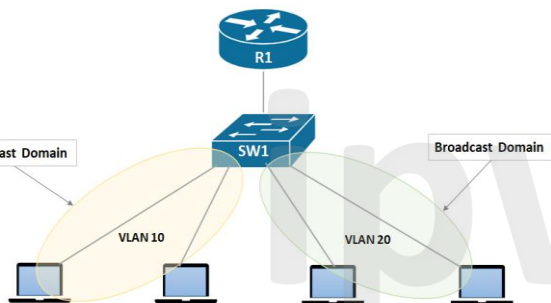# VLAN Cheat Sheet

What is VALN?

A Virtual LAN represents a broadcast domain. These are identified by a VLAN ID (a number up to 4096), with the default VLAN on any network being VLAN 1. Each port on a switch or router can be assigned to be a member of a VLAN (i.e. to allow receiving and sending traffic on that VLAN).

What is a VLAN ID?

Virtual Local Area Network Identifier creates virtual segmentation of physical networks and are used for traffic isolation. VLAN IDs range from 1 to 4096. VLAN 1(Default) is used by switches. VLAN ID can't be duplicate within a network segment

VLAN	PRIVATE VLAN
Different VLANs must belong to different IP subnets.	PVLANs belong to the same IP subnet
VLAN works in Layer 2 and Layer 3	PVLAN is method to segment device at layer 2
VLAN is the basic requirement for all LAN Environments.	PVLANs are required for specific requirements wherein endpoints of same VLAN should not communicate to each other. E.g. – Mainly in ISP scenarios to prevent different customer from communicating to each other on same LAN segment.
InterVLAN communication is performed at L3 SVI level	PVLAN to outside communication is performed via Primary VLAN.

VLAN Data Frame
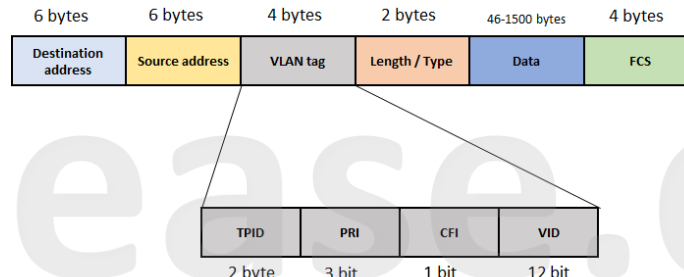
Parameter	SVI	VLAN
Abbreviation for	Switched Virtual Interface	Virtual Local Area Network
Platform support	Only configurable on Layer 3 devices.	Can be configured on Layer 3 and Layer 2 devices
Routing across IP subnets	SVI can perform routing across IP subnets	Cannot perform Routing between VLANs
Configuration	Interface VLAN (VLAN ID)	Can be enabled via following command: VLAN (VLAN ID)
OSI Layer	Works on Layer 3 of OSI Model	Works on Layer 2 of OSI Model

Benefits of VLAN

- ✓ Increased Security
- ✓ Increased Performance
- ✓ Improved Manageability
- ✓ More Scalability
- ✓ Reduced Broadcast

Cisco vs Dell VLAN Configuration

Cisco	Dell
Step 1: Create a Layer 2 VLAN	
Switch (Config)# Vlan 100	Dell_Switch (conf)# vlan database Dell_Switch(conf-vlan)# vlan 100
Step 2: Create a routable Layer 3 VLAN (that's routable)	
Switch (Config)# interface vlan 100 Switch (config-if)#ip address 192.168.1.1 255.255.255.0	Dell_Switch (config)# interface vlan 100 Dell_Switch (config-if)# : ip address 192.168.1.1 255.255.255.0

Cisco vs HP VLAN Configuration

Cisco	HP
Step 1: Create a Layer 2 VLAN	
Switch (Config)# Vlan 100	HP Switch (config)# :Vlan 100
Step 2: Create a routable Layer 3 VLAN (that's routable)	
Switch (Config)# interface vlan 100 Switch (config-if)#ip address 192.168.1.1 255.255.255.0	HP Switch (config)# : vlan 100 HP Switch (vlan-100)# : ip address 192.168.1.1 255.255.255.0

VLAN vs VRF

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