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# IPv6 multicast VLAN commands

## display ipv6 multicast-vlan

Use **display ipv6 multicast-vlan** to display information about IPv6 multicast VLANs.

### Syntax

```
display ipv6 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 IPv6 multicast VLANs.

### Examples

# Display information about all IPv6 multicast VLANs.

```
<Sysname> display ipv6 multicast-vlan
```

```
Total 2 IPv6 multicast VLANs.
```

```
IPv6 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
```

```
IPv6 multicast VLAN 200:
```

```
Sub-VLAN list(0 in total):
```

```
Port list(0 in total):
```

**Table 1 Command output**

Field	Description
Total 2 IPv6 multicast VLANs	Total number of IPv6 multicast VLANs.
Sub-VLAN list(3 in total)	Sub-VLAN list of the IPv6 multicast VLAN, and the total number of the sub-VLANs.
Port list(3 in total)	Port list of the IPv6 multicast VLAN, and the total number of the ports.

# display ipv6 multicast-vlan group

Use **display ipv6 multicast-vlan group** to display information about IPv6 multicast groups in IPv6 multicast VLANs.

## Syntax

```
display ipv6 multicast-vlan group [ ipv6-source-address | ipv6-group-address | slot slot-number | verbose | vlan vlan-id ] *
```

## Views

Any view

## Predefined user roles

network-admin

network-operator

## Parameters

*ipv6-source-address*: Specifies an IPv6 multicast source by its IPv6 address. If you do not specify an IPv6 multicast source, this command displays information about IPv6 multicast groups in IPv6 multicast VLANs for all IPv6 multicast sources.

*ipv6-group-address*: Specifies an IPv6 multicast group by its IPv6 address in the range of FFxy::/16 (excluding FFx0::/16, FFx1::/16, FFx2::/16, and FF0y::), where "x" and "y" represent any hexadecimal numbers from 0 to F. If you do not specify an IPv6 multicast group, this command displays information about all IPv6 multicast groups in IPv6 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 IPv6 multicast groups in IPv6 multicast VLANs on the master device.

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

**vlan** *vlan-id*: Specifies an IPv6 multicast VLAN in the range of 1 to 4094. If you do not specify a multicast VLAN, this command displays information about IPv6 multicast groups in all IPv6 multicast VLANs.

## Examples

```
# Display detailed information about all IPv6 multicast groups in all IPv6 multicast VLANs.
```

```
<Sysname> display ipv6 multicast-vlan group verbose
```

```
Total 6 entries.
```

```
IPv6 multicast VLAN 10: Total 3 entries.
```

```
(2::2, FF0E::2)
```

```
Flags: 0x70000020
```

```
Sub-VLANs (1 in total):
```

```
VLAN 40
```

```
(22::22, FF0E::4)
```

```
Flags: 0x70000030
```

```
Sub-VLANs (1 in total):
```

```
VLAN 40
```

```
(::, FF0E::10)
```

```
Flags: 0x10000030
```

```
Sub-VLANs (1 in total):
```

```
VLAN 40
```

```

IPv6 multicast VLAN 20: Total 3 entries.
(2::2, FF0E::2)
  Flags: 0x70000010
  Sub-VLANs (0 in total):
(22::22, FF0E::4)
  Flags: 0x70000010
  Sub-VLANs (0 in total):
(::$, FF0E::10)
  Flags: 0x50000010
  Sub-VLANs (0 in total):

```

**Table 2 Command output**

Field	Description
Total 6 entries	Total number of (S, G) entries.
IPv6 multicast VLAN 10: Total 3 entries	Total number of (S, G) in IPv6 multicast VLAN 10.
(::, FF0E::10)	(S, G) entry, where a double colon (::) in the S position means any IPv6 multicast source.
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"> <li>• <b>0x10</b>—The entry is created by the IPv6 multicast VLAN.</li> <li>• <b>0x20</b>—The entry is created by the sub-VLAN of the IPv6 multicast VLAN.</li> <li>• <b>0x40</b>—The entry is to be deleted.</li> <li>• <b>0x10000000</b>—This value represents one of the following situations: <ul style="list-style-type: none"> <li>○ The entry is newly created.</li> <li>○ The device receives an MLD query within an MLD general query interval.</li> </ul> </li> <li>• <b>0x20000000</b>—The device does not receive MLDv1 or MLDv2 reports that match the entry within an MLD general query interval.</li> <li>• <b>0x40000000</b>—The device does not receive MLDv2 IS_EX (NULL) reports that match the entry within an MLD general query interval.</li> </ul>
Sub-VLANs (1 in total)	Sub-VLAN list of the IPv6 multicast VLAN, and the total number of the sub-VLANs.

## Related commands

**reset ipv6 multicast-vlan group**

## display ipv6 multicast-vlan forwarding-table

Use **display ipv6 multicast-vlan forwarding-table** to display IPv6 multicast VLAN forwarding entries.

## Syntax

```
display ipv6 multicast-vlan forwarding-table [ ipv6-source-address [ prefix-length ] |  
ipv6-group-address [ prefix-length ] | slot slot-number | subvlan vlan-id | vlan vlan-id ] *
```

## Views

Any view

## Predefined user roles

network-admin

network-operator

## Parameters

*ipv6-source-address*: Specifies an IPv6 multicast source by its IPv6 address. If you do not specify an IPv6 multicast source, this command displays IPv6 multicast VLAN forwarding entries for all IPv6 multicast sources.

*prefix-length*: Specifies a prefix length of the IPv6 multicast source address. The value range is 0 to 128 and the default value is 128.

*ipv6-group-address*: Specifies an IPv6 multicast group by its IPv6 address in the range of FFxy::/16, where "x" and "y" represent any hexadecimal numbers from 0 to F. If you do not specify an IPv6 multicast group, this command displays information about IPv6 multicast VLAN forwarding entries for all IPv6 multicast groups.

*prefix-length*: Specifies a prefix length of the IPv6 multicast group address. The value range is 8 to 128 and the default value is 128.

**slot** *slot-number*: Specifies an IRF member device by its member ID. If you do not specify this option, the command displays IPv6 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 IPv6 multicast VLAN forwarding entries for all sub-VLANs.

**vlan** *vlan-id*: Specifies an IPv6 multicast VLAN by its ID in the range of 1 to 4094. If you do not specify an IPv6 multicast VLAN, this command displays IPv6 multicast VLAN forwarding entries for all IPv6 multicast VLANs.

## Examples

# Display all IPv6 multicast VLAN forwarding entries.

```
<Sysname> display ipv6 multicast-vlan forwarding-table  
IPv6 multicast VLAN 100 Forwarding Table  
Total 1 entries, 1 matched
```

```
00001. (1::1, FF0E::1)  
  Flags: 0x10000  
  IPv6 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
IPv6 multicast VLAN 100 Forwarding Table	Forwarding table for IPv6 multicast VLAN 100.
Total 1 entries, 1 matched	Total number of forwarding entries, and the number of matching

Field	Description
	entries.
00001	Sequence number of the (S, G) entry.
(1::1, FF0E::1)	(S, G) entry, where a double colon (::) in the S position means any IPv6 multicast source.
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"> <li>• <b>0x1</b>—The entry is in inactive state.</li> <li>• <b>0x4</b>—The entry fails to update.</li> <li>• <b>0x8</b>—The sub-VLAN information fails to update for the entry.</li> <li>• <b>0x200</b>—The entry is in GR state.</li> <li>• <b>0x10000</b>—The entry is an IPv6 multicast VLAN forwarding entry.</li> </ul>
List of sub-VLANs (3 in total)	Sub-VLAN list of the IPv6 multicast VLAN, and the total number of the sub-VLANs.

## ipv6 multicast-vlan

Use **ipv6 multicast-vlan** to configure an IPv6 multicast VLAN and enter IPv6 multicast VLAN view.

Use **undo ipv6 multicast-vlan** to remove an IPv6 multicast VLAN.

### Syntax

**ipv6 multicast-vlan** *vlan-id*

**undo ipv6 multicast-vlan** { **all** | *vlan-id* }

### Default

A VLAN is not configured as an IPv6 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 IPv6 multicast VLANs.

### Usage guidelines

The specified VLAN must exist.

As a best practice, do not configure an IPv6 multicast VLAN on a device that is enabled with IPv6 multicast routing.

The total number of IPv6 multicast VLANs on a device must not exceed the system upper limit.

For a sub-VLAN-based IPv6 multicast VLAN, you must enable MLD snooping for the IPv6 multicast VLAN and all its sub-VLANs. For a port-based IPv6 multicast VLAN, you must enable MLD snooping for the IPv6 multicast VLAN and all user VLANs to which the user ports are connected.

## Examples

# Enable MLD snooping for VLAN 100. Configure VLAN 100 as an IPv6 multicast VLAN and enter its view.

```
<Sysname> system-view
[Sysname] mld-snooping
[Sysname-mld-snooping] quit
[Sysname] vlan 100
[Sysname-vlan100] mld-snooping enable
[Sysname-vlan100] quit
[Sysname] ipv6 multicast-vlan 100
[Sysname-ipv6-mvlan-100]
```

## Related commands

- **mld-snooping enable**
- **ipv6 multicast routing**

## ipv6 multicast-vlan entry-limit

Use **ipv6 multicast-vlan entry-limit** to set the maximum number of IPv6 multicast VLAN forwarding entries.

Use **undo ipv6 multicast-vlan entry-limit** to restore the default.

## Syntax

```
ipv6 multicast-vlan entry-limit limit
undo ipv6 multicast-vlan entry-limit
```

## Default

The setting is 128.

## Views

System view

## Predefined user roles

network-admin

## Parameters

*limit*: Specifies the maximum number of IPv6 multicast VLAN forwarding entries, in the range of 0 to 128.

## Examples

# Set the maximum number of IPv6 multicast VLAN forwarding entries to 100.

```
<Sysname> system-view
[Sysname] ipv6 multicast-vlan entry-limit 100
```

## Related commands

**entry-limit** (MLD-snooping view)

## ipv6 port multicast-vlan

Use **ipv6 port multicast-vlan** to assign a port to an IPv6 multicast VLAN.

Use **undo ipv6 port multicast-vlan** to restore the default.

## Syntax

```
ipv6 port multicast-vlan vlan-id  
undo ipv6 port multicast-vlan
```

## Default

A port does not belong to IPv6 multicast VLANs.

## Views

Ethernet interface view, Layer 2 aggregate interface view

## Predefined user roles

network-admin

## Parameters

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

## Usage guidelines

A port can belong to only one IPv6 multicast VLAN.

## Examples

```
# Assign Ten-GigabitEthernet 1/0/1 to IPv6 multicast VLAN 100.  
<Sysname> system-view  
[Sysname] interface ten-gigabitethernet 1/0/1  
[Sysname-Ten-GigabitEthernet1/0/1] ipv6 port multicast-vlan 100
```

# port (IPv6 multicast VLAN view)

Use **port** to assign user ports to an IPv6 multicast VLAN.

Use **undo port** to remove user ports from the IPv6 multicast VLAN.

## Syntax

```
port interface-list  
undo port { all | interface-list }
```

## Default

An IPv6 multicast VLAN does not have user ports.

## Views

IPv6 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 IPv6 multicast VLAN.

## Usage guidelines

A port can belong to only one IPv6 multicast VLAN.

You can assign Ethernet interfaces and Layer 2 aggregate interfaces as user ports to an IPv6 multicast VLAN.



## Examples

```
# Assign Ten-GigabitEthernet 1/0/1 through Ten-GigabitEthernet 1/0/5 to IPv6 multicast VLAN 100.
<Sysname> system-view
[Sysname] ipv6 multicast-vlan 100
[Sysname-ipv6-mvlan-100] port ten-gigabitethernet 1/0/1 to ten-gigabitethernet 1/0/5
```

## reset ipv6 multicast-vlan group

Use **reset ipv6 multicast-vlan group** to clear IPv6 multicast groups in IPv6 multicast VLANs.

### Syntax

```
reset ipv6 multicast-vlan group [ ipv6-group-address [ prefix-length ] | ipv6-source-address
[ prefix-length ] | vlan vlan-id ] *
```

### Views

User view

### Predefined user roles

network-admin

### Parameters

*ipv6-group-address*: Specifies an IPv6 multicast group by its IPv6 address in the range of FFxy::/16 (excluding FFx0::/16, FFx1::/16, FFx2::/16, and FF0y::), where "x" and "y" represent any hexadecimal numbers from 0 to F. If you do not specify an IPv6 multicast group, this command clears all IPv6 multicast groups in IPv6 multicast VLANs.

*prefix-length*: Specifies a prefix length of the IPv6 multicast group address. The value range is 8 to 128 and the default value is 128.

*ipv6-source-address*: Specifies an IPv6 multicast source by its IPv6 address. If you do not specify an IPv6 multicast source, this command clears IPv6 multicast groups for all IPv6 multicast sources in IPv6 multicast VLANs.

*prefix-length*: Specifies a prefix length of the IPv6 multicast source address. The value range is 0 to 128 and the default value is 128.

**vlan** *vlan-id*: Specifies an IPv6 multicast VLAN in the range of 1 to 4094. If you do not specify an IPv6 multicast VLAN, this command clears IPv6 multicast groups in all IPv6 multicast VLANs.

## Examples

```
# Clear all IPv6 multicast groups in all IPv6 multicast VLANs.
<Sysname> reset ipv6 multicast-vlan group
```

### Related commands

```
display ipv6 multicast-vlan group
```

## subvlan (IPv6 multicast VLAN view)

Use **subvlan** to assign sub-VLANs to an IPv6 multicast VLAN.

Use **undo subvlan** to remove sub-VLANs from an IPv6 multicast VLAN.

### Syntax

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

## Default

An IPv6 multicast VLAN does not have sub-VLANs.

## Views

IPv6 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 IPv6 multicast VLAN.

## Usage guidelines

The VLANs to be configured as sub-VLANs must exist and must not be IPv6 multicast VLANs or sub-VLANs of any other IPv6 multicast VLANs.

## Examples

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

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

```
[Sysname] ipv6 multicast-vlan 100
```

```
[Sysname-ipv6-mvlan-100] subvlan 10 to 15
```