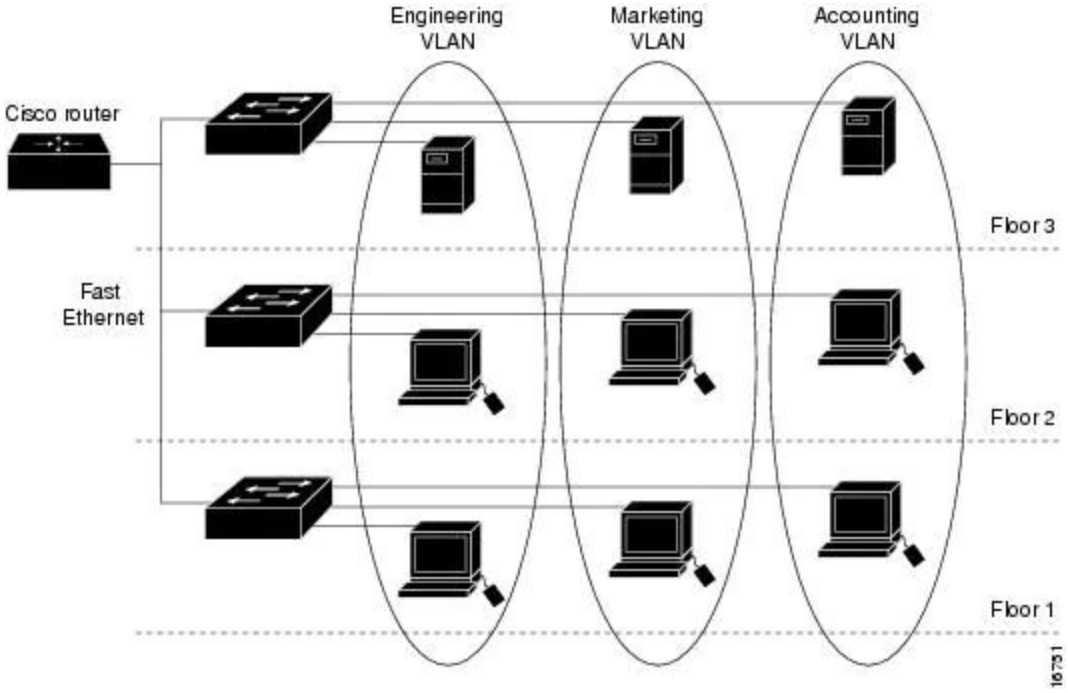
VLANS

[CCNA TO CCIE] SHORT NOTES TO REMEMBER "VLANS"

Introduction about VLANs

A VLAN is a group of devices on one or more LANs that are configured to communicate as if they were attached to the same wire, when in fact they are located on a number of different LAN segments. Because VLANs are based on logical instead of physical connections, they are extremely flexible.

VLANs define broadcast domains in a Layer 2 network. A broadcast domain is the set of all devices that will receive broadcast frames originating from any device within the set. Broadcast domains are typically bounded by routers because routers do not forward broadcast frames.



VLANs Range:

VLANs	Range	Usage	Propagated by VTP
0, 4095	Reserved	For system use only. You cannot see or use these VLANs.	N/A
1	Normal	Cisco default. You can use this VLAN but you cannot delete it.	Yes
2-1001	Normal	Used for Ethernet VLANs; you can create, use, and delete these VLANs.	Yes
1002-1005	Normal	Cisco defaults for FDDI and Token Ring. You cannot delete VLANs 1002-1005.	Yes
1006-4094	Extended	For Ethernet VLANs only. When configuring extended-range VLANs, note the following: • Layer 3 ports and some software features require internal VLANs. Internal VLANs are allocated from 1006 and up. You cannot	No

		use a VLAN that has been allocated for such use. To display the VLANs used internally, enter the show vlan internal usage command. • Switches running Catalyst product family software do not support configuration of VLANs 1006-1024. If you configure VLANs 1006-1024, ensure that the VLANs do not extend to any switches running Catalyst product family software. • You must enable the extended system ID to use extended range VLANs.	

Configuring VLANs

	Command	**Reason**
Step #1	Switch# **configure terminal**	Enters global configuration mode.
Step #2	Switch(config)# **vlan** *vlan_ID* Switch(config-vlan)#	Adds an Ethernet VLAN. **Note** You cannot delete the default VLANs for these media types: Ethernet VLAN 1 and FDDI or Token Ring

		VLANs 1002 to 1005. When you delete a VLAN, any LAN interfaces configured as access ports assigned to that VLAN become inactive. They remain associated with the VLAN (and thus inactive) until you assign them to a new VLAN. You can use the **no** keyword to delete a VLAN. When the prompt reads Switch(config-vlan)#, you are in vlan-configuration mode. If you wish to change any of the parameters for the newly created VLAN, use this mode.
Step #3	Switch(config-vlan)# **end**	Returns to enable mode from vlan-configuration mode.
Step #4	Switch# show vlan [id | **name**] vlan_name	Verifies the VLAN configuration.

How to Configure VLAN on Cisco Device [Simplified]:

Switch# configure terminal
Switch(config)# vlan 3
Switch(config-vlan)# end

Switch# show vlan id 3
Switch# show vlan summary
Switch# show vlan brief