

## Chapter 29

# Using Looking Glass

This chapter describes how to use the Looking Glass tool kit, which provides a graphical user interface (GUI) for viewing device status and troubleshooting information from Juniper Networks routers, including general router, chassis, interface, route, system management, and routing protocol information.

This chapter includes the following topics:

- Viewing Router Operational Status Information on page 325
- Looking Glass Device Commands on page 327

### Viewing Router Operational Status Information

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Use Looking Glass to view operational status and troubleshooting information for a selected router.

To view router operational status information, follow these steps:

1. From the JUNOScope main window, click Looking Glass > Query. The Looking Glass Enter Query Information window appears.

Juniper NETWORKS JUNOScope™ Home | Help | About | Logout  
Logged in as: admin

Looking Glass Configuration Inventory Management Monitor Settings

Home > Looking Glass > Query

Query

Looking Glass

Query

Enter Query Information

Device	Category	Command
router1	General	
router2	BGP	
router3	Chassis	
router4	Interfaces	
router5	IS-IS	
router6	L2 Circuit	

Submit Refresh Command After: Never Start Timer

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- In the Device list box, select the router that you want to monitor. The available routers in the list box are those added by the JUNOScope software administrator.



**NOTE:** You can view status and troubleshooting information from the TX Matrix routing platform, which consists of the TX Matrix platform (also known as the switch-card chassis [SSC]) and the attached T640 routing nodes (also known as the line-card chassis [LLC]).

- In the Category list box, select the type of router command you want. See Table 39 on page 327 for a description of the available command categories.
- In the Command list box, select the command that you want.
- In the Refresh Command After drop-down list box, select how often you want Looking Glass to send a request to the router for the device command information. The default is Never. If you select 1 minute, Looking Glass will send a request for the device command information to the router every minute.
- If you selected a Refresh Command After value, click Start Timer.
- Click Submit. The device command results appear.

Enter Query Information

Device	Category	Command
router1	General	Interface Information
router2	BGP	
router3	Chassis	
router4	Interfaces	
router5	IS-IS	
router6	L2 Circuit	

Submit Refresh Command After: Never Start Timer

whiteout: Interface Information

Interface Name	Oper State	Admin State	Description	Detailed Information
so-0/0/0	Up	Up		<a href="#">QUEUES</a>
so-0/0/1	Up	Up		<a href="#">QUEUES</a>
so-0/0/2	Down	Up		<a href="#">QUEUES</a>
so-0/0/3	Down	Up		<a href="#">QUEUES</a>
qr-0/1/0	Up	Up		<a href="#">QUEUES</a>
ip-0/1/0	Up	Up		<a href="#">QUEUES</a>
ft-0/1/0	Up	Up		<a href="#">QUEUES</a>
mt-0/1/0	Up	Up		<a href="#">QUEUES</a>
pd-0/1/0	Up	Up		<a href="#">QUEUES</a>
pe-0/1/0	Up	Up		<a href="#">QUEUES</a>
vt-0/1/0	Up	Up		<a href="#">QUEUES</a>

- Click Query to return the Looking Glass settings to their defaults.

## Looking Glass Device Commands

Table 39 describes the Looking Glass device commands.

**Table 39: Looking Glass Device Commands (1 of 4)**

Category	Device Command	Description
	Router Summary Information	Displays the current alarms, system uptime, and interface status information.
ASP	Stateful Firewall Flows	Displays the Adaptive Services (AS) Physical Interface Card (PIC) flow table entries.
	Stateful Firewall Flow Count	Displays a count of the matching flow table entries.
	Stateful Firewall Conversations	Displays stateful firewall conversation information.
	NAT Pool Information	Displays Network Address Translation (NAT) pool information.
	Service Set Memory Usage	Displays adaptive services interface memory utilization.
	Service Set CPU Usage	Displays service interface CPU utilization as a percentage.
BGP	BGP Neighbor Information	Displays information about Border Gateway Protocol (BGP) neighbors. Click a BGP neighbor for a detailed view.
	BGP Summary	Displays a summary of BGP and neighbor information.
Chassis	Alarm Status	Displays information about the current alarms, including alarm time, severity level, and description.
	Craft Interface Output	For routers with a craft interface, shows the operational status information that is currently displayed.

**Table 39: Looking Glass Device Commands (2 of 4)**

Category	Device Command	Description
	Environment Information	Displays environmental information about the router chassis, including temperature and information about the fans, power supplies, and Routing Engine. The command output displays component environmental status colors. Green is OK, yellow is caution, red is alarm status.
	Hardware Summary	Displays a list of all the router hardware components, including the revision level, part number, serial number, and description. Click a hardware component for more specific hardware information.
	Routing Engine Information	Displays operational information about the Routing Engine.
Interfaces	Interface Information	Displays operational status information about all router interfaces. Click an interface name to view more detailed information about that interface.
IS-IS	IS-IS Adjacency Information	Displays information about Intermediate System-to-Intermediate System (IS-IS) neighbors.
	IS-IS Interface Information	Displays status information about the interfaces on which IS-IS is configured.
LDP	LDP Database	Displays entries in the Label Distribution Protocol (LDP) label database.
	LDP Interfaces	Displays the status of each interface on which LDP is enabled.
	LDP Neighbor	Displays a list of LDP neighbors.
	LDP Path	Displays the label-switched paths (LSPs) that the LDP created.
	LDP Route	Displays the entries in the LDP internal topology table. The internal topology table contains routes from <code>inet.0</code> and <code>inet.3</code> and is used when binding labels to Forwarding Equivalence Classes (FECs).
	LDP Session	Displays information about LDP sessions.
	LDP Statistics	Displays LDP statistics.
MPLS	MPLS LSP Information	Displays information about configured and active dynamic LSPs in which this router participates.
	MPLS LSP Statistics	Displays statistics about configured and active dynamic LSPs in which this router participates.
	MPLS LSP	Displays information about configured and active dynamic Multiprotocol Label Switching (MPLS) LSPs in which this router participates.
	MPLS Path	Displays the named paths used in dynamic MPLS that have been configured on this router.
	MPLS Interface	Displays information about interfaces on which MPLS is enabled. MPLS is enabled on an interface when the interface is configured in both the <code>mpls</code> and <code>interface</code> sections of the configuration hierarchy (with the <code>set protocol mpls interface <i>interface-name</i></code> and <code>set interface <i>interface-name</i> unit 0 family mpls</code> statements, respectively).
	MPLS OSPF	Displays MPLS Constrained Shortest Path First (CSPF) statistics.

**Table 39: Looking Glass Device Commands (3 of 4)**

Category	Device Command	Description
Multicast	Multicast Route	Displays the entries in the multicast forwarding table. You can display similar information with the <code>show route table inet.1</code> command.
	Multicast RPF	Displays information about multicast reverse-path forwarding (RPF) calculations.
	Multicast Statistics	Displays multicast statistics. The input and output interface multicast statistics are consistent, but not timely. They are constructed from the forwarding statistics, which are gathered at 30-second intervals. Show Multicast Statistics will always lag true counts by up to 30 seconds.
	Multicast Usage	Displays usage information about the 10 most active Distance Vector Multicast Routing Protocol (DVMRP) or Protocol Independent Multicast (PIM) groups.
OSPF	OSPF Database	Displays the entries in the Open Shortest Path First (OSPF) link-state database, including information about link-state advertisement (LSA) packets.
	OSPF Interface Information	Displays status information about the interfaces on which OSPF is configured.
	OSPF Neighbor Information	Displays information about OSPF neighbors.
	OSPF Route	Displays the entries in the OSPF routing table.
	OSPF Statistics	Displays OSPF statistics.
PIM	PIM Interfaces	Displays information about the interfaces on which PIM is configured.
	PIM Join	Displays information about PIM groups.
	PIM Neighbors	Displays information about PIM neighbors.
	PIM RPS	Displays information about PIM rendezvous points (RPs).
	PIM Source	Displays information about the PIM source RPF state.
	PIM Statistics	Displays PIM statistics.
Route	Display Route Summary	Displays summary statistics about the entries in the routing table.
RSVP	RSVP Interface Information	Displays the status for each interface on which the Resource Reservation Protocol (RSVP) is enabled, and displays packet statistics for each interface.
	RSVP Interface Details	Displays detailed status for each interface on which RSVP is enabled, and displays packet statistics for each interface.
	RSVP Neighbor Information	Displays a list of RSVP neighbors learned dynamically when exchanging RSVP packets. Once a neighbor is learned, it is never removed from the list of RSVP neighbors.
	RSVP Session Information	Displays information about RSVP sessions.
	RSVP Version Information	Displays information about the RSVP protocol settings, such as the version of the RSVP software, the refresh timer and keep multiplier, and local RSVP graceful restart capabilities on an LSP.
	RSVP Interface	Displays the status of each interface on which RSVP is enabled, and displays packet statistics for each interface.
	RSVP Neighbor	Displays a list of RSVP neighbors that were learned dynamically when exchanging RSVP packets. Once a neighbor is learned, it is never removed from the list of RSVP neighbors.
	RSVP Session	Displays information about RSVP sessions.
	RSVP Statistics	Displays RSVP packet and error statistics.
	RSVP Version	Displays information about the RSVP protocol settings, such as the version of the RSVP software, the refresh timer and keep multiplier, and local RSVP graceful restart capabilities on an LSP.

**Table 39: Looking Glass Device Commands (4 of 4)**

Category	Device Command	Description
System	Storage Capacity	Displays statistics about the amount of free disk space in the router's file systems.
	Uptime	Displays the current time and information about how long the router, router software, and routing protocols have been running.
	Users	Displays information about the users who are currently logged in to the router.
	Version Information	Displays the hostname and version information about the software running on the router.
	System Commit	Displays the pending commit.
VPLS	VPLS Connection	Displays virtual private LAN service (VPLS) connection information.
VPN	l2circuit Connections	Displays status information about Layer 2 virtual circuits (VCs) from the local provider edge (PE) router to its neighbors.
	l2vpn Connections	Displays Layer 2 virtual private network (VPN) connections.