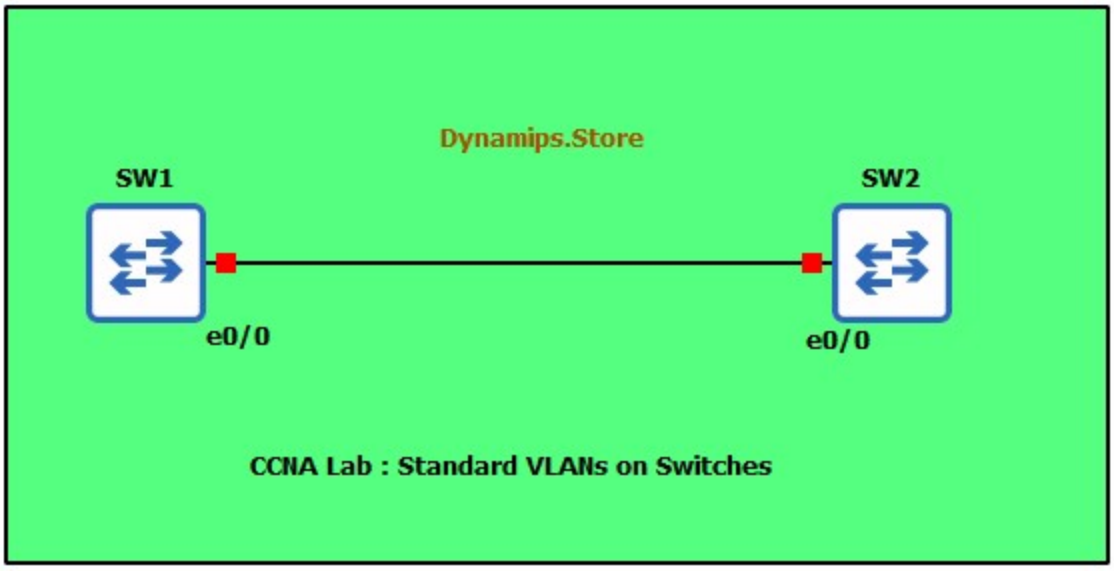
Lab 1: Standard VLANs on Switches



Document Information

Lab Objective:
The objective of this lab exercise is for you to learn and understand how to configure standard VLANs 1-1001 on Cisco Catalyst IOS switches. In addition to this, you are also required to familiarize yourself with the commands available in Cisco IOS to validate and check your configurations.

Lab Purpose:
VLAN configuration is a fundamental skill. VLANs allow you to segment your network into multiple, smaller broadcast domains. As a Cisco engineer, as well as in the Cisco CCNA exam, you will be expected to know how to configure VLANs on Cisco switches.

Certification Level:
This lab is suitable for both CCENT and CCNA certification exam preparation

Lab Difficulty:
This lab has a difficulty rating of 4/10

Readiness Assessment:
When you are ready for your certification exam, you should complete this lab in no more than 10 minutes

Lab Topology:
Please use the following topology to complete this lab exercise:

VLAN Number	VLAN Name	Port
10	Sales	E0/1
20	Managers	E0/2
30	Engineers	E0/3
40	Support	E1/0

Task 1:
In preparation for VLAN configuration, configure a hostname on Sw1 as well as the VLANs depicted in the topology.

Task 2:
Configure ports Ethernet0/1 – Ethernet0/3 and Ethernet1/0 as access ports and assign them to the VLANs specified.

Task 3:
Verify your VLAN configuration using relevant show commands in Cisco IOS.

SOLUTION:

Task 1: In preparation for VLAN configuration, configure a hostname on Sw1 as well as the VLANs depicted in the topology.

```
Switch>enable

Switch#config t

Enter configuration commands, one per line.   End with CNTL/Z.

Switch(config)#hostname SW1

SW1(config)#vlan 10

SW1(config-vlan)#name Sales

SW1(config-vlan)#vlan 20

SW1(config-vlan)#name Managers

SW1(config-vlan)#vlan 30
```

```
SW1(config-vlan)#name Engineers

SW1(config-vlan)#vlan 40

SW1(config-vlan)#name Support

SW1(config-vlan)#
```

Verification

```
SW1#show vlan


VLAN Name                                Status    Ports
---- ----------------------------------- --------- -------------------------------
1    default                             active    Et0/1, Et0/2, Et0/3
10   Sales                               active
20   Managers                            active
30   Engineers                           active
40   Support                             active
1002 fddi-default                        act/unsup
1003 token-ring-default                  act/unsup
1004 fddinet-default                     act/unsup
1005 trnet-default                       act/unsup


VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------
1    enet  100001     1500  -      -      -        -    -        0      0
10   enet  100010     1500  -      -      -        -    -        0      0
```

```
20   enet   100020     1500  -       -      -        -     -         0
0

30   enet   100030     1500  -       -      -        -     -         0
0

40   enet   100040     1500  -      -       -        -    -          0
0

1002
fddi  101002     1500   -      -      -         -    -        0       0

1003
tr    101003      1500  -      -       -        -    -         0      0

1004 fdnet 101004     1500  -       -      -        ieee
-        0       0



VLAN Type  SAID       MTU    Parent RingNo BridgeNo Stp   BrdgMode Trans1
Trans2

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1005 trnet
101005     1500  -       -      -        ibm   -        0      0



Primary Secondary Type              Ports

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```

Task 2:

```
SW1#conf t

Enter configuration commands, one per line.   End with CNTL/Z.

SW1(config)#int e0/1

SW1(config-if)#switchport mod access

SW1(config-if)#switchport access vlan 10

SW1(config-if)#int e0/2

SW1(config-if)#switchport mode access
```

```
SW1(config-if)#switchport access vlan 20

SW1(config-if)#int e0/3

SW1(config-if)#switchport mode access

SW1(config-if)#switchport access vlan 30

SW1(config-if)#int e1/0

SW1(config-if)#switchport mode access

SW1(config-if)#switchport access vlan 40
```

Task 3:

```
Sw1#show vlan brief



VLAN Name                                Status    Ports

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--

1    default                             active    Et1/1, Et1/2, Et1/3

10    Sales                               active    Et0/1

20    Managers                            active    Et0/2

30    Engineers                           active    Et0/3

40    Support                             active    Et1/0

1002 fddi-default                        act/unsup

1003 token-ring-default                  act/unsup

1004 fddinet-default                     act/unsup

1005 trnet-default                       act/unsup
```