

Voice VLAN Configuration on the Cisco Business 250/350 Series Switches

Objectives

Voice VLAN is used when traffic from VoIP equipment or phones is assigned to a specific VLAN. The switch can automatically detect the voice traffic, add port members to the Voice VLAN, and assign the respective QoS (Quality of Service) parameters to the voice traffic from the Voice VLAN. This article explains how to configure a Voice VLAN on the Cisco Business 250 or 350 series switch.

Applicable Devices | Software Version

- CBS250 ([Data Sheet](#)) | 3.0.0
- CBS350 ([Data Sheet](#)) | 3.0.0
- CBS350-2X ([Data Sheet](#)) | 3.0.0
- CBS350-4X ([Data Sheet](#)) | 3.0.0

Voice VLAN Configuration

Note: The switch default VLAN (VLAN 1, by default) cannot act as the Voice VLAN. A new VLAN must be created.

Step 1. Log into to the web configuration utility and choose **VLAN Management > Voice VLAN > Properties**.

▼ VLAN Management 1

VLAN Settings

Interface Settings

Port to VLAN

Port VLAN Membership

▶ VLAN Translation

Private VLAN Settings

GVRP Settings

▶ VLAN Groups

▼ Voice VLAN

Properties

2

The *Properties* page opens:

Properties

Operational Status can be affected by [Auto Voice VLAN](#) if enabled

Administrative Status		Operational Status
✦ Voice VLAN ID:	<input type="text" value="1"/> (Range: 1 - 4094, Default: 1)	Voice VLAN ID: 1
CoS/802.1p:	<input type="text" value="5"/> (Default: 5)	CoS/802.1p: 5
DSCP:	<input type="text" value="46"/> (Default: 46)	DSCP: 46

Dynamic Voice VLAN Settings

Dynamic Voice VLAN: Enable Auto Voice VLAN
 Enable [Telephony OUI](#)
 Disable

Auto Voice VLAN Activation: Immediate
 By external Voice VLAN trigger

Step 2. In the Voice VLAN ID field, enter a VLAN ID assigned to the Voice VLAN.

Properties

Operational Status can be affected by [Auto Voice VLAN](#) if enabled

Administrative Status		Operational Status
✦ Voice VLAN ID:	<input type="text" value="1"/> (Range: 1 - 4094, Default: 1)	Voice VLAN ID: 1
CoS/802.1p:	<input type="text" value="5"/> (Default: 5)	CoS/802.1p: 5
DSCP:	<input type="text" value="46"/> (Default: 46)	DSCP: 46

Step 3. In the CoS/802.1p drop-down list, choose a Class of Service ID. This ID tells the Link Layer Discovery Protocol Media Endpoint Discovery protocol (LLDP-MED) which CoS/802.1p network policy to be used for the voice VLAN.

Properties

Operational Status can be affected by [Auto Voice VLAN](#) if enabled

Administrative Status

Operational Status

Voice VLAN ID:	<input type="text" value="1"/>	(Range: 1 - 4094, Default: 1)	Voice VLAN ID:	1
CoS/802.1p:	<input type="text" value="5"/>	(Default: 5)	CoS/802.1p:	5
DSCP:	<input type="text" value="46"/>	(Default: 46)	DSCP:	46

Step 4. In the DSCP drop-down list, choose a Differentiated Services Code Point (DSCP) ID number for the LLDP. This value tells LLDP-MED which DSCP to use as a voice network policy.

Properties

Operational Status can be affected by [Auto Voice VLAN](#) if enabled

Administrative Status

Operational Status

Voice VLAN ID:	<input type="text" value="1"/>	(Range: 1 - 4094, Default: 1)	Voice VLAN ID:	1
CoS/802.1p:	<input type="text" value="5"/>	(Default: 5)	CoS/802.1p:	5
DSCP:	<input type="text" value="46"/>	(Default: 46)	DSCP:	46

Step 5. In the Dynamic Voice VLAN Settings area, in the Dynamic Voice VLAN field, click one of the following radio buttons:

- Enable Auto Voice VLAN - Set the dynamic voice VLAN to auto voice VLAN. Auto voice VLAN works with Auto Smartport. When Auto Smartport is enabled, it adds a port to the voice VLAN if it detects phone/media device.
- Enable Telephony OUI - Set the Dynamic Voice VLAN to Telephony OUI (Organization Unique Identifier). The switch automatically adds the port to the voice VLAN if it receives a packet which source MAC address matches the one of the telephone OUI.
- Disable - Disables Dynamic Voice VLAN.

Note: If you do not choose Enable Auto Voice VLAN, skip to Step 7.

Dynamic Voice VLAN Settings

Dynamic Voice VLAN:

- Enable Auto Voice VLAN
- Enable **Telephony OUI**
- Disable

Auto Voice VLAN Activation:

- Immediate
- By external Voice VLAN trigger

Step 6. In the Auto Voice VLAN Activation, click one of the following radio buttons:

- Immediate - Activates auto voice VLAN immediately.
- By external Voice VLAN trigger - Activates auto voice VLAN only when voice VLAN devices are present.

Dynamic Voice VLAN Settings

Dynamic Voice VLAN:

- Enable Auto Voice VLAN
- Enable **Telephony OUI**
- Disable

Auto Voice VLAN Activation:

- Immediate
- By external Voice VLAN trigger

Step 7. Click **Apply** to save changes or **Cancel** to discard them.

Properties

Apply Cancel

[Auto Smartport](#) is currently disabled. Auto Smartport and Telephony OUI are mutually exclusive.

CoS/802.1p and DSCP values are used only for [LLDP MED Network Policy](#) and [Auto Voice VLAN](#).

Voice VLAN Settings

Operational Status can be affected by [Auto Voice VLAN](#) if enabled

Administrative Status

Operational Status

Voice VLAN ID:	<input type="text" value="1"/> (Range: 1 - 4094, Default: 1)	Voice VLAN ID:	1
CoS/802.1p:	<input type="text" value="5"/> (Default: 5)	CoS/802.1p:	5
DSCP:	<input type="text" value="46"/> (Default: 46)	DSCP:	46

Dynamic Voice VLAN Settings

Dynamic Voice VLAN:

- Enable Auto Voice VLAN
- Enable [Telephony OUI](#)
- Disable

Auto Voice VLAN Activation:

- Immediate
- By external Voice VLAN trigger

You have now successfully learned the steps to configure a voice VLAN on the Cisco Business 250 or 350 series switch.

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