

Chapter 33

Summary of IGMP Configuration Statements

The following sections explain each of the IGMP configuration statements. The statements are organized alphabetically.

igmp

Syntax	<pre>igmp { traceoptions { file <i>name</i> <replace> <size <i>size</i>> <files <i>number</i>> <no-stamp> <(world-readable no-world-readable)>; flag <i>flag</i> <<i>flag-modifier</i>> <disable>; } interface <i>interface-name</i> { query-interval <i>seconds</i>; query-last-member-interval <i>seconds</i>; query-response-interval <i>seconds</i>; robust-count <i>number</i>; version <i>version</i>; } }</pre>
Hierarchy Level	[edit protocols]
Description	Enable IGMP on the router. IGMP must be enabled for the router to receive multicast packets.
Default	IGMP is disabled on the router.
Options	The statements within the igmp statement are explained separately.
Usage Guidelines	See “Enable IGMP” on page 372.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

interface

Syntax interface *interface-name* {
 query-interval *seconds*;
 query-last-member-interval *seconds*;
 query-response-interval *seconds*;
 robust-count *number*;
 version *version*;
 }

Hierarchy Level [edit protocols igmp]

Description Enable IGMP on an interface, and configure interface-specific properties.

Options *interface-name*—Name of the interface. Specify the full interface name, including the physical and logical address components. To configure all interfaces, you can specify all. For details about specifying interfaces, see the *JUNOS Internet Software Configuration Guide: Interfaces and Chassis*.

The remaining statements are explained separately.

Usage Guidelines See “Enable IGMP” on page 372.

Required Privilege Level routing—To view this statement in the configuration.
 routing-control—To add this statement to the configuration.

query-interval

Syntax query-interval *seconds*;

Hierarchy Level [edit protocols igmp interface *interface-name*]

Description How often the querier router sends general host-query messages.

Options *seconds*—Time interval, in seconds.
Range: 1 through 1024
Default: 125 seconds

Usage Guidelines See “Modify the IGMP Host-Query Message Interval” on page 372.

Required Privilege Level routing—To view this statement in the configuration.
 routing-control—To add this statement to the configuration.

See Also query-last-member-interval on page 377, query-response-interval on page 377

query-last-member-interval

Syntax	query-last-member-interval <i>seconds</i> ;
Hierarchy Level	[edit protocols igmp interface <i>interface-name</i>]
Description	How often the querier router sends group-specific query messages.
Options	<i>seconds</i> —Time interval, in seconds. Range: 1 through 1024 Default: 1 second
Usage Guidelines	See “Modify the Last-Member Query Interval” on page 373.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
See Also	query-interval on page 376, query-response-interval on page 377

query-response-interval

Syntax	query-response-interval <i>seconds</i> ;
Hierarchy Level	[edit protocols igmp interface <i>interface-name</i>]
Description	How long the querier router waits to receive a response to a host-query message from a host.
Options	<i>seconds</i> —Time interval, in seconds. This interval must be less than the interval between general host-query messages. Range: 1 through 1024 Default: 10 seconds
Usage Guidelines	See “Modify the IGMP Query Response Interval” on page 372.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
See Also	query-interval on page 376, query-last-member-interval on page 377

robust-count

Syntax	robust-count <i>number</i> ;
Hierarchy Level	[edit protocols igmp interface <i>interface-name</i>]
Description	Tune for the expected packet loss on a subnet.
Options	<i>time</i> —Time interval, in seconds. This interval must be less than the interval between general host-query messages. Range: 2 through 10 Default: 2 seconds
Usage Guidelines	See “Modify the Robustness Variable” on page 373.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

traceoptions

Syntax traceoptions {
 file *name* <replace> <size *size*> <files *number*> <no-stamp>
 <(world-readable | no-world-readable)>;
 flag *flag* <*flag-modifier*> <disable>;
 }

Hierarchy Level [edit protocols igmp]

Description Configure IGMP tracing options.

To specify more than one tracing operation, include multiple flag statements.

To trace the paths of multicast packets, use the mtrace command, as described in the *JUNOS Internet Software Command Reference*.

Default The default IGMP trace options are those inherited from the routing protocols traceoptions statement included at the [edit routing-options] hierarchy level.

Options disable—(Optional) Disable the tracing operation. You can use this option to disable a single operation when you have defined a broad group of tracing operations, such as all.

filename—Name of the file to receive the output of the tracing operation. Enclose the name within quotation marks. All files are placed in the directory /var/log. We recommend that you place tracing output in the file igmp-log.

files number—(Optional) Maximum number of trace files. When a trace file named *trace-file* reaches its maximum size, it is renamed *trace-file.0*, then *trace-file.1*, and so on, until the maximum number of trace files is reached. Then, the oldest trace file is overwritten.

If you specify a maximum number of files, you also must specify a maximum file size with the size option.

Range: 2 through 1000 files

Default: 2 files

flag—Tracing operation to perform. To specify more than one tracing operation, include multiple flag statements.

IGMP Tracing Flags

leave—Leave group messages (for IGMP Version 2 only)

mtrace—Mtrace packets

packets—All IGMP packets

query—IGMP membership query messages, including general and group-specific queries

report—Membership report messages

Global Tracing Flags

all—All tracing operations

general—A combination of the normal and route trace operations

normal—All normal operations

Default: If you do not specify this option, only unusual or abnormal operations are traced.

policy—Policy operations and actions

route—Routing table changes

state—State transitions

task—Interface transactions and processing

timer—Timer usage

flag-modifier—(Optional) Modifier for the tracing flag. You can specify one or more of these modifiers:

detail—Detailed trace information

receive—Packets being received

send—Packets being transmitted

no-stamp—(Optional) Do not place timestamp information at the beginning of each line in the trace file.

Default: If you omit this option, timestamp information is placed at the beginning of each line of the tracing output.

no-world-readable—(Optional) Disallow any user to read the log file.

replace—(Optional) Replace an existing trace file if there is one.

Default: If you do not include this option, tracing output is appended to an existing trace file.

size *size*—(Optional) Maximum size of each trace file, in kilobytes (KB), megabytes (MB), or gigabytes (GB). When a trace file named *trace-file* reaches this size, it is renamed *trace-file.0*. When the *trace-file* again reaches its maximum size, *trace-file.0* is renamed *trace-file.1* and *trace-file* is renamed *trace-file.0*. This renaming scheme continues until the maximum number of trace files is reached. Then, the oldest trace file is overwritten.

If you specify a maximum file size, you must also specify a maximum number of trace files with the *files* option.

Syntax: *xk* to specify KB, *xm* to specify MB, or *xg* to specify GB

Range: 10 KB through the maximum file size supported on your system

Default: 1 MB

world-readable—(Optional) Allow any user to read the log file.

Usage Guidelines See “Trace IGMP Protocol Traffic” on page 374.

Required Privilege Level routing and trace—To view this statement in the configuration.
routing-control and trace-control—To add this statement to the configuration.

version

Statement `version version;`

Hierarchy Level [edit protocols igmp interface *interface-name*]

Description Specify the version of IGMP.

Options *version*—IGMP version number.
Range: 1 or 2
Default: IGMP Version 2

Usage Guidelines See “Change the IGMP Version” on page 373.

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.