

FSOS

Multicast Command Line Reference

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1 IP Multicast-Routing Commands

1.1 ip multicast-routing

Use this command to enable ip multicast routing.

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

Command Syntax

ip multicast-routing

no ip multicast-routing

Command Mode

Global Configuration

Default

Enable

Usage

None

Examples

- This example shows how to enable ip multicast routing.

```
Switch# configure terminal
```

```
Switch(config)# ip multicast-routing
```

- This example shows how to disable ip multicast routing.

```
Switch# configure terminal
Switch(config)# no ip multicast-routing
```

Related Commands

None

1.2 ip 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

ip multicast route-limit *route-number* (*threshold-number*)

no ip multicast route-limit

<i>route-number</i>	Max number of multicast route entries
<i>threshold-number</i>	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)# ip multicast route-limit 512
- This example shows how to return the maximum number of the multicast routes to default value.
Switch(config)# no ip multicast route-limit

Related Commands

show ip mroute route-limit

1.3 ip mroute-rpf

Use this command to configure static multicast routes.

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

Command Syntax

ip mroute-rpf *source-address/mask-length* (**static** | **rip** | **ospf** |) *rpf-nbr-address distance*

no ip mroute-rpf *source-address/ mask-length* (**static** | **rip** | **ospf** |)

<i>source-address</i>	Destination address
<i>mask-length</i>	Length of address mask
static	Static routes
rip	Routing Information Protocol
ospf	Open Shortest Patch First
<i>rpf-nbr-address</i>	RPF neighbor address or route
<i>distance</i>	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 10.10.1.1/24 RPF neighbor address as 192.168.1.1.

```
Switch(config)# ip mroute-rpf 10.10.1.1/24 192.168.1.1
```

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

```
Switch(config)# no ip mroute-rpf 10.10.1.1/24
```

Related Commands

show ip mroute-rpf

1.4 show ip mroute

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

Command Syntax

show ip mroute (sparse|) (count|summary|)

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

show ip mroute route-limit

sparse	Show sparse multicast routes
count	Show number of multicast route entries
summary	Show abbreviated multicast route information
<i>address</i>	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 ip mroute

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

(10.0.1.20, 228.1.1.1), uptime 00:35:46, stat expires 00:02:19
Owner PIM-SM, Flags: TF
  Incoming interface: eth-0-1
  Outgoing interface list:
    eth-0-2 (1)
```

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

Switch# show ip mroute summary

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

```
(10.0.1.20, 228.1.1.1), 00:36:59/00:02:46, PIM-SM, Flags: TF
```

Related Commands

ip multicast route-limit

ip mroute-rpf

1.5 show ip mvif

Use this command to display the multicast interface information.

Command Syntax

show ip mvif (*IFNAME* |)

<i>IFNAME</i>	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 ip mvif

```
Interface Vif  Owner  TTL  Local  Remote  Uptime
```

	Idx	Module		Address	Address	
eth-0-1	0	PIM-SM	1	10.0.1.1	0.0.0.0	00:42:56
eth-0-2	2	PIM-SM	1	10.0.2.1	0.0.0.0	00:42:53

Related Commands

ip pim sparse-mode

1.6 show ip multicast groups count

Use this command to display the multicast group count.

Command Syntax

show ip multicast groups count

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display multicast group number.

Switch# show ip 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 ip mroute-rpf

Use this command to display RPF information for multicast source.

Command Syntax

show ip mroute-rpf *source-address*

<i>source-address</i>	The source address of mroute-rpf
-----------------------	----------------------------------

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display multicast source 192.168.1.1 RPF neighbor.

```
Switch# show ip mroute-rpf 192.168.1.1
```

```
RPF information for 192.168.1.1
RPF interface: eth-0-10
RPF neighbor: 0.0.0.0
RPF route: 192.168.1.0/24
RPF type: unicast (connected)
```

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

Related Commands

ip mroute-rpf

1.8 show resource mcast

Use this command to display multicast resource information.

Command Syntax

show resource mcast

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display multicast resource information.

Switch# show resource mcast

```
MCAST
Resource                Used      Capability
=====
Mcast Entry              1         508
Mcast Member             1        4064
```

Related Commands

None

1.9 clear ip mroute

Use this command to clear the multicast routing table information.

Command Syntax

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

<i>group-address</i>	Clear specify group address multicast route
<i>source-address</i>	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 multicast routing table information.

```
Switch# clear ip mroute *
```

Related Commands

show ip mroute

2 GMP Commands

2.1 ip igmp access-group

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

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

Command Syntax

ip igmp access-group *list*

no ip igmp access-group

<i>list</i>	The name of the ip access-list to be applied. The format of access-list should be ipv4.
-------------	---

Command Mode

Interface configuration

Default

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

Usage

No matter the source ip or the destination ip in ACE should be take effect respectively. If ACE's action is denied, 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)# ip igmp access-group acl1
```

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

```
Switch(config-if)# no ip igmp access-group
```

Related Commands

show ip igmp interface

2.2 ip igmp 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

ip igmp immediate-leave group-list *list*

no ip igmp immediate-leave

<i>list</i>	The name of the ip access-list to be applied. The format of access-list should be ipv4.
-------------	---

Command Mode

Interface configuration

Default

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

Usage

No matter the source ip or the destination ip in ACE should be take effect respectively. If ACE's action is denied, 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)# ip igmp immediate-leave group-list acl1
```

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

```
Switch(config-if)# no ip igmp immediate-leave group-list
```

Related Commands

show ip igmp interface

2.3 ip igmp 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

ip igmp last-member-query-count *count*

no ip igmp last-member-query-count

<i>count</i>	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)# ip igmp 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 ip igmp last-member-query-count

Related Commands

show ip igmp interface

ip igmp last-member-query-interval

2.4 ip igmp 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

ip igmp last-member-query-interval *interval*

no ip igmp last-member-query-interval

<i>interval</i>	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)# ip igmp last-member-query-interval 10000
- This example shows how to return the last member query interval value to default value.
Switch(config-if)# no ip igmp last-member-query-interval

Related Commands

show ip igmp interface

ip igmp last-member-query-count

2.5 ip igmp 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

ip igmp limit *number* **except** *list*

no ip igmp limit

<i>number</i>	The max num of groups, range is 1 to 8192
<i>list</i>	Groups not to be counted

Command Mode

Global Configuration & Interface Configuration

Default

8192

Usage

None

Examples

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

```
Switch(config)# ip igmp limit 1000
```

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

```
Switch(config)# no ip igmp limit
```

Related Commands

show ip igmp interface

2.6 ip igmp 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

ip igmp mroute-proxy *IFNAME*

no ip igmp mroute-proxy *IFNAME*

<i>IFNAME</i>	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 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)# ip igmp mroute-proxy eth-0-1
```

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

```
Switch(config-if)# no ip igmp mroute-proxy
```

Related Commands

ip igmp proxy-service

2.7 ip igmp proxy-service

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

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

Command Syntax

ip igmp proxy-service

no ip igmp proxy-service

Command Mode

Interface configuration

Default

None

Usage

This command is used with command `ip igmp mroute-proxy` and to set the upstream interface of the igmp group.

Examples

- This example shows how to enable igmp mroute proxy service on this interface.
Switch(config-if)# ip igmp proxy-service
- This example shows how to disable igmp mroute proxy service.
Switch(config-if)# no ip igmp proxy-service

Related Commands

ip igmp mroute-proxy

2.8 ip igmp querier-timeout

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

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

Command Syntax

ip igmp querier-timeout *intval*

no ip igmp querier-timeout

<i>intval</i>	The igmp 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 igmp previous querier timeout value to 100 seconds.
Switch(config-if)# ip igmp querier-timeout 100
- This example shows how to return the igmp previous querier timeout value to default value.

Switch(config-if)#no ip igmp querier-timeout

Related Commands

ip igmp query-interval

ip igmp query-max-response-time

2.9 ip igmp query-interval

Use this command to set the igmp query interval.

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

Command Syntax

ip igmp query-interval *intval*

no ip igmp query-interval

<i>intval</i>	The value of igmp query interval, range is 2 to 18000s.
---------------	---

Command Mode

Interface configuration

Default

125 seconds

Usage

None

Examples

- This example shows how to set the igmp query interval to 300 seconds.
Switch(config-if)# ip igmp query-interval 300
- This example shows how to return the igmp query interval to default value.
Switch(config-if)# no ip igmp query-interval

Related Commands

ip igmp querier-timeout

ip igmp query-max-response-time

2.10 ip igmp query-max-response-time

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

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

Command Syntax

ip igmp query-max-response-time *intval*

no ip query-max-response-time

<i>intval</i>	The igmp 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 igmp query interval.

Examples

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

```
Switch(config-if)# ip igmp query-max-response-time 20
```

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

```
Switch(config-if)# no ip igmp query-max-response-time
```

Related Commands

ip igmp querier-timeout

ip igmp query-interval

2.11 ip igmp robustness-variable

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

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

Command Syntax

ip igmp robustness-variable *value*

no ip robustness-variable

<i>value</i>	The igmp 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 igmp querier robustness variable value to 6.
Switch(config-if)# ip igmp robustness-variable 5
- This example shows how to return the igmp querier robustness variable value to default value.

Switch(config-if)# no ip igmp robustness-variable

Related Commands**show ip igmp interface**

2.12 ip igmp version

Use this command to set the igmp version on interface.

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

Command Syntax**ip igmp version** *number***no ip version**

<i>value</i>	The igmp version on the interface, range is 1 to 3
--------------	--

Command Mode

Interface configuration

Default

2

Usage

None

Examples

- This example shows how to set the igmp version 1 on the interface.
Switch(config-if)# ip igmp version 1
- This example shows how to return the igmp version to default value.
Switch(config-if)# no ip igmp version

Related Commands

show ip igmp interface

2.13 ip igmp 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

ip igmp static-group *group-address* (**source** *source-address* |)

no ip igmp static-group *group-address* (**source** *source-address* |)

<i>group-address</i>	The multicast group address
----------------------	-----------------------------

source <i>source-address</i>	The multicast source address
--	------------------------------

Command Mode

Interface configuration

Default

None

Usage

None

Examples

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

```
Switch # configure terminal
```

```
Switch (config)# interface eth-0-1
```

```
Switch (config-if)# ip igmp static-group 226.1.2.3
```

```
Switch (config-if)# ip igmp static-group 226.1.2.4 source 1.2.3.4
```

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

```
Switch # configure terminal
```

```
Switch (config)# interface eth-0-1
```

```
Switch (config-if)# no ip igmp static-group 226.1.2.3
```

Related Commands

show ip igmp groups

2.14 ip igmp ssm-map enable

Use this command to enable igmp ssm mapping.

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

Command Syntax

ip igmp ssm-map enable

no ip igmp ssm-map enable

Command Mode

Global Configuration

Default

Disable

Usage

None

Examples

- This example shows how to enable igmp ssm mapping.
Switch(config)# ip igmp ssm-map enable
- This example shows how to disable igmp ssm mapping.
Switch(config)# no ip igmp ssm-map enable

Related Commands

None

2.15 ip igmp ssm-map static

Use this command to set igmp ssm mapping.

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

Command Syntax

ip igmp ssm-map static *list source-address*

no ip igmp ssm-map static *list source-address*

<i>list</i>	Specify multicast group address range access list
<i>source-address</i>	Multicast source address

Command Mode

Global Configuration

Default

Disable

Usage

None

Examples

- This example shows how to set igmp ssm mapping.
Switch(config)# ip igmp ssm-map static ipacl 192.168.1.1
- This example shows how to unset igmp ssm mapping.
Switch(config)# no ip igmp ssm-map static ipacl 192.168.1.1

Related Commands

None

2.16 clear ip igmp

Use this command to clear igmp groups.

Command Syntax

clear ip igmp (**group** * | **group** *group-address* |)

group <i>group-address</i>	Specify multicast group address
*	All multicast group address

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

- This example shows how to clear igmp group all.
Switch# clear ip igmp
Switch# clear ip igmp group *
- This example shows how to clear igmp specified group.
Switch# clear ip igmp group 228.1.1.1

Related Commands

show ip igmp groups

2.17 clear ip igmp interface

Use this command to clear igmp groups on specified interface.

Command Syntax

clear ip igmp (**group** *group-address* | **interface**) *IFNAME*

group <i>group-address</i>	Specify multicast group address
interface	Specify interface
<i>IFNAME</i>	Interface name

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

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

```
Switch# clear ip igmp interface eth-0-1
```

Related Commands

show ip igmp groups

2.18 show ip igmp groups

Use this command to show the information about igmp groups.

Command Syntax

show ip igmp groups *group-address* (**detail** |)

<i>group-address</i>	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 igmp groups.

```
Switch# show ip igmp groups detail
```

```
Interface:      eth-0-1
Group:          227.0.0.1
Uptime:         00:00:33
Group mode:     Exclude (Expires: 00:04:18)
Last reporter: 10.0.1.100
Source list is empty
```

Related Commands

None

2.19 show ip igmp groups interface

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

Command Syntax

show ip igmp groups *IFNAME* (*group-address* |) (**detail** |)

<i>IFNAME</i>	Interface name
<i>group-address</i>	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 igmp groups on interface eth-0-1.

```
Switch# show ip igmp groups eth-0-1
```

```
IGMP Connected Group Membership
Group Address      Interface      Uptime    Expires    Last Reporter
```

```
227.0.0.1 eth-0-1 00:01:11 00:04:16 10.0.1.100
```

Related Commands

None

2.20 show ip igmp groups count

Use this command to show igmp group number.

Command Syntax

show ip igmp groups (*IFNAME* |) count

<i>IFNAME</i>	Interface name
---------------	----------------

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

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

```
Switch# show ip igmp 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 ip igmp interface

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

Command Syntax

show ip igmp interface (*IFNAME*)

<i>IFNAME</i>	Interface name
---------------	----------------

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

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

```
Switch# show ip igmp interface eth-0-1
```

```
Interface eth-0-1 (Index 1)
IGMP Enabled, Active, Querier, Version 2 (default)
Internet address is 10.0.1.1
IGMP interface limit is 8192
IGMP interface has 1 group-record states
```

```
IGMP activity: 97 joins, 0 leaves
IGMP query interval is 125 seconds
IGMP querier timeout is 255 seconds
IGMP max query response time is 10 seconds
Last member query response interval is 1000 milliseconds
Group Membership interval is 260 seconds
Last member query count is 2
Robustness Variable is 2
```

Related Commands

None

3 IGMP Snooping Commands

3.1 ip igmp snooping

Use this command to enable igmp snooping.

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

Command Syntax

ip igmp snooping (vlan *vlan_id* |)

no ip igmp snooping (vlan *vlan_id* |)

vlan <i>vlan_id</i>	Vlan ID, range is 1 to 4094.
----------------------------	------------------------------

Command Mode

Global Configuration

Default

Enable

Usage

Igmp Snooping can be enabled globally and per vlan. By default, igmp snooping should be enabled globally and per vlan.

Examples

- This example shows how to enable igmp snooping.
Switch(config)# ip igmp snooping
- This example shows how to disable igmp snooping.
Switch(config)# no ip igmp snooping
- This example shows how to enable igmp snooping on vlan 10.
Switch(config)# ip igmp snooping vlan 10
- This example shows how to disable igmp snooping on vlan 10.
Switch(config)# no ip igmp snooping vlan 10

Related Commands

show ip igmp snooping

3.2 ip igmp snooping fast-leave

Use this command to enable igmp snooping fast leave.

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

Command Syntax

ip igmp snooping (vlan *vlan_id* |) fast-leave

no ip igmp snooping (vlan *vlan_id* |) fast-leave

vlan <i>vlan_id</i>	Vlan ID, range is 1 to 4094.
----------------------------	------------------------------

Command Mode

Global Configuration

Default

Disable

Usage

If igmp snooping fast leave is enabled on a vlan interface, on which igmp also is enabled.

Examples

- This example shows how to enable igmp snooping fast-leave.
Switch(config)# ip igmp snooping fast-leave
- This example shows how to disable igmp snooping fast-leave.
Switch(config)# no ip igmp snooping fast-leave

Related Commands

show ip igmp snooping global

3.3 ip igmp snooping last-member-query-interval

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

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

Command Syntax

ip igmp snooping (vlan *vlan_id* |) last-member-query-interval *interval*

no ip igmp snooping (vlan *vlan_id* |) last-member-query-interval

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

Command Mode

Global Configuration

Default

1000 ms

Usage

Igmp 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)# ip igmp snooping last-member-query-interval 2000
- This example shows how to return the last member query interval to default value.
Switch(config)# no ip igmp snooping last-member-query-interval

Related Commands

show ip igmp snooping

show ip igmp snooping vlan

3.4 ip igmp 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

ip igmp snooping global source-address *address*

no ip igmp snooping global source-address

<i>address</i>	The IPv4 address of source address
----------------	------------------------------------

Command Mode

Global Configuration

Default

0.0.0.0

Usage

None

Examples

- This example shows how to set the global source address to 1.3.4.5.
Switch(config)# ip igmp snooping global source-address 1.3.4.5
- This example shows how to return the global source address to default value.
Switch(config)# no ip igmp snooping global source-address

Related Commands

show ip igmp snooping querier

3.5 ip igmp 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

ip igmp snooping (vlan *vlan_id* |) max-member-num *number*

no ip igmp snooping (vlan *vlan_id* |) max-member-num

vlan <i>vlan_id</i>	Vlan ID, range is 1 to 4094.
<i>number</i>	The max member number of igmp snooping, range is 1 to 8192

Command Mode

Global Configuration

Default

8192

Usage

None.

Examples

- This example shows how to set the max member number of igmp snooping to 1024.
Switch(config)# ip igmp snooping max-member-num 1024
- This example shows how to return the max member number to default value.
Switch(config)# no ip igmp snooping max-member-num

Related Commands

show ip igmp snooping global

show ip igmp snooping vlan

3.6 ip igmp snooping query-interval

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

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

Command Syntax

ip igmp snooping (vlan *vlan_id* |) query-interval *interval*

no ip igmp snooping (vlan *vlan_id* |) query-interval

vlan <i>vlan_id</i>	Vlan ID, range is 1 to 4094.
<i>interval</i>	The query-interval of igmp snooping (seconds), range is 2 to 18000

Command Mode

Global Configuration

Default

125

Usage

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

Examples

- This example shows how to set the igmp snooping query interval to 64s.
Switch(config)# ip igmp snooping query-interval 64
- This example shows how to return the query-interval to default value.
Switch(config)# no ip igmp snooping query-interval

Related Commands

show ip igmp snooping querier

show ip igmp snooping querier vlan

3.7 ip igmp snooping query-max-response-time

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

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

Command Syntax

ip igmp snooping (vlan *vlan_id* |) query-max-response-time *time*

no ip igmp snooping (vlan *vlan_id* |) query-max-response-time

vlan <i>vlan_id</i>	Vlan ID, range is 1 to 4094.
<i>time</i>	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 igmp snooping query max response time.

Examples

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

```
Switch(config)# ip igmp snooping query-max-response-time 15
```

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

```
Switch(config)# no ip igmp snooping query-max-response-time
```


Related Commands

show ip igmp snooping querier

show ip igmp snooping querier vlan

3.8 ip igmp snooping report-suppression

Use this command to enable report suppression.

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

Command Syntax

ip igmp snooping (vlan *vlan_id* |) report-suppression

no ip igmp snooping (vlan *vlan_id* |) report-suppression

vlan <i>vlan_id</i>	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)# ip igmp snooping report-suppression

- This example shows how to disable report suppression.

```
Switch(config)# no ip igmp snooping report-suppression
```

Related Commands

show ip igmp snooping

show ip igmp snooping vlan

3.9 ip igmp snooping version

Use this command to set igmp snooping version.

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

Command Syntax

ip igmp snooping (vlan *vlan_id* |) version *version*

no ip igmp snooping (vlan *vlan_id* |) version

vlan <i>vlan_id</i>	Vlan ID, range is 1 to 4094.
<i>version</i>	Igmp snooping version, range is 1 to 3.

Command Mode

Global Configuration

Default

2

Usage

The version of igmp snooping should be configurable globally and per vlan. The range of igmp snooping version should from 1 to 3. The default value should be 2.

Examples

This example shows how to set the igmp snooping version 1.

```
Switch(config)# ip igmp snooping version 1
```

Related Commands

show ip igmp snooping

show ip igmp snooping vlan

3.10 ip igmp snooping discard-unknown

Use this command to set discard unknown.

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

Command Syntax

ip igmp snooping (vlan *vlan_id* |) discard-unknown

no ip igmp snooping (vlan *vlan_id* |) discard-unknown

vlan <i>vlan_id</i>	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)# ip igmp snooping discard-unknown
```

Related Commands

show ip igmp snooping

show ip igmp snooping vlan

3.11 ip igmp snooping querier tcn

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

Command Syntax

ip igmp snooping querier tcn (**query-count** *count* | **query-interval** *interval*)

no ip igmp snooping querier tcn (**query-count** | **query-interval**)

query-count <i>count</i>	IGMP querier TCN query count, range is 1 to 10, default is 2.
query-interval <i>interval</i>	IGMP querier TCN query interval (sec), range is 1 to 255, default is 10s.

Command Mode

Global Configuration

Default

Enable

Usage

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

Igmp 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 ip igmp snooping querier tcn command.

```
Switch(config)# ip igmp snooping querier tcn query-count 2
```

Related Commands

show ip igmp snooping querier

3.12 ip igmp snooping vlan access-group

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

Command Syntax

ip igmp snooping vlan *vlan_id* access-group *acl*

no ip igmp snooping vlan *vlan_id* access-group

<i>vlan_id</i>	Vlan ID, range is 1 to 4094.
----------------	------------------------------

<i>acl</i>	IP 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)# ip igmp snooping vlan 10 access-group acl
- This example shows how to remove access-group from vlan 10.
Switch(config)# no ip igmp snooping vlan 10 access-group

Related Commands

show ip igmp snooping vlan

3.13 ip igmp snooping vlan mrouter interface

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

Command Syntax

ip igmp snooping vlan *vlan_id* mrouter interface *IFNAME*

no ip igmp snooping vlan *vlan_id* mrouter interface *IFNAME*

<i>vlan_id</i>	Vlan ID, range is 1 to 4094.
<i>IFNAME</i>	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)# ip igmp 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 ip igmp snooping vlan 10 mrouter interface eth-0-1

Related Commands

show ip igmp snooping vlan

3.14 ip igmp snooping vlan mrouter-aging-interval

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

Command Syntax

ip igmp snooping vlan *vlan_id* mrouter-aging-interval *interval*

no ip igmp snooping vlan *vlan_id* mrouter-aging-interval

<i>vlan_id</i>	Vlan ID, range is 1 to 4094.
<i>interval</i>	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)# ip igmp 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 ip igmp snooping vlan 10 mrouter-aging-interval
```

Related Commands

show ip igmp snooping vlan

3.15 ip igmp snooping vlan querier

Use this command to enable igmp snooping querier on vlan.

Command Syntax

ip igmp snooping vlan *vlan_id* querier

no ip igmp snooping vlan *vlan_id* querier

<i>vlan_id</i>	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)# ip igmp snooping vlan 10 querier
- This example shows how to disable querier on vlan 10.
Switch(config)# no ip igmp snooping vlan 10 querier

Related Commands

show ip igmp snooping querier vlan

3.16 ip igmp snooping vlan querier address

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

Command Syntax

ip igmp snooping vlan *vlan_id* querier address *address*

no ip igmp snooping vlan *vlan_id* querier address *address*

<i>vlan_id</i>	Vlan ID, range is 1 to 4094.
<i>address</i>	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)# ip igmp snooping vlan 10 querier address 1.1.1.1
- This example shows how to unset querier address on vlan 10.
Switch(config)# no ip igmp snooping vlan 10 querier address

Related Commands

show ip igmp snooping querier vlan

3.17 ip igmp snooping vlan querier-timeout

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

Command Syntax

ip igmp snooping vlan *vlan_id* querier-timeout *interval*

no ip igmp snooping vlan *vlan_id* querier-timeout

<i>vlan_id</i>	Vlan ID, range is 1 to 4094.
<i>interval</i>	The igmp 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)# ip igmp snooping vlan 10 querier-timeout 100
- This example shows how to reset previous querier timeout interval on vlan 10.
Switch(config)# no ip igmp snooping vlan 10 querier-timeout

Related Commands

show ip igmp snooping querier vlan

3.18 ip igmp snooping vlan static-group

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

Command Syntax

ip igmp snooping vlan *vlan_id* **static-group** *group-address* (**source** *source-address* |)

interface *IFNAME*

no ip igmp snooping vlan *vlan_id* **static-group** *group-address* (**source** *source-address* |)

interface *IFNAME*

<i>vlan_id</i>	Vlan ID, range is 1 to 4094.
<i>group-address</i>	The address of group configured on the specified interface.
<i>source-address</i>	The address of source configured on the specified interface.
<i>IFNAME</i>	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 238.1.1.1 on interface eth-0-11 of vlan 10.
Switch(config)# ip igmp snooping vlan 10 static-group 238.1.1.1 interface eth-0-11
- This example shows how to remove group 238.1.1.1 from interface eth-0-11 of vlan 10.

```
Switch(config)# no ip igmp snooping vlan 10 static-group 238.1.1.1 interface eth-0-11
```

Related Commands

```
show ip igmp snooping group
```

3.19 clear ip igmp snooping group

Use this command to clear all igmp snooping groups.

Command Syntax

```
clear ip igmp snooping (group * )
```

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to clear igmp snooping group all.

```
Switch# clear ip igmp snooping
```

Related Commands

None

3.20 clear ip igmp snooping vlan group

Use this command to clear igmp snooping groups on vlan.

Command Syntax

clear ip igmp snooping vlan *vlan_id*

<i>vlan_id</i>	Vlan ID, range is 1 to 4094
----------------	-----------------------------

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

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

```
Switch# clear ip igmp snooping vlan 10
```

Related Commands

None

3.21 show ip igmp snooping global

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

Command Syntax

show ip igmp snooping global

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

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

Switch# show ip igmp snooping global

```
Global Igmp Snooping Configuration
-----
Igmp Snooping :Enabled
Igmp Snooping Fast-Leave :Disabled
Igmp Snooping Version :2
Igmp Snooping Max-Member-Number :8192
Igmp Snooping Unknown Multicast Behavior :Flood
Igmp Snooping Report-Suppression :Enabled
```

Related Commands

None

3.22 show ip igmp snooping groups

Use this command to show the igmp snooping groups.

Command Syntax

show ip igmp snooping groups

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display igmp snooping groups.

```
Switch# show ip igmp snooping groups
```

VLAN	Interface	Group-Address	Uptime	Expires-time
1	eth-0-1	227.0.0.1	00:03:44	00:04:18

Related Commands

None

3.23 show ip igmp snooping groups vlan

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

Command Syntax

```
show ip igmp snooping groups vlan vlan_id (group_address |)
```

<i>vlan_id</i>	Vlan ID, range is 1 to 4094.
<i>group-address</i>	The address of group

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

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

Switch# show ip igmp snooping groups vlan 1

```
IGMP Snooping groups for vlan1
Interface:      eth-0-1
Group:         227.0.0.1
Uptime:        00:05:24
Group mode:    Exclude (Expires: 00:04:20)
Last reporter: 10.0.1.100
Source list is empty
```

Related Commands

None

3.24 show ip igmp snooping groups count

Use this command to show the igmp snooping groups number.

Command Syntax

show ip igmp snooping groups (vlan *vlan_id* |) count

<i>vlan_id</i>	Vlan ID, range is 1 to 4094.
----------------	------------------------------

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

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

```
Switch# show ip igmp 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 ip igmp snooping querier

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

Command Syntax

```
show ip igmp snooping querier (vlan vlan_id |)
```

<i>vlan_id</i>	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 igmp snooping querier on vlan 1.

```
Switch# show ip igmp snooping querier vlan 1
```

```
Global Igmp Snooping Querier Configuration
-----
Version :2
Last-Member-Query-Interval (msec) :1000
Max-Query-Response-Time (sec) :10
Query-Interval (sec) :125
Global Source-Address :1.1.11.1
TCN Query Count :2
TCN Query Interval (sec) :111

Vlan 1: IGMP snooping querier status
-----
Elected querier is : 0.0.0.0
-----
Admin state :Disabled
Admin version :2
Operational state :Non-Querier
Querier operational address :1.1.11.1
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 ip igmp snooping mrouter

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

Command Syntax

show ip igmp snooping mrouter (vlan *vlan_id* |)

<i>vlan_id</i>	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 igmp snooping mrouter port on vlan 1.

```
Switch# show ip igmp snooping mrouter vlan 1
```

Interface	Mode	Uptime	Expires-time
eth-0-11	static	-	-

Related Commands

None

3.27 show ip igmp snooping vlan

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

Command Syntax

show ip igmp snooping (vlan *vlan_id* |)

<i>vlan_id</i>	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 igmp snooping on vlan 1.

```
Switch# show ip igmp snooping vlan 1
```

```
Global Igmp Snooping Configuration
-----
Igmp Snooping :Enabled
Igmp Snooping Fast-Leave :Disabled
Igmp Snooping Version :2
Igmp Snooping Max-Member-Number :8192
Igmp Snooping Unknown Multicast Behavior :Flood
Igmp Snooping Report-Suppression :Enabled
Vlan 1
-----
Igmp Snooping :Enabled
Igmp Snooping Fast-Leave :Disabled
```

```
Igmp Snooping Report-Suppression :Enabled
Igmp Snooping Version :2
Igmp Snooping Max-Member-Number :8192
Igmp Snooping Unknown Multicast Behavior :Flood
Igmp Snooping Group Access-list :acl
Igmp Snooping Mrouter Port :eth-0-11(static)
Igmp 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 PIM Commands

4.1 ip pim accept-register

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

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

Command Syntax

ip pim accept-register list *list*

no ip pim accept-register

<i>list</i>	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 pim register message received by rp.

```
Switch(config)# ip pim accept-register list acl1
```

- This example shows how to remove the limits.

```
Switch(config)# no ip pim accept-register
```

Related Commands

None

4.2 ip pim anycast-rp

Use this command to set anycast rendezvous-point.

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

Command Syntax

ip pim anycast-rp *anycast_rp_address* *anycast_member_address*

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

<i>anycast_rp_address</i>	Anycast rp address
<i>anycast_member_address</i>	Anycast member rp address

Command Mode

Global Configuration

Default

None.

Usage

None

Examples

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

```
Switch(config)# ip pim anycast-rp 10.10.10.1 10.10.10.11
```

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

```
Switch(config)# no ip pim anycast-rp 10.10.10.1 10.10.10.11
```

Related Commands

None

4.3 ip 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

```
ip pim bsr-candidate IFNAME ( hash-mask (priority)|)
```

```
no ip pim bsr-candidate
```

<i>IFNAME</i>	Interface name
<i>hash-mask</i>	Hash mask length for RP selection, range is 0 to 32.
<i>priority</i>	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)# ip pim bsr-candidate eth-0-1
- This example shows how to cancel the candidate BSR configured.
Switch(config)# no ip pim bsr-candidate

Related Commands

ip pim bsr-border

4.4 ip 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

ip pim bsr-border

no ip 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)# ip pim bsr-border
- This example shows how to remove the configurations of the border of pim domain.
Switch(config-if)# no ip pim bsr-border

Related Commands

ip pim bsr-candidate

4.5 ip pim dr-priority

Use this command to configure DR priority.

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

Command Syntax

ip pim dr-priority *priority*

no ip pim dr-priority

<i>priority</i>	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 ip address will be elected as DR.

Examples

- This example shows how to set the pim router DR priority to 1000.
Switch(config-if)# ip pim dr-priority 1000
- This example shows how to return the pim router DR priority to default value.
Switch(config-if)# no ip pim dr-priority

Related Commands

None

4.6 ip 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

ip pim exclude-genid

no ip pim exclude-genid

<i>priority</i>	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)# ip pim exclude-genid
```

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

```
Switch(config-if)# no ip pim exclude-genid
```

Related Commands

None

4.7 ip 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

```
ip pim hello-interval interval
```

```
no ip pim hello-interval
```

<i>interval</i>	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)# ip pim hello-interval 100
- This example shows how to return the pim hello message interval to default value.
Switch(config-if)# no ip pim hello-interval

Related Commands

None

4.8 ip 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

ip pim ignore-rp-set-priority

no ip 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)# ip pim ignore-rp-set-priority
- This example shows how to return the configurations to default value.
Switch(config)# no ip pim ignore-rp-set-priority

Related Commands

None

4.9 ip 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

ip pim jp-timer *timer*

no ip pim jp-timer

<i>timer</i>	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)# ip pim jp-timer 100
- This example shows how to return the join/prune timer value to default value.
Switch(config)# no ip pim jp-timer

Related Commands

None

4.10 ip 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

ip pim neighbor-filter *list*

no ip pim neighbor-filter

<i>list</i>	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)# ip pim neighbor-filter acl1
```

- This example shows how to cancel the filter.

```
Switch(config-if)# no ip pim neighbor-filter
```

Related Commands

None

4.11 ip 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

```
ip pim register-rate-limit limit
```

```
no ip pim register-rate-limit
```

<i>limit</i>	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)# ip pim register-rate-limit 100
```

- This example shows how to cancel the rate limit.

```
Switch(config)# no ip pim register-rate-limit
```

Related Commands

ip pim register-rp-reachability

ip pim register-source

ip pim register-suppression

4.12 ip 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

ip pim register-source *IFNAME*

no ip pim register-source

<i>IFNAME</i>	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 ip of dr by default.

Usage

None

Examples

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

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

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

```
Switch(config)# no ip pim register-source
```

Related Commands**ip pim register-rate-limit****ip pim register-rp-reachability****ip pim register-suppression**

4.13 ip 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

ip pim register-rp-reachability

no ip 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)#ip pim register-rp-reachability
- This example shows how to disable rp reachability check for pim registers.
Switch(config)#no ip pim register-rp-reachability

Related Commands

ip pim register-rate-limit

ip pim register-source

ip pim register-suppression

4.14 ip 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

ip pim register-suppression *time*

no ip pim register-suppression

<i>time</i>	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)# ip pim register-suppression 100
- This example shows how to return the register suppression time to default value.
Switch(config)# no ip pim register-suppression

Related Commands

ip pim register-rate-limit

ip pim register-rp-reachability

ip pim register-source

4.15 ip pim rp-address

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

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

Command Syntax

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

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

<i>address</i>	The rp address
<i>list</i>	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 1.1.1.1.

```
Switch(config)# ip pim rp-address 1.1.1.1
```

- This example shows how to remove the rp address 1.1.1.1.

```
Switch(config)# no ip pim rp-address 1.1.1.1
```

Related Commands

ip pim rp-candidate

ip pim rp-register-kat

4.16 ip pim rp-candidate

Use this command to set the candidate rp.

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

Command Syntax

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

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

<i>IFNAME</i>	The name of the interface to be the candidate rp
priority <i>priority</i>	The Candidate-RP priority, range is 0 to 255
interval <i>interval</i>	The C-RP advertisement interval in seconds, range is 1 to 16383
group-list <i>list</i>	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)# ip pim rp-candidate eth-0-1
```

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

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

Related Commands

ip pim rp-address

4.17 ip 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

ip pim rp-register-kat *time*

no ip pim rp-register-kat

<i>time</i>	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)# ip pim rp-register-kat 100
```

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

```
Switch(config)# no ip pim rp-register-kat
```

Related Commands

ip pim rp-address

ip pim rp-candidate

4.18 ip 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

ip pim spt-switch-threshold infinity (group-list *list*)

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

group-list <i>list</i>	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)# ip pim spt-switch-threshold infinity
- This example shows how to return the spt-switch-threshold to default.
Switch(config)# no ip pim spt-switch-threshold infinity

Related Commands

show ip pim sparse-mode spt-threshold

4.19 ip 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

ip pim cisco-register-checksum (group-list *list*)

no ip pim cisco-register-checksum (group-list *list*)

group-list <i>list</i>	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)# ip pim cisco-register-checksum
- This example shows how to remove this setting.
Switch(config)# no ip pim cisco-register-checksum

Related Commands

None

4.20 ip 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

ip pim sparse-mode (passive|)

no ip 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)# ip pim sparse-mode
- This example shows how to disable pim sparse mode on the interface.
Switch(config-if)# no ip pim sparse-mode
- This example shows how to enable pim sparse mode passive on the interface.
Switch(config-if)# ip pim sparse-mode passive

Related Commands

None

4.21 ip pim dense-mode

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

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

Command Syntax

ip pim dense-mode (passive|)

no ip pim dense -mode

passive	Pim passive mode (local members only)
----------------	---------------------------------------

Command Mode

Interface configuration

Default

Disable

Usage

Pim sparse-mode and dense-mode can not take effect on the same interface. 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 dense mode on the interface.

```
Switch(config-if)# ip pim dense-mode
```

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

```
Switch(config-if)# no ip pim dense-mode
```

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

```
Switch(config-if)# ip pim dense-mode passive
```

Related Commands

None

4.22 ip 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

ip pim unicast-bsm

no ip 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)# ip pim unicast-bsm
```

- This example shows how to cancel this setting.

```
Switch(config-if)# no ip pim unicast-bsm
```

Related Commands

None

4.23 ip 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

ip pim propagation-delay *timer*

no ip pim propagation-delay

<i>timer</i>	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)# ip pim propagation-delay 400
```

This example shows how to unset this setting.

```
Switch(config-if)# no ip pim propagation-delay
```


Related Commands

None

4.24 ip 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

ip pim state-refresh origination-interval *interval*

no ip pim state-refresh origination-interval

<i>interval</i>	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)# ip pim state-refresh origination-interval 50
```

This example shows how to unset this setting.

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

Related Commands

None

4.25 ip 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

```
ip pim ssm (default | range list)
```

```
no ip pim ssm
```

default	Use 232/8 group range for SSM
range <i>list</i>	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)# ip pim ssm default
```

- This example shows how to cancel this setting.

```
Switch(config-if)# no ip pim ssm default
```

Related Commands

None

4.26 show ip pim sparse-mode bsr-router

Use this command to show the information of bootstrap router.

Command Syntax

```
show ip 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 ip pim sparse-mode bsr-router
```

```
PIMv2 bootstrap information
This system is the bootstrap router (BSR)
  BSR address: 12.0.9.2
  Uptime:      00:00:08, BSR Priority: 64, Hash mask length: 10
  Next bootstrap message in 00:00:04
  Role: Candidate BSR
```

```
State: Elected BSR
```

```
Candidate RP: 12.0.9.2 (eth-0-9)
```

```
Advertisement interval 60 seconds
```

```
Next C-RP advertisement in 00:00:57
```

Related Commands

None

4.27 show ip pim sparse-mode interface

Use this command to show the information of pim interface.

Command Syntax

show ip 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 ip pim sparse-mode interface detail
```

```
eth-0-9 (vif 0):  
  Address 12.0.9.1, DR 12.0.9.2  
  Hello period 30 seconds, Next Hello in 26 seconds  
  Triggered Hello period 5 seconds  
  Neighbors:  
    12.0.9.2
```

Related Commands

None

4.28 show ip pim sparse-mode local-member

Use this command to show the pim local membership information.

Command Syntax

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

<i>IFNAME</i>	Interface name
---------------	----------------

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display pim local membership information.

```
Switch# show ip pim sparse-mode local-members
```

```
PIM local membership information
```

```
eth-0-3:  
(*, 229.1.1.1) : Include
```

```
eth-0-9:  
(*, 228.1.1.1) : Include
```

Related Commands

None

4.29 show ip pim sparse-mode mroute

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

Command Syntax

show ip pim sparse-mode mroute (*source_address* | *group_address* |) (**detail** |)

<i>source_address</i>	Source address
<i>group_address</i>	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 ip pim sparse-mode mroute detail

IP Multicast Routing Table

```
(* ,*,RP) Entries: 0
(* ,G) Entries: 2
(S,G) Entries: 0
(S,G,rpt) Entries: 0
FCR Entries: 0

(* , 228.1.1.1) Uptime: 00:09:55
  RP: 0.0.0.0, RPF nbr: None, RPF idx: None
  Upstream:
    State: NOT JOINED, SPT Switch: Enabled, JT: off
  Downstream:
    eth-0-9:
      State: NO INFO, ET: off, PPT: off
      Assert State: NO INFO, AT: off
      Winner: 0.0.0.0, Metric: 4294967295, Pref: 4294967295, RPT bit: on
  Local Olist:
    eth-0-9

(* , 229.1.1.1) Uptime: 00:04:22
  RP: 12.0.9.2, RPF nbr: 12.0.9.2, RPF idx: eth-0-9
  Upstream:
    State: JOINED, SPT Switch: Enabled, JT Expiry: 40 secs
    Macro state: Join Desired,
  Downstream:
    eth-0-3:
      State: NO INFO, ET: off, PPT: off
      Assert State: NO INFO, AT: off
      Winner: 0.0.0.0, Metric: 4294967295, Pref: 4294967295, RPT bit: on
    Macro state: Could Assert, Assert Track
  Local Olist:
    eth-0-3
```

Related Commands

None

4.30 show ip pim sparse-mode neighbor

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

Command Syntax**show ip pim sparse-mode neighbor** ((*IFNAME* (*address* |)) | **detail** |)

<i>IFNAME</i>	Interface name
<i>address</i>	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 ip pim sparse-mode neighbor
```

Neighbor	Interface	Uptime/Expires	Ver	DR
Address				Priority/Mode
12.0.9.2	eth-0-9	00:18:18 /00:01:20	v2	1 / DR

Related Commands

None

4.31 show ip pim sparse-mode rp mapping

Use this command to show group to rp mappings.

Command Syntax

```
show ip 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 ip pim sparse-mode rp mapping

```
PIM group-to-RP mappings
Group(s) : 224.0.0.0/4
RP: 12.0.9.2
Info source: 12.0.9.2, via bootstrap, priority 192
Uptime: 00:22:56, expires: 00:01:34
```

Related Commands

None

4.32 show ip pim sparse-mode rp-hash

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

Command Syntax

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

<i>group_address</i>	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 224.0.0.10.

```
Switch# show ip pim sparse-mode rp-hash 224.0.0.10
```

```
RP: 12.0.9.2
```

```
Info source: 12.0.9.2, via bootstrap
```

Related Commands

None

4.33 show ip pim sparse-mode spt-threshold

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

Command Syntax

```
show ip 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 ip pim sparse-mode spt-threshold
```

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

Related Commands

None

4.34 show ip pim dense-mode interface

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

Command Syntax

```
show ip pim dense-mode interface (detail | )
```

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

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

```
Switch# show ip pim dense-mode interface
```

Address	Interface	VIFIndex	Ver/	Nbr
			Mode	Count
2.2.2.1	eth-0-2	0	v2/D	0
3.3.3.1	eth-0-3	2	v2/D	0

Related Commands

None

4.35 show ip pim dense-mode mroute

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

Command Syntax

```
show ip pim dense-mode mroute
```

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display pim mroute information.

```
Switch# show ip pim dense-mode mroute
```

```
PIM-DM Multicast Routing Table  
(2.2.2.2, 225.1.2.3)  
Source directly connected on eth-0-2  
State-Refresh Originator State: Originator
```

```
Upstream IF: eth-0-2
Upstream State: Forwarding
Assert State: NoInfo
Downstream IF List:
  eth-0-3, in 'olist':
    Downstream State: NoInfo
    Assert State: NoInfo
(2.2.2.2, 225.1.2.4)
Source directly connected on eth-0-2
State-Refresh Originator State: Originator
Upstream IF: eth-0-2
Upstream State: Forwarding
Assert State: NoInfo
Downstream IF List:
  eth-0-3, in 'olist':
    Downstream State: NoInfo
    Assert State: NoInfo
```

Related Commands

None

4.36 show ip pim dense-mode neighbor

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

Command Syntax

show ip pim sparse-mode neighbor (detail |)

detail	Detailed interface information
---------------	--------------------------------

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

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

```
Switch# show ip pim dense-mode neighbor
Neighbor-Address Interface Uptime/Expires Ver
4.4.4.4 eth-0-9 03d19h16m/00:01:29 v2
3.3.3.2 agg3 03d19h17m/00:01:37 v2
```

Related Commands

None

4.37 show ip pim dense-mode nexthop

Use this command to show the nexthop information of pim dense mode.

Command Syntax

```
show ip pim sparse-mode nexthop
```

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

This example shows how to display the nexthop information of pim dense mode.

```
Switch# show ip pim dense-mode nexthop
Destination Nexthop Nexthop Nexthop Metric Pref
```

	Num	Addr	Interface		
1.1.1.2	0	-	-	-	-

Related Commands

None

5 MVR Commands

5.1 mvr

Use this command to enable or disable MVR.

Command Syntax

mvr

no mvr

Command Mode

Global Configuration

Default

Disable

Usage

Enable MVR in the Switch, before enable MVR, must disable ip multicast-routing.

Examples

This example shows how to enable MVR.

```
Switch(config)# no ip multicast-routing
```

```
Switch(config)# mvr
```


Related Commands

show mvr

5.2 mvr vlan

Use this command to specify the MVR source vlan.

Command Syntax

mvr vlan *vlan_id*

no mvr vlan

<i>vlan_id</i>	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 MVR source vlan.

Examples

This example shows how to configure source vlan of MVR.

configure vlan 2 as source vlan of MVR

Switch(config)# vlan database

Switch (config-vlan)# vlan 2

```
Switch (config)# interface vlan 2
```

```
Switch (config-if)# exit
```

```
Switch(config)# mvr vlan 2
```

Related Commands

interface vlan

5.3 mvr group

Use this command to configure global group for MVR.

Command Syntax

```
mvr group address (count | )
```

```
no mvr group address (count | )
```

<i>address</i>	Multicast group address
<i>count</i>	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 238.255.0.1 to 238.255.0.50

```
Switch(config)# mvr group 238.255.0.1 50
```

Related Commands

None

5.4 mvr source-address

Use this command to create or delete mvr source address.

Command Syntax

mvr source-address *address*

no mvr source-address

<i>address</i>	Source ip address
----------------	-------------------

Command Mode

Global Configuration

Default

10.0.0.1

Usage

This command is used to create or delete mvr source vlan ip address. The default IP address is 10.0.0.1.

Examples

Create mvr source address:

```
Switch(config)# mvr source-address 192.168.11.1
```

Resume mvr source address as default IP address.

```
Switch(config)# no mvr source-address
```

Related Commands

None

5.5 mvr type

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

Command Syntax

mvr type (source | receiver vlan *vlan_id*)

no mvr type (receiver vlan *vlan_id*)

source	MVR source port
receiver	MVR receiver port
vlan <i>vlan_id</i>	MVR 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)# mvr type source
```

```
Switch(config)# interface eth-0-2
```

```
Switch(config-if)# mvr type receiver vlan 2
```

Related Commands

None

5.6 show mvr

Use this command to show mvr information.

Command Syntax

```
show mvr
```

Command Mode

Privileged EXEC

Default

None

Usage

Show mvr information.

Examples

```
Switch# show mvr
```

```
MVR Running: TRUE
MVR Multicast VLAN: 10
MVR Source-address: 1.1.1.1
MVR Max Multicast Groups: 1024
MVR Hw Rt Limit: 508
MVR Current Multicast Groups: 0
```

Related Commands

None

5.7 show mvr interface

Use this command to show mvr interface information.

Command Syntax

```
show mvr interface
```

Command Mode

Privileged EXEC

Default

None

Usage

Show mvr interface information.

Examples

```
Switch# show mvr interface
```

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

Related Commands

None

5.8 show mvr group

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

Command Syntax

```
show mvr group vlan vlan_id (group_address |)
```

vlan <i>vlan_id</i>	MVR receiver vlan
<i>group_address</i>	Multicast group address

Command Mode

Privileged EXEC

Default

None

Usage

Show mvr group information learned from receiver port

Examples

```
Switch# show mvr groups
```

VLAN	Interface	Group-Address	Uptime	Expires-time
11	eth-0-1	227.0.0.1	00:25:51	00:04:19

Related Commands

None

5.9 show mvr group static

Use this command to show mvr global static groups.

Command Syntax

```
show mvr group static global
```

Command Mode

Privileged EXEC

Default

None

Usage

Show mvr static configured group information.

Examples

```
Switch# show mvr groups static global
```

```
MVR Static Global Group:  
227.0.0.1  
227.0.0.2  
227.0.0.3  
227.0.0.4  
227.0.0.5  
227.0.0.6  
227.0.0.7  
227.0.0.8  
227.0.0.9  
227.0.0.10
```


Related Commands

None

5.10 show resource mvr

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

Command Syntax

show resource mvr

Command Mode

Privileged EXEC

Default

None

Usage

None

Examples

Switch# show resource mvr

```
MVR
Resource                               Used      Capability
=====
MVR Entry                               10         508
L2 Mcast Member                          11        4064
```

Related Commands

None