



**JUNOS<sup>™</sup>e Software  
for E Series<sup>™</sup> Broadband Services Routers**

# **System Event Logging Reference Guide**

*Release 11.1.x*

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# Abbreviated Table of Contents

	About the Documentation	xxi
<b>Part 1</b>	<b>Chapters</b>	
Chapter 1	System Logging Overview	3
Chapter 2	Event Categories	23
<b>Part 2</b>	<b>Event Categories</b>	
Chapter 3	A Commands	27
Chapter 4	B Commands	35
Chapter 5	C Commands	51
Chapter 6	D Commands	57
Chapter 7	E Commands	79
Chapter 8	F Commands	81
Chapter 9	G and H Commands	87
Chapter 10	I Commands	91
Chapter 11	L Commands	129
Chapter 12	M Commands	145
Chapter 13	N Commands	165
Chapter 14	O Commands	169
Chapter 15	P Commands	195
Chapter 16	Q Commands	217
Chapter 17	R Commands	219
Chapter 18	S Commands	233
Chapter 19	T Commands	251
Chapter 20	U Commands	259
Chapter 21	V Commands	261
<b>Part 3</b>	<b>Index</b>	
	Index	267





# Table of Contents

	<b>About the Documentation</b>	<b>xxi</b>
	E Series and JUNOS <sup>e</sup> Documentation and Release Notes .....	xxi
	Audience .....	xxi
	E Series and JUNOS <sup>e</sup> Text and Syntax Conventions .....	xxi
	Obtaining Documentation .....	xxiii
	Documentation Feedback .....	xxiii
	Requesting Technical Support .....	xxiii
	Self-Help Online Tools and Resources .....	xxiv
	Opening a Case with JTAC .....	xxiv
<b>Part 1</b>	<b>Chapters</b>	
<b>Chapter 1</b>	<b>System Logging Overview</b>	<b>3</b>
	Overview of System Logging .....	3
	Log Severity .....	3
	Log Verbosity .....	4
	Persistent Logs .....	4
	Logging Platform Considerations .....	5
	Configuring Event Logging .....	5
	Configuring Log Severity for Individual and Systemwide Logs .....	10
	Configuring Log Verbosity for Individual Logs or All Logs .....	14
	Setting the Timestamp for Log Messages .....	14
	Configuring Log Filters .....	16
	Turning Off Log Filters .....	17
	Monitoring Logging System Events .....	17
<b>Chapter 2</b>	<b>Event Categories</b>	<b>23</b>
<b>Part 2</b>	<b>Event Categories</b>	
<b>Chapter 3</b>	<b>A Commands</b>	<b>27</b>
	aaaAtm1483Cfg .....	27
	aaaEngineGeneral .....	28

aaaQosCfg .....	28
aaaServerGeneral .....	29
aaaUserAccess .....	29
addressServerGeneral .....	30
ar1AaaServerGeneral .....	30
atm .....	31
atm1483 .....	32
atm1483VcClass .....	32
atmAal5 .....	33
atmVcClass .....	33
auditIpsec .....	34

**Chapter 4****B Commands****35**

bfdAdaptivity .....	35
bfdEvents .....	36
bfdGeneral .....	36
bfdSession .....	37
bgpConnections .....	37
bgpDampening .....	38
bgpEvents .....	39
bgpGeneral .....	40
bgpGracefulRestart .....	41
bgpIpv6NextHops .....	42
bgpKeepAlives .....	42
bgpMessages .....	43
bgpNeighborChanges .....	44
bgpNextHops .....	45
bgpRoutes .....	45
bridge .....	48
bridgeEngine .....	49
bridgingMgr .....	49
bulkStats .....	50

**Chapter 5****C Commands****51**

cacGeneral .....	51
cacIntf .....	52
cliCommand .....	52
cliGeneral .....	53
connectionManager .....	53
cops .....	54
copsPr .....	54
coreDump .....	55
ctreeLog .....	56

<b>Chapter 6</b>	<b>D Commands</b>	<b>57</b>
	dcm .....	58
	dcmEngineGeneral .....	58
	debounceEvents .....	59
	debounceGeneral .....	59
	dhcpCapture .....	60
	dhcpExternal .....	60
	dhcpExternalEngine .....	61
	dhcpGeneral .....	61
	dhcpIssuLog .....	62
	dhcpLocalClients .....	63
	dhcpLocalGeneral .....	63
	dhcpLocalHighAvailability .....	64
	dhcpLocalPool .....	64
	dhcpLocalProtocol .....	65
	dhcpOfferLog .....	66
	dhcpPbeGeneral .....	66
	dhcpProxyGeneral .....	67
	dhcpRelayGeneral .....	67
	dhcpRelayNvWriterGeneral .....	68
	dhcpv6Client .....	68
	dhcpv6DemuxGeneral .....	69
	dhcpv6LsGeneral .....	69
	dismanEventMgr .....	70
	dnsGeneralLog .....	71
	dosProtection .....	71
	ds1 .....	72
	ds3 .....	72
	dvmrpGeneral .....	73
	dvmrpGracefulRestart .....	74
	dvmrpMcastTable .....	75
	dvmrpProbeRcv .....	75
	dvmrpProbeSent .....	76
	dvmrpRtTable .....	76
<b>Chapter 7</b>	<b>E Commands</b>	<b>79</b>
	ethernet .....	79
	ethernetStateSession .....	79
<b>Chapter 8</b>	<b>F Commands</b>	<b>81</b>
	fileSystem .....	81
	flowInspection .....	82
	flowInspectionEngine .....	82
	flowServicesFirewallAlert .....	83
	flowServicesFirewallAudit .....	83

frameRelay .....	84
fsAgent .....	84
ft1 .....	85
ftpClient .....	85
ftpServer .....	86

## **Chapter 9                      G and H Commands                      87**

gplaan .....	87
ha .....	87
hdlc .....	88
hotfixGeneral .....	89
httpServer .....	89

## **Chapter 10                      I Commands                      91**

icImageFixServer .....	92
icmpTraffic .....	93
icmpv6Traffic .....	94
icrPartitionManager .....	95
igmpGeneral .....	95
igmpGracefulRestart .....	96
igmpGroupState .....	97
ikeCertificateMgr .....	98
ikeEnrollment .....	98
ikepki .....	99
interModuleCommunication .....	99
ipAccessList .....	100
ipEngine .....	101
ipflowstats .....	101
ipflowstatsEngine .....	102
ipGeneral .....	102
ipIfCreator .....	104
ipInterface .....	104
ipNhopTrackerGeneral .....	105
ipProfileMgr .....	105
ipRoutePolicy .....	106
ipRouteTable .....	107
ipseclddb .....	107
ipsecPIThrottler .....	108
ipsecXcfgSM .....	108
ipSubscriberMgr .....	109
ipTraffic .....	109
ipTunnel .....	110
ipv6AccessList .....	110
ipv6General .....	111
ipv6Interface .....	112
ipv6ProfileMgr .....	113
ipv6RouteTable .....	113
ipv6Traffic .....	114

ipv6Types .....	115
isisAdjChange .....	115
isisAdjPackets .....	116
isisBfdEvents .....	117
isisChecksumErr .....	117
isisGeneral .....	118
isisHelloGeneral .....	119
isisHelloPackets .....	119
isisIpv6Log .....	120
isisLdpEvents .....	120
isisLocalUpdate .....	121
isisMplsTeAdvertisements .....	122
isisMplsTeEvents .....	122
isisNsfEvents .....	123
isisProtocolErr .....	123
isisSnPackets .....	124
isisSpfEvents .....	124
isisSpfStatistics .....	125
isisSpfTriggers .....	126
isisUpdatePackets .....	126
isVoice .....	127
itm .....	127

**Chapter 11****L Commands****129**

l2cGeneral .....	130
l2cKeepAlive .....	130
l2cPacket .....	131
l2tp .....	131
l2tpDialoutGenerator .....	132
l2tpDisconnectCause .....	132
l2tpIpLowerBinding .....	133
l2tpStateMachine .....	133
lasv6General .....	134
ldpConnect .....	134
ldpGeneral .....	135
ldpGracefulRestart .....	135
ldpHelloMessages .....	136
ldpHelloMgr .....	137
ldpInterface .....	137
ldpMessages .....	138
ldpPeer .....	139
ldpShimInterface .....	139
ldpSocket .....	140
ldpTimer .....	141
ldpVpls .....	141
ldpWorker .....	142
localAddressServerGeneral .....	142
localAuthServer .....	143
localEnableAuthServer .....	143

localLinePassword .....	144
-------------------------	-----

**Chapter 12****M Commands 145**

macroData .....	146
macroScheduler .....	146
mgmtGeneral .....	147
mgmtGracefulRestart .....	148
mgmtv6General .....	148
mgmtv6GracefulRestart .....	149
mldGeneral .....	150
mldGracefulRestart .....	151
mldGroupState .....	151
mmcd .....	152
mobileIpv4HaBinding .....	153
mobileIpv4HaEng .....	153
mobileIpv4HaEvent .....	154
mobileIpv4HaLog .....	154
mplsFwdTable .....	155
mplsGeneral .....	155
mplsHighAvailability .....	156
mplsMajorInterface .....	156
mplsMinorInterface .....	157
mplsRouter .....	158
mplsShimInterface .....	159
mplsTraffic .....	160
mrInfoLog .....	160
mrInfoRcvdLog .....	161
mrInfoSentLog .....	161
mtraceLog .....	162
mtraceRcvdLog .....	162
mtraceSentLog .....	163
multicastTraffic .....	163

**Chapter 13****N Commands 165**

nameResolverLog .....	165
nfsClient .....	165
noneAaaAddrServer .....	166
noneAaaServer .....	167
ntpGeneral .....	167

**Chapter 14****O Commands 169**

oam3ahAssociations .....	170
oam3ahEvents .....	170
oam3ahPdus .....	171
os .....	171
ospfElectDr .....	172

ospfGeneral .....	173
ospfHelloPktsRcvd .....	174
ospfHelloPktsSent .....	175
ospfInterface .....	176
ospfLdpEvents .....	176
ospfLsa .....	177
ospfNeighbor .....	178
ospfPktsRcvd .....	178
ospfPktsSent .....	179
ospfRestart .....	179
ospfRoute .....	180
ospfSpfExt .....	181
ospfSpfInter .....	181
ospfSpfIntra .....	182
ospfTeDatabase .....	183
ospfTeSpf .....	183
ospfv3ElectDr .....	184
ospfv3General .....	185
ospfv3HelloPktsRcvd .....	186
ospfv3HelloPktsSent .....	186
ospfv3Interface .....	187
ospfv3Lsa .....	188
ospfv3Neighbor .....	188
ospfv3PktsRcvd .....	189
ospfv3PktsSent .....	190
ospfv3Route .....	190
ospfv3SpfExt .....	191
ospfv3SpfInter .....	192
ospfv3SpfIntra .....	192

**Chapter 15****P Commands 195**

pimAutoRPRcvdLog .....	196
pimAutoRPSentLog .....	197
pimBsrRcvdLog .....	197
pimBsrSentLog .....	198
pimGracefulRestartLog .....	199
pimHelloRcvdLog .....	199
pimHelloSentLog .....	200
pimIpv6AutoRPRcvdLog .....	200
pimIpv6AutoRPSentLog .....	202
pimIpv6BsrRcvdLog .....	202
pimIpv6BsrSentLog .....	203
pimIpv6GracefulRestartLog .....	203
pimIpv6HelloRcvdLog .....	204
pimIpv6HelloSentLog .....	205
pimIpv6PktsRcvdLog .....	206
pimIpv6PktsSentLog .....	206
pimPktsRcvdLog .....	207
pimPktsSentLog .....	208

pimsmGeneral .....	208
pimsmMvpn .....	209
policyMgrAttachment .....	209
policyMgrGeneral .....	210
policyMgrPacketLog .....	210
ppp .....	211
pppoe .....	212
pppoeControlPacket .....	212
pppPacket .....	213
pppStateMachine .....	214
profileMgr .....	214

**Chapter 16****Q Commands 217**

qm .....	217
qos .....	217
qosAttachment .....	218

**Chapter 17****R Commands 219**

radiusAttributes .....	219
radiusClient .....	220
radiusCoAAttributes .....	220
radiusDisconnectGeneral .....	221
radiusRelayGeneral .....	222
radiusSendAttributes .....	222
remOps .....	223
resourceThresholdTrap .....	223
ripBfd .....	224
ripGeneral .....	225
ripRoute .....	225
ripRtTable .....	226
routeDownloader .....	227
routerLog .....	227
rsvpAsyncMgr .....	228
rsvpBfd .....	228
rsvpGeneral .....	229
rsvpGracefulRestart .....	230
rsvpInterface .....	230
rsvpTunnel .....	231

**Chapter 18****S Commands 233**

security .....	234
serviceability .....	234
serviceMgr .....	235
serviceMgrClientSession .....	235
serviceMgrDcm .....	236
serviceMgrMacroManager .....	236



serviceMgrPerformance .....	237
serviceMgrServiceDef .....	237
serviceMgrServiceInstance .....	238
serviceMgrServiceSession .....	238
serviceMgrSubscriberSession .....	239
slep .....	239
snmp .....	240
snmpIfMib .....	241
snmpPduAudit .....	241
snmpSetPduAudit .....	242
snmpTrap .....	242
sonet .....	243
sonetPath .....	243
sonetVT .....	244
ssccDetailPm .....	244
ssccDetailSsc .....	245
ssccGeneral .....	245
ssccLacGeneral .....	246
ssh .....	247
stTunnel .....	247
stTunnelEngine .....	248
system .....	248

**Chapter 19****T Commands 251**

tacacsPlusServer .....	251
tcpGeneral .....	252
tcpTraffic .....	252
tcpv6Traffic .....	253
telnet .....	254
telnetClient .....	254
tftpClient .....	255
trackerEvents .....	255
trackerGeneral .....	256
tsm .....	257

**Chapter 20****U Commands 259**

udpTraffic .....	259
udpv6Traffic .....	260

**Chapter 21****V Commands 261**

vrrp .....	261
vrrpTracking .....	262
vsm .....	262
vsmEngine .....	263

**Part 3**

**Index**

---

Index .....267

# List of Tables

	<b>About the Documentation</b>	<b>xxi</b>
	Table 1: Notice Icons .....	xxii
	Table 2: Text and Syntax Conventions .....	xxii
<b>Part 1</b>	<b>Chapters</b>	
	<hr/>	
Chapter 1	<b>System Logging Overview</b>	<b>3</b>
	Table 3: Log Severity Descriptions .....	4



# About the Documentation

- E Series and JUNOS<sup>e</sup> Documentation and Release Notes on page xxi
- Audience on page xxi
- E Series and JUNOS<sup>e</sup> Text and Syntax Conventions on page xxi
- Obtaining Documentation on page xxiii
- Documentation Feedback on page xxiii
- Requesting Technical Support on page xxiii

## E Series and JUNOS<sup>e</sup> Documentation and Release Notes

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For a list of related JUNOS<sup>e</sup> documentation, see <http://www.juniper.net/techpubs/software/index.html>.

If the information in the latest release notes differs from the information in the documentation, follow the *JUNOS<sup>e</sup> Release Notes*.

To obtain the most current version of all Juniper Networks® technical documentation, see the product documentation page on the Juniper Networks website at <http://www.juniper.net/techpubs/>.

## Audience

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This guide is intended for experienced system and network specialists working with Juniper Networks E Series Broadband Services Routers in an Internet access environment.

## E Series and JUNOS<sup>e</sup> Text and Syntax Conventions

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Table 1 on page xxii defines notice icons used in this documentation.

**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.

Table 2 on page xxii defines text and syntax conventions that we use throughout the E Series and JUNOS documentation.

**Table 2: Text and Syntax Conventions**

Convention	Description	Examples
<b>Bold text like this</b>	Represents commands and keywords in text.	<ul style="list-style-type: none"> <li>Issue the <b>clock source</b> command.</li> <li>Specify the keyword <b>exp-msg</b>.</li> </ul>
<b>Bold text like this</b>	Represents text that the user must type.	host1(config)# <b>traffic class low-loss1</b>
Fixed-width text like this	Represents information as displayed on your terminal's screen.	<pre>host1#show ip ospf 2 Routing Process OSPF 2 with Router ID 5.5.0.250 Router is an Area Border Router (ABR)</pre>
<i>Italic text like this</i>	<ul style="list-style-type: none"> <li>Emphasizes words.</li> <li>Identifies variables.</li> <li>Identifies chapter, appendix, and book names.</li> </ul>	<ul style="list-style-type: none"> <li>There are two levels of access: <i>user</i> and <i>privileged</i>.</li> <li><i>clusterId</i>, <i>ipAddress</i>.</li> <li><i>Appendix A, System Specifications</i></li> </ul>
Plus sign (+) linking key names	Indicates that you must press two or more keys simultaneously.	Press Ctrl + b.
<b>Syntax Conventions in the Command Reference Guide</b>		
Plain text like this	Represents keywords.	terminal length
<i>Italic text like this</i>	Represents variables.	<i>mask</i> , <i>accessListName</i>
(pipe symbol)	Represents a choice to select one keyword or variable to the left or to the right of this symbol. (The keyword or variable can be either optional or required.)	diagnostic   line

**Table 2: Text and Syntax Conventions** (*continued*)

Convention	Description	Examples
[ ] (brackets)	Represent optional keywords or variables.	[ internal   external ]
[ ]* (brackets and asterisk)	Represent optional keywords or variables that can be entered more than once.	[ level1   level2   l1 ]*
{ } (braces)	Represent required keywords or variables.	{ permit   deny } { in   out }  { <i>clusterId</i>   <i>ipAddress</i> }

## Obtaining Documentation

To obtain the most current version of all Juniper Networks technical documentation, see the Technical Documentation page on the Juniper Networks Web site at <http://www.juniper.net/>.

To download complete sets of technical documentation to create your own documentation CD-ROMs or DVD-ROMs, see the Offline Documentation page at

<http://www.juniper.net/techpubs/resources/cdrom.html>

Copies of the Management Information Bases (MIBs) for a particular software release are available for download in the software image bundle from the Juniper Networks Web site at <http://www.juniper.net/>.

## Documentation Feedback

We encourage you to provide feedback, comments, and suggestions so that we can improve the documentation to better meet your needs. Send your comments to [techpubs-comments@juniper.net](mailto:techpubs-comments@juniper.net), or fill out the documentation feedback form at <https://www.juniper.net/cgi-bin/docbugreport/>. If you are using e-mail, be sure to include the following information with your comments:

- Document or topic name
- URL or page number
- Software release version

## 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 JNASC 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 <http://www.juniper.net/customers/support/downloads/7100059-EN.pdf>.

- Product warranties—For product warranty information, visit <http://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: <http://www.juniper.net/customers/support/>
- Search for known bugs: <http://www2.juniper.net/kb/>
- Find product documentation: <http://www.juniper.net/techpubs/>
- Find solutions and answer questions using our Knowledge Base: <http://kb.juniper.net/>
- Download the latest versions of software and review release notes: <http://www.juniper.net/customers/csc/software/>
- Search technical bulletins for relevant hardware and software notifications: <https://www.juniper.net/alerts/>
- Join and participate in the Juniper Networks Community Forum: <http://www.juniper.net/company/communities/>
- Open a case online in the CSC Case Management tool: <http://www.juniper.net/cm/>

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

## ***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 <http://www.juniper.net/cm/> .
- Call 1-888-314-JTAC (1-888-314-5822 toll-free in the USA, Canada, and Mexico).

For international or direct-dial options in countries without toll-free numbers, see [http://www.juniper.net/support/requesting\\_support.html](http://www.juniper.net/support/requesting_support.html) .



## **Part 1**

# **Chapters**

- System Logging Overview on page 3
- Event Categories on page 23



## Chapter 1

# System Logging Overview

E Series Broadband Services Routers enable you to log system events to discover and isolate problems with your system. This chapter explains how to use the command-line interface (CLI) to monitor your system's log configuration and stay informed about all system events that you want to track.

This chapter contains the following sections:

- Overview of System Logging on page 3
- Logging Platform Considerations on page 5
- Configuring Event Logging on page 5
- Configuring Log Severity for Individual and Systemwide Logs on page 10
- Configuring Log Verbosity for Individual Logs or All Logs on page 14
- Setting the Timestamp for Log Messages on page 14
- Configuring Log Filters on page 16
- Turning Off Log Filters on page 17
- Monitoring Logging System Events on page 17

## Overview of System Logging

---

System events are classified into event categories. Using the CLI, you can determine which event categories to log. To fully utilize the logging facility, you need to understand *log severity* and *log verbosity*.

### Log Severity

Log severity is a level that is assigned to an event or log message. Log severity levels apply to event categories, such as *bulkStats*, *bgpRoutes*, or *atm1483*.

The minimum severity of a log message for an individual category is described either by a severity number in the range 0–7 or a descriptive priority term, such as *emergency* or *debug*. The lower the severity number is, the higher the priority. See Table 3 on page 4.



**NOTE:** Not every event category supports every severity level. For a list of event categories and the severity levels that each category supports, see “Event Categories” on page 23.

**Table 3: Log Severity Descriptions**

Severity Number	Severity Name	System Response
0	Emergency	System unusable; shelf reset
1	Alert	Immediate action needed; card reset
2	Critical	Critical conditions exist; interface is down
3	Error	Error conditions; nonrecoverable software error
4	Warning	Warning conditions; recoverable software error
5	Notice	Normal but significant conditions; nonerror, low-verbosity information
6	Info	Informational messages; nonerror, medium-verbosity information
7	Debug	Debug messages; nonerror, high-verbosity information

## Log Verbosity

The verbosity level determines the amount of information that appears in each message. You can assign the verbosity level for the log category. Verbosity levels can be any of the following:

- Low—Terse
- Medium—Moderate
- High—Verbose



**NOTE:** Many event categories provide only low-verbosity detail regardless of the verbosity setting.

## Persistent Logs

Log messages can survive a system reboot. After a reboot, the system rebuilds the list of log messages. However, if the system detects any problems or has gone through a power cycle, the buffer is reset, and the log messages from the previous session are lost.

Log messages are not synchronized between primary and redundant SRP modules. During a switchover from a primary to a redundant SRP module, existing log messages are not transferred to the redundant SRP module.

## Logging Platform Considerations

---

System logs are supported on all E Series routers.

For information about the modules supported on E Series routers:

- See the *ERX Module Guide* for modules supported on ERX7xx models, ERX14xx models, and the Juniper Networks ERX310 Broadband Services Router.
- See the *E120 and E320 Module Guide* for modules supported on the Juniper Networks E120 and E320 Broadband Services Routers.

## Configuring Event Logging

---

By default, event logging is enabled and has default settings. This section explains how to change settings to customize event logging to fit your needs.

- Set a baseline for when the system begins logging messages.

```
host1#baseline log 11:12:55 April 30 2002
```

- Set the log severity.

```
host1(config)#log severity warning
```

- Remove the limit on the number of buffers available for an event category.

```
host1(config)#log unlimited qos
```

- Set the log verbosity.

```
host1(config)#log verbosity low
```

- Log messages to a specified destination.

```
host1(config)#log destination syslog 10.10.9.5 include ospfGeneral
mplsGeneral os
```

- Select fields to be added to logs.

```
host1(config)#log fields timestamp instance no-calling-task
```

- Enable logs destined for a console to be displayed at the current console device.

```
host1#log here
```

The next sections explain how to configure individual and systemwide logs, how to format timestamps for log messages, and how to configure log filters.

- baseline log**
- Use to set a baseline for logging events. Only log messages timestamped after the baseline appear when you enter the **show log data delta** command.
  - To use the current system time, do not enter any options.
  - To set a specific time, use the following syntax:  
*Hour:Minute[:Second]*—Current time in 24-hour format. Seconds are optional.
  - **utc**—Enter this keyword to indicate that the time entered is in universal coordinated time (UTC), rather than local time.
  - To set a specific date, use the following syntax:  
*Month Day Year*—You must spell out the name of the month.
  - **last-reset**—Causes the system to display log messages generated since the last time the system was reset
  - Examples
 

```
host1#baseline log 11:12:55 April 30 2002
host1#baseline log last-reset
```
  - There is no **no** version.
  - See baseline log.

- log destination**
- Use to log messages to the specified destination, including system log, console, and nv-file (nonvolatile storage).



**NOTE:** You can display traffic logs—such as ipTraffic, icmpTraffic, tcpTraffic, and udpTraffic—only through the **show log data** command or from the SRP module console. You cannot redirect traffic logs elsewhere, such as to a system log or nonvolatile storage file, or to a Telnet session.

---

- Use the **severity** keyword to limit the messages logged based on priority level.
- The following information applies to logging messages to system log servers.
  - You can have multiple system log servers, but must configure logging to each one separately.
  - A particular message within a specified event category is logged to a particular system log server only if the priority of the message is greater than or equal to both the priority of the event category and the priority of that system log server.
  - If you log messages to a system log server, you can also specify:
    - **facility**—Specifies a facility ID on the system log destination host. The range is 0–7, representing the logging facilities local0–local7.
    - **include**—Logs only the listed categories to system log; no other categories are logged unless specifically included by issuing this command again.

- **exclude**—Logs all categories to system log except the listed categories; all other categories are logged unless specifically excluded by issuing this command again.
- Issuing an **include** command after an **exclude** command (or vice versa) overrides the earlier command. Therefore, you cannot enter a command including certain categories and then follow it with a command excluding others. Similarly, you cannot enter a command excluding certain categories and then follow it with a command including others.
- You can issue successive **include** commands or successive **exclude** commands; in this case, the successive commands expand the list of included or excluded categories.
- Example 1—The first command causes only the ospfGeneral, mplsGeneral, and os event categories to be logged to system log at 10.10.9.5. The second command reverses this inclusion and restores the logging of all event categories.

```
host1(config)#log destination syslog 10.10.9.5 include ospfGeneral
mplsGeneral os
host1(config)#no log destination syslog 10.10.9.5
```

- Example 2—The first command again causes only the ospfGeneral, mplsGeneral, and os event categories to be logged to system log at 10.10.9.5. The second command reverses the inclusion of ospfGeneral and os. The mplsGeneral category is still included and is thus the only category logged.

```
host1(config)#log destination syslog 10.10.9.5 include ospfGeneral mplsGeneral
os
host1(config)#no log destination syslog 10.10.9.5 include ospfGeneral os
```

- Example 3—The first command causes the isisGeneral, ipRoutePolicy, and ipTraffic event categories to be excluded from logging to system log at 10.1.2.3. The second command reverses this exclusion and restores the logging of all event categories.

```
host1(config)#log destination syslog 10.1.2.3 exclude isisGeneral ipRoutePolicy
ipTraffic
host1(config)#no log destination syslog 10.1.2.3 exclude
```

- Example 4—The first command again causes the isisGeneral, ipRoutePolicy, and ipTraffic event categories to be excluded from logging to system log at 10.1.2.3. The second command reverses the exclusion of ipRoutePolicy and ipTraffic. The isisGeneral category is still excluded; all other events are logged.

```
host1(config)#log destination syslog 10.1.2.3 exclude isisGeneral
ipRoutePolicy ipTraffic
host1(config)#no log destination syslog 10.1.2.3 exclude isisGeneral
```

- Example 5—The first command causes the isisGeneral event category to be excluded from logging to system log at 10.1.2.3. The second command causes ospfGeneral to also be excluded from logging.

```
host1(config)#log destination syslog 10.1.2.3 exclude isisGeneral
host1(config)#log destination syslog 10.1.2.3 exclude ospfGeneral
```

- Example 6—The first command causes the isisGeneral event category to be excluded from logging to system log at 10.1.2.3; all other events are logged. The second command overrides the first and causes the exclusion of all events except ospfGeneral.

```
host1(config)#log destination syslog 10.1.2.3 exclude isisGeneral
host1(config)#log destination syslog 10.1.2.3 include ospfGeneral
```

- Use the **no** version to reverse the effects of previous commands or restore the default, which is to log all event categories.
- See log destination.

#### **log destination syslog source**

- Use to specify a source interface type and location for events logged to system log at the specified IP address.
- Overrides the actual source interface type and location. The IP address associated with the specified source interface is used as the source address for subsequent system log messages.
- Example

```
host1(config)#log destination syslog 10.1.2.3 source atm 0/1
```

- Use the **no** version to restore the actual source interface type and location.
- See log destination syslog source.

#### **log engineering**

- Use to enable engineering logs.
- Provides troubleshooting information to assist you when contacting Juniper Networks Technical Assistance Center (JTAC).
- Example

```
host1(config)#log engineering
```

- Use the **no** form of this command to disable engineering logs.
- See log engineering.

#### **log fields**

- Use to select fields to be added to all logs. These fields include a timestamp for the message, an instance identifier, and the name of the internal software application that created the message.
- Example

```
host1(config)#log fields timestamp instance no-calling-task
```

- Use the **no** version to restore the default log field settings.
- See log fields.



- log here** ■ Use to enable logs destined for a console to be displayed at the current console.
- By default, the local console automatically receives all log messages if console is a destination. The exception is the cliCommand log, whose log events do not appear on the console.
- By default, Telnet consoles do not receive log messages.
- Example

```
host1#log here
```

- Use the **no** version to disable logs destined for a console from being displayed on this console.
- See log here.

- log severity** ■ Use to set the severity level for systemwide logs (that is, when you do not specify an individual event category) or for a specific event category. For a list of severity values, see Table 3 on page 4.



**NOTE:** Assigning a log severity to an individual event category changes its state to Assigned. You cannot change the severity of that event category using systemwide level commands until you return the event category to its default, unassigned state with the **no log severity** command.

---

- If you do not specify a category, the severity value changes for all categories except individual categories for which you previously set a specific severity level. See “Configuring Log Severity for Individual and Systemwide Logs” on page 10 for details.
- Each event category has its own default severity value. For most categories, the default is Error.
- To disable all *default* level log messages, use the **off** keyword without specifying an event category.
- To disable individual level log messages, use the **off** keyword and specify the event category that you want to disable.
- Example

```
host1(config)#log severity warning
```

- Use the **no** version to return the systemwide (when assigned) or default severity values to event categories.
- Use the **no** version with an \* (asterisk) to return all event categories (modified either systemwide or individually) to their default severity setting. For example:

```
host1(config)#no log severity *
```

- See log severity.

- log unlimited**
  - Use to remove the limit on the number of outstanding buffers for an event category, such as when the system is dropping logs of a particular category.
  - Example
 

```
host1(config)#log unlimited qos
```
  - Use the **no** version to return to the default value.
  - See log unlimited.
  
- log verbosity**
  - Use to set the verbosity level for a selected category or for all categories.
  - If you do not specify a category, then the verbosity level is set for all categories.
  - The default verbosity setting for all logs is low.
  - Example
 

```
host1(config)#log verbosity low
```
  - Use the **no** version to return to the default verbosity (low) for the selected category.
  - See log verbosity.

## Configuring Log Severity for Individual and Systemwide Logs

---

You can change the severity setting for *individual* logs and the *systemwide* value.

When working with log severities, keep the following in mind:

- All log event categories have a default. However, the default values can vary for each category. For example, most event categories have a default severity of Error. However, some event categories may have a default severity of Notice, Warning, Info, and so on.
- Log event categories have two states—unassigned (default) and assigned. How a log event category reacts to the **log severity** command depends on its current state.
- You can change log severities for event categories at a systemwide level or an individual level. Systemwide changes are those that modify a large number of unassigned event categories at one time; for example, the command **log severity debug off**. Individual changes are those that indicate an explicit event category that you want to change; for example, the command **log severity notice cli command**.
- Changes to log event categories at an individual level take precedence over those made at the systemwide level.
- Changes to log event categories at the systemwide level take precedence over the default.
- Assigning a log severity to an individual event category changes its state to Assigned. This means that you cannot change the severity of that event category

using systemwide level commands until you return the event category to its default, unassigned state by using the **no log severity *eventCategory*** command.

- To return all logs, systemwide and individual, to their default, unassigned severity level, use the **no log severity \*** command.
- To see whether individual or systemwide severity and verbosity settings are in effect, use the **show log configuration** command.

**Example** The following example demonstrates the effects of event category state in regard to using systemwide commands:

1. In Configuration mode and having made no changes to the severity settings of any event categories, view the log configuration:

```
host1(config)#run show log config
log destination console severity WARNING
log destination nv-file severity CRITICAL
log destination syslog 10.10.4.240 facility 7 severity DEBUG
no log engineering
log fields timestamp instance no-calling-task
no log here
```

```
Warning: Logging to this terminal is disabled
no log severity
```

category	severity	verbosity	filters	notes
-----	-----	-----	-----	-----
aaaAtm1483Cfg	ERROR	low		
aaaEngineGeneral	ERROR	low		
aaaServerGeneral	ERROR	low		
aaaUserAccess	ERROR	low		
addressServerGeneral	ERROR	low		
ar1AaaServerGeneral	ERROR	low		
atm	ERROR	low		
atm1483	ERROR	low		
atmAa15	ERROR	low		

Notice that the atm event category has a default severity of Error.

2. Change all event categories to Warning, systemwide, and view the log configuration:

```
host1(config)#log severity warning
host1(config)#run show log config
log destination console severity WARNING
log destination nv-file severity CRITICAL
log destination syslog 10.10.4.240 facility 7 severity DEBUG
no log engineering
log fields timestamp instance no-calling-task
no log here
```

```
Warning: Logging to this terminal is disabled
log severity WARNING
```

category	severity	verbosity	filters	notes
-----	-----	-----	-----	-----
aaaAtm1483Cfg	WARNING	low		1
aaaEngineGeneral	WARNING	low		1

aaaServerGeneral	WARNING	low	1
aaaUserAccess	WARNING	low	1
addressServerGeneral	WARNING	low	1
ar1AaaServerGeneral	WARNING	low	1
atm	WARNING	low	1
atm1483	WARNING	low	1
atmAa15	WARNING	low	1

3. Change the atm category to have a log severity of Emergency and view the log configuration:

```
host1(config)#log severity emergency atm
host1(config)#run show log config
log destination console severity WARNING
log destination nv-file severity CRITICAL
log destination syslog 10.10.4.240 facility 7 severity DEBUG
no log engineering
log fields timestamp instance no-calling-task
no log here
```

Warning: Logging to this terminal is disabled  
log severity WARNING

category	severity	verbosity	filters	notes
-----	-----	-----	-----	-----
aaaAtm1483Cfg	WARNING	low		1
aaaEngineGeneral	WARNING	low		1
aaaServerGeneral	WARNING	low		1
aaaUserAccess	WARNING	low		1
addressServerGeneral	WARNING	low		1
ar1AaaServerGeneral	WARNING	low		1
atm	EMERGENCY	low		2
atm1483	WARNING	low		1
atmAa15	WARNING	low		1

4. Change all event categories to Alert, systemwide, and view the log configuration:

```
host1(config)#log severity alert
host1(config)#run show log config
log destination console severity WARNING
log destination nv-file severity CRITICAL
log destination syslog 10.10.4.240 facility 7 severity DEBUG
no log engineering
log fields timestamp instance no-calling-task
no log here
```

Warning: Logging to this terminal is disabled  
log severity ALERT

category	severity	verbosity	filters	notes
-----	-----	-----	-----	-----
aaaAtm1483Cfg	ALERT	low		1
aaaEngineGeneral	ALERT	low		1
aaaServerGeneral	ALERT	low		1
aaaUserAccess	ALERT	low		1
addressServerGeneral	ALERT	low		1
ar1AaaServerGeneral	ALERT	low		1
atm	EMERGENCY	low		2
atm1483	ALERT	low		1
atmAa15	ALERT	low		1

Notice that the atm event category that you individually assigned in Step 3 does not change.

5. Turn off log notification, systemwide, and view the log configuration:

```
host1(config)#log severity off
host1(config)#run show log config
log destination console severity WARNING
log destination nv-file severity CRITICAL
log destination syslog 10.10.4.240 facility 7 severity DEBUG
no log engineering
log fields timestamp instance no-calling-task
no log here
```

```
Warning: Logging to this terminal is disabled
log severity OFF
```

category	severity	verbosity	filters	notes
-----	-----	-----	-----	-----
aaaAtm1483Cfg	OFF	low		1
aaaEngineGeneral	OFF	low		1
aaaServerGeneral	OFF	low		1
aaaUserAccess	OFF	low		1
addressServerGeneral	OFF	low		1
ar1AaaServerGeneral	OFF	low		1
atm	EMERGENCY	low		2
atm1483	OFF	low		1
atmAa15	OFF	low		1

Notice that the atm event category does not change.

6. Remove the assigned status of the atm event category and view the log configuration:

```
host1(config)#no log severity atm
host1(config)#run show log config
log destination console severity WARNING
log destination nv-file severity CRITICAL
log destination syslog 10.10.4.240 facility 7 severity DEBUG
no log engineering
log fields timestamp instance no-calling-task
no log here
```

```
Warning: Logging to this terminal is disabled
log severity OFF
```

category	severity	verbosity	filters	notes
-----	-----	-----	-----	-----
aaaAtm1483Cfg	OFF	low		1
aaaEngineGeneral	OFF	low		1
aaaServerGeneral	OFF	low		1
aaaUserAccess	OFF	low		1
addressServerGeneral	OFF	low		1
ar1AaaServerGeneral	OFF	low		1
atm	OFF	low		1
atm1483	OFF	low		1
atmAa15	OFF	low		1

Notice that the atm event category follows the systemwide severity level of OFF. The systemwide setting takes precedence over the atm event category default of Error.

7. Change all event categories, systemwide, to their default/unassigned levels, and view the log configuration:

```
host1(config)#no log severity *
Please wait....
host1(config)#run show log config
log destination console severity WARNING
log destination nv-file severity CRITICAL
log destination syslog 10.10.4.240 facility 7 severity DEBUG
no log engineering
log fields timestamp instance no-calling-task
no log here
```

```
Warning: Logging to this terminal is disabled
no log severity
```

category	severity	verbosity	filters	notes
-----	-----	-----	-----	-----
aaaAtm1483Cfg	ERROR	low		
aaaEngineGeneral	ERROR	low		
aaaServerGeneral	ERROR	low		
aaaUserAccess	ERROR	low		
addressServerGeneral	ERROR	low		
ar1AaaServerGeneral	ERROR	low		
atm	ERROR	low		
atm1483	ERROR	low		
atmAa15	ERROR	low		

## Configuring Log Verbosity for Individual Logs or All Logs

The default verbosity setting for all logs is low. To change the logging verbosity of an individual log, specify a category when you enter the **log verbosity** command. To change the log verbosity of every log, do not specify an event category when you enter the **log verbosity** command. However, after you enter the **log verbosity** command without specifying a particular event category, all logs are set to the new verbosity. No log verbosity overrides are saved.

**Example** The following example sets all log categories to verbosity medium, and then it sets the verbosity level for ds3 events to high.

```
host1(config)#log verbosity medium
host1(config)#log verbosity high ds3
```

## Setting the Timestamp for Log Messages

You can use the **service timestamps** command to format timestamps for log messages. By default, log messages display universal coordinated time (UTC) without the time zone.

The following examples illustrate how you can change the timestamp on log messages.

- Set the time zone to eastern daylight time (EDT), 5 hours behind UTC, and display the local time on the log messages.

```
host1(config)#clock timezone EDT -5
```

- Display UTC, but no time zone, on the log messages.

```
host1(config)#service timestamps log datetime
host1#exit
host1#show log data category cliCommand severity info
*****
NOTICE 05/14/2001 18:24:49 cliCommand: "configure terminal", console
NOTICE 05/14/2001 18:24:45 cliCommand: "service timestamps log datetime",
console
*****
```

- Display UTC and the time zone on the log messages.

```
host1#configure terminal
host1(config)#service timestamps log datetime show-timezone
host1(config)#exit
host1#show log data category cliCommand severity info
*****
NOTICE 05/14/2001 18:28:45 UTC EDT cliCommand: "configure terminal",
console
NOTICE 05/14/2001 18:28:42 UTC EDT cliCommand: "service timestamps log
datetime show-timezone", console
*****
```

- Display no timestamp on the log messages.

```
host1#configure terminal
host1(config)#no service timestamps
host1#exit
host1#show log data category cliCommand severity info
*****
NOTICE 134 cliCommand: "configure terminal", console
NOTICE 133 cliCommand: "no service timestamps", console
*****
```

- service timestamps**
- Use to format timestamps for log messages.
  - For information about setting local times and time zones, see *JUNOS System Basics Configuration Guide*.
  - The **show log data** command displays the log data with the current timestamp format.
  - The **show log data nv-file** command displays the log data with the timestamp format in effect at the time the log record was written.
  - Use the **no** version to remove timestamps from log messages.
  - See service timestamps.

## Configuring Log Filters

Many event categories contain filters so you can further refine the type of information that the system logs. For example, when logging BGP connections, you can limit the information logged to a specific access class, peer, route map, or virtual router.

You define filters when you set the log severity for an event category. The online Help shows the options you can set for each filter.



**NOTE:** You can use the packet flow monitoring feature to create user-defined classification parameters that specify the packet data that is logged. See Packet Tagging Overview.

The following example creates a filter that logs BGP connection information at the debug severity level on traffic that matches access list ListOne, and is incoming traffic to virtual router default.

```
host1(config)# log severity debug bgpevents ?
  access-class  Select an access list for the filter
  in            Select import/in direction for the filter
  out          Select export/out direction for the filter
  peer         Select a peer IP address for the filter
  route-map    Select a route map for the filter
  router       Identify an instance of a virtual router
  <cr>
host1(config)# log severity debug bgpevents access-class ?
  WORD The access list
host1(config)# log severity debug bgpevents access-class ListOne ?
  filtering-router Identify virtual router where access-class/route-map are defined
  in              Select import/in direction for the filter
  out            Select export/out direction for the filter
  route-map      Select a route map for the filter
  <cr>
host1(config)# log severity debug bgpevents access-class ListOne route-map ?
  WORD The route map
host1(config)# log severity debug bgpevents access-class ListOne route-map default ?
  filtering-router Identify virtual router where access-class/route-map are defined
  in              Select import/in direction for the filter
  out            Select export/out direction for the filter
  <cr>
host1(config)# log severity debug bgpevents access-class ListOne route-map default in
```

The next example limits the logging of PPP debug events to traffic to or from the POS interface in slot 2/0.

```
host1(config)# log severity debug ppp ?
  atm          Specify an ATM PPP interface
  fastEthernet Specify a fastEthernet interface
  gigabitEthernet Specify a gigabitEthernet interface
  mlppp        Specify an MLPPP network interface
  pos          Specify a POS PPP interface
  serial       Specify a serial PPP interface
```



```
<cr>
host1(config)#log severity debug ppp pos 2/0
```

To obtain a list of the filters available in each event category, see “Event Categories” on page 23 .

## Turning Off Log Filters

---

You can turn off filters in three ways:

- Turn off all filters
- Turn off all filters for an event category
- Turn off a specific filter

To turn off all filters:

```
host1(config)#no log filters
```

To turn off all filters for an event category, use the **no** version of the **log severity** command along with the category name. For example:

```
host1(config)#no log severity bgpEvents filters
```

To turn off a specific filter, use the **no** version of the **log severity** command that you used to add the filter. For example:

```
host1(config)#no log severity bgpEvents peer 10.0.0.2 10.0.0.1
```

- no log filters**
- Use to turn off log filters.
  - To turn off all filters for an event category, specify the category name.
  - Example

```
host1(config)#no log filters
```

- To turn off a specific filter, use the **no** version of the **log severity** command that you used to add the filter.
- See no log filters.

## Monitoring Logging System Events

---

Use the **show log configuration** command to display your log configuration. Use the **show log data** command to display system events on your screen.

You can use the output filtering feature of the **show** command to include or exclude lines of output based on a text string you specify. See *show Commands* in *JUNOS System Basics Configuration Guide* for details.

**show log configuration** ■ Use to show the logging configuration on your system.

■ Example 1—Factory defaults are set

```
host1#show log configuration
```

```
log destination console severity WARNING
log destination nv-file severity CRITICAL
no log engineering
log fields timestamp instance no-calling-task
no log severity
```

category	severity	verbosity	filters
-----	-----	-----	-----
NameResolverLog	ERROR	low	
aaaAtm1483Cfg	ERROR	low	
aaaEngineGeneral	ERROR	low	
aaaServerGeneral	ERROR	low	
addressServerGeneral	ERROR	low	
atm	ERROR	low	
atm1483	ERROR	low	
atmAa15	ERROR	low	
bgpConnections	ERROR	low	
...			
cliCommand	NOTICE	low	
controlNetworkSlave	ERROR	low	
cops	ERROR	low	
...			
udpTraffic	ERROR	low	

■ Example 2—Individual log **udpTraffic** is set to warning

```
host1#(config)#log severity warning udpTraffic
```

```
host1##show log configuration
```

```
log destination console severity WARNING
log destination nv-file severity CRITICAL
no log engineering
log fields timestamp instance no-calling-task
no log severity
```

category	severity	verbosity	filters
-----	-----	-----	-----
NameResolverLog	ERROR	low	
aaaAtm1483Cfg	ERROR	low	
aaaEngineGeneral	ERROR	low	
aaaServerGeneral	ERROR	low	
addressServerGeneral	ERROR	low	
atm	ERROR	low	
atm1483	ERROR	low	
atmAa15	ERROR	low	
bgpConnections	ERROR	low	
...			
cliCommand	NOTICE	low	
controlNetworkSlave	ERROR	low	
cops	ERROR	low	
...			
udpTraffic	WARNING*	low	

\* Default severity setting is overridden by the individual log severity setting.

■ Example 3—Log severity is set to alert

```
host1#(config)#log severity alert
host1#show log configuration
log destination console severity WARNING
log destination nv-file severity CRITICAL
no log engineering
log fields timestamp instance no-calling-task
log severity ALERT
```

category	severity	verbosity	filters
NameResolverLog	ALERT#	low	
aaaAtm1483Cfg	ALERT#	low	
aaaEngineGeneral	ALERT#	low	
aaaServerGeneral	ALERT#	low	
addressServerGeneral	ALERT#	low	
atm	ALERT#	low	
atm1483	ALERT#	low	
atmAa15	ALERT#	low	
bgpConnections	ALERT#	low	
...			
cliCommand	ALERT#	low	
controlNetworkSlave	ALERT#	low	
cops	ALERT#	low	
...			
udpTraffic	ALERT#	low	

\* Default severity setting is overridden by the system-wide severity setting.

■ Example 4—Individual log **atm** is set to severity warning

```
host1#(config)#log severity warning atm
host1#show log configuration
log destination console severity WARNING
log destination nv-file severity CRITICAL
no log engineering
log fields timestamp instance no-calling-task
log severity ALERT
```

category	severity	verbosity	filters
NameResolverLog	ALERT#	low	
aaaAtm1483Cfg	ALERT#	low	
aaaEngineGeneral	ALERT#	low	
aaaServerGeneral	ALERT#	low	
addressServerGeneral	ALERT#	low	
atm	WARNING*	low	
atm1483	ALERT#	low	
atmAa15	ALERT#	low	
bgpConnections	ALERT#	low	
...			
cliCommand	ALERT#	low	
controlNetworkSlave	ALERT#	low	
cops	ALERT#	low	
...			
udpTraffic	ALERT#	low	

\* Default severity setting is overridden by the system-wide severity setting.

\* Default severity setting is overridden by the individual log severity setting.

- See show log configuration.

**show log data** ■ Use to display system events.

- Use keywords to select which events are displayed:
  - **category**—Limits the display to a single log event category. See the CLI online Help for available categories.
  - Example

```
host1#show log data category os
```

- **delta**—Limits the display to events that occurred after the time set with the log baseline command.
- **nv-file**—Displays the information that is currently logged to nonvolatile storage.
  - Example

```
host1# show log data nv-file
logFile.temp: The system cannot find the file specified.
ALERT 09/12/2000 21:29:17 os: ASSERTION FAILED: file mplsNvs2.cc, line
789
ALERT 09/20/2000 02:18:06 os: ASSERTION FAILED: file osPool.cc, line 819
ALERT 09/20/2000 02:26:35 os: ASSERTION FAILED: file osPool.cc, line 819
ALERT 09/20/2000 02:44:33 os: ASSERTION FAILED: file osPool.cc, line 819
ALERT 09/20/2000 04:56:35 os: ASSERTION FAILED: file osPool.cc, line 819
ALERT 09/27/2000 03:10:25 os: ASSERTION FAILED: file
/sw0/sc/nvs/include/./nvMapBackend.h, line 235
ALERT 10/02/2000 04:05:42 os: ASSERTION FAILED: file osHeap.cc, line 439
ALERT 10/02/2000 04:08:04 os: ASSERTION FAILED: file osMessageQueue.cc,
line
42, rip1
ALERT 10/12/2000 03:43:38 os: PANIC: file osSemaphore.cc, line 54
ALERT 11/01/2000 02:03:49 os: ASSERTION FAILED: file cliCommand.cc, line
195
```

- **severity**—Displays events that have a specific severity level.

- Example

```
host1# show log data severity notice
NOTICE 01/10/2001 00:59:50 os: config -- using running
NOTICE 01/10/2001 00:59:52 os: srp application, build date: 0x3a437424 (FRI DEC 22 2000 15:32:52 UTC)
NOTICE 01/10/2001 00:59:52 os: last reset: user reboot, reason: not specified
NOTICE 01/10/2001 00:59:52 os: OsIsrRegistrar: 0xb
NOTICE 01/10/2001 00:59:52 os: OsIsrRegistrar: 0xa
NOTICE 01/10/2001 00:59:52 os: OsIsrRegistrar: 0x2
```

- By combining keywords, you can further limit the information displayed. See the CLI online Help for information about the keywords available at each level.

```
host1#show log data nv-file severity alert
```

- See show log data.



## Chapter 2

# Event Categories

This chapter lists each event category in the system software. To help you determine the severity level to set when troubleshooting, the log strategy for each event category is included. The log strategy shows the type of information logged for each severity level. In addition, this chapter includes the filters available in each event category.





## Part 2

# Event Categories

- A Commands on page 27
- B Commands on page 35
- C Commands on page 51
- D Commands on page 57
- E Commands on page 79
- F Commands on page 81
- G and H Commands on page 87
- I Commands on page 91
- L Commands on page 129
- M Commands on page 145
- N Commands on page 165
- O Commands on page 169
- P Commands on page 195
- Q Commands on page 217
- R Commands on page 219
- S Commands on page 233
- T Commands on page 251
- U Commands on page 259
- V Commands on page 261



## Chapter 3

# A Commands

- [aaaAtm1483Cfg](#) on page 27
- [aaaEngineGeneral](#) on page 28
- [aaaQosCfg](#) on page 28
- [aaaServerGeneral](#) on page 29
- [aaaUserAccess](#) on page 29
- [addressServerGeneral](#) on page 30
- [ar1AaaServerGeneral](#) on page 30
- [atm](#) on page 31
- [atm1483](#) on page 32
- [atm1483VcClass](#) on page 32
- [atmAal5](#) on page 33
- [atmVcClass](#) on page 33
- [auditIpsec](#) on page 34

### aaaAtm1483Cfg

---

<b>Description</b>	AAA ATM 1483 subinterface configuration
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Illegal service category traffic parameter received from AAA; unable to modify circuit traffic parameters using those received from AAA
<b>Notice Log</b>	None
<b>Info</b>	None

**Debug** Notification from AAA indicating that an ATM 1483 subinterface configuration is available; ATM 1483 processing configuration received from AAA; unable to get ATM 1483 subinterface information; number of ATM 1483 configuration entries is out of range

**Filter** None

## aaaEngineGeneral

---

**Description** AAA engine general

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** None

**Notice Log** Control flow and key events, less verbose than debug

**Info** None

**Debug** Control flow and key events

**Filter** None

## aaaQosCfg

---

**Description** AAA QoS configuration logs

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** None

<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	AAA QoS configuration tracking
<b>Filter</b>	None

## aaaServerGeneral

---

<b>Description</b>	AAA server general
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Subscriber count exceeds license plus grace; internal attachment errors
<b>Warning Log</b>	Subscriber count exceeds license; cannot grow internal memory pools; accounting message failures; the Framed-IPv6-Prefix RADIUS attribute is used for both IPv6 Neighbor Discovery router advertisements and DHCPv6 Prefix Delegation.
<b>Notice Log</b>	Authentication failures resulting from memory allocation failures
<b>Info</b>	None
<b>Debug</b>	Authentication failures resulting from reasons other than memory allocation failures; status of authentication; accounting and address assignment requests sent to local (internal) servers; duplicate accounting message failures; EAP challenge received; memory allocation failure for tunnel definition table and profile; failed to insert tunnel attribute and tunnel tag table; container size exceeded: creating new; found unexpected tunnel table; dsl-forum attribute type parse error: limited data or overflow
<b>Filter</b>	None

## aaaUserAccess

---

<b>Description</b>	AAA user access
<b>Emergency</b>	None
<b>Alert</b>	None

<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	User is granted or denied access
<b>Debug</b>	None
<b>Filter</b>	None

## addressServerGeneral

---

<b>Description</b>	Address server general
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Address server request failure (for example, configured address server is not available)
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	None

## ar1AaaServerGeneral

---

<b>Description</b>	Platform-dependent AAA server
<b>Emergency</b>	None

<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Internal (NVS) errors for limit configuration per interface
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Interface information insufficient to identify the user's interface location
<b>Filter</b>	None

## atm

---

<b>Description</b>	ATM interface
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Unable to reenable ILMI administrative state after UNI version change
<b>Warning Log</b>	Error getting location of underlying physical interface; error binding or unbinding to physical interface; error allocating memory for new interface; error setting system identifier; error adding or configuring an interface; error getting capabilities of interface; error getting maximum VPI/VCI for interface; error getting maximum virtual circuit descriptor for interface; unable to store or allocate memory for F4 OAM circuit data; unable to configure F4 OAM circuit for interface
<b>Notice Log</b>	Interface pool expanded by an incremental number of entries; report retry delay in seconds when waiting for the underlying physical interface to be created; unable to allocate a message to send an interface up or down notification; unable to add or configure interface
<b>Info</b>	Dropping interface up, down, or not present notification due to removal of interface; discarding F4 OAM circuits when interface does not support F4 OAM
<b>Debug</b>	None

**Filter** None

## atm1483

---

**Description** ATM 1483 data service

**Emergency** None

**Alert** None

**Critical** None

**Error** Error applying static map entry for a newly created circuit of an NBMA interface; unable to configure interfaces on ATM interface; unable to determine interface location for ATM AAL5 interface; unable to determine maximum interface configuration count for interface; unable to configure interface on ATM interface

**Warning Log** Error getting location of underlying AAL5 or ATM interface; error binding to AAL5 interface; error opening a circuit for an NBMA interface; attempting to associate a static map to an underlying ATM interface that does not exist; error restoring circuits from NVS; error removing static map entry; NVS entry not found for static map entry; error storing static map entry in NVS; error expanding interface pool, interface binding pool, or subscriber pool

**Notice Log** Interface pool, interface binding pool, or subscriber pool expanded by an incremental number of entries; unable to allocate a message to send a subinterface up or down notification

**Info** Dropping subinterface up or down notification due to removal of subinterface; configure interfaces on ATM interface; elapsed time for downloading interfaces; elapsed time for ATM AAL5 present notification; maximum interface count per call

**Debug** None

**Filter** None

## atm1483VcClass

---

**Description** Application of attributes configured in a virtual circuit (VC) class to PVCs

**Emergency** None

**Alert** None

**Critical** None



<b>Error</b>	In routers with high availability enabled, failure to mirror the VC modification or failure to associate the VC modification with the standby SRP module
<b>Warning Log</b>	Failure to find the PVCs associated with this VC class; failure to apply the VC class attributes to the appropriate PVCs; the log message displays a brief description of the failure
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	None

## atmAal5

---

<b>Description</b>	ATM Adaptation Layer 5
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Error getting location of underlying ATM interface; error binding to ATM interface; unable to expand interface pool; error creating interface; unable to set administrative status of interface
<b>Notice Log</b>	Interface pool expanded by an incremental number of entries; report retry delay in seconds when waiting for the underlying ATM interface to be created; unable to allocate a message to send an interface up or down notification
<b>Info</b>	Dropping interface up or down notification due to removal of interface
<b>Debug</b>	None
<b>Filter</b>	None

## atmVcClass

---

<b>Description</b>	Information on VC class operational errors
--------------------	--

**Emergency** None

**Alert** None

**Critical** None

**Error** Resource failure errors, such as error allocating memory for adding a VC class; internal software errors; error processing a VC class association; when using SNMP, unable to set a VC class state from not in service to in service, or vice-versa; unable to find an existing VC class in the internal data structure; unable to complete processing after a high availability switchover

**Warning Log** None

**Notice Log** None

**Info** None

**Debug** Unable to update mirrored storage for a high availability switchover

**Filter** None

## auditIpsec

---

**Description** IKE SA negotiations

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** None

**Notice Log** Information about IKE SA negotiation payloads

**Info** None

**Debug** None

**Filter** None

## Chapter 4

# B Commands

- bfdAdaptivity on page 35
- bfdEvents on page 36
- bfdGeneral on page 36
- bfdSession on page 37
- bgpConnections on page 37
- bgpDampening on page 38
- bgpEvents on page 39
- bgpGeneral on page 40
- bgpGracefulRestart on page 41
- bgpIpv6NextHops on page 42
- bgpKeepAlives on page 42
- bgpMessages on page 43
- bgpNeighborChanges on page 44
- bgpNextHops on page 45
- bgpRoutes on page 45
- bridge on page 48
- bridgeEngine on page 49
- bridgingMgr on page 49
- bulkStats on page 50

### **bfdAdaptivity**

---

**Description** BFD adaptivity events

**Emergency** None

**Alert** None

**Critical** None

<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	BFD session adaptivity events
<b>Debug</b>	BFD session adaptivity events
<b>Filter</b>	None

## bfdEvents

---

<b>Description</b>	BFD Events
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	BFD session state changes
<b>Debug</b>	None
<b>Filter</b>	None

## bfdGeneral

---

<b>Description</b>	BFD general events
<b>Emergency</b>	None
<b>Alert</b>	None

<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	BFD enabled/disabled on an interface from a client
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	None

## bfdSession

---

<b>Description</b>	BFD session events
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Unknown BFD session
<b>Notice Log</b>	Session state changes
<b>Info</b>	Session parameter changes
<b>Debug</b>	None
<b>Filter</b>	None

## bgpConnections

---

<b>Description</b>	BGP TCP/IP connection activity
<b>Emergency</b>	None

<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Error setting password for specified peer; error binding to update-source address for specified peer
<b>Warning Log</b>	TCP error occurred while receiving data
<b>Notice Log</b>	Outbound TCP connection initiated, completed, or failed; inbound TCP connection accepted, refused, or failed; TCP connection closed by peer
<b>Info</b>	None
<b>Debug</b>	TCP connection is ready to send; data received on TCP connection; notification message sent; could not send notification message due to flow control—will retry later; error while sending notification message; keepalive message sent; could not send keepalive message due to flow control—will retry later; error while sending keepalive message; message other than notification or keepalive sent; could not send other message than notification or keepalive due to flow control—will retry later; error while sending other message than notification or keepalive
<b>Filter 1</b>	access-class—This filter is not currently supported
<b>Filter 2</b>	peer—See description of the bgpRoutes peer filter for information about this filter
<b>Filter 3</b>	route-map—This filter is not currently supported
<b>Filter 4</b>	router—See description of the bgpRoutes router filter for information about this filter
<b>Filter 5</b>	in—This filter is not currently supported
<b>Filter 6</b>	out—This filter is not currently supported

## bgpDampening

---

<b>Description</b>	BGP dampening
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None

<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	Route is suppressed by route-flap dampening; route is no longer suppressed by route-flap dampening
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter 1</b>	access-class—This filter is not currently supported
<b>Filter 2</b>	peer—See description of the bgpRoutes peer filter for information about this filter
<b>Filter 3</b>	route-map—This filter is not currently supported
<b>Filter 4</b>	router—See description of the bgpRoutes router filter for information about this filter
<b>Filter 5</b>	in—This filter is not currently supported
<b>Filter 6</b>	out—This filter is not currently supported

## bgpEvents

---

<b>Description</b>	BGP finite state machine (FSM) events and transitions
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Event occurred that was not expected for current state
<b>Warning Log</b>	None
<b>Notice Log</b>	One of the following events occurred: start, stop, inbound-connection-arrived, outbound-connection-complete, connection-error, connection-closed, start-timer-expired, connect-timer-expired, hold-timer-expired, keep-alive-timer-expired, open-received, update-received, keep-alive-received, notification-received, route-refresh, route-refresh-cisco
<b>Info</b>	None

**Debug** None

**Filter 1** access-class—This filter is not currently supported

**Filter 2** peer—See description of the bgpRoutes peer filter for information about this filter

**Filter 3** route-map—This filter is not currently supported

**Filter 4** router—See description of the bgpRoutes router filter for information about this filter

**Filter 5** in—This filter is not currently supported

**Filter 6** out—This filter is not currently supported

## bgpGeneral

---

**Description** BGP general information

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** None

**Notice Log** BGP IPv4 route-target-signaling address family enabled or disabled; making local route to multihomed site less preferred (local-preference < > ) because down bit is set

**Info** None

**Debug** Setting local preference to < > for redistributed route of layer2 site

**Filter 1** access-class—This filter is not currently supported

**Filter 2** peer—See description of the bgpRoutes peer filter for information about this filter

**Filter 3** route-map—This filter is not currently supported

**Filter 4** router—See description of the bgpRoutes router filter for information about this filter



**Filter 5** in—This filter is not currently supported

**Filter 6** out—This filter is not currently supported

## bgpGracefulRestart

---

**Description** BGP Graceful Restart Feature log

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** None

**Notice Log** Log BGP performed or did not perform a graceful restart; router supports or does not support non-stop forwarding; router is capable of switching gracefully, deferring, or resuming best path selection decision process; BGP routes allowed or prevented from being downloaded to line cards; graceful-restart timer expiration; marking or removing stale routes; waiting to receive end-of-rib marker from peer; received end-of-rib marker from all peers

**Info** None

**Debug** Standby SRP will wait for BGP convergence on next restart

**Filter 1** access-class—This filter is not currently supported

**Filter 2** peer—This filter is not currently supported

**Filter 3** route-map—This filter is not currently supported

**Filter 4** router—See description of the bgpRoutes router filter for information about this filter

**Filter 5** in—This filter is not currently supported

**Filter 6** out—This filter is not currently supported

## bgpIpv6NextHops

---

<b>Description</b>	BGP indirect next-hops for IPv6 NLRI
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Errors in BGP IPv6 next hop events and state transitions
<b>Warning Log</b>	None
<b>Notice Log</b>	State transitions of BGP IPv6 next hops
<b>Info</b>	None
<b>Debug</b>	BGP IPv6 indirect next-hop events
<b>Filter 1</b>	router—See description of the bgpRoutes router filter for information about this filter
<b>Filter 2</b>	remote-ipv6-address—Matches on the IPv6 address of the BGP indirect next-hop

## bgpKeepAlives

---

<b>Description</b>	BGP keepalive messages
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Keepalive message received with unexpected additional data after header
<b>Notice Log</b>	Keepalive message received; keepalive message sent
<b>Info</b>	None

**Debug** None

**Filter 1** access-class—This filter is not currently supported

**Filter 2** peer—See description of the bgpRoutes peer filter for information about this filter

**Filter 3** route-map—This filter is not currently supported

**Filter 4** router—See description of the bgpRoutes router filter for information about this filter

**Filter 5** in—Matches on traffic coming into the router

**Filter 6** out—Matches on traffic going out of the router



**NOTE:** Send messages are logged to the bgpKeepAlives log when a message is added to the send queue. A debug message is logged in to the bgpConnections log when the message is actually passed to TCP.

## bgpMessages

**Description** BGP protocol messages

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** Unknown message type received; invalid field in received message; notification message received or sent; invalid capability length in received ORF capability; invalid capability value in received ORF capability; invalid ORF in received ORF capability; ORF entries exceeded maximum limit in received prefix list

**Notice Log** Open message received or sent; update message received or sent; route-refresh message received or sent; route-refresh-cisco message received or sent; received ORF capability; received route refresh message with ORF entries

**Info** None

**Debug** Keepalive message received or sent (Full decode of message logged if verbosity is high)



**NOTE:** Send messages are logged to the bgpMessages log when a message is added to the send queue. A debug message is logged to the bgpConnections log when the message is actually passed to TCP.

---

- Filter 1** access-class—This filter is not currently supported
- Filter 2** peer—See description of the bgpRoutes peer filter for information about this filter
- Filter 3** route-map—This filter is not currently supported
- Filter 4** router—See description of the bgpRoutes router filter for information about this filter
- Filter 5** in—Matches on traffic coming into the router
- Filter 6** out—Matches on traffic going out of the router

## bgpNeighborChanges

---

<b>Description</b>	BGP neighbor change
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	A peer has entered into or left the established state; reason for a session going idle
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter 1</b>	access-class—This filter is not currently supported
<b>Filter 2</b>	peer—See description of the bgpRoutes peer filter for information about this filter
<b>Filter 3</b>	route-map—This filter is not currently supported

**Filter 4** router—See description of the bgpRoutes router filter for information about this filter

**Filter 5** in—This filter is not currently supported

**Filter 6** out—This filter is not currently supported

## bgpNextHops

---

**Description** VPN and non-VPN BGP indirect next hops

**Emergency** None

**Alert** None

**Critical** None

**Error** Errors in BGP next hop events and state transitions

**Warning Log** None

**Notice Log** State transitions of BGP next hops

**Info** None

**Debug** BGP indirect next-hop events

**Filter 1** access-class—This filter is not currently supported

**Filter 2** peer—See description of the bgpRoutes peer filter for information about this filter

**Filter 3** route-map—This filter is not currently supported

**Filter 4** router—See description of the bgpRoutes router filter for information about this filter

**Filter 5** in—Matches on traffic coming into the router

**Filter 6** out—Matches on traffic going out of the router

## bgpRoutes

---

**Description** BGP routing table updates

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** Failure to add, remove, or modify BGP route in IP forwarding table

**Notice Log** BGP route added to, removed from, or modified in the IP forwarding table; aggregate route added to, removed from, or modified in Loc-RIB; network route added to, removed from, or modified in Loc-RIB; best route for internal peers for a given prefix became available; best route for internal peers for a given prefix is no longer available, has changed, or has become available; best route for external peers for a given prefix is no longer available, has changed, or has become available; MPLS base tunnel used to reach an indirect next-hop came up or went down; MPLS stacked tunnel for label came up; indirect next-hop became reachable or unreachable; direct next-hop for an indirect next-hop changed; MPLS tunnel for Inter-AS label came up or went down; route added to L2VPN instance; route deleted from L2VPN instance; route modified for L2VPN instance; -VE device for multihomed local layer 2 site 1 changed from *peer* to *peer2*

**Info** None

**Debug** Redistributed route added to, removed from, or modified in Loc-RIB; advertisement for a given prefix received; withdraw for a given prefix received; local route-target-filtering route added to or removed from *prefix* in *addressFamily*

**Filter 1** `access-class accessClassName [ route-map routeMapName routeMapOptions | filtering-router filteringRouterName filteringRouterOptions | in | out ]`

- *access-class*—Logs events for traffic that matches a specific access class
- *accessClassName* —Name of the access class for which you want to log events
- *route-map*—Logs events for traffic that matches a specific route map
- *routeMapName*—Name of route map for which you want to log events
- *routeMapOptions*—In the following format—`filtering-router filteringRouterName filteringRouterOptions | in | out`
- *filtering-router*—Logs events only if the access class or route map are defined on a specific virtual router
- *filteringRouterName*—Virtual router where the access class or route map or both are defined
- *filteringRouterOptions*—`in | out`
- *in*—Matches on traffic coming into the access class, route map, or virtual router
- *out*—Matches on traffic sent out of the access class, route map, or virtual router

- Filter 2** `peer peerIpAddress | peerIpv6Address`  
`[ access-class accessClassName accessClassOptions |`  
`route-map routeMapName routeMapOptions |`  
`filtering-router filteringRouterName filteringRouterOptions | in | out ]`
- `peer`—Logs events for traffic that matches a specific peer
  - `peerIpAddress`—IP address of the peer for which you want to log events
  - `peerIpv6Address`—IPv6 address of the peer for which you want to log events
  - `access-class`—Logs events for traffic that matches a specific access class
  - `accessClassName`—Name of the access class for which you want to log events
  - `accessClassOptions`—In the following format—`filtering-router filteringRouterName filteringRouterOptions | in | out`
  - `route-map`—Logs events for traffic that matches a specific route map
  - `routeMapName`—Name of route map for which you want to log events
  - `routeMapOptions`—In the following format—`filtering-router filteringRouterName filteringRouterOptions | in | out`
  - `filtering-router`—Logs events only if the peer, access class or route map are defined on a specific virtual router
  - `filteringRouterName`—Virtual router where the peer, access class or route map or both are defined
  - `filteringRouterOptions`—`in | out`
  - `in`—Matches on traffic coming into the peer, access class, route map, or virtual router
  - `out`—Matches on traffic sent out of the peer, access class, route map, or virtual router
- Filter 3** `route-map routeMapName`  
`[ filtering-router filteringRouterName filteringRouterOptions | in | out ]`
- `route-map`—Logs events for traffic that matches a specific route map
  - `routeMapName`—Name of route map for which you want to log events
  - `filtering-router`—Logs events only if the route map is defined on a specific virtual router
  - `filteringRouterName`—Virtual router where the route map is defined
  - `filteringRouterOptions`—`in | out`
  - `in`—Matches on traffic coming into the route map or virtual router
  - `out`—Matches on traffic sent out of the route map or virtual router
- Filter 4** `router virtualRouterName [ access-class accessClassName accessClassOptions |`  
`route-map routeMapName routeMapOptions |`  
`filtering-router filteringRouterName filteringRouterOptions |`  
`peer peerIpAddress peerOptions | in | out ]`

- **router**—Logs events for traffic on a specific virtual router
- **virtualRouterName**—Name of virtual router
- **access-class**—Logs events for traffic that matches a specific access class on the specified router
- **accessClassName**—Name of the access class for which you want to log events
- **accessClassOptions**—In the following format—route-map *routeMapName* *routeMapOptions* | virtual-router *virtualRouterName* *virtualRouterOptions* | in | out
- **route-map**—Logs events for traffic that matches a specific route map
- **routeMapName**—Name of route map for which you want to log events
- **routeMapOptions**—In the following format—virtual-router *virtualRouterName* *virtualRouterOptions* | in | out
- **filtering-router**—Logs events only if the access class or route map is defined on a specific virtual router
- **filteringRouterName**—Virtual router where the access class or route map is defined
- **filteringRouterOptions**—In the following format—in | out
- **peer**—Logs events for traffic that matches a specific peer
- **peerIpAddress**—Address of the peer for which you want to log events
- **peerOptions**—In the following format—access-class *accessClassName* *accessClassOptions* | filtering-router *filteringRouterName* *filteringRouterOptions* | route-map *routeMapName* *routeMapOptions* | in | out
- **in**—Matches on traffic coming into the virtual router, access class, or route map
- **out**—Matches on traffic sent out of the virtual router, access class, or route map

**Filter 5** in—Matches on traffic coming into the router

**Filter 6** out—Matches on traffic going out of the router

## bridge

---

<b>Description</b>	Bridge group configuration
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Bridge interface, learning, aging, and static MAC address errors



<b>Warning Log</b>	Bridge resources (maximum interfaces, memory exhaustion)
<b>Notice Log</b>	Bridge group interface location availability, operation status, and MTU changes
<b>Info</b>	Bridge group state changes (start, shutdown); bridge interface, learning, aging, and static MAC address modifications
<b>Debug</b>	Verbose bridge interface, learning, aging, and static MAC address configuration and status
<b>Filter</b>	None

## bridgeEngine

---

<b>Description</b>	Bridge engine configuration
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Bridge engine, bridge agent, and bridge interface errors
<b>Warning Log</b>	Bridge engine resources (maximum interfaces, memory exhaustion)
<b>Notice Log</b>	Slot status; bridge interface location availability
<b>Info</b>	Bridge engine and bridge agent state changes (create, start, stop delete); bridge engine, bridge agent, and bridge interface modifications
<b>Debug</b>	Verbose bridge engine, bridge agent, and bridge interface configuration and status
<b>Filter</b>	None

## bridgingMgr

---

<b>Description</b>	Bridging manager configuration
<b>Emergency</b>	None
<b>Alert</b>	None

<b>Critical</b>	None
<b>Error</b>	Bridge mode, bridge group, and subscriber policy errors
<b>Warning Log</b>	Bridging manager resources (maximum bridge groups, maximum subscriber policies, memory exhaustion)
<b>Notice Log</b>	None
<b>Info</b>	Bridging manager operation state changes (init, start, shutdown); bridge mode, bridge group, and subscriber policy modifications
<b>Debug</b>	Verbose bridge mode, bridge group, and subscriber policy configuration and status
<b>Filter</b>	None

## bulkStats

---

<b>Description</b>	Bulk statistics collector
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Operational failures, such as failed transfer—reverting to secondary receiver, file full, file creation failure, file deletion failure
<b>Notice Log</b>	File full or file nearly full conditions, preparing to send an SNMP trap
<b>Info</b>	Status of user configuration commands
<b>Debug</b>	Tracks performance progress of bulkstats application
<b>Filter</b>	None

## Chapter 5

# C Commands

- `cacGeneral` on page 51
- `cacIntf` on page 52
- `cliCommand` on page 52
- `cliGeneral` on page 53
- `connectionManager` on page 53
- `cops` on page 54
- `copsPr` on page 54
- `coreDump` on page 55
- `ctreeLog` on page 56

### **cacGeneral**

---


<b>Description</b>	CAC general purpose
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Unusual conditions in IGP/CAC interaction
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	General debugging info
<b>Filter</b>	None

**cacIntf**


---

<b>Description</b>	CAC interface events
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Unusual or failure situations in interface processing
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Interface level debugging info
<b>Filter</b>	interface interfaceType interfaceSpecifier <ul style="list-style-type: none"> <li>■ interface—Logs events for a specific interface</li> <li>■ <i>interfaceType</i>—Type of interface on which you want to log events</li> <li>■ <i>interfaceSpecifier</i>—Location of interface in the appropriate format</li> </ul>

---



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

**cliCommand**


---

<b>Description</b>	CLI commands
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None

<b>Warning Log</b>	None
<b>Notice Log</b>	All successful CLI configuration commands
<b>Info</b>	All unsuccessful CLI configuration commands; all nonconfiguration commands
<b>Debug</b>	None
<b>Filter</b>	None

## cliGeneral

---

<b>Description</b>	CLI general log
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	CLI command mode from prior release no longer exists; the overridden privilege level command will be discarded
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	None

## connectionManager

---

<b>Description</b>	Logging various conditions in the component that manages the chassis fabric.
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	10G and 5G SRP modules only—Detection that the FPGAs have not been loaded (results in an SRP [and chassis] reset)

<b>Error</b>	10G and 5G SRP modules only—That there is not enough bandwidth for a particular board in the system, that connections could not be added in the fabric due to resource limitations (such as memory), that a board was just removed and the resource will not be needed when this condition is detected momentarily, or that a connection cannot be closed or a multicast destination cannot be dropped.
<b>Warning Log</b>	Cannot connect to a particular source or destination address (board may have just been removed)
<b>Notice Log</b>	A connection that previously could not be closed has now closed; a multicast destination that previously could not be dropped has now been dropped
<b>Info</b>	Various logs to indicate events and transitions for low level diagnosis
<b>Debug</b>	Various logs to indicate events and transitions for low level diagnosis
<b>Filter</b>	None

## cops

---

<b>Description</b>	Common Open Policy Service (COPS) protocol
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	COPS message with bad header, version, length, or client
<b>Warning Log</b>	Unexpected socket event
<b>Notice Log</b>	COPS layer enabled or disabled; socket remotely closed
<b>Info</b>	None
<b>Debug</b>	COPS session instantiation or removal; COPS connection or socket creation or deletion; keepalive value
<b>Filter</b>	None

## copsPr

---

<b>Description</b>	COPS-PR general log
--------------------	---------------------

<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Error decoding COPS-PR messages received from the SDX program
<b>Warning Log</b>	Outstanding COPS-PR pool allocations while attempting to shut down SSC client; temporary resource allocations while sending COPS-PR messages to SDX program
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	None

## coreDump

---

<b>Description</b>	Core dump events
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Connection errors; file open errors; write failures; core dump failures; transfer errors
<b>Warning Log</b>	Core dump configuration changes due to core dump monitor; core dump monitor memory allocation errors
<b>Notice Log</b>	Successful line card core dump; core dump attempts; core dump progression; core dump monitor checks; core dump monitor transfer completions; core dump monitor dump file deletion
<b>Info</b>	None
<b>Debug</b>	lcLoader creation; dump request receipt; core dump monitor start; core dump monitor stop
<b>Filter</b>	None

## ctreeLog

---

<b>Description</b>	For internal maintenance of IP routes
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Failure in insertion, deletion, and update of IP routes in internal data structure used to maintain the routes
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Creation or deletion of an internal data structure
<b>Filter</b>	None



## Chapter 6

# D Commands

- dcm on page 58
- dcmEngineGeneral on page 58
- debounceEvents on page 59
- debounceGeneral on page 59
- dhcpCapture on page 60
- dhcpExternal on page 60
- dhcpExternalEngine on page 61
- dhcpGeneral on page 61
- dhcpIssuLog on page 62
- dhcpLocalClients on page 63
- dhcpLocalGeneral on page 63
- dhcpLocalHighAvailability on page 64
- dhcpLocalPool on page 64
- dhcpLocalProtocol on page 65
- dhcpOfferLog on page 66
- dhcpPbeGeneral on page 66
- dhcpProxyGeneral on page 67
- dhcpRelayGeneral on page 67
- dhcpRelayNvWriterGeneral on page 68
- dhcpv6Client on page 68
- dhcpv6DemuxGeneral on page 69
- dhcpv6LsGeneral on page 69
- dismanEventMgr on page 70
- dnsGeneralLog on page 71
- dosProtection on page 71
- ds1 on page 72
- ds3 on page 72
- dvmrpGeneral on page 73
- dvmrpGracefulRestart on page 74

- dvmrpMcastTable on page 75
- dvmrpProbeRcv on page 75
- dvmrpProbeSent on page 76
- dvmrpRtTable on page 76

## dcm

---

<b>Description</b>	Dynamic Configuration Manager
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Schedule engine event; status of dynamic interface creation; receipt of teardown signal for a dynamic interface; no interface adapter to propagate teardown; creation of dynamic PPP interface failed; creation of dynamic PPPoE interface failed
<b>Filter</b>	None

## dcmEngineGeneral

---

<b>Description</b>	DCM engine general
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None

<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Giving notify credits to line module; receipt of request buffer from line module; starting line module communication session; Ack/Nack dynamic interface creation request
<b>Filter</b>	None

## debounceEvents

---

<b>Description</b>	Events causing changes to the upper-layer link status based on Ethernet debounce configuration
<b>Emergency</b>	None
<b>Alert</b>	Debounce preempted; link stabilized to operational up or down status
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	Events causing finite state machine transitions
<b>Info</b>	Events not causing finite state machine transitions
<b>Debug</b>	None
<b>Filter</b>	None

## debounceGeneral

---

<b>Description</b>	Ethernet debounce configuration status log
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None

**Error** Error in enabling or disabling the debounce timer on the Ethernet interface

**Warning Log** None

**Notice Log** Debounce timer enabled or disabled on the Ethernet interface

**Info** None

**Debug** None

**Filter** None

## dhcpCapture

---

**Description** DHCP packet capture

**Emergency** None

**Alert** None

**Critical** None

**Error** Configuration errors

**Warning Log** Processing errors (resource exhaustion)

**Notice Log** None

**Info** Logged DHCP packets, configured by the **ip dhcp-capture** command (specify high verbosity for detail)

**Debug** Configuration change details; DHCP discover, offer, request, decline, and ACK/NAK packets on a per-interface basis

**Filter** None

## dhcpExternal

---

**Description** DHCP external

**Emergency** None

**Alert** None

<b>Critical</b>	None
<b>Error</b>	Configuration errors; client processing errors (invalid data)
<b>Warning Log</b>	Client processing errors (resource exhaustion)
<b>Notice Log</b>	Configuration changes
<b>Info</b>	None
<b>Debug</b>	Configuration change details; client events
<b>Filter</b>	None

## dhcpExternalEngine

---

<b>Description</b>	DHCP external engine
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Configuration errors; client processing errors (invalid data)
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	System events (line cards online/offline)
<b>Debug</b>	Configuration change details; client events
<b>Filter</b>	None

## dhcpGeneral

---

<b>Description</b>	DHCP general
<b>Emergency</b>	None

<b>Alert</b>	Rvn8
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	DHCP message received
<b>Filter</b>	None

## dhcplssuLog

---

<b>Description</b>	DHCP ISSU information
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Error recreating DHCP ISSU IC shadow and its data structures, followed by an ISSU halt
<b>Warning Log</b>	Buffering capacity exceeded between DHCP engine and the driver/ISSU shadow driver
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Normal operation: packet processing events, creation and deletion of DHCP common objects during ISSU
<b>Filter</b>	None

## dhcpLocalClients

---

<b>Description</b>	DHCP local server clients
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Cannot find the client's interface; cannot find the client to expire the lease or remove it from the database; trying to expire client's lease or remove it from database with bad IP address; requested MAC address does not match the available address; cannot allocate SDX subscriber information
<b>Warning Log</b>	Cannot find the DHCP instance for the client with an expired lease; cannot find the DHCP instance to release the client IP address; secondary DNS without primary DNS configured, using DHCP values; secondary NetBIOS Name Server (NBNS) without primary NBNS configured, using DHCP values
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Removing stale offers to clients and stale clients; adding and removing clients; expiring client's lease; client's transactions with DHCP local server
<b>Filter</b>	None

## dhcpLocalGeneral

---

<b>Description</b>	General DHCP local server
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Memory allocation failure; cannot find interface location for the UID
<b>Warning Log</b>	No DHCP instance to process the received packet; hard limits reached; packet discarded due to no resources

<b>Notice Log</b>	DHCP local server not configured; client's session failed to start
<b>Info</b>	Client per-interface limit exceeded; client per-interface exceeded condition abated
<b>Debug</b>	Any log message that indicates the status of the general operation of the DHCP local server; NVS actions; grace period lease state; configuration changes
<b>Filter</b>	None



**NOTE:** This category replaces the dhcpLocalServerGeneral category.

---

## dhcpLocalHighAvailability

---

<b>Description</b>	DHCP local high availability
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Out of resources errors; nonrecoverable software errors during client restoration or mirroring, pool creation/modification; recoverable software errors during modification of existing client
<b>Warning Log</b>	Recoverable software errors during client, server or pool configuration; out of resources on new client, server, or pool configuration; timer configuration problems
<b>Notice Log</b>	Normal recovery following SRP switch
<b>Info</b>	None
<b>Debug</b>	Normal client, server, pool processing
<b>Filter</b>	None

## dhcpLocalPool

---

<b>Description</b>	DHCP local address pool, including normal, linked, and shared pools
<b>Emergency</b>	None



<b>Alert</b>	Local pool IP address is exhausted (address limit violation)
<b>Critical</b>	Higher limit of address pool utilization reached
<b>Error</b>	None
<b>Warning Log</b>	Lower limit of address pool utilization reached; invalid DHCP local address pool attributes
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	DHCP local address pool resolution; address allocation
<b>Filter</b>	None

## dhcpLocalProtocol

---

<b>Description</b>	DHCP local server protocol
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Cannot find interface; remote client bind add failed; client failed to decline IP address; client failed to decline a null offered IP address; delete remote client entry failed
<b>Warning Log</b>	AAA not responding; SDX program not responding; rediscovering with no IP address allocated; a renewal is received on the line module for an unknown client; secondary DNS without primary DNS configured, using DHCP values; secondary NetBIOS Name Server (NBNS) without primary NBNS configured, using DHCP values; duplicate MAC address detected
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Received packet; transmit packet; authentication status; DHCP local server state transitions
<b>Filter</b>	interface interfaceType interfaceSpecifier

- `interface`—Logs events for a specific interface
- `interfaceType`—Type of interface for which you want to log events
- `interfaceSpecifier`—Location of interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

## dhcpOfferLog

---

<b>Description</b>	DHCP offer selection process log
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Status of the offer selection process
<b>Filter</b>	None

## dhcpPbeGeneral

---

<b>Description</b>	DHCP Proxy Backend Log
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Heap exhaustion

<b>Warning Log</b>	Failure to send a DHCP message to a client
<b>Notice Log</b>	Failure to restore client after reboot or interface change; failure to allocate memory from task-controlled pools
<b>Info</b>	None
<b>Debug</b>	Status of task and DHCP operations
<b>Filter</b>	None

## dhcpProxyGeneral

---

<b>Description</b>	DHCP Proxy general
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Control flow and key events
<b>Filter</b>	None

## dhcpRelayGeneral

---

<b>Description</b>	DHCP Relay general
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None

<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	Warm start recovery problems (high availability and unified ISSU)
<b>Info</b>	None
<b>Debug</b>	Control flow and key events, packets that are transmitted using the layer 2 unicast feature, status and changes to DHCP relay agent information option and suboptions
<b>Filter</b>	None

## dhcpRelayNvWriterGeneral

---

<b>Description</b>	DHCP host route preservation
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Out of memory conditions
<b>Warning Log</b>	Unexpected unified ISSU signal, removing all NVS and routing table entries at startup, removing routing table entries at startup due to inconsistencies
<b>Notice Log</b>	Removing or adding entries on start up due to inconsistencies
<b>Info</b>	None
<b>Debug</b>	Receiving unified ISSU signal, construction of the writer, saving to NVS, removing router, removing routes, adding routes
<b>Filter</b>	None

## dhcpcv6Client

---

<b>Description</b>	DHCPv6 internal test client events
<b>Emergency</b>	None

<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Problems communicating with IPv6; invalid message types received; out-of-memory conditions; serious DHCPv6 protocol state errors; internal errors
<b>Warning Log</b>	Minor DHCPv6 protocol errors
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	None

## dhcpv6DemuxGeneral

---

<b>Description</b>	DHCPv6 packet demultiplexer events
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	UDP transmit errors, out-of-memory conditions, internal errors
<b>Warning Log</b>	Invalid DHCPv6 packet type received
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	None

## dhcpv6LsGeneral

---

<b>Description</b>	DHCPv6 local server events
--------------------	----------------------------

<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Failure to create server (bad router or out of memory)
<b>Warning Log</b>	Attempt to remove a nonexistent server
<b>Notice Log</b>	Failure to create server (IPv6 not licensed); cold/warm restart of DHCPv6 local server; before/after restoring client bindings;
<b>Info</b>	None
<b>Debug</b>	Server bind, creation, deletion, unbind, and restoration of bindings post warm SRP switchover
<b>Filter</b>	None

## dismanEventMgr

---

<b>Description</b>	Distributed management event manager
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Configuration errors; Sampling, testing and setting errors
<b>Warning Log</b>	Limit maximums reached
<b>Notice Log</b>	Trigger values reached
<b>Info</b>	Application started; traps activated; sampling information provided
<b>Debug</b>	None
<b>Filter</b>	None

## dnsGeneralLog

---

<b>Description</b>	DNS general
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Failure to post a message to DNS about the query response from DNS server
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Dump DNS response packet; trace DNS query submission; trace DNS response parsing and processing; trace dropped queries if router is shutting down or DNS disabled in virtual router; trace DNS cache cleanup
<b>Filter</b>	None

## dosProtection

---

<b>Description</b>	DoS general
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	Suspicious control flows exceed threshold for specific line module; possible distributed DoS attack
<b>Error</b>	Control flow changed to suspicious.
<b>Warning Log</b>	Flow table overflow, protocol (or priority) has transitioned to suspicious
<b>Notice Log</b>	Suspicious control flow returned to nonsuspicious protocol (or priority) has transitioned from suspicious

<b>Info</b>	Suspicious control flow deleted
<b>Debug</b>	None
<b>Filter</b>	None

**ds1**

---

<b>Description</b>	DS1 layer
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Interface creation or binding failure
<b>Notice Log</b>	Failure to bring line module application online; dropped interface state change notification due to lack of resources; discarded stale line module notification
<b>Info</b>	Dropped interface state change notification for unknown or removed interface
<b>Debug</b>	None
<b>Filter</b>	None

**ds3**

---

<b>Description</b>	DS3 layer
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Failure to create or bind interface



<b>Notice Log</b>	Failure to bring line module application online; dropped interface state change notification due to lack of resources; discarded stale line module notification
<b>Info</b>	Dropped interface state change notification for unknown or removed interface
<b>Debug</b>	None
<b>Filter</b>	None

## dvmrpGeneral

---

<b>Description</b>	DVMRP general
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Memory allocation errors; bad parameters (internal errors); designated forwarder errors (two for same interface, DoNotForward by no designated forwarder); processing prune errors; graft errors; internal errors; catastrophic RT table errors; management interaction errors; NVS errors
<b>Warning Log</b>	Unable to add local route; routeHogCheck; routeLimit
<b>Notice Log</b>	Route expiration; pruneProcessing (send or receive); graftAck processing; source group (SG) state information; deletion of an output interface; nbrQuickDelete; nbrReset; nbrTimeOut; error adding neighbor on Route Report Reception
<b>Info</b>	Designated forwarder election information; sending graft; timer expired for MulticastEntry; attempting to log duplicate accept filter; external route deleted or added
<b>Debug</b>	Local address creation or deletion; information about accept filters; dvmrpInterface creation or deletion; sgTimeout information; noMoreOifs info; sg creation information; multicastForwarding enabled or disabled; DvmrpInit; dvmrpEnable/Disable; rpfCallback
<b>Filter 1</b>	interface interfaceType interfaceSpecifier <ul style="list-style-type: none"> <li>■ interface—Logs events for a specific interface</li> <li>■ <i>interfaceType</i>—Type of interface for which you want to log events</li> <li>■ <i>interfaceSpecifier</i>—Location of interface in the appropriate format</li> </ul>



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

**Filter 2** router virtualRouterName [ interface interfaceType *interfaceSpecifier* ]

- router—Logs events for a specific virtual router
  - *virtualRouterName*—Name of virtual router for which you want to log events
  - interface—Logs events on a specific interface on the virtual router
  - *interfaceType*—Type of interface for which you want to log events
  - *interfaceSpecifier*—Location of interface in the appropriate format
- 



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

## dvmrpGracefulRestart

---

<b>Description</b>	DVMRP graceful restart
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	DVMRP graceful restart complete
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	None

## dvmrpMcastTable

---

<b>Description</b>	DVMRP multicast table messages
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Error removing MulticastEntry; adding duplicate MulticastEntry; adding nonexistent MulticastEntry; attempting to send prune to nonexistent neighbor; error deleting MulticastEntry; error adding outgoing interfaces
<b>Warning Log</b>	Deleting MulticastEntry with no SG state found; attempting to create MulticastEntry, but unable to do so
<b>Notice Log</b>	Creating MulticastEntry
<b>Info</b>	rePruning; delOif; add outgoing interface; not adding outgoing interface for some reason; creating sgoiflist; pruneDelayCallback; prune; deleting MulticastEntry
<b>Debug</b>	None
<b>Filter 1</b>	interface—See description of the dvmrpGeneral interface filter for information about this filter
<b>Filter 2</b>	router—See description of the dvmrpGeneral router filter for information about this filter

## dvmrpProbeRcv

---

<b>Description</b>	DVMRP probe received
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None

<b>Notice Log</b>	procProbe new neighbor
<b>Info</b>	None
<b>Debug</b>	Processing probe (verified has our address in packet); display probe
<b>Filter 1</b>	interface—See description of the dvmrpGeneral interface filter for information about this filter
<b>Filter 2</b>	router—See description of the dvmrpGeneral router filter for information about this filter

## dvmrpProbeSent

---

<b>Description</b>	DVMRP probe sent
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Send probe
<b>Filter 1</b>	interface—See description of the dvmrpGeneral interface filter for information about this filter
<b>Filter 2</b>	router—See description of the dvmrpGeneral router filter for information about this filter

## dvmrpRtTable

---

<b>Description</b>	DVMRP Routing Table
<b>Emergency</b>	None

<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Route error; router report error; error replacing route after applying accept filter; internal errors
<b>Warning Log</b>	Unable to create new route; deleting routing table
<b>Notice Log</b>	Error in report packet; adding or replacing local route; ignoring poison on upstream user interface (USIF); deleting all dependent neighbors
<b>Info</b>	Processing report; added route from report; declaring ourselves as designated forwarder; route update
<b>Debug</b>	Delete route; insert route
<b>Filter 1</b>	interface—See description of the dvmrpGeneral interface filter for information about this filter
<b>Filter 2</b>	router—See description of the dvmrpGeneral router filter for information about this filter



## Chapter 7

# E Commands

- ethernet on page 79
- ethernetStateSession on page 79

### ethernet

---

<b>Description</b>	Ethernet layer
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Cannot configure Ethernet interface successfully; memory pool depleted
<b>Notice Log</b>	No pool space; can bring interface up
<b>Info</b>	Hardware present or not present notification
<b>Debug</b>	Interface created or deleted
<b>Filter</b>	None

### ethernetStateSession

---

<b>Description</b>	Configuration of the Fast Ethernet management port on the SRP IOA on the E320 router or the E120 router
<b>Emergency</b>	None
<b>Alert</b>	None

<b>Critical</b>	None
<b>Error</b>	Configuration errors for duplex mode and speed settings on the Fast Ethernet management port
<b>Warning Log</b>	Configuration did not occur for duplex mode and speed on the Fast Ethernet management port
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	None



## Chapter 8

# F Commands

- `fileSystem` on page 81
- `flowInspection` on page 82
- `flowInspectionEngine` on page 82
- `flowServicesFirewallAlert` on page 83
- `flowServicesFirewallAudit` on page 83
- `frameRelay` on page 84
- `fsAgent` on page 84
- `ft1` on page 85
- `ftpClient` on page 85
- `ftpServer` on page 86

### fileSystem

---

<b>Description</b>	File system
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	Configuration consistency check failed; HA/sync may be disabled
<b>Error</b>	Error enabling or disabling
<b>Warning Log</b>	Missing of invalid armed files
<b>Notice Log</b>	Configuration checker enabled or disabled
<b>Info</b>	None
<b>Debug</b>	Timestamp of last synchronization
<b>Filter</b>	None

## flowInspection

---

<b>Description</b>	Flow inspection
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Configuration error for bulk static translations; failure to increase size of translation database; pool range overlap; more DNS queries than can be processed
<b>Warning Log</b>	Translation timeout change not applied to existing translations; failure to install translations
<b>Notice Log</b>	None
<b>Info</b>	Allocation and deallocation of NAT address or NAPT address/port
<b>Debug</b>	Increase size of translation database; add or remove address pool ranges
<b>Filter</b>	None

## flowInspectionEngine

---

<b>Description</b>	Flow inspection engine
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Virtual router not found during deletion request
<b>Notice Log</b>	None
<b>Info</b>	None

**Debug** Engine creation, timer state information, setCoreLocation notification

**Filter** None

## flowServicesFirewallAlert

---

**Description** Firewall

**Emergency** None

**Alert** None

**Critical** None

**Error** No resources; number of connections has exceeded the specified limit; destination host is blocked or cleared; NAT disallows a connection; no controlling list; bad packet received

**Warning Log** None

**Notice Log** Oldest entry deleted; rate of connections has decreased to the specified limit; number of connections has decreased to below the specified limit

**Info** None

**Debug** None

**Filter** None

## flowServicesFirewallAudit

---

**Description** Firewall

**Emergency** None

**Alert** None

**Critical** None

**Error** New connection disallowed

**Warning Log** None

**Notice Log** Transition from half-open to fully complete connection; transition to half-open connection

**Info** None

**Debug** None

**Filter** None

## frameRelay

---

**Description** Frame Relay layer

**Emergency** None

**Alert** None

**Critical** Failure to bring up the application due to lack of memory resources

**Error** Summary information about automatic removal of interface or circuit from nonvolatile storage on startup; internal resource pool is too small

**Warning Log** None

**Notice Log** Lack of pool space for SNMP traps (it is permissible for SNMP traps to be unreliable); failure to obtain line module configuration on line module insertion

**Info** Line module insertion and removal information

**Debug** Creation of interfaces or circuits from nonvolatile storage on startup; detailed information about automatic removal of interfaces or circuit from nonvolatile storage on startup; reporting on SNMP traps for interfaces or circuits; engine debug messages

**Filter** None

## fsAgent

---

**Description** File System Agent

**Emergency** None

**Alert** None

<b>Critical</b>	Previous file system sync failed—booting protected images
<b>Error</b>	File system unavailable
<b>Warning Log</b>	File transfer initialization failure; unexpected software error
<b>Notice Log</b>	None
<b>Info</b>	File transfer notification; platform or release mismatch; file transfer error; release file is corrupt; image path not found; insufficient resources to copy release
<b>Debug</b>	Status of copy running-config; file transfer status; backup boot-setting configuration notification; subsystem release configuration notification
<b>Filter</b>	None

## ft1

---

<b>Description</b>	FT1 layer
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Interface creation or binding failure
<b>Notice Log</b>	Failure to bring line module application online; dropped interface state change notification due to lack of resources; discarded stale line module notification
<b>Info</b>	Dropped interface state change notification for unknown or removed interface
<b>Debug</b>	None
<b>Filter</b>	None

## ftpClient

---

<b>Description</b>	FTP client
--------------------	------------

**Emergency** None

**Alert** None

**Critical** None

**Error** Unexpected results during a transfer

**Warning Log** None

**Notice Log** Completion status of a network connection command (example: “ Succeeded creating data socket” )

**Info** Completion status of a user command (example: “ IS command succeeded” )

**Debug** None

**Filter** None

## ftpServer

---

**Description** FTP server

**Emergency** None

**Alert** None

**Critical** None

**Error** Error listening for new client connection; error creating daemon task

**Warning Log** Error creating new server task; socket write error; error adjusting socket window size

**Notice Log** Daemon task created; waiting for new client connection; accept client from host a.b.c.d; maximum client sessions exceeded; FTP daemon shutdown complete

**Info** Starting FTP daemon shutdown

**Debug** Read FTP command

**Filter** None

## Chapter 9

# G and H Commands

- gplan on page 87
- ha on page 87
- hdlc on page 88
- hotfixGeneral on page 89
- httpServer on page 89

### gplan

---

<b>Description</b>	General purpose locally allocated address notifier
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Out of resources
<b>Warning Log</b>	None
<b>Notice Log</b>	Task creation or deletion
<b>Info</b>	None
<b>Debug</b>	Adding or deleting IP addresses; adding or deleting user sessions
<b>Filter</b>	None

### ha

---

<b>Description</b>	High availability messages
--------------------	----------------------------

<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Accessing redundancy mode is not supported on the standby SRP; changing redundancy mode is not supported on the standby SRP; high availability disabled due to state error
<b>Warning Log</b>	High availability disabled due to incompatible release on standby; high availability disabled due to user initiated disable
<b>Notice Log</b>	High availability disabled due to standby down; high availability is now active
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	None

## hdlc

---

<b>Description</b>	HDLC layer
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Interface creation failures (interface is not created); interface configuration errors; interface pool failures
<b>Warning Log</b>	Interface creation failures during initialization; interface deletion failures (interface is still deleted); interface pool failures (might not cause problems)
<b>Notice Log</b>	Interface pool changes
<b>Info</b>	Layer initialization messages; interface creation; interface modification; interface deletion
<b>Debug</b>	Detailed layer initialization; interface creation details; interface deletion details



**Filter** None

## hotfixGeneral

---

**Description** Hotfix general

**Emergency** None

**Alert** None

**Critical** None

**Error** Error conditions causing startup hotfix activation to fail

**Warning Log** Failed to deactivate or disarm a hotfix; attempts to activate incompatible hotfixes

**Notice Log** Activation or arming of a hotfix

**Info** None

**Debug** None

**Filter** None

## httpServer

---

**Description** Embedded HTTP server

**Emergency** None

**Alert** None

**Critical** None

**Error** Failure to enable HTTP daemons (httpd); failure to remove httpd; failure to grow pool of httpds or pool of HTTP connections (httpcs); failure to listen on httpd socket; failure to set TCP socket options; failure to remove TCP socket; failure to queue HTTP event (socket accept, socket approve, socket send, socket receive); failure to queue HTTP event for maximum connection aging; invalid HTTP event

**Warning Log** Refused HTTP connection due to too many simultaneous connections from same host; refused HTTP connection due to access list deny; failure to perform TCP socket approval; failure to send data on TCP socket

**Notice Log** None

**Info** Start or stop HTTP process; create or remove httpd; growing a pool of httpds; enable or disable httpd; growing a pool of HTTP connections (httpcs); failure to perform TCP socket accept; growing a pool of HTTP events; updated HTTP scalars; handed out (global/token) address to dhcp-ls client; authentication passed from dhcp-ls for a given client; renewing token address for dhcp-ls client; removed session with dhcp-ls; removed global address through gplaaDelete; dhcp-ls user login/logout/shortcut login; create or remove HTTP interface redirect URL

**Debug** Server self-bind (for example, started HTTP without instantiating any httpd); attempt to remove nonexistent httpd; attempt to reread from NVS; updated httpd; create or remove session with dhcp-ls; bind or unbind with policy table; invalid or valid TCP socket approve or accept; received data from stale socket; create or remove HTTP connection; receive data from httpc; queued HTTP event; aging group of httpcs; added new address at dhcp-ls session; phase 1 of 2 for authentication passed from dhcp-ls for a given client; revoking token address for a given dhcp-ls client

**Filter** None

## Chapter 10

# I Commands

- `icImageFixServer` on page 92
- `icmpTraffic` on page 93
- `icmpv6Traffic` on page 94
- `icrPartitionManager` on page 95
- `igmpGeneral` on page 95
- `igmpGracefulRestart` on page 96
- `igmpGroupState` on page 97
- `ikeCertificateMgr` on page 98
- `ikeEnrollment` on page 98
- `ikepki` on page 99
- `interModuleCommunication` on page 99
- `ipAccessList` on page 100
- `ipEngine` on page 101
- `ipflowstats` on page 101
- `ipflowstatsEngine` on page 102
- `ipGeneral` on page 102
- `ipIfCreator` on page 104
- `ipInterface` on page 104
- `ipNhopTrackerGeneral` on page 105
- `ipProfileMgr` on page 105
- `ipRoutePolicy` on page 106
- `ipRouteTable` on page 107
- `ipsecIdDb` on page 107
- `ipsecP1Throttler` on page 108
- `ipsecXcfgSM` on page 108
- `ipSubscriberMgr` on page 109
- `ipTraffic` on page 109
- `ipTunnel` on page 110
- `ipv6AccessList` on page 110

- ipv6General on page 111
- ipv6Interface on page 112
- ipv6ProfileMgr on page 113
- ipv6RouteTable on page 113
- ipv6Traffic on page 114
- ipv6Types on page 115
- isisAdjChange on page 115
- isisAdjPackets on page 116
- isisBfdEvents on page 117
- isisChecksumErr on page 117
- isisGeneral on page 118
- isisHelloGeneral on page 119
- isisHelloPackets on page 119
- isisIpv6Log on page 120
- isisLdpEvents on page 120
- isisLocalUpdate on page 121
- isisMplsTeAdvertisements on page 122
- isisMplsTeEvents on page 122
- isisNsfEvents on page 123
- isisProtocolErr on page 123
- isisSnpPackets on page 124
- isisSpfEvents on page 124
- isisSpfStatistics on page 125
- isisSpfTriggers on page 126
- isisUpdatePackets on page 126
- isVoice on page 127
- itm on page 127

## icImageFixServer

---

**Description** IC image fix server

**Emergency** None

**Alert** None

**Critical** None

<b>Error</b>	Memory allocation failure; ImageFix load failure; manual ImageFix activation failure; ImageFix file errors
<b>Warning Log</b>	Buffer allocation failure; unexpected status received in state X
<b>Notice Log</b>	Application image up, startup ImageFixes activated; reversion from FC ImageFix to release FC image requires reload of line module; FC ImageFix found for line module
<b>Info</b>	State machine change; unexpected internal communication error; loading complete announcement; IC up-to-date following SRP switch; sending ImageFix descriptor to line module
<b>Debug</b>	Controller state change announcement; board state change announcement; manual ImageFix [de]activation attempt; subsystem announced
<b>Filter</b>	None

## icmpTraffic

---

<b>Description</b>	ICMP frame transmit or receive
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	All ICMP transmit or receive events
<b>Filter 1</b>	remote-ip-address <i>ipAddress</i> [ <i>ipAddressMask</i> ] <ul style="list-style-type: none"> <li>■ remote-ip-address—Logs events for a remote address</li> <li>■ <i>ipAddress</i>—Address of remote system for which you want to log messages</li> <li>■ <i>ipAddressMask</i>—Mask for the remote address</li> </ul>
<b>Filter 2</b>	router <i>virtualRouterName</i> [ remote-ip-address <i>ipAddress</i> [ <i>ipAddressMask</i> ] ]

- *router*—Logs events on a specific virtual router
- *virtualRouterName*—Name of virtual router for which you want to log events
- *remote-ip-address*—Logs events for a remote address
- *ipAddress*—Address of remote system for which you want to log messages
- *ipAddressMask*—Mask for the remote address

## icmpv6Traffic

---

<b>Description</b>	ICMPv6 frame transmit or receive
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Packets of unknown types, invalid headers, with header errors
<b>Notice Log</b>	None
<b>Info</b>	Failures due to checksum errors, unsupported
<b>Debug</b>	All ICMPv6 transmit or receive events
<b>Filter 1</b>	[ remote-ipv6-address ipv6Address ] <ul style="list-style-type: none"> <li>■ <i>remote-ipv6-address</i>—Logs events for packets arriving from or going to a specified IPv6 address</li> <li>■ <i>ipv6Address</i>—IPv6 address of remote system for which you want to log messages</li> </ul>
<b>Filter 2</b>	router <i>virtualRouterName</i> [ address <i>ipv6Address</i> ] <ul style="list-style-type: none"> <li>■ <i>router</i>—Logs events on a specific virtual router</li> <li>■ <i>virtualRouterName</i>—Name of virtual router for which you want to log events</li> <li>■ <i>address</i>—Logs events on a specific IPv6 address</li> <li>■ <i>ipv6Address</i>—Address of remote system for which you want to log messages</li> </ul>

## icrPartitionManager

---

<b>Description</b>	Interchassis Redundancy Partition Manager
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Errors allocating memory for any ICR activity; Error adding, configuring, removing ICR partitions and other errors during ICR transition.
<b>Warning Log</b>	None
<b>Notice Log</b>	Delay in changing the state of the ICR partition; Unable to change the state of the ICR partition because of RADIUS access issues.
<b>Info</b>	None
<b>Debug</b>	Successful ICR configuration such as creation and removal of ICR partition ; Addition and removal of ICR group members within partition, PPP, AAA, and Ethernet acknowledgement messages during ICR transitions, and other messages.
<b>Filter</b>	None

## igmpGeneral

---

<b>Description</b>	IGMP general
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Nonrecoverable errors
<b>Warning Log</b>	NVS errors
<b>Notice Log</b>	Errors while configuring or learning groups

**Info** None

**Debug** IGMP interface or group state change; errors in packet transmit or receive

**Filter 1** interface interfaceType interfaceSpecifier

- interface—Logs events for a specific interface
- *interfaceType*—Type of interface for which you want to log events
- *interfaceSpecifier*—Location of interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

**Filter 2** router virtualRouterName [ interface interfaceType interfaceSpecifier ]

- router—Logs events for a specific virtual router
- *virtualRouterName*—Name of virtual router for which you want to log events
- interface—Logs events on a specific interface on the virtual router
- *interfaceType*—Type of interface for which you want to log events
- *interfaceSpecifier*—Location of interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

## igmpGracefulRestart

**Description** IGMP graceful restart

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** None

**Notice Log** IGMP/MLD graceful restart complete



<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	None

## igmpGroupState

---

**Description** IGMP group state change events

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** None

**Notice Log** None

**Info** igmp v2 first host join, last host leave events (Release 5.0 and earlier); igmp v3 state change and source-list change events aggregated across all hosts on the interface (Release 5.1.0 and later)

**Debug** None

**Filter** router virtualRouterName [ interface interfaceType interfaceSpecifier ]

- router—Logs events for a specific virtual router
- *virtualRouterName*—Name of the virtual router for which you want to log events
- interface—Logs events on a specific interface on the virtual router
- *interfaceType*—Type of the interface for which you want to log events. For example, atm or fastEthernet.
- *interfaceSpecifier*—Location of the interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

## ikeCertificateMgr

---

<b>Description</b>	Displays events relating to ERX key generation, certificate status, and certificate processing
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Initialization problems
<b>Warning Log</b>	Missing ERX private key; public key does not match private key; certificate expired; memory allocation problems; CRL too large; attempt to generate new key pair before deleting old one; key generation problems; problem reading private key
<b>Notice Log</b>	Problem decoding certificates; IKE authentication problems related to certificates
<b>Info</b>	None
<b>Debug</b>	Certificate database notifications
<b>Filter</b>	None

## ikeEnrollment

---

<b>Description</b>	Displays events relating to certificate enrollment
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Identity not set; missing ERX private key; missing CA certificate; enrollment failures
<b>Notice Log</b>	None

<b>Info</b>	Received CA certificate; received CA and RA certificate chain; received ERX certificate; retry scep poll message
<b>Debug</b>	Found CA certificate; found ERX certificates; enrollment failure details
<b>Filter</b>	None

## ikepki

---

<b>Description</b>	IKE SA negotiation
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Event occurred that is unexpected for the current state
<b>Warning Log</b>	Memory pool growth problems; recoverable state problems; receiving IKE packets for unconfigured peer
<b>Notice Log</b>	IKE configuration problems—no preshared keys for peer; recoverable status conditions
<b>Info</b>	Number of successful SAs negotiation, both phase 1 and phase 2; unsuccessful phase 1 negotiation information; unsuccessful phase 2 negotiation information
<b>Debug</b>	Detailed SA negotiation debug information
<b>Filter</b>	None

## interModuleCommunication

---

<b>Description</b>	Intermodule communication monitoring
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	Line module resetting after recovery attempts fail; standby SRP module resetting after monitoring thresholds exceeded; primary SRP module resetting after all line modules fail because of issue with primary SRP module

<b>Error</b>	None
<b>Warning Log</b>	Line module recovery attempts after monitoring thresholds exceeded
<b>Notice Log</b>	Ping monitoring threshold exceeded; ICC session monitoring threshold exceeded; ICC connection monitoring threshold exceeded
<b>Info</b>	Intermodule communication monitoring condition, state change, and corresponding action
<b>Debug</b>	None
<b>Filter</b>	slot <i>slotNumber</i> <ul style="list-style-type: none"> <li>■ slot—Logs events for a specific slot</li> <li>■ <i>slotNumber</i>—Number of slot for which you want to log events</li> </ul>

## ipAccessList

---

<b>Description</b>	IP access list matching
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	Access list rule has been matched
<b>Debug</b>	None
<b>Filter 1</b>	accessList <ul style="list-style-type: none"> <li>■ accessList—Logs a match on any access-list entry for all access lists</li> </ul>
<b>Filter 2</b>	accessList router <i>virtualRouterName</i> access-list <i>accessListName</i> access-element-id <i>idNumber</i>

- `accessList`—Logs a match on any access-list entry
- `router`—Logs events for a specific virtual router
- `virtualRouterName`—Name of virtual router for which you want to log events
- `access-list`—Logs events for a specific access list
- `accessListName`—Name of access list for which you want to log events
- `access-element-id`—Logs events for a specific element ID
- `idNumber`—Element ID number for which you want to log events; the element ID is automatically assigned for access-list rules that you explicitly create and is shown by issuing the **show access-list detail** command

## ipEngine

---

<b>Description</b>	IP chassis manager
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Failure in operations such as adding, removing, or deleting interfaces or distributing routing tables to line modules
<b>Warning Log</b>	Errors such as attempting to configure something that is not supported on a module, or routing table memory is approaching 80 percent full
<b>Notice Log</b>	Something unexpected happened; for example, an interface was deleted twice or, internal to the software, connections between IC and SRP were deleted twice
<b>Info</b>	Completion status of a user command (for example: “IS command succeeded”)
<b>Debug</b>	An engine or agent that corresponds to a virtual router is added or deleted; an interface is added or deleted
<b>Filter</b>	None

## ipflowstats

---

<b>Description</b>	J-Flow statistics
<b>Emergency</b>	None

<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	Application starting
<b>Info</b>	Interfaces become available or unavailable
<b>Debug</b>	Main and History cache tables are cleared
<b>Filter</b>	None

## ipflowstatsEngine

---

<b>Description</b>	J-Flow statistics engine
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Agents stopping or deleting; memory allocation errors; line module errors
<b>Warning Log</b>	Problems bring modules or slots up or down
<b>Notice Log</b>	None
<b>Info</b>	Agent or master creation; slot or operation state information
<b>Debug</b>	Creation or removal of engine; initialization problems
<b>Filter</b>	None

## ipGeneral

---

<b>Description</b>	IP general
--------------------	------------

**Emergency** None

**Alert** None

**Critical** (IP) Interface stacking management errors

**Error** (ARP) Allocation of Ethernet next hop failed  
 (IP) Not able to create interface or create address on null 0 interface; undefined IP status code; interface stacking management errors; send and forward failures because of not finding corresponding egress or ingress nodes; conflict in adding hidden routes

**Warning Log** (IP) NVS load errors; failure to add address on an interface because of low memory

**Notice Log** None

**Info** None

**Debug** (ARP) NextHopPool is out of memory and trying to expire old entries; ARP data events  
 (IP) Interface stacking management errors

- Filter 1** `interface interfaceType interfaceSpecifier`
- `interface`—Logs events for a specific interface
  - `interfaceType`—Type of interface for which you want to log events
  - `interfaceSpecifier`—Location of interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

- Filter 2** `router virtualRouterName [ interface interfaceType interfaceSpecifier ]`
- `router`—Logs events for a specific virtual router
  - `virtualRouterName`—Name of virtual router for which you want to log events
  - `interface`—Logs events on a specific interface on the virtual router
  - `interfaceType`—Type of interface for which you want to log events. For example, atm or fastEthernet.
  - `interfaceSpecifier`—Location of interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

## ipIfCreator

---

<b>Description</b>	IP interface creator events
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Out of resources failures in midoperation; client application and DCM interaction errors (out-of-range sessionId or enum; unrecognized message type); failure during client callback for interface creation
<b>Warning Log</b>	Client session already unbound; unable to process new configuration requests (out of resources)
<b>Notice Log</b>	Interface deletion failure in DCM (no client acknowledgement required)
<b>Info</b>	None
<b>Debug</b>	Client interaction during bind or unbind, session creation or shutdown, and interface creation or deletion; DCM interaction during interface creation or deletion
<b>Filter</b>	None

## ipInterface

---

<b>Description</b>	IP interface
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Error status is returned by lower layer configuration; best route is pointing to an unnumbered interface with an invalid source IP address; unnumbered interface is pointing to invalid loopback interface problems; packets received with invalid source IP address on interfaces



<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Interface state transitions and deletions; interface state machine events
<b>Filter 1</b>	interface—See description of the ipGeneral interface filter for information about this filter
<b>Filter 2</b>	router—See description of the ipGeneral router filter for information about this filter

## ipNhopTrackerGeneral

---

<b>Description</b>	Next-hop tracker for IP shared interfaces
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Errors in tracking of routes that resolve indirect next hops
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	None

## ipProfileMgr

---

<b>Description</b>	IP Profile Manager
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None

<b>Error</b>	Failure to create or delete dynamic IP interfaces
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Events related to dynamic IP interface creation or deletion; assignment or unassignment of profiles to interfaces
<b>Filter</b>	None

## ipRoutePolicy

---

<b>Description</b>	IP route policy
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Failure to clean up NVS while a routing policy was being deleted; failure to store the routing policy to NVS while a new routing policy was being created; failure to find an expected routing policy created previously
<b>Warning Log</b>	Failure to create a new routing policy due to memory limitation; misuse of a routing policy
<b>Notice Log</b>	None
<b>Info</b>	Result of routing policy check; specifies which routing policy is used
<b>Debug</b>	Successful addition or deletion of routing policies
<b>Filter</b>	router <i>virtualRouterName</i> <ul style="list-style-type: none"> <li>■ router—Logs IP route policy events for a specific virtual router</li> <li>■ <i>virtualRouterName</i>—Name of virtual router for which you want to log events</li> </ul>

## ipRouteTable

---

<b>Description</b>	IP routing table
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Next-hop resolution-related problems; exceeding maximum route limit or warning threshold
<b>Warning Log</b>	Failure to add route
<b>Notice Log</b>	None
<b>Info</b>	In process of finding best route information
<b>Debug</b>	Normal routing table updates; next-hop resolution for static routes
<b>Filter 1</b>	interface—See description of the ipGeneral interface filter for information about this filter
<b>Filter 2</b>	router—See description of the ipGeneral router filter for information about this filter

## ipseclDb

---

<b>Description</b>	Phase 1 identity database information. Used for deciding which phase 1 identity to use for incoming IKE negotiations.
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Internal dBase issue with hashes
<b>Warning Log</b>	Problems adding or deleting entries
<b>Notice Log</b>	None

**Info** Adding entries to database

**Debug** Detailed database information and transactions

**Filter** None

## ipsecP1Throttler

---

**Description** Ongoing phase 1 negotiations

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** Throttling instances based on suspicious flows (for example, the same peer failing repeated fast negotiations)

**Notice Log** None

**Info** None

**Debug** None

**Filter** None

## ipsecXcfgSM

---

**Description** Xauth application state machine information.

**Emergency** None

**Alert** None

**Critical** None

**Error** Internal state machine errors

**Warning Log** State machine unexpected events; problems with xauth negotiations

**Notice Log** Significant state changes

**Info** None

**Debug** None

**Filter** None

## ipSubscriberMgr

---

**Description** IP Subscriber Manager

**Emergency** None

**Alert** None

**Critical** None

**Error** Primary interface not found

**Warning Log** None

**Notice Log** None

**Info** None

**Debug** Dump parameters for methods; dump results for lookups; dump points during thread execution.

**Filter** None

## ipTraffic

---

**Description** IP frame transmit and receive

**Emergency** None

**Alert** None

**Critical** None

**Error** None

<b>Warning Log</b>	Data errors detected in frames
<b>Notice Log</b>	Dropped frames—No error
<b>Info</b>	None
<b>Debug</b>	Normal data events
<b>Filter 1</b>	interface—See description of the ipGeneral interface filter for information about this filter
<b>Filter 2</b>	router—See description of the ipGeneral router filter for information about this filter

## ipTunnel

---

<b>Description</b>	IP tunnel
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Unexpected but recoverable events
<b>Notice Log</b>	No more pool space for interface up notification
<b>Info</b>	None
<b>Debug</b>	Function trace
<b>Filter</b>	None

## ipv6AccessList

---

<b>Description</b>	IPv6 access list matching
<b>Emergency</b>	None
<b>Alert</b>	None

<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	Access list rule has been matched
<b>Debug</b>	None
<b>Filter 1</b>	accessList <ul style="list-style-type: none"> <li>■ accessList—Logs a match on any access-list entry for all IPv6 access lists</li> </ul>
<b>Filter 2</b>	accessList router <i>virtualRouterName</i> access-list <i>accessListName</i> access-element-id <i>idNumber</i> <ul style="list-style-type: none"> <li>■ accessList—Logs a match on any access-list entry</li> <li>■ router—Logs events for a specific virtual router</li> <li>■ <i>virtualRouterName</i>—Name of virtual router for which you want to log events</li> <li>■ access-list—Logs events for a specific access list</li> <li>■ <i>accessListName</i> —Name of access list for which you want to log events</li> <li>■ access-element-id—Logs events for a specific element ID</li> <li>■ <i>idNumber</i>—Element ID number for which you want to log events; the element ID is automatically assigned for access-list rules that you explicitly create and is shown by issuing the <b>show ipv6 access-list detail</b> command</li> </ul>

## ipv6General

---

<b>Description</b>	IPv6 general
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	License-related errors (for example, attempting to configure IPv6 without configuring the license first); error in sending interface up or down events to IPv6
<b>Warning Log</b>	Primary IPv6 address on an interface is not found

**Notice Log**   None

**Info**   None

**Debug**   None

- Filter 1**   `interface interfaceType interfaceSpecifier`
- `interface`—Logs events for a specific interface
  - `interfaceType`—Type of interface for which you want to log events
  - `interfaceSpecifier`—Location of interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

- Filter 2**   `router virtualRouterName [ interface interfaceType interfaceSpecifier ]`
- `router`—Logs events for a specific virtual router
  - `virtualRouterName`—Name of virtual router for which you want to log events
  - `interface`—Logs events on a specific interface on the virtual router
  - `interfaceType`—Type of interface for which you want to log events (for example, atm or fastEthernet)
  - `interfaceSpecifier`—Location of interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

## ipv6Interface

**Description**   IPv6 interface

**Emergency**   None

**Alert**   None

**Critical**   None

**Error**   None



<b>Warning Log</b>	Interface configuration errors; errors in pointing interface to another interface; interface LocalAddress-related errors
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Interface state transitions
<b>Filter 1</b>	interface—See description of the ipv6General interface filter for information about this filter
<b>Filter 2</b>	router—See description of the ipv6General router filter for information about this filter

## ipv6ProfileMgr

---

<b>Description</b>	IPv6 Profile Manager
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Failure to create or delete dynamic IPv6 interfaces
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Events related to dynamic IPv6 interface creation or deletion; assignment or unassignment of profiles to interfaces
<b>Filter</b>	None

## ipv6RouteTable

---

<b>Description</b>	IPv6 routing table
<b>Emergency</b>	None

<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Next-hop resolution-related problems; exceeding maximum route limit or warning threshold; route add and delete errors
<b>Warning Log</b>	Route limit-related warnings
<b>Notice Log</b>	Route limit-related messages
<b>Info</b>	None
<b>Debug</b>	Normal routing table updates; next-hop resolution for static routes; redistribution events; overload list processing; routing table session creation; route change notification events; route add/delete information; route cleanup events
<b>Filter 1</b>	interface—See description of the ipv6General interface filter for information about this filter
<b>Filter 2</b>	router—See description of the ipv6General router filter for information about this filter

## ipv6Traffic

---

<b>Description</b>	IPv6 frame transmit and receive
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Normal data events
<b>Filter 1</b>	[ router virtualRouterName ]

- *router*—Logs events for a specific virtual router
- *virtualRouterName*—Name of virtual router for which you want to log events

**Filter 2** [ address ipv6Address ]

- *address*—Logs events for packets arriving from or going to a specified IPv6 address
- *ipv6Address*—IPv6 address of remote system for which you want to log messages

## ipv6Types

---

<b>Description</b>	IPv6 general
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	System out of memory error for allocating IPv6 addresses; IPv6 shutdown started in all virtual routers
<b>Error</b>	System low on memory; IPv6 address allocation may fail
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	None

## isisAdjChange

---

<b>Description</b>	IS-IS adjacency up or down
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None

**Error** None

**Warning Log** None

**Notice Log** Adjacency state change

**Info** None

**Debug** None

**Filter 1** interface *interfaceType* *interfaceSpecifier*

- interface—Logs events for a specific interface
- *interfaceType*—Type of interface for which you want to log events
- *interfaceSpecifier*—Location of interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

**Filter 2** router *virtualRouterName* [ interface *interfaceType* *interfaceSpecifier* ]

- router—Logs events for a specific virtual router
- *virtualRouterName*—Name of virtual router for which you want to log events
- interface—Logs events on a specific interface on the virtual router
- *interfaceType*—Type of interface for which you want to log events
- *interfaceSpecifier*—Location of interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

## isisAdjPackets

**Description** IS-IS adjacency hello packets

**Emergency** None

**Alert** None

**Critical** None

<b>Error</b>	None
<b>Warning Log</b>	Error in sent IIH or received IIH
<b>Notice Log</b>	Sent or received IIH, DR election
<b>Info</b>	Authentication failed
<b>Debug</b>	Detailed information about IIH
<b>Filter 1</b>	interface—See description of the isisAdjChange interface filter for information about this filter
<b>Filter 2</b>	router—See description of the isisAdjChange router filter for information about this filter

## isisBfdEvents

---

<b>Description</b>	IS-IS and BFD interaction and IS-IS session log
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	BFD to IS-IS interaction failure errors; out of memory errors
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	BFD session state changes
<b>Debug</b>	None
<b>Filter</b>	Router and interface

## isisChecksumErr

---

<b>Description</b>	IS-IS checksum errors
<b>Emergency</b>	None

<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	LSP checksum error
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter 1</b>	interface—See description of the isisAdjChange interface filter for information about this filter
<b>Filter 2</b>	router—See description of the isisAdjChange router filter for information about this filter

## isisGeneral

---

<b>Description</b>	IS-IS system notifications
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Error in restoring NVS
<b>Warning Log</b>	Exceeding maximum IP addresses on interface or maximum sequence number
<b>Notice Log</b>	Error in redistributing routes; LAN circuit coming up; BGP converged; BGP not converged and IS-IS times out; transient black hole avoidance suppressed because graceful restart has been configured and is in progress
<b>Info</b>	None
<b>Debug</b>	Redistributed routes
<b>Filter 1</b>	interface—See description of the isisAdjChange interface filter for information about this filter

**Filter 2** router—See description of the isisAdjChange router filter for information about this filter

## isisHelloGeneral

---

<b>Description</b>	IS-IS system notifications
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Memory failure and other fatal errors
<b>Warning Log</b>	Communication failure between IS-IS and IS-IS hello
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Timer expiration and other normal events
<b>Filter 1</b>	interface—See description of the isisAdjChange interface filter for information about this filter
<b>Filter 2</b>	router—See description of the isisAdjChange router filter for information about this filter

## isisHelloPackets

---

<b>Description</b>	IS-IS hello packets
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None

<b>Notice Log</b>	None
<b>Info</b>	Hello packets sent and received
<b>Debug</b>	Dumping hello packet in detail
<b>Filter 1</b>	interface—See description of the isisAdjChange interface filter for information about this filter
<b>Filter 2</b>	router—See description of the isisAdjChange router filter for information about this filter

## isisIpv6Log

---

<b>Description</b>	IS-IS IPv6 events
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	IS-IS IPv6 events
<b>Filter 1</b>	interface—See description of the isisAdjChange interface filter for information about this filter
<b>Filter 2</b>	router—See description of the isisAdjChange router filter for information about this filter

## isisLdpEvents

---

<b>Description</b>	Displays information about the interactions between LDP and IS-IS in the course of LDP-IGP synchronization.
--------------------	---



<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Failure to communicate with LDP and out of memory conditions
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	LDP interactions
<b>Filter</b>	None

## isisLocalUpdate

---

<b>Description</b>	IS-IS local LSP packets
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	Sent local LSP
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter 1</b>	interface—See description of the isisAdjChange interface filter for information about this filter
<b>Filter 2</b>	router—See description of the isisAdjChange router filter for information about this filter

## isisMplsTeAdvertisements

---

<b>Description</b>	IS-IS MPLS traffic engineering advertisements
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Resource information changes
<b>Filter</b>	None

## isisMplsTeEvents

---

<b>Description</b>	IS-IS MPLS traffic engineering
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	Start or stop MPLS function; tunnel in use by IS-IS; explicit route computation
<b>Debug</b>	Detailed debugging information for MPLS function

**Filter** None

## isisNsfEvents

---

<b>Description</b>	Log events related to IS-IS non-stop forwarding procedure during system warm start
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	Logs IS-IS NSF timer related events (for example, expiration and cancellation of timers [T1, T2, T3])
<b>Debug</b>	Restart-request transmit; restart-ack receive; SNP receive processing; LSP synchronization; LSP purging
<b>Filter 1</b>	interface—See description of the isisAdjChange interface filter for information about this filter
<b>Filter 2</b>	router—See description of the isisAdjChange router filter for information about this filter

## isisProtocolErr

---

<b>Description</b>	IS-IS protocol errors
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	LSP protocol error

<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	router <i>virtualRouterName</i> <ul style="list-style-type: none"> <li>■ router—Logs events for a specific virtual router</li> <li>■ <i>virtualRouterName</i>—Name of virtual router for which you want to log events</li> </ul>

## isisSnpPackets

---

<b>Description</b>	IS-IS complete sequence numbers PDU (CSNP) and partial sequence numbers PDU (PSNP) packets
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Error in received CSNP or PSNP
<b>Notice Log</b>	Sent PSNP; received CSNP or PSNP packets; PSNP authentication failed
<b>Info</b>	Sent CSNP packets; CSNP authentication failed
<b>Debug</b>	LSP entries
<b>Filter 1</b>	interface—See description of the isisAdjChange interface filter for information about this filter
<b>Filter 2</b>	router—See description of the isisAdjChange router filter for information about this filter

## isisSpfEvents

---

<b>Description</b>	IS-IS Shortest Path First (SPF)
<b>Emergency</b>	None

<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	Start or suspend SPF; updating routing table
<b>Info</b>	Add tent or path; process LSP
<b>Debug</b>	Add route
<b>Filter</b>	router <i>virtualRouterName</i> <ul style="list-style-type: none"> <li>■ router—Logs events for a specific virtual router</li> <li>■ <i>virtualRouterName</i>—Name of virtual router for which you want to log events</li> </ul>

## isisSpfStatistics

---

<b>Description</b>	IS-IS SPF timing and statistic data
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	SPF compute time
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	router <i>virtualRouterName</i> <ul style="list-style-type: none"> <li>■ router—Logs events for a specific virtual router</li> <li>■ <i>virtualRouterName</i>—Name of virtual router for which you want to log events</li> </ul>

## isisSpfTriggers

---

<b>Description</b>	IS-IS SPF triggering
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	SPF trigger event
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	router <i>virtualRouterName</i> <ul style="list-style-type: none"> <li>■ router—Logs events for a specific virtual router</li> <li>■ <i>virtualRouterName</i>—Name of virtual router for which you want to log events</li> </ul>

## isisUpdatePackets

---

<b>Description</b>	IS-IS LSP packets sent or received
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Error in received LSP
<b>Notice Log</b>	Sent or received LSP
<b>Info</b>	Authentication failed; processed received LSP

<b>Debug</b>	Set or cleared SRM flags; building LSP
<b>Filter 1</b>	interface—See description of the isisAdjChange interface filter for information about this filter
<b>Filter 2</b>	router—See description of the isisAdjChange router filter for information about this filter

## isVoice

---

<b>Description</b>	IS Voice application
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	NVS error; out of resources error; unexpected error
<b>Warning Log</b>	IP request failed
<b>Notice Log</b>	LSP used by IP circuit changes state (up, down, or modified); IP circuit requested, updated, or removed
<b>Info</b>	Voice gateway session established, terminated, or replaced
<b>Debug</b>	Management get, set, create, and remove
<b>Filter</b>	None

## itm

---

<b>Description</b>	IPSec transport mode
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	IPSec transport protocol interaction failures; interface engine interaction failures; IPSec transport profile configuration errors; interface configuration errors

**Warning Log** Recoverable IPSec transport interface–related configuration and operational error

**Notice Log** IPSec transport interface state change

**Info** IPSec transport interface interaction with IKE protocol; interface pool usage

**Debug** Details about the interaction between the IPSec transport interface and the IKE protocol; configuration and operational changes of the IPSec transport interface events; interface engine interaction

**Filter** None



## Chapter 11

# L Commands

- l2cGeneral on page 130
- l2cKeepAlive on page 130
- l2cPacket on page 131
- l2tp on page 131
- l2tpDialoutGenerator on page 132
- l2tpDisconnectCause on page 132
- l2tpIpLowerBinding on page 133
- l2tpStateMachine on page 133
- lasv6General on page 134
- ldpConnect on page 134
- ldpGeneral on page 135
- ldpGracefulRestart on page 135
- ldpHelloMessages on page 136
- ldpHelloMgr on page 137
- ldpInterface on page 137
- ldpMessages on page 138
- ldpPeer on page 139
- ldpShimInterface on page 139
- ldpSocket on page 140
- ldpTimer on page 141
- ldpVpls on page 141
- ldpWorker on page 142
- localAddressServerGeneral on page 142
- localAuthServer on page 143
- localEnableAuthServer on page 143
- localLinePassword on page 144

## I2cGeneral

---

<b>Description</b>	Layer 2 Control application general
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Signal protocol failures, out of resources errors
<b>Warning Log</b>	Signal unexpected but recoverable socket conditions
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Neighbor, socket events
<b>Filter</b>	None

## I2cKeepAlive

---

<b>Description</b>	Layer 2 Control adjacency packets
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Adjacency protocol packet processing

**Filter** None

## I2cPacket

---

**Description** Layer 2 Control protocol packets

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** Signal recoverable, unexpected packet processing failures

**Notice Log** None

**Info** None

**Debug** Protocol packet exchange

**Filter** None

## I2tp

---

**Description** Layer 2 Tunneling Protocol

**Emergency** None

**Alert** None

**Critical** Nonrecoverable error

**Error** Configuration error

**Warning Log** Protocol error; insufficient resources

**Notice Log** Status change; protocol warnings

**Info** Protocol operational information

**Debug** Detailed debugging information

**Filter** None

## I2tpDialoutGenerator

---

**Description** L2TP dial-out

**Emergency** None

**Alert** None

**Critical** None

**Error** Internal software consistency errors; dial-out service denial because of insufficient resources; dial-out session failure

**Warning Log** Dial-out NVS consistency errors; restrictions on maximum simultaneous dial-out components

**Notice Log** None

**Info** Dial-out resource pool expansion

**Debug** None

**Filter** None

## I2tpDisconnectCause

---

**Description** L2TP disconnect cause

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** None

**Notice Log** None

<b>Info</b>	Disconnect error code information generated at LAC
<b>Debug</b>	None
<b>Filter</b>	None

## I2tpIpLowerBinding

---

<b>Description</b>	Lower binding for L2TP and IP
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Virtual router does not have a configured router ID; virtual router has a null router ID
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	None

## I2tpStateMachine

---

<b>Description</b>	Layer 2 Tunnel Protocol state machine trace
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None

<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	State machine trace
<b>Filter</b>	None

## lasv6General

---

<b>Description</b>	IPv6 local address pool details
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Error in configuration of the command for IPv6 local address pool or runtime errors, if any, that occur
<b>Warning Log</b>	None
<b>Notice Log</b>	LASv6 warm restart complete
<b>Info</b>	None
<b>Debug</b>	Detailed debugging information to assist in troubleshooting and analyzing problems
<b>Filter</b>	None

## ldpConnect

---

<b>Description</b>	LDP connection information
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Memory allocation failure.

<b>Warning Log</b>	None
<b>Notice Log</b>	LDP connection creation and deletion information
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	router <i>virtualRouterName</i> <ul style="list-style-type: none"><li>■ router—Logs events for a specific virtual router</li><li>■ <i>virtualRouterName</i>—Name of virtual router for which you want to log events</li></ul>

**IdpGeneral**

---

<b>Description</b>	Label Distribution Protocol general events
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Memory allocation failures; protocol interaction failures
<b>Warning Log</b>	Message processing errors
<b>Notice Log</b>	Interface transition; adjacency transition
<b>Info</b>	Minor timer processing error
<b>Debug</b>	LDP finite state machine transactions; RouteTable interaction transaction; message processing transaction
<b>Filter</b>	router <i>virtualRouterName</i> <ul style="list-style-type: none"><li>■ router—Logs events for a specific virtual router</li><li>■ <i>virtualRouterName</i>—Name of virtual router for which you want to log events</li></ul>

**IdpGracefulRestart**

---

<b>Description</b>	LDP graceful restart events
--------------------	-----------------------------

<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	LDP Neighbor Graceful Restart state changes
<b>Info</b>	LDP Graceful Restart timer operation
<b>Debug</b>	LDP Graceful Restart debug message
<b>Filter</b>	router <i>virtualRouterName</i> <ul style="list-style-type: none"> <li>■ router—Logs events for a specific virtual router</li> <li>■ <i>virtualRouterName</i>—Name of virtual router for which you want to log events</li> </ul>

## IdpHelloMessages

---

<b>Description</b>	Label Distribution Protocol hello message event
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	LDP hello message processing errors
<b>Notice Log</b>	LDP hello message reception and transmission
<b>Info</b>	LDP hello message processing and transmission transaction
<b>Debug</b>	LDP hello message processing and transmission transaction details
<b>Filter</b>	router <i>virtualRouterName</i> <ul style="list-style-type: none"> <li>■ router—Logs events for a specific virtual router</li> </ul>



- *virtualRouterName*—Name of virtual router for which you want to log events

## IdpHelloMgr

---

<b>Description</b>	Displays details about the task dedicated for sending LDP hellos, the LDP hello manager
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Memory allocation failure
<b>Warning Log</b>	None
<b>Notice Log</b>	Hello transmission failure due to interface down
<b>Info</b>	None
<b>Debug</b>	Hello transmission debug information
<b>Filter</b>	router <i>virtualRouterName</i> <ul style="list-style-type: none"> <li>■ router—Logs events for a specific virtual router</li> <li>■ <i>virtualRouterName</i>—Name of virtual router for which you want to log events</li> </ul>

## IdpInterface

---

<b>Description</b>	LDP interface
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Failure to enable LDP on the interface
<b>Warning Log</b>	None

**Notice Log** Interface up and interface down events

**Info** None

**Debug** Event with detailed interface parameters for normal operation

**Filter** router virtualRouterName [ interface interfaceType interfaceSpecifier ]

- router—Logs events for a specific virtual router
- *virtualRouterName*—Name of virtual router for which you want to log events
- interface—Logs events on a specific interface on the virtual router
- *interfaceType*—Type of interface for which you want to log events
- *interfaceSpecifier*—Location of interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

## IdpMessages

---

**Description** Label Distribution Protocol session message events

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** None

**Notice Log** Minor TCP transmission error

**Info** LDP session message processing and transmission transaction

**Debug** None

**Filter** router *virtualRouterName*

- router—Logs events for a specific virtual router
- *virtualRouterName*—Name of virtual router for which you want to log events

## IdpPeer

---

<b>Description</b>	LDP peer events
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	LDP neighbor authentication setting failure
<b>Warning Log</b>	None
<b>Notice Log</b>	LDP neighbor authentication transaction
<b>Info</b>	None
<b>Debug</b>	LDP peer maintenance transaction
<b>Filter</b>	router <i>virtualRouterName</i> <ul style="list-style-type: none"> <li>■ router—Logs events for a specific virtual router</li> <li>■ <i>virtualRouterName</i>—Name of virtual router for which you want to log events</li> </ul>

## IdpShimInterface

---

<b>Description</b>	LDP shim interface
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None

**Debug** None

- Filter** router virtualRouterName [ interface interfaceType interfaceSpecifier ]
- router—Logs events for a specific virtual router
  - *virtualRouterName*—Name of virtual router for which you want to log events
  - interface—Logs events on a specific interface on the virtual router
  - *interfaceType*—Type of interface for which you want to log events
  - *interfaceSpecifier*—Location of interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

## IdpSocket

**Description** Displays details about the socket that is used to exchange LDP session messages and keep alives

**Emergency** None

**Alert** None

**Critical** None

**Error** Memory allocation failure

**Warning Log** Socket creation failure

**Notice Log** Socket creation and deletion information

**Info** None

**Debug** Socket send and receive information

- Filter** router *virtualRouterName*
- router—Logs events for a specific virtual router
  - *virtualRouterName*—Name of virtual router for which you want to log events

## IdpTimer

---

<b>Description</b>	Displays details about LDP timer events; when a timer expires or is scheduled
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Timer event information
<b>Filter</b>	router <i>virtualRouterName</i> <ul style="list-style-type: none"> <li>■ router—Logs events for a specific virtual router</li> <li>■ <i>virtualRouterName</i>—Name of virtual router for which you want to log events</li> </ul>

## IdpVpls

---

<b>Description</b>	Displays details about LDP signaling for VPLS configurations
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	VPLS failure
<b>Notice Log</b>	VPLS up and down state information
<b>Info</b>	None

**Debug** VPLS debug information

**Filter** router *virtualRouterName*

- router—Logs events for a specific virtual router
- *virtualRouterName*—Name of virtual router for which you want to log events

## IdpWorker

---

**Description** Displays details about the background LDP jobs (LDP worker events)

**Emergency** None

**Alert** None

**Critical** None

**Error** Memory allocation failure

**Warning Log** Invalid PDU

**Notice Log** Worker creation and deletion information

**Info** TCP socket reset by peer

**Debug** Worker running information

**Filter** router *virtualRouterName*

- router—Logs events for a specific virtual router
- *virtualRouterName*—Name of virtual router for which you want to log events

## localAddressServerGeneral

---

**Description** LAS general

**Emergency** None

**Alert** None

**Critical** None

**Error** None

<b>Warning Log</b>	Attempts to set a local pool group name; attempts to restore an overlapping address range from a previous version of the software
<b>Notice Log</b>	Attempts to allocate an address from the backup local address pool group name because all the addresses in the primary local address pool group have been already allocated.
<b>Info</b>	None
<b>Debug</b>	Control flow and key events
<b>Filter</b>	None

## localAuthServer

---

<b>Description</b>	Local authentication server
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Cannot bind to local authentication server; memory cannot be allocated for local authentication server; cannot send configuration request; cannot send information request; invalid virtual router; error with specified user database; cannot create local user database at startup
<b>Warning Log</b>	Internal AAA user profile missing; cannot create users at startup; user associated with invalid virtual router; users reassigned to default user database; invalid user database; cannot associate users with virtual router
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Server started; server bind occurred; no user name provided; no CHAP challenge provided; no authenticate request message allocated
<b>Filter</b>	None

## localEnableAuthServer

---

<b>Description</b>	Authentication server using locally stored enable secret
--------------------	--

<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Connection granted: no secrets are configured
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Authentication attempted; no memory for protocol message; connection granted: correct password; connection denied: incorrect password
<b>Filter</b>	None

## localLinePassword

---

<b>Description</b>	Local line password authentication server
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Unknown algorithm for local password
<b>Warning Log</b>	Connection granted or denied due to possible misconfiguration
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Connection granted or denied due to incorrect password
<b>Filter</b>	None



## Chapter 12

# M Commands

- macroData on page 146
- macroScheduler on page 146
- mgmtGeneral on page 147
- mgmtGracefulRestart on page 148
- mgmtmv6General on page 148
- mgmtmv6GracefulRestart on page 149
- mldGeneral on page 150
- mldGracefulRestart on page 151
- mldGroupState on page 151
- mmcd on page 152
- mobileIpv4HaBinding on page 153
- mobileIpv4HaEng on page 153
- mobileIpv4HaEvent on page 154
- mobileIpv4HaLog on page 154
- mplsFwdTable on page 155
- mplsGeneral on page 155
- mplsHighAvailability on page 156
- mplsMajorInterface on page 156
- mplsMinorInterface on page 157
- mplsRouter on page 158
- mplsShimInterface on page 159
- mplsTraffic on page 160
- mrInfoLog on page 160
- mrInfoRcvdLog on page 161
- mrInfoSentLog on page 161
- mtraceLog on page 162
- mtraceRcvdLog on page 162
- mtraceSentLog on page 163
- multicastTraffic on page 163

## macroData

---

<b>Description</b>	Macro information
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Error while running the macro
<b>Warning Log</b>	None
<b>Notice Log</b>	Data from env.setResults
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	None

## macroScheduler

---

<b>Description</b>	Macro information
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Scheduled macro cannot be run
<b>Warning Log</b>	None
<b>Notice Log</b>	Start and completion of scheduled macro, Values set using env.setResult
<b>Info</b>	None
<b>Debug</b>	None

**Filter** None

## mgmtGeneral

---

**Description** IP multicast group table manager general information

**Emergency** None

**Alert** None

**Critical** None

**Error** Major errors in MGTM API calls resulting in failure

**Warning Log** IP Multicast fastpath forwarding not supported on interface

**Notice Log** Errors in MGTM API calls

**Info** State change events; invalid parameters in API calls

**Debug** (Source, Group) entries not found

**Filter 1** interface *interfaceType interfaceSpecifier*

- interface—Logs events for a specific interface
- *interfaceType*—Type of interface for which you want to log events
- *interfaceSpecifier*—Location of interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

**Filter 2** router *virtualRouterName [ interface interfaceType interfaceSpecifier ]*

- router—Logs events for a specific virtual router
- *virtualRouterName*—Name of virtual router for which you want to log events
- interface—Logs events on a specific interface on the virtual router
- *interfaceType*—Type of interface for which you want to log events
- *interfaceSpecifier*—Location of interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

## mgmtGracefulRestart

<b>Description</b>	MGMT graceful restart
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	Multicast graceful restart complete
<b>Info</b>	None
<b>Debug</b>	IGMP, PIM, IP route table multicast graceful restart complete
<b>Filter</b>	None

## mgmtv6General

<b>Description</b>	IPv6 multicast group table manager general information
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Major errors in MGMT API calls resulting in failure
<b>Warning Log</b>	IPv6 Multicast fastpath forwarding not supported on interface
<b>Notice Log</b>	Errors in MGMT API calls

**Info** State change events; invalid parameters in API calls

**Debug** (Source, Group) entries not found

**Filter 1** interface *interfaceType interfaceSpecifier*

- interface—Logs events for a specific interface
- *interfaceType*—Type of interface for which you want to log events
- *interfaceSpecifier*—Location of interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

**Filter 2** router *virtualRouterName [ interface interfaceType interfaceSpecifier ]*

- router—Logs events for a specific virtual router
- *virtualRouterName*—Name of virtual router for which you want to log events
- interface—Logs events on a specific interface on the virtual router
- *interfaceType*—Type of interface for which you want to log events
- *interfaceSpecifier*—Location of interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

## mgtmv6GracefulRestart

---

**Description** MGTM V6 graceful restart

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** None

**Notice Log** Multicast graceful restart complete

**Info** None

**Debug** IGMP, PIM, IP route table multicast graceful restart complete

**Filter** None

## mldGeneral

---

**Description** Multicast Listener Discovery (MLD) general

**Emergency** None

**Alert** None

**Critical** None

**Error** Nonrecoverable errors

**Warning Log** NVS errors

**Notice Log** Errors while configuring or learning groups

**Info** None

**Debug** MLD interface or group state change

**Filter 1** interface *interfaceType* *interfaceSpecifier*

- interface—Logs events for a specific interface
- *interfaceType*—Type of interface for which you want to log events
- *interfaceSpecifier*—Location of interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

**Filter 2** router *virtualRouterName* [ *interface interfaceType interfaceSpecifier* ]

- router—Logs events for a specific virtual router
- *virtualRouterName*—Name of virtual router for which you want to log events
- interface—Logs events on a specific interface on the virtual router

- *interfaceType*—Type of interface for which you want to log events
- *interfaceSpecifier*—Location of interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

## mldGracefulRestart

---

<b>Description</b>	MLD graceful restart
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	IGMP/MLD graceful restart complete
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	None

## mldGroupState

---

<b>Description</b>	Multicast Listener Discovery (MLD) group state change events
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None

**Warning Log** None

**Notice Log** None

**Info** MLDv1 first host join, last host done events; MLDv2 state change and source-list change events aggregated across all hosts on the interface

**Debug** None

**Filter** router *virtualRouterName* [ *interface interfaceType interfaceSpecifier* ]

- router—Logs events for a specific virtual router
- *virtualRouterName*—Name of the virtual router for which you want to log events
- interface—Logs events on a specific interface on the virtual router
- *interfaceType*—The type of the interface for which you want to log events. For example, atm or fastEthernet.
- *interfaceSpecifier*—The location of the interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

## mmcd

---

**Description** MMC switch fabric driver

**Emergency** None

**Alert** None

**Critical** None

**Error** Errors in hardware configuration; resource limitation in fabric reached; errors in hardware

**Warning Log** None

**Notice Log** None

**Info** None

**Debug** Initialization details; configuration details; connection status details



**Filter** None

## mobileipv4HaBinding

---

**Description** Mobile IPv4 home agent binding

**Emergency** None

**Alert** None

**Critical** None

**Error** Registration request (RRQ) from foreign agent is prohibited by host access control list (ACL)

**Warning Log** None

**Notice Log** None

**Info** None

**Debug** Mobile IP timer started for  $n$  seconds, where  $n$  is the number of seconds

**Filter** None

## mobileipv4HaEng

---

**Description** Mobile IPv4 home agent engineering

**Emergency** None

**Alert** None

**Critical** None

**Error** Home agent does not exist in the virtual router

**Warning Log** None

**Notice Log** Mobile IP warm restart initiated

**Info** None

**Debug** Verifying replay attack

**Filter** None

## mobileipv4HaEvent

---

**Description** Mobile IPv4 home agent events

**Emergency** None

**Alert** None

**Critical** None

**Error** Authentication check failed

**Warning Log** None

**Notice Log** None

**Info** None

**Debug** Authentication check succeeded

**Filter** None

## mobileipv4HaLog

---

**Description** Mobile IPv4 home agent log

**Emergency** None

**Alert** None

**Critical** None

**Error** Registration request sanity check failed

**Warning Log** None

**Notice Log** Home agent deactivated in virtual router

<b>Info</b>	Home agent activated in virtual router
<b>Debug</b>	Authentication, authorization, and accounting (AAA) granted
<b>Filter</b>	None

## mplsFwdTable

---

<b>Description</b>	MPLS forwarding table events
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Nonfatal internal errors
<b>Warning Log</b>	Minor nonfatal internal errors
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Addition, deletion, and modification of table entries
<b>Filter</b>	router <i>virtualRouterName</i> <ul style="list-style-type: none"> <li>■ router—Logs events for a specific virtual router</li> <li>■ <i>virtualRouterName</i>—Name of virtual router for which you want to log events</li> </ul>

## mplsGeneral

---

<b>Description</b>	MPLS general purpose
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Nonfatal internal errors; configuration errors

<b>Warning Log</b>	Major interface deletion; minor internal errors
<b>Notice Log</b>	None
<b>Info</b>	NVS operations
<b>Debug</b>	NVS operations; timer operations; minor interface label stacking; function flows; L2VPN instance created, destroyed
<b>Filter</b>	router virtualRouterName <ul style="list-style-type: none"> <li>■ router—Logs events for a specific virtual router</li> <li>■ <i>virtualRouterName</i>—Name of virtual router for which you want to log events</li> </ul>

## mplsHighAvailability

---

<b>Description</b>	MPLS high availability events
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Nonfatal internal errors
<b>Warning Log</b>	Minor nonfatal internal errors
<b>Notice Log</b>	None
<b>Info</b>	Recovery of state information from NVS and mirrored storage; high-availability interactions with MPLS signaling protocols and line cards (major events)
<b>Debug</b>	High-availability interactions with MPLS signaling protocols and line modules (minor events)
<b>Filter</b>	None

## mplsMajorInterface

---

<b>Description</b>	MPLS major interface
<b>Emergency</b>	None

<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Signaling protocol interaction failures; major interface engine interaction failures; major interface finite state machine bad state transitions; major interface configuration errors; LSM interface label space interaction failures
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Major interface finite state machine transitions; signaling protocol interaction; major interface to engine transactions; major interface configuration transactions; LSM interface label space transactions
<b>Filter</b>	router <i>virtualRouterName</i> [ <i>interface interfaceType interfaceSpecifier</i> ] <ul style="list-style-type: none"> <li>■ router—Logs events for a specific virtual router</li> <li>■ <i>virtualRouterName</i>—Name of virtual router for which you want to log events</li> <li>■ interface—Logs events on a specific interface on the virtual router</li> <li>■ <i>interfaceType</i>—Type of interface for which you want to log events</li> <li>■ <i>interfaceSpecifier</i>—Location of interface in the appropriate format</li> </ul>



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

## mplsMinorInterface

<b>Description</b>	MPLS minor interface
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Tunnel/LSP setup or teardown signaling protocol interaction failures; minor interface engine interaction failures; minor interface finite state machine bad state transitions; minor interface configuration errors; minor interface to IP interaction failures

**Warning Log** None

**Notice Log** None

**Info** None

**Debug** Minor interface to engine transactions; minor interface to IP transactions; minor interface configuration transactions; signaling protocol LSP setup or teardown transactions; minor interface finite state machine transitions

**Filter 1** `interface interfaceType interfaceSpecifier`

- `interface`—Logs events for a specific interface
- `interfaceType`—Type of interface for which you want to log events
- `interfaceSpecifier`—Location of interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

**Filter 2** `router virtualRouterName`

- `router`—Logs events for a specific virtual router
- `virtualRouterName`—Name of virtual router for which you want to log events

## mplsRouter

---

**Description** MPLS router events

**Emergency** None

**Alert** None

**Critical** None

**Error** Nonfatal internal errors

**Warning Log** Minor nonfatal internal errors

**Notice Log** None

**Info** Creation or removal of MPLS router

**Debug** Configuration changes for per-VR attributes; dynamic interface creation events

**Filter** None

## mplsShimInterface

---

**Description** MPLS Shim Interface events

**Emergency** None

**Alert** None

**Critical** None

**Error** Signaling protocol interaction failures; shim interface engine interaction failures; shim interface finite state machine bad state transitions; shim interface configuration errors

**Warning Log** None

**Notice Log** None

**Info** None

**Debug** Shim interface finite state machine transitions; signaling protocol interaction; shim interface to engine transactions; shim interface configuration transactions

**Filter** router *virtualRouterName* [ *interface interfaceType interfaceSpecifier* ]

- router—Logs events for a specific virtual router
- *virtualRouterName*—Name of the virtual router for which you want to log events
- interface—Logs events on a specific interface on the virtual router
- *interfaceType*—Type of the interface for which you want to log events. For example, atm.
- *interfaceSpecifier*—Location of the interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

## mplsTraffic

---

<b>Description</b>	Logging for MPLS slow-path, ping, and trace packets; MPLS packets exceptioned to the SRP module for any reason
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	MPLS packets discarded on transmit or receive for any reason
<b>Notice Log</b>	None
<b>Info</b>	Abnormal conditions encountered during MPLS packet processing (when packets are not discarded); for example, truncating a packet or ignoring packet fields
<b>Debug</b>	Detailed debugging information for all MPLS packets transmitted to and received from the SRP module
<b>Filter</b>	None

## mrInfoLog

---

<b>Description</b>	General multicast router information
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Application startup or shutdown failures, resource allocation failures
<b>Warning Log</b>	None
<b>Notice Log</b>	Protocol Errors on received packets
<b>Info</b>	None



**Debug** Trace application startup/shutdown/operation

**Filter** None

## mrInfoRcvdLog

---

**Description** Multicast router received information

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** None

**Notice Log** None

**Info** Number of trace packets received

**Debug** Hexidecimal dump of packets received

**Filter** None

## mrInfoSentLog

---

**Description** Multicast router sent information

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** None

**Notice Log** None

<b>Info</b>	Number of trace packets sent
<b>Debug</b>	Hexidecimal dump of packets sent
<b>Filter</b>	None

## mtraceLog

---

<b>Description</b>	General Mtrace server information
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Error creating or deleting Mtrace server; error communicating with other modules; allocation failures
<b>Warning Log</b>	None
<b>Notice Log</b>	Error in received or sent mtrace packets
<b>Info</b>	None
<b>Debug</b>	Creation or deletion of Mtrace server; communication with other modules
<b>Filter</b>	None

## mtraceRcvdLog

---

<b>Description</b>	mtrace packets received
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None

<b>Notice Log</b>	None
<b>Info</b>	Short description of the received mtrace packets
<b>Debug</b>	Complete print of the received mtrace packets
<b>Filter</b>	None

## mtraceSentLog

---

<b>Description</b>	mtrace packets sent
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	Short description of the mtrace packets sent
<b>Debug</b>	Complete print of the mtrace packets sent
<b>Filter</b>	None

## multicastTraffic

---

<b>Description</b>	IP multicast frame transmit or receive
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None

**Warning Log**   None

**Notice Log**   None

**Info**   None

**Debug**   IP multicast packet transmit or receive information

**Filter 1**   remote-ip-address *ipAddress* [ *ipAddressMask* ]

- remote-ip-address—Logs events for a remote address
- *ipAddress*—Address of remote system for which you want to log messages
- *ipAddressMask*—Mask for the remote address

**Filter 2**   router *virtualRouterName* [ remote-ip-address *ipAddress* [ *ipAddressMask* ] ]

- router—Logs events on a specific virtual router
- *virtualRouterName*—Name of virtual router for which you want to log events
- remote-ip-address—Logs events for a remote address
- *ipAddress*—Address of remote system for which you want to log messages
- *ipAddressMask*—Mask for the remote address

## Chapter 13

# N Commands

- nameResolverLog on page 165
- nfsClient on page 165
- noneAaaAddrServer on page 166
- noneAaaServer on page 167
- ntpGeneral on page 167

### nameResolverLog

---

<b>Description</b>	Name resolver table
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	Name lookup failures
<b>Debug</b>	Name lookup processing events
<b>Filter</b>	None

### nfsClient

---

<b>Description</b>	NFS client log
--------------------	----------------

<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Error installing NFS driver; error mounting or unmounting remote file system with specific error indication (if known); error accessing file on remote file system
<b>Warning Log</b>	Attempting to reuse already used local mount point when mounting remote file system; attempting to unmount remote file system with outstanding open files
<b>Notice Log</b>	None
<b>Info</b>	NFS client driver installed or uninstalled; mounting or unmounting remote file system; opening or closing remote files
<b>Debug</b>	None
<b>Filter</b>	None

## noneAaaAddrServer

---

<b>Description</b>	AAA address client
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Notification of automatic success response to address request
<b>Filter</b>	None

## noneAaaServer

---

<b>Description</b>	Authentication and accounting client
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Notification of automatic success response to authentication or accounting request
<b>Filter</b>	None

## ntpGeneral

---

<b>Description</b>	Network Time Protocol (NTP) system notifications
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	NVS configuration errors; insufficient memory resources; protocol errors; time adjustment failures
<b>Warning Log</b>	No usable servers, NTP synchronization lost
<b>Notice Log</b>	System time adjustment
<b>Info</b>	Attach to or detach from virtual router; shutting down NTP IP session; shutting down NTP UDP session; enable or disable NTP; connection established with NTP server; announce system clock precision

**Debug** None

**Filter** router ID



## Chapter 14

# O Commands

- `oam3ahAssociations` on page 170
- `oam3ahEvents` on page 170
- `oam3ahPdus` on page 171
- `os` on page 171
- `ospfElectDr` on page 172
- `ospfGeneral` on page 173
- `ospfHelloPktsRcvd` on page 174
- `ospfHelloPktsSent` on page 175
- `ospfInterface` on page 176
- `ospfLdpEvents` on page 176
- `ospfLsa` on page 177
- `ospfNeighbor` on page 178
- `ospfPktsRcvd` on page 178
- `ospfPktsSent` on page 179
- `ospfRestart` on page 179
- `ospfRoute` on page 180
- `ospfSpfExt` on page 181
- `ospfSpfInter` on page 181
- `ospfSpfIntra` on page 182
- `ospfTeDatabase` on page 183
- `ospfTeSpf` on page 183
- `ospfv3ElectDr` on page 184
- `ospfv3General` on page 185
- `ospfv3HelloPktsRcvd` on page 186
- `ospfv3HelloPktsSent` on page 186
- `ospfv3Interface` on page 187
- `ospfv3Lsa` on page 188
- `ospfv3Neighbor` on page 188
- `ospfv3PktsRcvd` on page 189

- ospfv3PktsSent on page 190
- ospfv3Route on page 190
- ospfv3SpfExt on page 191
- ospfv3SpfInter on page 192
- ospfv3SpfIntra on page 192

## oam3ahAssociations

---

<b>Description</b>	802.3ah OAM association details for link-fault management between a local and remote OAM peer
<b>Emergency</b>	None
<b>Alert</b>	OAM association with the remote peer is lost
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	The MAC address of the peer identified during the discovery process
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	None

## oam3ahEvents

---

<b>Description</b>	802.3 OAM link-fault management event details about problems detected on the link
<b>Emergency</b>	None
<b>Alert</b>	Link is disabled because the high threshold for an error is exceeded on the Ethernet OAM interface or because of the error-disable action specified to be performed in response to an OAM PDU received from a remote peer for a fault in the receive path of the link
<b>Critical</b>	None

**Error** Link is disabled because the high threshold for an error is exceeded on the Ethernet OAM interface or because of the error-disable action specified to be performed in response to an OAM PDU received from a remote peer for a fault in the receive path of the link

**Warning Log** None

**Notice Log** None

**Info** None

**Debug** None

**Filter** None

## oam3ahPdus

---

**Description** 802.3ah OAM protocol data units (PDUs) configuration log

**Emergency** None

**Alert** Dying gasp or critical event flags set in the Event Notification PDUs sent from the remote peer to the local OAM entity

**Critical** None

**Error** None

**Warning Log** Unsupported OAM PDUs, with the code number, received from the remote peer

**Notice Log** Event Notification, Variable Request, Variable Response, Loopback Control, Organization-Specific OAM PDUs transmitted from the local entity and received from the remote peer

**Info** None

**Debug** Informational messages sent from the local entity and received on the local interface from the remote peer

**Filter** None

## OS

---

**Description** Operating system (including image loader)

**Emergency** None

**Alert** Fatal software error notification (assertions, panics, exceptions); panic timer expiration; ECC memory errors

**Critical** System halt; NVS reverting to factory defaults

**Error** File system errors; image checksum failure; POST test failure; unexpected software error; scheduled reload cancelled due to ongoing NVS flush; image not found or invalid; core dump host connect failure; SRP synchronization failure notification; I/O module mismatch or missing; NVS configuration errors

**Warning Log** OsTask client failed to initialize; file system capacity low (15 %); heap utilization high (85 %); crash dump save failure; unknown reset type; image loader failures (will retry); boot ROM programming failure; hardware upgrade necessary notification; NVS config file read or write errors; release file invalid

**Notice Log** OsAppRegistrar client names; OsAppRegistrar state change; version display; last reset type; file system condition abatement; POST start or done; NVS config file initialized or converted; scheduled reload notification; heap utilization abatement (75 %); file system release file copy notification; erasing boot ROM notification; core dump notification and status; NVS config boot status (factory defaults, running, file)

**Info** Image loader request; image loader success; SC-srpIc mailbox client up; POST test passed; NVS config cache enable, disable, flush, or termination; release path notification; diag-level diagnostic feature is also applicable to standby SRP

**Debug** High-frequency debug messages (enabled with various build defines); cached file hit, miss, or close; image loader frame retry; NVS config cache flush status

**Filter** None

## ospfElectDr

---

**Description** OSPF designated router (DR) election

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** None

**Notice Log** DR election events

**Info** None

**Debug** None

**Filter 1** interface-ip-address [ ip-address *ipAddress* | unnumbered *interfaceType* *interfaceSpecifier* ]

- interface-ip-address—Logs events for a specific interface
- ip-address—Specifies that you will identify the interface by entering an IP address
- *ipAddress*—IP address of interface for which you want to log events
- unnumbered—Specifies that the interface is unnumbered
- *interfaceType*—Type of interface for which you want to log events
- *interfaceSpecifier*—Location of the unnumbered interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

**Filter 2** router *virtualRouterName* [ interface-ip-address [ ip-address *ipAddress* | unnumbered *interfaceType* *interfaceSpecifier* ] ]

- router—Logs events for a specific virtual router
- *virtualRouterName*—Name of virtual router for which you want to log events
- interface-ip-address—Logs events for a specific interface on the virtual router
- ip-address—Specifies that you will identify the interface by entering an IP address
- *ipAddress*—IP address of interface for which you want to log events
- unnumbered—Specifies that the interface is unnumbered
- *interfaceType*—Type of interface for which you want to log events
- *interfaceSpecifier*—Location of the unnumbered interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

## ospfGeneral

---

**Description** OSPF general

<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Error enabling or disabling OSPF; allocation errors
<b>Warning Log</b>	State change errors (for example, OSPF could not be enabled); errors creating or destroying an area, an OSPF range, or a virtual link; error enabling OSPF protocol
<b>Notice Log</b>	OSPF enabled or disabled; BFD enabled or disabled on an OSPF interface
<b>Info</b>	Event for a dynamic neighbor
<b>Debug</b>	Bouncing adjacency with a neighbor
<b>Filter 1</b>	interface-ip-address—See description of the ospfElectDr interface-ip-address filter for information about this filter
<b>Filter 2</b>	router—See description of the ospfElectDr router filter for information about this filter

## ospfHelloPktsRcvd

---

<b>Description</b>	Processing of hello messages received on OSPF-enabled interfaces
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Invalid packet, hello parameters mismatch (area, network, hello and dead intervals, version, md5 digest)
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Received hello information (ip source/destination, length)

- Filter** router *virtualRouterName* [ *interface interfaceType interfaceSpecifier* ]
- router—Logs events for a specific virtual router
  - *virtualRouterName*—Name of the virtual router for which you want to log events
  - interface—Logs events on a specific OSPF-enabled interface on the virtual router
  - *interfaceType*—Type of the interface for which you want to log events (for example, atm or fastEthernet)
  - *interfaceSpecifier*—Location of the interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

## ospfHelloPktsSent

<b>Description</b>	Sending of hello messages on OSPF-enabled interfaces
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Information about hello messages sent on OSPF-enabled interfaces (ip source/destination, length)
<b>Filter</b>	router <i>virtualRouterName</i> [ <i>interface interfaceType interfaceSpecifier</i> ] <ul style="list-style-type: none"> <li>■ router—Logs events for a specific virtual router</li> <li>■ <i>virtualRouterName</i>—Name of the virtual router for which you want to log events</li> <li>■ interface—Logs events on a specific OSPF-enabled interface on the virtual router</li> <li>■ <i>interfaceType</i>—Type of the interface for which you want to log events (for example, atm or fastEthernet)</li> <li>■ <i>interfaceSpecifier</i>—Location of the interface in the appropriate format</li> </ul>



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

## ospfInterface

<b>Description</b>	OSPF interface
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Error saving or restoring OSPF interface configuration
<b>Warning Log</b>	Errors for packets sent or received over the OSPF interface
<b>Notice Log</b>	Creation or deletion of OSPF interfaces
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter 1</b>	interface-ip-address—See description of the ospfElectDr interface-ip-address filter for information about this filter
<b>Filter 2</b>	router—See description of the ospfElectDr router filter for information about this filter

## ospfLdpEvents

<b>Description</b>	Displays information about the interactions between LDP and OSPF in the course of LDP-IGP synchronization.
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Failure to communicate with LDP and out of memory conditions



<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	LDP interactions
<b>Filter</b>	None

## ospfLsa

---

<b>Description</b>	OSPF link-state advertisement (LSA) events
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	LSA discard errors
<b>Notice Log</b>	LSA add, update, or delete events; LSA purge, refresh, and max-age events; LSA send and receive events (Ack, delayed Ack, retransmit)
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter 1</b>	neighbor <i>neighborIpAddress</i> <ul style="list-style-type: none"> <li>■ neighbor—Logs events associated with a specific neighbor</li> <li>■ <i>neighborIpAddress</i>—IP address of neighbor for which you want to log events</li> </ul>
<b>Filter 2</b>	router <i>virtualRouterName</i> [ neighbor <i>neighborIpAddress</i> ] <ul style="list-style-type: none"> <li>■ router—Logs events on a specific virtual router</li> <li>■ <i>virtualRouterName</i>—Virtual router on which you want to log events</li> <li>■ neighbor—Logs events associated with a specific neighbor</li> <li>■ <i>neighborIpAddress</i>—IP address of neighbor for which you want to log events</li> </ul>

## ospfNeighbor

---

<b>Description</b>	OSPF neighbor change
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Neighbor MTU negotiation rejects
<b>Warning Log</b>	Flooding event errors; neighbor transition from Full state to Down state; invalid neighbor LSA requests; neighbor MTU negotiation mismatches
<b>Notice Log</b>	Database description neighbor exchange; neighbor state changes; neighbor retransmissions
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter 1</b>	neighbor—See description of the ospfLsa neighbor filter for information about this filter
<b>Filter 2</b>	router—See description of the ospfLsa router filter for information about this filter

## ospfPktsRcvd

---

<b>Description</b>	OSPF packet received
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Packets discarded; validation errors

<b>Notice Log</b>	Number of LSAs packed in different packet types (LSA Ack, LSA update); packets received over Down interface
<b>Info</b>	None
<b>Debug</b>	Packets received description
<b>Filter 1</b>	interface-ip-address—See description of the ospfElectDr interface-ip-address filter for information about this filter
<b>Filter 2</b>	router—See description of the ospfElectDr router filter for information about this filter

## ospfPktsSent

---

<b>Description</b>	OSPF packet sent
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Packet sent errors (for example, dropped OSPF packets)
<b>Warning Log</b>	None
<b>Notice Log</b>	Number of LSAs packed in different packet types (LSA Ack, LSA update)
<b>Info</b>	None
<b>Debug</b>	Packets sent description
<b>Filter 1</b>	interface-ip-address—See description of the ospfElectDr interface-ip-address filter for information about this filter
<b>Filter 2</b>	router—See description of the ospfElectDr router filter for information about this filter

## ospfRestart

---

<b>Description</b>	OSPF graceful restart events
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<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Unexpected events during restart
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	General information about significant restart operation events (for example, restart entry, exit, abort, and neighbor acquisition)
<b>Debug</b>	Details about restart operation events
<b>Filter</b>	router—See description of the ospfElectDr router filter for information about this filter

## ospfRoute

---

<b>Description</b>	OSPF route
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	OSPF route addition, deletion, or replacement errors in the routing table
<b>Warning Log</b>	Errors for routes imported into OSPF
<b>Notice Log</b>	Forwarding address decision algorithm events
<b>Info</b>	OSPF route added to, replaced, or deleted from the routing table; route imported into OSPF
<b>Debug</b>	None
<b>Filter 1</b>	interface-ip-address—See description of the ospfElectDr interface-ip-address filter for information about this filter

**Filter 2** router—See description of the ospfElectDr router filter for information about this filter

## ospfSpfExt

---

**Description** OSPF SPF external calculation

**Emergency** None

**Alert** None

**Critical** None

**Error** Errors in adding, modifying, or removing entries in tentative path entry table (TENT) and path entry table (PATH)

**Warning Log** None

**Notice Log** SPF (Dijkstra Shortest Path First algorithm) chunking events (for example, number of LSAs processed in an SPF chunk)

**Info** SPF results

**Debug** Events in building TENT and PATH

**Filter 1** interface-ip-address—See description of the ospfElectDr interface-ip-address filter for information about this filter

**Filter 2** router—See description of the ospfElectDr router filter for information about this filter

## ospfSpfInter

---

**Description** OSPF SPF interarea calculation

**Emergency** None

**Alert** None

**Critical** None

**Error** Errors in adding, modifying, or removing entries in tentative path entry table (TENT) and path entry table (PATH)

<b>Warning Log</b>	None
<b>Notice Log</b>	SPF chunking events (for example, number of LSAs processed in an SPF chunk)
<b>Info</b>	SPF results
<b>Debug</b>	Events in building TENT and PATH
<b>Filter 1</b>	interface-ip-address—See description of the ospfElectDr interface-ip-address filter for information about this filter
<b>Filter 2</b>	router—See description of the ospfElectDr router filter for information about this filter

## ospfSpfIntra

---

<b>Description</b>	OSPF SPF intra-area calculation
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Errors in adding, modifying, or removing entries in tentative path entry table (TENT) and path entry table (PATH)
<b>Warning Log</b>	None
<b>Notice Log</b>	SPF chunking events (for example, number of LSAs processed in an SPF chunk)
<b>Info</b>	SPF results
<b>Debug</b>	Events in building TENT and PATH
<b>Filter 1</b>	interface-ip-address—See description of the ospfElectDr interface-ip-address filter for information about this filter
<b>Filter 2</b>	router—See description of the ospfElectDr router filter for information about this filter

## ospfTeDatabase

---

<b>Description</b>	OSPF traffic engineering database
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Error in adding, deleting, or updating a record in the TE database
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	General information about a record being added, deleted, or updated in the TE database
<b>Debug</b>	None
<b>Filter</b>	router name <i>virtualRouterName</i> <ul style="list-style-type: none"> <li>■ router name—Logs events for a specific virtual router</li> <li>■ <i>virtualRouterName</i>—Name of virtual router for which you want to log events</li> </ul>

## ospfTeSpf

---

<b>Description</b>	OSPF traffic engineering SPF
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Any error in constrained SPF calculation
<b>Warning Log</b>	None
<b>Notice Log</b>	information about explicit path found as a result of TE SPF; information about type of failure in finding a constrained path

**Info** None

**Debug** None

**Filter** router name *virtualRouterName*

- router name—Logs events for a specific virtual router
- *virtualRouterName*—Name of virtual router for which you want to log events

## ospfv3ElectDr

---

**Description** OSPFv3 designated router (DR) election

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** None

**Notice Log** DR election events

**Info** None

**Debug** None

**Filter 1** interface-ip-address [ ip-address *ipAddress* | unnumbered *interfaceType* *interfaceSpecifier* ]

- interface-ip-address—Logs events for a specific interface
- ip-address—Specifies that you will identify the interface by entering an IP address
- *ipAddress*—IP address of interface for which you want to log events
- unnumbered—Specifies that the interface is unnumbered
- *interfaceType*—Type of interface for which you want to log events
- *interfaceSpecifier*—Location of the unnumbered interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---



- Filter 2** router *virtualRouterName* [ interface-ip-address [ ip-address *ipAddress* | unnumbered *interfaceType interfaceSpecifier* ] ]
- router—Logs events for a specific virtual router
  - *virtualRouterName*—Name of virtual router for which you want to log events
  - interface-ip-address—Logs events for a specific interface on the virtual router
  - ip-address—Specifies that you will identify the interface by entering an IP address
  - *ipAddress*—IP address of interface for which you want to log events
  - unnumbered—Specifies that the interface is unnumbered
  - *interfaceType*—Type of interface for which you want to log events
  - *interfaceSpecifier*—Location of the unnumbered interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*, .

ospfv3General

Description	OSPFv3 general
Emergency	None
Alert	None
Critical	None
Error	Error enabling or disabling OSPFv3; allocation errors
Warning Log	State change errors (for example, OSPFv3 could not be enabled); errors creating or destroying an area, an OSPFv3 range, or a virtual link
Notice Log	OSPFv3 enabled or disabled; BFD enabled or disable on an OSPF interface
Info	None
Debug	None
Filter 1	interface-ip-address—See description of the ospfElectDr interface-ip-address filter for information about this filter

**Filter 2** router—See description of the ospfElectDr router filter for information about this filter

## ospfv3HelloPktsRcvd

---

<b>Description</b>	Processing of hello messages received on OSPFv3-enabled interfaces
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Invalid packet, hello parameters mismatch (area, network, hello and dead intervals, version, md5 digest)
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Received hello information (ip source/destination, length)
<b>Filter</b>	router <i>virtualRouterName</i> [ <i>interface interfaceType interfaceSpecifier</i> ] <ul style="list-style-type: none"> <li>■ router—Logs events for a specific virtual router</li> <li>■ <i>virtualRouterName</i>—Name of the virtual router for which you want to log events</li> <li>■ interface—Logs events on a specific OSPFv3-enabled interface on the virtual router</li> <li>■ <i>interfaceType</i>—Type of the interface for which you want to log events (for example, atm or fastEthernet)</li> <li>■ <i>interfaceSpecifier</i>—Location of the interface in the appropriate format</li> </ul>

## ospfv3HelloPktsSent

---

<b>Description</b>	Sending of hello messages on OSPFv3-enabled interfaces
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None

<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Information about hello messages sent on OSPFv3-enabled interfaces (ip source/destination, length)
<b>Filter</b>	<p>router <i>virtualRouterName</i> [ <i>interface interfaceType interfaceSpecifier</i> ]</p> <ul style="list-style-type: none"> <li>■ router—Logs events for a specific virtual router</li> <li>■ <i>virtualRouterName</i>—Name of the virtual router for which you want to log events</li> <li>■ interface—Logs events on a specific OSPFv3-enabled interface on the virtual router</li> <li>■ <i>interfaceType</i>—Type of the interface for which you want to log events (for example, atm or fastEthernet)</li> <li>■ <i>interfaceSpecifier</i>—Location of the interface in the appropriate format</li> </ul>

## ospfv3Interface

---

<b>Description</b>	OSPFv3 interface
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Error saving or restoring OSPFv3 interface configuration
<b>Warning Log</b>	Errors for packets sent or received over the OSPFv3 interface
<b>Notice Log</b>	Creation or deletion of OSPFv3 interfaces
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter 1</b>	interface-ip-address—See description of the ospfElectDr interface-ip-address filter for information about this filter

**Filter 2** router—See description of the ospfElectDr router filter for information about this filter

## ospfV3Lsa

---

**Description** OSPFv3 link-state advertisement (LSA) events

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** LSA discard errors

**Notice Log** LSA add, update, or delete events; LSA purge, refresh, and max-age events; LSA send and receive events (Ack, delayed Ack, retransmit)

**Info** None

**Debug** None

**Filter 1** neighbor *neighborIpAddress*

- neighbor—Logs events associated with a specific neighbor
- *neighborIpAddress*—IP address of neighbor for which you want to log events

**Filter 2** router *virtualRouterName* [ neighbor *neighborIpAddress* ]

- router—Logs events on a specific virtual router
- *virtualRouterName*—Virtual router on which you want to log events
- neighbor—Logs events associated with a specific neighbor
- *neighborIpAddress*—IP address of neighbor for which you want to log events

## ospfv3Neighbor

---

**Description** OSPFv3 neighbor change

**Emergency** None

**Alert** None

<b>Critical</b>	None
<b>Error</b>	Neighbor MTU negotiation rejects
<b>Warning Log</b>	Flooding event errors; neighbor transition from Full state to Down state; invalid neighbor LSA requests; neighbor MTU negotiation mismatches; disregarding graceful restart notification (when graceful restart helper mode is not configured and the router gets a Grace LSA from a neighbor); aborting graceful restart due to time out (when the Grace LSA expires before the neighbor exited graceful restart); aborting graceful restart help due to topology change
<b>Notice Log</b>	Database description neighbor exchange; neighbor state changes; neighbor retransmissions
<b>Info</b>	None
<b>Debug</b>	Router exits graceful restart; helping router with graceful restart
<b>Filter 1</b>	neighbor—See description of the ospfLsa neighbor filter for information about this filter
<b>Filter 2</b>	router—See description of the ospfLsa router filter for information about this filter

## ospfv3PktsRcvd

---

<b>Description</b>	OSPFv3 packet received
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Packets discarded; validation errors
<b>Notice Log</b>	Number of LSAs packed in different packet types (LSA Ack, LSA update); packets received over Down interface
<b>Info</b>	None
<b>Debug</b>	Packets received description

**Filter 1** interface-ip-address—See description of the ospfElectDr interface-ip-address filter for information about this filter

**Filter 2** router—See description of the ospfElectDr router filter for information about this filter

## ospfv3PktsSent

---

**Description** OSPFv3 packet sent

**Emergency** None

**Alert** None

**Critical** None

**Error** Packet sent errors (for example, dropped OSPF packets)

**Warning Log** None

**Notice Log** Number of LSAs packed in different packet types (LSA Ack, LSA update)

**Info** None

**Debug** Packets sent description

**Filter 1** interface-ip-address—See description of the ospfElectDr interface-ip-address filter for information about this filter

**Filter 2** router—See description of the ospfElectDr router filter for information about this filter

## ospfv3Route

---

**Description** OSPF route

**Emergency** None

**Alert** None

**Critical** None

**Error** OSPF route addition, deletion, or replacement errors in the routing table

<b>Warning Log</b>	Errors for routes imported into OSPF
<b>Notice Log</b>	Forwarding address decision algorithm events
<b>Info</b>	OSPF route added to, replaced, or deleted from the routing table; route imported into OSPF
<b>Debug</b>	None
<b>Filter 1</b>	interface-ip-address—See description of the ospfElectDr interface-ip-address filter for information about this filter
<b>Filter 2</b>	router—See description of the ospfElectDr router filter for information about this filter

## ospfV3SpfExt

---

<b>Description</b>	OSPFv3 SPF external calculation
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Errors in adding, modifying, or removing entries in tentative path entry table (TENT) and path entry table (PATH)
<b>Warning Log</b>	None
<b>Notice Log</b>	SPF (Dijkstra Shortest Path First algorithm) chunking events (for example, number of LSAs processed in an SPF chunk)
<b>Info</b>	SPF results
<b>Debug</b>	Events in building TENT and PATH
<b>Filter 1</b>	interface-ip-address—See description of the ospfElectDr interface-ip-address filter for information about this filter
<b>Filter 2</b>	router—See description of the ospfElectDr router filter for information about this filter

## ospfV3SpfInter

---

<b>Description</b>	OSPFv3 SPF interarea calculation
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Errors in adding, modifying, or removing entries in tentative path entry table (TENT) and path entry table (PATH)
<b>Warning Log</b>	None
<b>Notice Log</b>	SPF chunking events (for example, number of LSAs processed in an SPF chunk)
<b>Info</b>	SPF results
<b>Debug</b>	Events in building TENT and PATH
<b>Filter 1</b>	interface-ip-address—See description of the ospfElectDr interface-ip-address filter for information about this filter
<b>Filter 2</b>	router—See description of the ospfElectDr router filter for information about this filter

## ospfV3SpfIntra

---

<b>Description</b>	OSPFv3 SPF intra-area calculation
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Errors in adding, modifying, or removing entries in tentative path entry table (TENT) and path entry table (PATH)
<b>Warning Log</b>	None



- Notice Log** SPF chunking events (for example, number of LSAs processed in an SPF chunk)
- Info** SPF results
- Debug** Events in building TENT and PATH
- Filter 1** interface-ip-address—See description of the ospfElectDr interface-ip-address filter for information about this filter
- Filter 2** router—See description of the ospfElectDr router filter for information about this filter



## Chapter 15

# P Commands

- pimAutoRPRcvdLog on page 196
- pimAutoRPSentLog on page 197
- pimBsrRcvdLog on page 197
- pimBsrSentLog on page 198
- pimGracefulRestartLog on page 199
- pimHelloRcvdLog on page 199
- pimHelloSentLog on page 200
- pimIpv6AutoRPRcvdLog on page 200
- pimIpv6AutoRPSentLog on page 202
- pimIpv6BsrRcvdLog on page 202
- pimIpv6BsrSentLog on page 203
- pimIpv6GracefulRestartLog on page 203
- pimIpv6HelloRcvdLog on page 204
- pimIpv6HelloSentLog on page 205
- pimIpv6PktsRcvdLog on page 206
- pimIpv6PktsSentLog on page 206
- pimPktsRcvdLog on page 207
- pimPktsSentLog on page 208
- pimsmGeneral on page 208
- pimsmMvpn on page 209
- policyMgrAttachment on page 209
- policyMgrGeneral on page 210
- policyMgrPacketLog on page 210
- ppp on page 211
- pppoe on page 212
- pppoeControlPacket on page 212
- pppPacket on page 213
- pppStateMachine on page 214
- profileMgr on page 214

**pimAutoRPRcvdLog**

---

**Description** Protocol Independent Multicast (PIM) AutoRP messages received

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** None

**Notice Log** None

**Info** Short description of received PIM AutoRP packets

**Debug** Complete print of received PIM AutoRP packets

**Filter 1** interface-ip-address [ ip-address *ipAddress* | unnumbered *interfaceType* *interfaceSpecifier* ]

- interface-ip-address—Logs events for a specific interface
- ip-address—Specifies that you will identify the interface by entering an IP address
- *ipAddress*—IP address of interface for which you want to log events
- unnumbered—Specifies that the interface is unnumbered
- *interfaceType*—Type of interface for which you want to log events
- *interfaceSpecifier*—Location of unnumbered interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

**Filter 2** router *virtualRouterName* [ interface-ip-address [ ip-address *ipAddress* | unnumbered *interfaceType* *interfaceSpecifier* ] ]

- router—Logs events for a specific virtual router
- *virtualRouterName*—Name of virtual router for which you want to log events
- interface-ip-address—Logs events for a specific interface on the virtual router
- ip-address—Specifies that you will identify the interface by entering an IP address

- *ipAddress*—IP address of interface for which you want to log events
- *unnumbered*—Specifies that the interface is unnumbered
- *interfaceType*—Type of interface for which you want to log events
- *interfaceSpecifier*—Location of unnumbered interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

### pimAutoRPSentLog

Description	Protocol Independent Multicast (PIM) AutoRP messages sent
Emergency	None
Alert	None
Critical	None
Error	None
Warning Log	None
Notice Log	None
Info	Short description of the sent PIM AutoRP packets
Debug	Complete print of the sent PIM AutoRP packets
Filter 1	interface-ip-address—See description of the pimAutoRPRcvdLog interface-ip-address filter for information about this filter
Filter 2	router—See description of the pimAutoRPRcvdLog router filter for information about this filter

### pimBsrRcvdLog

Description	Reception of PIM-SM IPv4 BSR messages (BSM and C-RP-Advs)
Emergency	None

<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Parse errors
<b>Warning Log</b>	Context errors
<b>Notice Log</b>	None
<b>Info</b>	Description of received messages (specify high verbosity for detail)
<b>Debug</b>	None
<b>Filter 1</b>	interface-ip-address—See description of the pimAutoRPRcvdLog interface-ip-address filter for information about this filter
<b>Filter 2</b>	router—See description of the pimAutoRPRcvdLog router filter for information about this filter

## pimBsrSentLog

---

<b>Description</b>	Transmission of PIM-SM IPv4 BSR messages (BSM and C-RP-Advs)
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	System errors
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	Description of transmitted messages (specify high verbosity for detail)
<b>Debug</b>	None
<b>Filter 1</b>	interface-ip-address—See description of the pimAutoRPRcvdLog interface-ip-address filter for information about this filter

**Filter 2** router—See description of the pimAutoRPRcvdLog router filter for information about this filter

## pimGracefulRestartLog

---

<b>Description</b>	PIM graceful restart
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	PIM graceful restart complete
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	None

## pimHelloRcvdLog

---

<b>Description</b>	Protocol Independent Multicast (PIM) hello messages received
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	Short description of the received PIM hello messages

<b>Debug</b>	Complete printout of the received PIM hello messages
<b>Filter 1</b>	interface-ip-address—See description of the pimAutoRPRcvdLog interface-ip-address filter for information about this filter
<b>Filter 2</b>	router—See description of the pimAutoRPRcvdLog router filter for information about this filter

## pimHelloSentLog

---

<b>Description</b>	Protocol Independent Multicast (PIM) hello messages sent
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	Short description of the PIM hello messages sent
<b>Debug</b>	Complete description of the PIM hello messages sent
<b>Filter 1</b>	interface-ip-address—See description of the pimAutoRPRcvdLog interface-ip-address filter for information about this filter
<b>Filter 2</b>	router—See description of the pimAutoRPRcvdLog router filter for information about this filter

## pimIpv6AutoRPRcvdLog

---

<b>Description</b>	Protocol Independent Multicast (PIM) AutoRP messages received
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None



**Error** None

**Warning Log** None

**Notice Log** None

**Info** Short description of received PIM AutoRP packets

**Debug** Complete print of received PIM AutoRP packets

- Filter 1** `interface-ipv6-address [ ipv6-address ipv6Address | unnumbered interfaceType interfaceSpecifier ]`
- `interface-ipv6-address`—Logs events for a specific interface
  - `ipv6-address`—Specifies that you will identify the interface by entering an IPv6 address
  - `ipv6Address`—IPv6 address of interface for which you want to log events
  - `unnumbered`—Specifies that the interface is unnumbered
  - `interfaceType`—Type of interface for which you want to log events
  - `interfaceSpecifier`—Location of unnumbered interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

- Filter 2** `router virtualRouterName [ interface-ipv6-address [ ipv6-address ipv6Address | unnumbered interfaceType interfaceSpecifier ] ]`
- `router`—Logs events for a specific virtual router
  - `virtualRouterName`—Name of virtual router for which you want to log events
  - `interface-ipv6-address`—Logs events for a specific interface on the virtual router
  - `ipv6-address`—Specifies that you will identify the interface by entering an IPv6 address
  - `ipv6Address`—IPv6 address of interface for which you want to log events
  - `unnumbered`—Specifies that the interface is unnumbered
  - `interfaceType`—Type of interface for which you want to log events
  - `interfaceSpecifier`—Location of unnumbered interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

## pimIpv6AutoRPSentLog

---

<b>Description</b>	Protocol Independent Multicast (PIM) AutoRP messages sent
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	Short description of the sent PIM AutoRP packets
<b>Debug</b>	Complete print of the sent PIM AutoRP packets
<b>Filter 1</b>	interface-ipv6-address—See description of the pimIpv6AutoRPRcvdLog interface-ipv6-address filter for information about this filter
<b>Filter 2</b>	router—See description of the pimIpv6AutoRPRcvdLog router filter for information about this filter

## pimIpv6BsrRcvdLog

---

<b>Description</b>	Reception of PIM-SM IPv6 BSR messages (BSM and C-RP-Advs)
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Parse errors
<b>Warning Log</b>	Context errors
<b>Notice Log</b>	None

<b>Info</b>	Description of received messages (specify high verbosity for detail)
<b>Debug</b>	None
<b>Filter 1</b>	interface-ip-address—See description of the pimAutoRPRcvdLog interface-ip-address filter for information about this filter
<b>Filter 2</b>	router—See description of the pimAutoRPRcvdLog router filter for information about this filter

## pimIpv6BsrSentLog

---

<b>Description</b>	Transmission of PIM-SM IPv6 BSR messages (BSM and C-RP-Advs)
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	System errors
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	Description of transmitted messages (specify high verbosity for detail)
<b>Debug</b>	None
<b>Filter 1</b>	interface-ip-address—See description of the pimAutoRPRcvdLog interface-ip-address filter for information about this filter
<b>Filter 2</b>	router—See description of the pimAutoRPRcvdLog router filter for information about this filter

## pimIpv6GracefulRestartLog

---

<b>Description</b>	PIM IPv6 graceful restart
<b>Emergency</b>	None
<b>Alert</b>	None

<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	PIM graceful restart complete
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	None

## pimIcmpv6HelloRcvdLog

---

<b>Description</b>	Protocol Independent Multicast (PIM) hello messages received
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	Short description of the received PIM hello messages
<b>Debug</b>	Complete printout of the received PIM hello messages
<b>Filter 1</b>	<p>interface-ipv6-address [ ipv6-address <i>ipv6Address</i>   unnumbered <i>interfaceType interfaceSpecifier</i> ]</p> <ul style="list-style-type: none"> <li>■ interface-ipv6-address—Logs events for a specific interface</li> <li>■ ipv6-address—Specifies that you will identify the interface by entering an IPv6 address</li> <li>■ <i>ipv6Address</i>—IPv6 address of interface for which you want to log events</li> <li>■ unnumbered—Specifies that the interface is unnumbered</li> </ul>

- *interfaceType*—Type of interface for which you want to log events
- *interfaceSpecifier*—Location of unnumbered interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

- Filter 2** router *virtualRouterName* [ interface-ipv6-address [ ipv6-address *ipv6Address* | unnumbered *interfaceType interfaceSpecifier* ] ]
- router—Logs events for a specific virtual router
  - *virtualRouterName*—Name of virtual router for which you want to log events
  - interface-ipv6-address—Logs events for a specific interface on the virtual router
  - ipv6-address—Specifies that you will identify the interface by entering an IPv6 address
  - *ipv6Address* —IPv6 address of interface for which you want to log events
  - unnumbered—Specifies that the interface is unnumbered
  - *interfaceType*—Type of interface for which you want to log events
  - *interfaceSpecifier*—Location of unnumbered interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

**pimIpv6HelloSentLog**

Description	Protocol Independent Multicast (PIM) Hello messages sent
Emergency	None
Alert	None
Critical	None
Error	None
Warning Log	None
Notice Log	None
Info	Short description of the PIM hello messages sent

- Debug** Complete description of the PIM hello messages sent
- Filter 1** interface-ipv6-address—See description of the pimIpv6HelloRcvdLog interface-ipv6-address filter for information about this filter
- Filter 2** router—See description of the pimIpv6HelloRcvdLog router filter for information about this filter

## pimIpv6PktsRcvdLog

---

- Description** Protocol Independent Multicast (PIM) nonhello (Register/RegisterStop/JoinPrune/Assert/Graft/GraftAck) messages received
- Emergency** None
- Alert** None
- Critical** None
- Error** None
- Warning Log** None
- Notice Log** None
- Info** Short description of the PIM messages received
- Debug** Complete description of the PIM messages received
- Filter 1** interface-ipv6-address—See description of the pimIpv6HelloRcvdLog interface-ipv6-address filter for information about this filter
- Filter 2** router—See description of the pimIpv6HelloRcvdLog router filter for information about this filter

## pimIpv6PktsSentLog

---

- Description** Protocol Independent Multicast (PIM) nonhello (Register/RegisterStop/JoinPrune/Assert/Graft/GraftAck) messages sent
- Emergency** None
- Alert** None

<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	Short description of the PIM messages sent
<b>Debug</b>	Complete description of the PIM messages sent
<b>Filter 1</b>	interface-ipv6-address—See description of the pimIpv6HelloRcvdLog interface-ipv6-address filter for information about this filter
<b>Filter 2</b>	router—See description of the pimIpv6HelloRcvdLog router filter for information about this filter

## pimPktsRcvdLog

---

<b>Description</b>	Protocol Independent Multicast (PIM) nonhello (Register/RegisterStop/JoinPrune/Assert/Graft/GraftAck) messages received
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	Short description of the PIM messages received
<b>Debug</b>	Complete description of the PIM messages received
<b>Filter 1</b>	interface-ip-address—See description of the pimAutoRPRcvdLog interface-ip-address filter for information about this filter
<b>Filter 2</b>	router—See description of the pimAutoRPRcvdLog router filter for information about this filter

## pimPktsSentLog

---

<b>Description</b>	Protocol Independent Multicast (PIM) nonhello (Register/RegisterStop/JoinPrune/Assert/Graft/GraftAck) messages sent
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	Short description of the PIM messages sent
<b>Debug</b>	Complete description of the PIM messages sent
<b>Filter 1</b>	interface-ip-address—See description of the pimAutoRPRcvdLog interface-ip-address filter for information about this filter
<b>Filter 2</b>	router—See description of the pimAutoRPRcvdLog router filter for information about this filter

## pimsmGeneral

---

<b>Description</b>	General PIM sparse mode events
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	Failure to initialize PIM sparse mode; memory allocation failures
<b>Error</b>	Error enabling or disabling PIM sparse mode; error adding or removing state
<b>Warning Log</b>	None
<b>Notice Log</b>	None



<b>Info</b>	Successful addition or removal of peer
<b>Debug</b>	None
<b>Filter</b>	None

## **pimsmMvpn**

---

<b>Description</b>	Multicast VPN events, including default and data MDT creation and deletion
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Failure to create MDT
<b>Warning Log</b>	None
<b>Notice Log</b>	Successful creation or deletion of default MDT; switch from data MDT to default MDT or from default MDT to data MDT
<b>Info</b>	Successful creation or deletion of data MDT
<b>Debug</b>	None
<b>Filter</b>	None

## **policyMgrAttachment**

---

<b>Description</b>	Policy Manager policy attachment activity
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Error attaching policies to static and dynamic interfaces
<b>Warning Log</b>	None

**Notice Log** None

**Info** Successful attachment of policies to dynamic interfaces

**Debug** CAM resource allocation on a line module is exceeded; the particular policy fails to be attached to the interface

**Filter** None

## policyMgrGeneral

---

**Description** Policy Manager general information

**Emergency** None

**Alert** None

**Critical** None

**Error** Error storing or restoring policy manager data to and from NVS; resource exhaustion errors

**Warning Log** None

**Notice Log** None

**Info** None

**Debug** 144-bit, 288-bit, or 576-bit CAM entry allocated for a classifier entry in a particular policy

**Filter** None

## policyMgrPacketLog

---

**Description** Policy Manager packets

**Emergency** None

**Alert** None

**Critical** None

<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	Packet trace
<b>Debug</b>	None
<b>Filter</b>	None

**ppp**

---

<b>Description</b>	Point-to-Point Protocol layer
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	Nonrecoverable error
<b>Error</b>	Recoverable error
<b>Warning Log</b>	Resource or configuration problem
<b>Notice Log</b>	Authentication actions
<b>Info</b>	Downstream buffer slot and upstream buffer slot details
<b>Debug</b>	Detailed debugging information
<b>Filter</b>	interface <i>interfaceType</i> <i>interfaceSpecifier</i> <ul style="list-style-type: none"><li>■ interface—Logs PPP events for a specific interface</li><li>■ <i>interfaceType</i>—Type of interface for which you want to log PPP events</li><li>■ <i>interfaceSpecifier</i>—Location of interface in the appropriate format</li></ul>



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

**pppoe**


---

<b>Description</b>	Point-to-Point over Ethernet layer
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Error enabling control packet log
<b>Warning Log</b>	PPPoE interface or subInterface removed from NVS
<b>Notice Log</b>	PPPoE enabled; status change for subInterface
<b>Info</b>	Line module status change
<b>Debug</b>	None
<b>Filter</b>	interface <i>interfaceType interfaceSpecifier</i> <ul style="list-style-type: none"> <li>■ interface—Logs PPP events for a specific interface</li> <li>■ <i>interfaceType</i>—Type of interface for which you want to log PPP events</li> <li>■ <i>interfaceSpecifier</i>—Location of interface in the appropriate format</li> </ul>

---



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---


**pppoeControlPacket**


---

<b>Description</b>	PPPoE control packet trace
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None

Warning Log	None
Notice Log	None
Info	None
Debug	Control packets logged; control packet log enabled
Filter	interface <i>interfaceType</i> <i>interfaceSpecifier</i> <ul style="list-style-type: none"><li>■ interface—Logs PPP events for a specific interface</li><li>■ <i>interfaceType</i>—Type of interface for which you want to log PPP events</li><li>■ <i>interfaceSpecifier</i>—Location of interface in the appropriate format</li></ul>

---

**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

pppPacket

Description	PPP packet capture
Emergency	None
Alert	None
Critical	None
Error	None
Warning Log	None
Notice Log	None
Info	None
Debug	Packet trace
Filter	interface <i>interfaceType</i> <i>interfaceSpecifier</i> <ul style="list-style-type: none"><li>■ interface—Logs PPP events for a specific interface</li><li>■ <i>interfaceType</i>—Type of interface for which you want to log PPP events</li><li>■ <i>interfaceSpecifier</i>—Location of interface in the appropriate format</li></ul>



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

## pppStateMachine

<b>Description</b>	PPP state machine trace
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	State machine trace
<b>Filter</b>	interface <i>interfaceType</i> <i>interfaceSpecifier</i> <ul style="list-style-type: none"> <li>■ interface—Logs PPP events for a specific interface</li> <li>■ <i>interfaceType</i>—Type of interface for which you want to log PPP events. For example, atm or fastEthernet</li> <li>■ <i>interfaceSpecifier</i>—Location of interface in the appropriate format</li> </ul>



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

## profileMgr

<b>Description</b>	Profile manager
<b>Emergency</b>	None

<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Profile manager process creation failed
<b>Warning Log</b>	Profile being removed was not found
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Initialize profiles from NVS at startup; dump list of profiles after startup initialization; read or save profile numbering seed to and from NVS; profile manager process creation succeeded; NVS updated; profile lookup succeeded; validating or executing removal of profile
<b>Filter</b>	None





## Chapter 16

# Q Commands

- qm on page 217
- qos on page 217
- qosAttachment on page 218

### qm

---

<b>Description</b>	Queue manager
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Queue memory errors; line module queue errors; queue database synchronization errors
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	None

### qos

---

<b>Description</b>	QoS events
<b>Emergency</b>	None

<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	QoS object creation and modification failures due to resource limitations or configuration limitations; QoS profile to interface attachment failures; QoS failover messages reported by line module
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	Modification, creation, and destruction of QoS objects; attachment of modification of QoS objects; attachment of QoS profiles to interfaces; detachment of QoS profiles from interfaces; modification of QoS profiles; QoS interface location availability operations
<b>Debug</b>	Dynamic attachment of QoS profile to interfaces
<b>Filter</b>	None

## qosAttachment

---

<b>Description</b>	QoS profile attachment to interface configuration
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	QoS attachment failures
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	Attachment of QoS profiles; modification of QoS profile attachments
<b>Debug</b>	Dynamic attachment of QoS profiles; QoS profile attach/detach tracing
<b>Filter</b>	None

## Chapter 17

# R Commands

- radiusAttributes on page 219
- radiusClient on page 220
- radiusCoAAttributes on page 220
- radiusDisconnectGeneral on page 221
- radiusRelayGeneral on page 222
- radiusSendAttributes on page 222
- remOps on page 223
- resourceThresholdTrap on page 223
- ripBfd on page 224
- ripGeneral on page 225
- ripRoute on page 225
- ripRtTable on page 226
- routeDownloader on page 227
- routerLog on page 227
- rsvpAsyncMgr on page 228
- rsvpBfd on page 228
- rsvpGeneral on page 229
- rsvpGracefulRestart on page 230
- rsvpInterface on page 230
- rsvpTunnel on page 231

### radiusAttributes

---

**Description** RADIUS user attributes

**Emergency** None

**Alert** None

**Critical** None

<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Supported RADIUS attributes found in the Access-Accept or Access-Reject packet; reports changes to the Service-Acct-Interval attribute (Juniper VSA 26-140)
<b>Filter</b>	None

## radiusClient

---

<b>Description</b>	RADIUS Authentication and Accounting Client
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Internal allocation error of base RADIUS server table; invalid virtual router for user's context; failure to include the ICR-Partition-Id VSA in Access-Request and accounting messages when the ICR partition is not found in the AAA list
<b>Warning Log</b>	Failure to send accounting on or accounting off; tunnel password format error; tunnel accounting request
<b>Notice Log</b>	Dropping tunnel attribute
<b>Info</b>	ICR partition accounting message failures when the Accounting-On response is pending from the RADIUS server
<b>Debug</b>	Authentication or accounting failure due to internal memory allocation failure; memory allocation failure for profile; failed to insert tunnel attribute and tunnel tag table; found unexpected tunnel table
<b>Filter</b>	None

## radiusCoAAttributes

---

<b>Description</b>	RADIUS CoA attributes
--------------------	-----------------------

<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Displays CoA requests and replies received by the router, including the attributes; reports changes to the Service-Acct-Interval attribute (Juniper VSA 26-140); Agent Circuit ID, Agent Remote ID (DSL Forum VSA) and DHCP Option 82
<b>Filter</b>	None

## radiusDisconnectGeneral

---

<b>Description</b>	RADIUS Disconnect and CoA General
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	CoA failures resulting from memory allocation failures
<b>Debug</b>	CoA results received that do not match pending CoA requests
<b>Filter</b>	None

## radiusRelayGeneral

---

<b>Description</b>	RADIUS Relay Server general
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Memory-allocation; NVS update failure; subscriber session timeouts
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Receiving invalid radius request. Debugging interaction with AAA/GPLAAN
<b>Filter</b>	None

## radiusSendAttributes

---

<b>Description</b>	RADIUS attributes added to Access-Accept (inbound RADIUS requests), Acct-Start, Interim-Acct, and Acct-Stop messages
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	Parse errors that occur in L2C and DSL Forum attribute strings

**Debug** Attributes that are added to outbound RADIUS requests, including Access-Request, Acct-Start, Acct-Stop, interim accounting requests, tunnel accounting requests, and ICR partition accounting requests; IPv6 accounting VSA attributes (IPv6-Acct-Input-Octets [26-151], IPv6-Acct-Output-Octets [26-152], IPv6-Acct-Input-Packets [26-153], IPv6-Acct-Output-Packets [26-154], IPv6-Acct-Input-Gigawords [26-155], and IPv6-Acct-Output-Gigawords [26-156]) that are added to outbound RADIUS requests, including Acct-Stop and interim accounting requests; IPv6 RADIUS IETF and VSA attributes (Ipv6-NdRa-Prefix [26-129], Ipv6-Virtual-Router [26-45], Ipv6-Local-Interface [26-46], Ipv6-Primary-DNS [26-47], Ipv6-Secondary-DNS [26-48], Framed-IPv6-Route [99], Framed-IPv6-Pool [100], Delegated-Ipv6-Prefix [123]) that are added to Access-Accept (inbound RADIUS requests), Acct-Start, Interim-Acct, and Acct-Stop messages; DHCP Option 82 [26-159] which is added to trigger packet mirroring for DHCP subscribers

**Filter** None

## remOps

---

**Description** Remote operations

**Emergency** None

**Alert** None

**Critical** None

**Error** Internal error

**Warning Log** Maximum table size reached; ICMP failure; same target probed by more than one entry

**Notice Log** Remote operations application begin/start; ping, traceroute, or nslookup entry; create, modify, or remove; unexpected packet receive; invalid target or source address; late packet receive

**Info** None

**Debug** Ping, traceroute, or nslookup session begin or end; packet receive; duplicate receive

**Filter** None

## resourceThresholdTrap

---

**Description** Resource threshold trap log

<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Rising trap
<b>Notice Log</b>	Falling trap
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	None

## ripBfd

---

<b>Description</b>	RIP and BFD interaction and RIP session log
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Client session creation, update, and deletion failures
<b>Warning Log</b>	unknown RIP peer
<b>Notice Log</b>	None
<b>Info</b>	BFD session state changes
<b>Debug</b>	None
<b>Filter</b>	Router and interface



## ripGeneral

---

**Description** RIP system notifications

**Emergency** None

**Alert** None

**Critical** None

**Error** Failed to redistribute an external route to the RIP; failed to establish peer with neighbor due to the memory limitation; general RIP configuration error, such as an access list name or route map name specified in the RIP config mode exceed maximum allowable length

**Warning Log** Failed to process a RIP packet due to the current memory limitation

**Notice Log** Enable or disable RIP application

**Info** None

**Debug** RIP query; RIP peer address

**Filter 1** interface *interfaceType interfaceSpecifier*

- interface—Logs PPP events for a specific interface
- *interfaceType*—Type of interface for which you want to log events
- *interfaceSpecifier*—Location of interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

**Filter 2** router *virtualRouterName*

- router—Logs events for a specific virtual router
- *virtualRouterName*—Name of virtual router for which you want to log events

## ripRoute

---

**Description** RIP route

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** None

**Notice Log** None

**Info** None

**Debug** Routes sent or received by RIP; if a route is rejected or not sent, gives the reason

**Filter 1** interface *interfaceType interfaceSpecifier*

- interface—Logs PPP events for a specific interface
- *interfaceType*—Type of interface for which you want to log events
- *interfaceSpecifier*—Location of interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

**Filter 2** router *virtualRouterName*

- router—Logs events for a specific virtual router
- *virtualRouterName*—Name of virtual router for which you want to log events

## ripRtTable

---

**Description** RIP routing table

**Emergency** None

**Alert** None

**Critical** None

**Error** Failed to remove a RIP route from the IP routing table

**Warning Log** Failed to added a RIP route to the IP routing table

**Notice Log** None

**Info** None

**Debug** Add or remove a route to the RIP routing table

**Filter** None

## routeDownloader

---

**Description** RADIUS route-download server operation

**Emergency** None

**Alert** None

**Critical** None

**Error** Unable to create application process when configured

**Warning Log** Write to mirrored storage memory failed

**Notice Log** No IP Application is found on warm start; unable to retrieve a route from AAA; route string parse error; too many downloaded routes; invalid destination of a downloaded route; **clear all** command is terminated due to download failure; empty download

**Info** Download started, completed, or finalized; IP update started, completed, or finalized

**Debug** Download operation information; such as download request sent. download response received

**Filter** None

## routerLog

---

**Description** Virtual router log

**Emergency** None

**Alert** None

<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	Creation and deletion of virtual routers
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	router <i>virtualRouterName</i> <ul style="list-style-type: none"> <li>■ router—Logs events for a specific virtual router</li> <li>■ <i>virtualRouterName</i>—Name of virtual router for which you want to log events</li> </ul>

## rsvpAsyncMgr

---

<b>Description</b>	RSVP asynchronous manager events
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Events processed by the asynchronous manager (for example, qos-profile/policy creation/deletion/attachment)
<b>Filter</b>	None

## rsvpBfd

---

<b>Description</b>	RSVP-TE and BFD interaction
--------------------	-----------------------------

<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	RSVP-TE client session create failed
<b>Notice Log</b>	None
<b>Info</b>	BFD session create failed for IP address
<b>Debug</b>	Delete BFD; RSVP-TE established session with BFD manager; Creating BFD session for interface; deleting BFD session for interface
<b>Filter</b>	Router and interface

## rsvpGeneral

---

<b>Description</b>	RSVP general purpose
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	Initialization failures; fatal resource allocation failures; fatal internal errors.
<b>Error</b>	Signaling protocol errors; nonfatal internal errors; configuration errors
<b>Warning Log</b>	Minor internal errors
<b>Notice Log</b>	Very minor internal errors
<b>Info</b>	Minor internal errors
<b>Debug</b>	Function flows; parameter passing; timer operations
<b>Filter</b>	router <i>virtualRouterName</i> <ul style="list-style-type: none"> <li>■ router—Logs events for a specific virtual router</li> <li>■ <i>virtualRouterName</i>—Name of virtual router for which you want to log events</li> </ul>

## rsvpGracefulRestart

---

<b>Description</b>	RSVP graceful restart
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	RSVP graceful restart complete
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	None

## rsvpInterface

---

<b>Description</b>	RSVP interface
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Setup errors; operational errors; invalid configuration errors
<b>Warning Log</b>	Nonfatal allocation errors
<b>Notice Log</b>	None
<b>Info</b>	Minor internal errors
<b>Debug</b>	Function flows

- Filter** router *virtualRouterName* [ *interface* *interfaceType* *interfaceSpecifier* ]
- router—Logs events for a specific virtual router
  - *virtualRouterName*—Name of virtual router for which you want to log events
  - *interface*—Logs events on a specific interface on the virtual router
  - *interfaceType*—Type of interface for which you want to log events
  - *interfaceSpecifier*—Location of interface in the appropriate format



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

**rsvpTunnel**

- Description** RSVP tunnels
- Emergency** None
- Alert** None
- Critical** Critical operational errors
- Error** Operational errors; resource allocation failures
- Warning Log** Operational failures; fast-reroute triggering
- Notice Log** Less serious operational failures; network changes
- Info** Minor internal errors; timer operations
- Debug** Function flows, parameter passing
- Filter** router *virtualRouterName*
- router—Logs events for traffic on a specific virtual router
  - *virtualRouterName*—Name of virtual router





## Chapter 18

# S Commands

- security on page 234
- serviceability on page 234
- serviceMgr on page 235
- serviceMgrClientSession on page 235
- serviceMgrDcm on page 236
- serviceMgrMacroManager on page 236
- serviceMgrPerformance on page 237
- serviceMgrServiceDef on page 237
- serviceMgrServiceInstance on page 238
- serviceMgrServiceSession on page 238
- serviceMgrSubscriberSession on page 239
- slep on page 239
- snmp on page 240
- snmpIfMib on page 241
- snmpPduAudit on page 241
- snmpSetPduAudit on page 242
- snmpTrap on page 242
- sonet on page 243
- sonetPath on page 243
- sonetVT on page 244
- sscdDetailPm on page 244
- sscdDetailSsc on page 245
- sscdGeneral on page 245
- sscdLacGeneral on page 246
- ssh on page 247
- stTunnel on page 247
- stTunnelEngine on page 248
- system on page 248

## security

---

<b>Description</b>	CLI security messages
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	Suspected denial of service attack
<b>Error</b>	None
<b>Warning Log</b>	Unrecognized username, invalid password, denied host
<b>Notice Log</b>	User connect, user disconnect
<b>Info</b>	vty allocation success and failure, vty disconnect.
<b>Debug</b>	None
<b>Filter</b>	None

## serviceability

---

<b>Description</b>	Log for serviceability features (currently only for the <b>show tech-support</b> command)
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Insufficient memory to complete the command
<b>Warning Log</b>	The file to support this command is invalid
<b>Notice Log</b>	Normal milestones of command completion
<b>Info</b>	Timing information of <b>show tech-support</b> command
<b>Debug</b>	Detailed information of <b>show tech-support</b> command progress

**Filter** None

## serviceMgr

---

**Description** Service manager

**Emergency** None

**Alert** None

**Critical** None

**Error** Information about detected abnormalities during execution

**Warning Log** Information about exceeded thresholds

**Notice Log** None

**Info** None

**Debug** Information about the code path executed along with values of parameters

**Filter** None

## serviceMgrClientSession

---

**Description** Service manager client session

**Emergency** None

**Alert** None

**Critical** None

**Error** Information about detected abnormalities during execution

**Warning Log** Information about exceeded thresholds

**Notice Log** None

**Info** None

**Debug** Information about the code path executed along with values of parameters

**Filter** None

## serviceMgrDcm

---

**Description** Service manager DCM

**Emergency** None

**Alert** None

**Critical** None

**Error** Information about detected abnormalities during execution

**Warning Log** Information about exceeded thresholds

**Notice Log** None

**Info** None

**Debug** Information about the code path executed along with values of parameters

**Filter** None

## serviceMgrMacroManager

---

**Description** Service manager macro manager

**Emergency** None

**Alert** None

**Critical** None

**Error** Information about detected abnormalities during execution

**Warning Log** Information about exceeded thresholds

**Notice Log** None

**Info** None

**Debug** Information about the code path executed along with values of parameters

**Filter** None

## serviceMgrPerformance

---

**Description** Service manager performance

**Emergency** None

**Alert** None

**Critical** None

**Error** Information about detected abnormalities during execution

**Warning Log** Information about exceeded thresholds

**Notice Log** None

**Info** None

**Debug** Information about the code path executed along with values of parameters

**Filter** None

## serviceMgrServiceDef

---

**Description** Service manager definition

**Emergency** None

**Alert** None

**Critical** None

**Error** Information about detected abnormalities during execution

**Warning Log** Information about exceeded thresholds

<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Information about the code path executed along with values of parameters
<b>Filter</b>	None

## serviceMgrServiceInstance

---

<b>Description</b>	Service manager service instance
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Information about detected abnormalities during execution
<b>Warning Log</b>	Information about exceeded thresholds
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Information about the code path executed along with values of parameters
<b>Filter</b>	None

## serviceMgrServiceSession

---

<b>Description</b>	Service manager service session
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Information about detected abnormalities during execution

<b>Warning Log</b>	Information about exceeded thresholds
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Information about the code path executed along with values of parameters
<b>Filter</b>	None

### **serviceMgrSubscriberSession**

---

<b>Description</b>	Service manager subscriber session
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Information about detected abnormalities during execution
<b>Warning Log</b>	Information about exceeded thresholds
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Information about the code path executed along with values of parameters
<b>Filter</b>	None

### **slep**

---

<b>Description</b>	Point-to-Point Protocol layer
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	Startup interface out of resources failure

**Error** Remove or unbind interface failure; unknown or missing lower binding failure

**Warning Log** Attempt to set characteristics with invalid value

**Notice Log** None

**Info** Hardware state change notification

**Debug** None

**Filter** serial *interfaceSpecifier*

- serial—Logs SLEP events for a specific serial Cisco-HDLC interface
- *interfaceSpecifier*—Identifier for a serial Cisco-HDLC interface



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

## snmp

---

**Description** Embedded SNMP agent

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** Access violation due to underprivileged community string or a bad proxy selector; access denial due to configured access list; configuration of SNMP failed; trap is dropped because of the severity level filter or because the trap category is not enabled

**Notice Log** None

**Info** SNMP agent has been enabled or disabled

**Debug** Trap request dropped; trap processing summary statistics

**Filter** None



**snmplfMib**

---

<b>Description</b>	SNMP Interfaces MIB
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Invalid ifTableLastChange reported by an interface
<b>Warning Log</b>	Failed to process an interface for ifNumber MIB attribute computation
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	None
<b>Filter</b>	None

**snmpPduAudit**

---

<b>Description</b>	SNMP PDUs
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	Identifies the following fields in all SNMP PDUs sent to the E Series router and all trap PDUs that leave the system: source and destination IP address, PDU type, snmpVersion, requested, errorStatus, errorIndex, variable count, variable object identifier and data

**Debug** None

**Filter** None

## snmpSetPduAudit

---

**Description** SNMP set PDUs

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** None

**Notice Log** None

**Info** Identifies the following fields in SNMP set PDUs: source and destination IP address, PDU type, snmpVersion, requested, errorStatus, errorIndex, variable count, variable object identifier and data

**Debug** None

**Filter** None

## snmpTrap

---

**Description** SNMP Trap PDU events

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** None

**Notice Log** None

<b>Info</b>	SNMP trap PDUs that the corresponding SNMP agent transmitted
<b>Debug</b>	None
<b>Filter</b>	None

## sonet

---

<b>Description</b>	SONET
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Configuration errors, NVS failures
<b>Warning Log</b>	NV interface removal after failed init from NV; errors during interface add/update or during hwPresent notification; path capability notification; failed pool expansion
<b>Notice Log</b>	Pool expansion, dropped SNMP traps
<b>Info</b>	NV interface creation; interface modification from path capability; unknown interface during hwNotPresent notification; interface notification for unknown interface
<b>Debug</b>	Application initialization trace, interface creation/deletion events
<b>Filter</b>	None

## sonetPath

---

<b>Description</b>	SONET Path
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None

<b>Warning Log</b>	Errors during interface removal (for removable paths); path update failures from path configuration notification; failed mapping from SONET status; errors during path creation; engine addInterface errors during hwPresent notification; errors during path creation for nonchannelized interfaces; failed pool expansion
<b>Notice Log</b>	Pool expansion
<b>Info</b>	Init from NV failures; NV upgrade; path update progress; path configuration notification
<b>Debug</b>	Path update
<b>Filter</b>	None

## sonetVT

---

<b>Description</b>	SONET virtual tributary
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Init from NV failures; errors during remove interface; failed pool expansion
<b>Notice Log</b>	Engine add interface retry; pool expansion
<b>Info</b>	Errors during add interface
<b>Debug</b>	None
<b>Filter</b>	None

## ssccDetailPm

---

<b>Description</b>	SDX client (formerly SSCC) detail for policy manager (PM) interaction
<b>Emergency</b>	None
<b>Alert</b>	None

<b>Critical</b>	None
<b>Error</b>	Failure of policy manager calls (detail)
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Policy manager function call made; Policy manager attempts to get statistics
<b>Filter</b>	None

## ssccDetailSsc

---

<b>Description</b>	SDX client (formerly SSCC) detail for SDX interaction
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	More detail for SDX management errors
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	More detail for SDX events
<b>Filter</b>	None

## ssccGeneral

---

<b>Description</b>	SDX client (formerly SSCC) general
<b>Emergency</b>	None

<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Failure to get heap space; packet decode errors; SDX inconsistency errors; packet creation errors; failure of calls to policy manager (changing, attaching policy); attempt to manage unknown interface
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	Creation or deletion of SDX client
<b>Debug</b>	Events (create interface, reports, removals); policy deletions; policy reattachments; CLI events; connection retries
<b>Filter</b>	None

## ssccLacGeneral

---

<b>Description</b>	L2TP LAC interfaces details for policy and QoS management by the COPS client
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Error encountered while managing L2TP LAC interfaces, or during the installation and removal of policies from the L2TP LAC interfaces
<b>Warning Log</b>	Unexpected events related to policy and QoS management of LAC interfaces by the COPS protocol that are handled appropriately by the software
<b>Notice Log</b>	None
<b>Info</b>	Creation or deletion of SDX client
<b>Debug</b>	Detailed debugging information related to L2TP LAC interfaces to assist in troubleshooting and analyzing problems
<b>Filter</b>	None

**ssh**


---

<b>Description</b>	Secure Shell (SSH) Server
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Cannot create SSH daemon; unexpected socket condition; packet overrun; AAA failure; resource allocation failure; host key read error
<b>Warning Log</b>	Missing/invalid public user key; possible DoS attack (invalid reported field length); unknown protocol message; protocol message received during wrong state; unsupported key exchange algorithm; unsupported cipher algorithm; unsupported encryption algorithm; unsupported MAC algorithm; unsupported compression algorithm; unexpected session/channel error; window adjust failure; user lock out announcement; user denied due to lock-out; packet encryption/decryption failure; unexpected protocol error; packet send failure; unsupported client version; malformed packet; packet MAC failure; user timeout
<b>Notice Log</b>	AAA user authentication failure; ignored channel request; client connect/disconnect
<b>Info</b>	Detailed client connection info (per connection attempt)
<b>Debug</b>	Daemon instance creation/removal; detailed packet info (per packet)
<b>Filter</b>	None

**stTunnel**


---

<b>Description</b>	Secure tunnel (ST) interface
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	ST interface configuration error; ST interface engine interaction failures; IPSec service line module resource error

<b>Warning Log</b>	ST interface pool exhausted; manual session key length input problems; problem relocating ST interface
<b>Notice Log</b>	ST interface memory pool extension
<b>Info</b>	Transport virtual router table downloading; ST interface status retrieval; transport virtual router table down; information about <b>clear sa</b> command
<b>Debug</b>	Detailed debug information related to the ST
<b>Filter</b>	None

## stTunnelEngine

---

<b>Description</b>	Logs events and conditions related to the communication between the IPsec tunnels application and the IPsec server and line modules
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Unexpected and nonrecoverable communication errors
<b>Warning Log</b>	Unexpected but recoverable events
<b>Notice Log</b>	Controller up/down and restart up/down events
<b>Info</b>	Processing of controller up/down and restart up/down events; processing of synchronization events following a cold- or warm-restart
<b>Debug</b>	Detailed debug information related to all communication between the IPsec tunnels application and the IPsec server and line modules; interactions with the IP Engine application for virtual router table download to designated IPsec server modules
<b>Filter</b>	None

## system

---

<b>Description</b>	System management and monitoring
<b>Emergency</b>	None



**Alert** None

**Critical** Line module ping failure threshold exceeded; test failure on line module or standby SRP module; test failure on line module or standby SRP module

**Error** Error on line module or standby SRP module; critical subsystem failure condition (NVS, power, fan, network timing, temperature); unrecognized module type; module ID mismatch; line module memory reduction; line module bandwidth misconfiguration; unrecoverable file system synchronization errors; software incompatibility issue

**Warning Log** Noncritical subsystem failure condition (heap/CPU utilization, NVS, network timing); unexpected software error; recoverable file system synchronization errors; file system out of synchronization notification; NVS subsystem redundancy size mismatch; line module ID block misconfigured

**Notice Log** Subsystem failure condition abatement (heap/CPU utilization, NVS, power, fan, network timing, temperature); new module announcement; module revision mismatch; module upgraded or downgraded (ECC/non-ECC); module online or offline

**Info** Synchronization start, complete; line module set timing failed (not necessarily an error); NVS volume flush

**Debug** Module state change; module memory announcement; redundancy role changes; server role changes; module enable, disable, or clear notification; file system synchronization (normal operation); line module timing source set failure (not necessarily an error); image protection notification

**Filter** slot *slotNumber*

- slot—Logs events for a specific slot
- *slotNumber*—Number of slot for which you want to log events



## Chapter 19

# T Commands

- tacacsPlusServer on page 251
- tcpGeneral on page 252
- tcpTraffic on page 252
- tcpv6Traffic on page 253
- telnet on page 254
- telnetClient on page 254
- tftpClient on page 255
- trackerEvents on page 255
- trackerGeneral on page 256
- tsm on page 257

### tacacsPlusServer

---

**Description** TACACS + server

**Emergency** None

**Alert** None

**Critical** None

**Error** Unable to start TACACS + ; failed to create tacacsPlusProcess instance while in startup

**Warning Log** Failed to create a host while reading parameters from NVS; primary host not found in NVS; more than one primary host found in NVS; number of primary hosts in NVS is not one, and attempts to correct this condition failed; unable to bind socket to source address configured to TACACS + server

**Notice Log** Received unexpected data from the TACACS + host, which will result in authentication failure; either there is no host in NVS, or all attempts to configure a host failed

**Info** None

**Debug** Authentication attempted while TACACS+ is being shutdown; not enough memory for sending authentication requests; socket allocation limit reached; failed to allocate new socket for a request; not enough memory for protocol message; received unexpected notification on the socket

**Filter** None

## tcpGeneral

---

**Description** TCP system

**Emergency** None

**Alert** None

**Critical** None

**Error** None

**Warning Log** None

**Notice Log** TCP state change event info (brief)

**Info** None

**Debug** TCP state changes (detail); TCP packet transmission; minor TCP errors

**Filter** router virtualRouterName

- router—Logs events for a specific virtual router
- *virtualRouterName*—Name of virtual router for which you want to log events

## tcpTraffic

---

**Description** TCP frame transmit and receive

**Emergency** None

**Alert** None

**Critical** None

**Error** None

<b>Warning Log</b>	None
<b>Notice Log</b>	TCP packet discards due to MD5 authorization failure and checksum failure
<b>Info</b>	None
<b>Debug</b>	Report all TCP receive and transmit events
<b>Filter 1</b>	remote-ip-address <i>ipAddress</i> [ <i>ipAddressMask</i> ] <ul style="list-style-type: none"> <li>■ remote-ip-address—Logs events for a remote address</li> <li>■ <i>ipAddress</i>—Address of remote system for which you want to log messages</li> <li>■ <i>ipAddressMask</i>—Mask for the remote address</li> </ul>
<b>Filter 2</b>	router <i>virtualRouterName</i> [ remote-ip-address <i>ipAddress</i> [ <i>ipAddressMask</i> ] ] <ul style="list-style-type: none"> <li>■ router—Logs events on a specific virtual router</li> <li>■ <i>virtualRouterName</i>—Name of virtual router for which you want to log events</li> <li>■ remote-ip-address—Logs events for a remote address</li> <li>■ <i>ipAddress</i>—Address of remote system for which you want to log messages</li> <li>■ <i>ipAddressMask</i>—Mask for the remote address</li> </ul>

## tcpv6Traffic

---

<b>Description</b>	TCP frame transmit and receive
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	TCP packet discards due to MD5 authorization failure and checksum failure
<b>Info</b>	None
<b>Debug</b>	Report all TCP receive and transmit events

**Filter 1** remote-ip-address *ipAddress* [ *ipAddressMask* ]

- remote-ip-address—Logs events for a remote address
- *ipAddress*—Address of remote system for which you want to log messages
- *ipAddressMask*—Mask for the remote address

**Filter 2** router *virtualRouterName* [ remote-ip-address *ipAddress* [ *ipAddressMask* ] ]

- router—Logs events on a specific virtual router
- *virtualRouterName*—Name of virtual router for which you want to log events
- remote-ip-address—Logs events for a remote address
- *ipAddress*—Address of remote system for which you want to log messages
- *ipAddressMask*—Mask for the remote address

## telnet

---

**Description** Telnet daemon

**Emergency** None

**Alert** None

**Critical** None

**Error** Error condition binding to or listening on Telnet sockets; unexpected software error; NVS mismatch; insufficient memory resources

**Warning Log** None

**Notice Log** None

**Info** None

**Debug** Stopped listening on a specified router

**Filter** None

## telnetClient

---

**Description** Telnet client log

**Emergency** None

<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	Unexpected socket condition; unable to connect to remote host; successful connection; ENV send failure; resource allocation failure
<b>Info</b>	Connection attempt; detailed connection information (per connection); escape character announcement; connection closed
<b>Debug</b>	None
<b>Filter</b>	None

## tftpClient

---

<b>Description</b>	TFTP client log
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	Memory allocation failures
<b>Warning Log</b>	None
<b>Notice Log</b>	TFTP error message received from remote host
<b>Info</b>	Initiating communication with remote host; discarded messages
<b>Debug</b>	TFTP responses received from incorrect source port on remote host
<b>Filter</b>	None

## trackerEvents

---

<b>Description</b>	Tracker event propagation
--------------------	---------------------------

<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	Indicates if there is a memory shortage for event propagation
<b>Debug</b>	Provides debug information for event propagation from the tracker component
<b>Filter</b>	None

## trackerGeneral

---

<b>Description</b>	Tracker component
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	Indicates if there is a memory shortage for tracker operations
<b>Notice Log</b>	None
<b>Info</b>	Indicates if there is a memory shortage for accommodating new clients
<b>Debug</b>	Provides debug information for the tracker component
<b>Filter</b>	None



**tsm**

---

<b>Description</b>	Tunnel server manager
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	Number of interfaces in use is critically close to maximum
<b>Error</b>	Memory exhaustion errors
<b>Warning Log</b>	Nonvolatile storage integrity problems; memory exhaustion-based denial of service; number of interfaces in use reaching high levels
<b>Notice Log</b>	Nonvolatile storage allocation problems; memory pool expansion
<b>Info</b>	Resource-restriction based denial of service; line module up or down transitions
<b>Debug</b>	Program debugging information including function call tracing
<b>Filter</b>	None



## Chapter 20

# U Commands

- udpTraffic on page 259
- udpv6Traffic on page 260

### udpTraffic

---

<b>Description</b>	UDP frame transmit or receive
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Report all UDP receive or transmit events
<b>Filter 1</b>	remote-ip-address <i>ipAddress</i> [ <i>ipAddressMask</i> ] <ul style="list-style-type: none"><li>■ remote-ip-address—Logs events for a remote address</li><li>■ <i>ipAddress</i>—Address of remote system for which you want to log messages</li><li>■ <i>ipAddressMask</i>—Mask for the remote address</li></ul>
<b>Filter 2</b>	router <i>virtualRouterName</i> [ remote-ip-address <i>ipAddress</i> [ <i>ipAddressMask</i> ] ] <ul style="list-style-type: none"><li>■ router—Logs events on a specific virtual router</li><li>■ <i>virtualRouterName</i>—Name of virtual router for which you want to log events</li></ul>

- `remote-ip-address`—Logs events for a remote address
- `ipAddress`—Address of remote system for which you want to log messages
- `ipAddressMask`—Mask for the remote address

## udpv6Traffic

---

<b>Description</b>	UDIPv6 packet transmit and receive events
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	All UDIPv6 packet receive and transmit events
<b>Filter 1</b>	[ router <i>virtualRouterName</i> ] <ul style="list-style-type: none"> <li>■ <code>router</code>—Logs events for a specific virtual router</li> <li>■ <code>virtualRouterName</code>—Name of virtual router for which you want to log events</li> </ul>
<b>Filter 2</b>	[ remote-ipv6-address <i>ipv6Address</i> ] <ul style="list-style-type: none"> <li>■ <code>remote-ipv6-address</code>—Logs events for packets arriving from or going to a specified IPv6 address</li> <li>■ <code>ipv6Address</code>—IPv6 address of remote system for which you want to log messages</li> </ul>

## Chapter 21

# V Commands

- vrrp on page 261
- vrrpTracking on page 262
- vsm on page 262
- vsmEngine on page 263

### vrrp

---

<b>Description</b>	Virtual Router Redundancy Protocol
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	NVS error; out of resources; unexpected error
<b>Error</b>	Virtual router ID (VRID) creation or modification failure; association addresses creation or modification failure
<b>Warning Log</b>	IP interface used by VRRP was removed; unexpected advertisement received from neighbor; invalid authentication detected; unable to get IP interface's primary address
<b>Notice Log</b>	VRRP neighbor found
<b>Info</b>	State machine change
<b>Debug</b>	Management get, set, create, and remove
<b>Filter</b>	interface <i>interfaceType interfaceSpecifier</i> [ <i>vrrpIdentifier</i> ] <ul style="list-style-type: none"><li>■ interface—Logs events on a specific interface</li><li>■ <i>interfaceType</i>—Type of interface for which you want to log events</li><li>■ <i>interfaceSpecifier</i>—Location of interface in the appropriate format</li></ul>



**NOTE:** For information about interface types and specifiers, see Interface Types and Specifiers in *JUNOS Command Reference Guide*.

---

- *vrpIdentifier*—ID of the VRRP router for which you want to log events

## vrpTracking

---

<b>Description</b>	Virtual Router Redundancy Protocol tracking
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	Information about interaction between VRRP and the tracker module
<b>Debug</b>	Management get, set, create, and remove
<b>Filter</b>	None

## vsm

---

<b>Description</b>	VLAN subinterface manager
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	Unable to find VLAN major interface for agent-circuit-id-based VLAN
<b>Error</b>	Truncating agent-circuit-id string
<b>Warning Log</b>	Creation failure

<b>Notice Log</b>	Out of pool space
<b>Info</b>	Replay of unknown interface after high availability switchover
<b>Debug</b>	General VSM operations, such as agent-circuit-id-based VLAN created
<b>Filter</b>	None

**vsmEngine**

---

<b>Description</b>	VLAN subinterface manager engine
<b>Emergency</b>	None
<b>Alert</b>	None
<b>Critical</b>	None
<b>Error</b>	None
<b>Warning Log</b>	None
<b>Notice Log</b>	None
<b>Info</b>	None
<b>Debug</b>	Recoverable out-of-sync conditions after high availability switchover
<b>Filter</b>	None





## **Part 3**

# **Index**

- Index on page 267



# Index

## B

baseline commands  
    baseline log.....5

## C

conventions  
    notice icons.....xxi  
    text and syntax.....xxii  
customer support.....xxiii  
    contacting JTAC.....xxiii

## D

destination  
    logging messages by.....5  
documentation set  
    comments on.....xxiii

## E

engineering logs  
    enabling.....5

## F

fields  
    adding to logs.....5

## L

legacy-configuration-guidelines.....14, 17  
log commands.....5  
    baseline log.....5  
    log destination.....5  
    log engineering.....5  
    log field.....5  
    log here.....5  
    log severity.....5  
    log unlimit.....5  
    log verbosity.....5  
    no log filters.....17  
    *See also* show log commands

log event categories.....23  
    aaaAtm1483Cfg.....23  
    aaaEngineGeneral.....23  
    aaaQosCfg.....23  
    aaaServerGeneral.....23  
    aaaUserAccess.....23  
    addressServerGeneral.....23  
    ar1AaaServerGeneral.....23  
    atm.....23  
    atm1483.....23  
    atm1483VcClass.....23  
    atmAal5.....23  
    atmVcClass.....23  
    auditIpsec.....34  
    bfdAdaptivity.....35  
    bfdEvents.....36  
    bfdGeneral.....36  
    bfdSession.....37  
    bgpConnections.....37  
    bgpDampening.....38  
    bgpEvents.....39  
    bgpGeneral.....40  
    bgpGracefulRestart.....41  
    bgpIpv6NextHops.....42  
    bgpKeepAlives.....42  
    bgpMessages.....43  
    bgpNeighborChanges.....44  
    bgpNextHops.....45  
    bgpRoutes.....45  
    bridge.....47  
    bridgeEngine.....47  
    bridgingMgr.....47  
    bulkStats.....47  
    cacGeneral.....47  
    cacIntf.....47  
    cliCommand.....47  
    cliGeneral.....47  
    connectionManager.....47  
    cops.....47  
    copsPr.....47  
    coreDump.....47  
    ctreeLog.....47  
    dcm.....47  
    dcmEngineGeneral.....47  
    debounceEvents.....59  
    debounceGeneral.....59

dhcpCapture.....	47	ipAccessList.....	100
dhcpExternal.....	47	ipEngine.....	101
dhcpExternalEngine.....	47	ipflowstats.....	101
dhcpGeneral.....	47	ipflowstatsEngine.....	102
dhcpIssuLog.....	47	ipGeneral.....	102
dhcpLocalClients.....	47	ipIfCreator.....	103
dhcpLocalGeneral.....	47	ipInterface.....	103
dhcpLocalHighAvailability.....	47	ipNhopTrackerGeneral.....	103
dhcpLocalPool.....	47	ipProfileMgr.....	103
dhcpLocalProtocol.....	47	ipRoutePolicy.....	103
dhcpNvGeneral.....	47	ipRouteTable.....	103
dhcpOfferLog.....	47	ipseclDb.....	103
dhcpPbeGeneral.....	47	ipsecP1Throttler.....	103
dhcpProxyGeneral.....	47	ipsecXcfgSM.....	103
dhcpRelayGeneral.....	47	ipSubscriberMgr.....	103
dhcpv6Client.....	47	ipTraffic.....	103
dhcpv6DemuxGeneral.....	47	ipTunnel.....	103
dhcpv6LsGeneral.....	47	ipv6AccessList.....	103
dismanEventMgr.....	47	ipv6General.....	103
dnsGeneralLog.....	47	ipv6Interface.....	103
dosProtection.....	47	ipv6ProfileMgr.....	103
ds1.....	47	ipv6RouteTable.....	103
ds3.....	47	ipv6Traffic.....	103
dvmrpGeneral.....	47	ipv6Types.....	103
dvmrpGracefulRestart.....	74	isisAdjChange.....	103
dvmrpMcastTable.....	74	isisAdjPackets.....	116
dvmrpProbeRcv.....	74	isisBfdEvents.....	116
dvmrpProbeSent.....	74	isisChecksumErr.....	116
dvmrpRtTable.....	74	isisGeneral.....	116
ethernet.....	74	isisHelloGeneral.....	116
ethernetStateSession.....	74	isisHelloPackets.....	116
fileSystem.....	74	isisIpv6Log.....	116
flowInspection.....	74	isisLdpEvents.....	116
flowInspectionEngine.....	74	isisLocalUpdate.....	116
flowServicesFirewallAlert.....	74	isisMplsTeAdvertisements.....	116
flowServicesFirewallAudit.....	74	isisMplsTeEvents.....	116
frameRelay.....	74	isisNsfEvents.....	116
fsAgent.....	74	isisProtocolErr.....	116
ft1.....	74	isisSnppackets.....	116
ftpClient.....	74	isisSpfEvents.....	116
ftpServer.....	74	isisSpfStatistics.....	116
gplaan.....	74	isisSpfTriggers.....	116
ha.....	74	isisUpdatePackets.....	116
hdlc.....	74	isVoice.....	127
hotfixGeneral.....	74	itm.....	127
httpServer.....	74	l2cGeneral.....	130
icImageFixServer.....	74	l2cKeepAlive.....	130
icmpTraffic.....	74	l2cPacket.....	131
icmpv6Traffic.....	74	l2tp.....	131
igmpGeneral.....	74	l2tpDialoutGenerator.....	132
igmpGracefulRestart.....	74	l2tpDisconnectCause.....	132
igmpGroupState.....	74	l2tpIpLowerBinding.....	133
ikeCertificateMgr.....	74	l2tpStateMachine.....	133
ikeEnrollment.....	74	lasv6General.....	134
ikepki.....	99	ldpConnect.....	134
interModuleCommunication.....	99	ldpGeneral.....	135

ldpGracefulRestart.....	135	ospfNeighbor.....	177
ldpHelloMessages.....	136	ospfPktsRcvd.....	177
ldpHelloMgr.....	137	ospfPktsSent.....	177
ldpInterface.....	137	ospfRestart.....	177
ldpMessages.....	138	ospfRoute.....	177
ldpPeer.....	139	ospfSpfExt.....	177
ldpShimInterface.....	139	ospfSpfInter.....	177
ldpSocket.....	140	ospfSpfIntra.....	177
ldpTimer.....	141	ospfTeDatabase.....	177
ldpVpls.....	141	ospfTeSpf.....	177
ldpWorker.....	142	ospfv3ElectDr.....	177
localAddressServerGeneral.....	142	ospfv3General.....	177
localAuthServer.....	143	ospfv3HelloPktsRcvd.....	177
localEnableAuthServer.....	143	ospfv3HelloPktsSent.....	177
localLinePassword.....	144	ospfv3Interface.....	177
macroData.....	146	ospfv3Lsa.....	177
mgmtGeneral.....	147	ospfv3Neighbor.....	177
mgmtGracefulRestart.....	148	ospfv3PktsRcvd.....	177
mgmtv6General.....	148	ospfv3PktsSent.....	177
mgmtv6GracefulRestart.....	149	ospfv3Route.....	177
mldGeneral.....	150	ospfv3SpfExt.....	177
mldGracefulRestart.....	151	ospfv3SpfInter.....	177
mldGroupState.....	151	ospfv3SpfIntra.....	177
mmcd.....	152	pimAutoRPRcvdLog.....	177
mobileIpv4HaBinding.....	153	pimAutoRPSentLog.....	196
mobileIpv4HaEng.....	153	pimBsrRcvdLog.....	196
mobileIpv4HaEvent.....	154	pimBsrSentLog.....	196
mobileIpv4HaLog.....	154	pimGracefulRestartLog.....	196
mplsFwdTable.....	155	pimHelloRcvdLog.....	196
mplsGeneral.....	155	pimHelloSentLog.....	196
mplsHighAvailability.....	156	pimIpv6AutoRPRcvdLog.....	196
mplsMajorInterface.....	156	pimIpv6AutoRPSentLog.....	196
mplsMinorInterface.....	157	pimIpv6BsrRcvdLog.....	196
mplsRouter.....	158	pimIpv6BsrSentLog.....	196
mplsShimInterface.....	159	pimIpv6GracefulRestartLog.....	196
mplsTraffic.....	160	pimIpv6HelloRcvdLog.....	196
mrInfoLog.....	160	pimIpv6HelloSentLog.....	196
mrInfoRcvdLog.....	161	pimIpv6PktsRcvdLog.....	196
mrInfoSentLog.....	161	pimIpv6PktsSentLog.....	196
mtraceLog.....	162	pimPktsRcvdLog.....	196
mtraceRcvdLog.....	162	pimPktsSentLog.....	196
mtraceSentLog.....	163	pimsmGeneral.....	196
multicastTraffic.....	163	pimsmMvpn.....	196
nameResolverLog.....	165	policyMgrAttachment.....	196
nfsClient.....	165	policyMgrGeneral.....	196
noneAaaAddrServer.....	166	policyMgrPacketLog.....	196
noneAaaServer.....	167	ppp.....	196
ntpGeneral.....	167	pppoe.....	196
os.....	171	pppoeControlPacket.....	196
ospfElectDr.....	172	pppPacket.....	196
ospfGeneral.....	173	pppStateMachine.....	196
ospfHelloPktsRcvd.....	173	profileMgr.....	196
ospfHelloPktsSent.....	173	qm.....	196
ospfInterface.....	173	qos.....	196
ospfLdpEvents.....	173	qosAttachment.....	196
ospfLsa.....	173	radiusAttributes.....	196

radiusClient.....	196
radiusCoAAttributes.....	196
radiusDisconnectGeneral.....	196
radiusRelayGeneral.....	196
radiusSendAttributes.....	196
remOps.....	196
resourceThresholdTrap.....	196
ripBfd.....	196
ripGeneral.....	196
ripRoute.....	196
ripRtTable.....	196
routeDownloader.....	196
routerLog.....	196
rsvpAsyncMgr.....	196
rsvpBfd.....	196
rsvpGeneral.....	196
rsvpGracefulRestart.....	196
rsvpInterface.....	196
rsvpTunnel.....	196
security.....	196
serviceability.....	196
serviceMgr.....	196
serviceMgrClientSession.....	196
serviceMgrDcm.....	196
serviceMgrMacroManager.....	196
serviceMgrPerformance.....	196
serviceMgrServiceDef.....	196
serviceMgrServiceInstance.....	196
serviceMgrServiceSession.....	196
serviceMgrSubscriberSession.....	196
slep.....	196
snmp.....	196
snmpIfMib.....	196
snmpPduAudit.....	196
snmpSetPduAudit.....	196
snmpTrap.....	196
sonet.....	196
sonetPath.....	196
sonetVT.....	196
ssccDetailPm.....	196
ssccDetailSsc.....	196
ssccGeneral.....	196
ssccLacGeneral.....	246
ssh.....	196
stTunnel.....	247
stTunnelEngine.....	248
system.....	248
tacasPlusServer.....	251
tcpGeneral.....	252
tcpTraffic.....	252
tcpv6Traffic.....	253
telnet.....	254
telnetClient.....	254
tftpClient.....	255
trackerEvents.....	255
trackerGeneral.....	256

tsm.....	257
udpTraffic.....	259
udpv6Traffic.....	260
vrrp.....	261
vrrpTracking.....	262
vsm.....	262
vsmEngine.....	263

## M

manuals	
comments on.....	xxiii

## N

notice icons.....	xxi
-------------------	-----

## P

platform considerations	
system logs.....	5

## S

service commands	
service timestamps.....	14
show log commands	
show log configuration.....	17
show log data.....	17
support, technical <i>See</i> technical support	
system event logs	
individual logs.....	10, 14
severity.....	3
system-wide logs.....	10, 14
user-defined classification.....	16
verbosity.....	3
viewing logs.....	17

## T

technical support	
contacting JTAC.....	xxiii
text and syntax conventions.....	xxii