

# IGMP Commands

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# clear ip igmp counters

To clear the Internet Group Management Protocol (IGMP) interface counters, use the **clear ip igmp counters** command in Privileged EXEC mode.

### Syntax

**clear ip igmp counters** [interface-id]

### Parameters

- ***interface-id***—(Optional) Interface Identifier

### Command Mode

Privileged EXEC mode

### User Guidelines

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.

### Example

The following example clears the counters for VLAN 100:

```
switchxxxxxx# clear ip igmp counters vlan 100
```

# ip igmp last-member-query-count

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.

### 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

### User Guidelines

Use the **ip igmp robustness** command to change the IGMP last member query counter.

### 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
```

# ip igmp last-member-query-interval

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.

### 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

### User Guidelines

Use the **ip igmp last-member-query-interval** command to configure the IGMP last member query interval on an interface.

### 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
```

# ip igmp query-interval

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.

### Syntax

**ip igmp query-interval** *seconds*

no ip igmp query-interval

### Parameters

- ***seconds***—Frequency, in seconds, at which the switch sends IGMP query messages 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

### User Guidelines

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.

### Example

The following example shows how to increase the frequency at which the IGMP querier sends IGMP host-query messages to 180 seconds:

```
switchxxxxxx(config)# interface vlan 100
switchxxxxxx(config-if)# ip igmp query-interval 180
switchxxxxxx(config-if)# exit
```

# ip igmp query-max-response-time

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.

### 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

### User Guidelines

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).

### Example

The following example configures a maximum response time of 8 seconds:

```
switchxxxxxx(config)# interface vlan 100
switchxxxxxx(config-if)# ip igmp query-max-response-time 8
switchxxxxxx(config-if)# exit
```

# ip igmp robustness

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.

### 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

The default value is 2.

### Command Mode

Interface Configuration mode

### User Guidelines

Use the **ip igmp robustness** command to change the IGMP robustness variable.

### 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
```

# ip igmp version

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.

### Syntax

**ip igmp version** {**1** | **2** | **3**}

no ip igmp version

### Parameters

- **1**—IGMP Version 1.
- **2**—IGMP Version 2.
- **3**—IGMP Version 3.

### Default Configuration

3

### Command Mode

Interface Configuration mode

### User Guidelines

Use the commnad to change the default version of IGMP>

### Example

The following example configures the router to use IGMP Version 2:

```
switchxxxxxx(config)# interface vlan 100
switchxxxxxx(config-if)# ip igmp version 2
switchxxxxxx(config-if)# exit
```

# show ip igmp counters

To display the Internet Group Management Protocol (IGMP) traffic counters, use the **show ip igmp counters** command in User EXEC mode.

### Syntax

**show ip igmp counters** [*interface-id*]

### Parameters

- ***interface-id***—(Optional) Interface Identifier.

### Command Mode

User EXEC mode

### User Guidelines

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.

### Example

The following example displays the IGMP protocol messages received and sent:

```
switchxxxxxx# show ip igmp counters vlan 100
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
```

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### Syntax

**show ip igmp counters** [*interface-id*]

### Parameters

- ***interface-id***—(Optional) Interface Identifier.

### Command Mode

User EXEC mode

### User Guidelines

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### Example

The following example displays the IGMP protocol messages received and sent:

```
switchxxxxxx# show ip igmp counters vlan 100
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
```

# show ip igmp groups

To display the multicast groups that are directly connected to the router and that were learned through Internet Group Management Protocol (IGMP), use the **show ip igmp groups** command in User EXEC mode.

### 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.

### Command Mode

User EXEC mode

### User Guidelines

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.

**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
```

# show ip igmp groups summary

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.

### Syntax

show ip igmp groups summary

### Parameters

This command has no arguments or keywords.

### Command Mode

User EXEC mode

### User Guidelines

The **show ip igmp groups summary** command displays the number of directly connected multicast groups.

### Example

The following is sample output from the **show ip igmp groups summary** command:

```
switchxxxxxx# show ip igmp groups summary
GMP 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.
```

# show ip igmp interface

To display multicast-related information about an interface, use the **show ip igmp interface** command in User EXEC mode.

### Syntax

**show ip igmp interface** [*interface-id*]

### Parameters

- ***interface-id***—(Optional) Interface identifier.

### Command Mode

User EXEC mode

### User Guidelines

If you omit the optional *interface-id* argument, the **show ip igmp interface** command displays information about all interfaces.

### 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
```