VLANs Assignment**. Select the vlanid from the Select **vlanid** drop-down box, or type it directly into the text field to the right, to search for all the interfaces belonging to a particular VLAN. (See Figure 92 on page 107.) Select **None** to see all interfaces that do not have any associated vlanid. Select **All** to see all interfaces in the network. If the vlanid for a particular entry says n/a (data not available), then that interface does not belong to a VLAN.

You can also search for all interfaces at a particular node by using the Filter by node name text field. This filter is case-sensitive and the full node name should be entered (no regular expressions).

NOTE: **Both the Select vlanid and Filter by node name options always search from within all interfaces in the network.**

Figure 92: View VLANs



vlanid	interface	node	ip	bandwidth	protocol(s)	comment
101	ge-0/0/0.101	VMX00	7.0.101.1	1.0G	RSVP MPLSTE	1.0G
101	ge-0/0/1.101	VMX00	149.1.101.1	1.0G	ISIS2 RSVP MPLSTE	1.0G
101	xe-3/0/0.101	7L2L3SR1	10.159.18.1	10G	OSPF	VLAN:7L2_4GPS_Core_1.Connect to 7L2MME1.1-25-3(APP-A).10G

As long as a collection of “config” and “interface” have been performed from the Task Manager using either CLI Collection, Autodiscovery, or Scheduling Live Network Collection, this data will be accessible.

The Tunnel Path Report feature provides reports about the tunnel status and tunnel path detail (for example, the “Record Route”) based on the same command used for the “tunnel path” collection method. The IP addresses are automatically resolved to the corresponding router and interface for convenience. To view this report, run the Scheduling Live Network Collection Task with **config**, **Tunnel Path**, and **Transit Tunnel** options selected. To access the report, select **Configuration > Misc Reports > Tunnel Path Report**. Figure 93 on page 108 shows a tunnel path report.

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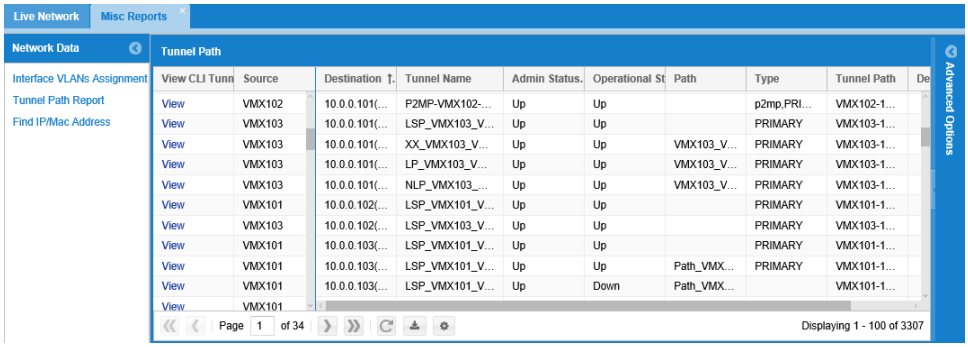
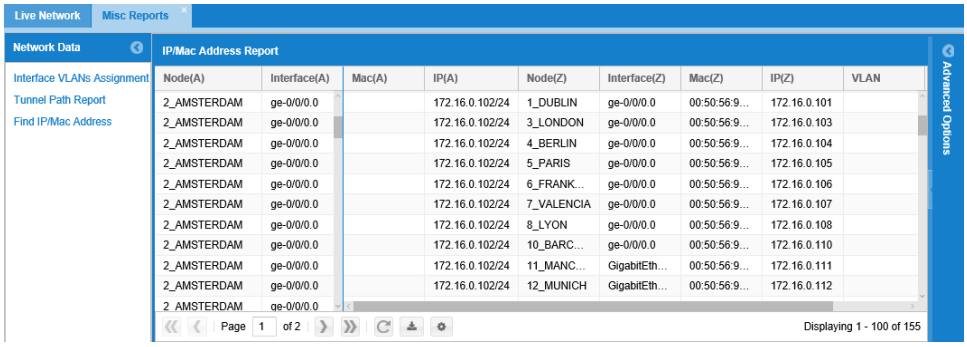
Figure 93: Tunnel Path Report



The Find IP/Mac Address feature provides reports about IPs and MAC Addresses in the network. To view this report, run the Scheduling Live Network Collection Task with the **config** and **ARP** options selected. To access the report, select **Configuration > Misc Reports > Find IP/Mac Address**.

Figure 94: IP/Mac Address Report



Related Documentation

- Main Window Configuration Menu on page 95

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CHAPTER 8

Fault Menu

- Main Window Fault Menu on page 109
- Fault Menu Live Event Browser on page 109
- Fault Menu Historical Event Browser on page 114
- Event Count Chart on page 117
- Event Summary Reports on page 120
- Event Options on page 121

Main Window Fault Menu

The IP/MPLSView main window has a Fault menu used to display live and historical event browsers, event summary reports, and to edit thresholds. "Fault Menu" on page 109 shows the main window Fault menu.

Figure 95: Main Window Fault Menu

Related Documentation

- IP/MPLSView Main Window Overview on page 25
- Fault Menu Live Event Browser on page 109
- Event Summary Reports on page 120

Fault Menu Live Event Browser

The IP/MPLSView main window has a Fault menu used to display an event browser and event summary reports, to edit thresholds, and to edit event subscriptions. The Event Browser can be used to monitor changes to the network such as link status, LSP tunnel status, impacted LSPs and associated LSP events during linkDown, VPN status,

application errors, and many other types of events. To see live trap data using the Event Browser, the network devices must be configured to send SNMP trap messages.

Select **Fault>Live Event Browser** to start the live Event Browser application.

The event browser lists the events as they are received from the network nodes and other IP/MPLSView subsystems. Use the Event Browser to group, analyze, acknowledge, and clear these events.

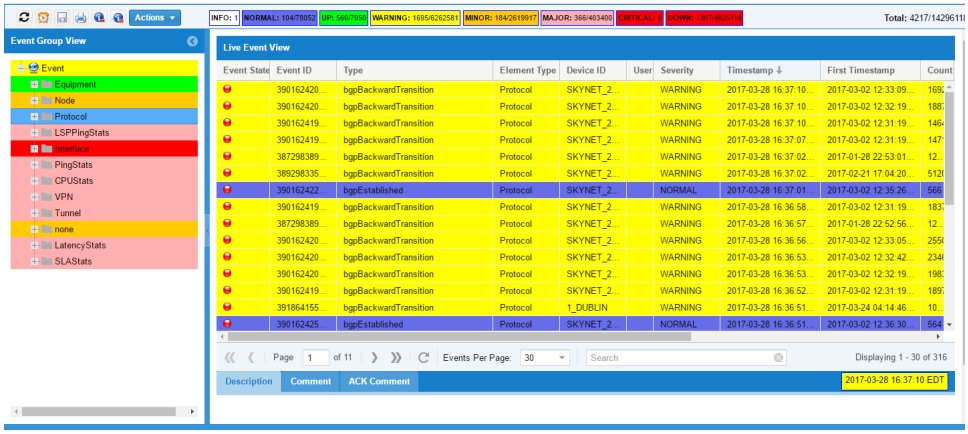
In the display, events are colored. By default, critical events are red, warnings are yellow, and major events are pink.

Icons at the top of the window are used to synchronize events with the Event Server, post network events, save events to a file, print events, toggle INFO events, and clear all INFO events.

Select an event to display event details in the lower pane of the window, including the related MIB attributes and their values.

Figure 96 on page 110 shows the Event Browser window.

Figure 96: Live Event Browser Window



Select an event and right -click to display a list of actions. Figure 97 on page 111 shows the right-click actions menu.

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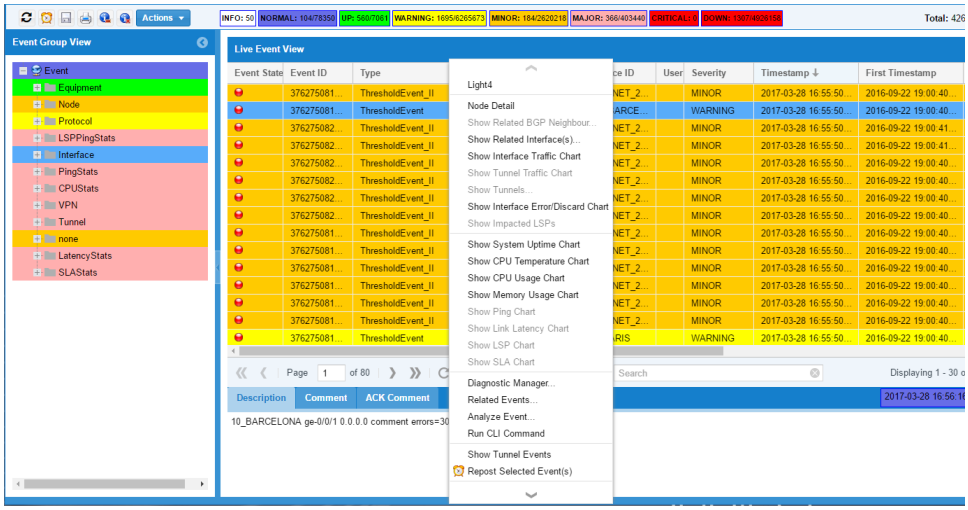
Figure 97: Live Event Browser Right-Click Actions Menu

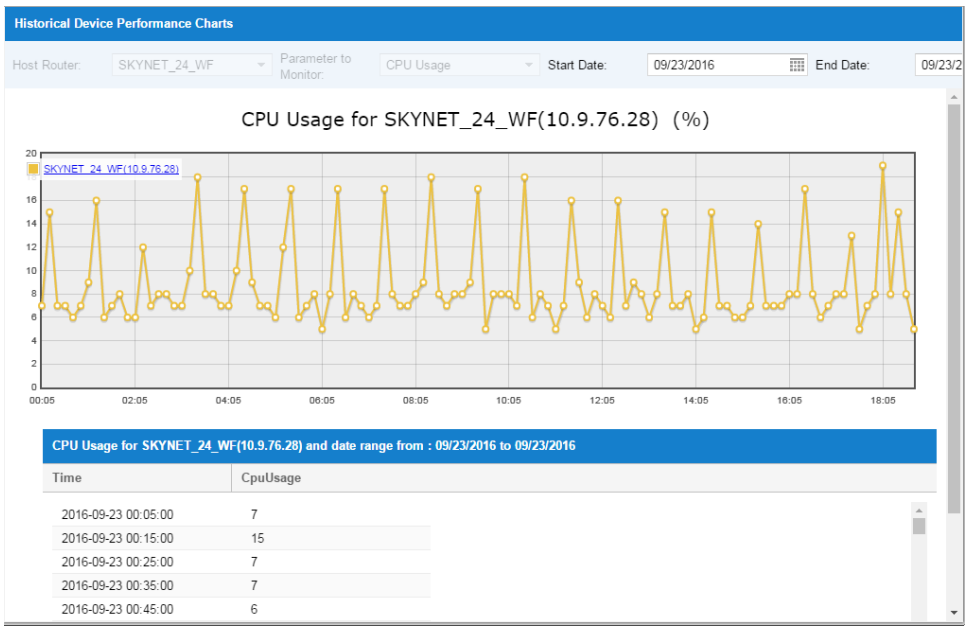


Using selections in the lower part of the menu, you can acknowledge an event, clear events, or query for the event history. After an event is cleared, it is only displayed in the historical Event Browser.

From the action menu, you can open the Diagnostic Manager to ping a device, ping an interface, execute a trace route, and show tunnel events. You can also chart system up time, CPU temperature, memory usage, and tunnel traffic.

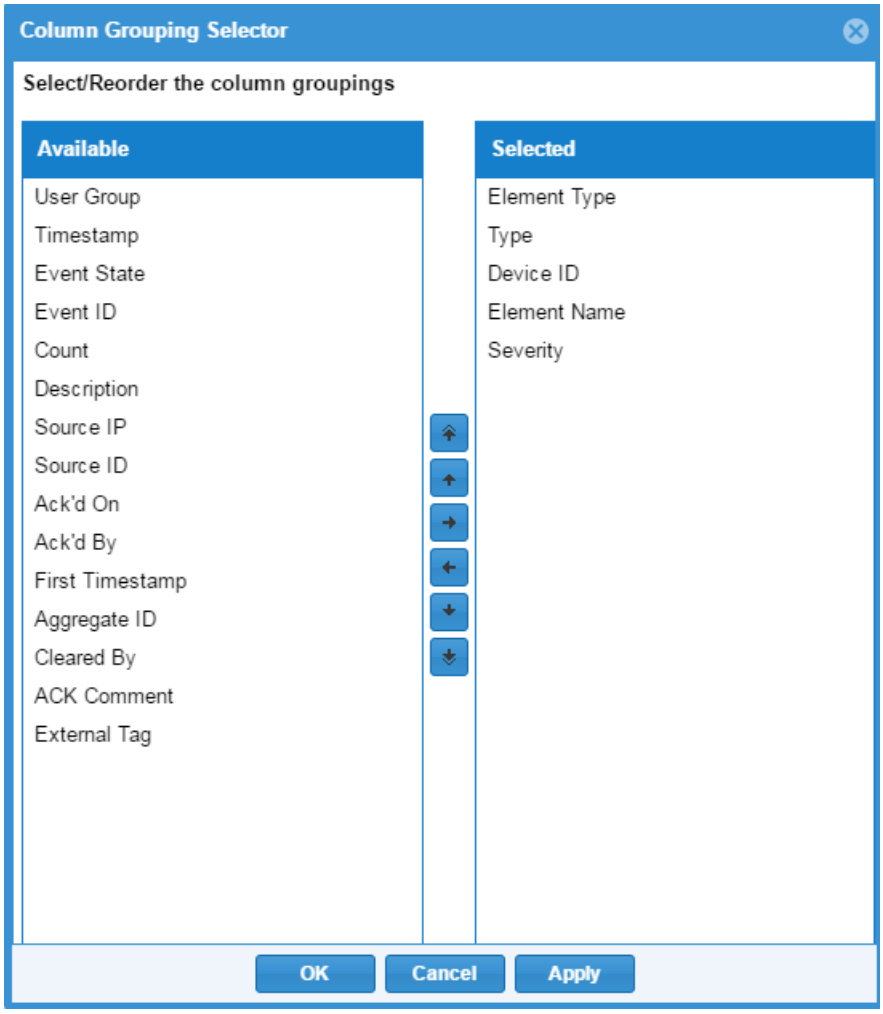
Figure 98 on page 111 shows a CPU Usage chart.

Figure 98: CPU Usage Chart



You can display a list of events in the Event Group View pane. To set the available groups in the list, Select **Actions>Group Event**. The Column Grouping Selector window is displayed. Figure 99 on page 112 shows the Column Grouping Selector window.

Figure 99: Event Browser Column Grouping Selector Window



Select the grouping you want and use the arrows to arrange and order the groups. When multiple properties are selected, events are grouped hierarchically according to their order within the list, starting from the top of the list. Click **Apply** to add the groups to the Event Group view. Select **OK** to close the window.

To analyze an event, select the event, right-click, and select **Analyze Event**. The Root Cause Analysis window is displayed.

Figure 100 on page 113 shows the Root Cause Analysis window.

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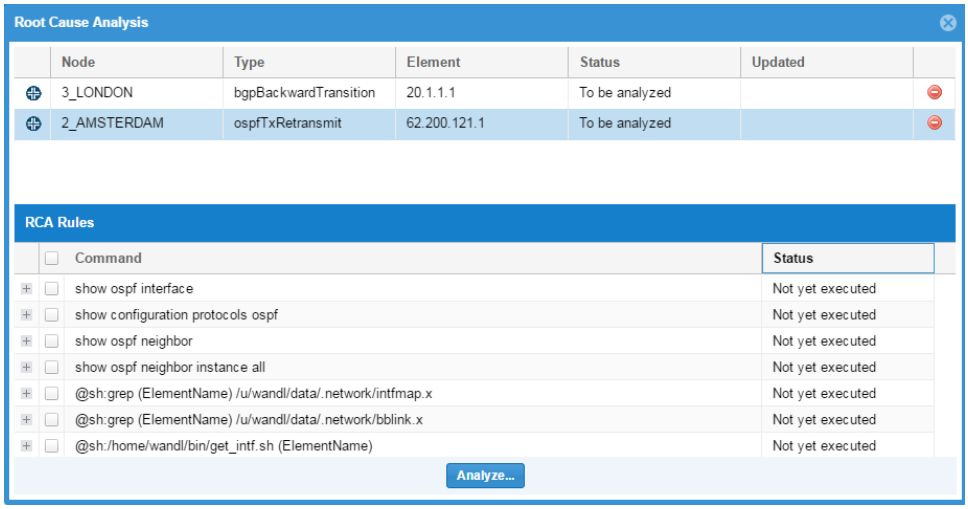
Figure 100: Root Cause Analysis Window



Select an event. The RCA Rules pane displays a list of commands that can be used to analyze the event. Select the commands you want to use and click **Analyze**. The commands are executed on the node. Expand the command in the RCA Rules pane to display the results.

Select **Actions > Options** to change how the Event Browser displays the events, enable event sound clips, add URL actions, and set the poll and update timers. Figure 101 on page 113 shows the Event Browser Options window.

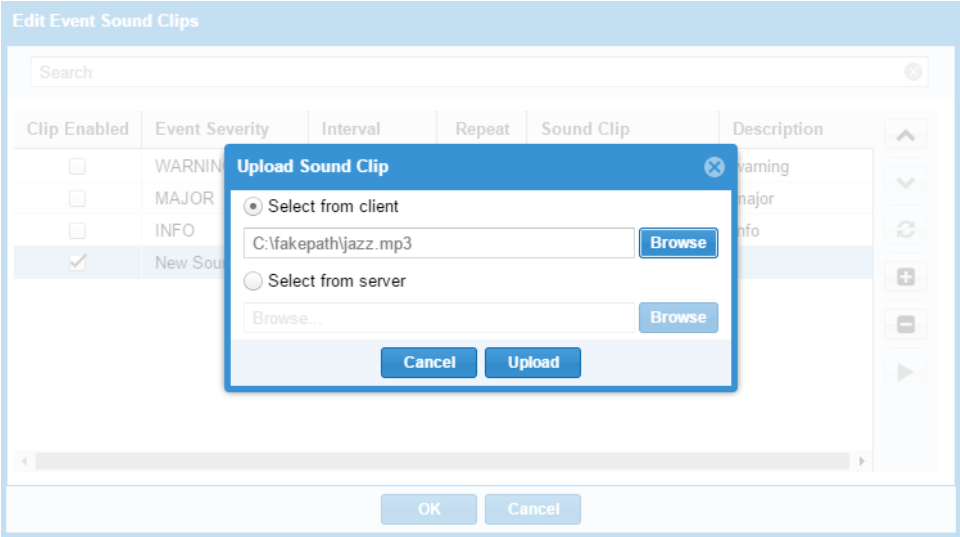
Figure 101: Event Browser Options Window

In the Set Event Browser options window, you can set the severity colors, select which columns are displayed, configure URL actions, configure event sound clips, and change the poll interval.

To add a URL to the event select **Edit URL Actions**. In the Edit URL Actions window, type the name of the action, the URL, and a description. Select **OK**. The name of the action is displayed at the top of the event browser right-click menu. Figure 97 on page 111 shows a URL action named Light4.

To upload an event severity sound clip, select **Edit event severity sound clips**. In the Edit Event Sound Clips window, click the plus sign (+) in the right pane. In the new row, select the Sound Clip column to upload a sound clip from either the local client or server. Figure 102 on page 114 shows the Upload Sound Clip window.

Figure 102: Upload Sound Clip Window



Related Documentation

- Main Window Fault Menu on page 109
- Event Summary Reports on page 120
- Fault Menu Historical Event Browser on page 114

Fault Menu Historical Event Browser

The IP/MPLSView main window has a Fault menu used to display an event browser and event summary reports, to edit thresholds, and to edit event subscriptions. The Event Browser can be used to monitor changes to the network such as link status, LSP tunnel status, VPN status, application errors, and many other types of events.

Select **Fault>Historical Event Browser** to start the Historical Event Browser.

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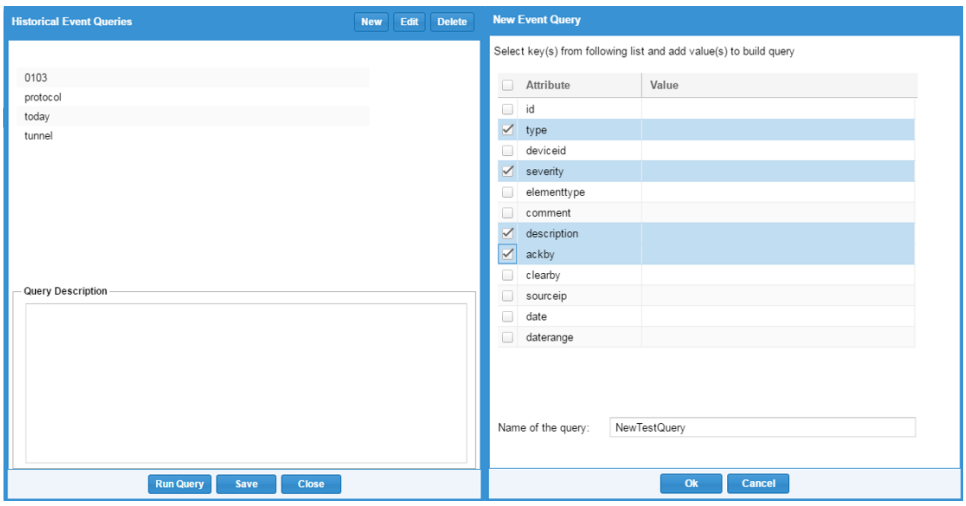
NOTE: For an event to be displayed in the historical event browser, it must first be cleared in the Live Event Browser.

To display events in the historical event browser, select **Actions > Manage Queries**. The Historical Events Query window is displayed.

In the Historical Events Query window, select **New**. The New Event Query window is displayed.

Select the attributes you want and select a value from the menu in the field. Figure 103 on page 115 shows the Historical Event Queries and New Event Query windows.

Figure 103: Historical Event Queries and New Event Query Window



From the Select Event Query menu, select the query you want and click the arrow. The results are displayed in the Historical Event Browser window.

Events are colored. By default, critical events are red, warnings are yellow, and major events are pink.

Icons at the top of the window are used to synchronize events with the Event Server, post network events, save events to a a file, print events, toggle INFO events, and clear all INFO events.

Select an event to display event details in the lower pane of the window.

Figure 104 on page 116 shows the historical Event Browser window with one event selected.

Figure 104: Historical Event Browser Window

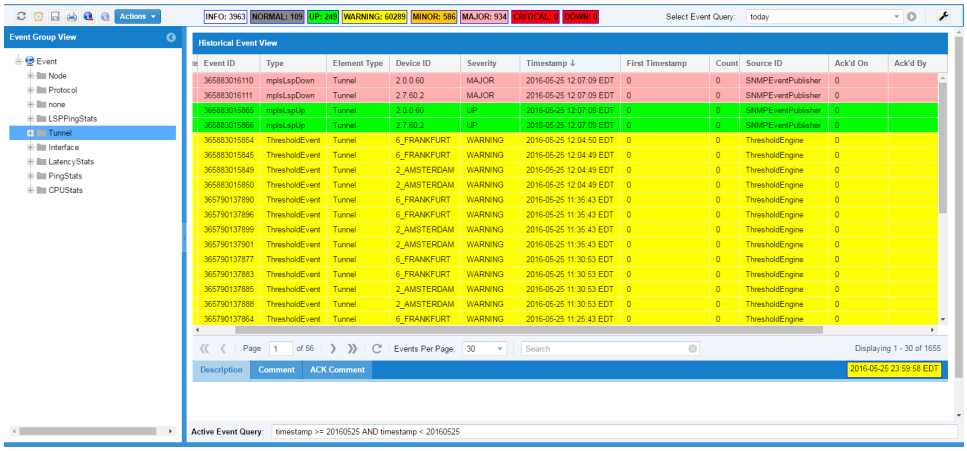


Table 10 on page 47 describes the Historical Event Browser table columns.

Table 22: Historical Event Browser Table Columns

Column Name	Description
Event State	This is the state of the event.
Event ID	This is the unique ID of the event. If the row corresponds to an aggregate event, this is the ID of the most recent event in the aggregated events.
Type	Supplied by the device sending the event, and is usually a terse description of the information represented by the event. For example, linkUp, mplsLspDown. Event types are defined in the **/u/wandl/db/config/eventtypes.store** file.
Element Type	The element associated with the event. For example, Interface, Tunnel, or VPN.
Device ID	Usually the hostname of the device. These names are derived from files created by a Scheduling Live Network Collection task in the Task Manager.
Element Name	The name of the element. For example, if the element type is Interface, the element name might be ge-0/0/3.0.
Severity	The severity of the event can be INFO, UP, WARNING, MINOR, MAJOR, CRITICAL, or DOWN. These are automatically set by default for each event, but can also be customized.
Timestamp	The time the event occurred, using the server's time zone. For aggregate events, this is the time the most recent event occurred.
First Timestamp	(For aggregate events only.) The timestamp of the first event in the aggregated events.
Count	(For aggregate events only.) The number of events included in the aggregate event.
Source IP	This is the IP address of the device sending the event.
Source ID	This is the identifier of the device sending the event.

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Table 22: Historical Event Browser Table Columns (continued)

Column Name	Description
Ack'd On	The time the event was acknowledged.
Ack'd By	The name of the user who acknowledged the event.
Aggregate ID	Identifier for the aggregate event.
Cleared By	The name of the user who cleared the event.

Note that the number of rows in the events table may not be the same as the number of events due to aggregation of events. Events that share the same Event Type, Device ID, Element Type, and Element Name are grouped together into one row representing an aggregate event in order to reduce clutter in the Event Browser.

Related Documentation

- Main Window Fault Menu on page 109
- Event Summary Reports on page 120
- Fault Menu Live Event Browser on page 109

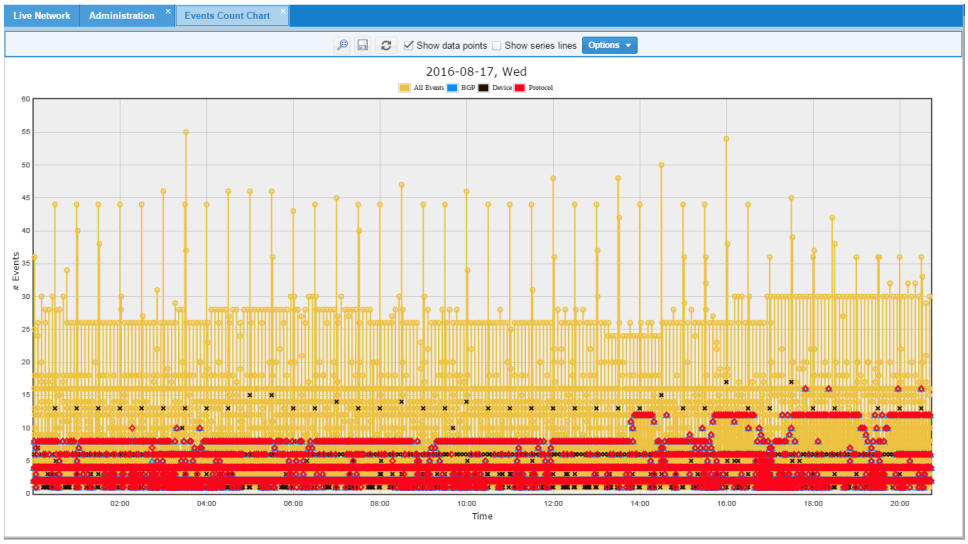
Event Count Chart

The IP/MPLSView main window has a Fault menu used to display an event browser, event summary reports, link availability reports, event charts, and to edit thresholds.

Select **Fault>Event Count Chart** to display the Event Count Chart window.

Figure 105 on page 117 shows the Event Count Chart window.

Figure 105: Event Count Chart Window



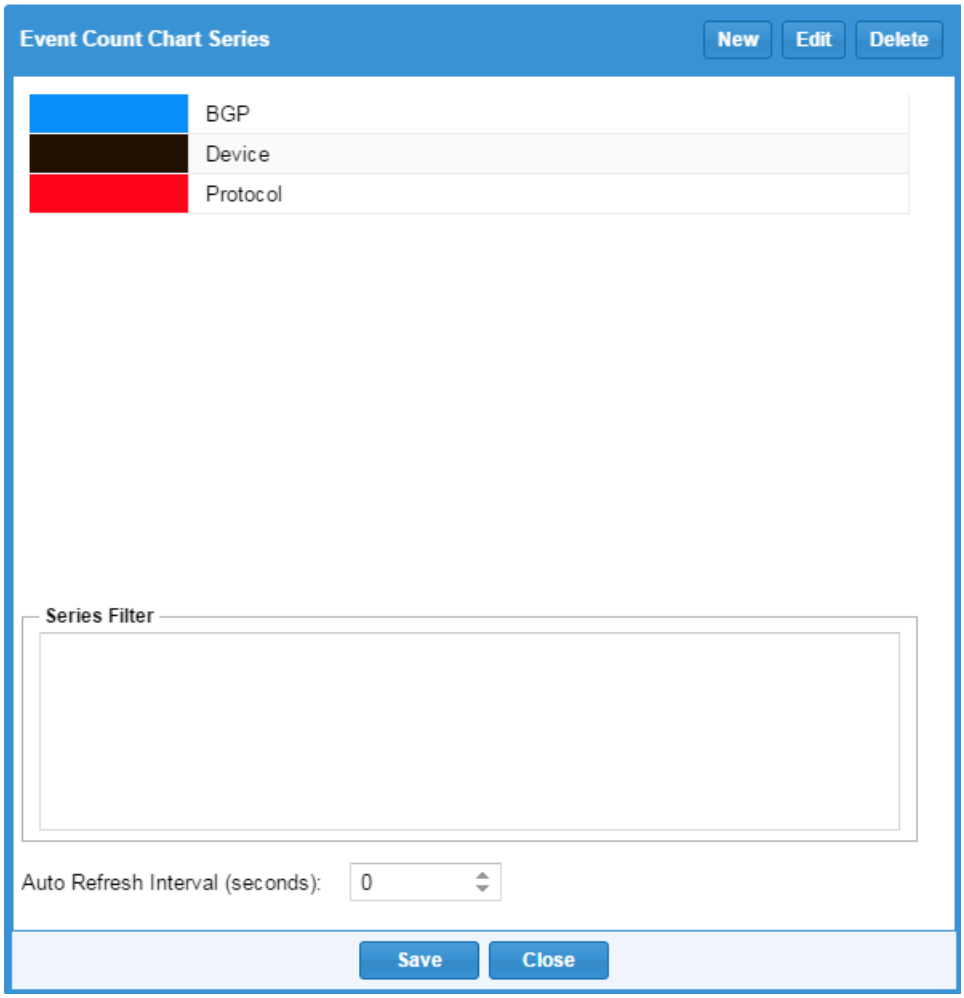
The chart shows the event count for all events in gold, BGP events in blue, device events in black, and protocol events in red.

In the chart window, you can use the controls at the top of the window to reset the zoom, save the chart as an image, and reload the chart. Hold your mouse pointer over a data point to display a pop-up pane that shows the event count. Drag your mouse over a section of the chart to zoom in.

You can also select to show or hide data points and show or hide series lines.

From the Options menu, you can show or hide protocol, device, and BGP events. Select **Options>Manage Series**. The Event Count Chart Series window is displayed. Figure 106 on page 118 shows the Event Count Chart Series window.

Figure 106: Event Count Series Window



Select the color and enter a different number to change the color displayed for each event series or select the color from the color selection window displayed. When you select the series color, the series filter is displayed in the Series Filter pane. You can change the auto refresh rate from the Auto Refresh Interval menu. A value of 0 does not refresh.

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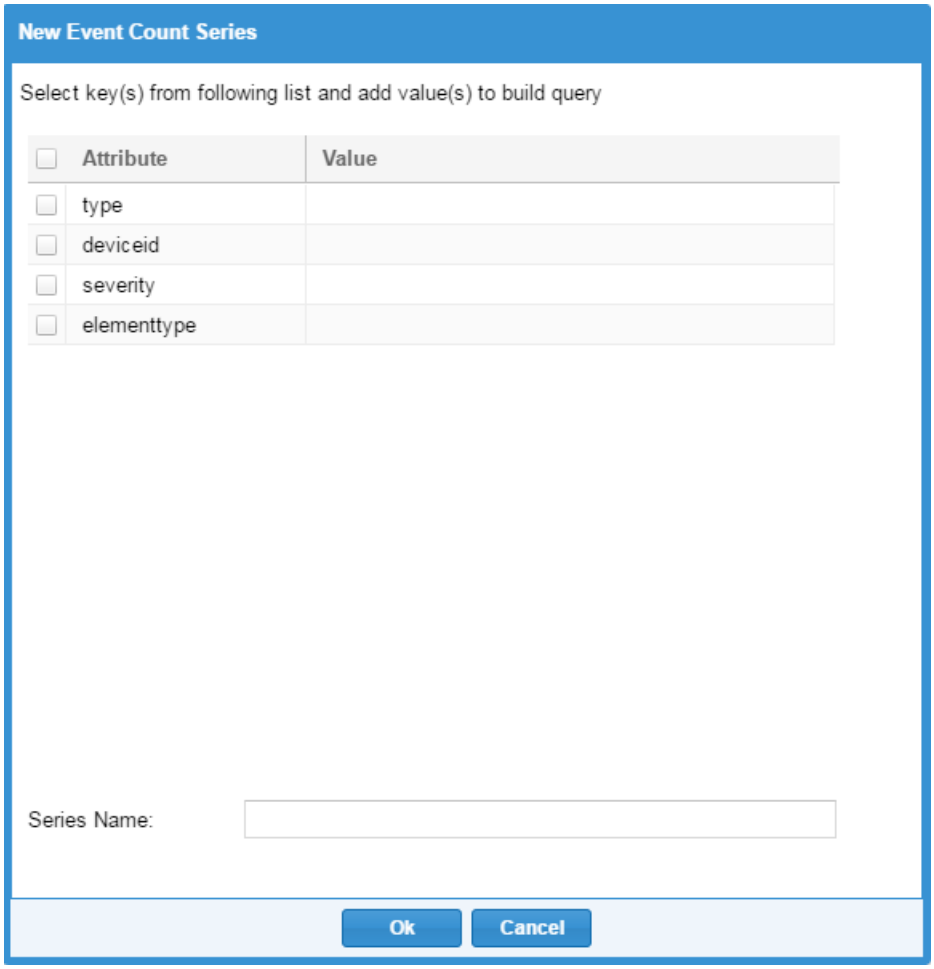
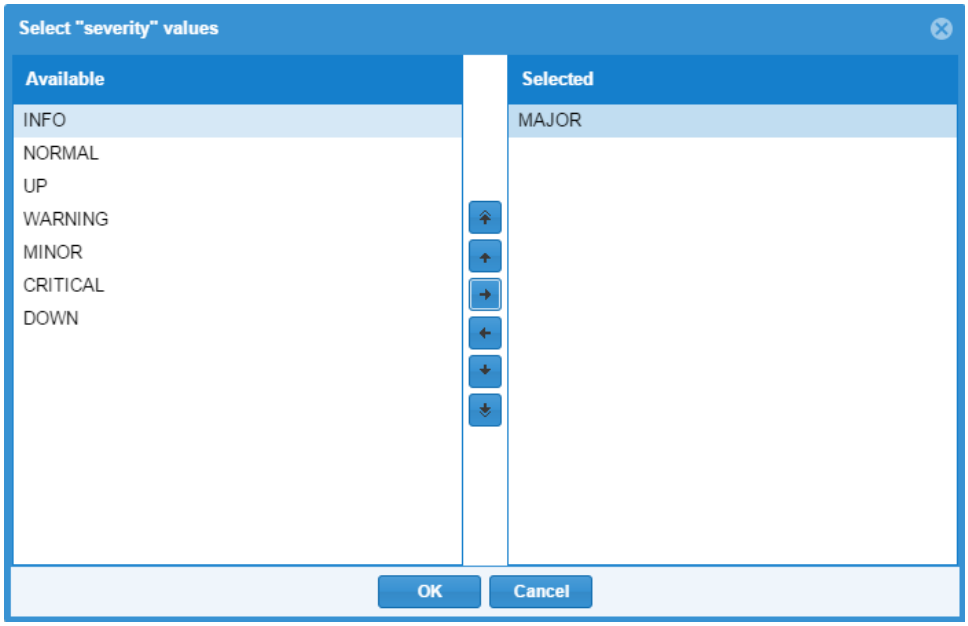
To create a new series, select **New**. The New Event Count Series window is displayed. Figure 107 on page 119 shows the New Event Count Series window.

Figure 107: New Event Count Series Window



Type the name for the series in the Series Name field. Select a key in the attribute list and then click in the **Value** field. A select values window is displayed. Figure 108 on page 120 shows the Select “severity” values window.

Figure 108: Select Severity Values Window



Select the value you want in the Available pane and select the right arrow to move it to the Selected pane. Select **OK**. The value is displayed in the New Event Count Series window. Continue to select the query values you want, then select **Ok**. The new series is displayed in the New Event Count Series window.

To edit a series, select **Edit**. To delete a series, select the series and select **Delete**.

Related Documentation

- Main Window Fault Menu on page 109
- Fault Menu Live Event Browser on page 109
- Fault Menu Historical Event Browser on page 114
- Event Summary Reports on page 120

Event Summary Reports

The IP/MPLSView main window has a Fault menu used to display an event browser, event summary reports, and link availability reports and to edit thresholds.

Select **Fault>Event Summary Reports** to display the Event Summary Reports window. The Event Summary window is displayed.

Figure 109 on page 121 shows the Event Summary window.

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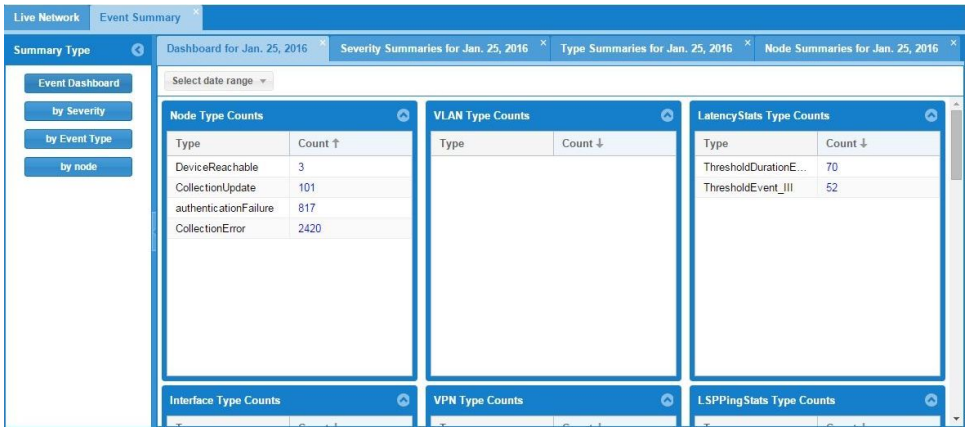
Figure 109: Event Summary Window



The Event Summary window displays an event dashboard in the right pane and a Summary Type list in the left pane. In the dashboard, events are listed by type. You can expand or hide each event type pane and change the sort order. Select a date range from the Select date range menu.

From the Summary Type pane, you can display a text list of events. Select **by Severity**, **by Event Type**, or **by node**. Figure 110 on page 121 shows the Event Summary window with **by Severity** selected.

Figure 110: Event Summary by Severity Window

From the column header menus you can display or hide each event type and change the sort order. Select a date range from the Select date range menu.

Related Documentation

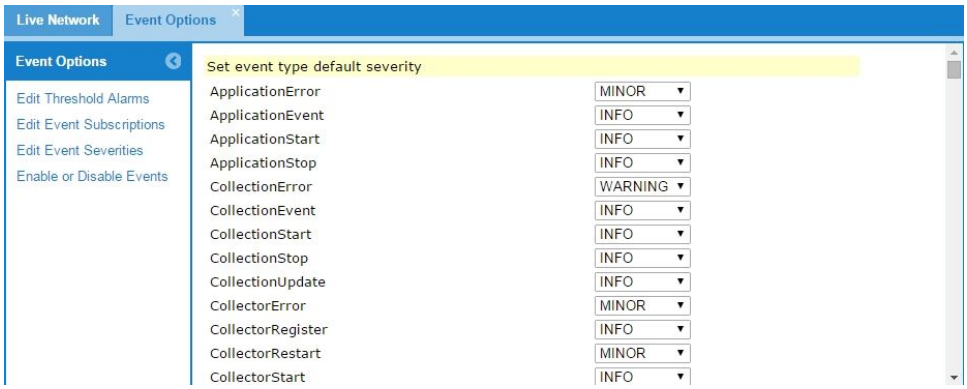
- Main Window Fault Menu on page 109
- Fault Menu Live Event Browser on page 109

Event Options

The IP/MPLSView main window has a Fault menu used to display an event browser, event summary reports, and to edit thresholds.

Select **Fault > Event Options** to display the Event Options window. Figure 111 on page 122 shows the Event Options window with the default **Edit Event Severities** option selected.

Figure 111: Event Options Window



From the event pull-down menu, select the severity you want for each event. Scroll to the bottom of the window and click **Apply**.

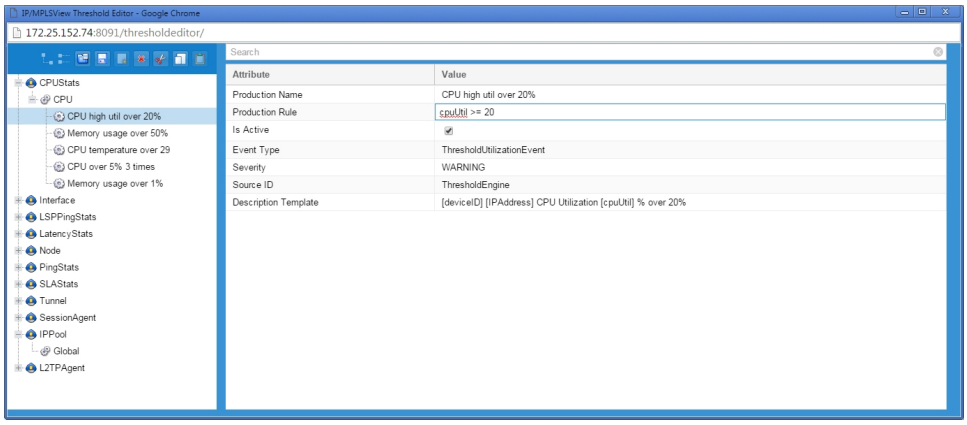
You can use the Threshold Editor to provide notifications when certain thresholds are exceeded. Through the threshold editor, you can configure rules, which if triggered, create a threshold event. For example, a rule can be generated when a link exceeds a certain percentage utilization or when a node's CPU utilization exceeds a certain percentage. The threshold events are displayed in the Event Browser and can also be subscribed to by e-mail or SMS using the Subscription Editor.

Threshold alarms are triggered by data periodically collected by the Traffic Collection Manager, or the Task Manager *Device SNMP Collection*, *Device Ping Collection*, or *Device SLA Collection* tasks.

Click **Edit Threshold Alarms**. The IP/MPLSView Threshold Editor window is displayed.

Figure 112 on page 122 shows the IP/MPLSView Threshold Editor window with the CPUStats element type, CPU scope, and CPU high util threshold rule selected.

Figure 112: IP/MPLSView Threshold Editor Window



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Icons at the top of the left pane provide the actions of: Expand All, Collapse All, Load, Save, Create, Delete, Cut, Copy, and Paste. Expand the list of thresholds and select the threshold value you want to edit.

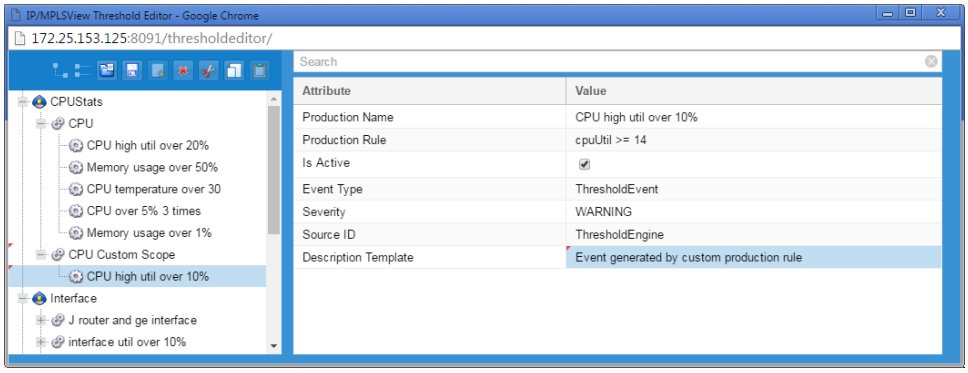
To change the threshold level of an existing rule, select the value to the right of the Production Rule. Change the value and click the **Save** icon.

You can create a new scope. Select the element type and click the **Create** icon. A new scope named *Undefined* is added to the list. Supply the parameters to create the new scope.

To create a new threshold rule, expand the element type, select the scope, and click the **Create** icon. A new threshold named *Undefined* is added to the list and displayed in the right pane. Supply the parameters to create the new rule.

Figure 113 on page 123 shows the Threshold Editor window with a new scope and rule defined.

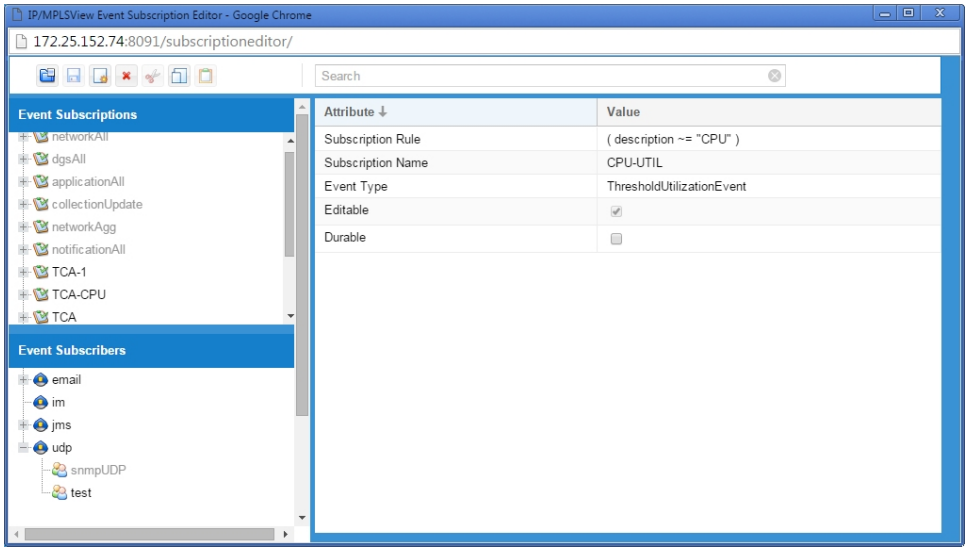
Figure 113: IP/MPLSView Create New Threshold Window



In the Event Options window, select **Edit Event Subscriptions**. The Event Subscription Editor window is displayed.

Figure 114 on page 124 shows the Event Subscription Editor window with the CPU high util threshold selected.

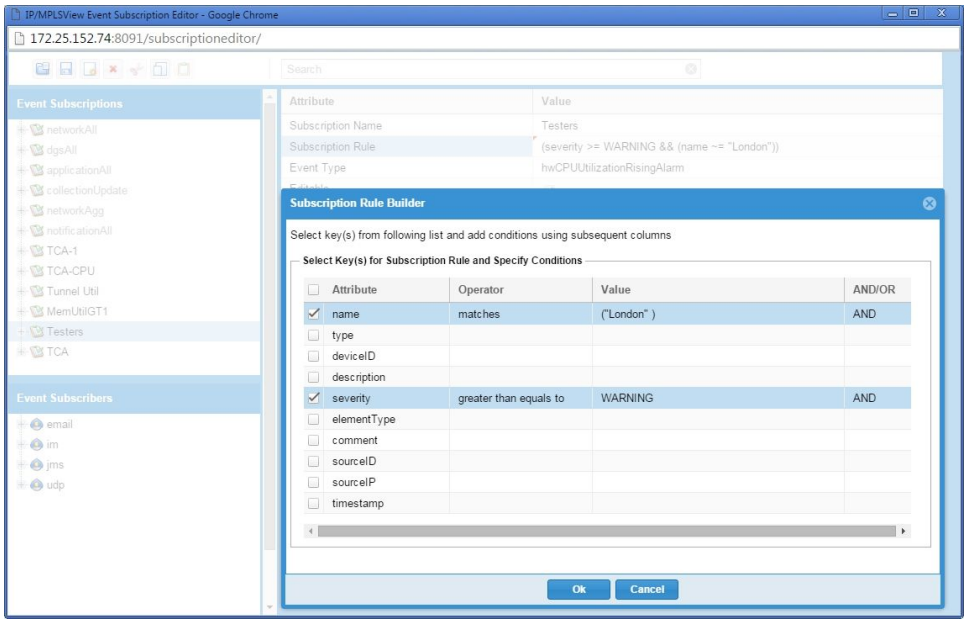
Figure 114: Event Subscription Editor Window



Icons at the top of the left pane provide the actions of: Load, Save, Create, Delete, Cut, Copy, and Paste. To create a new subscription, click the Create icon, type a subscription name, select the event from the Event Type menu and select **true** or **false** from the Durable menu. The Durable option specifies if the event subscription is persistent over a server restart.

Right-click Subscription Rule and select **Subscription Rule Builder**. The Subscription Rule Builder window is displayed. Figure 115 on page 124 shows the Subscription Rule Builder window with values added.

Figure 115: Subscription Rule Builder Window



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Select the attributes you want. Select **AND** or **OR** from the AND/OR menu. Select the severity value. Select the operators for each value. Operators include equals to, not equals to, matches, greater than, greater than equals to, less than, less than equals to, and between.

To enter text such as the name, click in the Value field. The Add/Remove Text window is displayed. Enter the text to match and click **Add**, then click **Ok**. Click **Ok** in the Subscription Rule Builder. The new rule is displayed in the Event Subscription Editor window.

Click the **Save** icon.

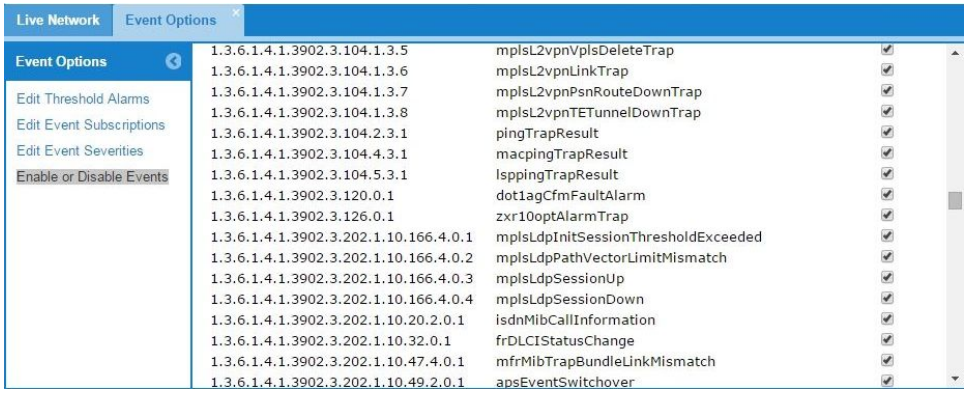
To add a new e-mail to the Event Subscribers list, click **email**, and then click the Create icon. A new e-mail identified as Undefined is listed. Select the **Undefined** e-mail, type the recipient e-mail address, select the e-mail format from the Email Format pull-down menu, select **true** or **false** from the Durable menu, and click the **Save** icon. The new e-mail is listed in the Event Subscribers pane.

You can also add a Java Message Service (JMS), instant messenger (IM), or UDP subscriber to interact with third-party applications.

After creating an event subscriber, you assign an event subscriber to an event subscription by dragging and dropping the event subscriber from the bottom left panel to an event subscription in the top left panel.

To enable or disable the sending of SNMP traps for an event, click **Enable or Disable Events**. The Enable/Disable SNMP trap configuration window is displayed. Figure 116 on page 125 shows the SNMP trap configuration list.

Figure 116: Enable/Disable SNMP Trap Configuration Window



Scroll down the list to the trap you want to edit. Check or uncheck the trap. Scroll to the bottom of the window and click **Apply**.

Related Documentation

- Main Window Fault Menu on page 109

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CHAPTER 9

Performance Menu

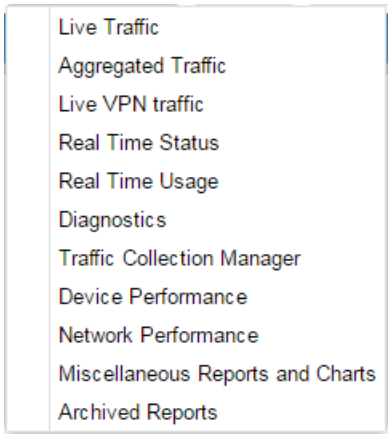
- Main Window Performance Menu on page 127
- Live Traffic on page 128
- Aggregated Traffic on page 135
- Live VPN Traffic on page 139
- Real Time Status on page 139
- Real Time Usage on page 144
- Diagnostics on page 148
- Performance Menu Run CLI on page 149
- Diagnostic Manager on page 152
- Traffic Collection Manager on page 155
- Device Performance on page 157
- Network Performance on page 158
- Miscellaneous Reports and Charts on page 161
- Archived Reports on page 163

Main Window Performance Menu

The IP/MPLSView main window has a Performance menu used to display live traffic, aggregated traffic, real-time status and usage, device and network performance, and diagnostics. It is also used to manage the traffic collector, and run CLI tests.

Figure 117 on page 128 shows the main window Performance menu.

Figure 117: Main Window Performance Menu



Related Documentation

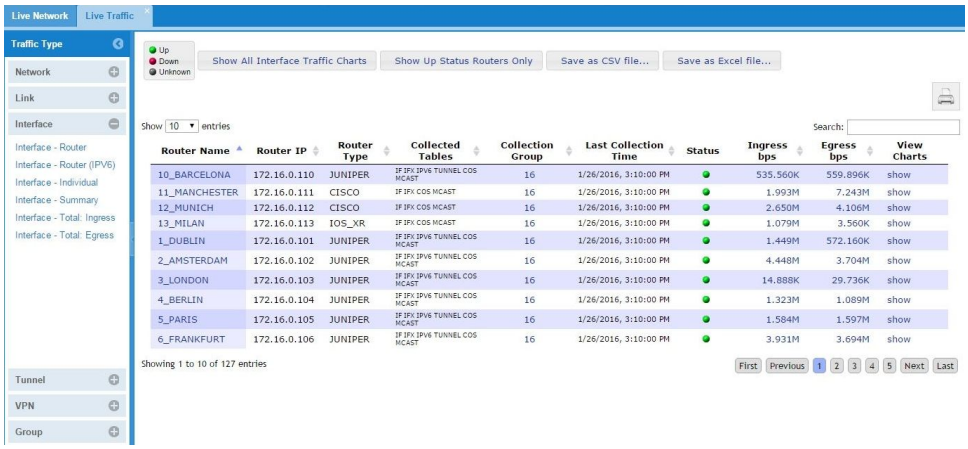
- IP/MPLSView Main Window Overview on page 25
- Live Traffic on page 128
- Traffic Collection Manager on page 155
- Device Performance on page 157
- Network Performance on page 158

Live Traffic

The IP/MPLSView main window has a Performance menu used to display live traffic, aggregated traffic, real-time status and usage, device and network performance, and diagnostics. It is also used to manage the traffic collector.

Select **Performance>Live Traffic** to display the Live Traffic window. Figure 118 on page 128 shows the Live Traffic window.

Figure 118: Live Traffic Window



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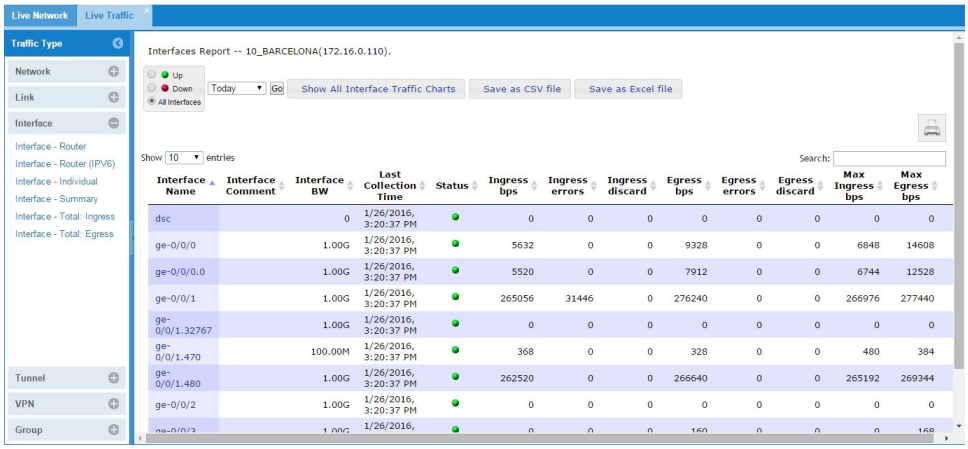
Click a device name to display a list of interfaces on that device. Figure 119 on page 129 shows the Live Traffic Interfaces Report window.

Figure 119: Live Traffic Interfaces Report Window



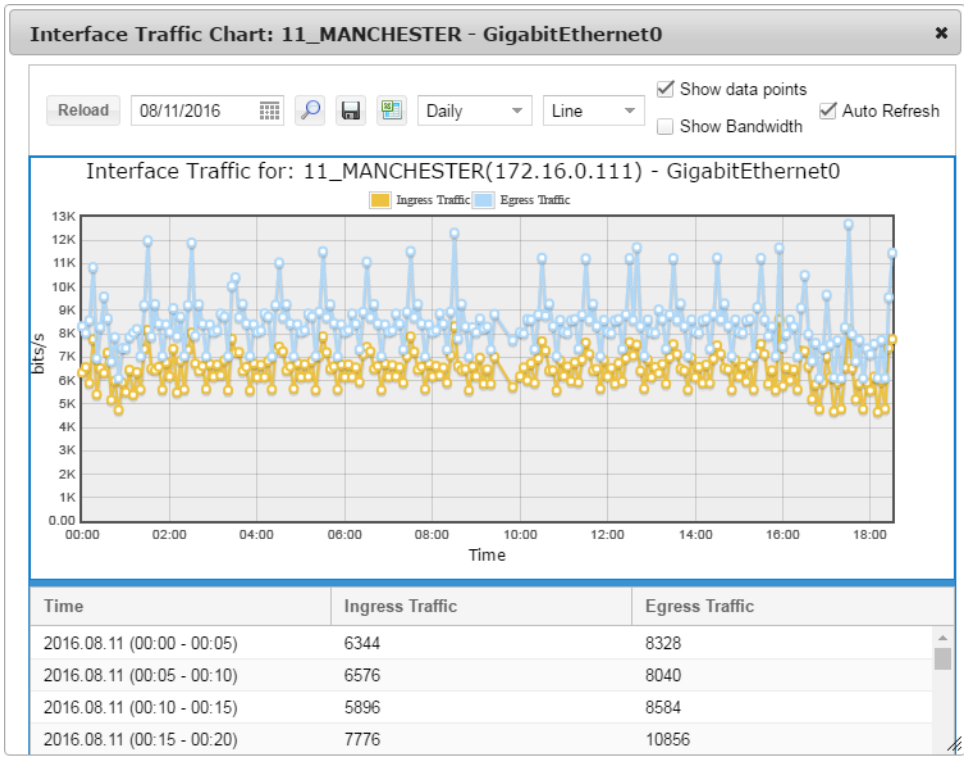
Click the name of an interface. The daily, weekly, monthly, and yearly traffic charts are displayed. Figure 120 on page 129 shows the Interface State and Traffic Report window.

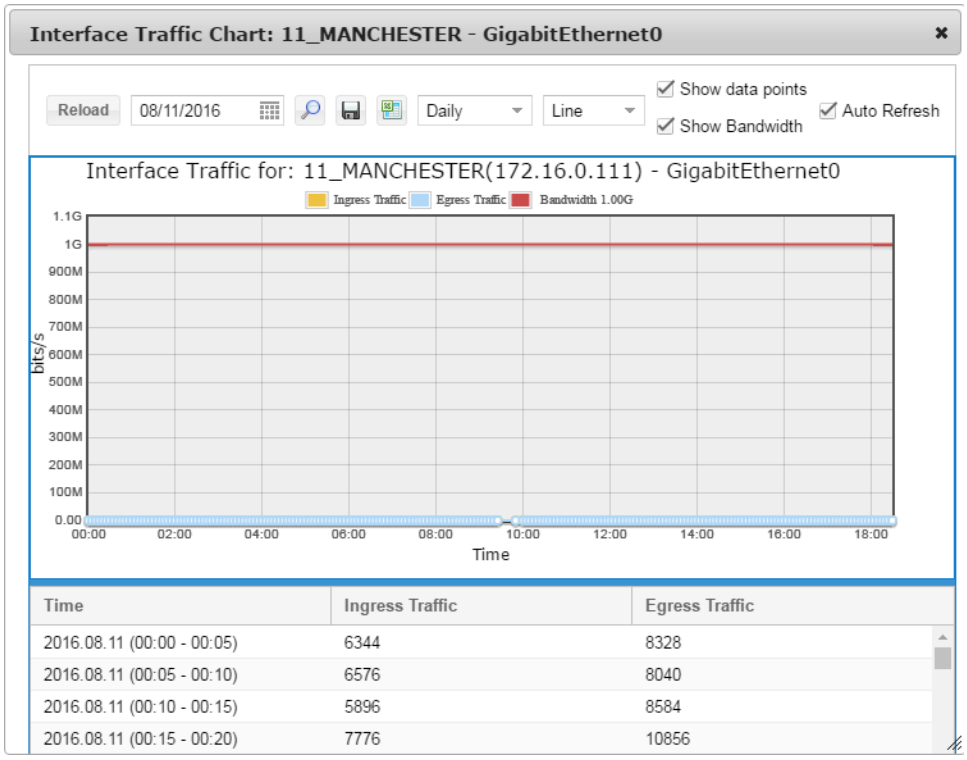
Figure 120: Interface State and Traffic Report Window

Open the Chart Legend menu to select which values are displayed.

Click **Traffic Chart** to open a traffic chart for the interface in a separate window. Figure 121 on page 130 shows the Interface Traffic Chart window without Show Bandwidth selected and with Show Bandwidth selected.

Figure 121: Interface Traffic Chart Window





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The upper pane shows the ingress and egress traffic charts. The bottom pane lists the traffic values for each data point time.

In the Interface Traffic Chart window, you can use the controls at the top of the window to reload the chart, select the day, week, month, or year, reset the zoom, save the chart as an image, export to Excel, select the time period, select the chart style, show or hide the data points, show the policed bandwidth, and enable auto refresh. Hold your mouse pointer over a data point to display a pop-up pane that shows the time and traffic value.

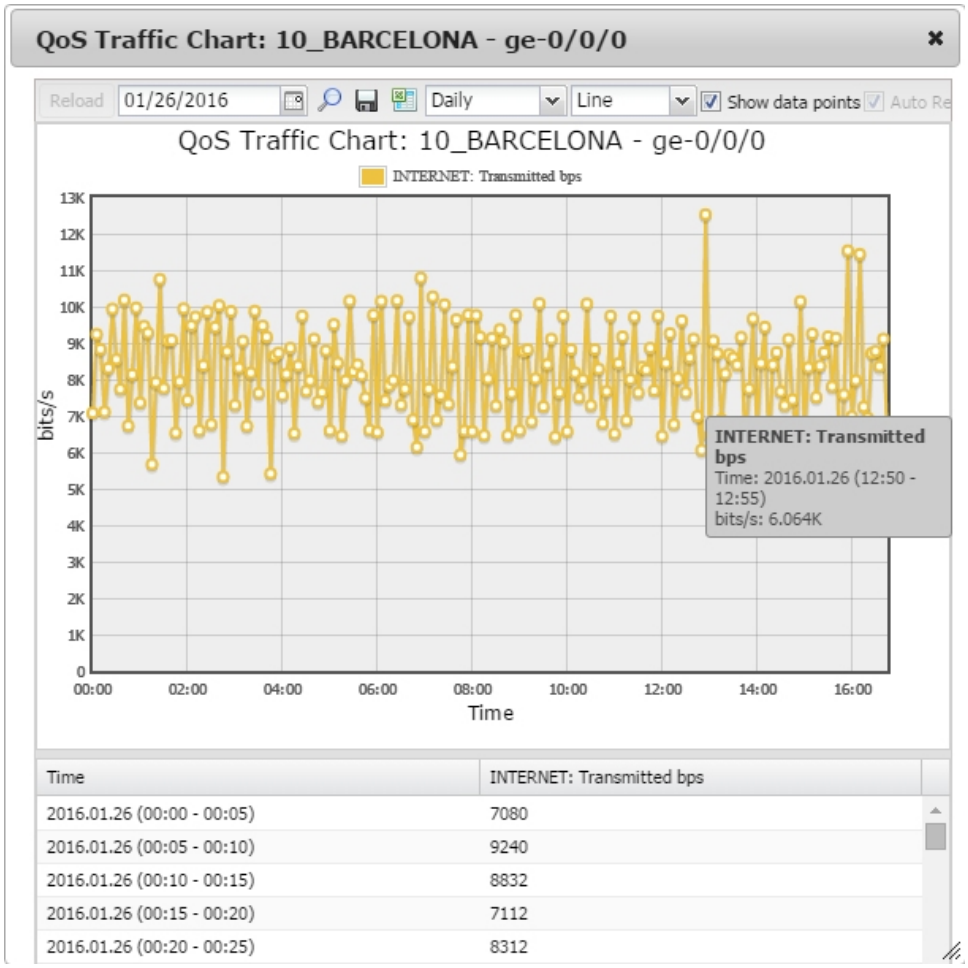
Click **Utilization Chart** to display a utilization chart similar to the interface traffic chart.

Click **QoS Chart**. The QoS Traffic Chart window is displayed. Select one or more egress classes and egress traffic attributes and click **OK**. Figure 122 on page 131 shows the QoS Traffic Chart window with selections made.

Figure 122: QoS Traffic Chart Window Selections

A QoS Traffic chart window similar to the interface traffic chart is displayed. Figure 123 on page 132 shows a QoS Traffic Chart window for transmitted bps for the Internet traffic class.

Figure 123: QoS Traffic Chart Window



Click **Multicast Traffic Chart** to display a multicast traffic chart similar to the interface traffic chart. Click **Multicast Utilization Chart** to display a multicast utilization chart similar to the interface traffic chart.

Other interface lists available include Interface - Router (IPv6), Interface - Individual, Interface - Summary, Interface - Total: Ingress, and Interface - Total: Egress. You can display the list and then display a chart of one or more items from the list for a selected time interval.

Live Traffic - Traffic Type Menu

The Traffic Type menu is used to select live traffic charts for the entire network, links, tunnels, VPNs, interface groups, and tunnel groups, in addition to the interfaces already described.

Select **Network>Interface - Total** or **Network>Tunnel - Total**, to display a chart of traffic statistics for all interfaces or tunnels on the network.

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Select **Link>Link - Summary**, specify a time interval, and click **Apply** to display a list of links with a detailed table of traffic statistics.

Select **Interface>Interface - Router** or **Interface>Interface - Router (IPv6)**, to display a list of nodes that have active live traffic collection.

Select **Interface>Interface - Individual** to display a list of interfaces that have active live traffic collection.

Select **Interface>Interface - Summary** to display an Interface Traffic Summary Report.

Select **Interface>Interface - Total: Ingress** or **Interface>Interface - Total: Egress** to display a Router Ingress Interface Report or Router Egress Interface Report

Select **Tunnel>Tunnel - Network Level**, specify a date, and click **Go** to display a list of all tunnels with a detailed table of traffic statistics. Click a tunnel name to display a daily, weekly, monthly, and yearly chart. Other choices for tunnels include Tunnel - Router, Tunnel - Individual, Tunnel - Summary, Tunnel - Total: Ingress, and Tunnel Traffic Matrix.

Similar to the Interface menu, you can select **Tunnel>Tunnel - Router**, **Tunnel>Tunnel - Individual**, **Tunnel>Tunnel - Summary**, **Tunnel>Tunnel - Total: Ingress**, and **Tunnel>Tunnel - Total: Egress**.

Select **VPN>VPN - Summary**, specify a time interval, and click **Go** to display a list of VPNs with a detailed table of traffic statistics. Select a VPN and click **Trending** to display a chart.

You can also select **VPN>VPN - Total: Ingress**, and **VPN>VPN - Total: Egress**.

Select **VPN>Customer Service** to display the Customer Service VPN Interface Traffic Summary Report.

Select **Group>Interface Group>Group Interface**, specify a time interval, and click **Apply** to display a list of interface groups with a detailed table of traffic statistics. Other choices for interface groups include **Live Chart** to display a real-time traffic, chart and **Live Report** to display a detailed table of real-time traffic statistics.

Select **Group>Tunnel Traffic>Single Day**, specify a time interval, and click **Go** to display a list of tunnel groups with a summary table of traffic statistics. Other choices for tunnel groups include **Multiple Days** to display a list of tunnels and traffic charts, and **Tunnel Traffic Matrix** to display the tunnel paths through the network.

Select **Group>Traffic Collection Group>Status**, to display a list traffic collection groups. Click the group name to display a list of members. Click the member ID to display an interfaces report for that group of devices.

Figure 124 on page 134 shows an example of the detailed traffic statistics. The Tunnel Traffic Summary Report is shown.

Figure 124: Tunnel Traffic Summary Report

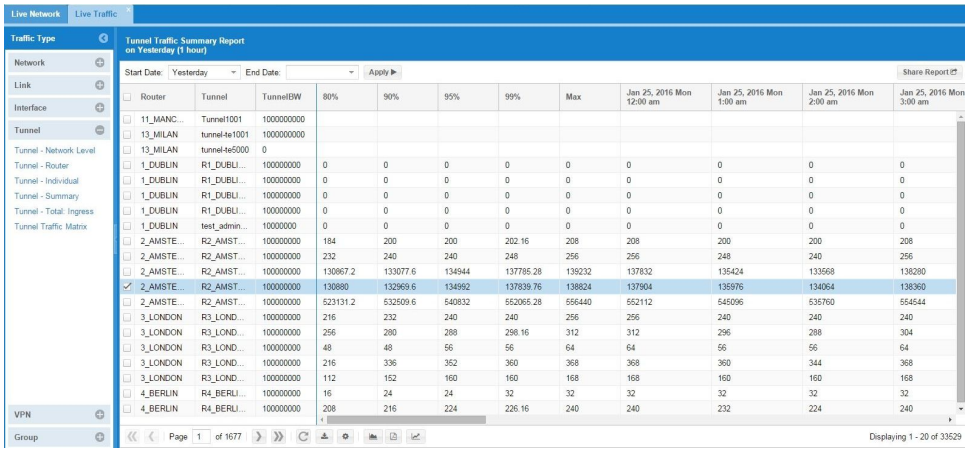

Figure 125 on page 134 shows an example of a trending chart. The chart is from the Router Ingress Tunnel Traffic Summary - Today (Total bits) report. Select a node and click the Charts icon at the bottom of the window to display a live traffic trending chart.

Figure 125: Ingress Tunnel Traffic Trending Chart

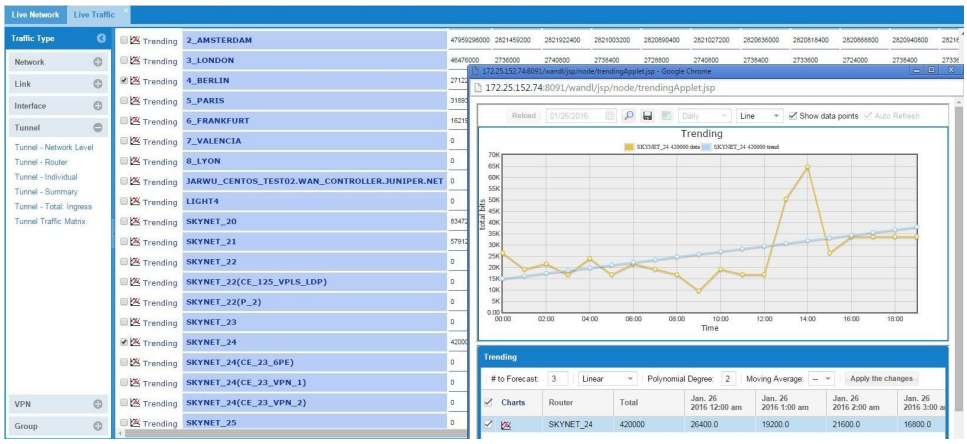

Figure 126 on page 135 shows an example of a Tunnel Traffic Summary chart with the configured bandwidth also displayed. The chart is from the Tunnel Traffic Summary report. Select a node and click the Charts icon at the bottom of the window to display a live traffic chart.

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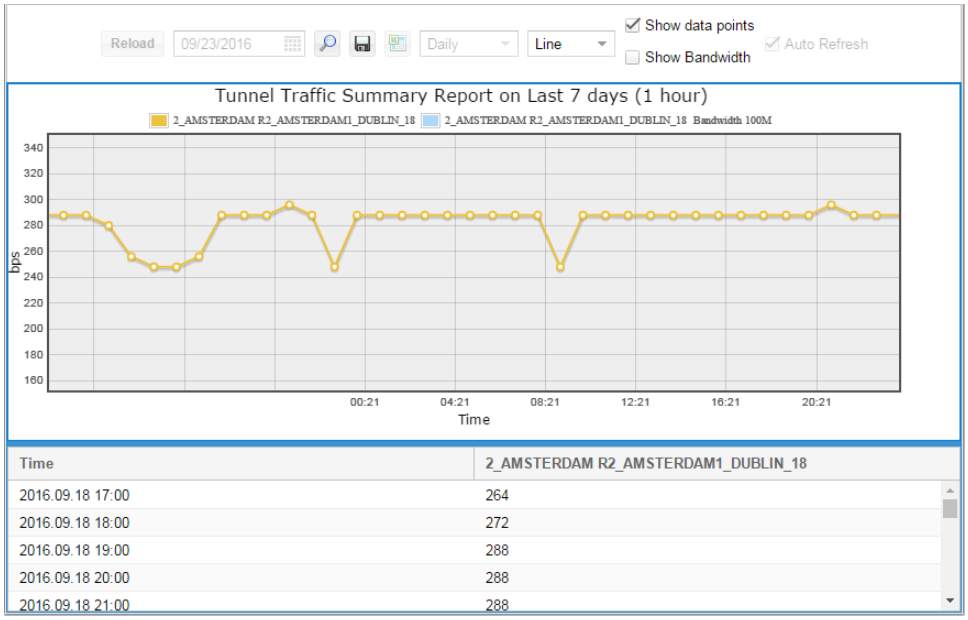
Figure 126: Tunnel Traffic Summary Chart



Related Documentation

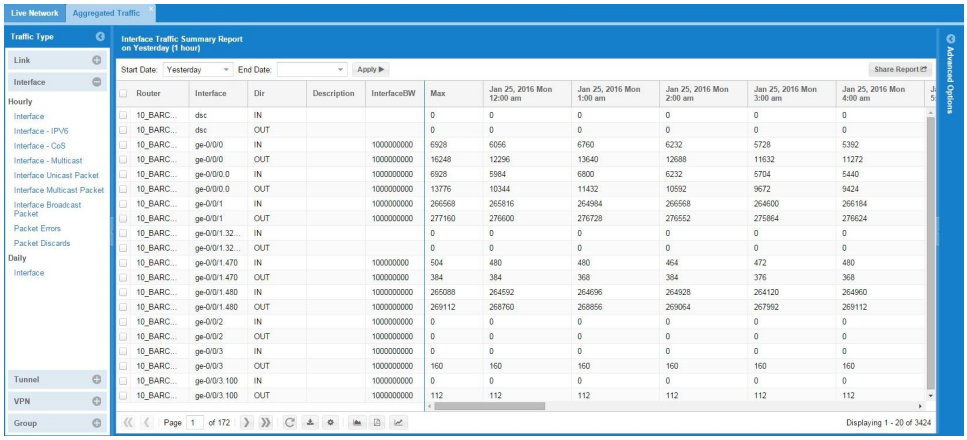
- Main Window Performance Menu on page 127
- Aggregated Traffic on page 135
- Real Time Usage on page 144

Aggregated Traffic

The IP/MPLSView main window has a Performance menu used to display live traffic, aggregated traffic, real-time status and usage, device and network performance, and diagnostics. It is also used to manage the traffic collector.

Select **Performance>Aggregated Traffic** to display the Aggregated Traffic window. Figure 127 on page 136 shows the Aggregated Traffic window.

Figure 127: Aggregated Traffic Window



Router	Interface	Dir	Description	InterfaceBW	Max	Jan 25, 2016 Mon 12:00 am	Jan 25, 2016 Mon 1:00 am	Jan 25, 2016 Mon 2:00 am	Jan 25, 2016 Mon 3:00 am	Jan 25, 2016 Mon 4:00 am
10_BARC...	dsc	IN			0	0	0	0	0	0
10_BARC...	dsc	OUT			0	0	0	0	0	0
10_BARC...	ge-0/0/0	IN		1000000000	6928	6056	6760	6232	5728	5392
10_BARC...	ge-0/0/0	OUT		1000000000	16248	12296	13640	12688	11632	11272
10_BARC...	ge-0/0/0.0	IN		1000000000	6928	5984	6800	6232	5704	5440
10_BARC...	ge-0/0/0.0	OUT		1000000000	13776	10344	11432	10592	9672	9424
10_BARC...	ge-0/0/1	IN		1000000000	266568	265816	264984	266568	264600	266184
10_BARC...	ge-0/0/1	OUT		1000000000	277160	276600	276728	276552	275864	276624
10_BARC...	ge-0/0/1.32...	IN			0	0	0	0	0	0
10_BARC...	ge-0/0/1.32...	OUT			0	0	0	0	0	0
10_BARC...	ge-0/0/1.470	IN		100000000	504	480	480	464	472	480
10_BARC...	ge-0/0/1.470	OUT		100000000	384	384	368	384	376	368
10_BARC...	ge-0/0/1.480	IN		1000000000	265088	264592	264696	264928	264120	264960
10_BARC...	ge-0/0/1.480	OUT		1000000000	269112	268760	268856	269064	267992	269112
10_BARC...	ge-0/0/2	IN		1000000000	0	0	0	0	0	0
10_BARC...	ge-0/0/2	OUT		1000000000	0	0	0	0	0	0
10_BARC...	ge-0/0/3	IN		1000000000	0	0	0	0	0	0
10_BARC...	ge-0/0/3	OUT		1000000000	160	160	160	160	160	160
10_BARC...	ge-0/0/3.100	IN		1000000000	0	0	0	0	0	0
10_BARC...	ge-0/0/3.100	OUT		1000000000	112	112	112	112	112	112

Aggregated traffic reports are organized by traffic type and are aggregated either hourly or daily.

Select a device and click the Charts icon at the bottom of the window to display an aggregated traffic chart. Select a device and click the Trending icon at the bottom of the window to display an aggregated trending chart.

Other hourly interface lists available include Interface - IPv6, Interface - CoS, Interface - Multicast, Interface - Unicast Packet, Interface - Multicast Packet, Interface - Broadcast Packet, Packet Errors, and Packet Discards. You can display the list and then display a chart of one or more items from the list for a selected time interval.

There is also a Daily Interface menu option.

Figure 128 on page 137 shows the Interface Traffic Summary Report chart.

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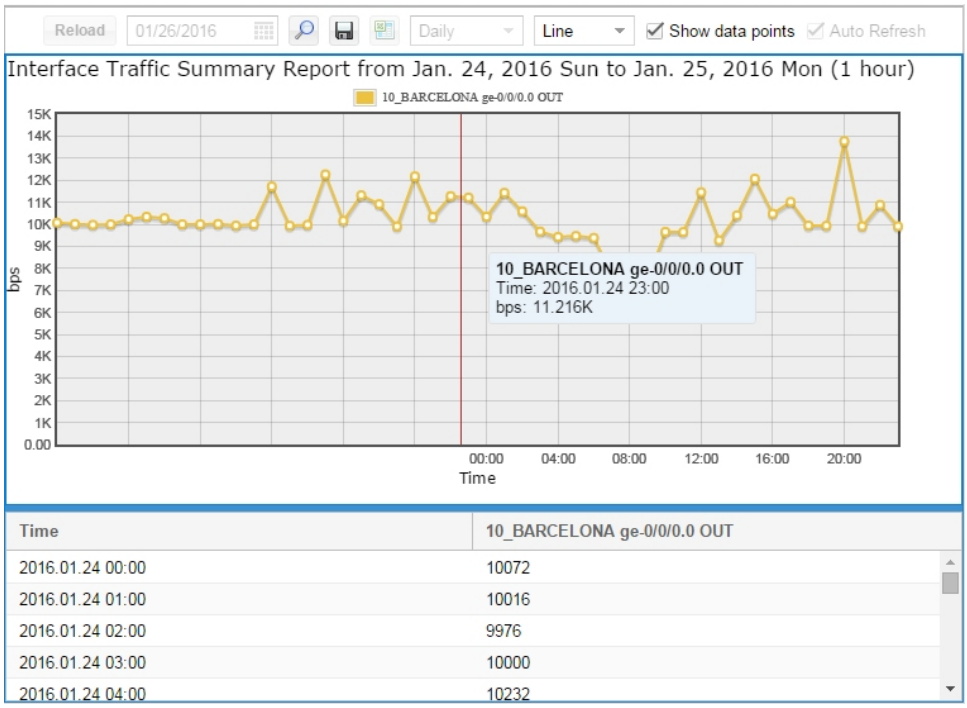
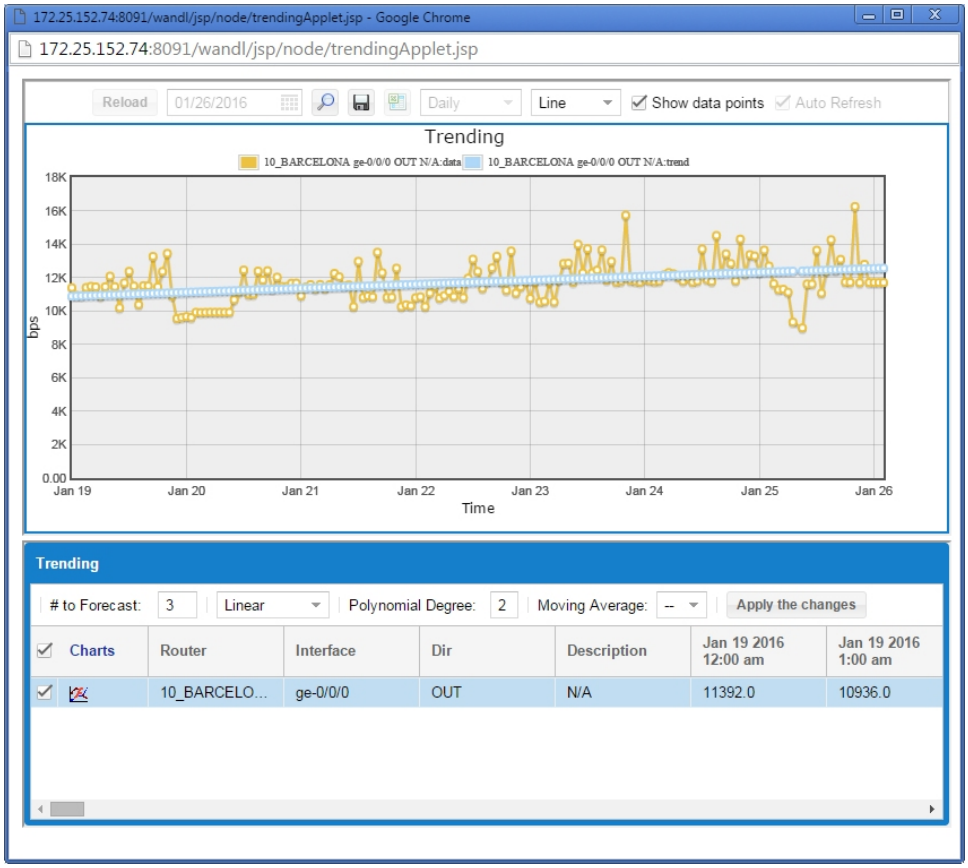
Figure 128: Aggregated Interface Traffic Summary Report Chart



In the chart window, you can use the controls at the top of the window to reset the zoom, save the chart as an image, export to Excel, select the chart style, and show or hide the data points. Hold your mouse pointer over a data point to display a pop-up pane that shows the time and traffic value.

Figure 129 on page 138 shows the Interface Traffic Summary Report trending chart.

Figure 129: Aggregated Traffic Summary Report Trending Chart



In the trending chart window, select the number of data points to forecast. Select the type of regression to be performed. Select: **Linear**, **Exponential**, or **Polynomial**. The moving average is used to smooth out any outlier values in the data. Select **none**, or any odd number from 3 to 23.

Aggregated Traffic - Traffic Type Menu

The Traffic Type menu is used to display aggregated traffic statistics and charts for links, tunnels, and VPNs in addition to the interfaces already described.

Select **Link>Hourly** or **Link>Daily**, specify a time interval, and click **Apply** to display a list of links with a detailed table of traffic statistics.

Select **Tunnel>Hourly** or **Tunnel>Daily**, specify a time interval, and click **Apply** to display a list of all tunnels with a detailed table of traffic statistics. Select a tunnel and click the Charts icon at the bottom of the window to display an aggregated traffic chart. Select a tunnel and click the Trending icon at the bottom of the window to display an aggregated trending chart.

Select **VPN>Hourly>VPN** or **VPN>Daily>VPN**, specify a time interval, and click **Apply** to display a list of all VPNs with a detailed table of traffic statistics. Select a VPN and click the Charts icon at the bottom of the window to display an aggregated traffic chart. Select

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a VPN and click the Trending icon at the bottom of the window to display an aggregated trending chart.

Other VPN menu selections include VPN - CoS, VPN - Multicast, Customer Service, Customer Service - CoS, and Customer Service - Multicast.

Related Documentation

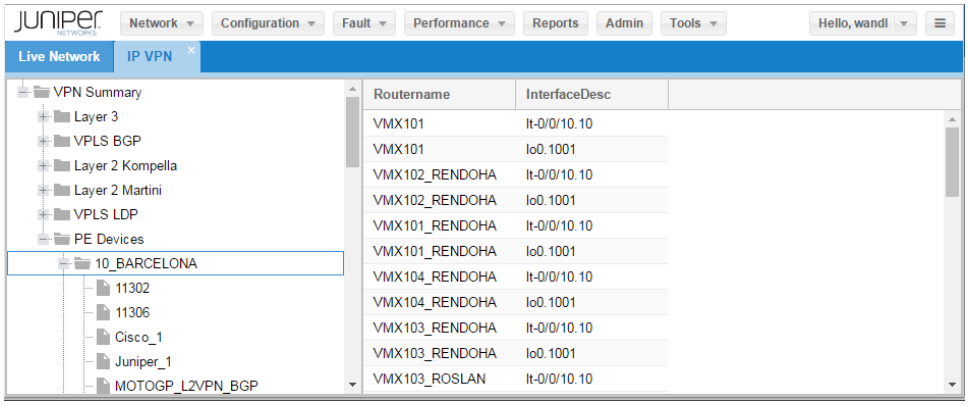
- Main Window Performance Menu on page 127
- Live Traffic on page 128
- Traffic Collection Manager on page 155

Live VPN Traffic

The IP/MPLSView main window has a Performance menu used to display live traffic, aggregated traffic, real-time status and usage, device and network performance, and diagnostics. It is also used to manage the traffic collector.

Select **Performance>Live VPN Traffic** to display the Live VPN Traffic window. Figure 130 on page 139 shows the Live VPN Traffic window.

Figure 130: Live VPN Traffic Window



Expand the menu and select a VPN. The router name and interface description are displayed.

Related Documentation

- Main Window Performance Menu on page 127
- Live Traffic on page 128

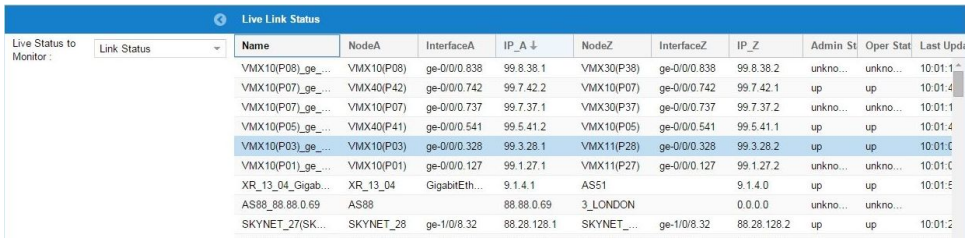
Real Time Status

The IP/MPLSView main window has a Performance menu used to display live traffic, aggregated traffic, real-time status and usage, device and network performance, and diagnostics. It is also used to manage the traffic collector.

Select **Performance>Real Time Status** to display the Real Time Status window. From the Live Status to Monitor menu, select: **Link Status**, **Tunnel Status**, **BGP Neighbor Status**,

OSPF Neighbor Status, or **ISIS Adjacency Status**. Figure 131 on page 140 shows the Live Link Status window.

Figure 131: Live Link Status Window



Each column head has a menu. From the menu within each column, the element information can be sorted in ascending or descending order. You can select which columns are displayed or hidden. Columns can also be resized and the order can be rearranged.

Table 9 on page 45 describes the Live Link Status table columns.

Table 23: Real Time Link Status Table Columns

Column Name	Description
Name	Name of the link.
NodeA	Name of node A at one end of the link.
Interface A	Physical and logical interface on node A at one end of the link.
IP_A	IP address of node A at one end of the link.
NodeZ	Name of node Z at one end of the link.
InterfaceZ	Physical and logical interface on node Z at one end of the link.
IP_Z	IP address of node Z at one end of the link.
Admin Status	The administrative status of the link (up, down, or unknown).
Oper Status	The operational status of the link (up, down, testing, unknown, dormant, notPresent, or lowerLayerDown).
Last Updated	The time the information was last updated.

From the Live Status to Monitor menu, select **Tunnel Status**. The system prompts you to filter the list. Select the node you want to display and click **Apply Filter**.
Figure 132 on page 141 shows the Live Tunnel Status window.

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Figure 132: Live Tunnel Status Window

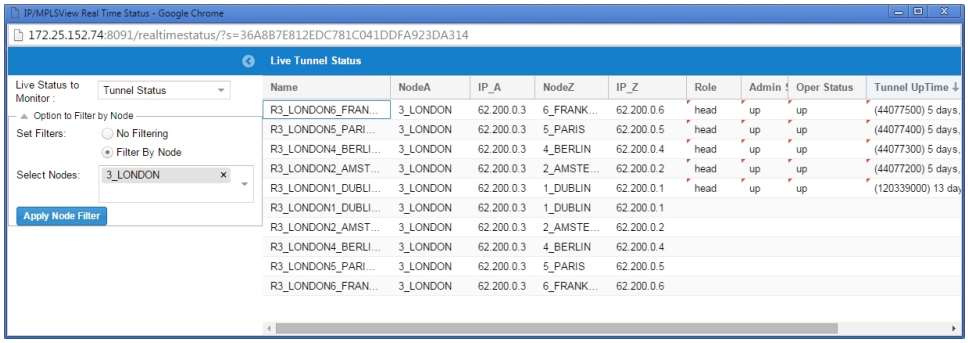

Table 10 on page 47 describes the Tunnel Status table columns.

Table 24: Real Time Tunnel Status Table Columns

Column Name	Description
Name	Name of the tunnel.
Node A	Name of node A at one end of the tunnel.
IP_A	IP address of node A at one end of the tunnel.
Node Z	Name of node Z at one end of the tunnel.
IP_Z	IP address of node Z at one end of the tunnel.
Role	The MPLS-TE tunnel role (head, transit, tail, or headTail).
Admin Status	Current status of the tunnel (up, down, or testing).
Oper Status	The operational status of the tunnel (up, down, testing, unknown, dormant, notPresent, or lowerLayerDown) .
Tunnel Up Time	The elapsed time since the tunnel came up.
Last Updated	The time the information was last updated.

From the Live Status to Monitor menu, select **BGP Neighbor Status**. Figure 133 on page 141 shows the Live BGP Neighbor Status window.

Figure 133: Live BGP Neighbor Status Window

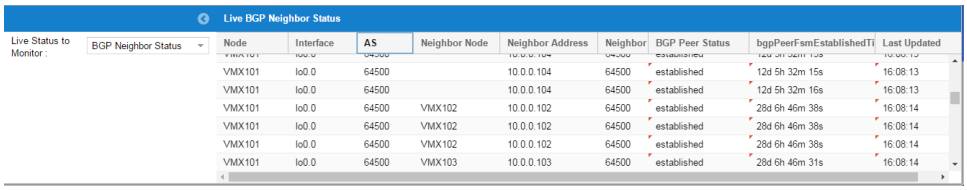

Table 25 on page 142 describes the BGP Neighbor Status columns.

Table 25: BGP Neighbor Status Table Columns

Column Name	Description
Node	Name of the node that is a BGP speaker.
Interface	Interface used to establish the neighbor peer session.
AS	Autonomous system number of the node.
Neighbor Node	Name of the node that is the BGP neighbor peer.
Neighbor Address	IP address of the node that is the BGP neighbor peer.
Neighbor AS	Autonomous system number of the node that is the BGP neighbor peer.
BGP Peer Status	The status of the peer relationship (connect, active, opensent, openconfirm, unknown, or established). Established is the key state which indicates peers are operationally up and BGP route updates are freely exchanged. BGP Peering Operation Status = Up only if peering state = Established. Any other peering state collected (idle, connect, active, opensent, or openconfirm) implies BGP Peering Operational Status = Down.
bgpPeerFsmEstablishedTime	How long this peer has been in the Established state or how long since this peer was last in the Established state. It is set to zero when a new peer is configured or the router is booted.
Last Updated	The time the information was last updated.

From the Live Status to Monitor menu, select **OSPF Neighbor Status**. Figure 134 on page 142 shows the Live OSPF Neighbor Status window.

Figure 134: Live OSPF Neighbor Status Window

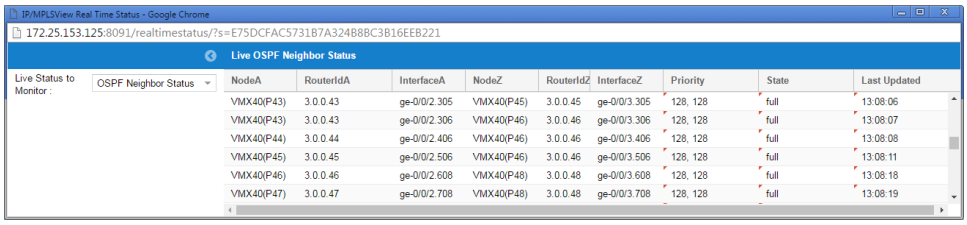

Table 26 on page 142 describes the Live OSPF Neighbor Status table columns.

Table 26: Live OSPF Neighbor Status Table Columns

Column Name	Description
Node A	Name of the node.
RouterIdA	OSPF router ID of the node.
InterfaceA	Interface used to establish the OSPF neighbor adjacency.
IP_A	IP address of node A used to establish the OSPF neighbor adjacency (not shown).

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Table 26: Live OSPF Neighbor Status Table Columns (continued)

Column Name	Description
Node Z	Name of the node that is the OSPF neighbor.
RouterIdZ	OSPF router ID of the neighbor node.
InterfaceZ	Interface on the neighbor node used to establish the OSPF neighbor adjacency.
IP_Z	IP address of the neighbor node used to establish the OSPF neighbor adjacency (not shown).
Priority	The OSPF priority used to determine which router is selected as the designated router (DR) or backup designated router (BDR) of the area.
State	The state of the OSPF neighbor adjacency (down, attempt, init, twoWay, exchangeStart, exchange, loading, full, or unknown).
Last Updated	The time the information was last updated.

From the Live Status to Monitor menu, select **ISIS Adjacency Status**. Figure 135 on page 143 shows the Live ISIS Adjacency Status window.

Figure 135: Live ISIS Adjacency Status Window

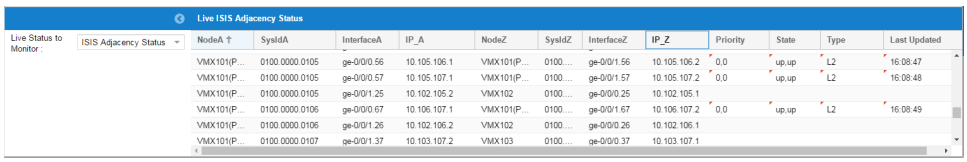

Table 27 on page 143 describes the Live ISIS Adjacency Status table columns.

Table 27: Live ISIS Adjacency Status Table Columns

Column Name	Description
Node A	Name of the node.
SysIdA	IS-IS system ID of the node.
InterfaceA	Interface used to establish the ISIS neighbor adjacency.
IP_A	IP address of used to establish the IS-IS neighbor adjacency.
Node Z	Name of the node that is the IS-IS neighbor.
SysIdZ	ISIS system ID of the neighbor node.
InterfaceZ	Interface on the neighbor node used to establish the IS-IS neighbor adjacency.
IP_Z	IP address of neighbor node used to establish the IS-IS neighbor adjacency.

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Table 27: Live ISIS Adjacency Status Table Columns (continued)

Column Name	Description
Priority	The ISIS priority used to determine the designated router on a broadcast network
State	The state of the IS-IS neighbor adjacency (up, down, initializing, failed, or unknown).
Type	Adjacency type (L1, L2, or L12).
Last Updated	The time the information was last updated.

Related Documentation

- Main Window Performance Menu on page 127
- Main Window Link Table on page 44
- Main Window Tunnel Table on page 47

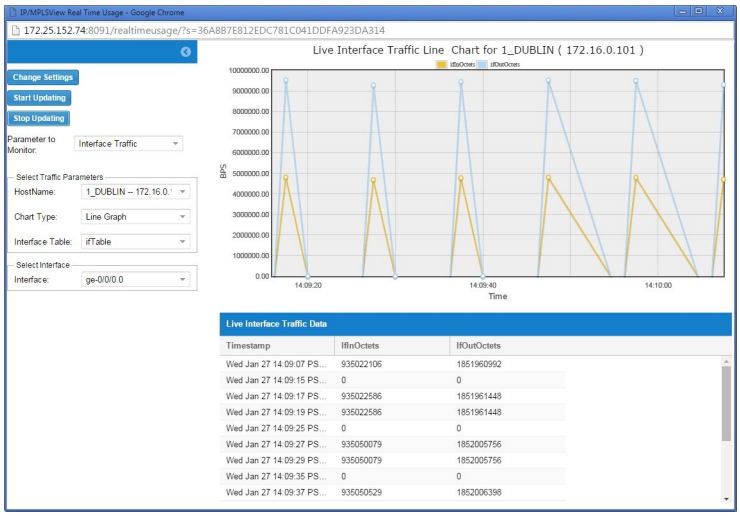
Real Time Usage

The IP/MPLSView main window has a Performance menu used to display live traffic, aggregated traffic, real-time status and usage, device and network performance, and diagnostics. It is also used to manage the traffic collector.

Select **Performance > Real Time Usage** to display the Live Traffic window. From the Parameter to Monitor menu, select: **Interface Traffic**, **Tunnel Traffic**, **Link Traffic**, **Device Performance**, or **Monitor Any OID Live**.

Select **Interface Traffic**. Select a hostname, chart type, interface table, and interface. Click **Start Updating**. Figure 136 on page 144 shows the Live Interface Traffic Line chart window.

Figure 136: Live Interface Traffic Line Chart Window



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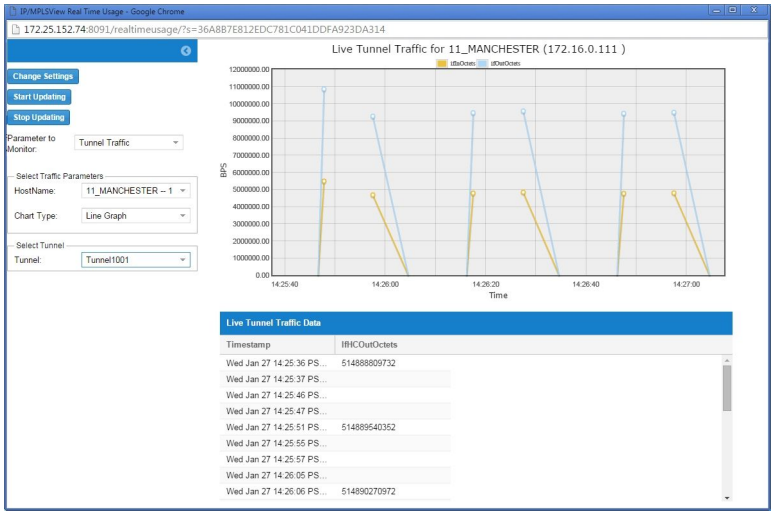
The table at the bottom of the window shows the polling timestamp and the values retrieved. Hold your mouse pointer over a data point to display a pop-up pane that shows the time and traffic value. Click **Stop Updating** to stop updating the chart.

Click **Change Settings** to change the polling time interval and maximum number of values.

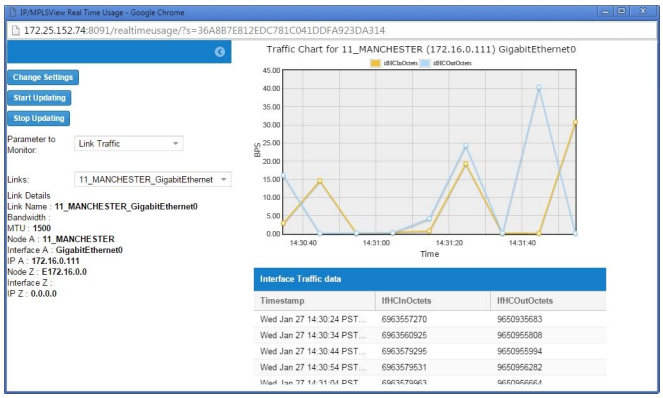
Select **Tunnel Traffic**. Select a hostname, chart type, and tunnel. Click **Start Updating**. Figure 137 on page 145 shows the Live Tunnel Traffic chart window.

Figure 137: Live Tunnel Traffic Chart Window



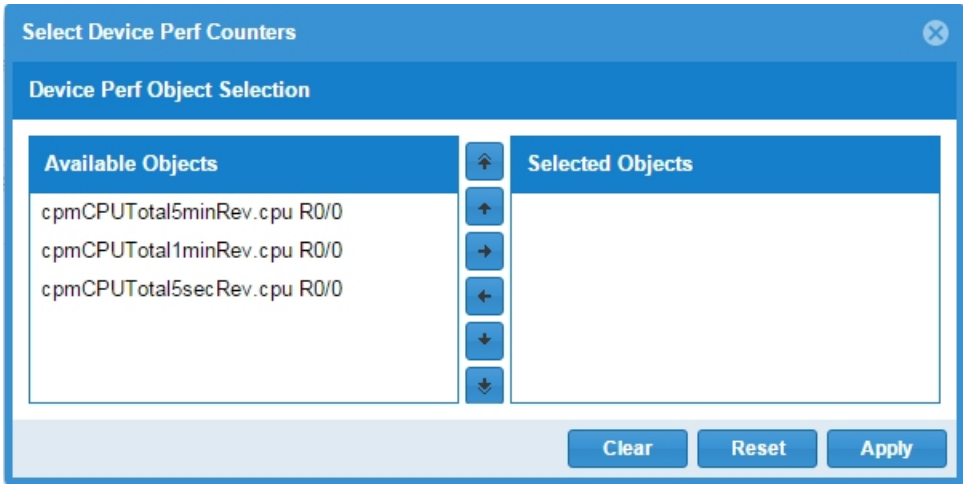
Select **Link Traffic**. Select a link. Click **Start Updating**. Figure 138 on page 145 shows the Traffic Chart window.

Figure 138: Traffic Chart Window



Select **Device Performance**. Select a node. The Select Device Perf Counters dialog box is displayed. Figure 139 on page 146 shows the Select Device Perf Counters dialog box.

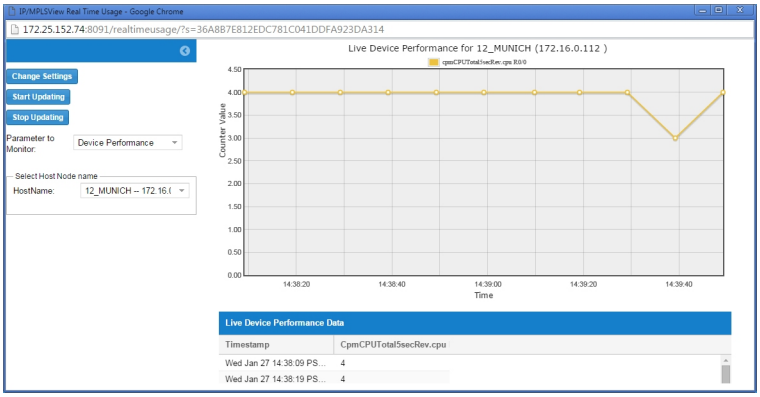
Figure 139: Select Device Perf Counters Dialog Box



Select the counters you want from the Available Counters list, and click the right arrow to move them to the Selected Objects list. Click **Apply**.

Click **Start Updating**. Figure 140 on page 146 shows the Live Device Performance chart window.

Figure 140: Live Device Performance Chart Window



Select **Monitor Any OID Live**. Select a node. The Inputs for Monitoring Any OID dialog box is displayed in the left pane. Figure 141 on page 147 shows the Inputs for Monitoring Any OID left pane.

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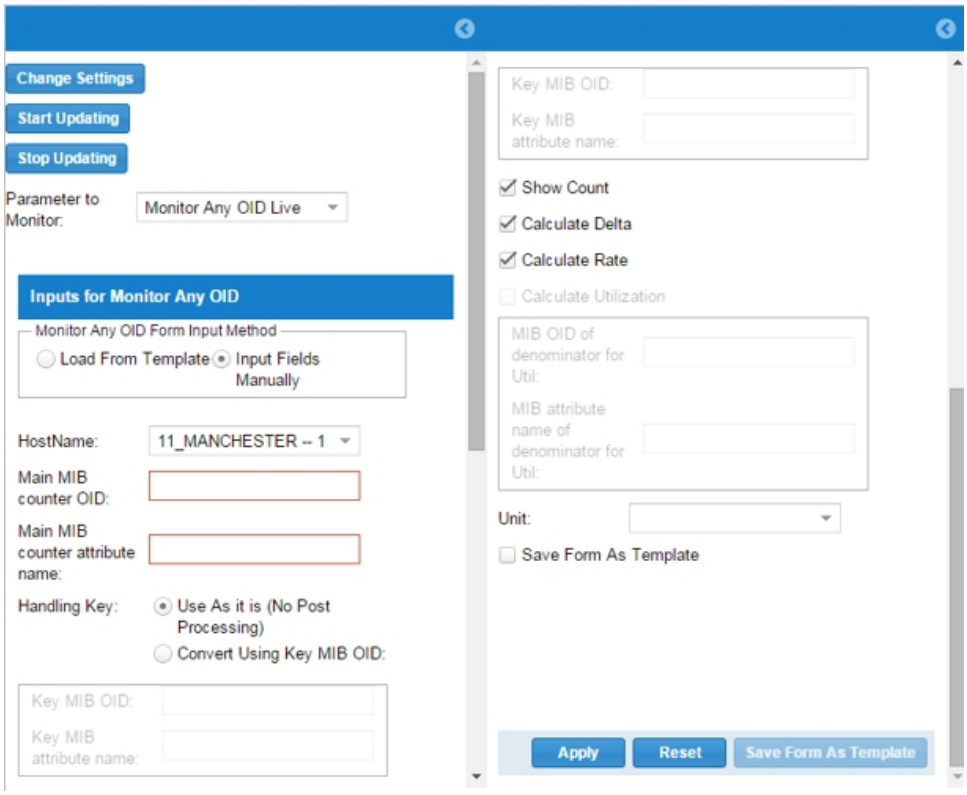
Figure 141: Inputs for Monitoring Any OID Dialog Box

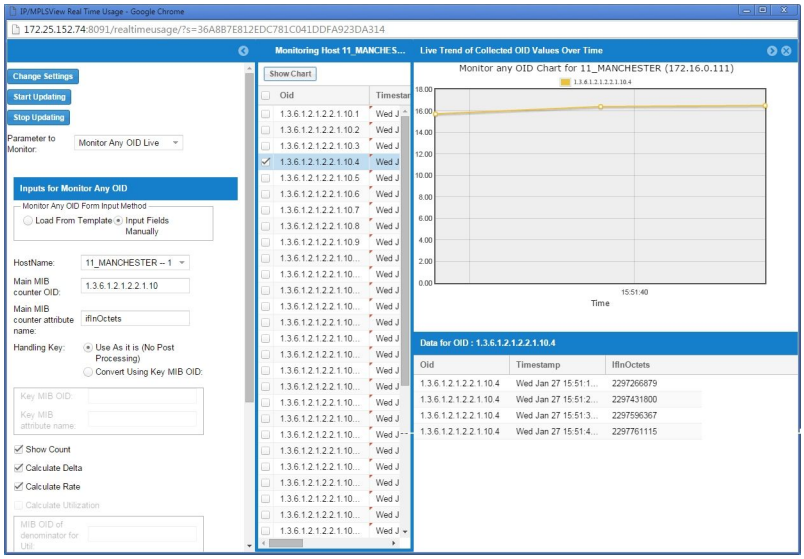


Select a parameter to monitor and a hostname. Select whether to have the data processed using the key MIB OID. If post processing is enabled, a key MIB OID is specified to link the main counter to a name or description, and to specify a utilization OID to compute utilization.

Enter the main MIB counter OID and counter attribute name. Scroll down the left pane and select whether to show the calculate delta and calculate rate. Select the counter unit for representation. If calculate rate is enabled, the system computes the delta divided by the time difference and plots it on the chart. Click **Apply**. A list of monitored OIDs are displayed. Select the OID you want, and click **Show Chart**.

Figure 142 on page 148 shows the Monitor Any OID chart window.

Figure 142: Monitor Any OID Chart Window



If calculate utilization is enabled, you must specify the OID for bandwidth of the link or interface. The MIB OID of the denominator for Util value is the utilization OID input field. The utilization OID uses the link bandwidth to compute the rate of the link (utilization = rate/bandwidth).

You can save the form as a template file on the server and load it back later. The template file is saved as **/u/wandl/data/monitorAnyOID/storeMonitorOID.csv**.

Related Documentation

- Main Window Performance Menu on page 127
- Live Traffic on page 128
- Real Time Status on page 139

Diagnostics

The IP/MPLSView main window has a Performance menu used to display live traffic, aggregated traffic, real-time status and usage, device and network performance, and diagnostics. It is also used to manage the traffic collector.

Select **Performance>Diagnostics** to display the Diagnostics window.

Figure 143 on page 149 shows the Diagnostics window.

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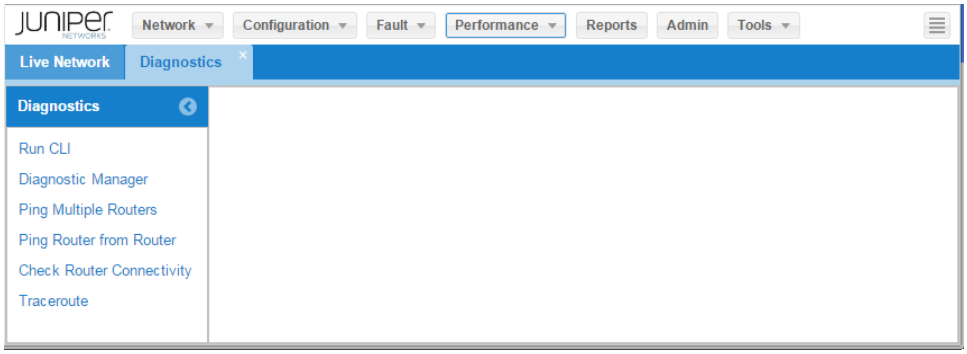
Figure 143: Diagnostics Window



Related Documentation

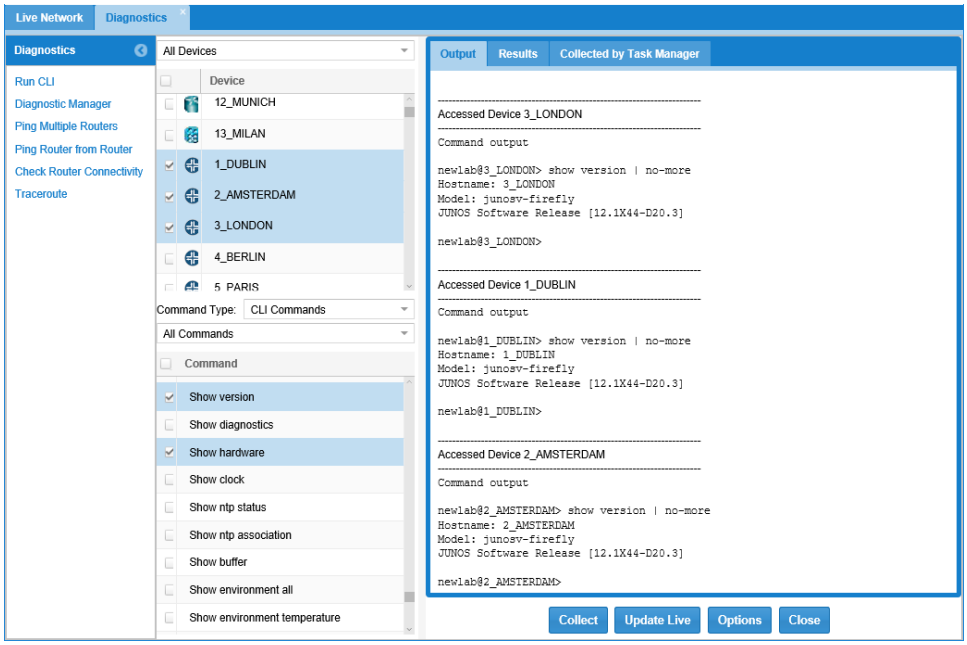
- Main Window Performance Menu on page 127
- Live Traffic on page 128
- Node Menu Diagnostic Manager on page 65
- Diagnostic Manager on page 152

Performance Menu Run CLI

The IP/MPLSView main window has a Performance menu used to display live traffic, aggregated traffic, real-time status and usage, device and network performance, and diagnostics. It is also used to manage the traffic collector, and run CLI tests.

Select **Performance** > **Diagnostics**>**Run CLI** to display the Run CLI window. Figure 144 on page 150 shows the Run CLI window populated with the results of the **show versions** and **show chassis environment** CLI commands for a single device.

Figure 144: Run CLI Window



In the Device Selection pane, select one or more devices. To filter devices by vendor, select the vendor name from the Device Selection menu.

In the Command Selection Command Types pane, select **CLI Commands**, **VPN Commands**, or **Provisioning Check**. Select a subset of the command types from the menu. A list of individual commands is displayed in the Command pane. Select the individual commands you want, and select **Collect**.

NOTE: **Executing all commands for a specified command type, takes significant time to complete.**

The output from the commands is displayed in the Output pane. The command name and timestamp of when the command last executed are displayed in the Results pane.

In the Results pane, select a command from the Command Execution History list to display the output.

Figure 145 on page 151 shows the Results pane with the Command Execution History and command output displayed.

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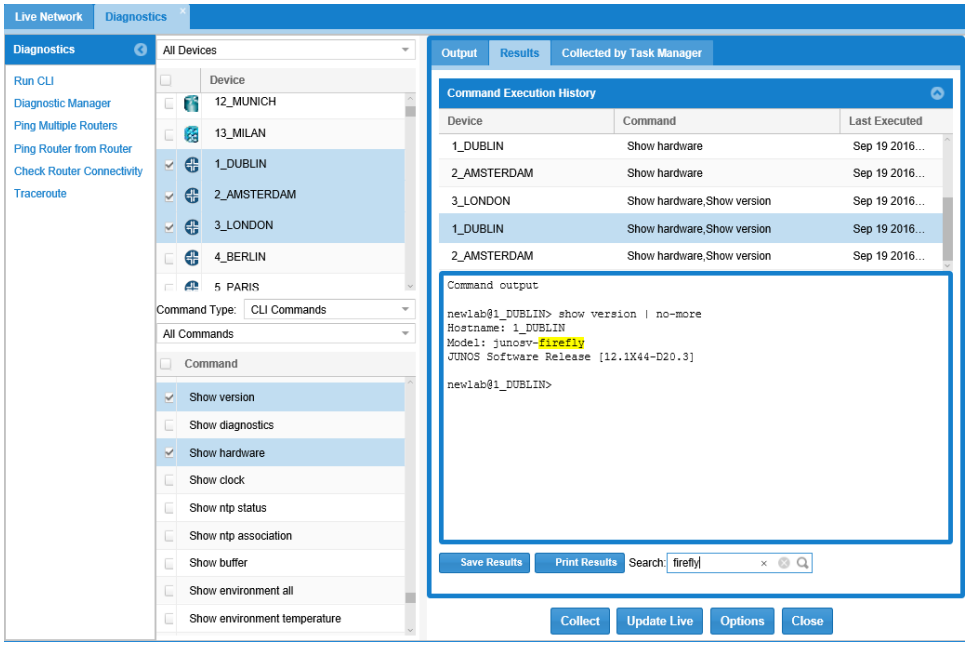
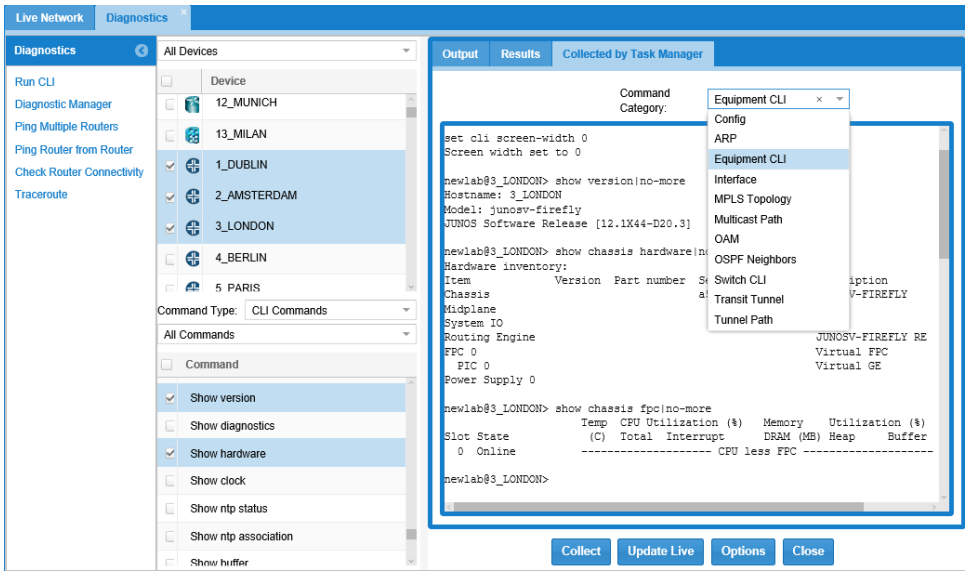
Figure 145: Command Execution History and Output



Select the **Collected by Task Manager** tab to display command output that has been collected by a task in the Task Manager. From the menu, select the category of command. The command output is displayed. Figure 146 on page 151 shows the Collected by Task Manager command category menu and command output display.

Figure 146: Command Output Collected by Task Manager

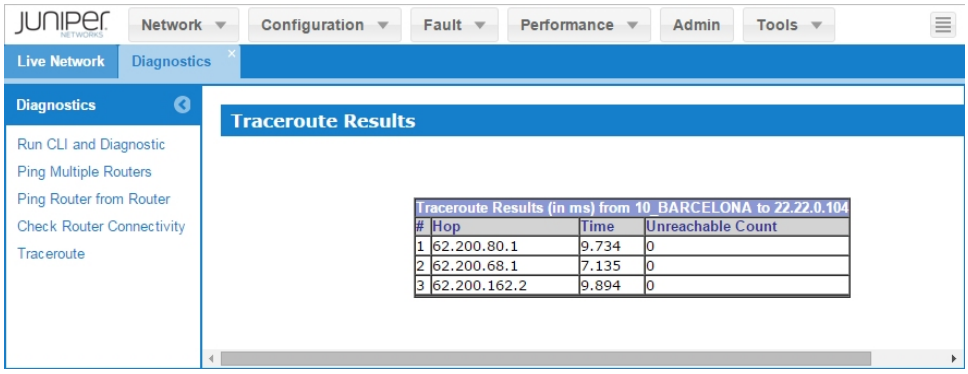


Select **Ping Multiple Routers**. The Ping Routers window is displayed. Hold the Shift key to select a range of routers. Hold the Control key to select multiple individual routers. Click **Submit**. The ping test results are displayed.

The Ping Router from Router, Check Router Connectivity and Traceroute selections all work similar to Ping Multiple Routers.

Figure 147 on page 152 shows the Traceroute Results pane.

Figure 147: Traceroute Results Pane



Related Documentation

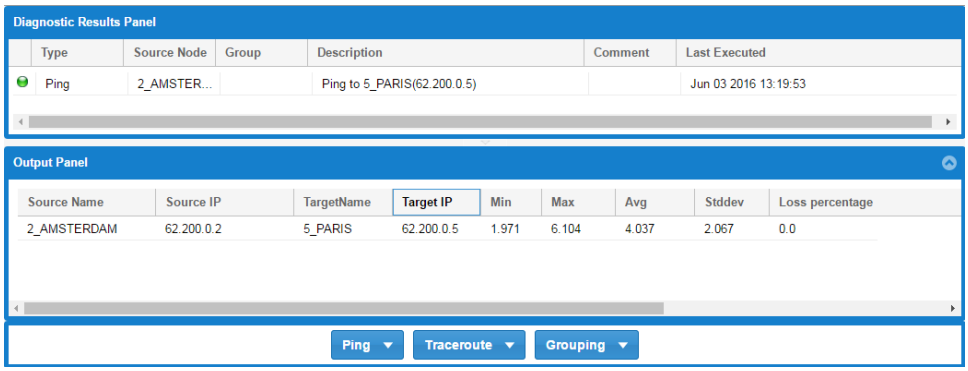
- Main Window Performance Menu on page 127

Diagnostic Manager

The IP/MPLSView main window has a Performance menu used to display live traffic, aggregated traffic, real-time status and usage, device and network performance, and diagnostics. It is also used to manage the traffic collector, and run CLI tests.

Select **Performance>Diagnostics>Diagnostic Manager** to display the Diagnostic Manager window. Figure 148 on page 152 shows the Diagnostic Manager window populated with the results of a ping test.

Figure 148: Diagnostic Manager Window



The diagnostic manager allows you to execute ping operations on devices in the live network. Figure 149 on page 153 shows the selections available from the Ping menu.

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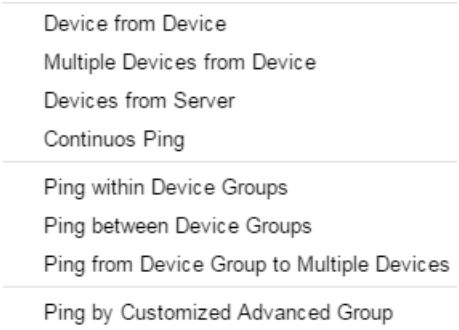
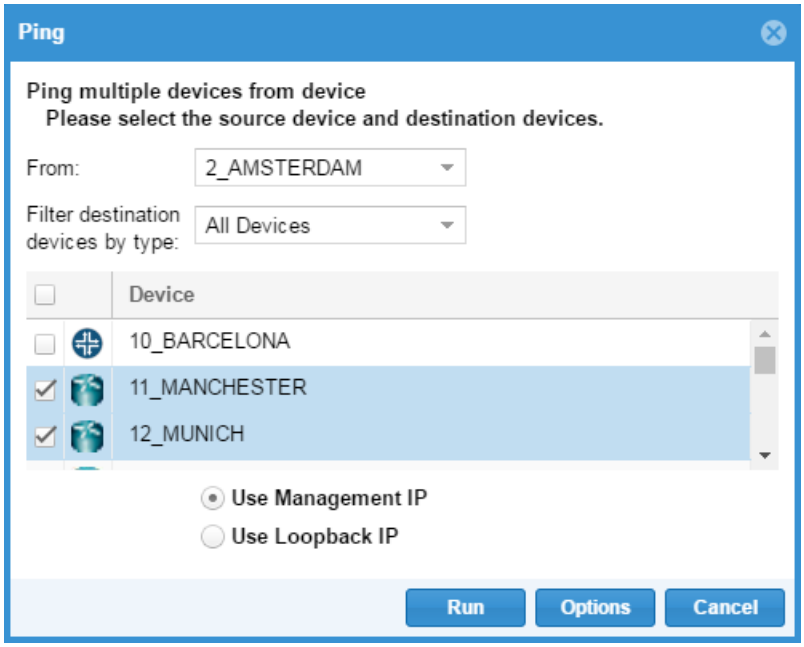
Figure 149: Diagnostic Manager Ping Menu



To perform a ping test from a single device to multiple devices, select **Ping > Multiple Devices from Device**. The Ping dialog box is displayed.

Figure 150 on page 153 shows the Ping dialog box.

Figure 150: Diagnostic Manager Ping Multiple Devices Dialog Box



Select the source device and one or more destination devices from the menus. Select **Use Management IP** or **Use Loopback IP**. Select **Run**. The results are displayed in the Output Panel of the Diagnostic Manager window.

Figure 151 on page 154 shows the selections available from the Traceroute menu.

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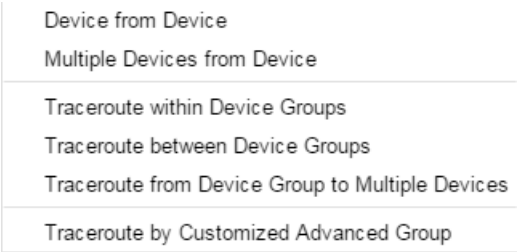
Figure 151: Diagnostic Manager Traceroute Menu



The diagnostic manager allows you to execute traceroute operations on devices in the live network.

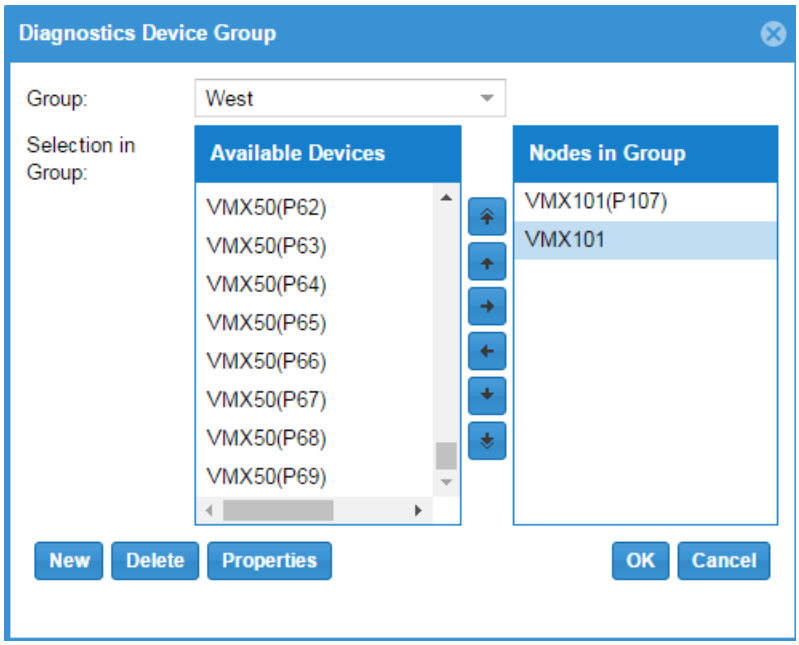
To perform a traceroute test from a single device to another device, select **Traceroute > Devices from Device**. The Traceroute dialog box is displayed. The settings are similar to the Ping dialog box.

Starting in Release 6.3.0, you can execute ping and traceroute operations on groups of devices in the live network.

To create groups of devices, select **Grouping > Device Group**. The Diagnostics Device Group window box is displayed.

Figure 152 on page 154 shows the Diagnostics Device Group window.

Figure 152: Diagnostics Device Group Window



To create a new group, select **New** and then type the group name in the dialog box. To add nodes to a group, select the group from the Group menu, select the device you want, and use the arrows to move the device to the Nodes in Group pane. Select **OK**. The group is available in the Diagnostic Manager Ping and Traceroute windows.

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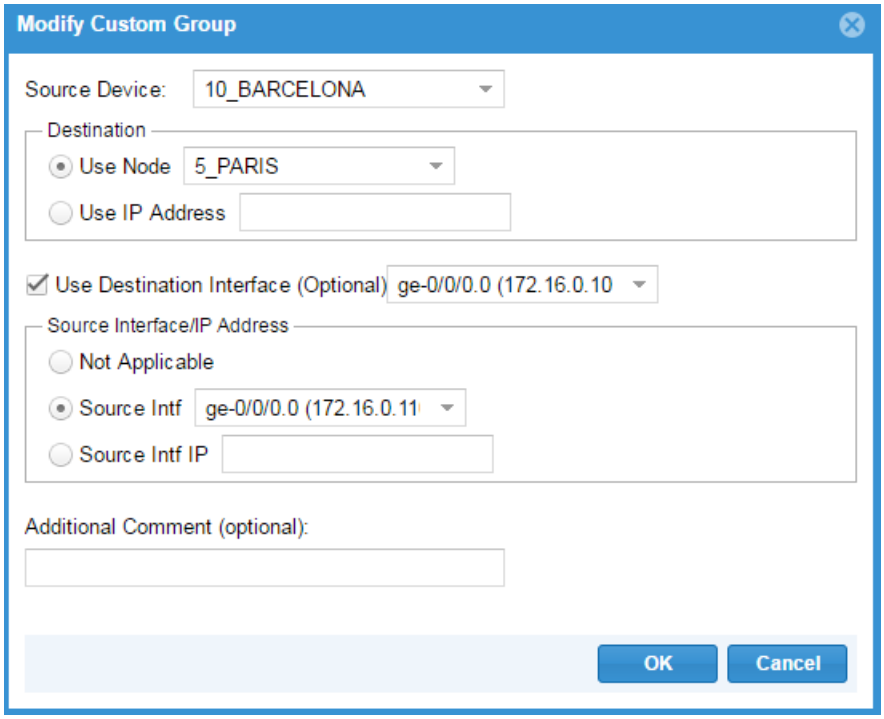
To create custom groups of devices, select **Grouping > Customized Advanced Groups**. Using custom groups, from the Modify Custom Group window, you can specify the source IP address and the destination IP address and interface.

Figure 153 on page 155 shows the Modify Custom Group window.

Figure 153: Modify Custom Group Window



Related Documentation

- Main Window Performance Menu on page 127
- Node Menu Run CLI on page 63

Traffic Collection Manager

The IP/MPLSView main window has a Performance menu used to display live traffic, aggregated traffic, real-time status and usage, device and network performance, and diagnostics. It is also used to manage the traffic collector, and run CLI tests.

Select **Performance>Traffic Collection Manager** to display the Traffic Collection Manager window.

The Traffic Collection Manager window left pane displays a list of grouped nodes, free nodes (non-grouped), and collectors. Expand the list and select a node. The node properties are displayed in the right pane. Properties include information about the node, the collection status, SNMP, the CLI access method, SSH commands, and Telnet settings. Figure 154 on page 156 shows the Traffic Collection Manager window with a node selected.

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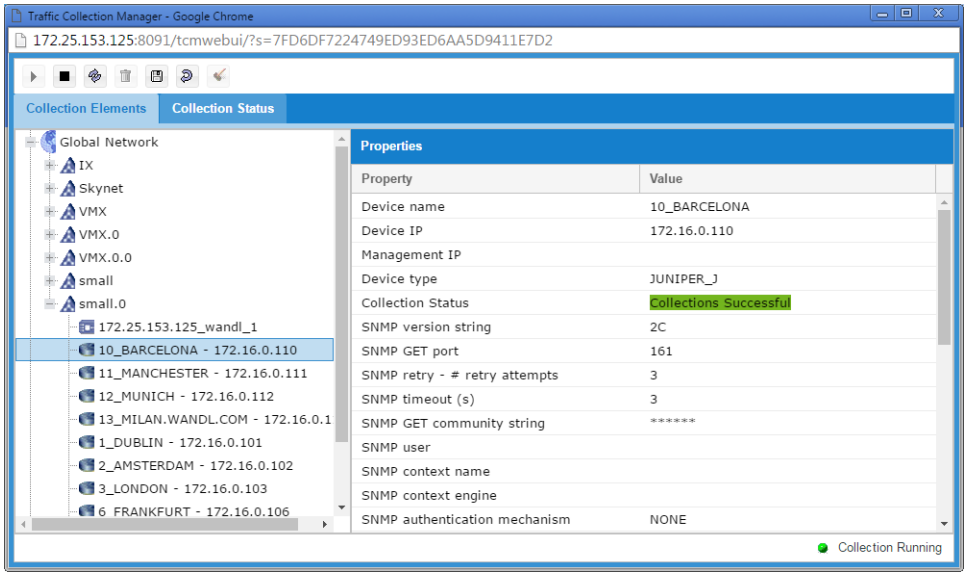
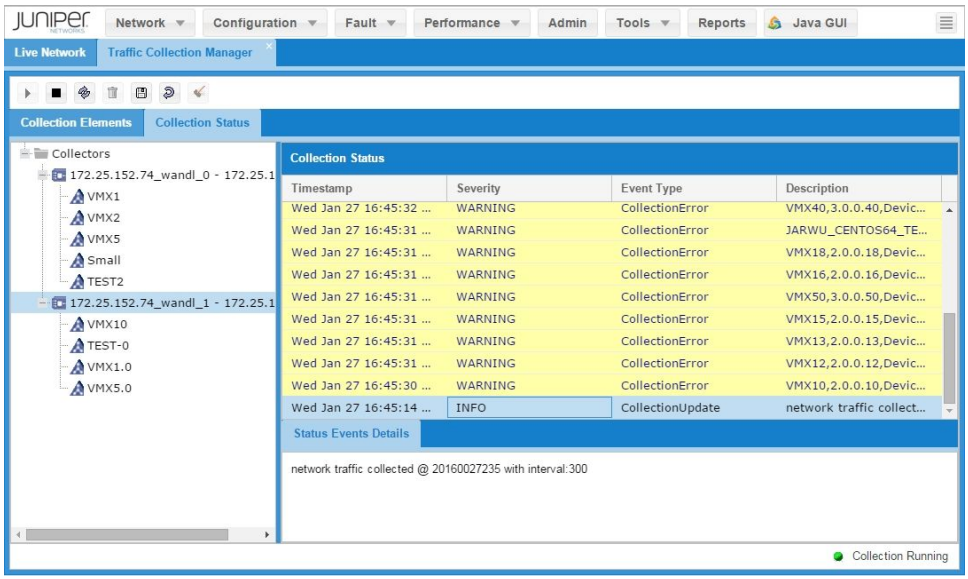
Figure 154: Traffic Collection Manager Window



Expand the list and select a collector. The collector properties are displayed in the right pane.

Select the Collection Status tab. The collection status is displayed in the right pane. Figure 155 on page 156 shows the collection status display.

Figure 155: Collection Status Display



Related Documentation

- Main Window Performance Menu on page 127
- Real Time Status on page 139
- Real Time Usage on page 144

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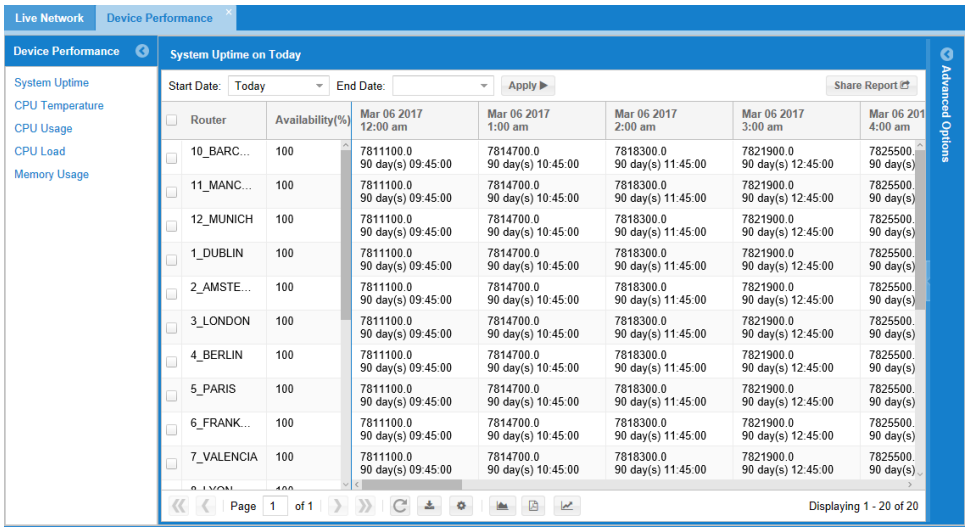
Device Performance

The IP/MPLSView main window has a Performance menu used to display live traffic, aggregated traffic, real-time status and usage, device and network performance, and diagnostics. It is also used to manage the traffic collector, and run CLI tests.

Select **Performance>Device Performance** to display the Device Performance window. System up time is displayed on an hourly basis. Figure 156 on page 157 shows the Device Performance window with system up time selected.

Figure 156: Device Performance Window



Select a start and end date and click **Apply** to display the system up time for the selected days. Select one or more devices and click the chart icon to display a chart of the system up time. Select the export icon to export a .cvs file of the data. Click the PDF icon to save the data as a PDF file. Click the gear icon to change the number of rows in the display.

Expand the Advanced Options pane to change the aggregate interval or the aggregation method. Figure 157 on page 158 shows the Advanced Options pane.

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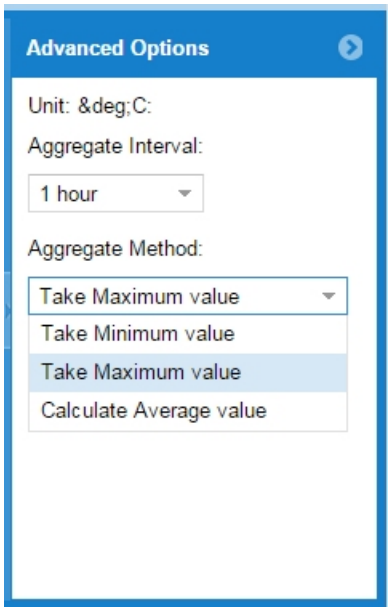
Figure 157: Advanced Options Pane



You can select **Take Maximum Value**, **Take Minimum Value**, or **Calculate Average Value**. You can set the Aggregate Interval to 5, 10, 20, or 30 minutes, or you can select 1, 2, 3, 4, 6, 8, 12, or 24 hours. The Advanced Options pane also displays the units used in the report. Some Advanced Options are only available for certain performance reports. The Advanced Options pane for memory usage has an option to set the Unit. Select b (bytes), kb (kilobytes), Mb (Megabytes), Gb (gigabytes), or %. After making your selections, click **Apply**.

From the Device Performance window, select **CPU Temperature** to display a report on CPU temperature. Select **CPU Usage** to display a report on CPU usage. Select **Memory Usage** to display a report on memory usage.

Related Documentation

- Main Window Performance Menu on page 127
- Network Performance on page 158

Network Performance

The IP/MPLSView main window has a Performance menu used to display live traffic, aggregated traffic, real-time status and usage, device and network performance, and diagnostics. It is also used to manage the traffic collector, and run CLI tests.

Select **Performance>Network Performance** to display the Network Performance window. Figure 158 on page 159 shows the Network Performance window with the Ping report selected.

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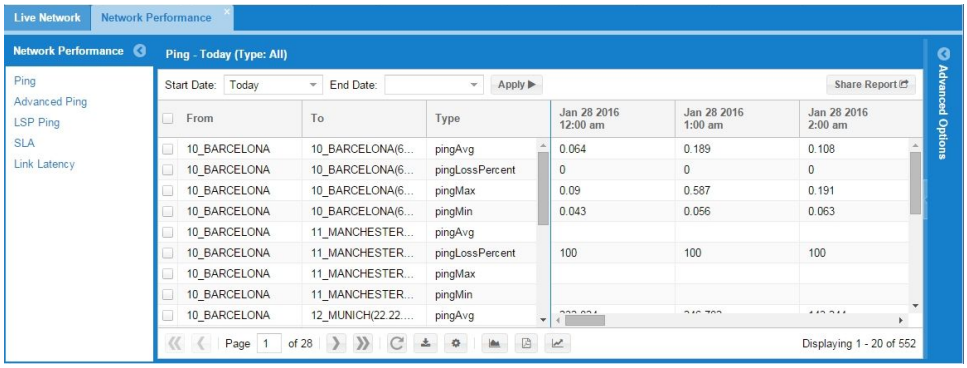
Figure 158: Network Performance Window

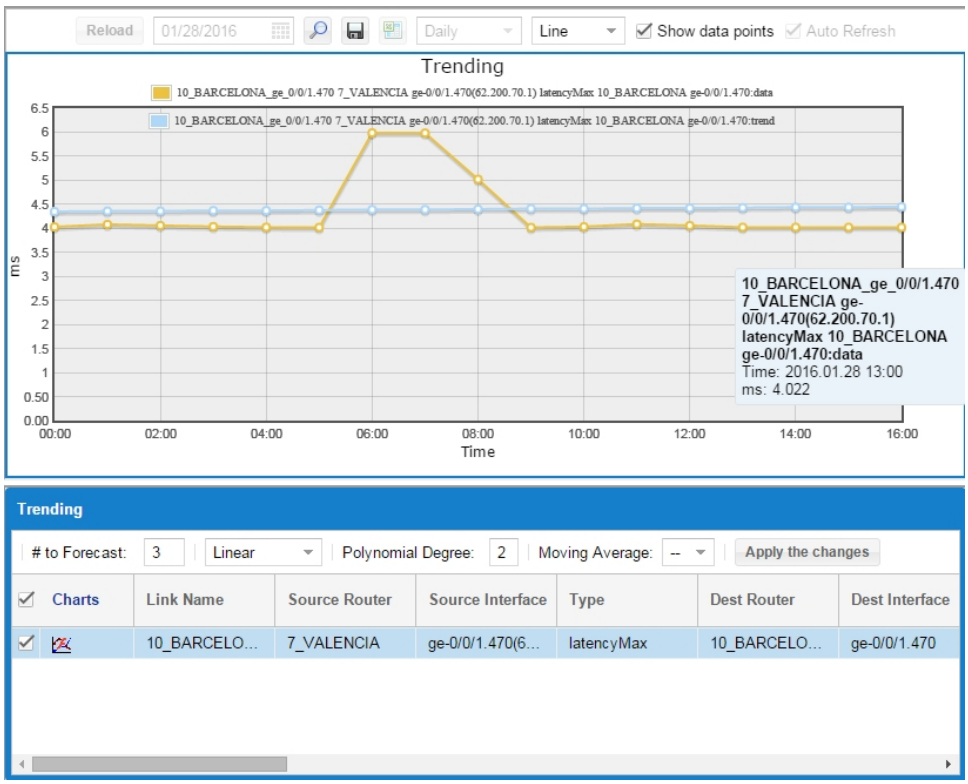


The ping report shows the average ping time (pingAvg), the maximum ping time (pingMax), the minimum ping time (pingMin), and the ping loss percentage (pingLossPercent).

Select a start and end date, and click **Apply** to display the report for the selected days. Select one or more devices and click the chart or trend icon to display a chart of the system up time. Select the export icon to export a .cvs file of the data. Click the PDF icon to save the data as a PDF file. Click the gear icon to change the number of rows in the display.

Figure 159 on page 159 shows a trend chart of Link Latency.

Figure 159: Trend Chart of Link Latency

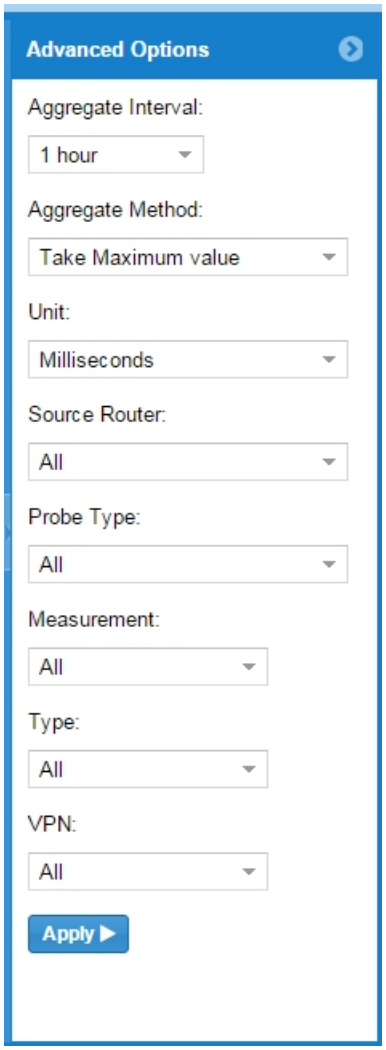


Expand the Advanced Options pane of the Network Performance window. For ping reports, you can change the Aggregate Interval, Aggregate Method, Source Router, Destination Router, or Ping Type. For Link Latency reports, you can also change the Latency Type.

For SLA reports, you can change the Aggregate Interval, Aggregate Method, Unit, Source Router, Probe Type, Measurement, and Type.

Figure 160 on page 160 shows the Advanced Options pane for SLA reports.

Figure 160: Advanced Options Pane for SLA Reports



Related Documentation

- Main Window Performance Menu on page 127
- Device Performance on page 157

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Miscellaneous Reports and Charts

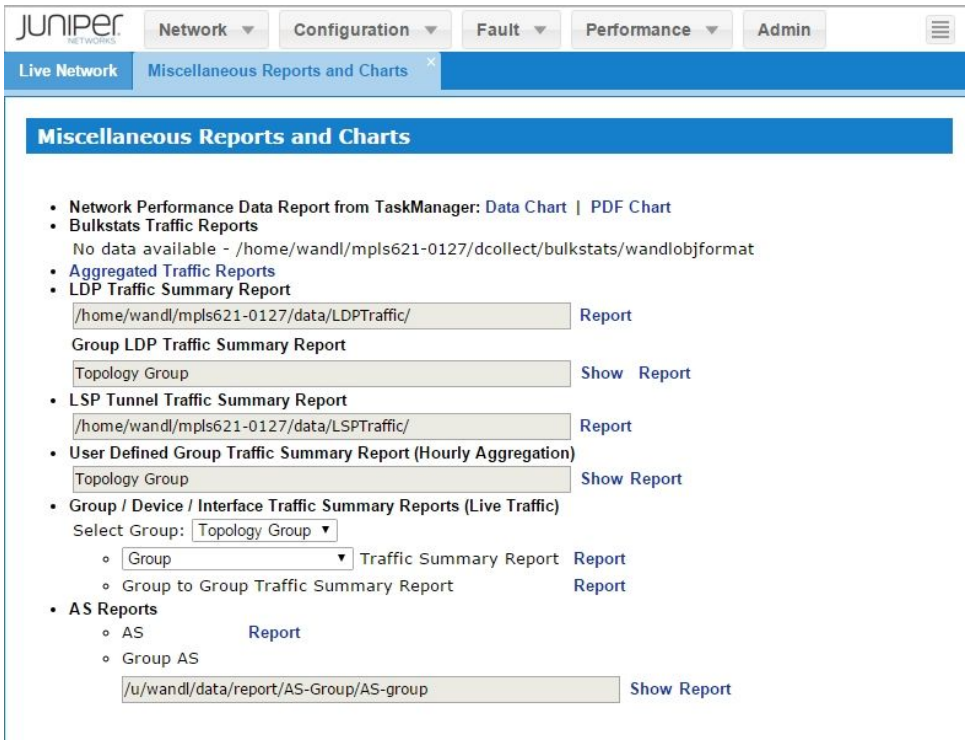
The IP/MPLSView main window has a Performance menu used to display live traffic, aggregated traffic, real-time status and usage, device and network performance, and diagnostics. It is also used to manage the traffic collector, and run CLI tests.

Select **Performance>Miscellaneous Reports and Charts** to display the Miscellaneous Reports and Charts window.

The Miscellaneous Reports and Charts includes selections for a **Network Performance Data Report**, **Aggregated Traffic Reports**, an **LDP Traffic Summary Report**, a **Group LDP Traffic Summary Report**, an **LSP Tunnel Traffic Summary Report**, a **User Defined Group Traffic Summary Report**, **Group / Device / Interface Traffic Summary Reports**, and **AS Reports**.

Figure 161 on page 161 shows the Miscellaneous Reports and Charts window.

Figure 161: Miscellaneous Reports and Charts Window



Click **Data Chart**. A list of reports is displayed. Click the report name to display the report.

Click **PDF Chart**. A list of report PDF files is displayed. Click the file name to download a copy.

Click **Aggregated Traffic Reports**. A list of reports formatted as CVS is displayed. Click the report name to display the report.

Under the LDP Traffic Summary Report, click **Report**. The LDP Traffic Summary Report window is displayed. Specify a time interval, and click **Apply**.

Under the Group LDP Traffic Summary Report, click **Show Report**. The Group LDP Traffic Summary Report window is displayed. Specify a time interval, and click **Apply**.

Under the User Defined Group Traffic Summary Report, click **Show Report**. The User Defined Group Traffic Summary Report window is displayed. Specify a time interval, and click **Apply**.

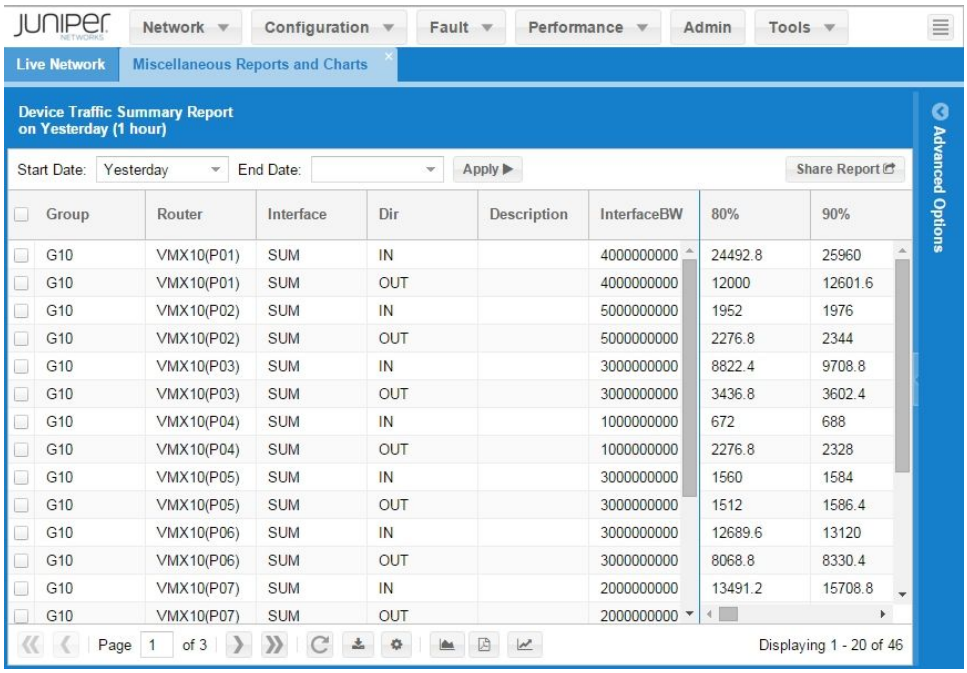
Under the LSP Traffic Summary Report, click **Show Report**. The LSP Traffic Summary Report window is displayed. Specify a time interval, and click **Apply**.

Under the User Defined Group Traffic Summary Report, click **Show Report**. The Show Topology Group windows is displayed. The window displays an expandable list of nodes by group.

Under the Group / Device / Interface Traffic Summary Reports select the topology group you want and click **Report**. The Device Traffic Summary Report window is displayed. Specify a time interval, and click **Apply**.

Figure 162 on page 162 shows the Device Traffic Summary Report window.

Figure 162: Device Traffic Summary Report Window



Group	Router	Interface	Dir	Description	InterfaceBW	80%	90%
G10	VMX10(P01)	SUM	IN		4000000000	24492.8	25960
G10	VMX10(P01)	SUM	OUT		4000000000	12000	12601.6
G10	VMX10(P02)	SUM	IN		5000000000	1952	1976
G10	VMX10(P02)	SUM	OUT		5000000000	2276.8	2344
G10	VMX10(P03)	SUM	IN		3000000000	8822.4	9708.8
G10	VMX10(P03)	SUM	OUT		3000000000	3436.8	3602.4
G10	VMX10(P04)	SUM	IN		1000000000	672	688
G10	VMX10(P04)	SUM	OUT		1000000000	2276.8	2328
G10	VMX10(P05)	SUM	IN		3000000000	1560	1584
G10	VMX10(P05)	SUM	OUT		3000000000	1512	1586.4
G10	VMX10(P06)	SUM	IN		3000000000	12689.6	13120
G10	VMX10(P06)	SUM	OUT		3000000000	8068.8	8330.4
G10	VMX10(P07)	SUM	IN		2000000000	13491.2	15708.8
G10	VMX10(P07)	SUM	OUT		2000000000		

Select the export icon to export a .cvs file of the data. Click the PDF icon to save the data as a PDF file. Click the gear icon to change the number of rows in the display. Click the chart or trend icons to display a chart.

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Under the AS Report, click **Report**. The AS Traffic Summary Report window is displayed. The window works similar to the LSP Traffic Summary Report window. The AS Group report also works the same.

Related Documentation

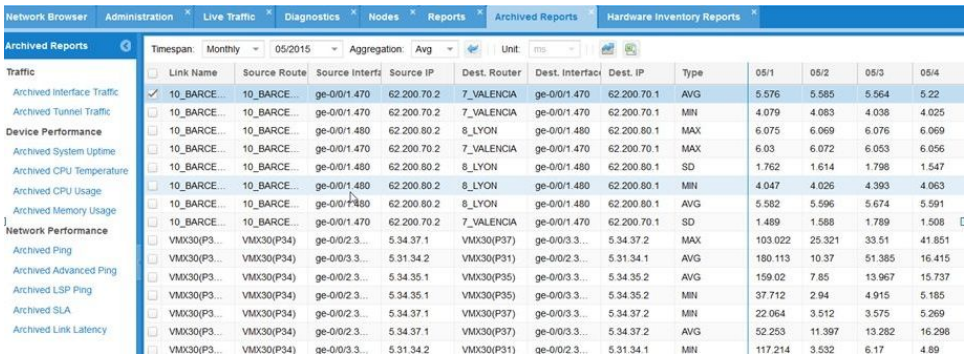
- Main Window Performance Menu on page 127
- Live Traffic on page 128

Archived Reports

The IP/MPLSView main window has a Performance menu used to display live traffic, aggregated traffic, real-time status and usage, device and network performance, and diagnostics. It is also used to manage the traffic collector, and run CLI tests.

Select **Performance>Archived Reports** to display the Archived Reports window. Figure 163 on page 163 shows the Archived Reports window.

Figure 163: Archived Reports Window



Archived reports are preprocessed traffic reports that you can view on a daily, weekly, monthly, or yearly basis.

Select a time interval. Select one or more devices and click the chart icon to display a chart. Select the export icon to export a .cvs file of the data. The chart controls are similar to what is described in "Aggregated Traffic" on page 135.

Related Documentation

- Main Window Performance Menu on page 127
- Aggregated Traffic on page 135
- Real Time Status on page 139
- Live Traffic on page 128

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CHAPTER 10

Admin Button

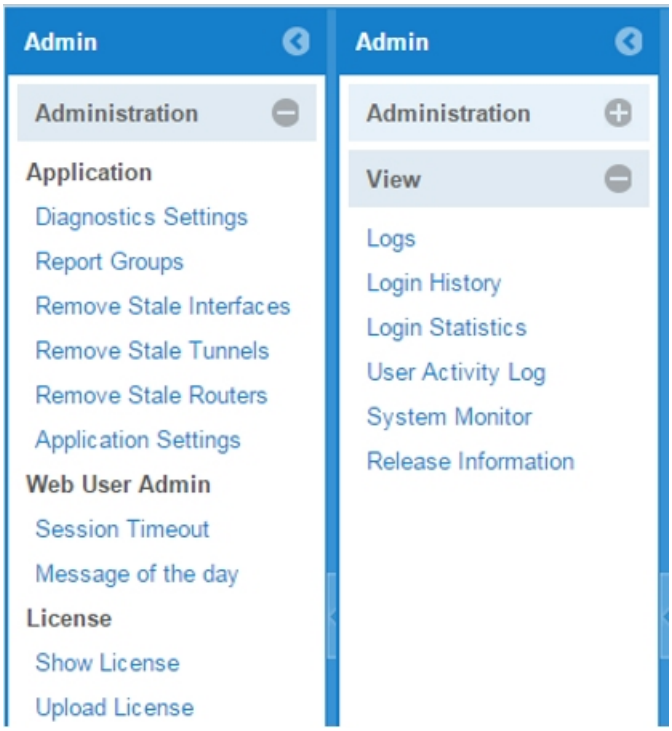
- Main Window Admin Button on page 165
- Administration Application Menu on page 166
- GUI User Admin on page 170
- Web User Admin on page 171
- Admin View Menu on page 172
- License File Window on page 175

Main Window Admin Button

The IP/MPLSView main window has an Admin button. The Admin button provides access to administrative settings for applications, user accounts, licenses, log files, login statistics, release information, and activity on the server.

Figure 164 on page 166 shows the Admin menu that is displayed in the left pane of the Administration window.

Figure 164: Administration Window Admin Menu



Related Documentation

- IP/MPLSView Main Window Overview on page 25
- Administration Application Menu on page 166
- Web User Admin on page 171
- Admin View Menu on page 172

Administration Application Menu

The IP/MPLSView main window has an Admin button. The Admin button provides access to administrative settings for applications, user accounts, licenses, log files, login statistics, release information, and activity on the server.

Select **Application>Diagnostics Settings** to display the Diagnostics Settings window. Figure 165 on page 167 shows the Diagnostics Settings window.

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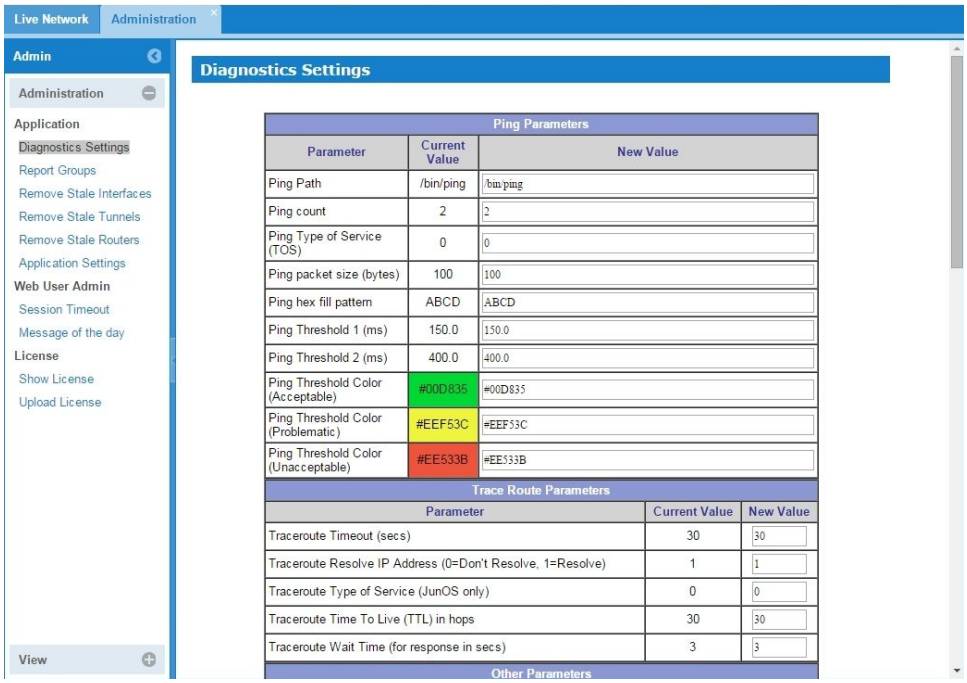
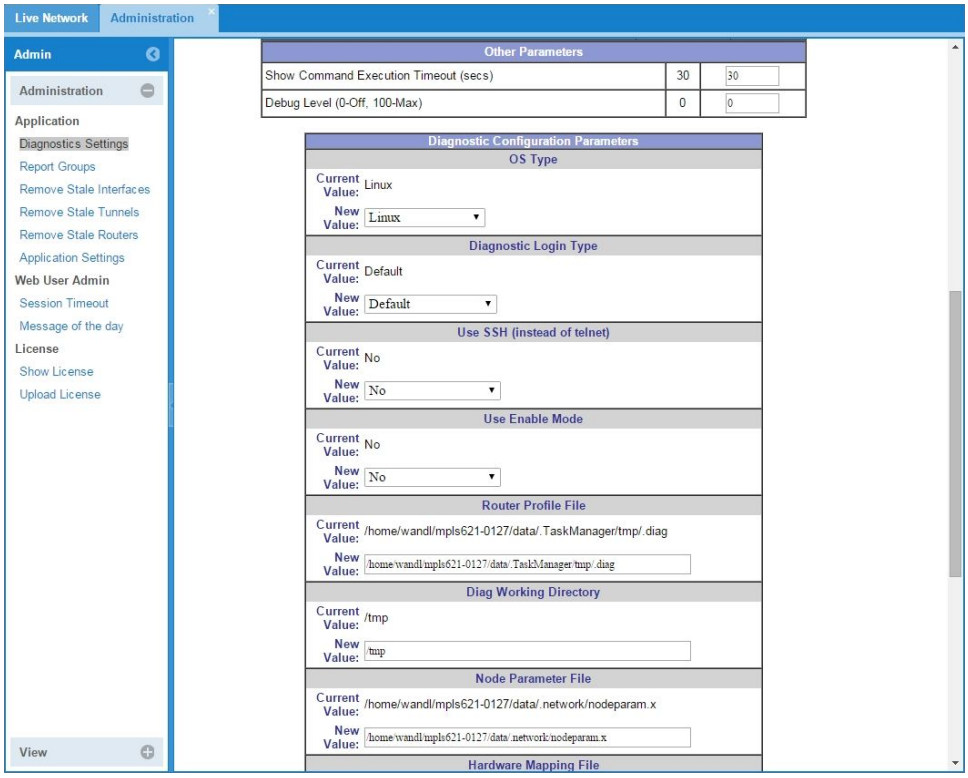
Figure 165: Diagnostics Settings Window



In the top pane of the Diagnostics Settings window, you can customize settings for the ping test. In the second pane you can customize the settings for the traceroute test.

Scroll down the window. From the lower panes you can set the show command timeout, set the debug level, change the required diagnostic login type, and change the location of various system files. Figure 166 on page 168 shows the lower panes of the Diagnostics Settings window.

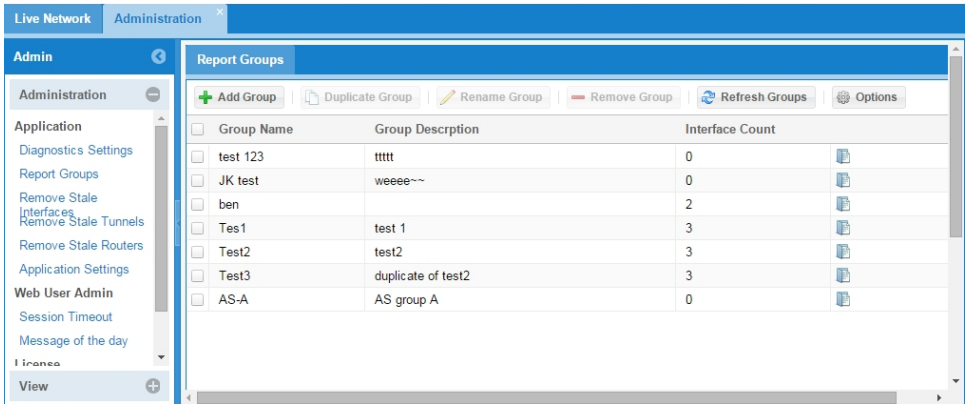
Figure 166: Lower Panes of the Diagnostics Settings Window



Report Groups

Select **Application>Report Groups** to display the Report Groups window. Figure 167 on page 168 shows the Report Groups window.

Figure 167: Report Groups Window



Click **Add Group**. The Add Group dialog box is displayed. Enter a group name and description, and click **Save**. To duplicate a group, click **Duplicate Group**. To rename a group, click **Rename Group**. To change the number of groups displayed, click **Options**.

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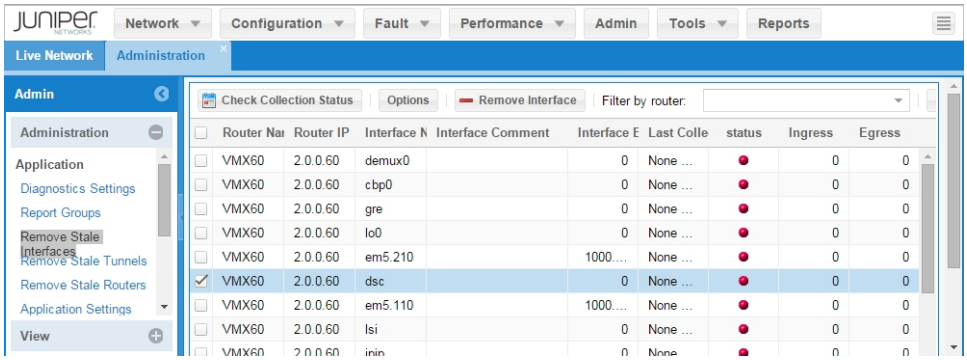
Remove Stale Interfaces, Tunnels, and Routers

Select **Application>Remove Stale Interfaces** to display a list of interfaces. Figure 168 on page 169 shows the Administration window with the list of removable interfaces.

Figure 168: List of Removable Interfaces



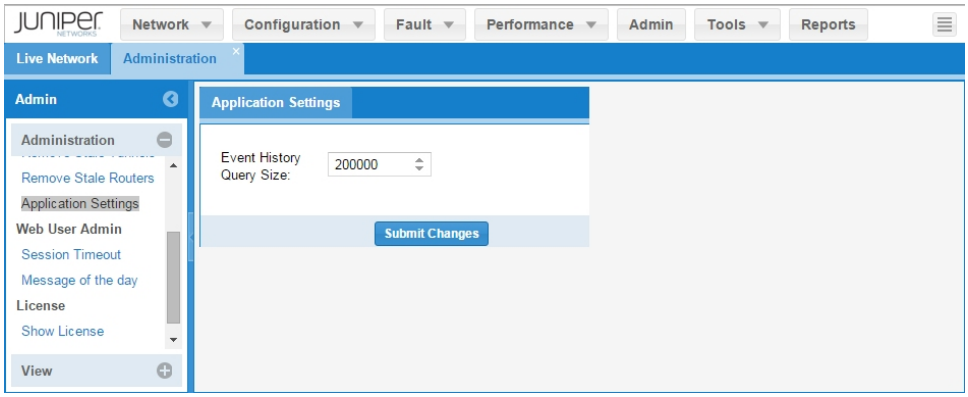
Select the interface you want to remove, and click **Remove Interface**. You are prompted to confirm the action.

The Remove Stale Tunnels and Remove Stale Routers lists work the same way.

Application Settings

Select **Application>Application Settings** to display the Application Settings dialog box. Figure 169 on page 169 shows the Application Settings dialog box.

Figure 169: Application Settings Dialog Box



To set the maximum number of events fetched from the historical event browser, change the event history query size, and click **Submit Changes**.

Related Documentation

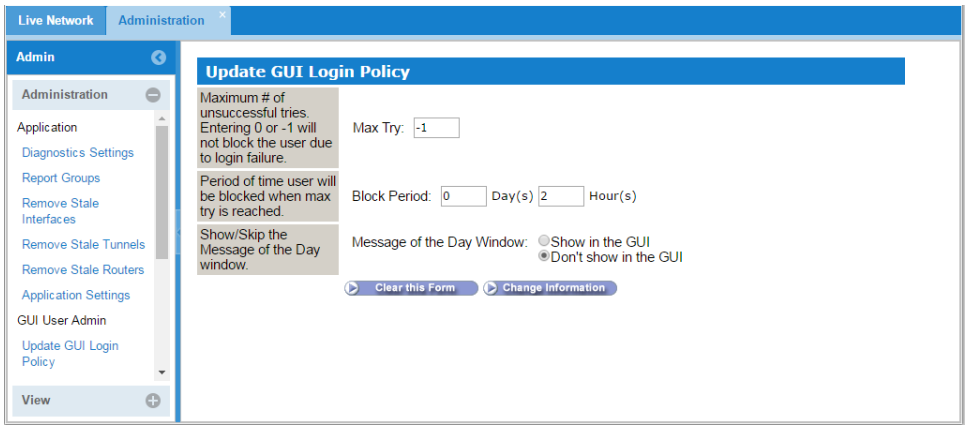
- Main Window Admin Button on page 165

GUI User Admin

The IP/MPLSView main window has an Admin button. The Admin button provides access to administrative settings for applications, user accounts, licenses, log files, login statistics, release information, and activity on the server.

Select **GUI User Admin>Update GUI Login Policy** to display the Update GUI Login Policy window. Figure 170 on page 170 shows the GUI Login Policy window with the default values.

Figure 170: GUI Login Policy Window



In the GUI Login Policy window, you can set the number of unsuccessful login attempts that can occur before the user is blocked and the time period for which that user is blocked.

User restrictions are modified using the User Administration window that you access by selecting **Tools>User Admin**.

NOTE: A user created through the User Administration window must map to an existing Linux user on the IP/MPLSView server.

To display the message of the day, select **Show in the GUI**.

After you have made changes, select **Change Information**. The updated login policy is displayed in the lower area of the screen.

To clear the form, select **Clear this Form**.

Related Documentation

- Main Window Admin Button on page 165
- Web User Admin on page 171
- User Admin on page 189

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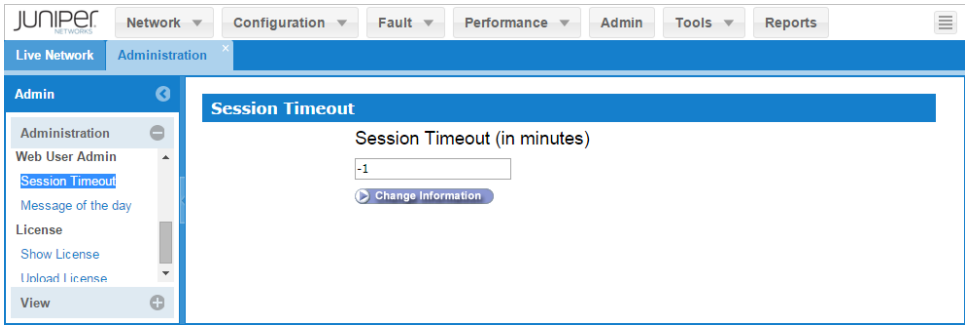
Web User Admin

The IP/MPLSView main window has an Admin button. The Admin button provides access to administrative settings for applications, user accounts, licenses, log files, login statistics, release information, and activity on the server.

Select **Web User Admin>Session Timeout** to display the Session Timeout window. Figure 171 on page 171 shows the Session Timeout window.

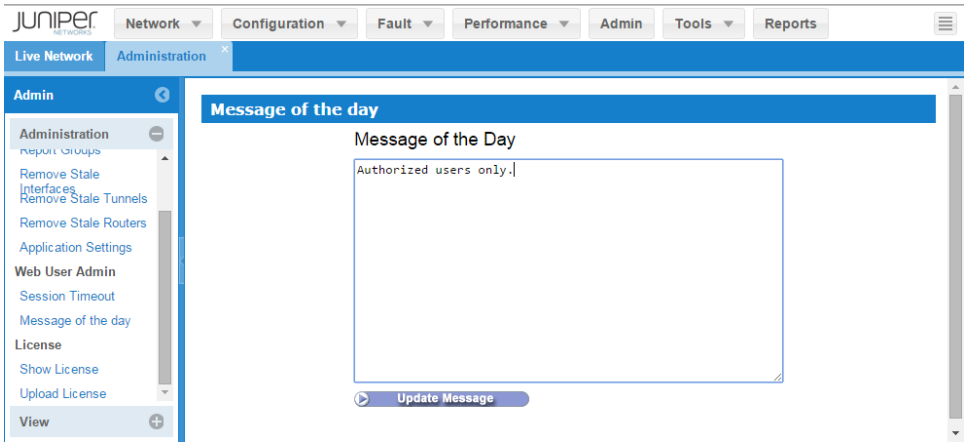
Figure 171: Session Timeout Window



Type the number of minutes before the Web user session times out, and click **Change Information**. A value of -1 disables the timeout.

Select **Web User Admin>Message of the day** to display the Message of the Day window. Figure 172 on page 171 shows the Message of the Day window.

Figure 172: Message of the Day Window



Type the message to display when a user logs into the system, and click **Update Message**.

Related Documentation

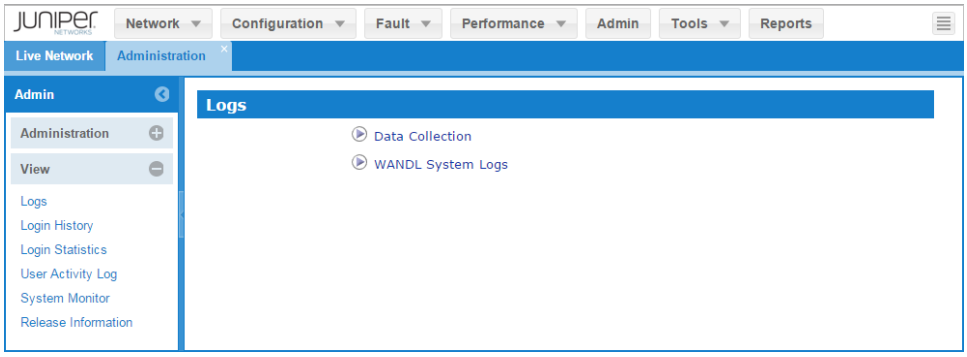
- Main Window Admin Button on page 165
- Admin View Menu on page 172

Admin View Menu

The IP/MPLSView main window has an Admin button. The Admin button provides access to administrative settings for applications, user accounts, licenses, log files, login statistics, release information, and activity on the server.

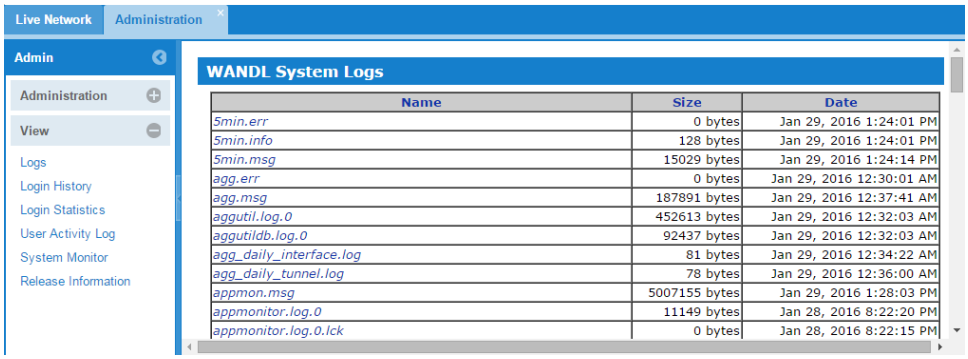
In the Administration window, select **View>Logs** to display the Logs window. Figure 173 on page 172 shows the Logs window.

Figure 173: Logs Window



Select the log file you want to view. The log file is displayed. Figure 174 on page 172 shows the WANDL System Logs window.

Figure 174: WANDL System Logs



Name	Size	Date
5min.err	0 bytes	Jan 29, 2016 1:24:01 PM
5min.info	128 bytes	Jan 29, 2016 1:24:01 PM
5min.msg	15029 bytes	Jan 29, 2016 1:24:14 PM
agg.err	0 bytes	Jan 29, 2016 12:30:01 AM
agg.msg	187891 bytes	Jan 29, 2016 12:37:41 AM
aggutil.log.0	452613 bytes	Jan 29, 2016 12:32:03 AM
aggutildb.log.0	92437 bytes	Jan 29, 2016 12:32:03 AM
agg_daily_interface.log	81 bytes	Jan 29, 2016 12:34:22 AM
agg_daily_tunnel.log	78 bytes	Jan 29, 2016 12:36:00 AM
appmon.msg	5007155 bytes	Jan 29, 2016 1:28:03 PM
appmonitor.log.0	11149 bytes	Jan 28, 2016 8:22:20 PM
appmonitor.log.0.lck	0 bytes	Jan 28, 2016 8:22:15 PM

Click the log file name to display the file path and date.

Login History and Statistics

In the Administration window, select **View>Login History** to display the Login History window. Figure 175 on page 173 shows the Login History window.

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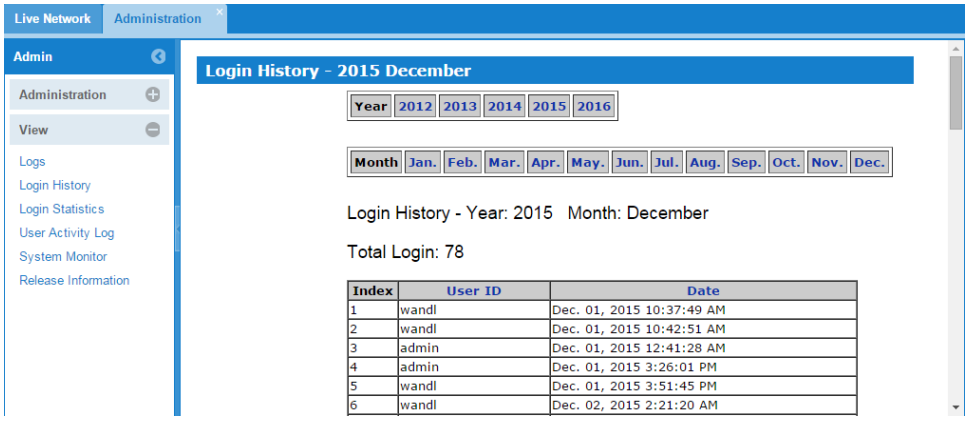
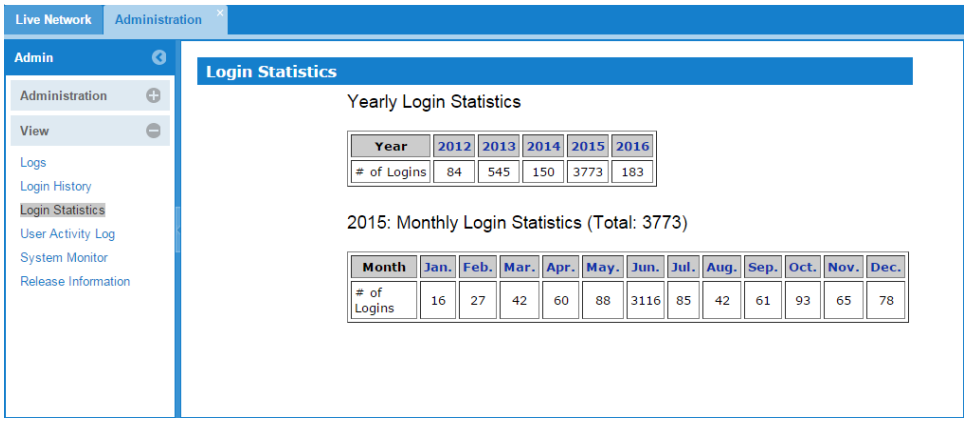
Figure 175: Login History Window



Select the year and month you want to display. The display updates the login history.

Select **View>Login Statistics** to display the Login Statistics window. Figure 176 on page 173 shows the Login Statistics window.

Figure 176: Login Statistics Window

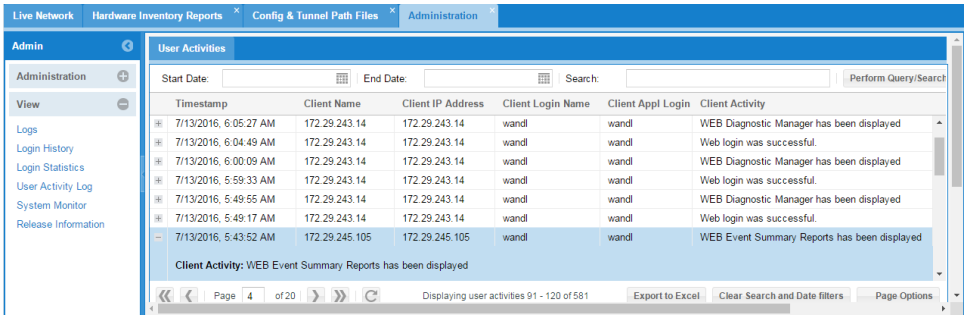


Select the year and month you want to display. The display updates the login statistics..

User Activity Log

In the Administration window, select **View>User Activity Log** to display the User Activities window. Figure 177 on page 174 shows the User Activities window.

Figure 177: User Activities Window

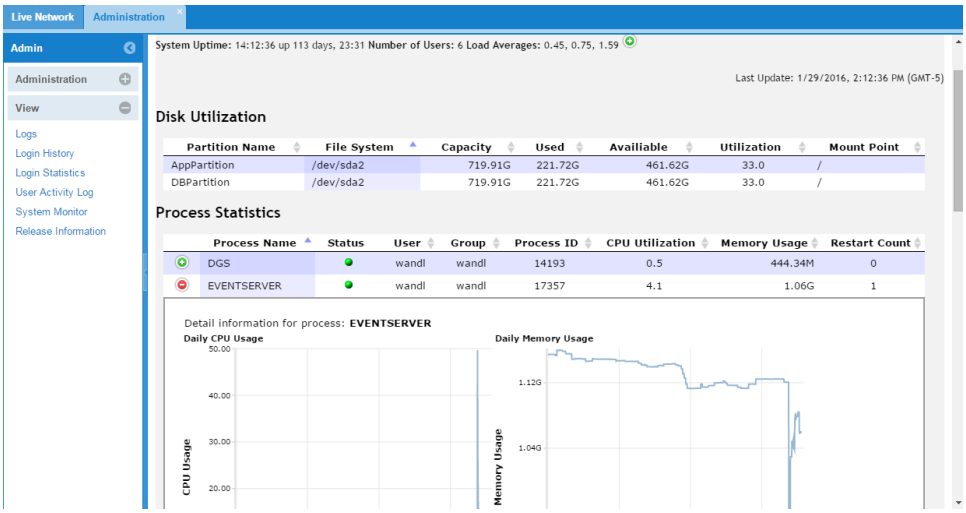


Starting in Release 6.3.0, the User Activity log lists every action the user takes. Expand an entry to display more details. Select the time period to display. Enter a string in the Search field and click **Perform Query/Search**. Use the controls at the bottom of the window to export the report to a .cvs formatted file, clear the search, or change the page size.

System Monitor

In the Administration window, select **View > System Monitor** to display the System Monitor window. Figure 178 on page 174 shows the System Monitor window.

Figure 178: System Monitor Window



The Disk Utilization table shows the application partition and database partition. The table shows the file system name, capacity, used space, available space, percent utilized, and the mount point.

The Process Statistics table lists each process name, the status, the user and group, the process ID, the CPU and memory utilization, and the restart count. Expand a process to display charts of the daily, weekly, and monthly CPU usage and memory usage of that process.

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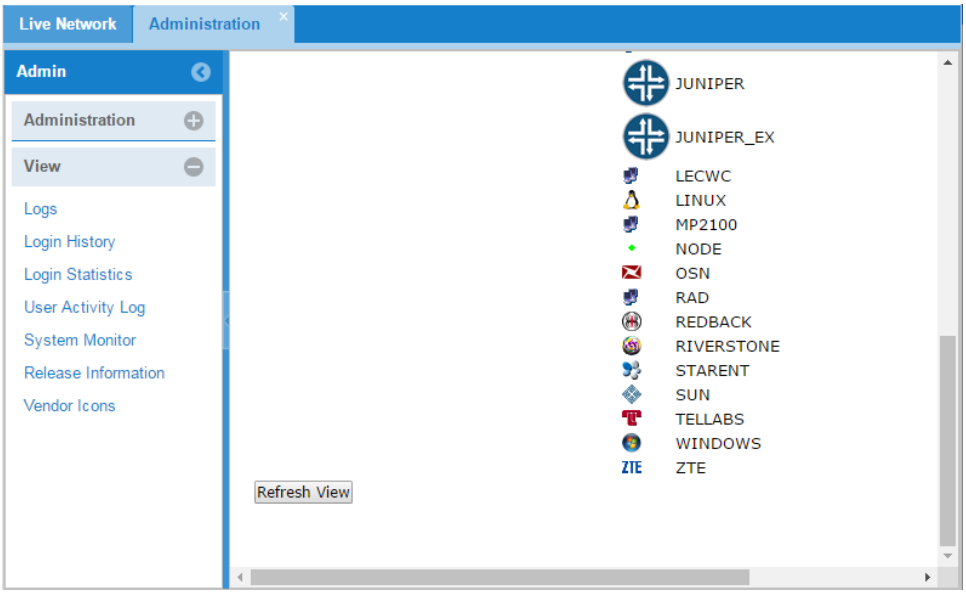
Vendor Icons

In the Administration window, select **View>Vendor Icons** to display the Vendor Icons window. Figure 179 on page 175 shows the System Monitor window.

Figure 179: Vendor Icons Window



The Vendor Icons window identifies each vendor associated with the icons used in the topology map.

Related Documentation

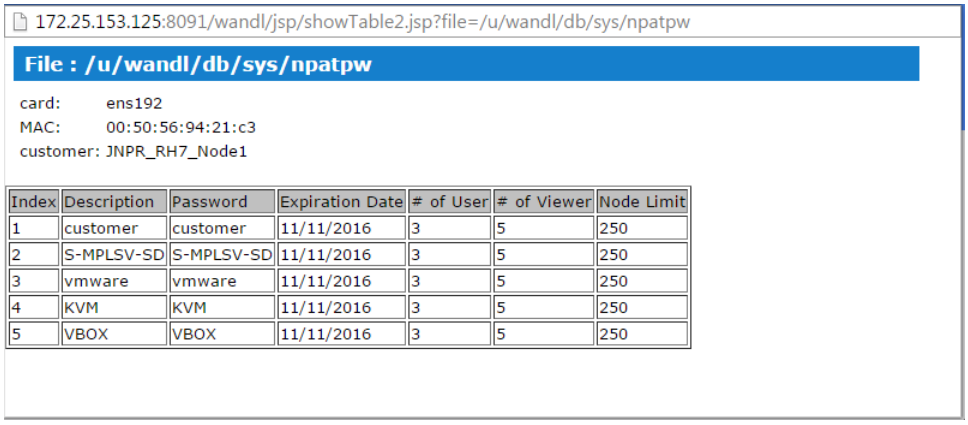
- Main Window Admin Button on page 165
- Topology Map Right Pane on page 30

License File Window

The IP/MPLSView main window has an Admin button. The Admin button provides access to administrative settings for applications, user accounts, licenses, log files, login statistics, release information, and activity on the server.

Select **License>Show License** to display the license file window. Figure 180 on page 176 shows the license window.

Figure 180: License File Window



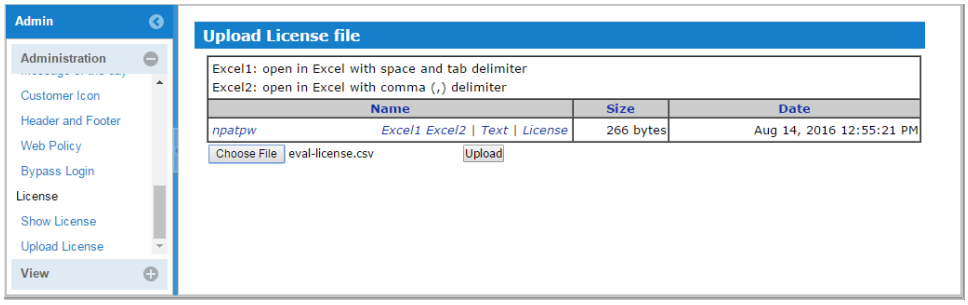
Index	Description	Password	Expiration Date	# of User	# of Viewer	Node Limit
1	customer	customer	11/11/2016	3	5	250
2	S-MPLSV-SD	S-MPLSV-SD	11/11/2016	3	5	250
3	vmware	vmware	11/11/2016	3	5	250
4	KVM	KVM	11/11/2016	3	5	250
5	VBOX	VBOX	11/11/2016	3	5	250

This window lists all the modules, number of users, number of viewers, the node limit, and the expiration date of the license file. The license file is on the application server in the **/u/wandl/db/sys** directory.

To upload a new license file, select **License>Upload License**.

The Upload License file window is displayed. Figure 181 on page 176 shows the Upload License file window.

Figure 181: Upload License Window



Select **Choose File**. An open file window is displayed. Select the license file and select **Open**. The license file is uploaded to the application server. If there is an existing license file, it is renamed with the timestamp of when the new license file is uploaded.

Related Documentation

- Main Window Admin Button on page 165
- Main Window Hello Menu and Help-About Menu on page 197

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CHAPTER 11

Tools Menu

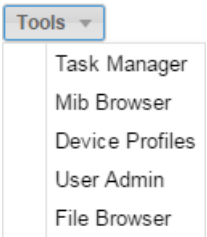
- Main Window Tools Menu on page 177
- Task Manager on page 178
- MIB Browser on page 185
- Device Profiles on page 186
- User Admin on page 189
- File Browser on page 191

Main Window Tools Menu

The IP/MPLSView main window has a Tools menu used to display the Task Manager, MIB Browser, Device Profiles, User Admin, and File Browser windows.

Figure 117 on page 128 shows the main window Tools menu.

Figure 182: Main Window Tools Menu



Related Documentation

- IP/MPLSView Main Window Overview on page 25
- Task Manager on page 178
- MIB Browser on page 185
- Device Profiles on page 186
- User Admin on page 189
- File Browser on page 191

Task Manager

The IP/MPLSView main window has a Tools menu used to display the Task Manager, MIB Browser, Device Profiles, User Admin, and File Browser windows.

Select **Tools>Task Manager** to display the Task Manager window. Figure 183 on page 178 shows the Task Manager window.

The Task Manager window displays a history of tasks executed and acts as a task management portal. Tasks can be added, deleted, modified, copied, delegated, deactivated, and chained into a sequence.

Figure 183: Task Manager Window

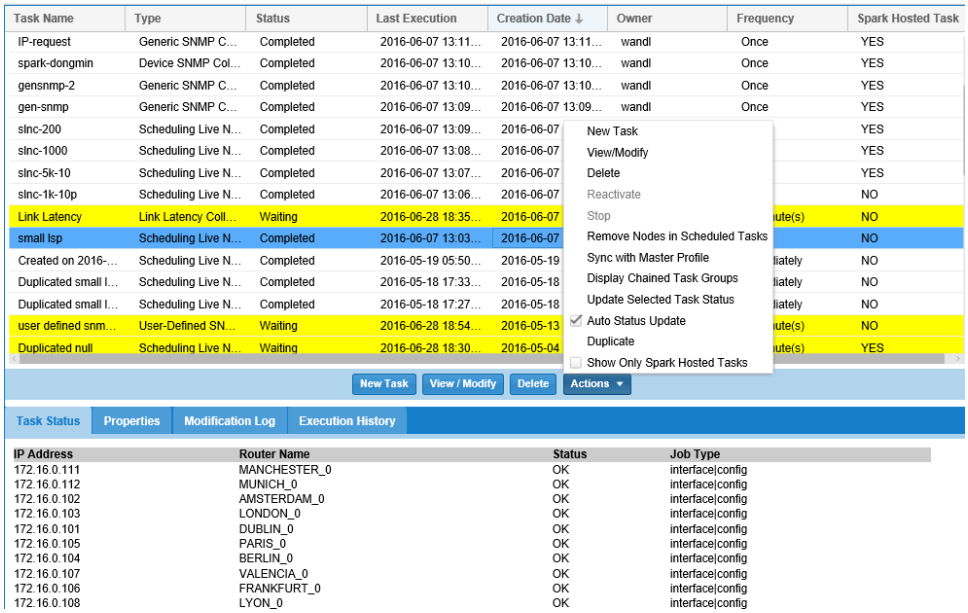


Table 28 on page 178 describes the Task Manager table columns.

Table 28: Task Manager Table Columns

Column Name	Description
Task Name	The name of the task assigned when you create the task.
Type	The type of task. For example: User-Defined SNMP Collection, User CLI Collection, Hardware Inventory Report, Scheduling Live Inventory Report, Network Performance Data Report, Integrity Check, Server Performance Data Collection, and Web Report. See the *Task Manager* in the *IP/MPLSView Web-Based Management and Monitoring Guide* for the complete list.
Status	The status of the task, such as Completed, Waiting, or Failed.
Last Execution	The date the task was last executed.

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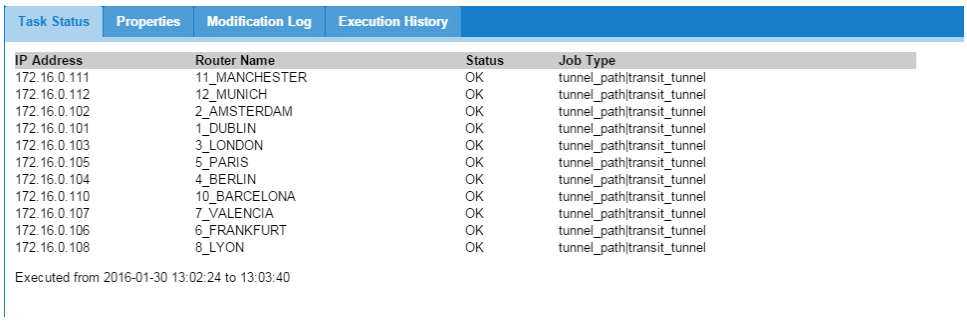
Table 28: Task Manager Table Columns (continued)

Column Name	Description
Creation Date	The date the task was created.
Owner	The user who created the task.
Frequency	The time unit for which recurrences of this task are scheduled, such as minutes, hours, days, and so on. If a task is scheduled to run only once at the time of creation, this field displays *Immediately*.
Comment	User-specified comment for the task.
Dependent Task ID	If the task is chained to run *Immediately After* another task in the scheduling options, the ID of the preceding task is listed here.
ID	Unique identification number for the task.
Start Time	The time the task started.
Stop Time	The time the task stopped.
Target Dir	Directory where output files are written.
Polling Server (Remote Collection Server)	The server that is polling for data, if configured.
Spark Hosted Task	Tasks delegated to a Spark cluster display Yes.

From any column head menu, you can select the sort order, show all columns, show default columns, or select which columns to display.

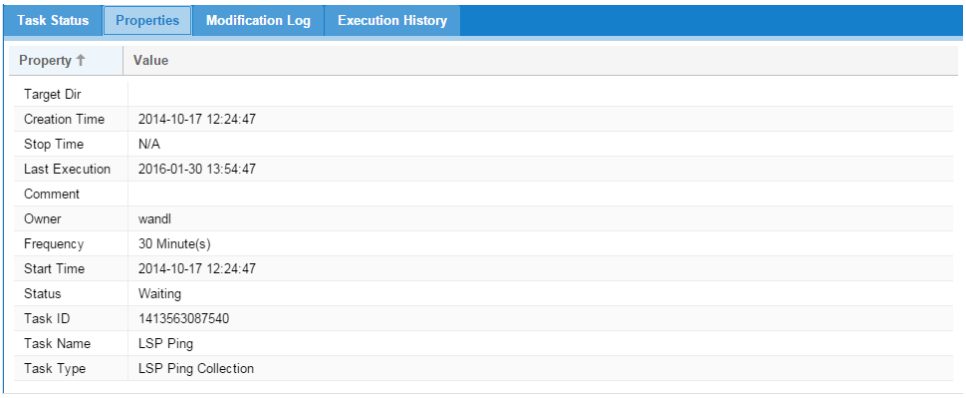
Select a task in the list and select the **Task Status** tab. Status details about the task are displayed in the lower pane. Figure 184 on page 179 shows an example of the task status details pane.

Figure 184: Task Status Details Pane



Select a task in the list and select the **Properties** tab. Task properties are displayed in the lower pane. Figure 185 on page 180 shows an example of the task properties.

Figure 185: Task Properties Pane



Select the **Modification Log** tab to display the user who created the task, operating system, and the creation and modification date and time. Select the **Execution History** tab to show an expandable list of executed dates. Expand an item in the executed list to see the results for individual nodes or tests.

NOTE: **Before defining any tasks in the Task Manager, you must first create a device profile.**

To create a new task, click **New Task**, or select **Actions > New Task**. The New Task dialog box is displayed. Type a task name and comment. Select a task group from the menu. Select a task. Figure 186 on page 181 shows the New Task dialog box with All Tasks selected and the Task menu open.

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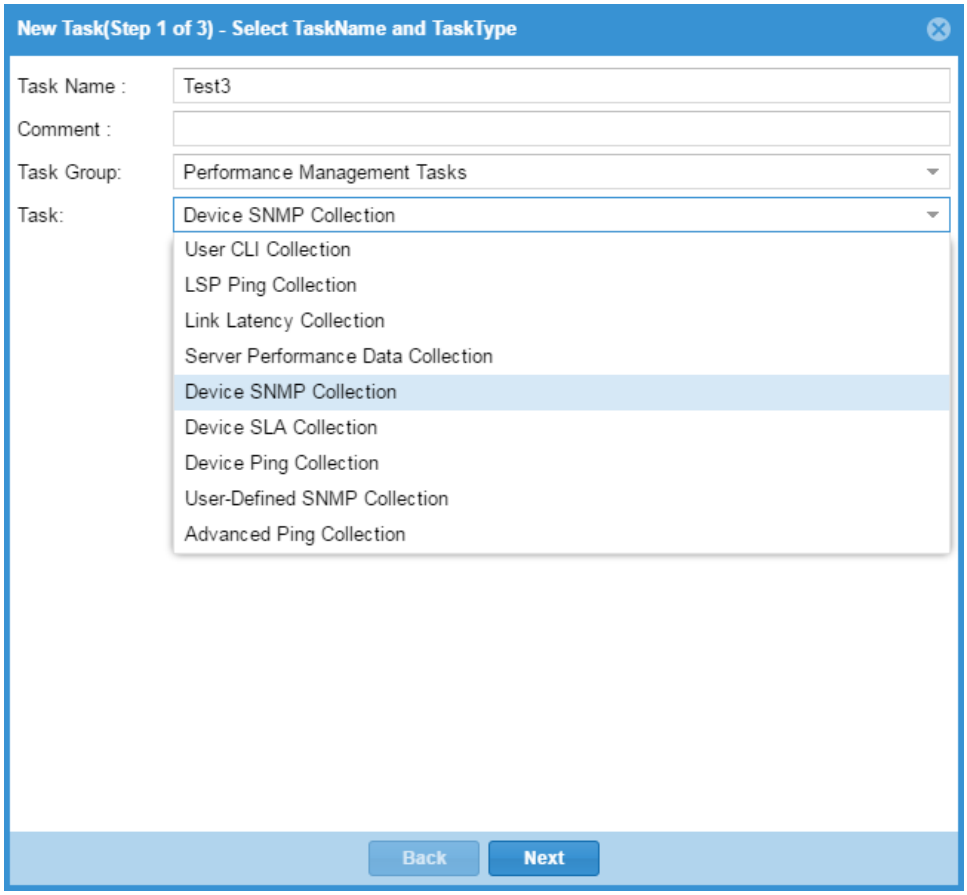
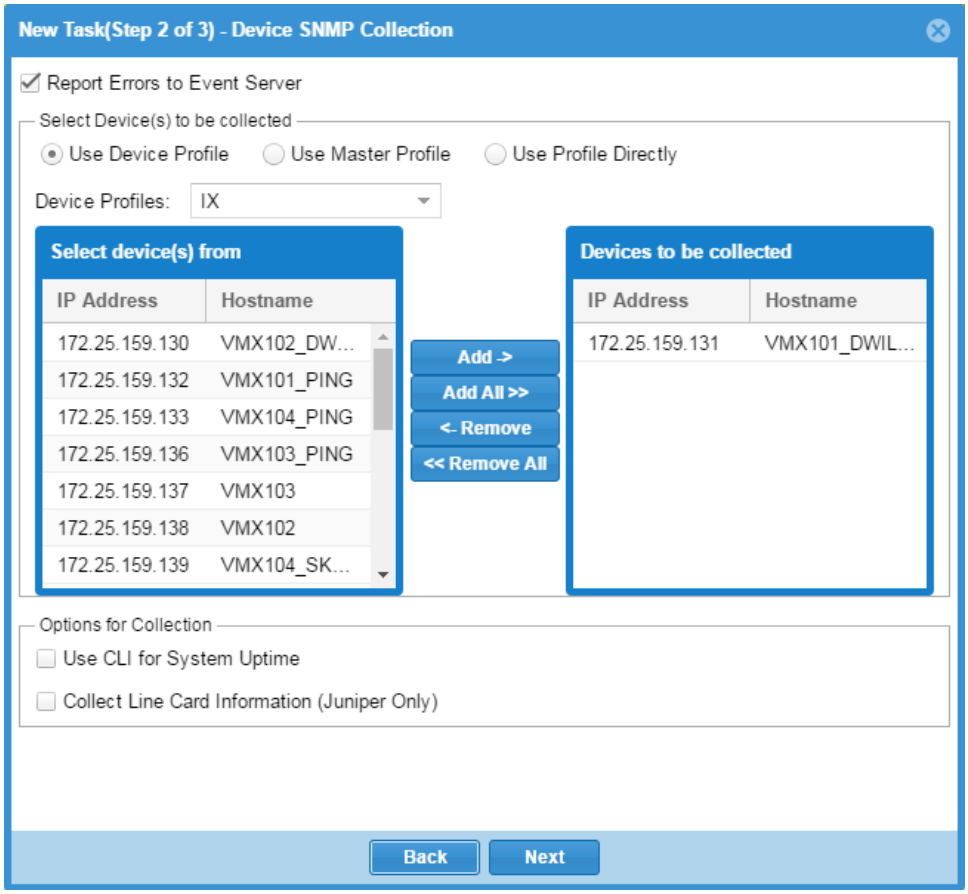
Figure 186: New Task Dialog Box



Click **Next**. The New Task Step 2 dialog box is displayed. Figure 187 on page 182 shows the New Task Step 2 dialog box for Device Ping Collection.

Figure 187: New Task Step 2 Dialog Box



NOTE: Every task has different information that must be specified in Step 2. This example shows a Device SNMP Collection type of task.

Select the device profile to use. Select **Use Device Profile**, and then select a specific device profile from the Device Profile menu. Alternately, select **Use Master Profile**. The Device profile field changes to Group, and All Devices are listed. Select **Use Profile Directly**, and then select the profile from the list.

The Select device(s) or Select profiles(s) pane is populated. Add the devices or profiles to the list of devices or profiles to be collected. Scroll down to the lower pane and specify the task parameters for the type of test being performed. Click **Next**. Figure 188 on page 183 show the New Task Step 3 dialog box.

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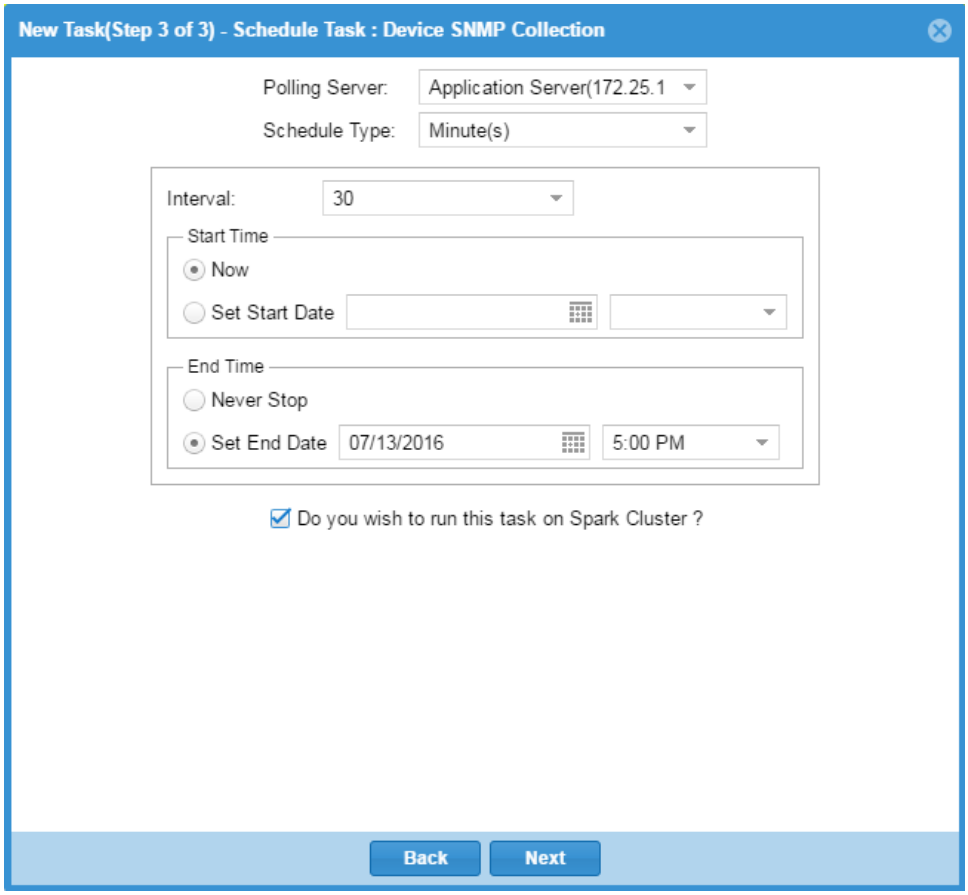
Figure 188: New Task Step 3 Dialog Box



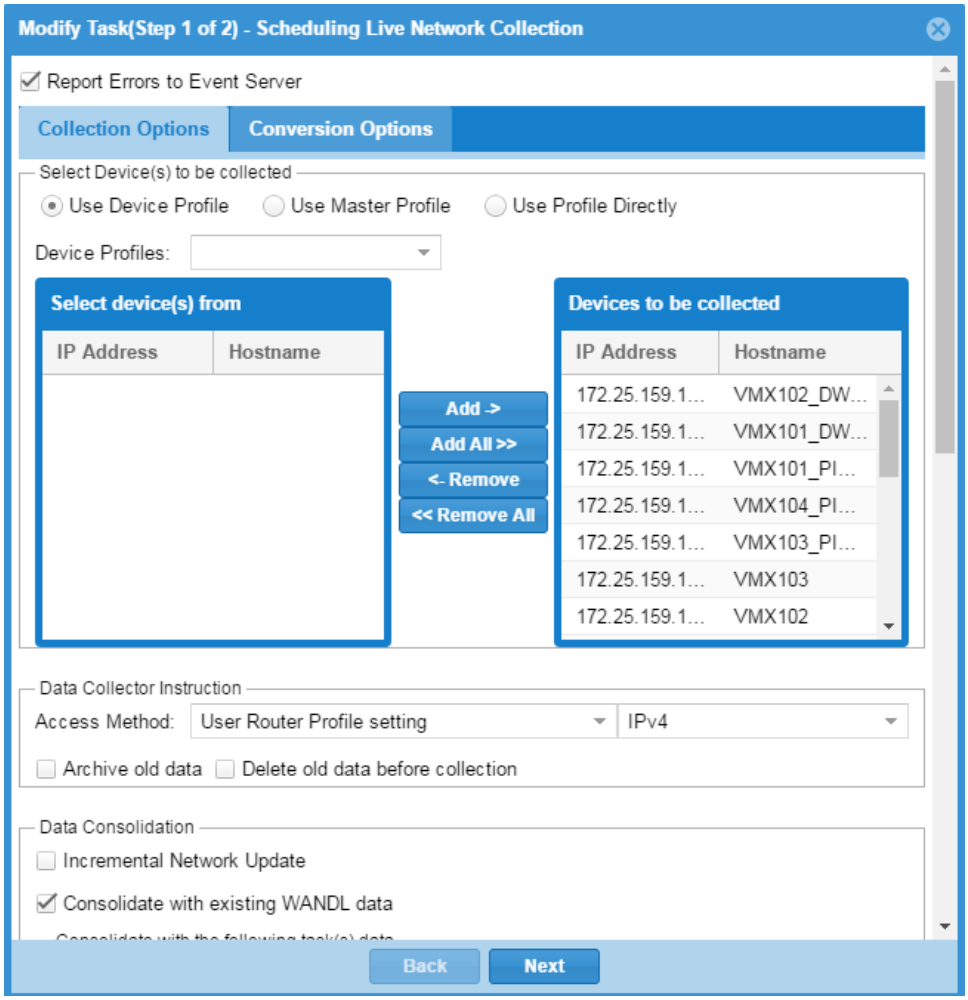
Select the server from the Polling Server menu. Select the schedule type. Specify the start and end date. Click **Next**. A confirmation is displayed.

Certain types of tasks can be delegated to an Spark cluster. To delegate the task to a Spark cluster, select **Do you wish to run this task on Spark Cluster?**

Click **Ok**.

To change task settings, click **View/Modify**. The Modify Task dialog box is displayed. Figure 189 on page 184 shows the Modify Task dialog box.

Figure 189: Modify Task Dialog Box



Specify the required information in Step 2 and select the schedule in Step 3 as you did when you created the task.

You can perform other actions on the tasks. Select a task and open the **Actions** menu. Figure 190 on page 185 shows the Actions menu.

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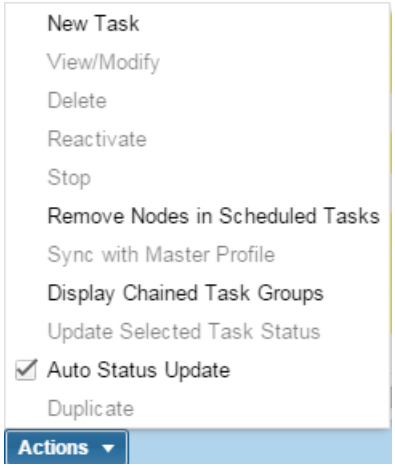
Figure 190: Task Manager Actions Menu



Related Documentation

- Main Window Tools Menu on page 177
- Device Profiles on page 186

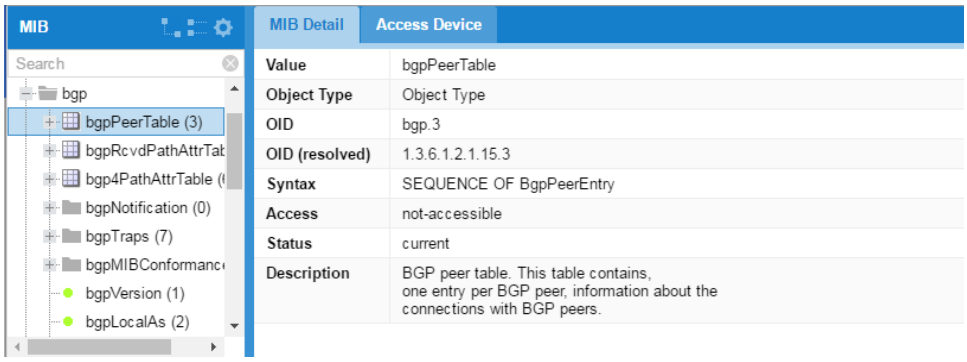
MIB Browser

The IP/MPLSView main window has a Tools menu used to display the Task Manager, MIB Browser, Device Profiles, User Admin, and File Browser windows.

Select **Tools>MIB Browser** to display the MIB Browser window.

Figure 191 on page 185 shows the MIB Browser window.

Figure 191: MIB Browser Window

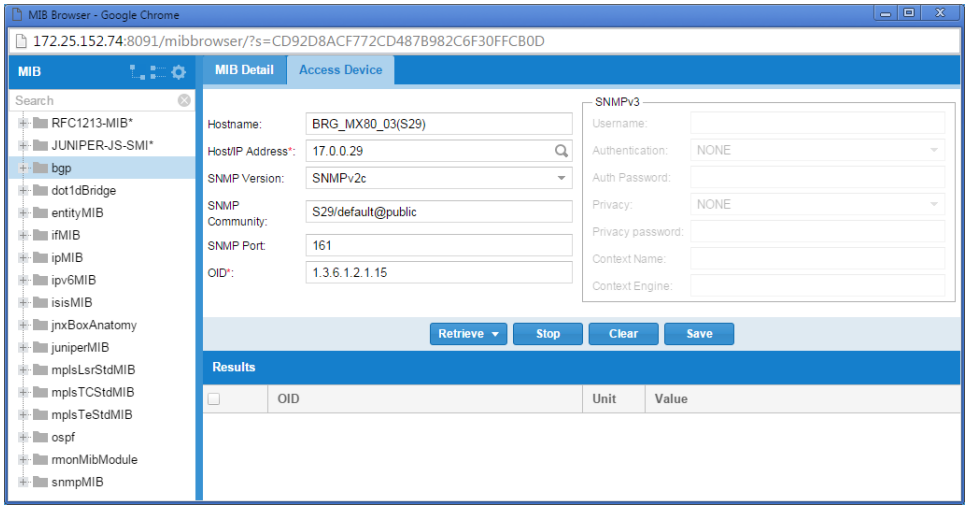


The MIB Details pane shows the definition of the MIB object.

To load a MIB, filter by trap, or enable SNMP configuration editing, click the gear icon.

To query a device for a MIB object, select Access Device. Figure 192 on page 186 shows the Access Device pane.

Figure 192: MIB Browser Access Device Pane



From the Host/IP Address menu, select the device you want. The hostname and SNMP community string are automatically populated. Make any necessary changes, and select **Get**, **Get next**, or **Get all** from the Retrieve menu. The device response is displayed.

To save the query to a file, click **Save**. To clear the query selections, click **Clear**.

Device Profiles

The IP/MPLSView main window has a Tools menu used to display the Task Manager, MIB Browser, Device Profiles, User Admin, and File Browser windows.

Select **Tools>Device Profiles** to display the Device Profiles window. Figure 193 on page 187 shows the Device Profiles window.

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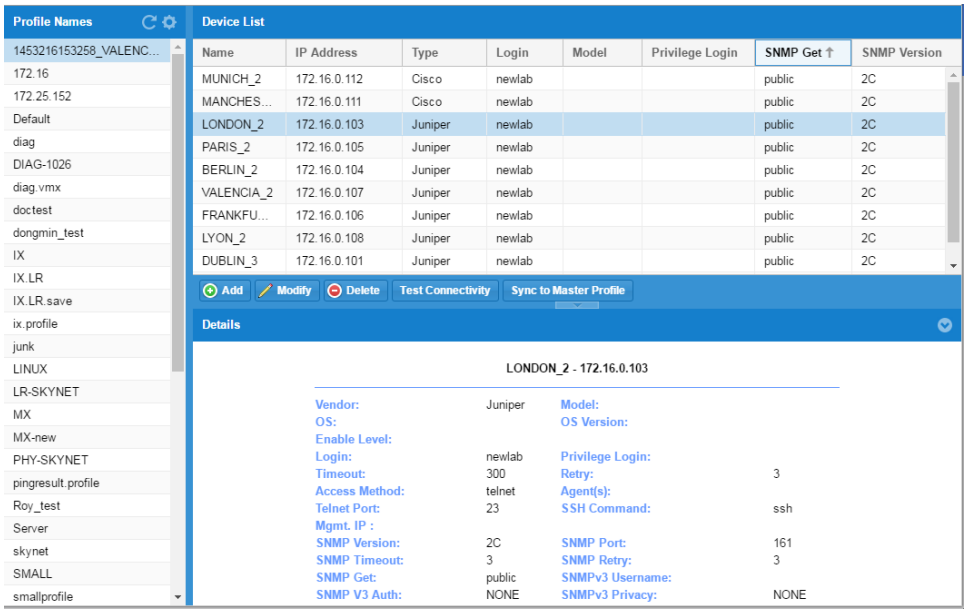
Figure 193: Device Profiles Window



To add a new device to a profile, click **Add**. Figure 194 on page 187 shows the Add New Device Dialog Box.

Figure 194: Add New Device Dialog Box

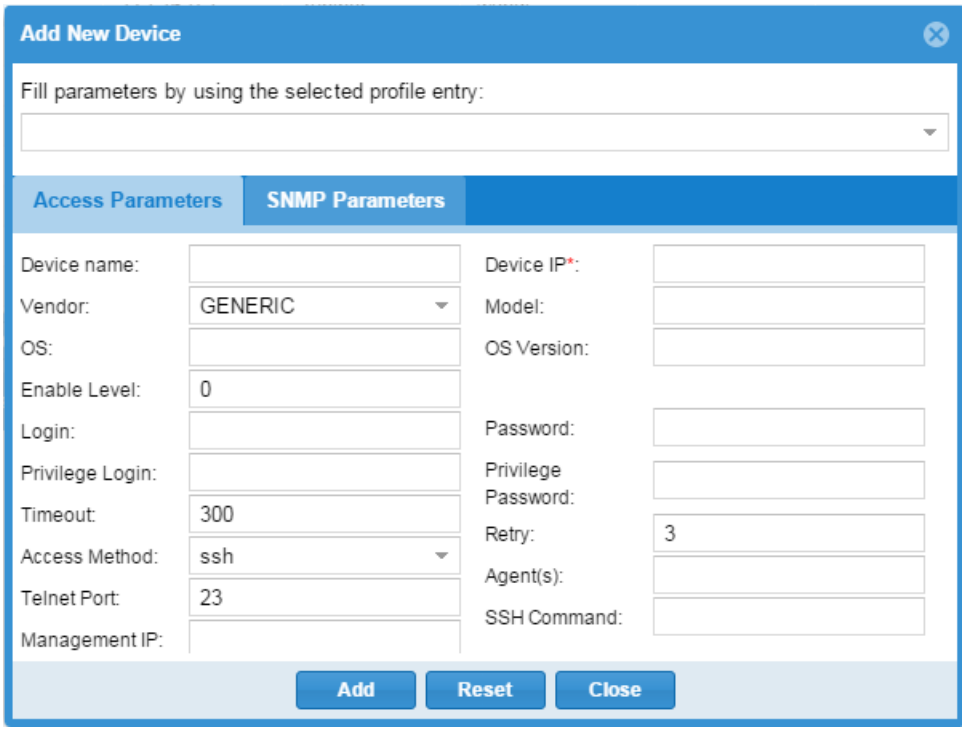


Table 29 on page 188 describes the Device Profiles Add New Device dialog box table columns.

Table 29: Add New Device Dialog Box Columns

Column Name	Description
Device Name	Name of the network device, which should be identical to the hostname. During configuration collection, the software uses this name along with the IP address as part of the name of the collected configuration file. The configuration filename uses the format *ip.name*.cfg. If the device name is left blank, the configuration filename uses the format *ip*.cfg.
Device IP	IP address of the network device.
Vendor	Name of the hardware vendor for the device. Possible values include, but are not limited to: Generic, Juniper, Cisco, ERX, Foundry, Riverstone, CRS, and New. If you select Generic as the vendor, the software attempts to guess the vendor by issuing the **show version** CLI command. For traffic collection purposes, you must specify this field explicitly by choosing a value other than Generic.
Model	Model number of the network device.
OS	Type of operating system installed on the device.
OS Version	Version number of the operating system build installed on the network device.
Enable Level	Default = 0; Reserved for future use. (Some devices may require a privilege password with a different enable level.)
Login / Password	Login ID and password for the network device.
Privilege Login / Privilege Password	Login ID and password for situations that require a higher-security login. Use a login that has the appropriate privileges for the vendor-specific **show** commands.
Timeout	Timeout value for the telnet access method. The default value is 300 seconds.
Retry	Number of retries for telnet. The default number of retries is 3.
Access Method	Method used to access the network device. Possible values include: • telnet—(Default) Use only telnet access. • ssh—Use only ssh access. • telnet | ssh—Try telnet access first, and then try ssh access if telnet access fails. • ssh | telnet—Try ssh access first, and then try telnet access if ssh access fails.
Agent(s)	A space-delimited list of one or more intermediate servers that act as gateways to the device. The servers should either have the same login and password as the device, or there should be another entry in the device profile for the intermediate servers to indicate their login and password information. When scheduling a task to collect data for a device through an intermediate server, you must add the intermediate servers to the list of devices to be collected if the intermediate server and the devices have different login and password information.
Telnet Port	Port number for telnet access. The default telnet port number is 23.
SSH Command	The full path of the command and options used for ssh; for example, **/usr/bin/ssh -1 -p 8888**.
Management IP	The management interface IP address, which is used first to connect to the device, if available. If this connection fails, the software instead uses the IP address of the device.

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To modify an existing device click **Modify**. To delete a device, select the device and click **Delete**. To test connectivity to the device, click **Test Connectivity**.

To copy settings from the currently selected profile to the master profile, select **Sync to Master Profile**.

NOTE: The Agent(s) field in the device profile is used to identify an intermediate host that the application server can log in to and then from there log in to the network device to perform CLI operations.

Related Documentation

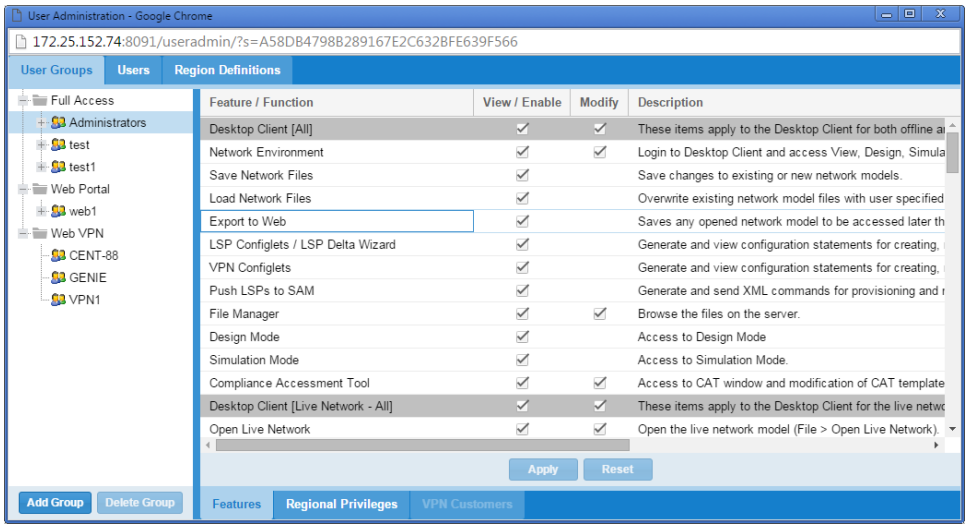
- Main Window Tools Menu on page 177

User Admin

The IP/MPLSView main window has a Tools menu used to display the Task Manager, MIB Browser, Device Profiles, User Admin, and File Browser windows.

Select **Tools>User Admin** to display the User Administration window. Figure 195 on page 189 shows the User Administration window.

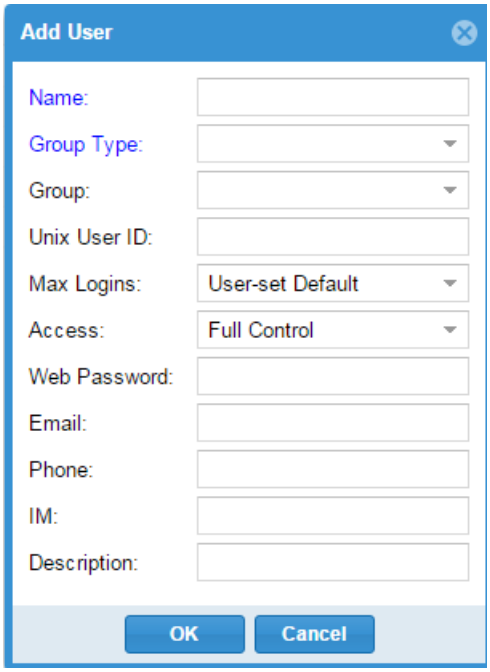
Figure 195: User Administration Window



Users are assigned to groups. To create a new group, select **Add Group**. An Add Group dialog box is displayed. Type a name for the group, and from the Group type menu, select **Full Access**, **Web Portal**, or **Web VPN**. Click **OK**. The new group is displayed in the User Administration window. Select view only or modify and view permissions for each feature or function and click **Apply**.

To add a new user, select the **Users** tab. A list of users is displayed. Click **Add**. Figure 196 on page 190 shows the Add New User Dialog Box.

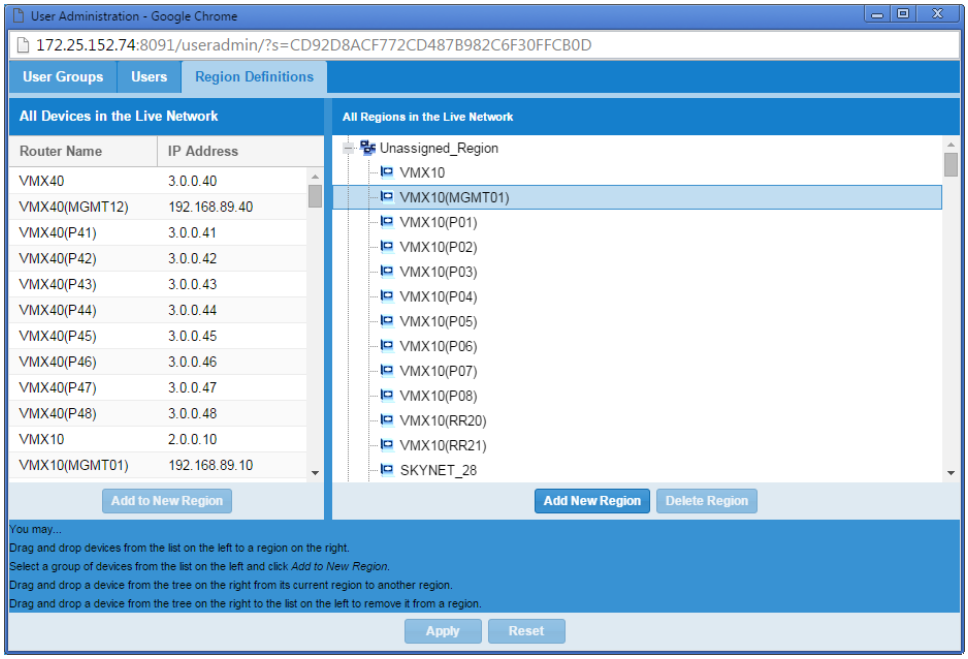
Figure 196: Add New User Dialog Box



Type the name, select the group type, group, and other information. Click **OK.**

To create or modify network regions, select the Region Definitions tab. Figure 197 on page 190 shows the Region Definitions window.

Figure 197: Region Definitions Window



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Related Documentation

- Main Window Tools Menu on page 177

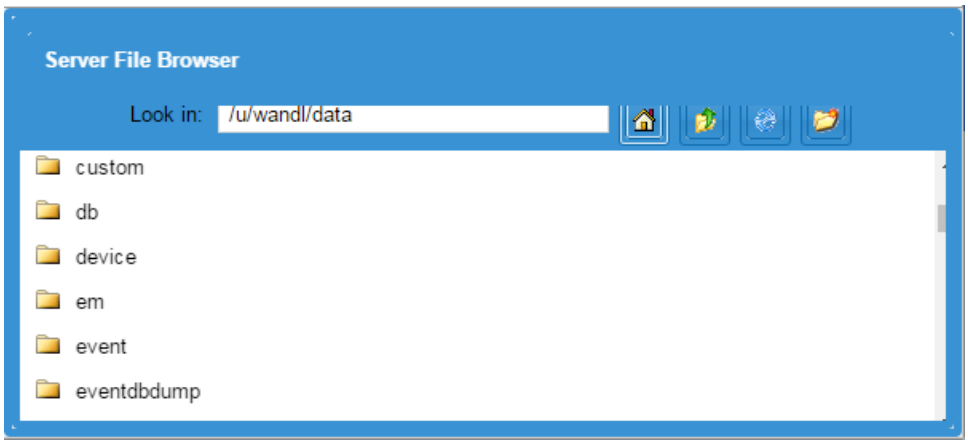
File Browser

The IP/MPLSView main window has a Tools menu used to display the Task Manager, MIB Browser, Device Profiles, User Admin, and File Browser windows.

Select **Tools > File Browser** to display the File Browser window.

Figure 198 on page 191 shows the File Browser window.

Figure 198: File Browser Window



By default, the File Browser window displays the contents of the **/u/wandl/data** directory.

To display the contents of a sub-directory, double-click the directory name. To return to the default directory, select the home icon. To refresh the display, select the blue-circle icon. To move up to the parent directory, select the up arrow icon.

To create a new directory, click the folder icon. You are prompted to name the new directory.

To download and save a file, navigate to the individual file and double-click the filename. The file is downloaded to your Web browser default download folder.

Related Documentation

- Main Window Tools Menu on page 177

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CHAPTER 12

Reports Button

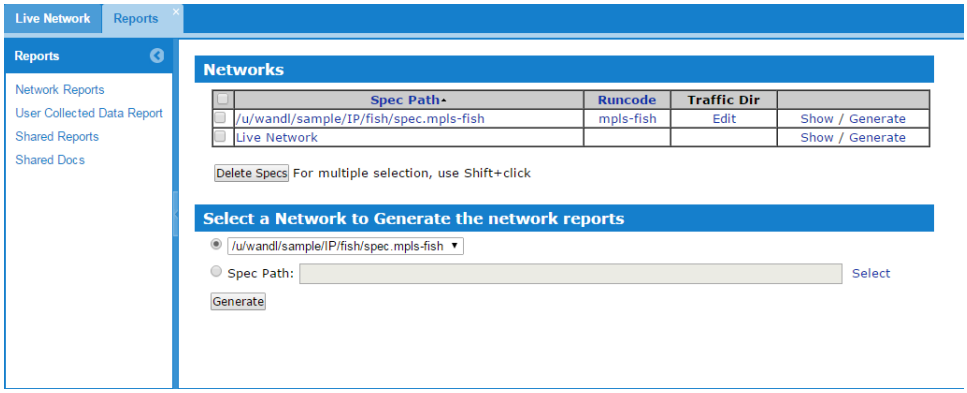
- Main Window Reports Window on page 193

Main Window Reports Window

The IP/MPLSView main window has a Reports button used to display the Network Reports, User Collected Data Reports, Shared Reports, and Shared Docs windows.

From the IP/MPLSView main window, click **Reports** to display the Reports window. Figure 199 on page 193 shows the Reports window.

Figure 199: Reports Window



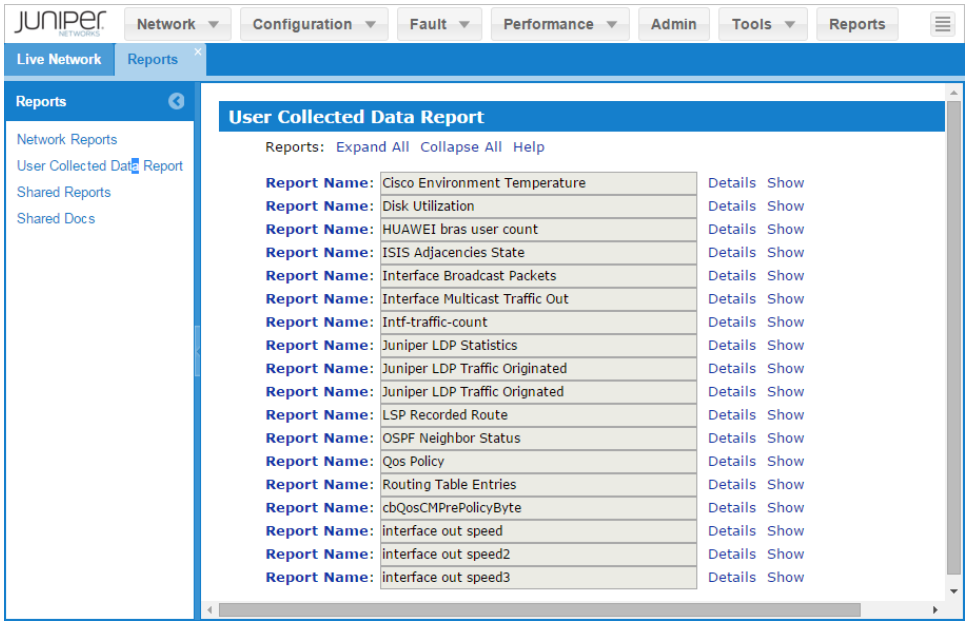
By default, the Reports window displays the Network Reports pane. Select a network to generate the network reports from, and click **Generate**. A confirmation is displayed in the window. Click **Select** to display a list of directories and files. Select a directory to see a list of report files in that directory.

After collecting data using a User-Defined SNMP Collection task, the generated Web report can be displayed.

In the Reports window, select **User Collected Data Report** to display a list of user-collected data reports.

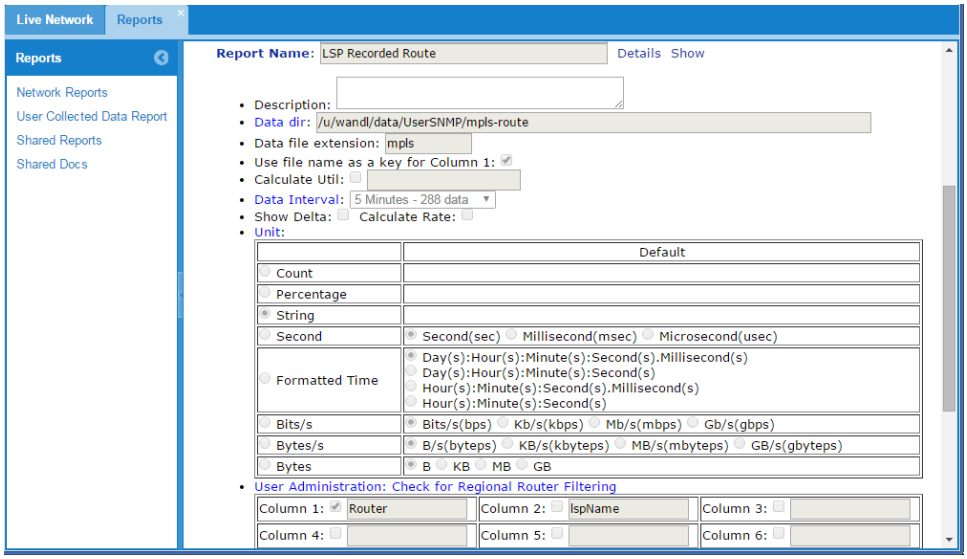
Figure 200 on page 194 shows the User Collected Data Report window.

Figure 200: User Collected Data Report Window



To display details about a specific data report, click **Details**. Figure 201 on page 194 shows the user-collected data report details.

Figure 201: User Collected Data Report Details



To access charting capabilities for reports, click **Show**.

The User Collected Data Report show window is displyed. Figure 202 on page 195 shows the User Collected Data Report show window.

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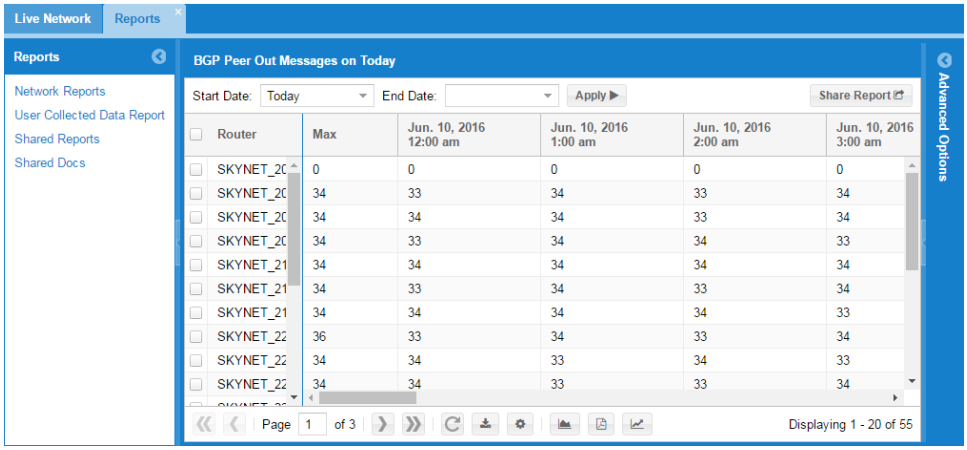
Figure 202: User Collected Data Report Show Window



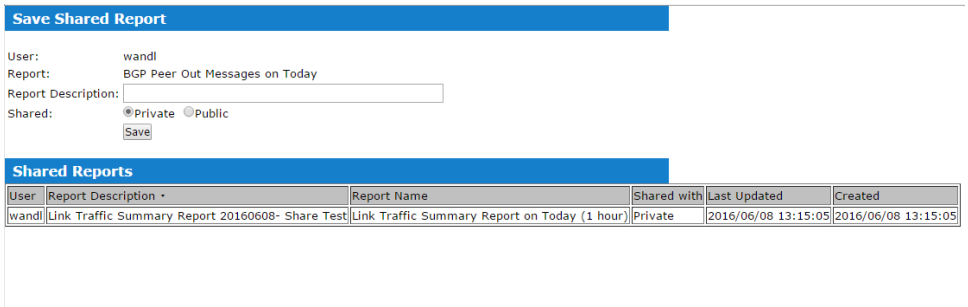
To display a chart of a report, select an item in the report list and select the Charts icon. To save the report as a .csv or text file, select the Export icon.

NOTE: Some charts take a significant time to generate.

To share a report, click **Share Report**.

The Save Shared Report window is displayed. Figure 203 on page 195 shows the Save Shared Report window.

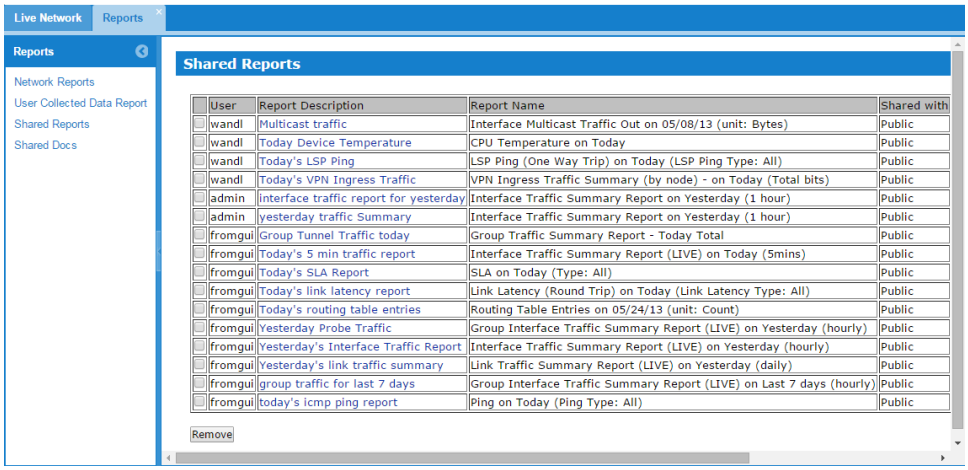
Figure 203: User Collected Data Save Shared Report Window



Give the report a description, select **Public** or **Private**, and click **Save**. The report is listed in the Shared Reports pane.

To display a list of reports that you or another user shared, in the Reports window select **Shared Reports**. Figure 204 on page 196 shows the Shared Reports window.

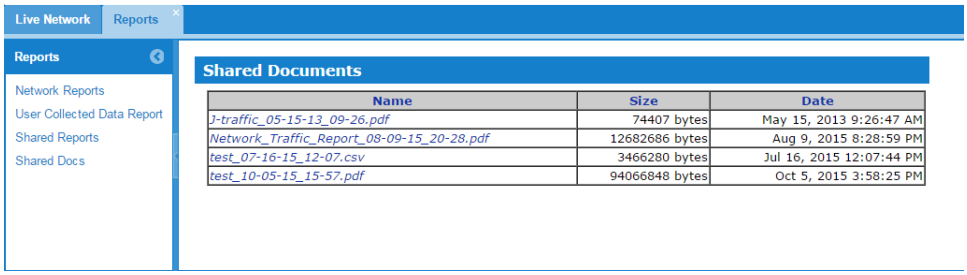
Figure 204: Shared Reports Window



User	Report Description	Report Name	Shared with
wandl	Multicast traffic	Interface Multicast Traffic Out on 05/08/13 (unit: Bytes)	Public
wandl	Today Device Temperature	CPU Temperature on Today	Public
wandl	Today's LSP Ping	LSP Ping (One Way Trip) on Today (LSP Ping Type: All)	Public
wandl	Today's VPN Ingress Traffic	VPN Ingress Traffic Summary (by node) - on Today (Total bits)	Public
admin	interface traffic report for yesterday	Interface Traffic Summary Report on Yesterday (1 hour)	Public
admin	yesterday traffic Summary	Interface Traffic Summary Report on Yesterday (1 hour)	Public
fromgui	Group Tunnel Traffic today	Group Traffic Summary Report - Today Total	Public
fromgui	Today's 5 min traffic report	Interface Traffic Summary Report (LIVE) on Today (5mins)	Public
fromgui	Today's SLA Report	SLA on Today (Type: All)	Public
fromgui	Today's link latency report	Link Latency (Round Trip) on Today (Link Latency Type: All)	Public
fromgui	Today's routing table entries	Routing Table Entries on 05/24/13 (unit: Count)	Public
fromgui	Yesterday Probe Traffic	Group Interface Traffic Summary Report (LIVE) on Yesterday (hourly)	Public
fromgui	Yesterday's Interface Traffic Report	Interface Traffic Summary Report (LIVE) on Yesterday (hourly)	Public
fromgui	Yesterday's link traffic summary	Link Traffic Summary Report (LIVE) on Yesterday (daily)	Public
fromgui	group traffic for last 7 days	Group Interface Traffic Summary Report (LIVE) on Last 7 days (hourly)	Public
fromgui	today's icmp ping report	Ping on Today (Ping Type: All)	Public

To display a list of shared report documents you or another user shared, select **Shared Docs**. Figure 205 on page 196 shows the Shared Documents window.

Figure 205: Shared Documents Window



Name	Size	Date
J-traffic_05-15-13_09-26.pdf	74407 bytes	May 15, 2013 9:26:47 AM
Network_Traffic_Report_08-09-15_20-28.pdf	12682686 bytes	Aug 9, 2015 8:28:59 PM
test_07-16-15_12-07.csv	3466280 bytes	Jul 16, 2015 12:07:44 PM
test_10-05-15_15-57.pdf	94066848 bytes	Oct 5, 2015 3:58:25 PM

Related Documentation

- IP/MPLSView Main Window Overview on page 25

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CHAPTER 13

Main Window Hello Menu and Help-About Menu

- Main Window Hello Menu and Help-About Menu on page 197

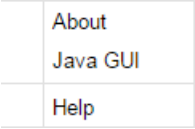
Main Window Hello Menu and Help-About Menu

The IP/MPLSView main window has a menu that displays Hello and the name of the user who is logged in. To log out of IP/MPLSView, select **Hello>Logout**. You are immediately logged out.

The IP/MPLSView main window has a menu, in the upper-right area of the main window, used to display the About window, connect to the WANDL IP/MPLSView technical documentation Web page, and launch the IP/MPLSView Java client user interface.

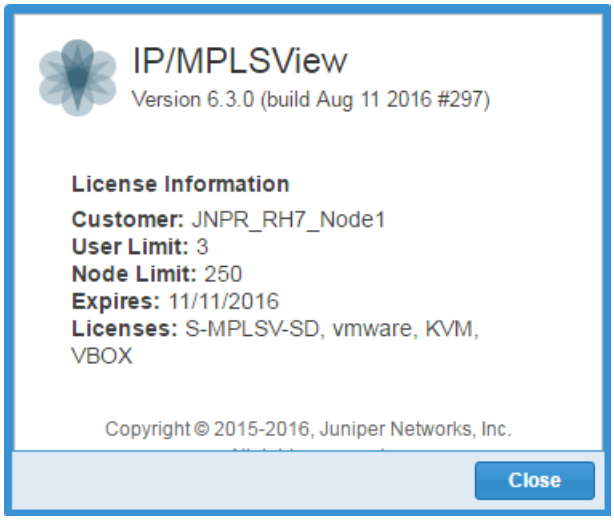
Figure 206 on page 197 shows the Help-About menu.

Figure 206: Help-About Menu



Select **About** to display the About window. Figure 207 on page 198 shows the About window.

Figure 207: IP/MPLSView About Window



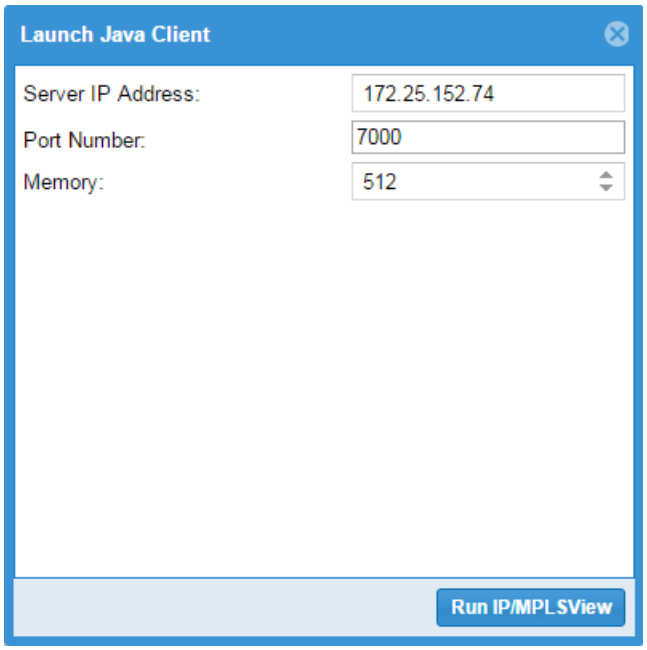
The IP/MPLSView About window displays the software revision, the customer identifier, the user limit, node limit, license expiration date, and the licenses enabled.

The license information is obtained from the **/IPMPLSView/API/v1/rest/license** file.

Select **Java GUI**. The Launch Java Client dialog box is displayed. Figure 208 on page 198 shows the Launch Java Client dialog box.

The advantage of launching the client in this way is that you do not have to install the IP/MPLSView client on your local machine.

Figure 208: Launch Java Client Dialog Box



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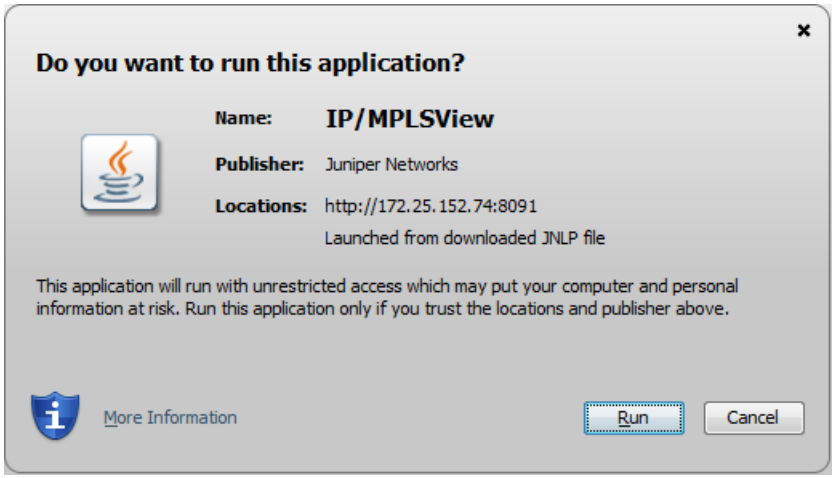
Click **RunIP/MPLSView**. The **WebstartServlet.jnlp** file is downloaded. A Starting message is displayed.

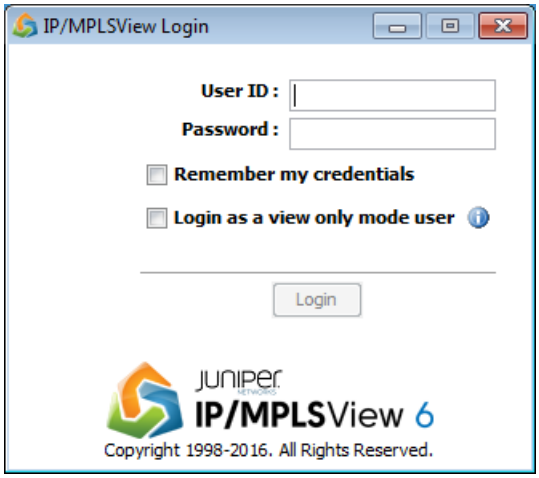
You are prompted to run the application. Figure 209 on page 199 shows the prompt window.

Figure 209: Run Application Prompt



Click **Run**. The IP/MPLSView login window is displayed. Figure 210 on page 199 shows the IP/MPLSView Java login window.

Figure 210: IP/MPLSView Java Login Window



For more information about using the Java-based user interface, see *Main Window Overview* in the *IP/MPLSView Java-based Graphical User Interface Reference*.

Select **Help** to connect to the WANDL IP/MPLSView technical documentation Web page. Internet access is required.

Related Documentation

- IP/MPLSView Main Window Overview on page 25
- License File Window on page 175

- IP/MPLSView Initial Landing Page Overview on page 23

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