Network Switch CLI Guide

IGMP Commands

Contents

IGMP Commands

clear ip igmp counters

Syntax	**clear ip igmp counters** [*interface-id*]
Parameters	***interface-id***—(Optional) Interface Identifier.
Default Configuration	–
Command Mode	Privileged EXEC mode
Usage	To clear the Internet Group Management Protocol (IGMP) interface counters, use the **clear ip igmp counters** command in Privileged EXEC mode.
Example	The following example clears the counters for VLAN 100: switchxxxxxx# **clear ip igmp counters vlan 100**
User Guideline	Use the clear ip igmp counters command to clear the IGMP counters, which keep track of the number of joins and leaves received. If you omit the optional *interface-id* argument, the clear ip igmp counters command clears the counters on all interfaces.

ip igmp last-member-query-count

Syntax	ip igmp last-member-query-count *count* no ip igmp last-member-query-count
Parameters	**count**—The number of times that group- or group-source-specific queries are sent upon receipt of a message indicating a leave. (Range: 1–7)
Default Configuration	A value of IGMP Robustness variable.
Command Mode	Interface Configuration mode.
Usage	To configure the Internet Group Management Protocol (IGMP) last member query counter, use the **ip igmp last-member-query-count** command in Interface Configuration mode. To restore the default value, use the **no** form of this command.
Example	The following example changes a value of the IGMP last member query counter to 3: switchxxxxxx(config)# **interface vlan 1** switchxxxxxx(config-if)# **ip igmp last-member-query-count 3** switchxxxxxx(config-if)# **exit**
User Guideline	Use the **ip igmp robustness** command to change the IGMP last member query counter.

ip igmp last-member-query-interval

Syntax	ip igmp last-member-query-interval *milliseconds* no ip igmp last-member-query-interval
Parameters	*milliseconds*—Interval, in milliseconds, at which IGMP group-specific host query messages are sent on the interface. (Range: 100–25500).
Default Configuration	The default IGMP last member query interval is 1000 milliseconds.
Command Mode	Interface Configuration mode.
Usage	To configure the Internet Group Management Protocol (IGMP) last member query interval, use the **ip igmp last-member-query-interval** command in Interface Configuration mode. To restore the default IGMP query interval, use the **no** form of this command.
Example	The following example shows how to increase the the IGMP last member query interval to 1500 milliseconds: switchxxxxxx(config)# **interface vlan 100** switchxxxxxx(config-if)# **ip igmp last-member-query-interval 1500** switchxxxxxx(config-if)# **exit**
User Guideline	Use the ip igmp last-member-query-interval command to configure the IGMP lastmember query interval on an interface.

ip igmp query-interval

Syntax	ip igmp query-interval *seconds* no ip igmp query-interval
Parameters	*seconds*—Frequency, in seconds, at which the switch sends IGMP querymessages from the interface. The range is from 30 to 18000.
Default Configuration	The default IGMP query interval is 125 seconds.
Command Mode	Interface Configuration mode.
Usage	To configure the frequency at which the IGMP querier sends Internet Group Management Protocol (IGMP) host-query messages from an interface, use the **ip igmp query-interval** command in Interface Configuration mode.

	To restore the default IGMP query interval, use the **no** form of this command.
Example	The following example shows how to increase the frequency at which the IGMPquerier sends IGMP host-query messages to 180 seconds: switchxxxxxx(config)# **interface vlan 100** switchxxxxxx(config-if)# **ipigmpquery-interval180** switchxxxxxx(config-if)# **exit**
User Guideline	Use the ip igmp query-interval command to configure the frequency at which the IGMP querier sends IGMP host-query messages from an interface. The IGMP querier sends query-host messages to discover which multicast groups have members on the attached networks of the router. The query interval must be bigger than the maximum query response time.

ip igmp query-max-response-time

Syntax	**ip igmp query-max-response-time** *seconds* **no ip igmp query-max-response-time**
Parameters	*seconds*—Maximum response time, in seconds, advertised in IGMP queries. (Range: 5–20)
Default Configuration	10 seconds.
Command Mode	Interface Configuration mode.
Usage	To configure the maximum response time advertised in Internet Group Management Protocol (IGMP) queries, use the **ip igmp query-max-response-time** command in Interface Configuration mode. To restore the default value, use the **no** form of this command.
Example	The following example configures a maximum response time of 8 seconds: switchxxxxxx(config)# **interface vlan 100** switchxxxxxx(config-if)#**ipigmpquery-max-response-time8** switchxxxxxx(config-if)# **exit**
User Guideline	This command controls the period during which the responder can respond to an IGMP query message before the router deletes the

	group. This command controls how much time the hosts have to answer an IGMP query message before the router deletes their group. Configuring a value of fewer than 10 seconds enables the router to prune groups faster. The maximum query response time must be less than the query interval. **Note.** *If the hosts do not respond fast enough, they might be pruned inadvertently. Therefore, the hosts must know to respond faster than 10 seconds (or the value you configure).*

ip igmp robustness

Syntax	**ip igmp robustness** *count* **no ip igmp robustness**
Parameters	*count*—The number of expected packet loss on a link. Parameter range.(Range: 1–7).
Default Configuration	2.
Command Mode	Interface Configuration mode.
Usage	To configure the Internet Group Management Protocol (IGMP) robustness variable, use the **ip igmp robustness** command in Interface Configuration mode. To restore the default value, use the **no** form of this command.
Example	The following example changes a value of the IGMP robustness variable to 3: switchxxxxxx(config)# **interface vlan 1** switchxxxxxx(config-if)#**ip igmp robustness 3** switchxxxxxx(config-if)# **exit**
User Guideline	Use the ip igmp robustness command to change the IGMP robustness variable.

ip igmp version

Syntax	ip igmp version {1	2	3} no ip igmpversion
Parameters	**1**–IGMP Version 1. **2**–IGMP Version 2. **3**–IGMP Version 3.
Default Configuration	2
Command Mode	Interface Configuration mode.
Usage	To configure which version of Internet Group Management Protocol (IGMP) the router uses, use the **ip igmp version** command in Interface Configuration mode. To restore the default value, use the **no** form of this command.
Example	The following example configures the router to use IGMP Version 2: switchxxxxxx(config)# **interface vlan 100** switchxxxxxx(config-if)#**ipigmpversion2** switchxxxxxx(config-if)# **exit**
User Guideline	Use the commnad to change the default version of IGMP.

show ip igmp counters

Syntax	**show ip igmp counters** [*interface-id*]
Parameters	*interface-id*–(Optional) Interface Identifier.
Default Configuration	–
Command Mode	User EXEC mode.
Usage	To display the Internet Group Management Protocol (IGMP) traffic counters, use the show **ip igmp counters** command in User EXEC mode.
Example	The following example displays the IGMP protocol messages received and sent: switchxxxxxx# **show ip igmp counters vlan 100**

	Elapsed time since counters cleared:00:00:21 Failed received Joins: 0 Total IGMPv1 received messages: 0 Total IGMPv2 received messages: 10 Total IGMPv3 received messages: 0 Total invalid received messages: 0 General Sent Queries:0 Specific Sent Queries: 0
User Guideline	Use the show ip igmp counters command to check if the expected number of IGMP protocol messages have been received and sent. If you omit the optional *interface-id* argument, the show ip igmp counters command displays counters of all interfaces.

show ip igmp groups

Syntax	**show ip igmp groups** [group-name	group-address	interface-id] [**detail**]
Parameters	group-name **|** group-address—(Optional) IP address or name of the multicast group. interface-id—(Optional) Interface identifier. **detail**—(Optional) Displays detailed information about individual sources.
Default Configuration	User EXEC mode.
Command Mode	Global Configuration mode.
Usage	To display the multicast groups that are directly connected to the router and that were learned through Internet Group Management Protocol (IGMP), use the **showip igmp groups** command in User EXEC mode.
Example	**Example 1.** The following is sample output from the **show ip igmp groups** command. It shows all of the groups joined by VLAN 100: switchxxxxxx# **show ip igmp groups vlan 100** IGMP Connected Group Membership Expires: never - switch itself has joined the group Group Address Interface Expires 224.1.1.1 VLAN 100 00:01:30 224.10.12.79 VLAN 100 never 225.1.1.1 VLAN 100 00:00:27

	Example 2. The following is sample output from the **show ip igmp groups** command using the **detail** keyword: switchxxxxxx# **show ip igmp groups detail** Expires: zero value - INCLUDE state; non-zero value - EXCLUDE state Interface: VLAN 100 Group: 225.1.1.1 Router mode: INCLUDE Last reporter: 10.0.119.133 Group Timer Expires: 00:20:11 Group source list: **Source Address** **Expires** 20.1.1.1 00:04:08 120.1.1.1 00:02:01 Group: 226.1.1.2 Router mode: EXCLUDE Last reporter: 100.1.12.130 Group Timer Expiry: 00:22:12 Exclude Mode Expiry (Filter) Timer: 00:10:11 Group source list: **Source Address** **Expires** 2.2.2.1 00:04:08 192.168.1.1 00:04:08 12.1.1.10 00:00:00 40.3.4.2 00:00:00
User Guideline	Use the **show ip igmp groups** [**detail**] command to display all directly connected groups. Use the **show ip igmp groups** [*group-name* | *group-address*] [**detail**] command to display one given directly connected group. Use the **show ip igmp groups** *interface-id* [**detail**] command to display all groups directly connected to the given interface.

show ip igmp groupssummary

Syntax	show ip igmp groups summary
Parameters	This command has no arguments or keywords.
Default Configuration	-
Command Mode	User EXEC mode.
Usage	To display the number of (*, G) and (S, G) membership reports present in the Internet Group Management Protocol (IGMP) cache, use the **show ip igmp groups summary** command in User EXEC mode.
Example	The following is sample output from the **show ip igmp groups summary** command: switchxxxxxx# **show ip igmp groups summary** IGMP Route Summary No. of (*,G) routes = 5 No. of (S,G) routes = 0 **Field Descriptions:** **No. of (*,G) routes = 5**—Displays the number of groups present in the IGMP cache. **No. of (S,G) routes = 0**—Displays the number of include and exclude mode sources present in the IGMP cache.
User Guideline	The **show ip igmp groups summary** command displays the number of directly connected multicast groups.

show ip igmp interface

Syntax	**show ip igmp interface** [*interface-id*]
Parameters	*interface-id*—(Optional) Interface identifier.
Default Configuration	–
Command Mode	User EXEC mode.
Usage	To display multicast-related information about an interface, use the **show ip igmp interface** command in User EXEC mode.
Example	The following is sample output from the **show ip igmp interface** command for Ethernet interface 2/1/1: switchxxxxxx# **show ip igmp interface vlan 100** VLAN 100 is up Administrative IGMP Querier IP address is 1.1.1.1 Operational IGMP Querier IP address is 1.1.1.1 Current IGMP version is 3 Administrative IGMP robustness variable is 2 seconds Operational IGMP robustness variable is 2 seconds Administrative IGMP query interval is 125 seconds Operational IGMP query interval is 125 seconds Administrative IGMP max query response time is 10 seconds Operational IGMP max query response time is 10 seconds Administrative Last member query response interval is 1000 milliseconds Operational Last member query response interval is 1000 milliseconds
User Guideline	If you omit the optional *interface-id* argument, the **show ip igmp interface** command displays information about all interfaces.