Configuration of Cisco CBS250, CBS350, and C1200 switches for use with Cisco video collaboration devices

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Section 1 | General switch requirements

Cisco recommends the use of CBS350, CBS250, and C1200 switch series because of the following features, which are important for stability and performance with video collaboration devices:

- Fanless (to avoid noise on microphones)
- Quality of Service (QoS)
- VLAN support
- Possibility to disable 802.3 Energy Efficiency Ethernet (EEE)
- PoE budget for the required equipment.

	Measured power consumption	PoE class
Cisco Microphone Pro	5 W	Class 2 (7 W)
Cisco Room Navigator	8 W	Class 0 (15.4 W)

Section 2 | Getting started

- 1. Connect switch to one of the device's available internal network ports (any network port like Navigator, Camera or those marked as PoE).
- 2. Power the Cisco device.



- 3. Connect computer to switch via Ethernet.
- 4. Wait until the switch has an IP address.
- 5. Log in to the switch. (Laptop connected to switch via Ethernet)

After a minute the switch should have IP 169.254.1.31 or 32.

Log into the device from a web browser.

Default username and password is *cisco*.

6. Enter Advanced mode.

Figure 1: Navigate to the drop-down menu in the top right corner.

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Getting Started	Getting Started		
Dashboard	This page provides easy steps to configure your device		
Configuration Wizards		Quick Access	
Search	Change Management Applications and Services	Change Device Password Upgrade Device Software	/
Status and Statistics	Change Device IP Address Create VLAN	Backup Device Configuration	/
Administration	Configure Port Settings	Create MAC-Based ACL Create IP-Based ACL	
Port Management	Let Device Status System Summary	Configure QoS Configure SPAN	
Smartport	Port Statistics RMON Statistics		
 VLAN Management 	View Log		
Spanning Tree	Other resources: Support Forums		
MAC Address Tables	Do not show this page on startup		
Multicast			
IPv4 Configuration			
IPv6 Configuration			
General IP Configuration			
Security			
Access Control			
Quality of Service			

Section 3 | Disable Energy Efficient Ethernet

Navigate to *Port management > Green Ethernet > Properties* and set *802.3 Energy Efficient Ethernet (EEE)* to: **Not Enabled**

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Dashboard	For the functions and/or para	meters configured on this page to become ef	ffective,				
Configuration Wizards	you may have to configure th	e corresponding port based parameters on Pe	ort Settings page.				
Search	Energy Detect Mode:	Enable					
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Status and Statistics	Port LEDs:	C Enable					
Administration	802.3 Energy Efficient Ethern	et (EEE): \Box Enable					
 Port Management 							
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Link Aggregation							
▶ PoE							
 Green Ethernet 							
Properties							
Port Settings							
 Smartport 							
VLAN Management							
Spanning Tree							

Section 4 | Set Quality of Service parameters

1. Navigate to Quality of service > General > QoS Properties and set QoS mode to: Advanced

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Smartport		
VLAN Management	QoS Mode: Disable Disable Basic Advanced	
Spanning Tree		
MAC Address Tables	Interface CoS Configuration Table	
Multicast	Provide the second seco	
IPv4 Configuration	Filter: Interface Type equals to Port - Go	
 IPv6 Configuration 	Entry No. Interface Default CoS	
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Security	2 GE2 0 3 GE3 0	
Access Control	□ 4 GE4 0	
	□ 5 GE5 0	
 Quality of Service 	□ 6 GE6 0	
 General 	□ 7 GE7 0	
	□ 8 GE8 0	
QoS Properties	9 GE9 0	
Queue	□ 10 GE10 0	
CoS/802.1p to Queue		
DSCP to Queue		
Bandwidth		
Egress Shaping Per		

2. Navigate to *Quality of Service > General > DSCP to Queue* and configure *DSCP* to Queue Table:

Ingress DSCP	Output queue value	Description
46 (EF)	3	Time critical clock synchronization events. Must always be the highest priority.
34 (AF41)	2	Media Packets
All other	1	Everything else in the lowest priority queue

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Spanning Tree	CISCO					~ · ·	Counter-Switch	
MAC Address Tables	DSCP to Queue						-	Apply Cancel Restore Default
Multicast	DSCP to Queue Table							
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IPv6 Configuration	0 (BE)	1 •	16 (CS2)	1 -	32 (CS4)	1 -	48 (CS6)	1 v
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Security	3	1 -	19	1 ~	35	1.	51	1 -
	4	1 -	20 (AF22)	1 ~	36 (AF42)	1 ~	52	1 -
Access Control	5	1 -	21	1 ~	37	1 -	53	1 -
Quality of Service	6	1 -	22 (AF23)	1 ~	38 (AF43)	1 ~	54	1 -
	7	1 •	23	1 ~	39	1 -	55	1 -
	8 (CS1)	1 •	24 (CS3)	1 -	40 (CS5)	1 -	56 (CS7)	1 -
QoS Properties	9	1 •	25	1 ~	41	1 -	57	1 -
Queue	10 (AF11)	1 -	26 (AF31)	1 -	42	1 -	58	1 -
CoS/802.1p to Queue	11	1 -	27	1 ~	43	1 -	59	1 -
DSCP to Queue	12 (AF12)	1 •	28 (AF32)	1 ~	44	1 -	60	1 -
Bandwidth	13	1 -	29	1 ~	45	1 -	61	1 -
Egress Shaping Per Queue	14 (AF13)	1 -	30 (AF33)	1 ~	46 (EF)	3 ~	62	1 -
VLAN Ingress Rate Limit	15	1.	31	1 -	47	1.	63	1 v
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TCP Congestion Avoidance	queue i nas die iowest pri	onty, queue o nas ure nigrest j	nony.					
QoS Basic Mode								

3. Navigate to *Quality of Service > QoS Advanced Mode > Global Settings* and configure *Trusted mode*.

Set *Trusted Mode* to: **DSCP** Set Default Mode Status to: **Trusted** Set *Override Ingress DSCP* to: **Not Enabled**

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General IP Configuration	Default Mode Status: Trusted Not Trusted	
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General		
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Class Mapping		
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Policy Table		
Policy Class Maps		
Policy Binding		

Section 5 | Set multicast VLAN settings

1. Navigate to *Multicast > Properties* and enable *Bridge Multicast Filtering Status*.

For VLAN ID: 1

Set Bridge Multicast Filtering Status to: Enable

Set Forwarding Method for IPv6 to: IP Group Address

Set Forwarding Method for IPv4 to: IP Group Address

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Þ	Port Management	Forwarding Method for IPv4:	Source Specific IP Group Address MAC Group Address							
	Smartport		IP Group Address Source Specific IP Group Address							
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	Multicast									
	Properties									
	MAC Group Address									
	IP Multicast Group Address									
	 IPv4 Multicast Configuration 									
	 IPv6 Multicast Configuration 									

 Navigate to Multicast > IPv4 Multicast Configuration > IGMP Snooping and enable IGMP Snooping settings. Set IGMP Snooping Status to: Enable Set IGMP Querier Status to: Enable

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IGMP Snooping																				
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 IPv6 Multicast Configuration 																				
IGMP/MLD Snooping IP Multicast Group																				
Multicast Router Port	1																			
Forward All																				
Unregistered Multicast																				
IPv4 Configuration																				

3. Navigate to Edit VLAN 1.

Set IGMP Snooping Status to: Enable

Set IGMP Querier Status to: Enable

Set IGMP Querier Version to: v3

Set IGMP Querier Source IP Address to: Auto

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Section 6 | Save settings and connect microphones

- 1. Save *Settings* using the red save symbol.
- 2. Connect microphones.

Cisco switch