

## 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::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 vlan *vlan\_id***
- **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

**ipv6 mld-snooping**

**no ipv6 mld-snooping**

To enable MLD snooping, run **ipv6 mld-snooping**. To disable the MLD snooping, use the no form of the command.

#### Parameter

None

#### Default

This command is used to enable MLD snooping.

## 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**.

### Parameter

None

### Default

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***

#### Parameter

Parameter	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</i>	An interface

#### Default

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 interface g1/1.

```
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**

#### Parameter

Parameter	Description
-----------	-------------

<i>time value</i>	Queries the time of the timer. Value range: 10-2147483647
-------------------	---

### Default

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***.

### Parameter

Parameter	Description
<i>time value</i>	Queries the time of the timer. Value range: 10-2147483647

### Default

15 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 mld-snooping querier mechanism or set the source IP address of the query packet, run the first one of the above commands.

To return to the default setting, use the no form of this command.

### Parameter

Parameter	Description
<i>ip_addr</i>	Normal unicast IPv6 address

### Default

Querier function is not disabled. The default source IP address is FE80::3FF:FEFE:FD00:1.

### Usage Guidelines

None

### Example

The following example shows how to activate IGMP querier and replace its work in condition of no multicast router.

```
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 set the static multicast router's port of MLD snooping, run the first one of the above-mentioned commands.

### Parameter

Parameter	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

None

### Usage Guidelines

None

### Example

The following example shows how to set interface G0/4 to be the interface 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**

### Parameter

Parameter	Description
-----------	-------------

<i>vlan id</i>	Stands for the ID of a VLAN. Value range: 1-4094
----------------	--

### Default

The immediate-leave functionality is disabled.

### Usage Guidelines

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

### 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**

### Parameter

None

### Default

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
```

### Parameter

Parameter	Description
<i>vlan_id</i>	Stands for the ID of a VLAN. Value range: 1-4094

### Default

None

### Usage Guidelines

This command is used to display the concrete information about MLD-snooping of the specified vlan.

## Example

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

## 1.11 show ipv6 mld-snooping timer

### Syntax

```
show ipv6 mld-snooping timer
```

### Parameter

None

### Default

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 timer
```

```
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:** This shows the switch router aging timer expires.

**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.

## 1.12 show ipv6 mld-snooping groups

### Syntax

**show ipv6 mld-snooping groups**

### Parameter

None

### Default

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 groups
```

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#
```

## 1.13 show ipv6 mld-snooping statistics

### Syntax

**show ipv6 mld-snooping statistics**

**Parameter**

None

**Default**

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  Send the packets quantity of Query
err_packets:0      Quantity of error packets
```

## 1.14 show ipv6 mld-snooping mac

**Syntax**

**show ipv6 mld-snooping mac**

**Parameter**

None

**Default**

None

**Usage Guidelines**

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

## Example

The following example shows how to display the multicast MAC of 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.