

## MLD-Snooping Configuration Commands

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# Chapter 1 MLD Multicast Configuration Commands

The MLD multicast configuration commands include:

- `ipv6 mld-snooping`
- `ipv6 mld-snooping solicitation`
- `ipv6 mld-snooping vlan vlan_id static X:X:X::X interface intf`
- `ipv6 mld-snooping timer router-age timer_value`
- `ipv6 mld-snooping timer response-time timer_value`
- `ipv6 mld-snooping vlan vlan_id mrouter interface intf_name`
- `ipv6 mld-snooping vlan vlan_id immediate-leave`
- `show ipv6 mld-snooping`
- `show ipv6 mld-snooping timer`
- `show ipv6 mld-snooping groups`
- `show ipv6 mld-snooping statistics`
- `show ipv6 mld-snooping mac`

## 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
<i>vlan id</i>	Stands for the ID of a VLAN. Value range: 1-4094
<i>X:X:X:X::X</i>	IP address of the multicast
<i>Intf_name</i>	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
<i>time value</i>	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
<i>time value</i>	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
<i>ip_addr</i>	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
<i>vlan_id</i>	Stands for the ID of a VLAN. Value range: 1-4094
<i>inft_name</i>	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
<i>vlan_id</i>	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 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.