

Configuration and procedures

A VLAN is a logical group of ports that enables device associated with it to communicate with each other over the Ethernet MAC layer, regardless of the physical LAN segment of the bridged network to which they are connected.

When using the factory default settings, the switch automatically creates VLAN1 as the default VLAN. Take the Cisco switch, the default interface status of all ports is Trunk, and all ports are configured as untagged members of the default VLAN.

A port in VLAN Access mode can be part of only one VLAN. If it is in General or Trunk mode, the port can be part of one or more VLANs.

If there is no VLAN tag in the frame, the frame is classified to the VLAN based on the Port VLAN Identifier (PVID) configured at the ingress port where the frame is received. Frames belonging to a VLAN remain within the VLAN. This is achieved by sending or forwarding a frame only to egress ports that are members of the target VLAN.

An egress port may be a tagged or untagged member of a VLAN. Remove the VLAN tag from the frame if the egress port is an untagged member of the target VLAN.

When the audio and video devices of the Microsoft Teams meeting system in two meeting rooms are connected by a switch, we have to make sure they are separated by two VLANs, such as the configuration list of the switch below.

Device connected to the switch port	Configuration of the switch			
	Port	VLAN	PVID	Tagged Member
UVC84	Port 1	2	2	Untagged
VCM38	Port 2	2	2	Untagged
Mspeaker II	Port 3	2	2	Untagged
Av Hub	Port 4	2	2	Untagged
UVC84	Port 5	3	3	Untagged
VCM38	Port 6	3	3	Untagged
Mspeaker II	Port 7	3	3	Untagged
Av Hub	Port 8	3	3	Untagged

The operation procedures are for reference.

- Create new VLANs and attached the ports to the corresponding VLAN.
 1. Create two new VLANs, the identifier of the VLAN can be 2 and 3.
 2. Attach port 1-4 to the VLAN 2 and port 5-8 to the VLAN 3.
- Remove VLAN membership of the ports from the original default VLAN 1.
 1. Remove port 1-8 from VLAN 1.
- Change the PVID of the ports to the VID of the new VLAN.
 2. Change the PVID of port 1-4 to the VID 2 and the PVID of port 5-8 to the VID 3.
- Add the ports as untagged VLAN members of the new VLAN.
 3. Configure the tagged member of port 1-8 as untagged.

When the two kit of MTR devices are required to combined into one system, we don't have to do many jobs. By changing the configuration of the switch, the audio and video devices can attach to one single AV hub.

The following table lists the configuration of the switch.

Device connected to the switch port	Configuration of the switch			
	Port	VLAN	PVID	Tagged Member
UVC84	Port 1	2	2	Untagged
VCM38	Port 2	2	2	Untagged
Mspeaker II	Port 3	2	2	Untagged
Av Hub	Port 4	2	2	Untagged
UVC84	Port 5	2	2	Untagged
VCM38	Port 6	2	2	Untagged
Mspeaker II	Port 7	2	2	Untagged
Av Hub	Port 8	3	3	Untagged

The procedures are for reference.

- Attach the ports to the corresponding VLAN.
 1. Attach port 5-7 to the VLAN 2.
- Remove VLAN membership of the ports from the original VLAN.
 1. Remove port 5-7 from VLAN 3.
- Change the PVID of the ports to the VID of the new VLAN.
 1. Change the PVID of port 5-7 to the VID 2.



Two to One.mp4



One to Two.mp4