1 IGMP Commands

Command	Function
clear ip igmp group	Clear dynamic group member records in the IGMP cache.
clear ip igmp interface	Clear all IGMP statistics and group member records on an interface.
ip igmp access-group	Specify groups that the hosts are allowed to join on the interface.
ip igmp immediate-leave group-list	Enable the fast leave function on an interface.
ip igmp join-group	Add an interface to a group.
ip igmp last-member-query-count	Configure the times for sending specific group query packets on an interface.
ip igmp last-member-query-interval	Configure the interval for sending specific group query packets on an interface.
ip igmp limit	Configure the maximum number of IGMP group member records.
ip igmp mroute-proxy	Enable the MRoute proxy function on an interface.
ip igmp proxy-service	Enable the proxy service function on an interface.
ip igmp query-interval	Configure an interval for querying common group members.
ip igmp query-max-response-time	Configure the maximum response time for Query packets on an interface.
ip igmp query-timeout	Configure the survival period of other querier on an interface.
ip igmp robustness-variable	Configure the querier robustness variable on an interface.
ip igmp ssm-map enable	Enable the IGMP SSM mapping function.
ip igmp ssm-map static	Configure static mapping entries.
ip igmp static-group	Add a static interface to a group.
ip igmp version	Configure the IGMP version on an interface.

ip igmp enforce-router-alert	Enable the function of checking the Router Alert option in an IGMP packet and discarding an IGMP packet that does not carry the Router Alert option.
ip igmp enforce-source-subnet	Enable the source address checking function for IGMP Report packets.
ip igmp send-router-alert	Enable the function of containing the Router Alert option in an IGMP packet to be sent.
show ip igmp groups	Display groups directly connected to a device and group information learned from IGMP.
show ip igmp interface	Display configurations of an interface.
show ip igmp ssm-mapping	Display IGMP SSM mapping information.

1.1 clear ip igmp group

Function

Run the **clear ip igmp group** command to clear dynamic group member records in the IGMP cache.

Syntax

clear ip igmp group [*group-address* [*interface-type interface-number*]]

Parameter Description

group-address: Address of a group.

interface-type interface-number: Interface type and interface number.

Command Modes

Privileged EXEC mode

Default Level

14

Usage Guidelines

The IGMP cache contains a list, which includes multicast groups to which hosts directly connected to a subnet are added. If a device is added to a multicast group, this group is included in this list as well.

If no parameter is specified in the command, all dynamic group member records are cleared from the IGMP cache.

Examples

The following example clears dynamic group member records in the IGMP cache.

```
Hostname> enable
Hostname# clear ip igmp group
```

Notifications

N/A

Platform Description

N/A

1.2 clear ip igmp interface

Function

Run the **clear ip igmp interface** command to clear all IGMP statistics and group member records on an interface.

Syntax

clear ip igmp interface *interface-type interface-number*

Parameter Description

interface-type interface-number: Interface type and interface number.

Command Modes

Privileged EXEC mode

Default Level

14

Usage Guidelines

This command is used to clear all IGMP learned group information and packet statistics on an interface. The packet statistics include received Report packets, Leave packets, and group member records on the current interface.

Examples

The following example clears all IGMP statistics and group member records on GigabitEthernet 0/1.

```
Hostname> enable
Hostname# clear ip igmp interface GigabitEthernet 0/1
```

Notifications

N/A

Platform Description

N/A

1.3   ip igmp access-group

Function

Run the **ip igmp access-group** command to specify groups that the hosts are allowed to join on the interface.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

Hosts can join any group by default.

Syntax

ip igmp access-group { *acl-name* | *acl-number* }

no ip igmp access-group

default ip igmp access-group

Parameter Description

acl-name: Name of a standard IP ACL that hosts can join. The value is a case-sensitive string of 1 to 99 characters.

acl- number: No. of a standard IP ACL that hosts can join. The value range is from 1 to 199 or from 1300 to 2699.

Command Modes

Interface configuration mode

Default Level

14

Usage Guidelines

You can run this command on an interface to specify groups that you want hosts directly connected to a network segment to join. ACLs are used to limit the group address range. Report packets from groups denied by the ACLs are discarded.

When IGMPv3 is enabled, this command supports extended ACLs. When a received IGMP Report packet is (S1, S2, S3 … Sn, G), this command uses corresponding ACL to match (*,G). Therefore, to normally use this command, you must explicitly configure a (*,G) in the extended ACLs to filter (S1, S2, S3 … Sn, G).

Examples

The following example allows hosts on GigabitEthernet 0/1 to join only the group with the address 225.2.2.2.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# access-list 1 permit 225.2.2.2 0.0.0.0
Hostname(config)# interface GigabitEthernet 0/1
Hostname(config-if-GigabitEthernet 0/1)# ip igmp access-group 1
```

The following example associates a group list with extended ACLs on GigabitEthernet 0/1 to allow the interface to process IGMP packets with the source address 1.1.1.1 and group address 233.3.3.3.

```
Hostname# configure terminal
Hostname(config)# ip access-list extended ext_acl
Hostname(config-ext-nacl)# permit ip host 1.1.1.1 host 233.3.3.3
Hostname(config)# interface GigabitEthernet 0/1
Hostname(config-if-GigabitEthernet 0/1)# ip igmp access-group ext_acl
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.4   ip igmp immediate-leave group-list

Function

Run the **ip igmp immediate-leave group-list** command to enable the fast leave function on an interface.

Run the **no** form of this command to disable this function on the interface.

Run the **default** form of this command to restore the default configuration.

The fast leave function on an interface is disabled by default.

Syntax

ip igmp immediate-leave group-list { *acl-name* | *acl-number* }

no ip igmp immediate-leave

default ip igmp immediate-leave

Parameter Description

acl-name: Name of a standard IP ACL. The value is a case-sensitive string of 1 to 99 characters.

acl- number: No. of a standard IP ACL. The value range is from 1 to 99 or from 1300 to 1999.

Command Modes

Interface configuration mode

Default Level

14

Usage Guidelines

This command applies to an interface that runs IGMPv2 or IGMPv3 and that is connected to only one host.

After the fast leave function is enabled, if a device receives an IGMP Leave packet of a specified group, the device directly deletes this interface from the group member records to shorten the leave latency.

Examples

The following example enables the fast leave function on an interface.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# access-list 1 permit 225.192.20.0 0.0.0.255
Hostname(config)# interface GigabitEthernet 0/1
Hostname(config-if-GigabitEthernet 0/1)# ip igmp immediate-leave group-list 1
```

Notifications

If no access list exists, the following notification will be displayed:

```
% access-list 1 not exist
```

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.5 ip igmp join-group

Function

Run the **ip igmp join-group** command to add an interface to a group.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

No interface is added to a group by default.

Syntax

ip igmp join-group *group-address*

no ip igmp join-group *group-address*

default ip igmp join-group *group-address*

Parameter Description

group-address: Address of a group.

Command Modes

Interface configuration mode

Default Level

14

Usage Guidelines

After this command is run, the interface will simulate host behaviors and send a Join packet to the upstream device to join the specified group.

This command is used in lab test.

Examples

The following example adds GigabitEthernet 0/1 to the group with the address 233.3.3.3.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# interface GigabitEthernet 0/1
Hostname(config-if-GigabitEthernet 0/1)# ip igmp join-group 233.3.3.3
```

Notifications

If the group address is invalid, the following notification will be displayed:

```
Illegal multicast group address
```

If the interfaces in a group are full, the following notification will be displayed:

```
IGMP join-group limit reached
```

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.6   ip igmp last-member-query-count

Function

Run the **ip igmp last-member-query-count** command to configure the times for sending specific group query packets on an interface.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

Specific group query packets are sent twice by default.

Syntax

ip igmp last-member-query-count *last-member-query-count-number*

no ip igmp last-member-query-count

default ip igmp last-member-query-count

Parameter Description

last-member-query-count-number: Times for sending specific group query packets. The value range is from 2 to 7.

Command Modes

Interface configuration mode

Default Level

14

Usage Guidelines

This command applies to IGMPv2 or IGMPv3 only.

After receiving a Leave packet through an interface, a multicast device continuously sends specific group query packets and waits for responses from the host. After timeout, the device considers that no group member exists in the directly-connected network segment and deletes this interface from the IGMP group member records. The timeout time is a product of the interval for sending specific group query packets and the times for sending the specific group query packets.

Examples

The following example sets the times for sending specific group query packets to 3 on GigabitEthernet 0/1.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# interface GigabitEthernet 0/1
Hostname(config-if-GigabitEthernet 0/1)# ip igmp last-member-query-count 3
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- **show ip igmp interface**

1.7 ip igmp last-member-query-interval

Function

Run the **ip igmp last-member-query-interval** command to configure the interval for sending specific group query packets on an interface.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

The interval for sending specific group query packets is **1** second by default.

Syntax

ip igmp last-member-query-interval *last-member-query-interval*

no ip igmp last-member-query-interval

default ip igmp last-member-query-interval

Parameter Description

last-member-query-interval: Interval for sending specific group query packets, in 0.1 seconds. The value range is from 1 to 255.

Command Modes

Interface configuration mode

Default Level

14

Usage Guidelines

This command applies to IGMPv2 and IGMPv3 only.

After receiving a Leave packet through an interface, a multicast device continuously sends specific group query packets and waits for responses from the host. After timeout, the device considers that no group member exists in the directly-connected network segment and deletes this interface from the IGMP group member records. Timeout period = Interval for sending specific group query packets * Times for sending the specific group query packets

Examples

The following example sets the interval for sending specific group query packets to 20 seconds on GigabitEthernet 0/1.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# interface GigabitEthernet 0/1
Hostname(config-if-GigabitEthernet 0/1)# ip igmp last-member-query-interval 200
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

● **show ip igmp interface**

1.8 ip igmp limit

Function

Run the **ip igmp limit** command to configure the maximum number of IGMP group member records.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

The maximum number of IGMP group member records on an interface is **4000** by default. This number is **64000** in global configuration mode by default.

Syntax

ip igmp limit *limit-number* [**except** *acl-name* | **except** *acl-number*]

no ip igmp limit

default ip igmp limit

Parameter Description

limit *limit-number*: Specifies the maximum number of IGMP group member records. The value range is from 1 to 64000.

except *acl-name*: Specifies the name of a standard IP ACL. The groups in the ACL are not counted. The value is a case-sensitive string of 1 to 99 characters.

except *acl-number*: Specifies the No. of a standard IP ACL. The groups in the ACL are not counted. The value range is from 1 to 99 or from 1300 to 1999.

Command Modes

Global configuration mode

Interface configuration mode

Default Level

14

Usage Guidelines

In global configuration mode, this command limits the number of IGMP group member records on a multicast device.

In interface configuration mode, this command limits the number of IGMP group member records on an interface.

If the number of group member records exceeds the interface limit or global limit, subsequent received Report packets are ignored.

If an except list is configured, Report packets in a specified range can be normally processed, but they are not counted.

Interface and global limits can be configured separately. If the global limit is smaller than the interface limit, the global limit prevails.

Examples

The following example sets the maximum number of group members on GigabitEthernet 0/1 to 300, excluding the groups in the ACL1.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# interface GigabitEthernet 0/1
Hostname(config-if-GigabitEthernet 0/1)# ip igmp limit 300 except acl1
```

Notifications

If no access list exists, the following notification will be displayed:

```
% access-list acl1 not exist
```

Common Errors

N/A

Platform Description

N/A

Related Commands

- **show ip igmp interface**

1.9   ip igmp mroute-proxy

Function

Run the **ip igmp mroute-proxy** command to enable the MRoute proxy function on an interface.

Run the **no** form of this command to disable this function on an interface.

Run the **default** form of this command to restore the default configuration.

The MRoute proxy function on an interface is disabled by default.

Syntax

ip igmp mroute-proxy *interface-type interface-number*

no ip igmp mroute-**proxy**

default ip igmp mroute-**proxy**

Parameter Description

interface-type interface-number: Type and number of a specified upstream interface.

Command Modes

Interface configuration mode

Default Level

14

Usage Guidelines

You can run the **ip igmp proxy-service** command to configure the upstream interface in the root direction of the multicast distribution tree as a proxy service interface.

You can run the **ip igmp mroute-proxy** command to configure the downstream interface in the leaf direction of the multicast distribution tree as an MRoute proxy interface.

The proxy service interface forwards an IGMP Query packet to the MRoute proxy interface. The MRoute proxy interface forwards an IGMP Report packet to the proxy service interface.

Examples

The following example enables the proxy service function on GigabitEthernet 0/1 and the MRoute proxy function on GigabitEthernet 0/2.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# interface GigabitEthernet 0/1
Hostname(config-if-GigabitEthernet 0/1)# ip igmp proxy-service
Hostname(config-if-GigabitEthernet 0/1)# exit
Hostname(config)# interface GigabitEthernet 0/2
Hostname(config-if-GigabitEthernet 0/2)# ip igmp mroute-proxy GigabitEthernet 0/1
```

Notifications

If the multicast proxy function on an interface is disabled, the following notification will be displayed:

```
Mroute proxy had configured
```

Common Errors

N/A

Platform Description

N/A

Related Commands

- **ip multicast-routing** (IPv4 multicast routing management)

- **show ip igmp interface**

1.10   ip igmp proxy-service

Function

Run the **ip igmp proxy-service** command to enable the proxy service function on an interface.

Run the **no** form of this command to disable this function on an interface.

Run the **default** form of this command to restore the default configuration.

The proxy service function on an interface is disabled by default.

Syntax

ip igmp proxy-service

no ip igmp proxy-service

default ip igmp proxy-service

Parameter Description

N/A

Command Modes

Interface configuration mode

Default Level

14

Usage Guidelines

You can run the **ip igmp proxy-service** command to configure the upstream interface in the root direction of the multicast distribution tree as a proxy service interface.

You can run the **ip igmp mroute-proxy** command to configure the downstream interface in the leaf direction of the multicast distribution tree as an MRoute proxy interface.

The proxy service interface forwards an IGMP Query packet to the MRoute proxy interface. The MRoute proxy interface forwards an IGMP Report packet to the proxy service interface.

A maximum of 32 proxy service interfaces can be configured on a device. After receiving an IGMP Query packet, the proxy service interface makes a response based on the IGMP group member records.

If the **switchport** command is executed on the proxy service interface, the **ip igmp mroute-proxy** command configured on the MRoute proxy interface is automatically deleted.

Examples

The following example enables the proxy service function on GigabitEthernet 0/1 and the MRoute proxy function on GigabitEthernet 0/2.

```
Hostname> enable
Hostname# configure terminal
```

```
Hostname(config)# interface GigabitEthernet 0/1
Hostname(config-if-GigabitEthernet 0/1)# ip igmp proxy-service
Hostname(config-if-GigabitEthernet 0/1)# exit
Hostname(config)# interface GigabitEthernet 0/2
Hostname(config-if-GigabitEthernet 0/2)# ip igmp mroute-proxy GigabitEthernet 0/1
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- **ip multicast-routing** (IPv4 multicast routing management)

- **show ip igmp interface**

1.11   ip igmp query-interval

Function

Run the **ip igmp query-interval** command to configure an interval for querying common group members.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

The default interval for querying common group members is **125** seconds.

Syntax

ip igmp query-interval

no ip igmp query-interval

default ip igmp query-interval

Parameter Description

query-interval: Interval for querying a common group member, in seconds. The value range is from 1 to 18000.

Command Modes

Interface configuration mode

Default Level

14

Usage Guidelines

N/A

Examples

The following example sets the interval for querying a common group member to 120 seconds on GigabitEthernet 0/1.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# interface GigabitEthernet 0/1
Hostname(config-if-GigabitEthernet 0/1)# ip igmp query-interval 120
```

Notifications

If the configured query interval is smaller than the maximum response time, the following notification will be displayed:

```
Query interval should be greater than Query Response Interval
```

Common Errors

N/A

Platform Description

N/A

Related Commands

● **show ip igmp interface**

1.12 ip igmp query-max-response-time

Function

Run the **ip igmp query-max-response-time** command to configure the maximum response time for Query packets on an interface.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

The maximum response time for query packets on an interface is **10** seconds by default.

Syntax

ip igmp query-max-response-time *query-max-response-time*

no ip igmp query-max-response-time

default ip igmp query-max-response-time

Parameter Description

query-max-response-time: Maximum response time, in seconds. The value range is from 1 to 25.

Command Modes

Interface configuration mode

Default Level

14

Usage Guidelines

After sending Query packets, the interface waits for responses. After timeout, the interface considers that no group member exists in the directly-connected network segment and deletes the group information.

Examples

The following example sets the maximum response interval to 20 seconds on GigabitEthernet 0/1.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# interface GigabitEthernet 0/1
Hostname(config-if-GigabitEthernet 0/1)# ip igmp query-max-response-time 20
```

Notifications

If the configured maximum response time is greater than the query interval, the following notification will be displayed:

```
% Query Response Interval should be less than Query Interval
```

Common Errors

N/A

Platform Description

N/A

Related Commands

- **show ip igmp interface**

1.13   ip igmp query-timeout

Function

Run the **ip igmp query-timeout** command to configure the survival period of other querier on an interface.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

The survival period of other querier is **255** seconds by default.

Syntax

ip igmp query-timeout *query-timeout*

no ip igmp query-timeout

default ip igmp query-timeout

Parameter Description

query-timeout: Survival period of other querier, in seconds. The value range is from 60 to 300.

Command Modes

Interface configuration mode

Default Level

14

Usage Guidelines

After sending a Query packet, an interface waits for Query packets from other devices. After timeout, the device considers that it is the only querier on the directly-connected network segment.

Examples

The following example sets the survival period of other querier to 200 seconds on GigabitEthernet 0/1.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# interface GigabitEthernet 0/1
Hostname(config-if-GigabitEthernet 0/1)# ip igmp query-timeout 200
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

● **show ip igmp interface**

1.14   ip igmp robustness-variable

Function

Run the **ip igmp robustness-variable** command to configure the querier robustness variable on an interface.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

The default querier robustness variable is **2**.

Syntax

ip igmp robustness-variable *robustness-variable-number*

no ip igmp robustness-variable

default ip igmp robustness-variable

Parameter Description

robustness-variable-number: Querier robustness variable. The value range is from 2 to 7.

Command Modes

Interface configuration mode

Default Level

14

Usage Guidelines

The querier robustness variable is used to calculate the aging time of a forwarding entry after a device receives an IGMP Report packet. Aging time = Query interval × Robustness variable + 10

Examples

The following example sets the querier robustness variable to 3 on GigabitEthernet 0/1.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# interface GigabitEthernet 0/1
Hostname(config-if-GigabitEthernet 0/1)# ip igmp robustness-variable 3
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- **show ip igmp interface**

1.15 ip igmp ssm-map enable

Function

Run the **ip igmp ssm-map enable** command to enable the IGMP SSM mapping function.

Run the **no** form of this command to disable this function.

Run the **default** form of this command to restore the default configuration.

The IGMP SSM mapping function is disabled by default.

Syntax

ip igmp ssm-map enable

no ip igmp ssm-**map enable**

default ip igmp ssm-**map enable**

Parameter Description

N/A

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

You can run the **ip igmp ssm-map static** command to configure static mapping entries.

After this function is enabled, when an interface running IGMPv3 receives an IGMPv1 or IGMPv2 Report packet, the interface adds a static mapping source address.

Examples

The following example enables the IGMP SSM mapping function and sets the group mapping source address of ACL 11 to 192.168.2.2.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# ip igmp ssm-map enable
Hostname(config)# ip igmp ssm-map static 11 192.168.2.2
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- **ip pim ssm** (PIM-SM)
- **ip igmp ssm-map static**
- **show ip igmp ssm-mapping**

1.16   ip igmp ssm-map static

Function

Run the **ip igmp ssm-map static** command to configure static mapping entries.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

No static mapping entry is configured by default.

Syntax

ip igmp ssm-map static { *acl-name* | *acl-number* } *source-address*

no ip igmp ssm-map static { *acl-name* | *acl-number* } *source-address*

default ip igmp ssm-map static { *acl-name* | *acl-number* } *source-address*

Parameter Description

acl-name: Name of a standard IP ACL. The value is a case-sensitive string of 1 to 99 characters.

acl- number: No. of a standard IP ACL. The value range is from 1 to 99 or from 1301 to 1999.

source-address: Source address.

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

You can run the **ip igmp ssm-map enable** command to enable the IGMP SSM mapping function.

You can run this command to configure a static mapping entry.

After a static mapping entry is configured, when an interface running IGMPv3 receives an IGMPv1 or IGMPv2 Report packet, the interface adds a static mapping source address.

Examples

The following example enables the IGMP SSM mapping function and sets the group mapping source address of ACL 11 to 192.168.2.2.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# ip igmp ssm-map enable
Hostname(config)# ip igmp ssm-map static 11 192.168.2.2
```

Notifications

If *source-address* is not a unicast address, the following notification will be displayed:

```
% Invalid input, not a unicast IP address 224.1.1.1!
```

If an inexistent ACL is applied, the following notification will be displayed:

```
% access-list 1 not exist
```

Common Errors

N/A

Platform Description

N/A

Related Commands

- **ip pim ssm** (PIM-SM)
- **ip igmp ssm-map enable**
- **show ip igmp ssm-mapping**

1.17   ip igmp static-group

Function

Run the **ip igmp static-group** command to add a static interface to a group.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

No static interface is added to a group by default.

Syntax

ip igmp static-group *group-address*

no ip igmp static-group *group-address*

default ip igmp static-group *group-address*

Parameter Description

group-address: Address of a group.

Command Modes

Interface configuration mode

Default Level

14

Usage Guidelines

This command adds an interface to a group without IGMP packet exchange. Even if no host exists in the group that resides on the same network segment as the interface, this interface is added to the group member records.

The record generated by adding a static interface to a group can be removed by using the **no ip igmp static-group** command, other than the **clear ip igmp group** command.

Examples

The following example adds GigabitEthernet 0/1 to the group with the address 236.6.6.6.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# interface GigabitEthernet 0/1
Hostname(config-if-GigabitEthernet 0/1)# ip igmp static-group 236.6.6.6
```

Notifications

If the group address is not an address of a multicast group, the following notification will be displayed:

```
Not a IP multicast group address
```

If the multicast group is full, the following notification will be displayed:

```
IGMP static-group limit reached
```

Common Errors

N/A

Platform Description

N/A

Related Commands

● **show ip igmp interface**

1.18   ip igmp version

Function

Run the **ip igmp version** command to configure the IGMP version on an interface.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

IGMPv2 runs on an interface by default.

Syntax

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

no ip igmp version

default ip igmp version

Parameter Description

1: Indicates IGMPv1.

2: Indicates IGMPv2.

3: Indicates IGMPv3.

Command Modes

Interface configuration mode

Default Level

14

Usage Guidelines

After this command is executed, the IGMP function automatically restarts.

Examples

The following example configures IGMPv3 on GigabitEthernet 0/1.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# interface GigabitEthernet 0/1
Hostname(config-if-GigabitEthernet 0/1)# ip igmp version 3
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

● **show ip igmp interface**

1.19   ip igmp enforce-router-alert

Function

Run the **ip igmp enforce-router-alert** command to enable the function of checking the Router Alert option in an IGMP packet and discarding an IGMP packet that does not carry the Router Alert option.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

The function of checking the Router Alert option in an IGMP packet is disabled by default.

Syntax

ip igmp enforce-router-alert

no ip igmp enfore-router-alert

default ip igmp enfore-router-alert

Parameter Description

N/A

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

You can run the **ip igmp enforce-router-alert** command to enable the Router Alert option checking function.

You can run the **no** form of this command to disable the Router Alert option checking function.

Examples

The following example enables the function of checking the Router Alert option in IGMP packets and discarding the IGMP packets that do not carry the Router Alert option.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# ip igmp enforce-router-alert
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.20　ip igmp enforce-source-subnet

Function

Run the **ip igmp enforce-source-subnet** command to enable the source address checking function for IGMP Report packets.

Run the **no** form of this command to disable this function.

Run the **default** form of this command to restore the default configuration.

The source address checking function for IGMP Report packets is disabled by default.

Syntax

ip igmp enforce-source-subnet

no ip igmp enforce-source-subnet

default ip igmp enforce-source-subnet

Parameter Description

N/A

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

You can run the **ip igmp enforce-source-subnet** command to enable the source address checking function for IGMP Report packets. Only IGMP Report packets whose source addresses are on the same network segment as the packet receiving interface are received.

You can run the **no** form of this command to disable the source address checking function for IGMP Report packets.

If the source address in an IGMP Report packet is on the same network segment as the packet receiving interface, the packet can be received and the packet sending host can join the local group. If the source

address in an IGMP Report packet is not on the same network segment as the packet receiving interface, the packet is rejected and the packet sending host cannot join the local group.

Examples

The following example enables source address checking for IGMP Report packets.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# ip igmp enforce-source-subnet
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.21 ip igmp send-router-alert

Function

Run the **ip igmp send-router-alert** command to enable the function of containing the Router Alert option in an IGMP packet to be sent.

Run the **no** form of this command to disable this function.

Run the **default** form of this command to restore the default configuration.

The Router Alert option is not contained in an IGMP packet to be sent by default.

Syntax

ip igmp send-router-alert

no ip igmp send-router-alert

default ip igmp send-router-alert

Parameter Description

N/A

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

You can run the **ip igmp send-router-alert** command to enable the function of containing the Router Alert option in an IGMP packet to be sent.

You can run the **no** form of this command to disable the function of containing the Router Alert option in an IGMP packet to be sent.

Examples

The following example enables the function of containing the Router Alert option in an IGMP packet to be sent.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# ip igmp send-router-alert
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.22   show ip igmp groups

Function

Run the **show ip igmp groups** command to display groups directly connected to a device and group information learned from IGMP.

Syntax

show ip igmp groups [*interface-type interface-number*] [*group-address*] [**detail**]

Parameter Description

group-address: Address of a group.

interface-type interface-number: Interface type and interface number.

detail: Displays detailed information.

Command Modes

All modes except the user EXEC mode

Default Level

14

Usage Guidelines

If no parameter is specified in the command, the group addresses, interface types, and all multicast groups directly connected to the interfaces are displayed.

Examples

The following example displays all group information.

```
Hostname> enable
Hostname# show ip igmp groups
IGMP Connected Group Membership
Group Address Interface Uptime Expires  Last Reporter
224.0.1.1         eth2  00:00:09  00:04:17  10.10.0.82
224.0.1.24        eth2  00:00:06  00:04:14  10.10.0.84
224.0.1.40        eth2  00:00:09  00:04:15  10.10.0.91
224.0.1.60        eth2  00:00:05  00:04:15  10.10.0.7
239.255.255.250 eth2  00:00:12  00:04:15  10.10.0.228
239.255.255.254 eth2  00:00:08  00:04:13  10.10.0.84
```

The following example displays detailed information of a group with the address 224.1.1.1.

```
Hostname> enable
Hostname# show ip igmp groups 224.1.1.1 detail
Interface: eth1
Group: 224.1.1.1
Uptime: 00:00:42
Group mode: Include
Last reporter: 192.168.50.111
TIB-A Count: 2
TIB-B Count: 0
Group source list: (R - Remote, M - SSM Mapping)
Source Address Uptime v3 Exp Fwd Flags
192.168.55.55 00:00:42 00:03:38 Yes R
192.168.55.66 00:00:42 00:03:38 Yes R
```

Table 1-1Output Fields of the show ip igmp groups Command

Field	Description
Group Address	Group address
Interface	Interface
Uptime	Update time
Expires	Remaining time
Last Reporter	Address of the last host that sends a Report packet
TIB-A Count	Number of source nodes in INCLUDE mode
TIB-B Count	Number of source nodes in EXCLUDE mode

Field	Description
Group source list	Linked list of source addresses
Source Address	Source address
Uptime	Source update time
v3 Exp	Source timeout time
Fwd Flags	Method of recording source addresses

Notifications

N/A

Platform Description

N/A

1.23 show ip igmp interface

Function

Run the **show ip igmp interface** command to display configurations of an interface.

Syntax

show ip igmp interface [*interface-type interface-number*]

Parameter Description

interface-type interface-number: Interface type and interface number.

Command Modes

All modes except the user EXEC mode

Default Level

14

Usage Guidelines

If no parameter is specified in the command, configurations of all interfaces are displayed.

Examples

The following example displays configurations of all interfaces.

```
Hostname> enable
Hostname# show ip igmp interface
Interface vlan 1(Index 4294967295)
IGMP Active, Non-Querier, Version 3 (default)
IGMP querying router is 0.0.0.0
IGMP query interval is 125 seconds
```

```
IGMP querier timeout is 255 seconds
IGMP max query response time is 10 seconds
Last member query response interval is 1000 milliseconds
Group Membership interval is 260 seconds
```

Table 1-1Output Fields of the show ip igmp interface Command

Field	Description
Interface	Interface description
IGMP Active	IGMP status of an interface
IGMP querying router is x	Address of an IGMP querier router
IGMP query interval is x seconds	IGMP query interval
IGMP querier timeout is x seconds	IGMP query timeout time
IGMP max query response time is x seconds	Maximum response time for IGMP query packets
Last member query response interval is x milliseconds	Interval for querying the last member
Group Membership interval is x seconds	Interval for sending group member relationship

Notifications

N/A

Platform Description

N/A

1.24   show ip igmp ssm-mapping

Function

Run the **show ip igmp ssm-mapping** command to display IGMP SSM mapping information.

Syntax

show ip igmp ssm-mapping [*group-address*]

Parameter Description

group-address: Address of a group.

Command Modes

All modes except the user EXEC mode

Default Level

14

Usage Guidelines

If no parameter is specified in the command, all IGMP SSM mapping information is displayed.

Examples

The following example displays the IGMP SSM mapping information of a group with the address 233.3.3.3.

```
Hostname> enable
Hostname# show ip igmp ssm-mapping 233.3.3.3
Group address: 233.3.3.3
Database    : Static
Source list : 192.3.3.3
            : 3.3.3.3
```

Table 1-1 Output Fields of the show ip igmp ssm-mapping Command

Field	Description
Group Address	Group address
Database	Data status
Source list	Linked list of source addresses

Notifications

N/A

Platform Description

N/A