

# Configuration Example of Voice VLAN

## Procedure

**Step1** Configure a trunk mode VLAN.

```
admin@XorPlus# set vlans vlan-id 10
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 family ethernet-switching port-mode trunk
```

**Step2** Configure an interface into voice VLAN.

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 voice-vlan vlan-id 10
```

**Step3** Configure the mode for how an interface is added to a voice VLAN.

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 voice-vlan mode manual
```

**Step4** Configure the tagged mode for the outgoing packet of a voice VLAN interface.

```
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 voice-vlan tagged mode tag
```

**Step5** Configure the aging time for voice VLAN.

```
admin@XorPlus# set vlans voice-vlan aging 600
```

**Step6** Configure an OUI for the voice VLAN.

```
admin@XorPlus# set vlans voice-vlan mac-address 00:11:11:00:00:01 mask ff:ff:ff:00:00:00
```

**Step7** (Optional) Configure description information for the OUI address.

```
admin@Xorplus# set vlans voice-vlan mac-address 00:11:11:00:00:01 description CompanyPhone
```

**Step8** Configure the 802.1p priority and DSCP priority for a voice VLAN.

```
admin@XorPlus# set vlans voice-vlan local-priority 6
admin@XorPlus# set vlans voice-vlan dscp 63
```

**Step9** Enable LLDP function to support IP phone of LLDP, LLDP-MED and CDP.

```
admin@XorPlus# set protocols lldp enable true
```

**Step10** Enable LLDP compliance with CDP to support IP phone of CDP.

a) Enable global LLDP compliance with CDP.

```
admin@XorPlus# set protocols lldp compliance cdp true
```

b) Enable interface-based LLDP compliance with CDP.

```
admin@XorPlus# set protocols lldp interface ge-1/1/1 compliance cdp true
```

**NOTE:**

- To enable LLDP compliance with CDP on a specific interface, you need to enable both the global and interface-based LLDP compliance with CDP functions.
- To avoid unnecessary trouble, you should only configure CDP compliance on access port intended for VoIP phones, but do not configure CDP on other interfaces.

## Verify the Configuration

- You can use the **run show vlans voice-vlan oui** command to view the OUI addresses of voice VLAN, including default OUI, user-configured OUI and learned OUI.

```
admin@XorPlus# run show vlans voice-vlan oui
Oui_Address      Mask              Description
0:1:e3:0:0:0     ff:ff:ff:0:0:0   Siemens phone
0:3:6b:0:0:0     ff:ff:ff:0:0:0   Cisco phone
0:4:d:0:0:0      ff:ff:ff:0:0:0   Avaya phone
0:60:b9:0:0:0    ff:ff:ff:0:0:0   Philips/NEC phone
0:d0:1e:0:0:0    ff:ff:ff:0:0:0   Pingtel phone
0:e0:75:0:0:0    ff:ff:ff:0:0:0   Polycom phone
0:e0:bb:0:0:0    ff:ff:ff:0:0:0   3com phone
00:11:11:00:00:01 ff:ff:ff:0:0:0   CompanyPhone
Learned_Oui_Address  Mask
22:22:22:22:11:11   ff:ff:ff:ff:ff:ff
22:22:22:22:22:22   ff:ff:ff:ff:ff:ff
22:22:22:22:33:33   ff:ff:ff:ff:ff:ff
22:22:22:22:44:44   ff:ff:ff:ff:ff:ff
```

- You can use the **run show vlans voice-vlan** command to view the configuration information of a voice VLAN.

```
admin@XorPlus# run show vlans voice-vlan vlan-id 10
Voice Vlan ID:10
Voice Vlan local priority:6
Voice Vlan dscp:63
Voice Vlan aging time:600 minutes
Current voice vlan enabled port mode:
Port      Mode      Tagged   Mac_Address      Status
-----
ge-1/1/1  manual   true     00:11:11:00:00:01 Working
```

- You can use the **run show vlans vlan-id <vlan-id>** command to check whether the port has been added to the voice VLAN.

```
admin@XorPlus# run show vlans vlan-id 10
VLAN ID: 10
VLAN Name: default
Description: CompanyPhone
vlan-interface:
Number of member ports: 1
Untagged port: None
Tagged port: ge-1/1/1
```

- You can use the **run show lldp neighbor <interface-name> detail** command to view the LLDP information of neighbor device.

```
admin@XorPlus# run show lldp neighbor ge-1/1/1 detail
Local Port: ge-1/1/1
LLDP info:
Time To Live: 180
Chassis Id: 192.1.1.1
Port ID: 189C5DB7E4F4:P1
Port Description: SW PORT
System Name: SEP189C5DB7E4F4
System Description: Cisco IP Phone 7965G,V14,
System Capability: Bridge, Telephone
Management Address:
Default VLAN ID: 0
Auto Negotiation: Supported, Enabled
Physical media capabilities: FDX_S_Pause, FDX_B_Pause, 1000base_XFD, 1000base_T
Media Attachment Unit type: 1000base_T_Full_Duplex
+Med capabilities: Capabilities, Network Policy, Extended Power via MDI-PD, Inventory
Med device type: Endpoint Class III
+MED Network Policy
Application Type: Voice
Policy Flags: Known Policy
Vlan ID: 10
L2 Priority: 6
DSCP Value: 63
+MED Network Policy
Application Type: Voice Signaling
Policy Flags: Known Policy
Vlan ID: 10
L2 Priority: 0
DSCP Value: 0
+MED Extended Power via MDI
Power Type: PD device
Power Source: Unknown
Power Priority: Unknown
Power Value: 12.0 watts
+MED Hardware revision: 14
+MED Firmware revision: tnp65.9-3-1-CR17.bin
+MED Software revision:
+MED Serial number: FCH174499U2
+MED Manufacturer: Cisco Systems, Inc.
+MED Model name: CP-7965G
+MED Asset ID:
```

- You can use the **run show lldp local\_info<interface-name> detail** command to view the LLDP information of local device.

```
admin@XorPlus# run show lldp local_info ge-1/1/1 detail
LLDP Local configuration details
Chassis ID: 70:72:cf:fd:8f:21
System name: XorPlus
System description: PICA8 Inc., Model as4610_30p, PicOS 2.9.1
Interface      LLDP      State
-----
ge-1/1/1      Enable    tx_rx

+Med capabilities: Capabilities, Network Policy, Extended Power via MDI-PD, Inventory
Med device type: Network Connectivity
+MED Network Policy
Application Type: Voice
Policy Flags: Unknown Policy
Vlan ID: 10
L2 Priority: 6
DSCP Value: 63
+MED Network Policy
Application Type: Voice Signaling
Policy Flags: Unknown Policy
Vlan ID: 10
L2 Priority: 0
DSCP Value: 0
+MED Extended Power via MDI
Power Type: PSE device
Power Source: Primary Power Source
Power Priority: Unknown
Power Value: 0.0 watts
+MED Hardware revision: N/A
+MED Firmware revision: 2.9.1/ac36038
+MED Software revision: 2.9.1/ac36038
+MED Serial number: AF10029779
+MED Manufacturer: Edgecore
+MED Model name: as4610_30p
+MED Asset ID: N/A
```