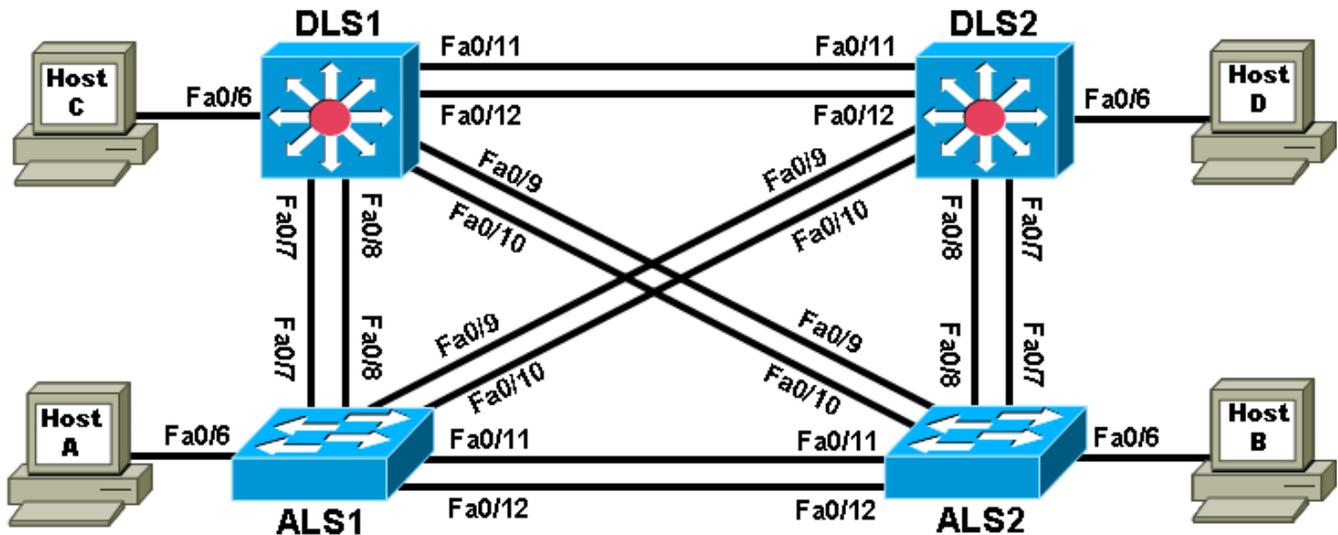Cisco | Networking Academy®
Mind Wide Open™

Chapter 1 Lab 1-2, Clearing a Switch Connected to a Larger Network

Topology

Objective

- Clear the configuration of a switch that is connected to other switches and prepare it for a new lab.

Background

When working with a switch that has been previously configured, any new commands entered are merged with the existing configuration, causing unpredictable results. Additionally, if the switch is connected to other switches in the network, you can remove the VLANs but they might be relearned from another switch via VTP. In this lab, you prepare a Catalyst 2960 or 3560 switch for use with a lab by erasing the startup configuration from NVRAM and deleting the VLAN database. You also ensure that VLANs will not be relearned from another switch after the VLAN database has been deleted.

Note: This lab uses the Cisco WS-C2960-24TT-L switch with the Cisco IOS image c2960-lanbasek9-mz.122-46.SE.bin, and the Catalyst 3560-24PS switch with the Cisco IOS image c3560-advipservicesk9-mz.122-46.SE.bin. You can use other switches (such as a 2950 or a 3550) and Cisco IOS Software versions if they have comparable capabilities and features. Depending on the switch model and Cisco IOS Software version, the commands available and output produced might vary from what is shown in this lab.

Required Resources

- 2 switches (Cisco 2960 with the Cisco IOS Release 12.2(46)SE C2960-LANBASEK9-M image or comparable)
- 2 switches (Cisco 3560 with the Cisco IOS Release 12.2(46)SE C3560-ADVIPSERVICESK9-M image or comparable)

- Console and Ethernet cables

Step 1: Connect to the switch console port and enter privileged EXEC mode.

This lab assumes that you have completed Lab 1-1, Clearing a Switch.

Step 2: Delete the VLAN database file.

In privileged EXEC mode, type **delete vlan.dat** and press Enter. If you are asked to confirm, press Enter until you are back to the original prompt.

```
Switch# delete vlan.dat
Delete flash:vlan.dat? [confirm]
Switch#
```

Step 3: Erase the startup config from NVRAM.

After deleting the vlan.dat file, you can erase the startup configuration on the switch by typing **erase startup-config**. You again have to press Enter to confirm. Reload the switch.

```
Switch# erase startup-config
Erasing the nvram filesystem will remove all configuration files! Continue?
[confirm]
[OK]
Erase of nvram: complete
Switch#
Switch# reload
```

Step 4: Display the existing configured VLANs.

The difficulty with clearing a switch that is cabled to other switches is removing the VLANs. When the switch is finished reloading, it is possible for it to relearn VLANs from another connected switch that is in VTP server or client mode.

To determine if the VLANs have been relearned, use the **show vlan** command.

```
Switch# show vlan brief

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Fa0/1, Fa0/2, Fa0/3, Fa0/4
                                                Fa0/5, Fa0/6, Fa0/7, Fa0/8
                                                Fa0/9, Fa0/10, Fa0/11, Fa0/12
                                                Fa0/13, Fa0/14, Fa0/15, Fa0/16
                                                Fa0/17, Fa0/18, Fa0/19, Fa0/20
                                                Fa0/21, Fa0/22, Fa0/23, Fa0/24
                                                Gi0/1, Gi0/2
1002 fddi-default                     act/unsup
1003 token-ring-default               act/unsup
1004 fddinet-default                  act/unsup
1005 trnet-default                    act/unsup
```

In this sample output, the switch has not learned any VLANs from another switch. You are finished clearing both the configuration and VLANs from the switch.

However, if the **show vlan** command displays nondefault VLANs after you have deleted the vlan.dat file, your switch has learned the VLANs dynamically from another switch. For example:

```
Switch# show vlan brief
```

```
VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Fa0/1, Fa0/2, Fa0/3, Fa0/4
                                                Fa0/5, Fa0/6, Fa0/7, Fa0/8
                                                Fa0/9, Fa0/10, Fa0/11, Fa0/12
                                                Fa0/13, Fa0/14, Fa0/15, Fa0/16
                                                Fa0/17, Fa0/18, Fa0/19, Fa0/20
                                                Fa0/21, Fa0/22, Fa0/23, Fa0/24
                                                Gi0/1, Gi0/2
10   OFFICE                           active
20   VOICE                            active
30   GUEST                            active
50   SERVERS                          active
100  MGMT                             active
200  TRANS                            active
900  NATIVE                           active
999  UNUSED                           active

1002 fddi-default                     act/unsup
1003 token-ring-default               act/unsup
1004 fddinet-default                  act/unsup
1005 trnet-default                    act/unsup
```

Step 5: Shut down interfaces and remove the VLANs.

To eliminate these VLANS, shut down all interfaces and remove the existing VLANs.

```
Switch(config)# interface range FastEthernet 0/1 - 24
Switch(config-if-range)# shutdown
Switch(config-if-range)#
15:44:06: %LINK-5-CHANGED: Interface FastEthernet0/1, changed state to
administratively down
15:44:06: %LINK-5-CHANGED: Interface FastEthernet0/2, changed state to
administratively down
15:44:06: %LINK-5-CHANGED: Interface FastEthernet0/3, changed state to
administratively down
15:44:06: %LINK-5-CHANGED: Interface FastEthernet0/4, changed state to
administratively down
15:44:06: %LINK-5-CHANGED: Interface FastEthernet0/5, changed state to
administratively down
15:44:06: %LINK-5-CHANGED: Interface FastEthernet0/6, changed state to
administratively down
<output omitted>

Switch(config-if-range)# interface range GigabitEthernet 0/1 - 2
Switch(config-if-range)# shutdown
Switch(config-if-range)#
15:45:59: %LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to
administratively down
15:45:59: %LINK-5-CHANGED: Interface GigabitEthernet0/2, changed state to
administratively down


Switch(config-if-range)# exit
Switch(config)# no vlan 2-999
Switch(config)#exit
```

```
Switch# show vlan brief

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Fa0/1, Fa0/2, Fa0/3, Fa0/4
                                                Fa0/5, Fa0/6, Fa0/7, Fa0/8
                                                Fa0/9, Fa0/10, Fa0/11, Fa0/12
                                                Fa0/13, Fa0/14, Fa0/15, Fa0/16
                                                Fa0/17, Fa0/18, Fa0/19, Fa0/20
                                                Fa0/21, Fa0/22, Fa0/23, Fa0/24
                                                Gi0/1, Gi0/2
1002 fddi-default                     act/unsup
1003 token-ring-default               act/unsup
1004 fddinet-default                  act/unsup
1005 trnet-default                    act/unsup
```

Step 6: (Optional) Configure transparent VTP mode.

Now that both the startup configuration and the VLANs have been erased, you are ready to start a new lab. For interfaces that need to be up, use the **no shutdown** command in the new lab. If you want to do some configuration before the switch learns VLANs from the network, put it into VTP transparent mode until you are ready.

```
Switch# conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)# vtp mode transparent
Setting device to VTP TRANSPARENT mode.
```