Contents

PIM commands

anycast-rp (PIM view)

Use **anycast-rp** to add an anycast RP member to an Anycast RP set.

Use **undo anycast-rp** to remove an anycast RP member from an Anycast RP set.

Syntax

anycast-rp *anycast-rp-address member-address*

undo anycast-rp *anycast-rp-address member-address*

Default

No Anycast RP sets exist.

Views

PIM view

Predefined user roles

network-admin

Parameters

anycast-rp-address: Specifies an Anycast RP address. It must be a legal unicast IP address that is not in the range of 127.0.0.0/8.

member-address: Specifies an Anycast RP member address. It must be a legal unicast IP address that is not in the range of 127.0.0.0/8 and must be different from the Anycast RP address.

Usage guidelines

To add multiple RP member addresses to an Anycast RP set, execute this command multiple times with the same Anycast RP address but different RP member addresses.

To configure multiple Anycast RP sets, execute this command multiple times with different Anycast RP addresses.

Examples

Add Anycast RP members 1.1.0.1 and 1.2.0.1 to Anycast RP set 1.1.0.0.

```
<Sysname> system-view
[Sysname] pim
[Sysname-pim] anycast-rp 1.1.0.0 1.1.0.1
[Sysname-pim] anycast-rp 1.1.0.0 1.2.0.1
```

Related commands

display pim rp-info

auto-rp enable (PIM view)

Use **auto-rp enable** to enable Auto-RP listening.

Use **undo auto-rp enable** to disable Auto-RP listening.

Syntax

auto-rp enable

```
undo auto-rp enable
```

Default

Auto-RP listening is disabled.

Views

PIM view

Predefined user roles

network-admin

Examples

Enable Auto-RP listening.

```
<Sysname> system-view
[Sysname] pim
[Sysname-pim] auto-rp enable
```

bsm-fragment enable (PIM view)

Use **bsm-fragment enable** to enable bootstrap message (BSM) semantic fragmentation.

Use **undo bsm-fragment enable** to disable BSM semantic fragmentation.

Syntax

bsm-fragment enable

undo bsm-fragment enable

Default

BSM semantic fragmentation is enabled.

Views

PIM view

Predefined user roles

network-admin

Usage guidelines

Disable BSM semantic fragmentation if the PIM-SM domain contains a device that does not support BSM semantic fragmentation.

Examples

Disable BSM semantic fragmentation.

```
<Sysname> system-view
[Sysname] pim
[Sysname-pim] undo bsm-fragment enable
```

bsm-reflection enable (PIM view)

Use **bsm-reflection enable** to enable the device to forward BSMs out of their incoming interfaces.

Use **undo bsm-reflection enable** to disable the device from forwarding BSMs out of their incoming interfaces.

Syntax

```
bsm-reflection enable

undo bsm-reflection enable
```

Default

The device forwards BSMs out of their incoming interfaces.

Views

PIM view

Predefined user roles

network-admin

Usage guidelines

Disable this feature if all the devices in the PIM-SM domain have consistent routing information.

Examples

Disable the device from forwarding BSMs out of their incoming interfaces.

```
<Sysname> system-view
[Sysname] pim
[Sysname-pim] undo bsm-reflection enable
```

bsr-policy (PIM view)

Use **bsr-policy** to configure a BSR policy.

Use **undo bsr-policy** to restore the default.

Syntax

```
bsr-policy ipv4-acl-number

undo bsr-policy
```

Default

No BSR policy exists, and all bootstrap messages are regarded as legal.

Views

PIM view

Predefined user roles

network-admin

Parameters

ipv4-acl-number: Specifies an IPv4 basic ACL by its number in the range of 2000 to 2999.

Usage guidelines

A BSR policy filters bootstrap messages to guard against BSR spoofing.

When you configure a rule in the IPv4 basic ACL, follow these restrictions and guidelines:

- The **source** *source-address source-wildcard* option specifies a BSR address.
- Among the other optional parameters, only the **fragment** keyword and the **time-range** *time-range-name* option take effect.

If you execute this command multiple times, the most recent configuration takes effect.

Examples

Configure a BSR policy so that only the devices on subnet 10.1.1.0/24 can act as the BSR.

```
<Sysname> system-view
[Sysname] acl basic 2000
[Sysname-acl-ipv4-basic-2000] rule permit source 10.1.1.0 0.0.0.255
[Sysname-acl-ipv4-basic-2000] quit
[Sysname] pim
[Sysname-pim] bsr-policy 2000
```

Related commands

c-bsr (PIM view)

c-bsr (PIM view)

Use **c-bsr** to configure a candidate-BSR (C-BSR).

Use **undo c-bsr** to remove the configuration of a C-BSR.

Syntax

c-bsr *ip-address* [**scope** *group-address* { *mask-length* | *mask* }] [**hash-length** *hash-length* | **priority** *priority*] *

undo c-bsr *ip-address* [**scope** *group-address* { *mask-length* | *mask* }]

Default

No C-BSRs exist.

Views

PIM view

Predefined user roles

network-admin

Parameters

ip-address: Specifies the IP address of a C-BSR. You must specify the IP address of a local PIM interface.

scope *group-address*: Specifies a multicast group by its IP address in the range of 239.0.0.0 to 239.255.255.255. If you do not specify a multicast group, this command designates the C-BSR to the global-scoped zone.

mask-length: Specifies an address mask length in the range of 8 to 32.

mask: Specifies an address mask.

hash-length *hash-length*: Specifies a hash mask length in the range of 0 to 32. The default setting is 30.

priority *priority*: Specifies a C-BSR priority in the range of 0 to 255. The default setting is 64. The greater the value, the higher the priority.

Usage guidelines

If you execute this command for a zone multiple times, the most recent configuration takes effect.

You can configure the same C-BSR for different zones.

Examples

Configure the interface with IP address 1.1.1.1 as a C-BSR for the global-scoped zone.

```
<Sysname> system-view
[Sysname] pim
[Sysname-pim] c-bsr 1.1.1.1
```

c-rp (PIM view)

Use **c-rp** to configure a candidate-RP (C-RP).

Use **undo c-rp** to remove the configuration of a C-RP.

Syntax

c-rp *ip-address* [**advertisement-interval** *adv-interval* | **group-policy** *ipv4-acl-number* | **holdtime** *hold-time* | **priority** *priority*] * [**bidir**]

undo c-rp *ip-address*

Default

No C-RPs exist.

Views

PIM view

Predefined user roles

network-admin

Parameters

ip-address: Specifies the IP address of a C-RP. You must specify the IP address of a local PIM interface.

advertisement-interval *adv-interval*: Specifies a C-RP advertisement interval in the range of 1 to 65535 seconds. The default value is 60 seconds.

group-policy *ipv4-acl-number*: Specifies an IPv4 basic ACL by its number in the range of 2000 to 2999. If you specify an ACL, this command designates the C-RP to IPv4 multicast groups in C-RP advertisement messages that the ACL permits. The C-RP is designated to all IPv4 multicast groups when one of the following conditions exists:

- You do not specify an ACL.
- The specified ACL does not exist.
- The specified ACL does not have valid rules.

holdtime *hold-time*: Specifies a C-RP lifetime in the range of 1 to 65535 seconds. The default value is 150 seconds.

priority *priority*: Specifies a C-RP priority in the range of 0 to 255. The default setting is 192. The greater the value, the lower the priority.

bidir: Specifies BIDIR-PIM to which the C-RP is designated. If you do not specify this keyword, the C-RP provides services for PIM-SM. This keyword is not supported in the current software version.

Usage guidelines

To designate a C-RP to multiple multicast group ranges, create multiple rules that specify different multicast group ranges in the ACL.

When you configure a rule in the IPv4 basic ACL, follow these restrictions and guidelines:

- The **source** *source-address* *source-wildcard* option specifies a multicast group range.
- Among the other optional parameters, only the **fragment** keyword and the **time-range** *time-range-name* option take effect.

If you execute this command by using the same C-RP address multiple times, the most recent configuration takes effect.

Examples

Configure the interface with IP address 1.1.1.1 as a C-RP for multicast group ranges 225.1.0.0/16 and 226.2.0.0/16 and set its priority to 10.

```
<Sysname> system-view
[Sysname] acl basic 2000
[Sysname-acl-ipv4-basic-2000] rule permit source 225.1.0.0 0.0.255.255
[Sysname-acl-ipv4-basic-2000] rule permit source 226.2.0.0 0.0.255.255
[Sysname-acl-ipv4-basic-2000] quit
[Sysname] pim
[Sysname-pim] c-rp 1.1.1.1 group-policy 2000 priority 10
```

crp-policy (PIM view)

Use **crp-policy** to configure a C-RP policy.

Use **undo crp-policy** to restore the default.

Syntax

crp-policy *ipv4-acl-number*

undo crp-policy

Default

No C-RP policy exists, and all C-RP messages are regarded as legal.

Views

PIM view

Predefined user roles

network-admin

Parameters

ipv4-acl-number: Specifies an IPv4 advanced ACL number in the range of 3000 to 3999.

Usage guidelines

A C-RP policy filters C-RP advertisement messages to guard against C-RP spoofing.

The device uses only the prefixes of the multicast group ranges in advertisement messages to match the destination field in ACL rules. For example, the multicast group range in an advertisement message is 224.1.0.0/16. If the prefix 224.1.0.0 is in the range specified by the destination field of an ACL rule, the specified C-RPs are designated to this multicast group range.

When you configure a rule in the IPv4 advanced ACL, follow these restrictions and guidelines:

- The **source** *source-address source-wildcard* option specifies an RP address.
- The **destination** *dest-address dest-wildcard* option specifies a multicast group address.
- Among the other optional parameters, only the **fragment** keyword and the **time-range** *time-range-name* option take effect.

If you execute this command multiple times, the most recent configuration takes effect.

Examples

Configure a C-RP policy so that only devices in the range of 1.1.1.1/24 can be C-RPs for the groups in the range of 225.1.1.0/24.

```
<Sysname> system-view
[Sysname] acl advanced 3000
[Sysname-acl-ipv4-adv-3000] rule permit ip source 1.1.1.1 0.0.0.255 destination 225.1.1.0
0.0.0.255
[Sysname-acl-ipv4-adv-3000] quit
[Sysname] pim
[Sysname-pim] crp-policy 3000
```

Related commands

c-rp (PIM view)

display interface register-tunnel

Use **display interface register-tunnel** to display register-tunnel interface information.

Syntax

display interface [**register-tunnel** [*interface-number*]] [**brief** [**description** | **down**]]

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

register-tunnel [*interface-number*]: Specifies a register-tunnel interface by its number. The device has only one register-tunnel interface, Register-Tunnel 0. If you specify the **register-tunnel** keyword, this command displays information about Register-Tunnel 0 regardless of whether you specify an interface number. If you do not specify the **register-tunnel** keyword, this command displays information about all interfaces.

brief: Displays brief information. If you do not specify this keyword, the command displays detailed information.

description: Displays the full interface description. If you do not specify this keyword, the command displays only the first 27 characters of the interface description.

down: Displays information about the interfaces in down state and the reasons why the interfaces are down. If you do not specify this keyword, the command displays information about interfaces in all states.

Usage guidelines

The register-tunnel interface is a virtual interface that is automatically created by the system. You cannot configure it or delete it, but you can display the interface information by using this command.

In the initial stage of multicast source registration, the register-tunnel interface is used to establish a channel between the source-side DR and the RP to transmit multicast register messages. The process of initial source registration is as follows:

1. After receiving the first multicast data from the source, the source-side DR encapsulates the multicast data into a register message. Then, it forwards the message to the RP through the register-tunnel interface.

2. The register message reaches RP on the register-tunnel interface on the RP. The RP decapsulates the register message and forwards the multicast data to the receiver hosts. At the same time, the RP learns the IP address of the multicast source.

3. The RP sends a join message toward the multicast source to build an SPT.

4. After the SPT is built, the multicast data travels to the RP along the SPT rather than through the register-tunnel interface.

Examples

Display detailed information about Register-Tunnel 0.

```
<Sysname> display interface register-tunnel 0
Register-Tunnel0
Current state: UP
Line protocol state: DOWN
Description: Register-Tunnel0 Interface
Maximum transmission unit: 1536
Internet protocol processing: Disabled
Physical: Unknown
Last 300 seconds input rate: 0 bytes/sec, 0 bits/sec, 0 packets/sec
Last 300 seconds output rate: 0 bytes/sec, 0 bits/sec, 0 packets/sec
Input: 0 packets, 0 bytes, 0 drops
Output: 0 packets, 0 bytes, 0 drops
```

Display brief information about Register-Tunnel 0.

```
<Sysname> display interface register-tunnel 0 brief
Brief information on interfaces in route mode:
Link: ADM - administratively down; Stby - standby
Protocol: (s) - spoofing
Interface            Link Protocol Primary IP        Description
REG0                 UP   --        --
```

Table 1 Command output

Field	Description
Current state	Physical link state of the interface. This field always displays **UP**.
Line protocol state	Data link layer state of interface. This field always displays **DOWN**.
Description	Description of the interface. It is not configurable.
Maximum transmission unit	MTU of the register-tunnel interface. It is not configurable.
Internet protocol processing: Disabled	The interface is not assigned an IP address and cannot process IP packets.
Physical	Physical type of the interface. This field always displays **Unknown**, because the physical type of the interface is unknown.
Last 300 seconds input rate	Average incoming rate in the last 300 seconds. This field always displays **0**.
Last 300 seconds output rate	Average outgoing rate in the last 300 seconds. This field always displays **0**.
Input	Number of incoming packets, incoming bytes, and discarded packets. This field always displays **0**.
Output	Number of outgoing packets, outgoing bytes, and discarded packets. This field always displays **0**.
Brief information on interfaces	Brief information about Layer 3 interfaces.

Field	Description
in route mode	
Link	Physical link state of the interface. This field always displays **UP**.
Protocol	Data link layer protocol state of the interface. This field always displays two hyphens (--) because the interface does not support a data link layer protocol.
Primary IP	Primary IP address of the interface. This field always displays two hyphens (**--**) because the interface does not have a primary IP address.
Cause	Cause for the physical link state of an interface to be **DOWN**. This field always displays **Not connected** because no physical connection exists.
Description	Description of the interface. This field is empty because the interface cannot be configured with a description.

Related command

```
reset counters interface register-tunnel
```

display pim bsr-info

Use **display pim bsr-info** to display BSR information.

Syntax

```
display pim bsr-info
```

Views

Any view

Predefined user roles

network-admin

network-operator

Examples

Display BSR information.

```
<Sysname> display pim bsr-info
 Scope: non-scoped
     State: Accept Preferred
     Bootstrap timer: 00:01:44
     Elected BSR address: 12.12.12.1
       Priority: 64
       Hash mask length: 30
       Uptime: 00:21:56

 Scope: 239.4.0.0/16
     State: Accept Any
     Scope-zone expiry timer: 00:21:12

 Scope: 239.1.0.0/16
     State: Elected
     Bootstrap timer: 00:00:26
     Elected BSR address: 17.1.11.1
```

```
        Priority: 64
        Hash mask length: 30
        Uptime: 02:53:37
      Candidate BSR address: 17.1.11.1
        Priority: 64
        Hash mask length: 30

  Scope: 239.2.2.0/24
      State: Candidate
      Bootstrap timer: 00:01:56
      Elected BSR address: 61.2.37.1
        Priority: 64
        Hash mask length: 30
        Uptime: 02:53:32
      Candidate BSR address: 17.1.12.1
        Priority: 64
        Hash mask length: 30

  Scope: 239.3.3.0/24
      State: Pending
      Bootstrap timer: 00:00:07
      Candidate BSR address: 17.1.13.1
        Priority: 64
        Hash mask length: 30
```

Table 2 Command output

Field	Description
Bootstrap timer	Aging timer for the BSR.
Scope-zone expiry timer	Aging timer for the scoped zone.
Elected BSR address	Address of the elected BSR.
Candidate BSR address	Address of the C-BSR.
Priority	BSR priority.
Uptime	Length of time the BSR has been up.

display pim claimed-route

Use **display pim claimed-route** to display information about all routes that PIM uses.

Syntax

display pim claimed-route [*source-address*]

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

source-address: Specifies a multicast source by its IP address. If you do not specify a multicast source, this command displays information about all routes that PIM uses.

Examples

Display information about all routes that PIM uses.

```
<Sysname> display pim claimed-route
 RPF-route selecting rule: longest-match

 Route/mask: 7.11.0.0/16 (unicast (direct))
     RPF interface: Vlan-interface2, RPF neighbor: 8.0.0.2
     Total number of (S,G) or (*,G) dependent on this route entry: 4
     (7.11.0.10, 225.1.1.1)
     (7.11.0.10, 226.1.1.1)
     (7.11.0.10, 227.1.1.1)
     (*, 228.1.1.1)
 Route/mask: 7.12.0.0/16 (multicast static)
     RPF interface: Vlan-interface2, RPF neighbor: 8.0.0.3,
     Config NextHop: 8.0.0.5
     Total number of (S,G) or (*,G) dependent on this route entry: 2
     (7.12.0.10, 226.1.1.1)
     (7.12.0.10, 225.1.1.1)
```

Table 3 Command output

Field	Description
Route/mask	Route entry. Route types in parentheses include: • **igp**—IGP unicast route. • **egp**—EGP unicast route. • **unicast (direct)**—Direct unicast route. • **unicast**—Other unicast route, such as static unicast route. • **mbgp**—MBGP route. • **multicast static**—Static multicast route.
RPF interface	Name of the RPF interface.
RPF neighbor	IP address of the RPF neighbor.
Config NextHop	Address of the configured next hop. This field is displayed only when the static multicast route is configured with a next hop.
Total number of (S,G) or (*,G) dependent on this route entry	Total number of (S, G) or (*, G) entries associated with the RPF route and the entry list.

display pim c-rp

Use **display pim c-rp** to display C-RP information.

Syntax

display pim c-rp [**local**]

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

`local`: Specifies local C-RPs. If you do not specify this keyword, the command displays information about all C-RPs.

Usage guidelines

You can view information about learned C-RPs only on the BSR. On other devices, you can view information about the locally configured C-RPs.

Examples

Display information about learned C-RPs.

```
<Sysname> display pim c-rp
 Scope: non-scoped
     Group/MaskLen: 224.0.0.0/4
       C-RP address              Priority  HoldTime  Uptime    Expires
       1.1.1.1 (local)           192       150       03:01:36  00:02:29
       2.2.2.2                   192       150       1d:13h    00:02:02
     Group/MaskLen: 226.1.1.0/24 [B] Expires: 00:00:33
     Group/MaskLen: 225.1.0.0/16 [B]
       C-RP Address              Priority  HoldTime  Uptime    Expires
       3.3.3.3                   192       150       12w:5d    00:02:05
```

Display information about the locally configured C-RPs.

```
<Sysname> display pim c-rp local
 Candidate RP: 12.12.12.9(Loop1)
     Priority: 192
     HoldTime: 150
     Advertisement interval: 60
     Next advertisement scheduled at: 00:00:48
```

Table 4 Command output

Field	Description
Group/MaskLen	Multicast group to which the C-RP is designated.
[B]	This field is not supported in the current software version. BIDIR-PIM C-RP. This field is not displayed if the C-RP is a PIM-SM C-RP.
C-RP address	IP address of the C-RP. If the C-RP resides on the device where the command is executed, this field displays **(local)** after the address.
Priority	Priority of the C-RP.
HoldTime	Lifetime of the C-RP.
Uptime	Length of time the C-RP has been up: • **w**—Weeks. • **d**—Days.

Field	Description
	• **h**—Hours.
Expires	Remaining lifetime for the C-RP and the multicast group.
Candidate RP	IP address of the locally configured C-RP.
Advertisement interval	Interval between two advertisement messages sent by the locally configured C-RP.
Next advertisement scheduled at	Remaining time for the locally configured C-RP to send the next advertisement message.

display pim interface

Use **display pim interface** to display PIM information for interfaces.

Syntax

display pim interface [*interface-type interface-number*] [**verbose**]

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

interface-type interface-number: Specifies an interface by its type and number. If you do not specify an interface, this command displays PIM information for all interfaces.

verbose: Displays detailed PIM information. If you do not specify this keyword, the command displays brief PIM information.

Examples

Display brief PIM information for all interfaces.

```
<Sysname> display pim interface
 Interface        NbrCnt  HelloInt  DR-Pri      DR-Address
 Vlan1            1       30        1           10.1.1.2
 Vlan2            0       30        1           172.168.0.2    (local)
 Vlan3            1       30        1           20.1.1.2
```

Table 5 Command output

Field	Description
NbrCnt	Number of PIM neighbors.
HelloInt	Interval for sending hello messages.
DR-Pri	Priority for DR election.
DR-Address	IP address of the DR. If the DR resides on the device where the command is executed, this field displays **(local)** after the address.

Display detailed PIM information for VLAN-interface 1.

```
<Sysname> display pim interface vlan-interface 1 verbose
 Interface: Vlan-interface1, 10.1.1.1
```

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```
PIM version: 2
PIM mode: Sparse
PIM DR: 10.1.1.2
PIM DR Priority (configured): 1
PIM neighbors count: 1
PIM hello interval: 30 s
PIM LAN delay (negotiated): 500 ms
PIM LAN delay (configured): 500 ms
PIM override interval (negotiated): 2500 ms
PIM override interval (configured): 2500 ms
PIM neighbor tracking (negotiated): disabled
PIM neighbor tracking (configured): disabled
PIM generation ID: 0xF5712241
PIM require generation ID: disabled
PIM hello hold interval: 105 s
PIM assert hold interval: 180 s
PIM triggered hello delay: 5 s
PIM J/P interval: 60 s
PIM J/P hold interval: 210 s
PIM BSR domain border: disabled
PIM BFD: disabled
PIM passive: disabled
Number of routers on network not using DR priority: 0
Number of routers on network not using LAN delay: 0
Number of routers on network not using neighbor tracking: 2
```

Table 6 Command output

Field	Description
PIM version	Version of the PIM protocol.
PIM mode	PIM mode: dense or sparse.
PIM DR	IP address of the DR.
PIM DR Priority (configured)	Configured priority for DR election.
PIM neighbors count	Total number of PIM neighbors.
PIM hello interval	Interval between two hello messages.
PIM LAN delay (negotiated)	Negotiated PIM message propagation delay.
PIM LAN delay (configured)	Configured PIM message propagation delay.
PIM override interval (negotiated)	Negotiated interval for overriding prune messages.
PIM override interval (configured)	Configured interval for overriding prune messages.
PIM neighbor tracking (negotiated)	Negotiated neighbor tracking status: enabled or disabled.
PIM neighbor tracking (configured)	Configured neighbor tracking status: enabled or disabled.
PIM require generation ID	Whether the feature of discarding hello messages without Generation_ID is enabled.
PIM hello hold interval	PIM neighbor lifetime.
PIM assert hold interval	Assert holdtime timer.

Field	Description
PIM triggered hello delay	Maximum delay for sending hello messages.
PIM J/P interval	Interval between two join/prune messages.
PIM J/P hold interval	Joined/pruned state holdtime timer.
PIM BSR domain border	Whether a PIM domain border is configured.
PIM BFD	Whether PIM is enabled to work with BFD.
PIM passive	Whether PIM passive mode is enabled on the interface.
Number of routers on network not using DR priority	Number of routers that do not use the DR priority field on the subnet where the interface resides.
Number of routers on network not using LAN delay	Number of routers that do not use the LAN delay field on the subnet where the interface resides.
Number of routers on network not using neighbor tracking	Number of routers that are not enabled with neighbor tracking on the subnet where the interface resides.

display pim neighbor

Use **display pim neighbor** to display PIM neighbor information.

Syntax

display pim neighbor [*neighbor-address* | **interface** *interface-type interface-number* | **verbose**] *

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

neighbor-address: Specifies a PIM neighbor by its IP address. If you do not specify a PIM neighbor, this command displays information about all PIM neighbors.

interface *interface-type interface-number*: Specifies an interface by its type and number. If you do not specify an interface, this command displays PIM neighbor information on all interfaces.

verbose: Displays detailed PIM neighbor information. If you do not specify this keyword, the command displays brief PIM neighbor information.

Examples

Display brief information about all PIM neighbors.

```
<Sysname> display pim neighbor
 Total Number of Neighbors = 2

 Neighbor        Interface          Uptime   Expires  DR-Priority Mode
 10.1.1.2        Vlan1              02:50:49 00:01:31 1           B
 20.1.1.2        Vlan2              02:49:39 00:01:42 1           P
```

Display detailed information about the PIM neighbor with IP address 11.110.0.20.

```
<Sysname> display pim neighbor 11.110.0.20 verbose
 Neighbor: 11.110.0.20
     Interface: Vlan-interface3
     Uptime: 00:00:10
     Expiry time: 00:00:30
     DR Priority: 1
     Generation ID: 0x2ACEFE15
     Holdtime: 105 s
     LAN delay: 500 ms
     Override interval: 2500 ms
     State refresh interval: 60 s
     Neighbor tracking: Disabled
     Bidirectional PIM: Disabled
     RPF proxy vector: Disabled
     Secondary address(es):
     22.1.1.2
     22.1.1.3
     22.1.1.4
     22.1.1.5
     22.1.1.6
     22.1.1.7
     22.1.1.8
```

Table 7 Command output

Field	Description
Total Number of Neighbors	Total number of PIM neighbors.
Neighbor	IP address of the PIM neighbor.
Interface	Interface that connects to the PIM neighbor.
Uptime	Length of time the PIM neighbor has been up.
Expires/Expiry time	Remaining lifetime for the PIM neighbor. If the PIM neighbor is always up and reachable, this field displays **never**.
DR-Priority/DR Priority	Priority of the PIM neighbor.
Mode	BIDIR-PIM is not supported in the current software version. PIM mode. • **B**—The PIM mode is BIDIR-PIM. • **P**—The RPF proxy vector is enabled. This field is empty if the PIM mode is not BIDIR-PIM and the RPF vector is disabled.
Generation ID	Generation ID of the PIM neighbor. (A random value represents a status change of the PIM neighbor.)
Holdtime	Lifetime of the PIM neighbor. If the PIM neighbor is always up and reachable, this field displays **forever**.
LAN delay	PIM message propagation delay on a shared-media LAN.
Override interval	Interval for overriding prune messages.
State refresh interval	Interval for refreshing state. This field is displayed only when the PIM neighbor operates in the PIM-DM mode and the state refresh capability

Field	Description
	is enabled.
Neighbor tracking	Neighbor tracking status: enabled or disabled.
Bidirectional PIM	This field is not supported in the current software version. Whether BIDIR-PIM is enabled.
RPF proxy vector	Whether the RPF vector feature is enabled.
Secondary address(es)	Secondary addresses of the PIM neighbor.

display pim routing-table

Use **display pim routing-table** to display PIM routing entries.

Syntax

display pim routing-table [*group-address* [**mask** { *mask-length* | *mask* }] | *source-address* [**mask** { *mask-length* | *mask* }] | **flags** *flag-value* | **fsm** | **incoming-interface** *interface-type interface-number* | **mode** *mode-type* | **outgoing-interface** { **exclude** | **include** | **match** } *interface-type interface-number*] *

Views

Any view

Predefined user roles

network-admin

network-operator

group-address: Specifies a multicast group by its IP address in the range of 224.0.0.0 to 239.255.255.255. If you do not specify a multicast group, this command displays PIM routing entries for all multicast groups.

source-address: Specifies a multicast source by its IP address.

mask-length: Specifies an address mask length in the range of 0 to 32. The default value is 32.

mask: Specifies an address mask. The default value is 255.255.255.255.

flags *flag-value*: Specifies a flag. If you do not specify a flag, this command displays PIM routing entries that contain all flags. The following lists the values for the *flag-value* argument and their meanings:

- **2msdp**: Specifies PIM routing entries to be contained in the next SA message to notify an MSDP peer.
- **act**: Specifies PIM routing entries that have been used for routing data.
- **del**: Specifies PIM routing entries to be deleted.
- **exprune**: Specifies PIM routing entries containing outgoing interfaces pruned by other multicast routing protocols.
- **ext**: Specifies PIM routing entries containing outgoing interfaces provided by other multicast routing protocols.
- **loc**: Specifies PIM routing entries on the devices that reside on the same subnet as the multicast source.
- **msdp**: Specifies PIM routing entries learned from MSDP SA messages.
- **niif**: Specifies PIM routing entries containing unknown incoming interfaces.

- **nonbr**: Specifies PIM routing entries with PIM neighbor lookup failure.
- **rpt**: Specifies PIM routing entries on the RPT branches where (S, G) prunes have been sent to the RP.
- **rc**: Specifies PIM routing entries that have received C-Multicast route information.
- **rq**: Specifies PIM routing entries of the receiving side of the data-MDT switchover.
- **spt**: Specifies PIM routing entries on the SPT.
- **sq**: Specifies PIM routing entries of the originator side of data-MDT switchover.
- **src-act**: Specifies PIM routing entries that have received Source Active A-D route information.
- **swt**: Specifies PIM routing entries in the process of RPT-to-SPT switchover.
- **wc**: Specifies PIM routing entries with wildcards.

fsm: Displays detailed information about the finite state machine.

incoming-interface *interface-type interface-number*: Specifies an incoming interface. If you do not specify an incoming interface, this command displays PIM routing entries that contain all incoming interfaces.

mode *mode-type*: Specifies a PIM mode. If you do not specify a PIM mode, this command displays PIM routing entries in all PIM modes. The available PIM modes include:

- **dm**: Specifies PIM-DM.
- **sm**: Specifies PIM-SM.
- **ssm**: Specifies PIM-SSM.

outgoing-interface { **exclude** | **include** | **match** } *interface-type interface-number*: Specifies an outgoing interface. If you do not specify an outgoing interface, this command displays PIM routing entries that contain all outgoing interfaces. Whether an outgoing interface is contained in the PIM routing table depends on the following conditions:

- If you specify an excluded interface, this command displays PIM routing entries that do not contain the specified outgoing interface.
- If you specify an included interface, this command displays PIM routing entries that contain the specified outgoing interface.
- If you specify a matching interface, this command displays PIM routing entries that contain only the specified outgoing interface.

Examples

Display PIM routing entries.

```
<Sysname> display pim routing-table
 Total 0 (*, G) entries; 1 (S, G) entries

 (172.168.0.12, 227.0.0.1)
     RP: 2.2.2.2
     Protocol: pim-sm, Flag: SPT LOC ACT
     UpTime: 02:54:43
     Upstream interface: Vlan-interface1
         Upstream neighbor: NULL
         RPF prime neighbor: NULL
     Downstream interface information:
     Total number of downstream interfaces: 1
         1: Vlan-interface2
```

```
                 Protocol: pim-sm, UpTime: 02:54:43, Expires: 00:02:47
```

Table 8 Command output

Field	Description
Total 0 (*, G) entries; 1 (S, G) entries	Total number of (*, G) entries, and the total number of (S, G) entries.
(172.168.0.12, 227.0.0.1)	(S, G) entry.
Protocol	PIM mode.
Flag	Flag of the (S, G) entry or (*, G) entry: • **2MSDP**—The entry is to be advertised by the MSDP module in the next (S, A) message. • **ACT**—The entry has been used for routing data. • **DEL**—The entry is to be removed. • **EXPRUNE**—Some outgoing interfaces are pruned by other multicast routing protocols. • **EXT**—The entry contains outgoing interfaces provided by other multicast routing protocols. • **LOC**—The entry is on a router directly connected to the same subnet with the multicast source. • **MSDP**—The entry is learned from an MSDP (S, A) message. • **NIIF**—The entry contains unknown incoming interfaces. • **NONBR**—The entry has a PIM neighbor lookup failure. • **RC**—The entry has received C-Multicast route information. • **RPT**—The entry is on an RPT branch where (S, G) prunes have been sent to the RP. • **SPT**—The entry is on the SPT. • **SQ**—The entry triggers the default-MDT to data-MDT switchover. • **SRC-ACT**—The entry has received Source Active A-D route information. • **SWT**—The entry is in the process of RPT-to-SPT switchover. • **WC**—The entry contains a wildcard.
Uptime	Length of time for which the (S, G) entry or (*, G) entry has been up.
Upstream interface	Upstream (incoming) interface of the (S, G) entry or (*, G) entry.
Upstream neighbor	Upstream neighbor of the (S, G) entry or (*, G) entry.
RPF prime neighbor	RPF neighbor of the (S, G) or (*, G) entry: • For a (*, G) entry, if the RPF neighbor is the RP, the field displays **NULL**. • For an (S, G) entry, if the RPF neighbor is a router that directly connects to the multicast source, this field displays **NULL**.
Downstream interface information	Information about the downstream interfaces: • Total number of downstream interfaces. • Names of the downstream interfaces. • Protocol type on the downstream interfaces. • Uptime of the downstream interfaces. • Expiration time of the downstream interfaces.

display pim rp-info

Use **display pim rp-info** to display PIM RP information.

Syntax

```
display pim rp-info [ group-address ]
```

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

group-address: Specifies a multicast group by its IP address in the range of 224.0.1.0 to 239.255.255.255. If you do not specify a multicast group, this command displays RP information for all multicast groups.

Examples

Display RP information for multicast group 224.0.1.1.

```
<Sysname> display pim rp-info 224.0.1.1
 BSR RP address is: 2.2.2.2
     Priority: 192
     HoldTime: 180
     Uptime: 03:01:10
     Expires: 00:02:30

 Static RP address is: 3.3.3.5
     Preferred: Yes
     Configured ACL: 2003

 RP mapping for this group is: 3.3.3.5

 Anycast-RP 3.3.3.5 members:
     Member address         State
     1.1.0.1                Active
     1.2.0.2                Local
     1.2.0.1                Remote
```

Display RP information for all multicast groups.

```
<Sysname> display pim rp-info
 BSR RP information:
   Scope: non-scoped
     Group/MaskLen: 224.0.0.0/4
       RP address              Priority  HoldTime  Uptime    Expires
       1.1.1.1 (local)         192       180       03:01:36  00:02:29
       2.2.2.2                 192       180       1d:13h    00:02:02
     Group/MaskLen: 225.1.0.0/16 [B]
       RP address              Priority  HoldTime  Uptime    Expires
       3.3.3.3                 192       180       12w:5d    00:02:05

 Static RP information:
       RP address              ACL   Mode    Preferred
       3.3.3.1                 2000  pim-sm  No
```

```
        3.3.3.3                    2002  pim-sm  No
        3.3.3.4                          pim-sm  No
        3.3.3.5                    2002  pim-sm  Yes


Anycast-RP information:
        RP address                 Member address           State
        3.3.3.5                    1.1.0.1                  Active
        3.3.3.5                    1.1.0.2                  Local
        3.3.3.5                    1.2.0.1                  Remote
```

Table 9 Command output

Field	Description
BSR RP address is	IP address of the RP.
BSR RP information	Information about the RP.
Group/MaskLen	Multicast group to which the RP is designated.
[B]	BIDIR-PIM is not supported in the current software version. The RP is a BIDIR-PIM RP. This field is not displayed if the RP is a PIM-SM RP.
RP address	IP address of the RP. If the RP resides on the device where the command is executed, this field displays **(local)** after the address.
Priority	Priority of the RP.
HoldTime	RP lifetime.
Uptime	Length of time the RP has been up.
Expires	Remaining lifetime for the RP.
Preferred	Whether the static RP is preferred.
Configured ACL/ACL	ACL defining the multicast groups to which the static RP is designated.
Mode	BIDIR-PIM is not supported in the current software version. RP service mode: PIM-SM or BIDIR-PIM.
RP mapping for this group	IP address of the RP that provides services for the multicast group.
Anycast-RP 3.3.3.5 members	Members of Anycast RP 3.3.3.5.
Member address	IP address of the Anycast RP member.
State	State of the interface from which the member address originates: • **Active**—Activated local interface. • **Local**—Inactivated local interface. • **Remote**—Remote interface.

display pim statistics

Use **display pim statistics** to display statistics for PIM packets.

Syntax

display pim statistics

Views

Any view

Predefined user roles

network-admin

network-operator

Examples

Display statistics for PIM packets.

```
<Sysname> display pim statistics
 Received PIM packets: 3295
 Sent PIM packets   : 5975
              Valid        Invalid       Succeeded   Failed
      Hello   : 3128        0             4333        0
      Reg     : 14          0             0           0
      Reg-stop : 0          0             0           0
      JP      : 151         0             561         0
      BSM     : 0           0             1081        0
      Assert  : 0           0             0           0
      Graft   : 0           0             0           0
      Graft-ACK: 0          0             0           0
      C-RP    : 0           0             0           0
      SRM     : 0           0             0           0
      DF      : 0           0             0           0
      AutoRP  : 0           0             0           0
```

Table 10 Command output

Field	Description
Received PIM packets	Total number of received PIM protocol packets.
Sent PIM packets	Total number of sent PIM protocol packets.
Valid	Number of received legal PIM protocol packets.
Invalid	Number of received illegal PIM protocol packets.
Succeeded	Number of PIM protocol packets that were sent successfully.
Failed	Number of PIM protocol packets that failed to be sent.
Hello	Hello message statistics.
Reg	Register message statistics.
Reg-stop	Register-stop message statistics.
JP	Join/prune message statistics.
BSM	Bootstrap message statistics.
Assert	Assert message statistics.
Graft	Graft message statistics.
Graft-ACK	Graft-ACK message statistics.
C-RP	C-RP message statistics.
SRM	State refresh message statistics.

Field	Description
DF	Designated forwarder statistics.
AutoRP	Auto-RP message statistics.

dscp

Use **dscp** to set the DSCP value for outgoing PIM protocol packets.

Use **undo dscp** to restore the default.

Syntax

dscp *dscp-value*

undo dscp

Default

The DSCP value for outgoing PIM protocol packets is 48.

Views

PIM view

Predefined user roles

network-admin

Parameters

dscp-value: Specifies the DSCP value in the range of 0 to 63.

Usage guidelines

The DSCP value is carried in the ToS field of an IP packet to determine the transmission priority of the packet. A greater DSCP value represents a higher priority.

Examples

Set the DSCP value for outgoing PIM protocol packets to 63.

```
<Sysname> system-view
[Sysname] pim
[Sysname-pim] dscp 63
```

hello-option dr-priority (PIM view)

Use **hello-option dr-priority** to set the DR priority globally.

Use **undo hello-option dr-priority** to restore the default.

Syntax

hello-option dr-priority *priority*

undo hello-option dr-priority

Default

The DR priority is 1.

Views

PIM view

network-admin

Parameters

priority: Specifies a DR priority in the range of 0 to 4294967295. The greater the value, the higher the priority.

Usage guidelines

You can set the DR priority globally for all interfaces in PIM view or for an interface in interface view. For an interface, the interface-specific configuration takes priority over the global configuration.

Examples

Set the global DR priority to 3.

```
<Sysname> system-view
[Sysname] pim
[Sysname-pim] hello-option dr-priority 3
```

Related commands

pim hello-option dr-priority

hello-option holdtime (PIM view)

Use **hello-option holdtime** to set the PIM neighbor lifetime globally.

Use **undo hello-option holdtime** to restore the default.

Syntax

hello-option holdtime *time*

undo hello-option holdtime

Default

The PIM neighbor lifetime is 105 seconds.

Views

PIM view

Predefined user roles

network-admin

Parameters

time: Specifies a PIM neighbor lifetime in the range of 1 to 65535 seconds. If you set the value to 65535 seconds, PIM neighbors are always reachable.

Usage guidelines

You can set the PIM neighbor lifetime globally for all interfaces in PIM view or for an interface in interface view. For an interface, the interface-specific configuration takes priority over the global configuration.

Examples

Set the global PIM neighbor lifetime to 120 seconds.

```
<Sysname> system-view
[Sysname] pim
[Sysname-pim] hello-option holdtime 120
```

Related commands

```
pim hello-option holdtime
```

hello-option lan-delay (PIM view)

Use **hello-option lan-delay** to set the PIM message propagation delay on a shared-media LAN globally.

Use **undo hello-option lan-delay** to restore the default.

Syntax

```
hello-option lan-delay delay
```

```
undo hello-option lan-delay
```

Default

The PIM message propagation delay on a shared-media LAN is 500 milliseconds.

Views

PIM view

Predefined user roles

network-admin

Parameters

delay: Specifies a PIM message propagation delay on a shared-media LAN, in the range of 1 to 32767 milliseconds.

Usage guidelines

You can set the PIM message propagation delay globally for all interfaces in PIM view or for an interface in interface view. For an interface, the interface-specific configuration takes priority over the global configuration.

Examples

Set the global PIM message propagation delay on a shared-media LAN to 200 milliseconds.

```
<Sysname> system-view
[Sysname] pim
[Sysname-pim] hello-option lan-delay 200
```

Related commands

hello-option override-interval (PIM view)

pim hello-option lan-delay

pim hello-option override-interval

hello-option neighbor-tracking (PIM view)

Use **hello-option neighbor-tracking** to enable neighbor tracking globally.

Use **undo hello-option neighbor-tracking** to disable neighbor tracking globally.

Syntax

```
hello-option neighbor-tracking
```

```
undo hello-option neighbor-tracking
```

Default

Neighbor tracking is disabled.

Views

PIM view

Predefined user roles

network-admin

Usage guidelines

You can enable neighbor tracking globally for all interfaces in PIM view or for an interface in interface view. For an interface, the interface-specific configuration takes priority over the global configuration.

Examples

Enable neighbor tracking globally.

```
<Sysname> system-view
[Sysname] pim
[Sysname-pim] hello-option neighbor-tracking
```

Related commands

pim hello-option neighbor-tracking

hello-option override-interval (PIM view)

Use **hello-option override-interval** to set the override interval globally.

Use **undo hello-option override-interval** to restore the default.

Syntax

hello-option override-interval *interval*

undo hello-option override-interval

Default

The override interval is 2500 milliseconds.

Views

PIM view

Predefined user roles

network-admin

Parameters

interval: Specifies an override interval in the range of 1 to 65535 milliseconds.

Usage guidelines

You can set the override interval globally for all interfaces in PIM view or for an interface in interface view. For an interface, the interface-specific configuration takes priority over the global configuration.

Examples

Set the global override interval to 2000 milliseconds.

```
<Sysname> system-view
[Sysname] pim
[Sysname-pim] hello-option override-interval 2000
```

Related commands

hello-option lan-delay (PIM view)

pim hello-option lan-delay

pim hello-option override-interval

holdtime join-prune (PIM view)

Use **holdtime join-prune** to set the joined/pruned state holdtime globally.

Use **undo holdtime join-prune** to restore the default.

Syntax

holdtime join-prune *time*

undo holdtime join-prune

Default

The joined/pruned state holdtime is 210 seconds.

Views

PIM view

Predefined user roles

network-admin

Parameters

time: Specifies a joined/pruned state holdtime in the range of 1 to 65535 seconds.

Usage guidelines

You can set the joined/pruned state holdtime globally for all interfaces in PIM view or for an interface in interface view. For an interface, the interface-specific configuration takes priority over the global configuration.

To prevent the upstream neighbors from aging out, you must set the join/prune interval to be less than the joined/pruned state holdtime.

Examples

Set the global joined/pruned state holdtime to 280 seconds.

```
<Sysname> system-view
[Sysname] pim
[Sysname-pim] holdtime join-prune 280
```

Related commands

pim holdtime join-prune

timer join-prune (PIM view)

jp-pkt-size (PIM view)

Use **jp-pkt-size** to set the maximum size of a join or prune message.

Use **undo jp-pkt-size** to restore the default.

Syntax

jp-pkt-size *size*

```
undo jp-pkt-size
```

Default

The maximum size of a join or prune message is 1200 bytes.

Views

PIM view

Predefined user roles

network-admin

Parameters

size: Specifies the maximum size of a join or prune message, in the range of 100 to 8100 bytes.

Examples

Set the maximum size of a join or prune message to 1500 bytes.

```
<Sysname> system-view
[Sysname] pim
[Sysname-pim] jp-pkt-size 1500
```

pim

Use **pim** to enter PIM view.

Use **undo pim** to remove all configurations in PIM view.

Syntax

```
pim
undo pim
```

Views

System view

Predefined user roles

network-admin

Examples

Enable IP multicast routing and enter PIM view.

```
<Sysname> system-view
[Sysname] multicast routing
[Sysname-mrib] quit
[Sysname] pim
[Sysname-pim]
```

Related commands

multicast routing-enable

pim bfd enable

Use **pim bfd enable** to enable BFD for PIM.

Use **undo pim bfd enable** to disable BFD for PIM.

Syntax

    `pim bfd enable`

    `undo pim bfd enable`

Default

    BFD is disabled for PIM.

Views

    Interface view

Predefined user roles

    network-admin

Usage guidelines

    This command takes effect only when PIM-DM or PIM-SM is enabled on the interface.

Examples

    # Enable IP multicast routing. Then, enable PIM-DM on VLAN-interface 100, and enable BFD for PIM on the interface.

```
<Sysname> system-view
[Sysname] multicast routing
[Sysname-mrib] quit
[Sysname] interface vlan-interface 100
[Sysname-Vlan-interface100] pim dm
[Sysname-Vlan-interface100] pim bfd enable
```

Related commands

    `pim dm`

    `pim sm`

pim bsr-boundary

    Use `pim bsr-boundary` to configure a PIM-SM domain border (a bootstrap message boundary).

    Use `undo pim bsr-boundary` to restore the default.

Syntax

    `pim bsr-boundary`

    `undo pim bsr-boundary`

Default

    An interface is not a PIM-SM domain border.

Views

    Interface view

Predefined user roles

    network-admin

Examples

    # Configure VLAN-interface 100 as a PIM-SM domain border.

```
<Sysname> system-view
[Sysname] interface vlan-interface 100
```

```
[Sysname-Vlan-interface100] pim bsr-boundary
```

Related commands

c-bsr (PIM view)

multicast boundary

pim dm

Use **pim dm** to enable PIM-DM.

Use **undo pim dm** to disable PIM-DM.

Syntax

pim dm

undo pim dm

Default

PIM-DM is disabled.

Views

Interface view

Predefined user roles

network-admin

Usage guidelines

This command takes effect only when IP multicast routing is enabled.

Examples

Enable IP multicast routing, and enable PIM-DM on VLAN-interface 100.

```
<Sysname> system-view
[Sysname] multicast routing
[Sysname-mrib] quit
[Sysname] interface vlan-interface 100
[Sysname-Vlan-interface100] pim dm
```

Related commands

multicast routing

pim hello-option dr-priority

Use **pim hello-option dr-priority** to set the DR priority on an interface.

Use **undo pim hello-option dr-priority** to restore the default.

Syntax

pim hello-option dr-priority *priority*

undo pim hello-option dr-priority

Default

The DR priority is 1.

Views

Interface view

Predefined user roles

network-admin

Parameters

priority: Specifies a DR priority in the range of 0 to 4294967295. The greater the value, the higher the priority.

Usage guidelines

You can set the DR priority for an interface in interface view or globally for all interfaces in PIM view. For an interface, the interface-specific configuration takes priority over the global configuration.

Examples

\# Set the DR priority to 3 on VLAN-interface 100.

```
<Sysname> system-view
[Sysname] interface vlan-interface 100
[Sysname-Vlan-interface100] pim hello-option dr-priority 3
```

Related commands

hello-option dr-priority (PIM view)

pim hello-option holdtime

Use **pim hello-option holdtime** to set the PIM neighbor lifetime on an interface.

Use **undo pim hello-option holdtime** to restore the default.

Syntax

pim hello-option holdtime *time*

undo pim hello-option holdtime

Default

The PIM neighbor lifetime is 105 seconds.

Views

Interface view

Predefined user roles

network-admin

Parameters

time: Specifies a PIM neighbor lifetime in the range of 1 to 65535 seconds. If you set the value to 65535 seconds, the PIM neighbor is always reachable.

Usage guidelines

You can set the PIM neighbor lifetime for an interface in interface view or globally for all interfaces in PIM view. For an interface, the interface-specific configuration takes priority over the global configuration.

Examples

\# Set the PIM neighbor lifetime to 120 seconds on VLAN-interface 100.

```
<Sysname> system-view
[Sysname] interface vlan-interface 100
[Sysname-Vlan-interface100] pim hello-option holdtime 120
```

Related commands

> **hello-option holdtime** (PIM view)

pim hello-option lan-delay

Use **pim hello-option lan-delay** to set the PIM message propagation delay on a shared-media LAN for an interface.

Use **undo pim hello-option lan-delay** to restore the default.

Syntax

> **pim hello-option lan-delay** *delay*
>
> **undo pim hello-option lan-delay**

Default

The PIM message propagation delay on a shared-media LAN is 500 milliseconds.

Views

Interface view

Predefined user roles

network-admin

Parameters

delay: Specifies a PIM message propagation delay on a shared-media LAN in the range of 1 to 32767 milliseconds.

Usage guidelines

You can set the PIM message propagation delay for an interface in interface view or globally for all interfaces in PIM view. For an interface, the interface-specific configuration takes priority over the global configuration.

Examples

Set the PIM message propagation delay on a shared-media LAN to 200 milliseconds on VLAN-interface 100.

```
<Sysname> system-view
[Sysname] interface vlan-interface 100
[Sysname-Vlan-interface100] pim hello-option lan-delay 200
```

Related commands

> **hello-option lan-delay** (PIM view)
>
> **hello-option override-interval** (PIM view)
>
> **pim hello-option override-interval**

pim hello-option neighbor-tracking

Use **pim hello-option neighbor-tracking** to enable neighbor tracking on an interface.

Use **pim hello-option neighbor-tracking disable** to disable neighbor tracking on an interface when neighbor tracking is enabled globally.

Use **undo pim hello-option neighbor-tracking** to restore neighbor tracking setting on an interface to be consistent with the global setting.

Syntax

```
pim hello-option neighbor-tracking
pim hello-option neighbor-tracking disable
undo pim hello-option neighbor-tracking
```

Default

Neighbor tracking is disabled on an interface.

Views

Interface view

Predefined user roles

network-admin

Usage guidelines

You can enable neighbor tracking for an interface in interface view or globally for all interfaces in PIM view. For an interface, the interface-specific configuration takes priority over the global configuration.

Examples

Enable neighbor tracking on VLAN-interface 100.

```
<Sysname> system-view
[Sysname] interface vlan-interface 100
[Sysname-Vlan-interface100] pim hello-option neighbor-tracking
```

Disable neighbor tracking on VLAN-interface 100 when neighbor tracking is enabled globally.

```
<Sysname> system-view
[Sysname] pim
[Sysname-pim] hello-option neighbor-tracking
[Sysname-pim] quit
[Sysname] interface vlan-interface 100
[Sysname-Vlan-interface100] pim hello-option neighbor-tracking disable
```

Related commands

hello-option neighbor-tracking (PIM view)

pim hello-option override-interval

Use **pim hello-option override-interval** to set the override interval on an interface.

Use **undo pim hello-option override-interval** to restore the default.

Syntax

```
pim hello-option override-interval interval
undo pim hello-option override-interval
```

Default

The override interval is 2500 milliseconds.

Views

Interface view

Predefined user roles

network-admin

Parameters

interval: Specifies an override interval in the range of 1 to 65535 milliseconds.

Usage guidelines

You can set the override interval for an interface in interface view or globally for all interfaces in PIM view. For an interface, the interface-specific configuration takes priority over the global configuration.

Examples

Set the override interval to 2000 milliseconds on VLAN-interface 100.

```
<Sysname> system-view
[Sysname] interface vlan-interface 100
[Sysname-Vlan-interface100] pim hello-option override-interval 2000
```

Related commands

hello-option lan-delay (PIM view)

hello-option override-interval (PIM view)

pim hello-option lan-delay

pim holdtime join-prune

Use **pim holdtime join-prune** to set the joined/pruned state holdtime on an interface.

Use **undo pim holdtime join-prune** to restore the default.

Syntax

pim holdtime join-prune *time*

undo pim holdtime join-prune

Default

The joined/pruned state holdtime is 210 seconds.

Views

Interface view

Predefined user roles

network-admin

Parameters

time: Specifies a joined/pruned state holdtime in the range of 1 to 65535 seconds.

Usage guidelines

You can set the joined/pruned state holdtime for an interface in interface view or globally for all interfaces in PIM view. For an interface, the interface-specific configuration takes priority over the global configuration.

To prevent the upstream neighbors from aging out, you must configure the join/prune interval to be less than the joined/pruned state holdtime.

Examples

Set the joined/pruned state holdtime to 280 seconds on VLAN-interface 100.

```
<Sysname> system-view
[Sysname] interface vlan-interface 100
[Sysname-Vlan-interface100] pim holdtime join-prune 280
```

Related commands

> **holdtime join-prune** (PIM view)
>
> **pim timer join-prune**

pim neighbor-policy

Use **pim neighbor-policy** to configure a PIM hello policy.

Use **undo pim neighbor-policy** to restore the default.

Syntax

> **pim neighbor-policy** *ipv4-acl-number*
>
> **undo pim neighbor-policy**

Default

No PIM hello policy exists on an interface, and all PIM hello messages are regarded as legal.

Views

Interface view

Predefined user roles

network-admin

Parameters

ipv4-acl-number: Specifies an IPv4 basic ACL number in the range of 2000 to 2999.

Usage guidelines

A PIM hello policy filters PIM hello messages to guard against hello message spoofing.

When you configure a rule in the IPv4 basic ACL, follow these restrictions and guidelines:

- The **source** *source-address source-wildcard* option specifies a source IP address.
- Among the other optional parameters, only the **fragment** keyword and the **time-range** *time-range-name* option take effect.

If you execute this command multiple times, the most recent configuration takes effect.

Examples

Configure a PIM hello policy on VLAN-interface 100 so that only the devices on subnet 10.1.1.0/24 can become PIM neighbors of this switch.

```
<Sysname> system-view
[Sysname] acl basic 2000
[Sysname-acl-ipv4-basic-2000] rule permit source 10.1.1.0 0.0.0.255
[Sysname-acl-ipv4-basic-2000] quit
[Sysname] interface vlan-interface 100
[Sysname-Vlan-interface100] pim neighbor-policy 2000
```

pim non-stop-routing

Use **pim non-stop-routing** to enable PIM NSR.

Use **undo pim non-stop-routing** to disable PIM NSR.

Syntax

> **pim non-stop-routing**

```
undo pim non-stop-routing
```

Default

PIM NSR is disabled.

Views

System view

Predefined user roles

network-admin

Examples

Enable PIM NSR.

```
<Sysname> system-view
[Sysname] pim non-stop-routing
```

pim passive

Use **pim passive** to enable PIM passive mode on an interface.

Use **undo pim passive** to disable PIM passive mode on an interface.

Syntax

```
pim passive
```

```
undo pim passive
```

Default

PIM passive mode is disabled on an interface.

Views

Interface view

Predefined user roles

network-admin

Usage guidelines

This command takes effect only when PIM-DM or PIM-SM is enabled on the interface.

Examples

Enable IP multicast routing. Then, enable PIM-DM and PIM passive mode on VLAN-interface 100.

```
<Sysname> system-view
[Sysname] multicast routing
[Sysname-mrib] quit
[Sysname] interface vlan-interface 100
[Sysname-Vlan-interface100] pim dm
[Sysname-Vlan-interface100] pim passive
```

pim require-genid

Use **pim require-genid** to enable dropping hello messages without the generation ID options.

Use **undo pim require-genid** to restore the default.

Syntax

```
pim require-genid
undo pim require-genid
```

Default

Hello messages without the generation ID options are accepted.

Views

Interface view

Predefined user roles

network-admin

Examples

Enable VLAN-interface 100 to drop hello messages without the generation ID options.

```
<Sysname> system-view
[Sysname] interface vlan-interface 100
[Sysname-Vlan-interface100] pim require-genid
```

pim sm

Use **pim sm** to enable PIM-SM.

Use **undo pim sm** to disable PIM-SM.

Syntax

```
pim sm
undo pim sm
```

Default

PIM-SM is disabled.

Views

Interface view

Predefined user roles

network-admin

Usage guidelines

This command takes effect only when IP multicast routing is enabled.

Examples

Enable IP multicast routing, and enable PIM-SM on VLAN-interface 100.

```
<Sysname> system-view
[Sysname] multicast routing
[Sysname-mrib] quit
[Sysname] interface vlan-interface 100
[Sysname-Vlan-interface100] pim sm
```

Related commands

multicast routing

pim state-refresh-capable

Use **pim state-refresh-capable** to enable the state refresh feature on an interface.

Use **undo pim state-refresh-capable** to disable the state refresh feature.

Syntax

pim state-refresh-capable

undo pim state-refresh-capable

Default

The state refresh feature is enabled.

Views

Interface view

Predefined user roles

network-admin

Examples

Disable the state refresh feature on VLAN-interface 100.

```
<Sysname> system-view
[Sysname] interface vlan-interface 100
[Sysname-Vlan-interface100] undo pim state-refresh-capable
```

Related commands

state-refresh-interval (PIM view)

state-refresh-rate-limit (PIM view)

state-refresh-ttl (PIM view)

pim timer graft-retry

Use **pim timer graft-retry** to set a graft retry timer.

Use **undo pim timer graft-retry** to restore the default.

Syntax

pim timer graft-retry *interval*

undo pim timer graft-retry

Default

The graft retry timer is 3 seconds.

Views

Interface view

Predefined user roles

network-admin

Parameters

interval: Specifies a graft retry timer in the range of 1 to 65535 seconds.

Examples

Set the graft retry timer to 80 seconds on VLAN-interface 100.

```
<Sysname> system-view
[Sysname] interface vlan-interface 100
[Sysname-Vlan-interface100] pim timer graft-retry 80
```

pim timer hello

Use **pim timer hello** to set the hello interval on an interface.

Use **undo pim timer hello** to restore the default.

Syntax

pim timer hello *interval*

undo pim timer hello

Default

The hello interval is 30 seconds.

Views

Interface view

Predefined user roles

network-admin

Parameters

interval: Specifies a hello interval in the range of 0 to 18000 seconds. If you set the value to 0 seconds, the interface does not send hello messages.

Usage guidelines

You can set the hello interval for an interface in interface view or globally for all interfaces in PIM view. For an interface, the interface-specific configuration takes priority over the global configuration.

Examples

Set the hello interval to 40 seconds on VLAN-interface 100.

```
<Sysname> system-view
[Sysname] interface vlan-interface 100
[Sysname-Vlan-interface100] pim timer hello 40
```

Related commands

timer hello (PIM view)

pim timer join-prune

Use **pim timer join-prune** to set the join/prune interval on an interface.

Use **undo pim timer join-prune** to restore the default.

Syntax

pim timer join-prune *interval*

undo pim timer join-prune

Default

The join/prune interval is 60 seconds.

Views

Interface view

Predefined user roles

network-admin

Parameters

interval: Specifies a join/prune interval in the range of 0 to 18000 seconds. If you set the value to 0 seconds, the interface does not send join or prune messages.

Usage guidelines

You can set the join/prune interval for an interface in interface view or globally for all interfaces in PIM view. For an interface, the interface-specific configuration takes priority over the global configuration.

The configuration takes effect after the current interval ends.

To prevent the upstream neighbors from aging out, you must set the join/prune interval to be less than the joined/pruned state holdtime.

Examples

Set the join/prune interval to 80 seconds on VLAN-interface 100.

```
<Sysname> system-view
[Sysname] interface vlan-interface 100
[Sysname-Vlan-interface100] pim timer join-prune 80
```

Related commands

pim holdtime join-prune

timer join-prune (PIM view)

pim triggered-hello-delay

Use **pim triggered-hello-delay** to set the triggered hello delay (maximum delay for sending a hello message).

Use **undo pim triggered-hello-delay** to restore the default.

Syntax

pim triggered-hello-delay *delay*

undo pim triggered-hello-delay

Default

The triggered hello delay is 5 seconds.

Views

Interface view

Predefined user roles

network-admin

Parameters

delay: Specifies a triggered hello delay in the range of 1 to 60 seconds.

Examples

Set the triggered hello delay to 3 seconds on VLAN-interface 100.

```
<Sysname> system-view
```

```
[Sysname] interface vlan-interface 100
[Sysname-Vlan-interface100] pim triggered-hello-delay 3
```

register-policy (PIM view)

Use **register-policy** to configure a PIM register policy.

Use **undo register-policy** to restore the default.

Syntax

register-policy *ipv4-acl-number*

undo register-policy

Default

No PIM register policy exists, and all PIM register messages are regarded as legal.

Views

PIM view

Predefined user roles

network-admin

Parameters

ipv4-acl-number: Specifies an IPv4 advanced ACL number in the range of 3000 to 3999.

Usage guidelines

A PIM register policy enables an RP to filter PIM register messages so that the RP is designated only to multicast groups permitted by the ACL.

When you configure a rule in the IPv4 advanced ACL, follow these restrictions and guidelines:

- The **source** *source-address source-wildcard* option specifies a multicast source address.
- The **destination** *dest-address dest-wildcard* option specifies a multicast group range.
- Among the other optional parameters, only the **fragment** keyword and the **time-range** *time-range-name* option take effect.

If you execute this command multiple times, the most recent configuration takes effect.

Examples

Configure a PIM register policy. Then, the device accepts only register messages from the sources on the subnet 10.10.0.0/16 to the groups on the subnet 225.1.0.0/16.

```
<Sysname> system-view
[Sysname] acl advanced 3000
[Sysname-acl-ipv4-adv-3000] rule permit ip source 10.10.0.0 0.0.255.255 destination
225.1.0.0 0.0.255.255
[Sysname-acl-ipv4-adv-3000] quit
[Sysname] pim
[Sysname-pim] register-policy 3000
```

register-suppression-timeout (PIM view)

Use **register-suppression-timeout** to set the register suppression time.

Use **undo `register-suppression-timeout`** to restore the default.

Syntax

> **`register-suppression-timeout`** *interval*
>
> **undo `register-suppression-timeout`**

Default

> The register suppression time is 60 seconds.

Views

> PIM view

Predefined user roles

> network-admin

Parameters

> *interval*: Specifies a register suppression time in the range of 1 to 65535 seconds.

Examples

> # Set the register suppression time to 70 seconds.
> ```
> <Sysname> system-view
> [Sysname] pim
> [Sysname-pim] register-suppression-timeout 70
> ```

register-whole-checksum (PIM view)

> Use **`register-whole-checksum`** to configure the device to calculate the checksum based on an entire register message.
>
> Use **undo `register-whole-checksum`** to restore the default.

Syntax

> **`register-whole-checksum`**
>
> **undo `register-whole-checksum`**

Default

> The device calculates the checksum based on the register message header.

Views

> PIM view

Predefined user roles

> network-admin

Examples

> # Configure the device to calculate the checksum based on an entire register message.
> ```
> <Sysname> system-view
> [Sysname] pim
> [Sysname-pim] register-whole-checksum
> ```

snmp-agent trap enable pim

> Use **`snmp-agent trap enable pim`** to enable SNMP notifications for PIM.

Use **undo snmp-agent trap enable pim** to disable SNMP notifications for PIM.

Syntax

```
snmp-agent    trap    enable    pim    [    candidate-bsr-win-election    |
elected-bsr-lost-election | neighbor-loss ] *
```

```
undo  snmp-agent  trap  enable  pim  [  candidate-bsr-win-election    |
elected-bsr-lost-election | neighbor-loss ] *
```

Default

SNMP notifications for PIM are enabled.

Views

System view

Predefined user roles

network-admin

Parameters

candidate-bsr-win-election: Specifies notifications about winning the BSR election.

elected-bsr-lost-election: Specifies notifications about losing the BSR election.

neighbor-loss: Specifies notifications about losing neighbors.

Usage guidelines

If you do not specify an optional keyword, this command enables or disables PIM to generate SNMP notifications.

To report critical PIM events to an NMS, enable SNMP notifications for PIM. For PIM event notifications to be sent correctly, you must also configure SNMP as described in *Network Management and Monitoring Configuration Guide*.

Examples

Disable SNMP notifications for PIM.

```
<Sysname> system-view
[Sysname] undo snmp-agent trap enable pim
```

source-lifetime (PIM view)

Use **source-lifetime** to set the multicast source lifetime.

Use **undo source-lifetime** to restore the default.

Syntax

source-lifetime *time*

undo source-lifetime

Default

The multicast source lifetime is 210 seconds.

Views

PIM view

Predefined user roles

network-admin

Parameters

time: Specifies a multicast source lifetime in the range of 0 to 31536000 seconds. If you set the value to 0 seconds, multicast sources never age out.

Examples

\# Set the multicast source lifetime to 200 seconds.

```
<Sysname> system-view
[Sysname] pim
[Sysname-pim] source-lifetime 200
```

source-policy (PIM view)

Use **source-policy** to configure a multicast source policy.

Use **undo source-policy** to restore the default.

Syntax

source-policy *ipv4-acl-number*

undo source-policy

Default

No multicast source policy exists. The device does not filter multicast data packets.

Views

PIM view

Predefined user roles

network-admin

Parameters

ipv4-acl-number: Specifies an IPv4 basic or advanced ACL number in the range of 2000 to 3999.

Usage guidelines

A multicast source policy filters multicast data packets to control information available to downstream receivers.

When you configure a rule in the IPv4 ACL, follow these restrictions and guidelines:

- In a basic ACL, the **source** *source-address source-wildcard* option specifies a source IP address.
- In an advanced ACL, the **source** *source-address source-wildcard* option specifies a source IP address. The **destination** *dest-address dest-wildcard* option specifies a multicast group address.
- Among the other optional parameters, only the **fragment** keyword and the **time-range** *time-range-name* option take effect.

If you execute this command multiple times, the most recent configuration takes effect.

Examples

\# Configure a multicast source policy to accept multicast data from source 10.10.1.2 and to deny multicast data from source 10.10.1.1.

```
<Sysname> system-view
[Sysname] acl basic 2000
[Sysname-acl-ipv4-basic-2000] rule permit source 10.10.1.2 0
```

```
[Sysname-acl-ipv4-basic-2000] rule deny source 10.10.1.1 0
[Sysname-acl-ipv4-basic-2000] quit
[Sysname] pim
[Sysname-pim] source-policy 2000
```

spt-switch-threshold (PIM view)

Use **spt-switch-threshold** to configure a criterion for an RPT-to-SPT switchover.

Use **undo spt-switch-threshold** to remove criteria for RPT-to-SPT switchovers.

Syntax

spt-switch-threshold { **immediacy** | **infinity** } [**group-policy** *ipv4-acl-number*]

undo spt-switch-threshold [**immediacy** | **infinity**] [**group-policy** *ipv4-acl-number*]

Default

The first multicast packet triggers an RPT-to-STP switchover.

Views

PIM view

Predefined user roles

network-admin

Parameters

immediacy: Triggers an RPT-to-STP switchover immediately.

infinity: Disables RPT-to-STP switchover.

group-policy *ipv4-acl-number*: Specifies an IPv4 basic ACL number in the range of 2000 to 2999. If you specify an ACL, the configuration applies to the multicast groups that the ACL permits. The configuration applies to all multicast groups when one of the following conditions exists:

- You do not specify an ACL.
- The specified ACL does not exist.
- The specified ACL does not have valid rules.

Usage guidelines

△ **CAUTION:**

If the device is an RP, disabling RPT-to-STP switchover might cause multicast traffic forwarding failures on the source-side DR. When disabling RPT-to-SPT switchover, make sure you fully understand its impact on your network.

When you configure a rule in the IPv4 basic ACL, follow these restrictions and guidelines:

- The **source** *source-address source-wildcard* option specifies a multicast group address.
- Among the other optional parameters, only the **fragment** keyword and the **time-range** *time-range-name* option take effect.

Examples

Disable RPT-to-STP switchover on a receiver-side DR.

```
<Sysname> system-view
```

```
[Sysname] pim
[Sysname-pim] spt-switch-threshold infinity
```

ssm-policy (PIM view)

Use **ssm-policy** to configure the SSM group range.

Use **undo ssm-policy** to restore the default.

Syntax

ssm-policy *ipv4-acl-number*

undo ssm-policy

Default

The SSM group range is 232.0.0.0/8.

Views

PIM view

Predefined user roles

network-admin

Parameters

ipv4-acl-number: Specifies an IPv4 basic ACL number in the range of 2000 to 2999.

Usage guidelines

This command defines a multicast group range that is used by PIM-SSM. For multicast packets that are permitted by the ACL, the PIM-SSM mode is used. For multicast packets that are not permitted by the ACL, the PIM-SM mode is used.

When you configure a rule in the IPv4 basic ACL, follow these restrictions and guidelines:

- The **source** *source-address source-wildcard* option specifies a multicast group range.
- Among the other optional parameters, only the **fragment** keyword and the **time-range** *time-range-name* option take effect.

If you execute this command multiple times, the most recent configuration takes effect.

Examples

Configure the SSM group range as 232.1.0.0/16.

```
<Sysname> system-view
[Sysname] acl basic 2000
[Sysname-acl-ipv4-basic-2000] rule permit source 232.1.0.0 0.0.255.255
[Sysname-acl-ipv4-basic-2000] quit
[Sysname] pim
[Sysname-pim] ssm-policy 2000
```

state-refresh-interval (PIM view)

Use **state-refresh-interval** to set the state refresh interval.

Use **undo state-refresh-interval** to restore the default.

Syntax

state-refresh-interval *interval*

```
undo state-refresh-interval
```

Default

The state refresh interval is 60 seconds.

Views

PIM view

Predefined user roles

network-admin

Parameters

interval: Specifies a state refresh interval in the range of 1 to 255 seconds.

Examples

Set the state refresh interval to 70 seconds.

```
<Sysname> system-view
[Sysname] pim
[Sysname-pim] state-refresh-interval 70
```

Related commands

pim state-refresh-capable

state-refresh-rate-limit (PIM view)

state-refresh-ttl (PIM view)

state-refresh-rate-limit (PIM view)

Use **state-refresh-rate-limit** to set the waiting time to accept a new state refresh message.

Use **undo state-refresh-rate-limit** to restore the default.

Syntax

state-refresh-rate-limit *time*

undo state-refresh-rate-limit

Default

The device waits 30 seconds before it accepts a new state refresh message.

Views

PIM view

Predefined user roles

network-admin

Parameters

time: Specifies the waiting time to accept a new refresh message, in the range of 1 to 65535 seconds.

Examples

Set the waiting time to 45 seconds to accept a new state refresh message.

```
<Sysname> system-view
[Sysname] pim
[Sysname-pim] state-refresh-rate-limit 45
```

Related commands

> **pim state-refresh-capable**
>
> **state-refresh-interval** (PIM view)
>
> **state-refresh-ttl** (PIM view)

state-refresh-ttl (PIM view)

Use **state-refresh-ttl** to set the TTL value for state refresh messages.

Use **undo state-refresh-ttl** to restore the default.

Syntax

> **state-refresh-ttl** *ttl-value*
>
> **undo state-refresh-ttl**

Default

The TTL value for state refresh messages is 255.

Views

PIM view

Predefined user roles

network-admin

Parameters

ttl-value: Specifies the TTL value for state refresh messages, in the range of 1 to 255.

Examples

Set the TTL value to 45 for state refresh messages.

```
<Sysname> system-view
[Sysname] pim
[Sysname-pim] state-refresh-ttl 45
```

Related commands

> **pim state-refresh-capable** (PIM view)
>
> **state-refresh-interval** (PIM view)
>
> **state-refresh-rate-limit** (PIM view)

static-rp (PIM view)

Use **static-rp** to configure a static RP.

Use **undo static-rp** to delete a static RP.

Syntax

> **static-rp** *rp-address* [*ipv4-acl-number* | **bidir** | **preferred**] *
>
> **undo static-rp** *rp-address*

Default

No static RPs exist.

Views

PIM view

Predefined user roles

network-admin

Parameters

rp-address: Specifies the IP address of the static RP. The IP address must be valid and cannot be on the subnet 127.0.0.0/8. For a static PIM-SM RP, you must specify a used IP address.

ipv4-acl-number: Specifies an IPv4 basic ACL number in the range of 2000 to 2999. If you specify an ACL, the static RP is designated only to multicast groups that the ACL permits. The static RP is designated to all multicast groups when one of the following conditions exists:

- You do not specify an ACL.
- The specified ACL does not exist.
- The specified ACL does not have valid rules.

bidir: Configures the static RP as a BIDIR-PIM RP. If you do not specify this keyword, this command configures the static RP as a PIM-SM RP. This keyword is not supported in the current software version.

preferred: Gives priority to the static RP if a dynamic RP also exists on the network. The dynamic RP takes effect only when the static RP fails. If you do not specify this keyword, the dynamic RP has priority, and the static RP takes effect only when the dynamic RP fails.

Usage guidelines

You do not need to enable PIM on an interface that acts as a static RP.

When you configure a rule in the IPv4 basic ACL, follow these restrictions and guidelines:

- The **source** *source-address source-wildcard* option specifies a multicast group address.
- Among the other optional parameters, only the **fragment** keyword and the **time-range** *time-range-name* option take effect.

When rules in the ACL used by a static RP change, new RPs are dynamically elected for all multicast groups.

You can configure multiple static RPs by using this command multiple times. However, if you specify the same static RP address or use the same ACL in the command, the most recent configuration takes effect. If you configure multiple static RPs for the same multicast group, the static RP with the highest IP address is used.

Examples

Configure the interface with IP address 11.110.0.6 as a static RP for multicast group range 225.1.1.0/24 and give priority to this static RP.

```
<Sysname> system-view
[Sysname] acl basic 2001
[Sysname-acl-ipv4-basic-2001] rule permit source 225.1.1.0 0.0.0.255
[Sysname-acl-ipv4-basic-2001] quit
[Sysname] pim
[Sysname-pim] static-rp 11.110.0.6 2001 preferred
```

Related commands

display pim rp-info

timer hello (PIM view)

Use **timer hello** to set the hello interval globally.

Use **undo timer hello** to restore the default.

Syntax

timer hello *interval*

undo timer hello

Default

The hello interval is 30 seconds.

Views

PIM view

Predefined user roles

network-admin

Parameters

interval: Specifies a hello interval in the range of 0 to 18000 seconds. If you set the value to 0 seconds, the device does not send hello messages.

Usage guidelines

You can set the hello interval globally for all interfaces in PIM view or for an interface in interface view. For an interface, the interface-specific configuration takes priority over the global configuration.

Examples

Set the global hello interval to 40 seconds.

```
<Sysname> system-view
[Sysname] pim
[Sysname-pim] timer hello 40
```

Related commands

pim timer hello

timer join-prune (PIM view)

Use **timer join-prune** to set the join/prune interval globally.

Use **undo timer join-prune** to restore the default.

Syntax

timer join-prune *interval*

undo timer join-prune

Default

The join/prune interval is 60 seconds.

Views

PIM view

Predefined user roles

network-admin

Parameters

interval: Specifies a join/prune interval in the range of 0 to 18000 seconds. If you set the value to 0 seconds, the device does not send join or prune messages.

Usage guidelines

You can set the join/prune interval globally for all interfaces in PIM view or for an interface in interface view. For an interface, the interface-specific configuration takes priority over the global configuration.

The configuration takes effect after the current interval ends.

To prevent the upstream neighbors from expiring, you must set the join/prune interval to be less than the joined/pruned state holdtime.

Examples

Set the global join/prune interval to 80 seconds.

```
<Sysname> system-view
[Sysname] pim
[Sysname-pim] timer join-prune 80
```

Related commands

holdtime join-prune (PIM view)

pim timer join-prune