

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 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>Inft_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.