

MLD Commands

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clear ipv6 mld counters

To clear the Multicast Listener Discovery (MLD) interface counters, use the **clear ipv6 mld counters** command in Privileged EXEC mode.

Syntax

clear ipv6 mld counters [interface-id]

Parameters

- ***interface-id***—(Optional) Interface Identifier.

Command Mode

Privileged EXEC mode

User Guidelines

Use the **clear ipv6 mld counters** command to clear the MLD counters, which keep track of the number of joins and leaves received. If you omit the optional *interface-id* argument, the **clear ipv6 mld counters** command clears the counters on all interfaces.

Example

The following example clears the counters for VLAN 100:

```
switchxxxxxx# clear ipv6 mld counters vlan 100
```

ipv6 mld last-member-query-count

To configure the Multicast Listener Discovery (MLD) last member query counter, use the **ipv6 mld last-member-query-count** command in Interface Configuration mode. To restore the default value, use the **no** form of this command.

Syntax

ipv6 mld last-member-query-count count

no ipv6 mld last-member-query-count

Parameters

count—The number of times that group- or group-source-specific queries are sent upon receipt of a message indicating a leave. (Range: 1–7)

Default Configuration

A value of MLD Robustness variable.

Command Mode

Interface Configuration mode

User Guidelines

Use the **ipv6 mld robustness** command to change the MLD last member query counter.

Example

The following example changes a value of the MLD last member query counter to 3:

```
switchxxxxxx(config)# interface vlan 1
ipv6 mld last-member-query-count 3
exit
```

ipv6 mld last-member-query-interval

To configure the Multicast Listener Discovery (MLD) last member query interval, use the **ipv6 mld last-member-query-interval** command in Interface Configuration mode. To restore the default MLD query interval, use the **no** form of this command.

Syntax

ipv6 mld last-member-query-interval *milliseconds*

no ipv6 mld last-member-query-interval

Parameters

- ***milliseconds***—Interval, in milliseconds, at which MLD group-specific host query messages are sent on the interface. (Range: 100–25500).

Default Configuration

The default MLD last member query interval is 1000 milliseconds.

Command Mode

Interface Configuration mode

User Guidelines

Use the **ipv6 mld last-member-query-interval** command to configure the MLD last member query interval on an interface.

Example

The following example shows how to increase the MLD last member query interval to 1500 milliseconds:

```
switchxxxxxx(config)# interface vlan 100
switchxxxxxx(config-if)# ipv6 mld last-member-query-interval 1500
switchxxxxxx(config-if)# exit
```

ipv6 mld query-interval

To configure the frequency at which the switch sends Multicast Listener Discovery (MLD) host-query messages, use the **ipv6 mld query-interval** command in Interface Configuration mode. To return to the default frequency, use the **no** form of this command.

Syntax

ipv6 mld query-interval *seconds*

no ipv6 mld query-interval

Parameters

- ***seconds***—Frequency, in seconds, at which the switch sends MLD query messages from the interface. The range is from 30 to 18000.

Default Configuration

The default MLD query interval is 125 seconds.

Command Mode

Interface Configuration mode

User Guidelines

Use the **ipv6 mld query-interval** command to configure the frequency at which the MLD querier sends MLD host-query messages from an interface. The MLD querier sends query-host messages to discover which multicast groups have members on the attached networks of the router.

The query interval must be bigger than the maximum query response time.

Example

The following example shows how to increase the frequency at which the MLD querier sends MLD host-query messages to 180 seconds:

```
switchxxxxxx(config)# interface vlan 100
switchxxxxxx(config-if)# ipv6 mld query-interval 180
switchxxxxxx(config-if)# exit
```

ipv6 mld query-max-response-time

To configure the maximum response time advertised in Multicast Listener Discovery (MLD) queries, use the **ipv6 mld query-max-response-time** command in Interface Configuration mode. To restore the default value, use the **no** form of this command.

Syntax

ipv6 mld query-max-response-time *seconds*

no ipv6 mld query-max-response-time

Parameters

- ***seconds***—Maximum response time, in seconds, advertised in MLD queries. (Range: 5–20)

Default Configuration

10 seconds.

Command Mode

Interface Configuration mode

User Guidelines

This command controls the period during which the responder can respond to an MLD query message before the router deletes the group.

This command controls how much time the hosts have to answer an MLD query message before the router deletes their group. Configuring a value of fewer than 10 seconds enables the router to prune groups faster.

The maximum query response time must be less than the query interval.

Note. If the hosts do not respond fast enough, they might be pruned inadvertently. Therefore, the hosts must know to respond faster than 10 seconds (or the value you configure).

Example

The following example configures a maximum response time of 8 seconds:

```
switchxxxxxx(config)# interface vlan 100
switchxxxxxx(config-if)# ipv6 mld query-max-response-time 8
switchxxxxxx(config-if)# exit
```

ipv6 mld robustness

To configure the Multicast Listener Discovery (MLD) robustness variable, use the **ipv6 mld robustness** command in Interface Configuration mode. To restore the default value, use the **no** form of this command.

Syntax

ipv6 mld robustness count

no ipv6 mld robustness

Parameters

- ***count***—The number of expected packet loss on a link. Parameter range. (Range: 1–7).

Default Configuration

The default value is 2.

Command Mode

Interface Configuration mode

User Guidelines

Use the **ipv6 mld robustness** command to change the MLD robustness variable.

Example

The following example changes a value of the MLD robustness variable to 3:

```
switchxxxxxx(config)# interface vlan 1
switchxxxxxx(config-if)# ipv6 mld robustness 3
switchxxxxxx(config-if)# exit
```

ipv6 mld version

To configure which version of Multicast Listener Discovery Protocol (MLD) the router uses, use the **ipv6 mld version** command in Interface Configuration mode. To restore the default value, use the **no** form of this command.

Syntax

ipv6 mld version {**1** | **2**}

no ipv6 mld version

Parameters

- **1**—MLD Version 1.
- **2**—MLD Version 2.

Default Configuration

1

Command Mode

Interface Configuration mode

User Guidelines

Use the command to change the default version of MLD.

Example

The following example configures the router to use MLD Version 1:

```
switchxxxxxx(config)# interface vlan 100
switchxxxxxx(config-if)# ipv6 mld version 1
switchxxxxxx(config-if)# exit
```

show ipv6 mld counters

To display the Multicast Listener Discovery (MLD) traffic counters, use the **show ipv6 mld counters** command in User EXEC mode.

Syntax

show ipv6 mld counters [*interface-id*]

Parameters

- ***interface-id***—(Optional) Interface Identifier.

Command Mode

User EXEC mode

User Guidelines

Use the **show ipv6 mld counters** command to check if the expected number of MLD protocol messages have been received and sent.

If you omit the optional *interface-id* argument, the **show ipv6 mld counters** command displays counters of all interfaces.

Example

The following example displays the MLD protocol messages received and sent:

```
switchxxxxxx# show ipv6 mld counters vlan 100
VLAN 100
Elapsed time since counters cleared:00:00:21
 Failed received Joins: 0
 Total MLDv1 received messages: 10
 Total MLDv2 received messages: 0
 Total invalid received messages: 0
 General Sent Queries: 0
 Specific Sent Queries: 0
```

show ipv6 mld groups

To display the multicast groups that are directly connected to the router and that were learned through Multicast Listener Discovery (MLD), use the **show ipv6 mld groups** command in User EXEC mode.

Syntax

show ipv6 mld groups [**link-local** | *group-name* | *group-address* | *interface-id*] [**detail**]

Parameters

- **link-local**—(Optional) Displays the link-local groups.
- ***group-name* | *group-address***—(Optional) IPv6 address or name of the multicast group.
- ***interface-id***—(Optional) Interface identifier.
- **detail**—(Optional) Displays detailed information about individual sources.

Command Mode

User EXEC mode

User Guidelines

Use the **show ipv6 mld groups** [**detail**] command to display all directly connected groups.

Use the **show ipv6 mld groups link-local** [**detail**] command to display all directly connected link-local groups.

Use the **show ipv6 mld groups** [*group-name* | *group-address*] [**detail**] command to display one given directly connected group.

Use the **show ipv6 mld groups** *interface-id* [**detail**] command to display all groups directly connected to the given interface.

Example 1. The following is sample output from the **show ipv6 mld groups** command. It shows all of the groups joined by VLAN 100:

```
switchxxxxxx# show ipv6 mld groups vlan 100
```

MLD Connected Group Membership

```
Expires: never - switch itself has joined the group
Group Address Interface Expires
FF02::2 VLAN 100 never
FF02::1:FF00:1 VLAN 00:10:27
FF02::1:FFAF:2C39 VLAN 100 00:09:11
FF06:7777::1 VLAN 100 00:00:26
```

Example 2. The following is sample output from the **show ipv6 mld groups** command using the **detail** keyword:

```
switchxxxxxx# show ipv6 mld groups detail
Expires: zero value - INCLUDE state; non-zero value - EXCLUDE state
Interface: VLAN 100
 Group: FF33::1:1:1
 Router mode: INCLUDE
```

```
Last reporter: 2009:5::12:1
Group Timer Expires: 00:20:11
Group source list:
Source Address Expires
2004:4::6 00:00:11
2004:4::16 00:08:11
Group: FF33::1:1:2
Router mode: EXCLUDE
Last reporter: 2008:5::2A:10
Group Timer Expires: 00:20:11
Exclude Mode Expiry (Filter) Timer: 00:10:11
Group source list:
Source Address Expires
2004:5::1 00:04:08
2004:3::1 00:04:08
2004:7::10 00:00:00
2004:50::1 00:00:00
```

show ipv6 mld groups summary

To display the number of (*, G) and (S, G) membership reports present in the Multicast Listener Discovery (MLD) cache, use the **show ipv6 mld groups summary** command in User EXEC mode.

Syntax

show ipv6 mld groups summary

Parameters

This command has no arguments or keywords.

Command Mode

User EXEC mode

User Guidelines

The **show ipv6 mld groups summary** command displays the number of directly connected multicast groups (including link-local groups).

Example

The following is sample output from the **show ipv6 mld groups summary** command:

```
switchxxxxxx# show ipv6 mld groups summary
MLD Route Summary
 No. of (*,G) routes = 5
 No. of (S,G) routes = 0
```

```
Field Descriptions:
No. of (*,G) routes = 5—Displays the number of groups present in the MLD cache.
No. of (S,G) routes = 0—Displays the number of include and exclude mode sources present in
 the MLD cache.
```

show ipv6 mld interface

To display multicast-related information about an interface, use the **show ipv6 mld interface** command in User EXEC mode.

Syntax

show ipv6 mld interface [*interface-id*]

Parameters

- ***interface-id***—Interface identifier.

Command Mode

User EXEC mode

User Guidelines

If you omit the optional *interface-id* argument, the **show ipv6 mld interface** command displays information about all interfaces.

Example

The following is sample output from the **show ipv6 mld interface** command for Ethernet interface 2/1/1:

```
switchxxxxxx# show ipv6 mld interface vlan 100
VLAN 100 is up
 Administrative MLD Querier IPv6 address is FE80::260:3EFF:FE86:5649
 Operational MLD Querier IPv6 address is FE80::260:3EFF:FE86:5649
 Current MLD version is 3
 Administrative MLD robustness variable is 2 seconds
 Operational MLD robustness variable is 2 seconds
 Administrative MLD query interval is 125 seconds
 Operational MLD query interval is 125 seconds
 Administrative MLD max query response time is 10 seconds
 Operational MLD max query response time is 10 seconds
 Administrative Last member query response interval is 1000 milliseconds
 Operational Last member query response interval is 1000 milliseconds
```