Contents

Multicast VLAN commands

display multicast-vlan

Use **display multicast-vlan** to display information about multicast VLANs.

Syntax

display multicast-vlan [*vlan-id*]

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

vlan-id: Specifies a multicast VLAN ID in the range of 1 to 4094. If you do not specify a multicast VLAN ID, this command displays information about all multicast VLANs.

Examples

Display information about all multicast VLANs.

```
<Sysname> display multicast-vlan
Total 2 multicast VLANs.

Multicast VLAN 100:
  Sub-VLAN list(3 in total):
    2-3, 6
  Port list(3 in total):
    XGE1/0/1
    XGE1/0/2
    XGE1/0/3

Multicast VLAN 200:
  Sub-VLAN list(0 in total):
  Port list(0 in total):
```

Table 1 Command output

Field	Description
Total 2 multicast VLANs	Total number of multicast VLANs.
Sub-VLAN list(3 in total)	Sub-VLAN list of the multicast VLAN, and the total number of the sub-VLANs.
Port list(3 in total)	Port list of the multicast VLAN, and the total number of the ports.

display multicast-vlan forwarding-table

Use **display multicast-vlan forwarding-table** to display multicast VLAN forwarding entries.

Syntax

display multicast-vlan forwarding-table [*group-address* [**mask** { *mask-length* | *mask* }] | *source-address* [**mask** { *mask-length* | *mask* }] | **slot** *slot-number* | **subvlan** *vlan-id* | **vlan** *vlan-id*] *

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 224.0.0.0 to 239.255.255.255. If you do not specify a multicast group, this command displays multicast VLAN forwarding entries for all multicast groups.

mask { *mask-length* | *mask* }: Specifies a mask length or subnet mask for the multicast group address. The value range for the *mask-length* argument is 4 to 32 (default), and the default value for the *mask* argument is 255.255.255.255.

source-address: Specifies a multicast source by its IP address. If you do not specify a multicast source, this command displays multicast VLAN forwarding entries for all multicast sources.

mask { *mask-length* | *mask* }: Specifies a mask length or subnet mask for the multicast source address. The value range for the *mask-length* argument is 0 to 32 (default), and the default value for the *mask* argument is 255.255.255.255.

slot *slot-number*: Specifies an IRF member device by its member ID. If you do not specify a member device, this command displays multicast VLAN forwarding entries for the master device.

subvlan *vlan-id*: Specifies a sub-VLAN by its VLAN ID. If you do not specify a sub-VLAN, this command displays multicast VLAN forwarding entries for all sub-VLANs.

vlan *vlan-id*: Specifies a multicast VLAN by its VLAN ID in the range of 1 to 4094. If you do not specify a multicast VLAN, this command displays multicast VLAN forwarding entries for all multicast VLANs.

Examples

Display all multicast VLAN forwarding entries.
```
<Sysname> display multicast-vlan forwarding-table
Multicast VLAN 100 Forwarding Table
Total 1 entries, 1 matched

00001. (1.1.1.1, 225.0.0.1)
    Flags: 0x10000
    Multicast VLAN: 100
    List of sub-VLANs (3 in total):
      1: VLAN 10
      2: VLAN 20
      3: VLAN 30
```

Table 2 Command output

Field	Description
Multicast VLAN 100 Forwarding Table	Forwarding entries for multicast VLAN 100.
Total 1 entries, 1 matched	Total number of (S, G) entries, and the number of matching entries.
00001	Sequence number of the (S, G) entry.
(1.1.1.1, 255.0.0.1)	(S, G) entry, where **0.0.0.0** in the S position means all multicast sources.
Flags	Entry flag. This field displays one flag or the sum of multiple flags. In this example, the value 0x10000 means that the entry has only one flag 0x10000. The following flags are available for an entry: • **0x1**—The entry is in inactive state. • **0x4**—The entry fails to update. • **0x8**—The sub-VLAN information fails to update for the entry. • **0x200**—The entry is in GR state. • **0x10000**—The entry is a multicast VLAN forwarding entry.
List of sub-VLANs (3 in total)	Sub-VLAN list of the multicast VLAN, and the total number of the sub-VLANs.

display multicast-vlan group

Use **display multicast-vlan group** to display information about multicast groups in multicast VLANs.

Syntax

display multicast-vlan group [*source-address* | *group-address* | **slot** *slot-number* | **verbose** | **vlan** *vlan-id*] *

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 multicast groups for all multicast sources in multicast VLANs.

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 information for all multicast groups in multicast VLANs.

slot *slot-number*: Specifies an IRF member device by its member ID. If you do not specify a member device, this command displays information about multicast groups in multicast VLANs for the master device.

verbose: Displays detailed information.

vlan *vlan-id*: Specifies a multicast VLAN by its VLAN ID in the range of 1 to 4094. If you do not specify a multicast VLAN, this command displays information about multicast groups for all multicast VLANs.

Examples

Display detailed information about all multicast groups in multicast VLANs.

```
<Sysname> display multicast-vlan group verbose
Total 6 entries.

Multicast VLAN 10: Total 3 entries.
  (2.2.2.2, 225.1.1.2)
    Flags: 0x70000020
    Sub-VLANs (1 in total):
      VLAN 40
  (111.112.113.115, 225.1.1.4)
    Flags: 0x70000030
    Sub-VLANs (1 in total):
      VLAN 40
  (0.0.0.0, 226.1.1.6)
    Flags: 0x60000020
    Sub-VLANs (1 in total):
      VLAN 40

Multicast VLAN 20: Total 3 entries.
  (2.2.2.2, 225.1.1.2)
    Flags: 0x70000010
    Sub-VLANs (0 in total):
  (111.112.113.115, 225.1.1.4)
    Flags: 0x70000010
    Sub-VLANs (0 in total):
  (0.0.0.0, 226.1.1.6)
    Flags: 0x50000010
    Sub-VLANs (0 in total):
```

Table 3 Command output

Field	Description
Total 6 entries	Total number of (S, G) entries.
Multicast VLAN 10: Total 3 entries	Total number of (S, G) entries in multicast VLAN 10.
(0.0.0.0, 226.1.1.6)	(S, G) entry, where **0.0.0.0** in the S position means all multicast sources.
Flags	Entry flag. This field displays one flag or the sum of multiple flags. For example, the value 0x70000020 means that the entry has flags 0x20, 0x10000000, 0x20000000, and 0x40000000. The following flags are available for an entry: • **0x10**—The entry is created by the multicast VLAN. • **0x20**—The entry is created by the sub-VLAN of the multicast VLAN. • **0x40**—The entry is to be deleted.

Field	Description

	• **0x10000000**—This value represents one of the following situations:
	   ○ The entry is newly created.
	   ○ The device receives an IGMP query that matches the (S, G) entry but does not receive any matching IGMPv1 reports within an IGMP general query interval.
	• **0x20000000**—The device does not receive IGMPv2 or IGMPv3 reports that match the (S, G) entry within an IGMP general query interval.
	• **0x40000000**—The device does not receive IGMPv3 IS_EX (NULL) reports that match the (S, G) entry within an IGMP general query interval.

Sub-VLANs (1 in total)	Sub-VLAN list of the multicast VLAN, and the total number of the sub-VLANs.

Related commands

```
reset multicast-vlan group
```

multicast-vlan

Use **multicast-vlan** to configure a multicast VLAN and enter its view, or enter the view of an existing multicast VLAN.

Use **undo multicast-vlan** to remove the configuration of multicast VLANs.

Syntax

multicast-vlan *vlan-id*

undo multicast-vlan { **all** | *vlan-id* }

Default

No multicast VLANs exist.

Views

System view

Predefined user roles

network-admin

Parameters

vlan-id: Specifies an existing VLAN by its ID in the range of 1 to 4094.

all: Specifies all multicast VLANs.

Usage guidelines

You can configure a maximum of five multicast VLANs.

You must enable IGMP snooping for the VLAN to be configured as a multicast VLAN.

As a best practice, do not configure a multicast VLAN on a device that is enabled with IP multicast routing.

Examples

Enable IGMP snooping for VLAN 100. Configure VLAN 100 as a multicast VLAN and enter its view.

```
<Sysname> system-view
[Sysname] igmp-snooping
```

```
[Sysname-igmp-snooping] quit
[Sysname] vlan 100
[Sysname-vlan100] igmp-snooping enable
[Sysname-vlan100] quit
[Sysname] multicast-vlan 100
[Sysname-mvlan-100]
```

Related commands

igmp-snooping enable

multicast routing

multicast-vlan entry-limit

Use **multicast-vlan entry-limit** to set the maximum number of multicast VLAN forwarding entries.

Use **undo multicast-vlan entry-limit** to restore the default.

Syntax

multicast-vlan entry-limit *limit*

undo multicast-vlan entry-limit

Default

The maximum number of multicast VLAN forwarding entries is 4000.

Views

System view

Predefined user roles

network-admin

Parameters

limit: Specifies the maximum number of multicast VLAN forwarding entries, in the range of 0 to 4000.

Usage guidelines

If the configured value is smaller than the current number of multicast VLAN forwarding entries, the device cannot create new entries until some entries age out or are manually removed. To allow new entries to be created immediately, use the **reset multicast-vlan group** command to remove multicast VLAN forwarding entries.

Examples

Set the maximum number of multicast VLAN forwarding entries to 128.

```
<Sysname> system-view
[Sysname] multicast-vlan entry-limit 128
```

Related commands

entry-limit (IGMP-snooping view)

port (multicast-VLAN view)

Use **port** to assign user ports to a multicast VLAN.

Use **undo port** to delete user ports from a multicast VLAN.

Syntax

> **port** *interface-list*
>
> **undo port** { **all** | *interface-list* }

Default

> A multicast VLAN does not have user ports.

Views

> Multicast VLAN view

Predefined user roles

> network-admin

Parameters

> *interface-list*: Specifies a port in the form of *interface-type interface-number*, or a port range in the form of *interface-type interface-number* to *interface-type interface-number*.
>
> **all**: Specifies all user ports in the current multicast VLAN.

Usage guidelines

> You can assign only Layer 2 Ethernet ports or Layer 2 aggregate interfaces to multicast VLANs. Additionally, you can assign a port to only one multicast VLAN.
>
> For ports to be assigned to a multicast VLAN, you must enable IGMP snooping for the VLANs to which the ports belong.

Examples

> # Assign Ten-GigabitEthernet 1/0/1 through Ten-GigabitEthernet 1/0/3 as user ports to multicast VLAN 100.
>
> ```
> <Sysname> system-view
> [Sysname] multicast-vlan 100
> [Sysname-mvlan-100] port ten-gigabitethernet 1/0/1 to ten-gigabitethernet 1/0/3
> ```

port multicast-vlan

> Use **port multicast-vlan** to assign a user port to a multicast VLAN.
>
> Use **undo port multicast-vlan** to restore the default.

Syntax

> **port multicast-vlan** *vlan-id*
>
> **undo port multicast-vlan**

Default

> A port does not belong to a multicast VLAN.

Views

> Layer 2 Ethernet interface view
>
> Layer 2 aggregate interface view

Predefined user roles

> network-admin

Parameters

vlan-id: Specifies a multicast VLAN by its VLAN ID in the range of 1 to 4094.

Usage guidelines

You can assign a port to only one multicast VLAN.

For a port to be assigned to a multicast VLAN, you must enable IGMP snooping for the VLAN to which the port belongs.

Examples

Assign Ten-GigabitEthernet 1/0/1 as a user port to multicast VLAN 100.

```
<Sysname> system-view
[Sysname] interface ten-gigabitethernet 1/0/1
[Sysname-Ten-GigabitEthernet1/0/1] port multicast-vlan 100
```

reset multicast-vlan group

Use **reset multicast-vlan group** to clear multicast groups in multicast VLANs.

Syntax

reset multicast-vlan group [*source-address* [**mask** { *mask-length* | *mask* }] | *group-address* [**mask** { *mask-length* | *mask* }] | **vlan** *vlan-id*] *

Views

User view

Predefined user roles

network-admin

Parameters

source-address: Specifies a multicast source by its IP address. If you do not specify a multicast source, this command clears multicast groups for all multicast sources in multicast VLANs.

mask { *mask-length* | *mask* }: Specifies a mask length or subnet mask for the multicast source address. The value range for the *mask-length* argument is 0 to 32 (default), and the default value for the *mask* argument is 255.255.255.255.

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 clears all multicast groups in multicast VLANs.

mask { *mask-length* | *mask* }: Specifies a mask length or subnet mask for the multicast group address. The value range for the *mask-length* argument is 4 to 32 (default), and the default value for the *mask* argument is 255.255.255.255.

vlan *vlan-id*: Specifies a multicast VLAN by its VLAN ID in the range of 1 to 4094. If you do not specify a multicast VLAN, this command clears multicast groups for all multicast VLANs.

Examples

Clear multicast groups for all multicast VLANs.

```
<Sysname> reset multicast-vlan group
```

Related commands

display multicast-vlan group

subvlan (multicast-VLAN view)

Use **subvlan** to assign VLANs as sub-VLANs to a multicast VLAN.

Use **undo subvlan** to delete sub-VLANs from a multicast VLAN.

Syntax

subvlan *vlan-list*

undo subvlan { **all** | *vlan-list* }

Default

A multicast VLAN does not have sub-VLANs.

Views

Multicast VLAN view

Predefined user roles

network-admin

Parameters

vlan-list: Specifies a space-separated list of up to 10 VLAN items. Each item specifies a VLAN by its ID or a range of VLANs in the form of *start-vlan-id* **to** *end-vlan-id*. The value range for the VLAN ID is 1 to 4094. The specified VLANs must exist and cannot be multicast VLANs or sub-VLANs of other multicast VLANs.

all: Specifies all sub-VLANs of the current multicast VLAN.

Usage guidelines

You must enable IGMP snooping for VLANs to be configured as sub-VLANs.

Examples

Assign VLAN 10 through VLAN 15 as sub-VLANs to multicast VLAN 100.

```
<Sysname> system-view
[Sysname] multicast-vlan 100
[Sysname-mvlan-100] subvlan 10 to 15
```