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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 VLAN ID in the range of 1 to 4094. If you do not specify a 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 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 about all multicast groups in multicast VLANs.

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

verbose: Displays detailed information.

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

Examples

Display detailed information about all multicast groups in all 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 2 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 any multicast sources.
Flags	<p>Entry flag.</p> <p>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.</p> <p>The following flags are available for an entry:</p> <ul style="list-style-type: none"> • 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. • 0x10000000—This value represents one of the following situations: <ul style="list-style-type: none"> ○ 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

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 information about 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 this option, the command displays multicast VLAN forwarding entries on the master device.

subvlan *vlan-id*: Specifies a sub-VLAN by its 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 ID. The value range for the *vlan-id* argument is 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 3 Command output

Field	Description
Multicast VLAN 100 Forwarding Table	Forwarding table for multicast VLAN 100.
Total 1 entries, 1 matched	Total number of forwarding entries, and the number of matching entries.
00001	Sequence number of the (S, G) entry.
(1.1.1.1, 225.0.0.1)	(S, G) entry, where 0.0.0.0 in the S position means any multicast

Field	Description
	sources.
Flags	<p>Entry flag.</p> <p>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.</p> <p>The following flags are available for an entry:</p> <ul style="list-style-type: none"> • 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.

multicast-vlan

Use **multicast-vlan** to configure a multicast VLAN and enter multicast VLAN view.

Use **undo multicast-vlan** to remove a multicast VLAN.

Syntax

multicast-vlan *vlan-id*

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

Default

A VLAN is not configured as a multicast VLAN.

Views

System view

Predefined user roles

network-admin

Parameters

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

all: Specifies all multicast VLANs.

Usage guidelines

The specified VLAN must exist.

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

The total number of multicast VLANs on a device must not exceed the system upper limit.

For a sub-VLAN-based multicast VLAN, you must enable IGMP snooping for the multicast VLAN and all its sub-VLANs. For a port-based multicast VLAN, you must enable IGMP snooping for the multicast VLAN and all user VLANs to which the user ports are connected.

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 setting is 128.

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 128.

Examples

```
# Set the maximum number of multicast VLAN forwarding entries to 100.
<Sysname> system-view
[Sysname] multicast-vlan entry-limit 100
```

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 remove 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

A port can belong to only one multicast VLAN.

You can assign Ethernet ports and Layer 2 aggregate interfaces as user ports of a multicast VLAN.

Examples

```
# Assign Ten-GigabitEthernet 1/0/1 through Ten-GigabitEthernet 1/0/5 to multicast VLAN 100.
```

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

```
[Sysname] multicast-vlan 100
```

```
[Sysname-mvlan-100] port ten-gigabitethernet 1/0/1 to ten-gigabitethernet 1/0/5
```

port multicast-vlan

Use **port multicast-vlan** to assign a 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 multicast VLANs.

Views

Ethernet interface view, Layer 2 aggregate interface view

Predefined user roles

network-admin

Parameters

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

Usage guidelines

A port can belong to only one multicast VLAN.

Examples

```
# Assign Ten-GigabitEthernet 1/0/1 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

Use **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 the 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 in all multicast VLANs.

Examples

```
# Clear multicast groups in all multicast VLANs.  
<Sysname> reset multicast-vlan group
```

Related commands

display multicast-vlan group

subvlan (multicast-VLAN view)

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

Use **undo subvlan** to remove 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.

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

Usage guidelines

The VLANs to be configured as sub-VLANs must exist and must not be multicast VLANs or sub-VLANs of any other multicast VLAN.

Examples

Configure VLAN 10 through VLAN 15 as sub-VLANs of multicast VLAN 100.

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

```
[Sysname] multicast-vlan 100
```

```
[Sysname-mvlan-100] subvlan 10 to 15
```