MLD-Snooping Configuration Commands

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Chapter 1 MLD Multicast Configuration Commands

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1.1 ipv6 mld-snooping

Syntax

To enable MLD snooping, run ipv6 mld-snooping.
ipv6 mld-snooping
ipv6 mld-snooping

Parameters

None

Default Value

Enables MLD snooping multicast.

Usage Guidelines

After MLD snooping is enabled, when DLF occurs on multicast packets (that is, the destination address is not registered in the swap chip through the MLD-snooping), all multicast packets whose destination addresses are not registered on any port will be dropped.

Example

The following example shows how to enable the MLD snooping function:
switch_config# ipv6 mld-snooping

1.2 ipv6 mld-snooping solicitation

Syntax

ipv6 mld-snooping solicitation
no ipv6 mld-snooping solicitation
To enable or disable the hardware forwarding of the multicast group, run ip mld-snooping solicitation.To resume the default value, run no ip mld-snooping solicitation.

Parameters

None

Default Value

This function is shut down.

Usage Guidelines

None

Example

The following example shows how to enable the hardware forward of the multicast group.
switch_config#ipv6 mld-snooping solicitation

1.3 ipv6 mld-snooping vlan *vlan_id* static *X:X:X:X::X* interface *intf_name*

Syntax

ipv6 mld-snooping vlan *vlan_id* **static** *X:X:X:X::X* **interface** *intf_name*
no ipv6 mld-snooping vlan *vlan_id* **static** *X:X:X:X::X* **interface** *intf_name*

Parameters

Parameters	Description
vlan id	Stands for the ID of a VLAN. Value range: 1-4094
X:X:X:X::X	IP address of the multicast
Inft_name	An interface

Default Value

None

Usage Guidelines

This command is used to configure the static multicast address of VLAN. Its negative form is used to cancel the static multicast address.

Example

The following example shows how to add the static multicast address ff12::5 to port G0/1.
switch_config# ipv6 mld-snooping vlan 1 static ff12::5 interface g0/1
switch_config#

1.4 ipv6 mld-snooping timer router-age *timer_value*

Syntax

ipv6 mld-snooping timer router-age *timer_value*
no ipv6 mld-snooping timer router-age

Parameters

Parameters	Description
time value	Queries the time of the timer. Value range: 10-2147483647

Default Value

260 seconds

Usage Guidelines

This command is used to query the time of the timer of MLD-Snooping. The negative form of this command is used to resume the default value.

Example

The following example shows how to set the query time of the router to 300 seconds.
switch_config# ipv6 mld-snooping timer router-age 300
switch_config#

1.5 ipv6 mld-snooping timer response-time *timer_value*

Syntax

ipv6 mld-snooping timer response-time *timer_value*
no ipv6 mld-snooping timer response-time
To configure the maximum response time of IGMP snooping, run ip mld-snooping timer response-time timer_value. To resume the default value of IGMP snooping, run no ip mld-snooping timer response-time timer_value.

Parameters

Parameters	Description
time value	Queries the time of the timer. Value range: 10-2147483647

Default Value

10 seconds

Usage Guidelines

None

Example

The following example shows how to set the query response time of IGMP snooping to 20 seconds.
switch_config# ipv6 mld-snooping timer response-time 20

1.6 ipv6 mld-snooping querier

Syntax

Ipv6 mld-snooping querier [address <*ip_addr*>**]**
no ipv6 mld-snooping querier [address]
To activate the mld-snooping querier mechanism, or set the source IP address of the automatic query packet, run ip igmp-snooping querier [address <ip_addr>]. To resume the default value, run no ip igmp-snooping querier [address].

Parameters

Parameters	Description
ip_addr	IPv6 address of a normal unicast

Default Value

By default, the querier function is not enabled and the source IP address is FE80::3FF:FEFE:FD00:1.

Usage Guidelines

None

Example

The following example shows how to activate IGMP Querier to serve as a multicast router if no multicast router is working.
switch_config# ipv6 mld-snooping querier
switch_config#

1.7 ipv6 mld-snooping vlan *vlan_id* mrouter interface *inft_name*

Syntax

ipv6 mld-snooping vlan *vlan_id* **mrouter** interface *inft_name*
no ipv6 mld-snooping vlan *vlan_id* **mrouter** interface *inft_name*
To configure the port of the static multicast router of MLD snooping, run ipv6 mld-snooping vlan vlan_id mrouter interface inft_name.

Parameters

Parameters	Description
vlan id	Stands for the ID of a VLAN. Value range: 1-4094
inft_name	Shows the port type, the slot and the port ID.

Default Value

None

Usage Guidelines

None

Example

The following example shows how to set port G0/4 to the port of the static multicast router of MLD Snooping.

switch_config# ipv6 mld-snooping vlan 1 mrouter interface g0/4

1.8 ipv6 mld-snooping vlan *vlan_id* immediate-leave

Syntax

ipv6 mld-snooping vlan *vlan_id* **immediate-leave**
no ipv6 mld-snooping vlan *vlan_id* **immediate-leave**

Parameters

Parameters	Description
vlan id	Stands for the ID of a VLAN. Value range: 1-4094

Default Value

The immediate-leave function is disabled.

Usage Guidelines

This command is used to set the immediate-leave function.

Example

The following example shows how to enable the immediate-leave functionality on VLAN 1:
switch_config# ipv6 mld-snooping vlan 1 immediate-leave
switch_config#

1.9 show ipv6 mld-snooping

Syntax

show ipv6 mld-snooping

Parameters

None

Default Value

None

Usage Guidelines

This command is used to display the information about MLD-snooping configuration.

Example

The following example shows how to display the information about MLD snooping.

```
switch#show ipv6 mld-snooping

Global MLD snooping configuration:
----------------------------------
Globally enable          : Enabled
Querier                  : Enabled
Querier address          : FE80::3FF:FEFE:FD00:1
Router age               : 260 s
Response time            : 10 s
Handle Solicitation    : Enabled

Vlan 1:
----------
    Running
    Routers: SWITCH(querier);
Vlan 2:
----------
    Running
    Routers: SWITCH(querier);
Switch_config#show ipv6 mld-s g
Vlan Group               Type Port(s)
```

```
---- ---------------- ---- ----------------------------------
   1 FF02::1:FF13:647D MLD    G0/2
   1 FF02::1:FF13:394 MLD    G0/2
   2 FF02::1:FF00:2    MLD    G0/1
   1 FF02::1:FF00:12 MLD    G0/1
   1 FF02::1:FF00:2    MLD    G0/1
   2 FF02::1:FF61:9901 MLD    G0/2
switch#
```

1.10 show ipv6 mld-snooping vlan vlan_id

Syntax

show ipv6 mld-snooping vlan *vlan_id*

Parameters

Parameters	Description
vlan id	VLAN id. The value ranges from 1 to 4094.

Default Value

None

Usage Guidelines

The command is used to display the detailed information of MLD Snooping of specific vlan.

Example

The following example shows how to display the information about MLD snooping of specific vlan.

```
switch#show ipv6 mld-snooping vlan 1

Vlan 1:
----------
    Running
    Ports:      g0/1    g0/2    g0/3    g0/4    g0/5    g0/6    g0/8    g0/9    g0/10
g0/11   g0/12   g0/13   g0/14
            g0/16   g0/17   g0/18   g0/19   g0/20   g0/21   g0/22   g0/23   g0/24
    Routers:
No querier, MLD snooping doesn't work on this vlan
```

1.10 show ipv6 mld-snooping timer

Syntax

show ipv6 mld-snooping timer

Parameters

None

Default Value

None

Usage Guidelines

This command is used to display the information about the MLD-snooping clock.

Example

The following example shows how to display the information about the MLD-snooping clock.

```
switch#show ipv6 mld-snooping timers

vlan 1 Querier on port 0 : 251
vlan 2 Querier on port 0 : 251
vlan 2 multicast address 3333.0000.0005 response time : 13

switch#
```

Querier on port 0: 251 means the timeout time of the ageing timer of the router.
vlan 2 multicast address 3333.0000.0005 response time : this shows the time period from receiving a multicast query packet to the present; if there is no host to respond when the timer times out, the port will be canceled.

1.11 show ipv6 mld-snooping groups

Syntax

show ipv6 mld-snooping groups

Parameters

None

Default Value

None

Usage Guidelines

This command is used to display the information about the multicast group of MLD-snooping.

Example

The following example shows how to display the information about the multicast group of MLD-snooping.

```
switch# show ipv6 mld-snooping timer

Vlan Group                Type Port(s)
---- --------------- ---- -----------------------------------
   2 FF02::1:FF00:2    MLD    G0/2
   2 FF02::1:FF61:9901 MLD    G0/2
   1 FF02::1:FF13:394 MLD    G0/1
   1 FF02::1:FF00:2    MLD    G0/1
   1 FF02::1:FF00:12 MLD    G0/1
   1 FF02::1:FF13:647D MLD    G0/2
switch#
```

1.12 show ipv6 mld-snooping statistics

Syntax

show ipv6 mld-snooping statistics

Parameters

None

Default Value

None

Usage Guidelines

This command is used to display the information about MLD-snooping statistics.

Example

The following example shows how to display the information about MLD-snooping statistics.

```
switch#show ipv6 mld-snooping statistics
v1_packets:0            Quantity of MLD v1 packets
v2_packets:6            Quantity of MLD v2 packets
general_query_packets:5       Quantity of general query packets
special_query_packets:0       Quantity of special query packets
listener_packets:6       Quantity of Report packets
done_packets:0       Quantity of Leave packets
send_query_packets:0 Quantity of sending packets
err_packets:0         Quantity of error packets
```

1.13 show ipv6 mld-snooping mac

Syntax

show ipv6 mld-snooping mac

Parameters

None

Default Value

None

Usage Guidelines

This command is used to display the multicast MAC of MLD snooping.

Example

The following example shows how to display the information about MLD snooping.

```
switch#show ipv6 mld-snooping mac
  Vlan Mac                      Ref Flags
  ---- ---------------- ---- ------
     1 3333:0000:0001       1     2
     2 3333:ff61:9901       1     0
           FF02::1:FF61:9901
     1 3333:0000:0002       1     2
     1 3333:ff00:0002       1     0
           FF02::1:FF00:2
     1 3333:ff00:0012       1     0
           FF02::1:FF00:12
     1 3333:ff13:647d       1     0
           FF02::1:FF13:647D
```

```
2 3333:ff00:0002       1     0
        FF02::1:FF00:2
1 3333:ff13:0394       1     0
        FF02::1:FF13:394
1 3333:ff00:0001       1     2
1 3333:ff8e:7000       1     2
switch#
```

Ref means the quantity of referred IPv6 addresses of MAC.

Flags means the debug output information, and 2 means the information need be sent to CPU.