

# IGMP-SNOOPING Configuration Commands

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## Chapter 1 IGMP-SNOOPING Configuration Commands

IGMP-SNOOPING configuration commands include:

- ip igmp-snooping
- ip igmp-snooping static
- ip igmp-snooping immediate-leave
- ip igmp-snooping dlf-frames
- ip igmp-snooping router age
- ip igmp-snooping response time
- ip igmp-snooping querier
- show ip igmp-snooping
- show ip igmp-snooping timer
- show ip igmp-snooping groups
- show ip igmp-snooping statistics
- debug ip igmp-snooping packet
- debug ip igmp-snooping timer

### 1.1.1 igmp-snooping

#### Description

To enable the IGMP-snooping of VLAN, use the ip igmp-snooping command. Use the no form of this command to restore the default.

**ip igmp-snooping [ vlan *vlan\_id* ]**

**no ip igmp-snooping [ vlan *vlan\_id* ]**

#### Parameter

Parameter	Description
<i>vlan id</i>	VLAN identity. Value is from 1 to 4094.

**Default**

disabled

**Instruction**

If not specified the vlan parameter, this command enable or disable all vlans in the system (IGMP-snooping currently can be ran on 16 vlans at most at the same time.)

**Example**

The following command enables IGMP snooping of vlan 1:

```
switch(config)# ip igmp-snooping vlan 1
switch(config)#
```

## 1.1.2 igmp-snooping static

**Description**

**ip igmp-snooping vlan** *vlan\_id* **static** *A.B.C.D* **interface** *intf*

**no ip igmp-snooping vlan** *vlan\_id* **static** *A.B.C.D* **interface** *intf*

**Parameter**

Parameter	Description
<i>vlan id</i>	VLAN identity. Value is from 1 to 4094.
<i>A.B.C.D</i>	Specifies the IP address of multicast
<i>intf</i>	Specifies the interface

**Default**

None

**Instruction**

Use this command to configure the static multicast address of vlan. Use the no form of this command to delete the address.

**Example**

The following command adds the static multicast address at 234.5.6.7 to the fast ethernet interface 5 of vlan 2:

```
switch(config)# ip igmp-snooping vlan 2 static 234.5.6.7 interface FastEthernet0/5
switch(config)#
```

**N o t e :**

224.0.0.0-224.0.0.255, as the multicast address which cannot be routed, cannot be registered to each interface.

### 1.1.3 igmp-snooping immediate-leave

#### Description

To configure the immediate-leave characteristic of vlan, use the ip igmp-snooping vlan command. Use the no form of this command to restore the default value.

**ip igmp-snooping vlan *vlan\_id* immediate-leave**

**no ip igmp-snooping vlan *vlan\_id* immediate-leave**

#### Parameter

Parameter	Description
<i>vlan id</i>	VLAN identity. Value is from 1 to 4094.

#### Default

disabled

#### Instruction

None

#### Example

The following command enables immediate-leave characteristic of vlan 1:

```
switch(config)# ip igmp-snooping vlan 1 immediate-leave
switch(config)#
```

### 1.1.4 igmp-snooping dlf-frames

#### Description

**ip igmp-snooping dlf-frames *filter***

**no ip igmp-snooping dlf-frames**

**Parameter**

Parameter	Description
<i>filter</i>	Filters for the multicast packets of the unregistered address

**Default**

None

**Instruction**

Use this command to configure filter mode for the multicast packets of the unregistered destination address. Use the no form of this command to restore the default configuration( broadcasting in vlan)

**Example**

The following example configures to drop multicast packets of the unregistered destination address in all vlans:

```
switch(config)# ip igmp-snooping dlf-frames filter
switch(config)#
```

**1.1.5 igmp-snooping router age****Description**

**ip igmp-snooping timer router-age *timer\_value***

**no ip igmp-snooping timer router-age *timer\_value***

**Parameter**

Parameter	Description
<i>time value</i>	Query timer time. Value is from 10 to 2147483647.

**Default**

260 seconds

**Instruction**

Use this command to configure query timer time. Use the no form of this command to restore the default value.

## Example

The following example configures router-age to 300 seconds

```
switch(config)# ip igmp-snooping timer router-age 300
```

```
switch(config)#
```

### 1.1.6 igmp-snooping response time

#### Description

To configure the maximum response time of IGMP-snooping, use IGMP-snooping command. Use the no form of this command to restore the default value.

**ip igmp-snooping timer response-time** *timer\_value*

**no ip igmp-snooping timer response-time** *timer\_value*

#### Parameter

Parameter	Description
<i>time value</i>	Query timer time . Value is from 1 to 255.

#### Default

10 seconds

#### Instruction

None

#### Example

The following example configures response-time to 20 seconds:

```
switch(config)# ip igmp-snooping timer response-time 20
```

```
switch(config)#
```

### 1.1.7 igmp-snooping querier

#### Description

To activate IGMP-snooping querier mechanism or configure the source ip address of the spontaneous query packets. Use the no form of this command to restore the default value.

**ip igmp-snooping querier** [*address* <*ip\_addr*>]

**no ip igmp-snooping querier** [*address* <*ip\_addr*>]

### Parameter

Parameter	Description
<i>ip_addr</i>	The common unicast IP address

### Default

disabled, the default source IP address is 10.0.0.200.

### Instruction

None

### Example

The following command activates IGMP querier:

```
switch(config)# ip igmp-snooping querier
switch(config)#
```

## 1.1.8 igmp-snooping forward-I3-to-mrouter

### Syntax

**ip igmp-snooping forward-I3-to-mrouter**

**no ip igmp-snooping forward-I3-to-mrouter**

To send the data packets to the multicast routing port, run **ip igmp-snooping forward-I3-to-mrouter**. To resume the default settings, run the “no” form of the previous command.

### Parameter

None

### Default value

If the **forward-I3-to-mrouter** command is not enabled, the data packets will not be sent to the related multicast routing port.



## Remarks

This command is mainly to send the data packets to the IGMP JOIN port and meanwhile to the multicast routing port. Especially in case of L3 multicast cascading, the upstream L3 switches cannot receive the IGMP JOIN packets from a relative group and hence cannot learn the information about the relative group, and then the data packets will be sent to all physical ports in the L3 egress VLAN. After this command is run, the data packets will only be sent to the multicast routing port, which is registered on PIM-SM.

## Example

The following example shows how to activate **IGMP forward-I3-to-mrouter** and make the upstream multicast data packets be sent to the multicast routing port:

```
switch(config)# ip igmp-snooping forward-I3-to-mrouter
switch(config)#
```

### 1.1.9 igmp-snooping sensitive

## Syntax

**ip igmp-snooping sensitive [value int<3-30>]**

**no ip igmp-snooping sensitive [value int<3-30 >]**

To activate the **IGMP-snooping sensitive** mechanism or set the value of the **sensitive** parameter, run **ip igmp-snooping sensitive [value int<3-30>]**. To resume the default value, run the "no" form of this command.

## Parameter

Parameter	Description
<i>int</i>	3-30

## Default value

The **sensitive** function is disabled by default.

## Remarks

This command is mainly used to modify the router-age of the mrouter port in active state and deliver the new query packets rapidly when a port in trunk mode is shut down.

## Example

The following example shows how to activate IGMP sensitive and set the route-age of mrouter to be a converged one.

```
switch(config)# ip igmp-snooping sensitive
switch(config)# ip igmp-snooping sensitive value 10
```

### 1.1.10 igmp-snooping v3-leave-check

#### Syntax

**ip igmp-snooping v3-leave-check**

**no ip igmp-snooping v3-leave-check**

To send the special query packets after the v3-leave packet is received, run **ip igmp-snooping v3-leave-check**; to resume the default settings, run the "no" form of this command.

#### Parameter

Parameter	Description

#### Default value

**v3-leave-check** is disabled and the special query packet will not be sent after v3-leave packet is received.

#### Remarks

#### Example

The following example shows how to activate IGMP **v3-leave-check** and send the special query packet after the v3-leave packet is received.

```
switch(config)# ip igmp-snooping v3-leave-check
switch(config)#
```

### 1.1.11 igmp-snooping forward-wrongiif-within-vlan

#### Syntax

**ip igmp-snooping forward-wrongiif-within-vlan**

**no ip igmp-snooping forward-wrongiif-within-vlan**

To send the multicast data packets, received from the wrongiif port, to the relative physical ports in the local vlan, run **ip igmp-snooping forward-wrongiif-within-vlan**; to resume the default value, run the “no” form of this command.

**Parameter**

Parameter	Description

**Default value**

This command is enabled by default and the multicast packets from the wrongiif port will be sent to the relative physical ports.

**Remarks**

This command takes its importance only when the L3 multicast is enabled. After this command is enabled, the multicast packets, entering from the wrongiif port, will be sent to the physical ports that are added into the group of vlan; otherwise, the multicast packets will be dropped.

**Example**

The following example shows how to activate IGMP **forward-wrongiif-within-vlan**, and how to send the multicast packets from the wrongiif port to the relative physical ports in the local VLAN:

```
switch(config)# ip igmp-snooping forward-wrongiif-within-vlan
switch(config)#
```

## 1.1.12 show ip igmp-snooping

**Description**

**show ip igmp-snooping**

**Parameter**

None

**Default**

None

**Instruction**

Use this command to show configuration information of IGMP-snooping.

**Example**

The following example shows the vlan information of the running ipmp-snooping:

```
switch(config)# show ip igmp-snooping
igmp-snooping router age:260 s
igmp-snooping response time:10 s
  vlan 1
  -----
  running
  Router: 90.0.0.120(F0/2)
switch(config)#
```

**1.1.13 show ip igmp-snooping timer****Description**

**show ip igmp-snooping timer**

**Parameter**

None

**Default**

None

**Instruction**

Use this command to show timer information of IGMP.

**Example**

The following example shows timer information of igmp-snooping:

```
switch(config)# show ip igmp-snooping timer
vlan 1 router age : 246
switch(config)#
```

### 1.1.14 show ip igmp-snooping groups

#### Description

**show ip igmp-snooping groups**

#### Parameter

None

#### Default

None

#### Instruction

Use this command to configure multicast group information of IGMP-snooping.

#### Example

The following example shows the multicast group information of igmp-snooping:

```
switch(config)# show ip igmp-snooping groups
```

Vlan	Source	Group	Type	Port(s)
------	--------	-------	------	---------

-----

1	0.0.0.0	234.5.6.6	IGMP	F0/2
---	---------	-----------	------	------

1	0.0.0.0	239.255.255.250	IGMP	F0/2
---	---------	-----------------	------	------

```
switch(config)#
```

### 1.1.15 show ip igmp-snooping statistics

#### Description

**show ip igmp-snooping statistics**

#### Parameter

None

#### Default

None

**Instruction**

Use this command to show IGMP-snooping statistics.

**Example**

The following example shows igmp-snooping statistics:

```
switch(config)# show ip igmp-snooping statistics
  vlan 1
-----
  v1_packets:1
  v2_packets:2
  v3_packets:0
  general_query_packets:1
  special_query_packets:2
  join_packets:0
  leave_packets:0
  send_query_packets:0
  err_packets:0
switch(config)#
```

**1.1.16 debug ip igmp-snooping packet****Description**

**debug ip igmp-snooping packet**

**no debug ip igmp-snooping packet**

**Parameter**

None

**Default**

None

**Instruction**

Use this command to enable/disable the packet debugging switch of IGMP-snooping.

**Example**

The following command enables the packet debugging switch of igmp-snooping:

```
switch(config)# debug ip igmp-snooping packet
```

```
switch(config)#
```

### 1.1.17 debug ip igmp-snooping timer

#### Description

```
debug ip igmp-snooping timer
```

```
no debug ip igmp-snooping timer
```

#### Parameter

None

#### Default

None

#### Instruction

Use this command to enable/disable the timer debugging switch of IGMP-snooping

#### Example

The following example enables timer debugging switch of igmp-snooping:

```
switch(config)# debug ip igmp-snooping timer  
switch(config)#
```