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Chapter 1 VLAN Configuration Commands

1.1 VLAN Common Configuration Commands

1.1.1 description

Syntax

description *string*

undo description

View

VLAN view, VLAN interface view

Parameter

string: description character string of current VLAN or VLAN interface.

- For VLAN, it ranges from 1 to 32 characters. The default description character string of current VLAN is VLAN ID of the VLAN, e.g. VLAN 0001.
- For VLAN interface, it ranges from 1 to 80 characters. The default description character string of VLAN interface is the interface name, e.g. Vlan-interface1 Interface.

Description

Using **description** command, you can configure a description for the current VLAN or VLAN interface. Using **undo description** command, you can restore the default description of current VLAN or VLAN interface.

For the related command, see **display vlan**, **display interface Vlan-interface**.

Example

Specify a description character string "RESEARCH" for current VLAN.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway]vlan 1
[Quidway-vlan1] description RESEARCH
```

1.1.2 display interface Vlan-interface

Syntax

display interface Vlan-interface [*vlan_id*]

View

Any view

Parameter

vlan_id: ID of VLAN interface, ranging from 1 to 4094.

Description

Using **display interface Vlan-interface** command, you can view the related information about specified or all VLAN interfaces such as physical status and link status of VLAN interface, Ethernet frame format, MAC address, IP address and sub-net mask, description character string and MTU, etc.

With *vlan_id* specified, only the information about the specified VLAN interface will be displayed. If no *vlan_id* is specified, the information about all the existing VLAN interfaces will be displayed.

For the related command, see **interface Vlan-interface**.

Example

Display related information about VLAN-interface 1.

```
<Quidway> display interface Vlan-interface 1
Vlan-interface1 current state : DOWN
Line protocol current state : DOWN
IP Sending Frames' Format is PKTFMT_ETHNT_2, Hardware address is
00e0-fc07-4101
Internet Address is 10.1.1.1/24 Primary
Description : Vlan-interface1 Interface
The Maximum Transmit Unit is 1500
```

1.1.3 display vlan

Syntax

display vlan [*vlan_id* [*to vlan_id*] | **all** | **dynamic** | **static**]

View

Any view

Parameter

vlan_id: Display information of specified VLAN.

to: Specify multiple sequential VLANs.

all: Display information of all VLANs.

static: Display information of VLAN created statically by the system.

dynamic: Display information of VLAN created dynamically by the system.

Description

Using **display vlan** command, you can view related information about the specified or all VLANs.

If *vlan_id* or **all** is specified, information of specified VLAN or all VLANs is displayed. It includes: VLAN ID, VLAN type, whether the routing function has been enable on this VLAN (i.e. whether the route interface exists. If it exists, display primary IP address and mask), VLAN description, and the ports VLAN contains.

If parameter is not specified, information of the VLAN that has been created is displayed. If the parameter dynamic or static is selected, information of VLAN created dynamically or statically by the system is displayed.

For the related command, see **vlan**.

Example

Display the information about VLAN1.

```
<Quidway> display vlan 1
VLAN ID: 1
VLAN Type: static
Route interface: not configured
Description: VLAN 0001
Tagged   Ports: none
Untagged Ports:
      GigabitEthernet1/0/1  GigabitEthernet1/0/2  GigabitEthernet1/0/3
```

1.1.4 interface Vlan-interface

Syntax

```
interface Vlan-interface vlan_id
undo interface Vlan-interface vlan_id
```

View

System view

Parameter

vlan_id: ID of VLAN interface, ranging from 1 to 4094.

Description

Using **interface Vlan-interface** command, you can configure VLAN interface or enter VLAN interface view. Using **undo interface Vlan-interface** command, you can cancel one VLAN interface.

For the related command, see **display interface Vlan-interface**.

Example

Enter VLAN-interface 1 view of VLAN interface.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] interface Vlan-interface 1
```

1.1.5 port

Syntax

port *interface_list*
undo port *interface_list*

View

VLAN view

Parameter

interface_list: list of Ethernet ports to be added to or deleted from a certain VLAN, expressed as *interface_list*= { { *interface_type* *interface_num* } [**to** { *interface_type* *interface_num* }] } &<1-10>. *interface_type* is interface type, *interface_num* is interface number. For their meanings and value range, read Parameter of "Port" in this document. The interface number after keyword **to** must be larger than or equal to the port number before **to**. &<1-10>: Representing the repeatable times of parameters, 1 is the minimal and 10 is the maximal.

Description

Using **port** command, you can add one port or one group of ports to VLAN. Using **undo port** command, you can cancel one port or one group of ports from VLAN.

Note that you can add/delete trunk port and hybrid port to/from VLAN by **port** and **undo port** commands in Ethernet port view, but not in VLAN view.

For the related command, see **display vlan**.

Example

Add GigabitEthernet1/0/2 through GigabitEthernet1/0/4 to VLAN 2.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] vlan2
[Quidway-vlan2] port gigabitethernet1/0/2 to gigabitethernet1/0/4
```

1.1.6 shutdown

Syntax

shutdown
undo shutdown

View

VLAN interface view

Parameter

none

Description

Using **shutdown** command, you can disable the VLAN interface. Using **undo shutdown** command, you can enable the VLAN interface.

By default, when all Ethernet ports are in DOWN status in VLAN interface, the VLAN interface is in DOWN status, i.e. disabled status. When there is one or more Ethernet ports in VLAN interface are in UP status, the VLAN interface is UP.

This command can be used to start interface after the related parameters and protocols of VLAN interface are set well. Or when the VLAN interface fails, the interface can be shut down first and then restarted, in this way, the interface may be restored to normal status. Shutting down or starting VLAN interface will not take any effect on any Ethernet port of this VLAN.

Example

Restart interface after shutting down the interface.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] interface Vlan-interface 1
[Quidway-Vlan-interface1] shutdown
[Quidway-Vlan-interface1] undo shutdown
```

1.1.7 vlan

Syntax

vlan *vlan_id*
undo vlan { *vlan_id* [**to** *vlan_id*] | **all** }

View

System view

Parameter

vlan_id: Specifies the ID of a VLAN to be created and/or entered, ranging from 1 to 4094.

all: Delete all VLANs.

Description

Using **vlan** command, you can enter VLAN view. If the specified VLAN is not created, create it first. Using **undo vlan** command, you can cancel the specified VLAN.

VLAN 1 is default VLAN and cannot be deleted.

For the related commands, see **display vlan**.

Example

Enter the view of VLAN 1.

```
<Quidway> system-view
```

System View: return to User View with Ctrl+Z.

```
[Quidway] vlan 1
```

Chapter 2 Voice VLAN Configuration Commands

2.1 Voice VLAN Configuration Commands

2.1.1 display voice vlan oui

Syntax

display voice vlan oui

View

Any view

Parameter

None

Description

Using the **display voice vlan oui** command, you can display the OUI address supported by the current system and its relative features.

For related commands, see **voice vlan *vlan_id* enable** and **voice vlan enable**.

Example

Display the OUI address of Voice VLAN.

```
<Quidway> display voice vlan oui
Oui Address      Mask           Description
0003-6b00-0000   ffff-ff00-0000 Cisco phone
00d0-1e00-0000   ffff-ff00-0000 Pingtel phone
00e0-7500-0000   ffff-ff00-0000 Polycom phone
00e0-bb00-0000   ffff-ff00-0000 3com phone
```

2.1.2 display voice vlan status

Syntax

display voice vlan status

View

Any view

Parameter

None

Description

Using the **display voice vlan status** command, you can display the relative Voice VLAN features including the Voice VLAN status, the configuration mode, and the current Voice VLAN port status, and so on

For related commands, see **voice vlan *vlan_id* enable** and **voice vlan enable**.

Example

Enable the Voice VLAN on VLAN 2 and display the Voice VLAN status.

```
<Quidway> display voice vlan status
Voice Vlan status: ENABLE
Voice Vlan ID: 2
Voice Vlan configuration mode: AUTO
Voice Vlan security mode: Security
Voice Vlan aging time: 100 minutes
Current voice vlan enabled port:
-----
GigabitEthernet1/0/2, GigabitEthernet1/0/3,
```

2.1.3 voice vlan aging

Syntax

voice vlan aging *minutes*
undo voice vlan aging

View

System view

Parameter

minutes: The aging time of Voice VLAN, in minute, ranging from 5 to 43200. The default value is 1440 minutes.

Description

Using the **voice vlan aging** command, you can set the aging time of Voice VLAN. Using the **undo voice vlan aging** command, you can set the aging time back to the default.

For the related command, see **display voice vlan status**.

Example

Set the aging time of Voice VLAN to 100 minutes.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
```

```
[Quidway] voice vlan aging 100
```

2.1.4 voice vlan enable

Syntax

voice vlan enable

undo voice vlan enable

View

Ethernet Port view

Parameter

None

Description

Using the **voice vlan enable** command, you can enable the Voice VLAN features on the port. Using the **undo voice vlan enable** command, you can disable its Voice VLAN features.

Only the Voice VLAN features in system view and port view are all enabled can the Voice VLAN function on the port run normally.

For the related command, see **display voice vlan status**.

Note:

- The **voice vlan enable** command can not be operated successfully when the port is in a aggregation group and the system prompts you: Can't enable voice vlan if port is in PA.
 - The **voice vlan enable** command can not be operated successfully either when the port is in a aggregation group and the system prompts you: Operation not supported!
-

Example

Enable the Voice VLAN features on port GigabitEthernet1/0/2.

```
<Quidway> system-view
```

System View: return to User View with Ctrl+Z.

```
[Quidway] interface GigabitEthernet1/0/2
```

```
[Quidway-GigabitEthernet1/0/2] voice vlan enable
```

2.1.5 voice vlan

Syntax

voice vlan *vlan_id* **enable**

undo voice vlan enable

View

System view

Parameter

vlan_id: The VLAN ID for the Voice VLAN to be enabled, in the range of 2 to 4094.

Description

Using the **voice vlan** command, you can globally enable the Voice VLAN features of one VLAN. Using the **undo voice vlan enable** command, you can globally disable its Voice VLAN features.

A specified VLAN must exist for a successful Voice VLAN enabling. You cannot delete a specified VLAN that has enabled Voice VLAN and only one VLAN can enable Voice VLAN features at one time.

For the related command, see **display voice vlan status**.

Example

Enable the Voice VLAN features on VLAN 2 (There is VLAN 2).

```
<Quidway> system-view
```

```
System View: return to User View with Ctrl+Z.
```

```
[Quidway] voice vlan 2 enable
```

2.1.6 voice vlan mac-address

Syntax

voice vlan mac-address *oui* **mask** *oui_mask* [**description** *string*]

undo voice vlan mac-address *oui*

View

System view

Parameter

oui: The MAC address to be set, in the format of H-H-H.

oui_mask: The valid length of a MAC address, represented by a mask, and in the format of H-H-H.

string: Description of the MAC address, in the range of 1 to 30.

Description

Using the **voice vlan mac-address** command, you can set the MAC address that the Voice VLAN can control. Using the **undo voice vlan mac-address** command, you can cancel this MAC address.

Here the OUI address refers to a vendor's. The OUI address system can learn 16 MAC addresses at most. There are four default OUI addresses after the system starts:

Table 2-1 Default OUI addresses

No.	OUI	Description
1	00:E0:BB	3com phone
2	00:03:6B	Cisco phone
3	00:E0:75	Polycom phone
4	00:D0:1E	Pingtel phone

For the related command, see **display voice vlan oui**.

Example

Set the MAC address 00AA-BB00-0000 as an OUI address.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] voice vlan mac-address 00aa-bb00-0000 mask ffff-ff00-0000
description ABC
```

2.1.7 voice vlan mode

Syntax

voice vlan mode auto
undo voice vlan mode auto

View

System view

Parameter

None

Description

Using the **voice vlan mode auto** command, you can set the Voice VLAN in auto mode. Using the **undo voice vlan mode auto** command, you can set the Voice VLAN in manual mode.

By default, the Voice VLAN is in auto mode.

If needed, the **voice vlan mode auto** and **undo voice vlan mode auto** commands must be executed before the Voice VLAN features are enabled globally.

For the related command, see **display voice vlan status**.

Example

Set the Voice VLAN in manual mode.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] undo voice vlan mode auto
```

2.1.8 voice vlan security

Syntax

voice vlan security enable
undo voice vlan security enable

View

System view

Parameter

None

Description

Using the **voice vlan security enable** command you can enable the Voice VLAN security mode. In this mode, the system can filter out the traffic whose source MAC is not OUI when the traffic travels through the access port of IP Phone within the Voice VLAN, while the other VLANs are not influenced. Using the **undo voice vlan security enable** command, you can disable the Voice VLAN security mode.

By default, the Voice VLAN security mode is enabled.

For the related command, see **display voice vlan status**.

Example

Disable the Voice VLAN security mode.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] undo voice vlan security enable
```

Chapter 3 VLAN-VPN Configuration Commands

3.1.1 display port vlan-vpn

Syntax

display port vlan-vpn

View

Any view

Parameter

None

Description

Use the **display port vlan-vpn** command to display the information about VLAN VPN configuration of the current system, including VLAN-VPN ports and whether the inner tag priority replication function is enabled.

Example

Display the VLAN-VPN configuration of the system.

```
<Quidway> display port vlan-vpn
GigabitEthernet1/0/1
  VLAN-VPN status: enabled
  VLAN-VPN VLAN: 1
  VLAN-VPN inner-cos-trust status: disable
```

3.1.2 vlan-vpn enable

Syntax

vlan-vpn enable

undo vlan-vpn

View

Ethernet port view

Parameter

None

Description

Use the **vlan-vpn enable** command to enable the VLAN-VPN function for a port.

Use the **undo vlan-vpn** command to disable the VLAN-VPN function for a port.

With the VLAN VPN function enabled, a received packet is tagged with the default VLAN tag of the receiving port no matter whether or not the packet already carries a VLAN tag. If the packet already carries a VLAN tag, the inserted VLAN tag becomes a nested VLAN tag in the packet. Otherwise, the packet is transmitted with the default VLAN tag of the port carried.



Caution:

The VLAN-VPN function is unavailable if the port has any of the protocols among GVRP, GMRP, STP, IRF, NTDP and 802.1x enabled.

By default, the VLAN-VPN function is disabled.

Example

Enable the VLAN-VPN function for GigabitEthernet1/0/1 port.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway]interface GigabitEthernet 1/0/1
[Quidway-GigabitEthernet1/0/1] vlan-vpn enable
```

3.1.3 vlan-vpn inner-cos-trust

Syntax

vlan-vpn inner-cos-trust enable

undo vlan-vpn inner-cos-trust

View

Ethernet port view

Parameter

None

Description

Use the **vlan-vpn inner-cos-trust enable** command to enable the inner VLAN tag priority replication function.

Use the **undo vlan-vpn inner-cos-trust** command to disable the inner VLAN tag priority replication function.

Example

Enable the inner VLAN tag priority replication function for GigabitEthernet 1/0/2 port.

```
<Quidway> system-view
```

```
System View: return to User View with Ctrl+Z.
```

```
[Quidway] interface GigabitEthernet 1/0/2
```

```
[Quidway-GigabitEthernet1/0/2] vlan-vpn inner-cos-trust enable
```