FSOS

IPv6 Multicast Command Line Reference

Contents

1 IPv6 Multicast-Routing Commands

1.1 Ipv6 multicast-routing

Use this command to enable ipv6 multicast routing.

To disable ipv6 multicast routing, use the no form of this command.

Command Syntax

ipv6 multicast-routing

no ipv6 multicast-routing

Command Mode

Global Configuration

Default

Enable

Usage

None

Examples

- This example shows how to enable ipv6 multicast routing.

  Switch# configure terminal

  Switch(config)# ipv6 multicast-routing

- This example shows how to disable ipv6 multicast routing.

Switch# configure terminal

Switch(config)# no ipv6 multicast-routing

Related Commands

None

1.2 ipv6 multicast route-limit

Use this command to set the maximum number of the multicast routes.

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

Command Syntax

ipv6 multicast route-limit *route-number* (*threshold-number|*)

no ipv6 multicast route-limit

route-number	Max number of multicast route entries
threshold-number	Threshold at which to generate warning message

Command Mode

Global Configuration

Default

Default maximum number of the multicast routes should be 2048.

Default threshold should be same as the maximum number of multicast routes.

Usage

None

Examples

- This example shows how to set the maximum number of the multicast routes to 512.

  Switch(config)# ipv6 multicast route-limit 512

- This example shows how to return the maximum number of the multicast routes to default value.

  Switch(config)# no ipv6 multicast route-limit

Related Commands

    show ipv6 mroute route-limit

1.3 ipv6 mroute-rpf

Use this command to configure static multicast routes.

To remove static multicast routers, use the no form of this command.

Command Syntax

ipv6 mroute-rpf *source-address/mask-length* (**static** | **ripng** | **ospfv3** |) *rpf-nbr-address distance*

no ipv6 mroute-rpf *source-address/ mask-length* (**static** | **ripng** | **ospfv3** |)

source-address	Destination address
mask-length	Length of address mask
static	Static routes
ripng	Routing Information Protocol for IPv6
ospfv3	Open Shortest Patch First for IPv6
rpf-nbr-address	RPF neighbor address or route
distance	Administrative distance for mroute

Command Mode

Global Configuration

Default

No static multicast route is configured by default.

Usage

None

Examples

- This example shows how to set multicast source 2001::1/24 RPF neighbor address as 2002::3

  Switch(config)# ipv6 mroute-rpf 2001::1/64 2002::3

- This example shows how to remove this multicast static route.

  Switch(config)# no ipv6 mroute-rpf 2001::1/64

Related Commands

show ipv6 mroute-rpf

1.4 show ipv6 mroute

Use this command to display the ipv6 multicast routing table information.

Command Syntax

show ipv6 mroute (**sparse**|) (**count**|**summary**|)

show ipv6 mroute *address* (**sparse**|) (**count**|**summary**|)

show ipv6 mroute route-limit

sparse	Show sparse multicast routes
count	Show number of multicast route entries
summary	Show abbreviated multicast route information
address	Show specify source or group address multicast route
route-limit	Show max route limit value

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

- This example shows how to display multicast routing table.

    Switch# show ipv6 mroute

```
IPv6 Multicast Routing Table
Flags: I - Immediate Stat, T - Timed Stat, F - Forwarder installed
Timers: Uptime/Stat Expiry
Interface State: Interface

2001:1::1234, ff0e::1234:5678
uptime 00:00:02, stat expires 00:03:28
Owner PIM-SMv6, Flags: TF
  Incoming interface: eth-0-1
  Outgoing interface list:
    Register
    eth-0-2
```

- This example shows how to display multicast routing table summary information.

    Switch# show ipv6 mroute summary

```
IPv6 Multicast Routing Table
Flags: I - Immediate Stat, T - Timed Stat, F - Forwarder installed
```

```
Timers: Uptime/Stat Expiry
Interface State: Interface

2001:1::1234, ff0e::1234:5678
    00:01:04/00:02:26, PIM-SMv6, Flags: TF
```

Related Commands

ipv6 multicast route-limit

ipv6 mroute-rpf

1.5 show ipv6 mif

Use this command to display the multicast interface information.

Command Syntax

show ipv6 mif (*IFNAME* |)

IFNAME	Interface name. eg : eth-0-1

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display multicast interface information.

Switch# show ipv6 mif

```
Interface   Mif   Owner             Uptime
            Idx   Module
eth-0-1     0     PIM-SMv6          00:00:05
Register    1     PIM-SMv6          00:00:05
```

Related Commands

ipv6 pim sparse-mode

1.6 show ipv6 multicast groups count

Use this command to display the multicast group count.

Command Syntax

show ipv6 multicast groups count

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display multicast group number.

Switch# show ipv6 multicast groups count

```
multicast group record count:  1
multicast source record count: 0
multicast total record count:  1
multicast max record count:    2048
```

Related Commands

None

1.7 show ipv6 mroute-rpf

Use this command to display RPF information for multicast source.

Command Syntax

show ipv6 mroute-rpf *source-address*

source-address	The source address of mroute-rpf

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display multicast source 2001:5::1 RPF neighbor.

Switch# show ipv6 mroute-rpf 2001:5::1

```
RPF information for 2001:5::1
  RPF interface: eth-0-1
  RPF neighbor: 2001:1::2
  RPF route: 2001:5::/64
  RPF type: static
```

```
  RPF recursion count: 0
  Doing distance-preferred lookups across tables
  Distance: 0
  Metric: 0
```

Related Commands

ipv6 mroute-rpf

1.8 show resource mcast6

Use this command to display ipv6 multicast resource information.

Command Syntax

show resource mcast6

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display ipv6 multicast resource information.

Switch# show resource mcast6

```
MCAST
Resource                        Used        Capability
===========================================================
Mcast Entry                     0           224
Mcast Member                    0           1792
```

Related Commands

None

1.9 clear ipv6 mroute

Use this command to clear the ipv6 multicast routing table information.

Command Syntax

clear ipv6 mroute (* | *group-address* (*source-address*)|)

group-address	Clear specify group address multicast route
source-address	Clear specify source address multicast route
*	Clear all multicast routes

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to clear all ipv6 multicast routing table information.

Switch# clear ipv6 mroute *

Related Commands

show ipv6 mroute

2 MLD Commands

2.1 ipv6 mld access-group

Use this command to apply an access-list to the mld interface.

To remove this setting, use the no form of this command.

Command Syntax

ipv6 mld access-group *list*

no ipv6 mld access-group

list	The name of the ipv6 access-list to be applied. The format of access-list should be ipv6.

Command Mode

Interface configuration

Default

Access-group is not configured on any mld interface by default.

Usage

No matter the source ipv6 prefix or the destination ipv6 prefix in ACE should be take effect respectively. If ACE's action is deny, then the packet should be ignored; Otherwise if it matches one whose action is permit, then it should be processed regularly.

Examples

- This example shows how to apply the access-list acl1 to the interface vlan1.

  Switch(config-if)# interface vlan 1

  Switch(config-if)# ipv6 mld access-group acl1

- This example shows how to remove the access-list acl1 on the interface.

  Switch(config-if)# no ipv6 mld access-group

Related Commands

show ipv6 mld interface

2.2 ipv6 mld immediate-leave group-list

Use this command to apply an access-list to configure which groups support immediately-leave per interface.

To remove this setting, use the no form of this command.

Command Syntax

ipv6 mld immediate-leave group-list *list*

no ipv6 mld immediate-leave

list	The name of the ipv6 access-list to be applied. The format of access-list should be ipv6.

Command Mode

Interface configuration

Default

Access-group is not configured on any mld interface by default.

Usage

No matter the source ipv6 prefix or the destination ipv6 prefix in ACE should be take effect respectively. If ACE's action is deny, then the packet should be ignored; Otherwise if it matches one whose action is permit, then it should be processed regularly.

Examples

- This example shows how to apply an access-list to configure which groups support immediately-leave on interface vlan1.

    Switch(config-if)# interface vlan 1

    Switch(config-if)# ipv6 mld immediate-leave group-list acl1
- This example shows how to remove the access-list acl1 on the interface.

    Switch(config-if)# no ipv6 mld immediate-leave group-list

Related Commands

show ipv6 mld interface

2.3 ipv6 mld last-member-query-count

Use this command to set the value of last member query count.

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

Command Syntax

ipv6 mld last-member-query-count *count*

no ipv6 mld last-member-query-count

count	The value of last member query count, range is 2 to 7

Command Mode

Interface Configuration

Default

2

Usage

None.

Examples

- This example shows how to set the value of last member query count to 5.

  Switch(config-if)# ipv6 mld last-member-query-count 5

- This example shows how to return the value of last member query count to default value.

  Switch(config-if)# no ipv6 mld last-member-query-count

Related Commands

show ipv6 mld interface

ipv6 mld last-member-query-interval

2.4 ipv6 mld last-member-query-interval

Use this command to set the value of last member query interval.

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

Command Syntax

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

no ipv6 mld last-member-query-interval

interval	The last member query interval value(ms), range is 1000 to 25500.

Command Mode

Interface configuration

Default

1000

Usage

None

Examples

- This example shows how to set the last member query interval value to 10000ms.

  Switch(config-if)# ipv6 mld last-member-query-interval 10000
- This example shows how to return the last member query interval value to default value.

  Switch(config-if)# no ipv6 mld last-member-query-interval

Related Commands

show ipv6 mld interface

ipv6 mld last-member-query-count

2.5 ipv6 mld limit

Use this command to set the max num of groups allowed.

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

Command Syntax

ipv6 mld limit *number* **except** *list*

no ipv6 mld limit

number	The max num of groups, range is 1 to 4096
list	Groups not to be counted

Command Mode

Global Configuration & Interface Configuration

Default

4096

Usage

None

Examples

- This example shows how to set the max num of groups allowed to 1000 globally.

  Switch(config)# ipv6 mld limit 1000

- This example shows how to return the max num of groups to default value.

  Switch(config)# no ipv6 mld limit

Related Commands

show ipv6 mld interface

2.6 ipv6 mld mroute-proxy

Use this command to set the mroute-proxy port on this interface.

To remove it, use the no form of this command.

Command Syntax

ipv6 mld mroute-proxy *IFNAME*

no ipv6 mld mroute-proxy *IFNAME*

IFNAME	The interface name of the mroute-proxy port

Command Mode

Interface configuration

Default

None.

Usage

This command is used to set the mroute-proxy port on on the interface. Only one mroute-proxy port can be set on the interface. When set it again, the new setting will overwrite the old one.

Examples

- This example shows how to set the mroute-proxy port to eth-0-1 on this interface.

  Switch(config-if)# ipv6 mld mroute-proxy eth-0-1

- This example shows how to remove the mroute-proxy port on this interface.

  Switch(config-if)# no ipv6 mld mroute-proxy

Related Commands

ipv6 mld proxy-service

2.7 ipv6 mld proxy-service

Use this command to enable mld mroute proxy service on the interface.

To disable it, use the no form of this command.

Command Syntax

ipv6 mld proxy-service

no ipv6 mld proxy-service

Command Mode

Interface configuration

Default

None.

Usage

This command is used with command ipv6 mld mroute-proxy and to set the upstream interface of the mld group.

Examples

- This example shows how to enable mld mroute proxy service on this interface.

  Switch(config-if)# ipv6 mld proxy-service

- This example shows how to disable mld mroute proxy service.

  Switch(config-if)# no ipv6 mld proxy-service

Related Commands

ipv6 mld mroute-proxy

2.8 ipv6 mld querier-timeout

Use this command to set the mld previous querier timeout value.

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

Command Syntax

ipv6 mld querier-timeout *intval*

no ipv6 mld querier-timeout

intval	The mld previous querier timeout value, range is 60 to 300s.

Command Mode

Interface configuration

Default

255 seconds

Usage

None.

Examples

- This example shows how to set the mld previous querier timeout value to 100 seconds.

  Switch(config-if)# ipv6 mld querier-timeout 100

- This example shows how to return the mld previous querier timeout value to default value.

Switch(config-if)#no ipv6 mld querier-timeout

Related Commands

ipv6 mld query-interval

ipv6 mld query-max-response-time

2.9 ipv6 mld query-interval

Use this command to set the mld query interval.

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

Command Syntax

ipv6 mld query-interval *intval*

no ipv6 mld query-interval

intval	The value of mld query interval, range is 2 to 18000s.

Command Mode

Interface configuration

Default

125 seconds

Usage

None

Examples

- This example shows how to set the mld query interval to 300 seconds.

  Switch(config-if)# ipv6 mld query-interval 300

- This example shows how to return the mld query interval to default value.

  Switch(config-if)# no ipv6 mld query-interval

Related Commands

    ipv6 mld querier-timeout

    ipv6 mld query-max-response-time

2.10 ipv6 mld query-max-response-time

Use this command to set the mld query max response time.

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

Command Syntax

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

    no ipv6 query-max-response-time

intval	The mld query max response time, range is 1 to 25s.

Command Mode

Interface configuration

Default

10 seconds

Usage

Query max response time must be less than mld query interval.

Examples

This example shows how to set the mld query max response time to 20 seconds.

Switch(config-if)# ipv6 mld query-max-response-time 20

This example shows how to return the mld query max response time to default value.

Switch(config-if)# no ipv6 mld query-max-response-time

Related Commands

ipv6 mld querier-timeout

ipv6 mld query-interval

2.11 ipv6 mld robustness-variable

Use this command to set the mld querier robustness variable value.

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

Command Syntax

ipv6 mld robustness-variable *value*

no ipv6 robustness-variable

| *value* | The mld querier robustness variable value, range is 2 to 7. |

Command Mode

Interface configuration

Default

2

Usage

None

Examples

- This example shows how to set the mld querier robustness variable value to 6.

Switch(config-if)# ipv6 mld robustness-variable 5

- This example shows how to return the mld querier robustness variable value to default value.

Switch(config-if)# no ipv6 mld robustness-variable

Related Commands

show ipv6 mld interface

2.12 ipv6 mld version

Use this command to set the mld version on interface.

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

Command Syntax

ipv6 mld version *number*

no ipv6 version

value	The mld version on the interface, range is 1 to 2

Command Mode

Interface configuration

Default

1

Usage

None

Examples

- This example shows how to set the mld version 2 on the interface.

  Switch(config-if)# ipv6 mld version 2

- This example shows how to return the mld version to default value.

  Switch(config-if)# no ipv6 mld version

Related Commands

show ipv6 mld interface

2.13 ipv6 mld static-group

Use this command to configure the static multicast group on interface.

To delete static group, use the no form of this command.

Command Syntax

ipv6 mld static-group *group-address* (**source** *source-address* |)

no ipv6 mld static-group *group-address* (**source** *source-address* |)

group-address	The multicast group address

source *source-address*	The multicast source address

Command Mode

Interface configuration

Default

None

Usage

None

Examples

- This example shows how to configure the static mld group on interface.

  Switch # configure terminal

  Switch (config)# interface eth-0-1

  Switch (config-if)# ipv6 mld static-group ff0e::1234

  Switch (config-if)# ipv6 mld static-group ff0e::5678 source 2001::2

- This example shows how to delete static mld group on interface.

  Switch # configure terminal

  Switch (config)# interface eth-0-1

  Switch (config-if)# no ipv6 mld static-group ff0e::1234

Related Commands

show ipv6 mld groups

2.14 ipv6 mld ssm-map enable

Use this command to enable mld ssm mapping.

To disable ssm mapping, use the no form of this command.

Command Syntax

ipv6 mld ssm-map enable

no ipv6 mld ssm-map enable

Command Mode

Global Configuration

Default

Disable

Usage

None

Examples

- This example shows how to enable mld ssm mapping.

  Switch(config)# ipv6 mld ssm-map enable

- This example shows how to disable mld ssm mapping.

  Switch(config)# no ipv6 mld ssm-map enable

Related Commands

None

2.15 ipv6 mld ssm-map static

Use this command to set mld ssm mapping.

To cancel ssm mapping setting, use the no form of this command.

Command Syntax

ipv6 mld ssm-map static *list source-address*

no ipv6 mld ssm-map static *list source-address*

list	Specify multicast group address range access list
source-address	Multicast source address

Command Mode

Global Configuration

Default

Disable

Usage

None

Examples

- This example shows how to set mld ssm mapping.

    Switch(config)# ipv6 mld ssm-map static ipv6acl 2001::2

- This example shows how to unset mld ssm mapping.

    Switch(config)# no ipv6 mld ssm-map static ipv6acl 2001::2

Related Commands

None

2.16 clear ipv6 mld

Use this command to clear mld groups.

Command Syntax

clear ipv6 mld (**group** *** | **group** *group-address* |)

group *group-address*	Specify multicast group address
*	All multicast group address

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

- This example shows how to clear mld group all.

  Switch# clear ipv6 mld

  Switch# clear ipv6 mld group *

- This example shows how to clear mld specified group.

  Switch# clear ipv6 mld group ff0e::1234

Related Commands

show ipv6 mld groups

2.17 clear ipv6 mld interface

Use this command to clear mld groups on specified interface.

Command Syntax

clear ipv6 mld (**group** *group-address* | **interface**) *IFNAME*

group *group-address*	Specify multicast group address
interface	Specify interface
IFNAME	Interface name

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to clear mld group on specified interface.

Switch# clear ipv6 mld interface eth-0-1

Related Commands

show ipv6 mld groups

2.18 show ipv6 mld groups

Use this command to show the information about mld groups.

Command Syntax

show ipv6 mld groups *group-address* (**detail |**)

group-address	Specify multicast group address
detail	Detailed Information

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display the detail information about mld groups.

Switch# show ipv6 mld groups detail

```
MLD Connected Group Membership Details for eth-0-2
Interface:      eth-0-2
Group:          ff0e::1234:5678
Uptime:         00:00:10
Group mode:     Exclude (Expires: 00:04:10)
Last reporter:  fe80:1111:1111:1111:1111:1111:1111:1111
Source list is empty
```

Related Commands

None

2.19 show ipv6 mld groups interface

Use this command to show the information about mld groups on interface.

Command Syntax

show ipv6 mld groups *IFNAME* (*group-address* |) (**detail** |)

IFNAME	Interface name
group-address	Specify multicast group address
detail	Detailed Information

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display the information about mld groups on interface eth-0-1.

Switch# show ipv6 mld groups eth-0-1

```
MLD Connected Group Membership
Group Address                           Interface          Expires
```

```
ff0e::1234:5678                          eth-0-2                    00:03:01
```

Related Commands

None

2.20 show ipv6 mld groups count

Use this command to show mld group number.

Command Syntax

show ipv6 mld groups (*IFNAME* |) **count**

IFNAME	Interface name

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display the mld group number on interface eth-0-1.

Switch# show ipv6 mld groups eth-0-1 count

```
Dynamic multicast groups count: 1
Static multicast groups count: 0
Total multicast groups count: 1
```

Related Commands

None

2.21 show ipv6 mld interface

Use this command to show the information about mld on interface.

Command Syntax

show ipv6 mld interface (*IFNAME |*)

IFNAME	Interface name

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display the information about mld on interface eth-0-1.

Switch# show ipv6 mld interface eth-0-1

```
Interface eth-0-1 (Index 1)
 MLD Active, Querier, Version 1 (default)
  Internet address is fe80::9c7c:7eff:fe94:8300
 MLD interface has 0 group-record states
 MLD activity: 0 joins, 0 leaves
```

```
MLD query interval is 125 seconds
MLD querier timeout is 255 seconds
MLD max query response time is 10 seconds
Last member query response interval is 1000 milliseconds
Group Membership interval is 260 seconds
```

Related Commands

None

3 MLD Snooping Commands

3.1 ipv6 mld snooping

Use this command to enable mld snooping.

To disable mld snooping, use the no form of this command.

Command Syntax

ipv6 mld snooping (**vlan** *vlan_id* |)

no ipv6 mld snooping (**vlan** *vlan_id* |)

vlan *vlan_id*	Vlan ID, range is 1 to 4094.

Command Mode

Global Configuration

Default

Disable

Usage

Mld Snooping can be enabled globally and per vlan. By default, mld snooping should be disabled globally and per vlan.

Examples

- This example shows how to enable mld snooping.

  Switch(config)# ipv6 mld snooping

- This example shows how to disable mld snooping.

  Switch(config)# no ipv6 mld snooping

- This example shows how to enable mld snooping on vlan 10.

  Switch(config)# ipv6 mld snooping vlan 10

- This example shows how to disable mld snooping on vlan 10.

  Switch(config)# no ipv6 mld snooping vlan 10

Related Commands

show ipv6 mld snooping

3.2 ipv6 mld snooping fast-leave

Use this command to enable mld snooping fast leave.

To disable it, use the no form of this command.

Command Syntax

ipv6 mld snooping (**vlan** *vlan_id* |) **fast-leave**

no ipv6 mld snooping (**vlan** *vlan_id* |) **fast-leave**

vlan *vlan_id*	Vlan ID, range is 1 to 4094.

Command Mode

Global Configuration

Default

Disable

Usage

If mld snooping fast leave is enabled on an vlan interface, on which mld also is enabled.

Examples

- This example shows how to enable mld snooping fast-leave.

  Switch(config)# ipv6 mld snooping fast-leave

- This example shows how to disable mld snooping fast-leave.

  Switch(config)# no ipv6 mld snooping fast-leave

Related Commands

show ipv6 mld snooping global

3.3 ipv6 mld snooping last-member-query-interval

Use this command to set the last member query interval of mld snooping.

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

Command Syntax

ipv6 mld snooping (**vlan** *vlan_id* |) **last-member-query-interval** *interval*

no ipv6 mld snooping (**vlan** *vlan_id* |) **last-member-query-interval**

vlan *vlan_id*	Vlan ID, range is 1 to 4094.
interval	The last member query interval, range is 1000 to 25500(ms)

Command Mode

Global Configuration

Default

1000 ms

Usage

Mld last member query interval must be configurable per interface. The default value should be 1000ms and the range should be 1000-25500ms.

Examples

- This example shows how to set the last member query interval.

  Switch(config)# ipv6 mld snooping last-member-query-interval 2000

- This example shows how to return the last member query interval to default value.

  Switch(config)# no ipv6 mld snooping last-member-query-interval

Related Commands

show ipv6 mld snooping

show ipv6 mld snooping vlan

3.4 ipv6 mld snooping global source-address

Use this command to set the global source address.

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

Command Syntax

ipv6 mld snooping global source-address *address*

no ipv6 mld snooping global source-address

address	The IPv6 address of source address

Command Mode

Global Configuration

Default

::

Usage

None

Examples

- This example shows how to set the global source address to fe80::1.

  Switch(config)# ipv6 mld snooping global source-address fe80::1

- This example shows how to return the global source address to default value.

  Switch(config)# no ipv6 mld snooping global source-address

Related Commands

show ipv6 mld snooping querier

3.5 ipv6 mld snooping max-member-num

Use this command to set the max allowed member number.

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

Command Syntax

ipv6 mld snooping (**vlan** *vlan_id* |) **max-member-num** *number*

no ipv6 mld snooping (**vlan** *vlan_id* |) **max-member-num**

vlan *vlan_id*	Vlan ID, range is 1 to 4094.
number	The max member number of mld snooping, range is 1 to 4096

Command Mode

Global Configuration

Default

4096

Usage

None.

Examples

- This example shows how to set the max member number of mld snooping to 1024.

  Switch(config)# ipv6 mld snooping max-member-num 1024

- This example shows how to return the max member number to default value.

  Switch(config)# no ipv6 mld snooping max-member-num

Related Commands

show ipv6 mld snooping global

show ipv6 mld snooping vlan

3.6 ipv6 mld snooping query-interval

Use this command to set the mld snooping query-interval.

To return the query-interval to default value, use the no form of this command.

Command Syntax

ipv6 mld snooping (**vlan** *vlan_id* |) **query-interval** *interval*

no ipv6 mld snooping (**vlan** *vlan_id* |) **query-interval**

vlan *vlan_id*	Vlan ID, range is 1 to 4094.
interval	The query-interval of mld snooping (seconds), range is 2 to 18000

Command Mode

Global Configuration

Default

125

Usage

Query interval can't less than the mld snooping query max response time.

Examples

- This example shows how to set the mld snooping query interval to 64s.

  Switch(config)# ipv6 mld snooping query-interval 64

- This example shows how to return the query-interval to default value.

  Switch(config)# no ipv6 mld snooping query-interval

Related Commands

show ipv6 mld snooping querier

show ipv6 mld snooping querier vlan

3.7 ipv6 mld snooping query-max-response-time

Use this command to set the mld snooping query-interval.

To return the query-interval to default value, use the no form of this command.

Command Syntax

ipv6 mld snooping (**vlan** *vlan_id* |) **query-max-response-time** *time*

no ipv6 mld snooping (**vlan** *vlan_id* |) **query-max-response-time**

vlan *vlan_id*	Vlan ID, range is 1 to 4094.
time	The query max response time (seconds), range is 1 to 25.

Command Mode

Global Configuration

Default

10

Usage

Query interval can't less than the mld snooping query max response time.

Examples

- This example shows how to set the mld snooping query max response time to 15s.

  Switch(config)# ipv6 mld snooping query-max-response-time 15

- This example shows how to return the query max response time to default value.

  Switch(config)# no ipv6 mld snooping query-max-response-time

Related Commands

>**show ipv6 mld snooping querier**

>**show ipv6 mld snooping querier vlan**

3.8 ipv6 mld snooping report-suppression

Use this command to enable report suppression.

To disable report suppression, use the no form of this command.

Command Syntax

>**ipv6 mld snooping** (**vlan** *vlan_id* |) **report-suppression**

>**no ipv6 mld snooping** (**vlan** *vlan_id* |) **report-suppression**

vlan *vlan_id*	Vlan ID, range is 1 to 4094.

Command Mode

>Global Configuration

Default

>Enable

Usage

>None

Examples

- This example shows how to enable the report suppression.

    Switch(config)# ipv6 mld snooping report-suppression

- This example shows how to disable report suppression.

  Switch(config)# no ipv6 mld snooping report-suppression

Related Commands

show ipv6 mld snooping

show ipv6 mld snooping vlan

3.9 ipv6 mld snooping version

Use this command to set the mld snooping version.

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

Command Syntax

ipv6 mld snooping (**vlan** *vlan_id* |) **version** *version*

no ipv6 mld snooping (**vlan** *vlan_id* |) **version**

vlan *vlan_id*	Vlan ID, range is 1 to 4094.
version	Mld snooping version, range is 1 to 2.

Command Mode

Global Configuration

Default

1

Usage

The version of mld snooping should be configurable globally and per vlan. The range of mld snooping version should from 1 to 2. The default value should be 1.

Examples

This example shows how to set the mld snooping version 2.

Switch(config)# ipv6 mld snooping version 2

Related Commands

show ipv6 mld snooping

show ipv6 mld snooping vlan

3.10 ipv6 mld snooping discard-unknown

Use this command to enable discard unknown.

To disable discard unknown, use the no form of this command.

Command Syntax

ipv6 mld snooping (**vlan** *vlan_id* |) **discard-unknown**

no ipv6 mld snooping (**vlan** *vlan_id* |) **discard-unknown**

vlan *vlan_id*	Vlan ID, range is 1 to 4094.

Command Mode

Global Configuration

Default

Enable

Usage

None

Examples

This example shows how to enable discard-unknown multicast traffic.

Switch(config)# ipv6 mld snooping discard-unknown

Related Commands

show ipv6 mld snooping

show ipv6 mld snooping vlan

3.11 ipv6 mld snooping querier tcn

Use this command to set MLD snooping querier TCN related parameters.

Command Syntax

ipv6 mld snooping querier tcn (**query-count** *count* | **query-interval** *interval*)

no ipv6 mld snooping querier tcn (**query-count** | **query-interval**)

query-count *count*	MLD querier TCN query count, range is 1 to 10, default is 2.
query-interval *interval*	MLD querier TCN query interval (sec), range is 1 to 255, default is 10s.

Command Mode

Global Configuration

Default

Enable

Usage

Mld snooping tcn query counter must be configurable. The default value should be 2 and the range should be 1-10.

Mld snooping tcn query interval must be configurable. The default value should be 10s and the range should be 1-255s.

Examples

This example shows how to use ipv6 mld snooping querier tcn command.

Switch(config)# ipv6 mld snooping querier tcn query-count 2

Related Commands

show ipv6 mld snooping querier

3.12 ipv6 mld snooping vlan access-group

Use this command to set mld snooping access group on vlan.

Command Syntax

ipv6 mld snooping vlan *vlan_id* **access-group** *acl*

no ipv6 mld snooping vlan *vlan_id* **access-group**

vlan_id	Vlan ID, range is 1 to 4094.

acl	IPV6 Named Standard Access list.

Command Mode

Global Configuration

Default

None

Usage

None

Examples

- This example shows how to use apply access-group on vlan 10.

  Switch(config)# ipv6 mld snooping vlan 10 access-group acl

- This example shows how to remove access-group from vlan 10.

  Switch(config)# no ipv6 mld snooping vlan 10 access-group

Related Commands

show ipv6 mld snooping vlan

3.13 ipv6 mld snooping vlan mrouter interface

Use this command to set mld snooping mrouter interface on vlan.

Command Syntax

ipv6 mld snooping vlan *vlan_id* **mrouter interface** *IFNAME*

no ipv6 mld snooping vlan *vlan_id* **mrouter interface** *IFNAME*

vlan_id	Vlan ID, range is 1 to 4094.
IFNAME	Mrouter interface on this vlan

Command Mode

Global Configuration

Default

None

Usage

None

Examples

- This example shows how to set eth-0-1 as mrouter interface on vlan 10.

  Switch(config)# ipv6 mld snooping vlan 10 mrouter interface eth-0-1

- This example shows how to unset eth-0-1 as mrouter interface on vlan 10.

  Switch(config)# no ipv6 mld snooping vlan 10 mrouter interface eth-0-1

Related Commands

show ipv6 mld snooping vlan

3.14 ipv6 mld snooping vlan mrouter-aging-interval

Use this command to set mld snooping mrouter interface aging interval on vlan.

Command Syntax

ipv6 mld snooping vlan *vlan_id* **mrouter-aging-interval** *interval*

no ipv6 mld snooping vlan *vlan_id* **mrouter-aging-interval**

vlan_id	Vlan ID, range is 1 to 4094.
interval	Dynamic mrouter interface aging interval on this vlan(seconds)

Command Mode

Global Configuration

Default

255 seconds

Usage

None

Examples

- This example shows how to set dynamic mrouter interface aging interval as 100 seconds on vlan 10.

    Switch(config)# ipv6 mld snooping vlan 10 mrouter-aging-interval 100

- This example shows how to reset dynamic mrouter interface aging interval as default on vlan 10.

    Switch(config)# no ipv6 mld snooping vlan 10 mrouter-aging-interval

Related Commands

show ipv6 mld snooping vlan

3.15 ipv6 mld snooping vlan querier

Use this command to enable mld snooping querier on vlan.

Command Syntax

ipv6 mld snooping vlan *vlan_id* **querier**

no ipv6 mld snooping vlan *vlan_id* **querier**

vlan_id	Vlan ID, range is 1 to 4094.

Command Mode

Global Configuration

Default

Disable

Usage

None

Examples

- This example shows how to enable querier on vlan 10.

  Switch(config)# ipv6 mld snooping vlan 10 querier

- This example shows how to disable querier on vlan 10.

  Switch(config)# no ipv6 mld snooping vlan 10 querier

Related Commands

show ipv6 mld snooping querier vlan

3.16 ipv6 mld snooping vlan querier address

Use this command to set mld snooping querier address on vlan.

Command Syntax

ipv6 mld snooping vlan *vlan_id* **querier address** *address*

no ipv6 mld snooping vlan *vlan_id* **querier address** *address*

vlan_id	Vlan ID, range is 1 to 4094.
address	The address of querier on this vlan

Command Mode

Global Configuration

Default

None

Usage

None

Examples

- This example shows how to set querier address on vlan 10.

  Switch(config)# ipv6 mld snooping vlan 10 querier address fe80::1

- This example shows how to unset querier address on vlan 10.

  Switch(config)# no ipv6 mld snooping vlan 10 querier address

Related Commands

show ipv6 mld snooping querier vlan

3.17 ipv6 mld snooping vlan querier-timeout

Use this command to set mld previous querier timeout interval on this vlan.

Command Syntax

ipv6 mld snooping vlan *vlan_id* **querier-timeout** *interval*

no ipv6 mld snooping vlan *vlan_id* **querier-timeout**

vlan_id	Vlan ID, range is 1 to 4094.
interval	The mld previous querier timeout interval on this vlan(seconds), range is 60 to 300.

Command Mode

Global Configuration

Default

255

Usage

None

Examples

- This example shows how to set previous querier timeout interval as 100 seconds on vlan 10.

    Switch(config)# ipv6 mld snooping vlan 10 querier-timeout 100

- This example shows how to reset previous querier timeout interval on vlan 10.

    Switch(config)# no ipv6 mld snooping vlan 10 querier-timeout

Related Commands

show ipv6 mld snooping querier vlan

3.18 ipv6 mld snooping vlan static-group

Use this command to add static mld group on this vlan.

Command Syntax

ipv6 mld snooping vlan *vlan_id* **static-group** *group-address* (**source** *source-address* |) **interface** *IFNAME*

no ipv6 mld snooping vlan *vlan_id* **static-group** *group-address* (**source** *source-address* |) **interface** *IFNAME*

vlan_id	Vlan ID, range is 1 to 4094.
group-address	The address of group configured on the specified interface.
source-address	The address of source configured on the specified interface.
IFNAME	The interface configured as a member of specified group on this vlan

Command Mode

Global Configuration

Default

None

Usage

None

Examples

- This example shows how to add group ff02::1234 on interface eth-0-11 of vlan 10.

  Switch(config)# ipv6 mld snooping vlan 10 static-group ff02::1234 interface eth-0-11

- This example shows how to remove group ff02::1234 from interface eth-0-11 of vlan 10.

Switch(config)# no ipv6 mld snooping vlan 10 static-group ff02::1234 interface eth-0-11

Related Commands

show ipv6 mld snooping group

3.19 clear ipv6 mld snooping group

Use this command to clear all mld snooping groups.

Command Syntax

clear ipv6 mld snooping (group * |)

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to clear mld snooping group all.

Switch# clear ipv6 mld snooping

Related Commands

None

3.20 clear ipv6 mld snooping vlan group

Use this command to clear mld snooping groups on vlan.

Command Syntax

clear ipv6 mld snooping vlan *vlan_id*

vlan_id	Vlan ID, range is 1 to 4094

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to clear mld snooping group on vlan 10.

Switch# clear ipv6 mld snooping vlan 10

Related Commands

None

3.21 show ipv6 mld snooping global

Use this command to show the global configurations of mld snooping.

Command Syntax

show ipv6 mld snooping global

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display the global configurations of mld snooping.

Switch# show ipv6 mld snooping global

```
Global Mld Snooping Configuration
-------------------------------------------------
Mld Snooping                            :Enabled
Mld Snooping Fast-Leave                  :Disabled
Mld Snooping Version                     :1
Mld Snooping Max-Member-Number           :4096
Mld Snooping Unknown Multicast Behavior  :Flood
Mld Snooping Report-Suppression          :Enabled
```

Related Commands

None

3.22 show ipv6 mld snooping groups

Use this command to show the mld snooping groups.

Command Syntax

show ipv6 mld snooping groups

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display mld snooping groups.

Switch# show ipv6 mld snooping groups

```
VLAN  Interface  Group Address                             Uptime    Expire-time
1     eth-0-3    ff0e:2111:1111:1111:1111:1111:1234:5678  00:00:04  00:04:16
```

Related Commands

None

3.23 show ipv6 mld snooping groups vlan

Use this command to show the mld snooping groups on vlan.

Command Syntax

show ipv6 mld snooping groups vlan *vlan_id* (*group_address* |)

vlan_id	Vlan ID, range is 1 to 4094.
group-address	The address of group

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display mld snooping groups on vlan 1.

Switch# show ipv6 mld snooping groups vlan 1

```
MLD Snooping groups for vlan1
Interface:      eth-0-3
Group:          ff0e:2111:1111:1111:1111:1111:1234:5678
Uptime:         00:00:42
Group mode:     Exclude (Expires: 00:03:38)
Last reporter:  fe80:1111:1111:1111:1111:1111:1111:1111
Source list is empty
```

Related Commands

None

3.24 show ipv6 mld snooping groups count

Use this command to show the mld snooping groups number.

Command Syntax

show ipv6 mld snooping groups (**vlan** *vlan_id* |) **count**

vlan_id	Vlan ID, range is 1 to 4094.

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display mld snooping groups number on vlan 1.

Switch# show ipv6 mld snooping groups vlan 1 count

```
Dynamic multicast groups count: 1
Static multicast groups count: 0
Total multicast groups count: 1
```

Related Commands

None

3.25 show ipv6 mld snooping querier

Use this command to show the configurations of mld snooping querier information.

Command Syntax

show ipv6 mld snooping querier (**vlan** *vlan_id* |)

vlan_id	Vlan ID, range is 1 to 4094.

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display the configurations of mld snooping querier on vlan 1.

Switch# show ipv6 mld snooping querier vlan 1

```
Global Mld Snooping Querier Configuration
-----------------------------------------------
Version                        :1
Last-Member-Query-Interval (msec) :1000
Max-Query-Response-Time (sec)     :10
Query-Interval (sec)           :125
Global Source-Address          :::
TCN Query Count                :2
TCN Query Interval (sec)       :10


Vlan 1:   MLD snooping querier status
-------------------------------------------
Elected querier is : ::
-------------------------------------------
Admin state                    :Disabled
Admin version                  :1
Operational state              :Non-Querier
Querier operational address    :::
Querier configure address      :N/A
Last-Member-Query-Interval (msec) :1000
Max-Query-Response-Time (sec)     :10
Query-Interval (sec)           :125
Querier-Timeout (sec)          :255
```

Related Commands

None

3.26 show ipv6 mld snooping mrouter

Use this command to show the information of mld snooping mrouter port on vlan.

Command Syntax

show ipv6 mld snooping mrouter (**vlan** *vlan_id* |)

vlan_id	Vlan ID, range is 1 to 4094.

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display the information of mld snooping mrouter port on vlan 1.

Switch# show ipv6 mld snooping mrouter vlan 1

```
VLAN    Interface      Mode      Uptime      Expires-time
2       eth-0-1        static    -           -
```

Related Commands

None

3.27 show ipv6 mld snooping vlan

Use this command to show the configurations of mld snooping on vlan.

Command Syntax

show ipv6 mld snooping (**vlan** *vlan_id* |)

vlan_id	Vlan ID, range is 1 to 4094.

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display the configurations of mld snooping on vlan 1.

Switch# show ipv6 mld snooping vlan 1

```
Global Mld Snooping Configuration
-----------------------------------------------
Mld Snooping                           :Enabled
Mld Snooping Fast-Leave                :Disabled
Mld Snooping Version                   :1
Mld Snooping Max-Member-Number         :4096
Mld Snooping Unknown Multicast Behavior  :Flood
Mld Snooping Report-Suppression        :Enabled
Vlan 2
-----------
Mld Snooping                           :Enabled
Mld Snooping Fast-Leave                :Disabled
```

```
Mld Snooping Report-Suppression       :Enabled
Mld Snooping Version                  :1
Mld Snooping Max-Member-Number        :4096
Mld Snooping Unknown Multicast Behavior  :Flood
Mld Snooping Group Access-list        :N/A
Mld Snooping Mrouter Port             :eth-0-1(static)
Mld Snooping Mrouter Port Aging Interval(sec) :255
```

Related Commands

None

3.28 show resource l2mcast

Use this command to display the resource statistic used by L2 mcast.

Command Syntax

show resource l2mcast

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

The following is sample output from the show resource l2mcast command.

Switch# show resource l2mcast

```
L2MCAST
Resource                      Used          Capability
=============================================================
L2 Mcast Entry                1             1024
```

```
L2 Mcast Member              2             8192
```

Related Commands

None

4 PIMv6 Commands

4.1 ipv6 pim accept-register

Use this command to apply an access-list to limit the ipv6 pim register message received by rp.

To remove this setting, use the no form of this command.

Command Syntax

ipv6 pim accept-register list *list*

no ipv6 pim accept-register

list	The name of the access-list to be applied.

Command Mode

Global Configuration

Default

None

Usage

This feature is used to prevent the unauthorized user registered to the switch.

When enable this feature, the system will send back a register stop message when the unauthorized register message is received.

Examples

- This example shows how to apply the access-list acl1 to limit the ipv6 pim register message received by rp.

  Switch(config)# ipv6 pim accept-register list acl1

- This example shows how to remove the limits.

  Switch(config)# no ipv6 pim accept-register

Related Commands

None

4.2 ipv6 pim anycast-rp

Use this command to set anycast rendezvous-point.

To remove the configurations, use the no form of this command.

Command Syntax

ipv6 pim anycast-rp *anycast_rp_address anycast_member_address*

no ipv6 pim anycast-rp *anycast_rp_address* (*anycast_member_address* |)

anycast_rp_address	Anycast rp address
anycast_member_address	Anycast member rp address

Command Mode

Global Configuration

Default

None.

Usage

None

Examples

- This example shows how to set anycast rendezvous-point.

  Switch(config)# ipv6 pim anycast-rp 2001::2 2001::10

- This example shows how to remove the member in anycast rendezvous-point.

  Switch(config)# no ipv6 pim anycast-rp 2001::2 2001::10

Related Commands

None

4.3 ipv6 pim bsr-candidate

Use this command to configure the candidate bootstrap router (candidate BSR).

To remove the configurations, use the no form of this command.

Command Syntax

ipv6 pim bsr-candidate *IFNAME* (*hash-mask* (*priority*)|)

no ipv6 pim bsr-candidate

IFNAME	Interface name
hash-mask	Hash mask length for RP selection, range is 0 to 128.
priority	Priority value for candidate bootstrap router, range is 0 to 255.

Command Mode

Global Configuration

Default

None

Usage

None

Examples

- This example shows how to configure the candidate BSR.

  Switch(config)# ipv6 pim bsr-candidate eth-0-1

- This example shows how to cancel the candidate BSR configured.

  Switch(config)# no ipv6 pim bsr-candidate

Related Commands

ipv6 pim bsr-border

4.4 ipv6 pim bsr-border

Use this command to configure the border of pim domain.

To remove the configurations of the border of pim domain, use the no form of this command.

Command Syntax

ipv6 pim bsr-border

no ipv6 pim bsr-border

Command Mode

Interface configuration

Default

None

Usage

None

Examples

- This example shows how to configure the border of pim domain.

  Switch(config-if)# ipv6 pim bsr-border

- This example shows how to remove the configurations of the border of pim domain.

  Switch(config-if)# no ipv6 pim bsr-border

Related Commands

ipv6 pim bsr-candidate

4.5 ipv6 pim dr-priority

Use this command to configure the DR priority.

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

Command Syntax

ipv6 pim dr-priority *priority*

no ipv6 pim dr-priority

priority	The DR priority, range is 0 to 4294967294.

Command Mode

Interface configuration

Default

> 1

Usage

> When a hello message without DR priority is received, it will be regarded to have the max DR priority and to be elected as DR. When more than one router's hello messages do not have DR priority, the one which have the highest ipv6 address will be elected as DR.

Examples

- This example shows how to set the pim router DR priority to 1000.

    Switch(config-if)# ipv6 pim dr-priority 1000

- This example shows how to return the pim router DR priority to default value.

    Switch(config-if)# no ipv6 pim dr-priority

Related Commands

> None

4.6 ipv6 pim exclude-genid

> Use this command to exclude generation id option from pim hello packets on this interface.

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

Command Syntax

> **ipv6 pim exclude-genid**

> **no ipv6 pim exclude-genid**

priority	The DR priority, range is 0 to 4294967294.

Command Mode

Interface configuration

Default

Disable

Usage

None

Examples

- This example shows how to exclude generation id option from pim hello packets on this interface.

  Switch(config-if)# ipv6 pim exclude-genid

- This example shows how to return the generation id option to the default setting.

  Switch(config-if)# no ipv6 pim exclude-genid

Related Commands

None

4.7 ipv6 pim hello-interval

Use this command to configure the interval for pim hello packets on this interface.

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

Command Syntax

ipv6 pim hello-interval *interval*

no ipv6 pim hello-interval

interval	The pim hello message interval (second), range is 1 to 65535.

Command Mode

Interface configuration

Default

30 seconds

Usage

None

Examples

- This example shows how to set the pim hello message interval to 100s.

  Switch(config-if)# ipv6 pim hello-interval 100

- This example shows how to return the pim hello message interval to default value.

  Switch(config-if)# no ipv6 pim hello-interval

Related Commands

None

4.8 ipv6 pim ignore-rp-set-priority

Use this command to ignore RP set priority value.

To not ignore the priority, use the no form of this command.

Command Syntax

ipv6 pim ignore-rp-set-priority

no ipv6 pim ignore-rp-set-priority

Command Mode

Global Configuration

Default

Disable

Usage

None

Examples

- This example shows how to ignore RP set priority value.

Switch(config)# ipv6 pim ignore-rp-set-priority

- This example shows how to return the configurations to default value.

Switch(config)# no ipv6 pim ignore-rp-set-priority

Related Commands

None

4.9 ipv6 pim jp-timer

Use this command to set the join/prune timer value.

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

Command Syntax

ipv6 pim jp-timer *timer*

no ipv6 pim jp-timer

timer	The Join/Prune timer value (second), range is 1 to 65535.

Command Mode

Global Configuration

Default

60 seconds

Usage

None

Examples

- This example shows how to set the join/prune timer value to 100s.

Switch(config)# ipv6 pim jp-timer 100

- This example shows how to return the join/prune timer value to default value.

Switch(config)# no ipv6 pim jp-timer

Related Commands

None

4.10 ipv6 pim neighbor-filter

Use this command to add an access-list to filter the neighbor.

To remove this filter, use the no form of this command.

Command Syntax

ipv6 pim neighbor-filter *list*

no ipv6 pim neighbor-filter

list	The name of the access-list

Command Mode

Interface configuration

Default

None

Usage

None

Examples

- This example shows how to establish neighbors based on access-list acl1.

  Switch(config-if)# ipv6 pim neighbor-filter acl1

- This example shows how to cancel the filter.

  Switch(config-if)# no ipv6 pim neighbor-filter

Related Commands

None

4.11 ipv6 pim register-rate-limit

Use this command to set the rate limit for pim registers.

To return the rate limit to default value, use the no form of this command.

Command Syntax

ipv6 pim register-rate-limit *limit*

no ipv6 pim register-rate-limit

limit	The rate limit for pim registers send from DR to RP

Command Mode

Global Configuration

Default

None

Usage

There is no rate limit for pim registers by default.

When the rate limit is configured, the exceed pim register message will be dropped on the rp.

Examples

- This example shows how to set the rate limit for pim registers to 100 per second.

  Switch(config)# ipv6 pim register-rate-limit 100

- This example shows how to cancel the rate limit.

  Switch(config)# no ipv6 pim register-rate-limit

Related Commands

ipv6 pim register-rp-reachability

ipv6 pim register-source

ipv6 pim register-suppression

4.12 ipv6 pim register-source

Use this command to set the source address for pim register.

To return the source address for pim register to default value, use the no form of this command.

Command Syntax

ipv6 pim register-source *IFNAME*

no ipv6 pim register-source

IFNAME	The name of the interface. Use the address of this interface to be the source address for pim register

Command Mode

Global Configuration

Default

The source address for pim register is the interface ipv6 address of dr by default.

Usage

None

Examples

- This example shows how to set the source address for pim register to the ipv6 address of interface eth-0-1.

  Switch(config)# ipv6 pim register-source eth-0-1

- This example shows how to return the source address for pim register to default value.

  Switch(config)# no ipv6 pim register-source

Related Commands

ipv6 pim register-rate-limit

ipv6 pim register-rp-reachability

ipv6 pim register-suppression

4.13 ipv6 pim register-rp-reachability

Use this command to enable rp reachability check for pim registers.

To disable this check, use the no form of this command.

Command Syntax

ipv6 pim register-rp-reachability

no ipv6 pim register-rp-reachability

Command Mode

Global Configuration

Default

Disable.

Usage

None

Examples

- This example shows how to enable rp reachability check for pim registers.

  Switch(config)#ipv6 pim register-rp-reachability

- This example shows how to disable rp reachability check for pim registers.

  Switch(config)#no ipv6 pim register-rp-reachability

Related Commands

ipv6 pim register-rate-limit

ipv6 pim register-source

ipv6 pim register-suppression

4.14 ipv6 pim register-suppression

Use this command to set the register suppression time.

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

Command Syntax

ipv6 pim register-suppression *time*

no ipv6 pim register-suppression

time	The register suppression time in seconds, range is 11 to 65535

Command Mode

Global Configuration

Default

60 seconds

Usage

None

Examples

- This example shows how to set the register suppression time to 100s.

  Switch(config)# ipv6 pim register-suppression 100

- This example shows how to return the register suppression time to default value.

  Switch(config)# no ipv6 pim register-suppression

Related Commands

ipv6 pim register-rate-limit

ipv6 pim register-rp-reachability

ipv6 pim register-source

4.15 ipv6 pim rp-address

Use this command to set the ipv6 pim rp (rendezvous point) address.

To remove it, use the no form of this command.

Command Syntax

ipv6 pim rp-address *address* (*list* | **override** |)

no ipv6 pim rp-address *address* (*list* |)

address	The rp address
list	The name of an access-list
override	Overrides dynamically learned RP mappings

Command Mode

Global Configuration

Default

None

Usage

None

Examples

- This example shows how to set the pim rp address to 2001::2.

Switch(config)# ipv6 pim rp-address 2001::2

- This example shows how to remove the rp address 2001::2.

Switch(config)# no ipv6 pim rp-address 2001::2

Related Commands

ipv6 pim rp-candidate

ipv6 pim rp-register-kat

4.16 ipv6 pim rp-candidate

Use this command to set the candidate rp.

To remove the candidate rp, use the no from of this command.

Command Syntax

ipv6 pim rp-candidate *IFNAME* ({**priority** *priority* |**interval** *interval* |**group-list** *list*}|)

no ipv6 pim rp-candidate (*IFNAME* |)

IFNAME	The name of the interface to be the candidate rp
priority *priority*	The Candidate-RP priority, range is 0 to 255
interval *interval*	The C-RP advertisement interval in seconds, range is 1 to 16383
group-list *list*	Group ranges for this C-RP, only permit filters would be cared

Command Mode

Global Configuration

Default

None

Usage

None

Examples

- This example shows how to set the interface eth-0-1 to be the candidate rp.

  Switch(config)# ipv6 pim rp-candidate eth-0-1

- This example shows how to cancel the configured candidate rp.

  Switch(config)# no ipv6 pim rp-candidate eth-0-1

Related Commands

ipv6 pim rp-address

4.17 ipv6 pim rp-register-kat

Use this command to set the keepalive timer (KAT) for (S,G) at RP from PIM registers.

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

Command Syntax

ipv6 pim rp-register-kat *time*

no ipv6 pim rp-register-kat

time	The KAT time in seconds, range is 1 to 65535

Command Mode

Global Configuration

Default

185 seconds

Usage

The register message send from dr will add an entry on rp. This entry will be aged when the keepalive timer expired which can be configured by this command.

Examples

- This example shows how to set the keepalive timer to 100s at RP from PIM registers.

  Switch(config)# ipv6 pim rp-register-kat 100

- This example shows how to return this timer to default value.

  Switch(config)# no ipv6 pim rp-register-kat

Related Commands

ipv6 pim rp-address

ipv6 pim rp-candidate

4.18 ipv6 pim spt-switch-threshold infinity

Use this command to set the spt switch threshold to infinity.

To cancel this setting, use the no form of this command.

Command Syntax

ipv6 pim spt-switch-threshold infinity (**group-list** *list*|)

no ipv6 pim spt-switch-threshold infinity (**group-list** *list*|)

group-list *list*	Group address access list

Command Mode

Global Configuration

Default

The DR will switch to spt immediately when received the first multicast packet by default.

Usage

None

Examples

- This example shows how to set the spt switch threshold to infinity.

  Switch(config)# ipv6 pim spt-switch-threshold infinity

- This example shows how to return the spt-switch-threshold to default.

  Switch(config)# no ipv6 pim spt-switch-threshold infinity

Related Commands

show ipv6 pim sparse-mode spt-threshold

4.19 ipv6 pim cisco-register-checksum

Use this command to calculate register checksum over whole packet (cisco compatibility).

To remove this setting, use the no form of this command.

Command Syntax

ipv6 pim cisco-register-checksum (group-list *list*|**)**

no ipv6 pim cisco-register-checksum (group-list *list*|**)**

group-list *list*	Group address access list

Command Mode

Global Configuration

Default

The register checksum defined in RFC is used by default.

Usage

None

Examples

- This example shows how to set to calculate register checksum over whole packet.

  Switch(config)# ipv6 pim cisco-register-checksum

- This example shows how to remove this setting.

  Switch(config)# no ipv6 pim cisco-register-checksum

Related Commands

None

4.20 ipv6 pim sparse-mode

Use this command to enable pim sparse mode on the interface.

To disable pim sparse mode, use the no form of this command.

Command Syntax

ipv6 pim sparse-mode (passive|)

no ipv6 pim sparse-mode (passive|)

passive	Pim passive mode (local members only)

Command Mode

Interface configuration

Default

Disable

Usage

The pim hello message will not be sent out from the interface when the passive mode is configured.

Examples

- This example shows how to enable pim sparse mode on the interface.

  Switch(config-if)# ipv6 pim sparse-mode

- This example shows how to disable pim sparse mode on the interface.

  Switch(config-if)# no ipv6 pim sparse-mode

- This example shows how to enable pim sparse mode passive on the interface.

  Switch(config-if)# ipv6 pim sparse-mode passive

Related Commands

None

4.21 ipv6 pim dense-mode

Use this command to enable ipv6 pim dense mode on the interface.

To disable ipv6 pim dense mode, use the no form of this command.

Command Syntax

Ipv6 pim dense-mode (passive|)

no ipv6 pim dense -mode

passive	Ipv6 pim passive mode (local members only)

Command Mode

Interface configuration

Default

Disable

Usage

Ipv6 pim spasre-mode and dense-mode can not take effect on the same interface. The ipv6 pim hello message will not be sent out from the interface when the passive mode is configured.

Examples

This example shows how to enable ipv6 pim dense mode on the interface.

Switch(config-if)# ipv6 pim dense-mode

This example shows how to disable ipv6 pim dense mode on the interface.

Switch(config-if)# no ipv6 pim dense-mode

This example shows how to enable ipv6 pim dense mode passive on the interface.

Switch(config-if)# ipv6 pim dense-mode passive

Related Commands

None

4.22 ipv6 pim unicast-bsm

Use this command to enable sending and receiving of unicast BSM for backward compatibility.

To cancel this setting, use the no form of this command.

Command Syntax

ipv6 pim unicast-bsm

no ipv6 pim unicast-bsm

Command Mode

Interface configuration

Default

Disable

Usage

Interface will send BSM message to the whole pim domain by default.

Examples

- This example shows how to enable sending and receiving of unicast BSM for backward compatibility.

  Switch(config-if)# ipv6 pim unicast-bsm

- This example shows how to cancel this setting.

  Switch(config-if)# no ipv6 pim unicast-bsm

Related Commands

None

4.23 ipv6 pim propagation-delay

Use this command to set propagation delay on its LAN.

To cancel this setting, use the no form of this command.

Command Syntax

Ipv6 pim propagation-delay *timer*

no ipv6 pim propagation-delay

timer	Propagation delay value, range is 100-5000(ms).

Command Mode

Interface configuration

Default

500ms

Usage

If all routers on a LAN support the LAN Prune Delay option, then the PIM routers on that LAN will use the values received to adjust their J/P_Override_Interval on that interface and the interface is LAN Delay Enabled.

Examples

This example shows how to set propagation delay.

Switch(config-if)# ipv6 pim propagation-delay 400

This example shows how to unset this setting.

Switch(config-if)# no ipv6 pim propagation-delay

Related Commands

None

4.24 ipv6 pim state-refresh origination-interval

Use this command to set the interval of originator sending state refresh messages.

To cancel this setting, use the no form of this command.

Command Syntax

Ipv6 pim state-refresh origination-interval *interval*

no ipv6 pim state-refresh origination-interval

interval	**state-refresh origination-interval,** range is 1-100(s).

Command Mode

Interface configuration

Default

60 seconds

Usage

State Refresh Messages are generated periodically by the PIM-DM router directly connected to a source. This command can control the interval of two messages.

Examples

This example shows how to set state-refresh origination-interval.

Switch(config-if)# ipv6 pim state-refresh origination-interval 50

This example shows how to unset this setting.

Switch(config-if)# no ipv6 pim state-refresh origination-interval

Related Commands

None

4.25 ipv6 pim ssm

Use this command to enable pim-ssm and set ssm group range.

To cancel this setting, use the no form of this command.

Command Syntax

ipv6 pim ssm (**default** | **range** *list*)

no ipv6 pim ssm

default	Use FF3x::/32 group range for SSM
range *list*	ACL for group range to be used for SSM

Command Mode

Global Configuration

Default

Disable

Usage

Enable pim-ssm and set ssm group range.

Examples

- This example shows how to enable pim-ssm and set ssm group range to default.

Switch(config-if)# ipv6 pim ssm default

- This example shows how to cancel this setting.

Switch(config-if)# no ipv6 pim ssm default

Related Commands

None

4.26 show ipv6 pim sparse-mode bsr-router

Use this command to show the information of bootstrap router.

Command Syntax

show ipv6 pim sparse-mode bsr-router

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display the information of bootstrap router.

Switch# show ipv6 pim sparse-mode bsr-router

```
PIM6v2 Bootstrap information
This system is the Bootstrap Router (BSR)
  BSR address: 2001:2::1 (?)
  Uptime:      00:00:08, BSR Priority: 64, Hash mask length: 126
  Next bootstrap message in 00:00:52
  Role: Candidate BSR
```

```
    State: Elected BSR
```

Related Commands

None

4.27 show ipv6 pim sparse-mode interface

Use this command to show the information of pim interface.

Command Syntax

show ipv6 pim sparse-mode interface (**detail** |)

detail	Detailed interface information

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display the information of pim interface.

Switch# show ipv6 pim sparse-mode interface detail

```
eth-0-1 (vif 0):
  Address fe80::9c7c:7eff:fe94:8300, DR fe80::9c7c:7eff:fe94:8300
  Hello period 30 seconds, Next Hello in 3 seconds
```

```
 Triggered Hello period 5 seconds
 Secondary addresses:
  2001:1::1
 Neighbors:
```

Related Commands

None

4.28 show ipv6 pim sparse-mode local-member

Use this command to show the pim local membership information.

Command Syntax

show ipv6 pim sparse-mode local-member (*IFNAME* |)

IFNAME	Interface name

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display pim local membership information.

Switch# show ipv6 pim sparse-mode local-members

```
PIM Local membership information

eth-0-2:
```

```
*, ff0e::1234:5678
    info: Include
```

Related Commands

None

4.29 show ipv6 pim sparse-mode mroute

Use this command to show the mroute information of pim sparse mode.

Command Syntax

show ipv6 pim sparse-mode mroute (source_*address* | *group_address* |*)* (**detail** |)

source_*address*	Source address
group_address	Group address
detail	Detailed interface information

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display pim mroute information.

Switch# show ipv6 pim sparse-mode mroute detail
```
IPv6 Multicast Routing Table
```

```
(*,*,RP) Entries: 0
(*,G) Entries: 1
(S,G) Entries: 0
(S,G,rpt) Entries: 0
FCR Entries: 0

*, ff0e::1234:5678
Type: (*,G)
Uptime: 00:01:49
  RP: ::, RPF nbr: None, RPF idx: None
  Upstream:
   State: JOINED, SPT Switch: Enabled, JT: off
   Macro state: Join Desired,
  Downstream:
   eth-0-2:
    State: NO INFO, ET: off, PPT: off
    Assert State: NO INFO, AT: off
     Winner: ::, Metric: 4294967295, Pref: 4294967295, RPT bit: on
    Macro state: Could Assert, Assert Track
  Local Olist:
   eth-0-2
```

Related Commands

None

4.30 show ipv6 pim sparse-mode neighbor

Use this command to show the neighbor information of pim sparse mode.

Command Syntax

show ipv6 pim sparse-mode neighbor ((*IFNAME* (*address* |)) | **detail** |)

IFNAME	Interface name
address	Neighbor address
detail	Detailed interface information

Command Mode

Privileged EXEC

Default

> None

Usage

> None

Examples

> This example shows how to display the neighbor information of pim sparse mode.

```
Switch# show ipv6 pim sparse-mode neighbor
Neighbor Address                    Interface   Uptime/Expires   DR
                                                                 Pri/Mode
fe80::9c7c:7eff:fe94:8300           eth-0-9     00:00:40/00:01:44 1 / DR
```

Related Commands

> None

4.31 show ipv6 pim sparse-mode rp mapping

> Use this command to show group to rp mappings.

Command Syntax

> **show ipv6 pim sparse-mode rp mapping**

Command Mode

> Privileged EXEC

Default

> None

Usage

> None

Examples

This example shows how to display group to rp mappings.

Switch# show ipv6 pim sparse-mode rp mapping

```
PIM Group-to-RP Mappings
Group(s): ff00::/8
  RP: 2001:1::1
    Info source: 2001:1::1, via bootstrap, priority 192
         Uptime: 00:00:25, expires: 00:02:05
Embedded RP Groups:
```

Related Commands

None

4.32 show ipv6 pim sparse-mode rp-hash

Use this command to show the information of rp to be chosen based on group selected.

Command Syntax

show ipv6 pim sparse-mode rp-hash *group_address*

group_address	Multicast group address

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display the information of rp to be chosen based on group ff02::1234.

Switch# show ipv6 pim sparse-mode rp-hash ff02::1234

```
    RP: 2001:1::1
    Info source: 2001:1::1, via bootstrap
```

Related Commands

None

4.33 show ipv6 pim sparse-mode spt-threshold

Use this command to show the rpt to spt threshold of pim sparse mode.

Command Syntax

show ipv6 pim sparse-mode spt-threshold

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display the rpt to spt threshold of pim sparse mode.

Switch# show ipv6 pim sparse-mode spt-threshold

```
IPv6 PIM spare-mode immediately switches over to SPT upon receiving the first tr
```

```
affic
```

Related Commands

None

4.34 show ipv6 pim dense-mode interface

Use this command to show the information of pim-dm interface.

Command Syntax

show ipv6 pim dense-mode interface (detail |)

detail	Detailed interface information

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display the information of pim-dm interface.

Switch# show ipv6 pim dense-mode interface detail

```
eth-0-1 (vif-id: 1):
  Address fe80::326f:c9ff:fef2:8200
  Hello period 30 seconds, Next Hello in 23 seconds
```

Over-ride interval 3000 milli-seconds
Propagation-delay 1000 milli-seconds
State-Refresh Origination-Interval 60 seconds
Neighbors: none

Related Commands

None

4.35 show ipv6 pim dense-mode neighbor

Use this command to show the information of pim-dm neighbor.

Command Syntax

show ipv6 pim dense-mode neighbor (**detail** |)

detail	Detailed interface information

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display the information of pim-dm neighbor.

Switch# show ipv6 pim dense-mode neighbor detail

Neighbor fe80::ce47:6eff:feb7:1400 (eth-0-9)
Up since 00:09:55, Expires in 00:01:19
State Refresh Capable: Yes
State Refresh Interval: 60 s
LAN Prune Delay: 1000 ms
Override Interval: 3000 ms

Related Commands

None

4.36 show ipv6 pim dense-mode nexthop

Use this command to show the information of pim-dm nexthop.

Command Syntax

show ipv6 pim dense-mode nexthop

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display the information of pim-dm nexthop.

Switch# show ipv6 pim dense-mode nexthop

Destination	Nexthop Num	Nexthop Addr	Nexthop Interface	Metric	Pref
2001:1::2	1	::	eth-0-1	0	0

Related Commands

None

4.37 show ipv6 pim dense-mode mroute

Use this command to show the information of pim-dm mroute.

Command Syntax

show ipv6 pim dense-mode mroute (detail |)

detail	Detailed interface information

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display the information of pim-dm mroute.

Switch# show ipv6 pim dense-mode mroute detail

```
PIM-DM Multicast Routing Table
(2001:1::2, ffe0::1)
  Source directly connected on eth-0-1
  State-Refresh Originator State: Originator
  SLT Expiry: 169 secs, SRT Expiry: 19 secs
```

```
Upstream IF: eth-0-1
  Upstream State: Forwarding
  Upstream Timer: GRT: off, PLT: off, OT: off
  Assert State: NoInfo AT: off
    Winner: ::, Metric: 0, Pref: 0
Downstream IF List:
 eth-0-2:
   Downstream State: NoInfo
   Downstream Timer: PPT: off, PT: off
   Assert State: NoInfoAT: off
     Winner: ::, Metric: 0, Pref: 0
 eth-0-9, in 'olist':
   Downstream State: NoInfo
   Downstream Timer: PPT: off, PT: off
   Assert State: NoInfoAT: off
     Winner: ::, Metric: 0, Pref: 0
```

Related Commands

None

5 MVR6 Commands

5.1 mvr6

Use this command to enable or disable MVR6.

Command Syntax

mvr6

no mvr6

Command Mode

Global Configuration

Default

Disable

Usage

Enable MVR6 in the Switch, before enable MVR6, must disable ipv6 multicast-routing.

Examples

This example shows how to enable MVR6.

Switch(config)# no ipv6 multicast-routing

Switch(config)# mvr6

Related Commands

show mvr6

5.2 mvr6 vlan

Use this command to specify the MVR6 source vlan.

Command Syntax

mvr6 vlan *vlan_id*

no mvr6 vlan

vlan_id	Vlan ID, range is 1 to 4094

Command Mode

Global Configuration

Default

None

Usage

The related vlan interface should be created before the configuration of the MVR6 source vlan.

Examples

This example shows how to configure source vlan of MVR6.

configure vlan 2 as source vlan of MVR6

Switch(config)# vlan database

Switch (config-vlan)# vlan 2

Switch (config)# interface vlan 2

Switch (config-if)# exit

Switch(config)# mvr6 vlan 2

Related Commands

interface vlan

5.3 mvr6 group

Use this command to configure global group for MVR6.

Command Syntax

mvr6 group *address* (*count* |)

no mvr6 group *address* (*count* |)

address	Multicast group address
count	Count of contiguous groups, between 1 and 64

Command Mode

Global Configuration

Default

None

Usage

This command is used to create or delete a global static group.

Examples

This example shows how to create global static group from ff02::1 to ff02::50

Switch(config)# mvr6 group ff02::1 50

Related Commands

None

5.4 mvr6 source-address

Use this command to create or delete mvr6 source address.

Command Syntax

mvr6 source-address *address*

no mvr6 source-address

address	Source ipv6 address

Command Mode

Global Configuration

Default

10.0.0.1

Usage

This command is used to create or delete mvr6 source vlan ipv6 address. The default IPv6 address is 10.0.0.1.

Examples

Create mvr6 source address:

Switch(config)# mvr6 source-address 2001::2

Resume mvr6 source address as default IPv6 address.

Switch(config)# no mvr6 source-address

Related Commands

None

5.5 mvr6 type

Use this command to configure a switch-port as source port or receiver port.

Command Syntax

mvr6 type (**source | receiver vlan** *vlan_id*)

no mvr6 type (**receiver vlan** *vlan_id* |)

source	MVR6 source port
receiver	MVR6 receiver port
vlan *vlan_id*	MVR6 receiver vlan

Command Mode

Interface configuration

Default

None

Usage

Configure the interface as source port or receiver port. The source port must belong to source vlan, and the receiver port must not belong to source vlan.

Examples

Configure the eth-0-1 as source port, and configure the eth-0-2 as receiver port of vlan 2.

Switch(config)# interface eth-0-1

Switch(config-if)# mvr6 type source

Switch(config)# interface eth-0-2

Switch(config-if)# mvr6 type receiver vlan 2

Related Commands

None

5.6 show mvr6

Use this command to show mvr6 information.

Command Syntax

show mvr6

Command Mode

Privileged EXEC

Default

None

Usage

Show mvr6 information.

Examples

Switch# show mvr6

```
MVR6 Running: TRUE
MVR6 Multicast VLAN: 2
MVR6 Source-address: fe80::1
MVR6 Max Multicast Groups: 1024
MVR6 Hw Rt Limit: 224
MVR6 Current Multicast Groups: 3
```

Related Commands

None

5.7 show mvr6 interface

Use this command to show mvr6 interface information.

Command Syntax

show mvr6 interface

Command Mode

Privileged EXEC

Default

None

Usage

Show mvr6 interface information.

Examples

Switch# show mvr6 interface

```
Port        Type        VLAN    Status
eth-0-2     source      10      ACTIVE
eth-0-1     receiver    11      ACTIVE
```

Related Commands

None

5.8 show mvr6 groups

Use this command to show mvr6 group learned from receiver port.

Command Syntax

show mvr6 groups vlan *vlan_id* (*group_adddress* |)

vlan *vlan_id*	MVR6 receiver vlan
group_adddress	Multicast group address

Command Mode

Privileged EXEC

Default

None

Usage

Show mvr6 group information learned from receiver port

Examples

Switch# show mvr6 groups

```
VLAN  Interface  Group Address                          Uptime    Expire-time
1     eth-0-3    ff0e:2111:1111:1111:1111:1111:1234:5678  00:00:11  00:04:10
```

Related Commands

None

5.9 show mvr6 groups static

Use this command to show mvr6 global static groups.

Command Syntax

show mvr6 groups static global

Command Mode

Privileged EXEC

Default

None

Usage

Show mvr6 static configured group information.

Examples

Switch# show mvr6 groups static global

```
MVR6 Static Global Group:
ff0e::1234
ff0e::1235
ff0e::1236
ff0e:2111:1111:1111:1111:1111:1234:5678
```

Related Commands

None

5.10 show resource mvr6

Use this command to display the resource statistic used by MVR6.

Command Syntax

show resource mvr6

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

Switch# show resource mvr6

```
MVR
Resource                      Used        Capability
==========================================================
MVR Entry                     4           224
L2 Mcast Member               1           1792
```

Related Commands

None