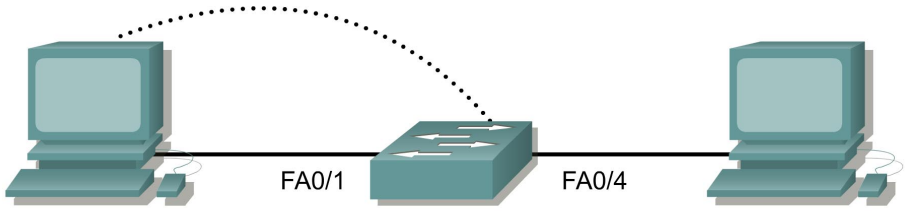
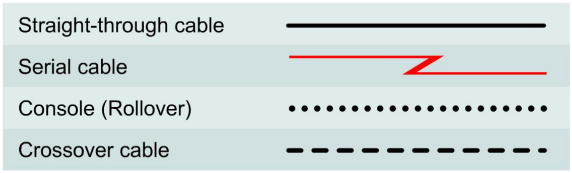
Lab 6.2.4 Configuring Static MAC Addresses – 2900XL Series



Switch Designation	Switch Name	Enable Secret Password	Enable, VTY, and Console Passwords	VLAN 1 IP Address	Default Gateway IP Address	Subnet Mask
Switch 1	ALSwitch	class	cisco	192.168.1.2	192.168.1.1	255.255.255.0



Objective

- Create a static address entry in the switch MAC table.
- Remove the created static MAC address entry.

Background/Preparation

Cable a network similar to the one in the diagram. The configuration output used in this lab is produced from a 2950 series switch. Any other switch used may produce different output. The following steps are to be executed on each switch unless specifically instructed otherwise. Instructions are also provided for the 1900 Series switch, which initially displays a User Interface Menu. Select the “Command Line” option from the menu to perform the steps for this lab.

Start a HyperTerminal session.

Note: Go to the erase and reload instructions at the end of this lab. Perform those steps on all switches in this lab assignment before continuing.

Step 1 Configure the switch

Configure the hostname, access, and command mode passwords, as well as the management LAN settings. These values are shown in the chart. If problems occur while performing this configuration, refer to the Basic Switch Configuration lab.

Step 2 Configure the hosts attached to the switch

Configure the hosts to use the same IP subnet for the address, mask, and the default gateway on the switch.

Step 3 Verify connectivity

a. To verify that the hosts and switch are correctly configured, ping the switch IP address from the hosts.

b. Were the pings successful? Yes

c. If the answer is no, troubleshoot the hosts and switch configurations.

Step 4 Record the host MAC addresses

a. Determine and record the layer 2 addresses of the PC network interface cards.

If running Windows 98, check by using **Start** > **Run** > **`winipcfg`**. Click on **`More info`**.

If running Windows 2000, check by using **Start** > **Run** > **`cmd > ipconfig /all`**.

b. PC1: 08-00-46-06-FB-B6

c. PC4: 08-00-46-06-FB-B6

Step 5 Determine what MAC addresses that the switch has learned

a. To determine what MAC addresses the switch has learned use the **`show mac-address-table`** command as follows at the privileged exec mode prompt:

```
ALSwitch#show mac-address-table
```

b. How many dynamic addresses are there? 2

c. How many total MAC addresses are there? 51

d. Do the MAC addresses match the host MAC addresses? Yes

Step 6 Determine the show MAC table options

a. To determine the options the **`mac-address-table`** command has use the **`?`** option as follows:

```
ALSwitch(config)#mac-address-table ?
```

e. How many options are available for the **`mac-address-table`** command? 5

b. There is an option to set a static MAC address in the table. Under what circumstances would this option be utilized? Port Security

Step 7 Setup a static MAC address

Setup a static MAC address on Fast Ethernet interface 0/4 as follows:

Note: Use the address that was recorded for PC4 in Step 4. The MAC address 00e0.2917.1884 is used in the example statement only.

```
ALSwitch(config)#mac-address-table static 00e0.2917.1884 interface
fastethernet 0/4 vlan 1

2900:
ALSwitch(config)#mac-address-table static 00e0.2917.1884 fastethernet
0/4 vlan 1


1900:
ALSwitch(config)#mac-address-table permanent 00e0.2917.1884 ethernet
0/4
```


Step 8 Verify the results

a. Enter the following to verify the **mac-address table** entries.

```
ALSwitch#show mac-address-table
```

b. How many total MAC addresses are there now? 50

c. How many static addresses are there? 1

d. Under what circumstances can other static or dynamic learning of addresses occur on switchport 4? Connecting a hub to that port

Step 9 Remove the static MAC entry

The **static mac-address-table** entry may need to be reversed. To do this, enter the configuration mode and reverse the command by putting a **no** in front of the entire old command string as follows:

Note: The MAC address 00e0.2917.1884 is used in the example statement only, use the MAC address that was recorded for the host on port 0/4.

```
ALSwitch(config)#no mac-address-table static 00e0.2917.1884 interface
fastethernet 0/4 vlan 1

2900:
ALSwitch(config)#no mac-address-table static 00e0.2917.1884
fastEthernet 0/4 vlan 1

1900:
ALSwitch(config)#no mac-address-table permanent 00e0.2917.1884 ethernet
0/4
```

Step 10 Verify the results

a. Enter the following to verify that the static MAC address was cleared:

```
ALSwitch#show mac-address-table static
```

b. How many total static MAC addresses are there now? 0

Step 11 Exit the switch

Type **exit**, as follows, to leave the switch welcome screen

```
Switch#exit
```

Once the steps are completed, logoff by typing **exit**, and turn all the devices off. Then remove and store the cables and adapter.

```
Switch>enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname ALSwitch
ALSwitch(config)#enable secret class
```



```
ALSwitch(config)#line con 0
ALSwitch(config-line)#password cisco
ALSwitch(config-line)#login
ALSwitch(config-line)#line vty 0 15
ALSwitch(config-line)#password cisco
ALSwitch(config-line)#login

ALSwitch(config-line)#interface Vlan1
ALSwitch(config-if)#ip address 192.168.1.2 255.255.255.0
ALSwitch(config-if)#ip default-gateway 192.168.1.1
ALSwitch(config)#exit

ALSwitch#show mac-address-table
Dynamic Address Count:                     2
Secure Address Count:                      0
Static Address (User-defined) Count:       0
System Self Address Count:                 49
Total MAC addresses:                       51
Maximum MAC addresses:                     2048
Non-static Address Table:
Destination Address  Address Type  VLAN  Destination Port
-------------------  ------------  ----  --------------------
0008.744d.8ee2       Dynamic          1  FastEthernet0/4
0800.4606.fbb6       Dynamic          1  FastEthernet0/1
ALSwitch#config terminal
Enter configuration commands, one per line.  End with CNTL/Z.


ALSwitch(config)#mac-address-table ?
  aging-time    Set MAC address table entry maximum age
  dynamic       Configure a dynamic 802.1d address
  notification  Enable/Disable MAC Notification on the switch
  secure        Configure a secure address
  static        Configure a static 802.1d static address

ALSwitch(config)#mac-address-table static 0008.744d.8ee2 fa0/4 vlan 1
ALSwitch(config)#exit

ALSwitch#show mac-address-table
06:23:29: %SYS-5-CONFIG_I: Configured from console by console
Dynamic Address Count:                     0
Secure Address Count:                      0
Static Address (User-defined) Count:       1
System Self Address Count:                 49
Total MAC addresses:                       50
Maximum MAC addresses:                     2048

Static Address Table:
Destination Address   VLAN  Input Port  Output Ports
-------------------   ----  ----------  -----------------------
0008.744d.8ee2           1  Fa0/1
                         1  Fa0/2
                         1  Fa0/3
                         1  Fa0/4
                         1  Fa0/5
                         1  Fa0/6
                         1  Fa0/7
                         1  Fa0/8
                         1  Fa0/9
                         1  Fa0/10
```



```
1   Fa0/11
1   Fa0/12
1   Fa0/13
1   Fa0/14
1   Fa0/15
1   Fa0/16
1   Fa0/17
1   Fa0/18
1   Fa0/19
1   Fa0/20
1   Fa0/21
1   Fa0/22
1   Fa0/23
1   Fa0/24

ALSwitch#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
ALSwitch(config)#no mac-address-table static 0008.744d.8ee2 fa0/4 vlan 1
ALSwitch(config)#exit

ALSwitch#show mac-address-table static

ALSwitch#exit


Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time<10ms TTL=255
Reply from 192.168.1.2: bytes=32 time<10ms TTL=255
Reply from 192.168.1.2: bytes=32 time<10ms TTL=255
Reply from 192.168.1.2: bytes=32 time<10ms TTL=255

Ping statistics for 192.168.1.2:
      Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
      Minimum = 0ms, Maximum =  0ms, Average =  0ms

C:\>ipconfig /all

Windows 2000 IP Configuration

      Host Name . . . . . . . . . . . . : laptop
      Primary DNS Suffix  . . . . . . . :
      Node Type . . . . . . . . . . . . : Broadcast
      IP Routing Enabled. . . . . . . . : No
      WINS Proxy Enabled. . . . . . . . : No

Ethernet adapter Local Area Connection:

      Connection-specific DNS Suffix  . :
      Description . . . . . . . . . . . : Intel 8255x-based PCI Ethernet
         Adapter (10/100)
      Physical Address. . . . . . . . . : 08-00-46-06-FB-B6
      DHCP Enabled. . . . . . . . . . . : No
      IP Address. . . . . . . . . . . . : 192.168.1.10
```



```
        Subnet Mask . . . . . . . . . . . : 255.255.255.0
        Default Gateway . . . . . . . . . : 192.168.1.1
        DNS Servers . . . . . . . . . . . :

C:\>


Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time=10ms TTL=255
Reply from 192.168.1.2: bytes=32 time<10ms TTL=255
Reply from 192.168.1.2: bytes=32 time<10ms TTL=255
Reply from 192.168.1.2: bytes=32 time<10ms TTL=255

Ping statistics for 192.168.1.2:
        Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum =  10ms, Average =  2ms

C:\>
C:\>ipconfig /all

Windows 2000 IP Configuration

        Host Name . . . . . . . . . . . . : inspiron1
        Primary DNS Suffix  . . . . . . . : cisco.com
        Node Type . . . . . . . . . . . . : Hybrid
        IP Routing Enabled. . . . . . . . : No
        WINS Proxy Enabled. . . . . . . . : No

Ethernet adapter Local Area Connection:

        Connection-specific DNS Suffix  . :
        Description . . . . . . . . . . . : 3Com 3C920 Integrated Fast
           Ethernet Controller (3C905C-TX Compatible)
        Physical Address. . . . . . . . . : 00-08-74-4D-8E-E2
        DHCP Enabled. . . . . . . . . . . : No
        IP Address. . . . . . . . . . . . : 192.168.1.20
        Subnet Mask . . . . . . . . . . . : 255.255.255.0
        Default Gateway . . . . . . . . . : 192.168.1.1
        DNS Servers . . . . . . . . . . . :

C:\>
```


Erasing and Reloading the Switch

For the majority of the labs in CCNA 3 and CCNA 4 it is necessary to start with an unconfigured switch. Use of a switch with an existing configuration may produce unpredictable results. These instructions allow preparation of the switch prior to performing the lab so previous configuration options do not interfere. The following is the procedure for clearing out previous configurations and starting with an unconfigured switch. Instructions are provided for the 2900, 2950, and 1900 Series switches.

2900 and 2950 Series Switches

1. Enter into the privileged EXEC mode by typing **enable**.

   If prompted for a password, enter **class** (if that does not work, ask the instructor).

   ```
   Switch>enable
   ```

2. Remove the VLAN database information file.

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

   If there was no VLAN file, this message is displayed.

   ```
   %Error deleting flash:vlan.dat (No such file or directory)
   ```

3. Remove the switch startup configuration file from NVRAM.

   ```
   Switch#erase startup-config
   ```

   The responding line prompt will be:

   ```
   Erasing the nvram filesystem will remove all files! Continue? [confirm]
   ```

   Press **Enter** to confirm.

   The response should be:

   ```
   Erase of nvram: complete
   ```

4. Check that VLAN information was deleted.

   Verify that the VLAN configuration was deleted in Step 2 using the **show vlan** command. If previous VLAN configuration information (other than the default management VLAN 1) is still present it will be necessary to power cycle the switch (hardware restart) instead of issuing the **reload** command. To power cycle the switch, remove the power cord from the back of the switch or unplug it. Then plug it back in.

   If the VLAN information was successfully deleted in Step 2, go to Step 5 and restart the switch using the **reload** command.

5. Software restart (using the **reload** command)

   Note: This step is not necessary if the switch was restarted using the power cycle method.

   a. At the privileged EXEC mode enter the command **reload**.

      ```
      Switch#reload
      ```

      The responding line prompt will be:

      ```
      System configuration has been modified. Save? [yes/no]:
      ```

   b. Type **n** and then press **Enter**.

      The responding line prompt will be:

      ```
      Proceed with reload? [confirm] [Enter]
      ```

      The first line of the response will be:

      ```
      Reload requested by console.
      ```

      After the switch has reloaded, the line prompt will be:

      ```
      Would you like to enter the initial configuration dialog? [yes/no]:
      ```

   c. Type **n** and then press **Enter**.

      The responding line prompt will be:

      ```
      Press RETURN to get started! [Enter]
      ```

1900 Series Switches

1. Remove VLAN Trunking Protocol (VTP) information.

   ```
   #delete vtp
   This command resets the switch with VTP parameters set to factory
   defaults.
   All other parameters will be unchanged.

   Reset system with VTP parameters set to factory defaults, [Y]es or
   [N]o?
   ```

   Enter **y** and press **Enter**.

2. Remove the switch startup configuration from NVRAM.

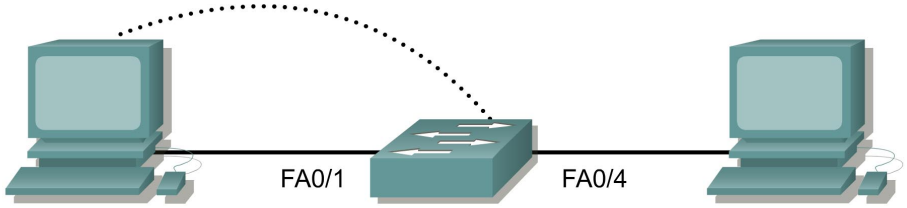
   ```
   #delete nvram
   ```

   This command resets the switch with factory defaults. All system parameters will revert to their default factory settings. All static and dynamic addresses will be removed.

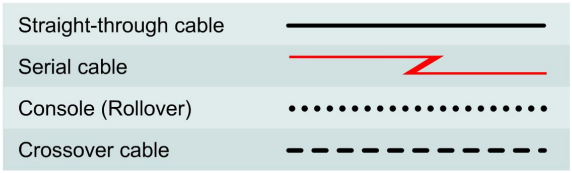
   Reset system with factory defaults, [**Y**]es or [**N**]o?

   Enter **y** and press **Enter**.

Lab 6.2.4 Configuring Static MAC Addresses – 2950 Series



Switch Designation	Switch Name	Enable Secret Password	Enable, VTY, and Console Passwords	VLAN 1 IP Address	Default Gateway IP Address	Subnet Mask
Switch 1	ALSwitch	class	cisco	192.168.1.2	192.168.1.1	255.255.255.0



Objective

- Create a static address entry in the switch MAC table.
- Remove the created static MAC address entry.

Background/Preparation

Cable a network similar to the one in the diagram. The configuration output used in this lab is produced from a 2950 series switch. Any other switch used may produce different output. The following steps are to be executed on each switch unless specifically instructed otherwise. Instructions are also provided for the 1900 Series switch, which initially displays a User Interface Menu. Select the “Command Line” option from the menu to perform the steps for this lab.

Start a HyperTerminal session.

Note: Go to the erase and reload instructions at the end of this lab. Perform those steps on all switches in this lab assignment before continuing.

Step 1 Configure the switch

Configure the hostname, access, and command mode passwords, as well as the management LAN settings. These values are shown in the chart. If problems occur while performing this configuration, refer to the Basic Switch Configuration lab.

Step 2 Configure the hosts attached to the switch

Configure the hosts to use the same IP subnet for the address, mask, and the default gateway on the switch.

Step 3 Verify connectivity

a. To verify that the hosts and switch are correctly configured, ping the switch IP address from the hosts.

b. Were the pings successful? Yes

c. If the answer is no, troubleshoot the hosts and switch configurations.

Step 4 Record the host MAC addresses

a. Determine and record the layer 2 addresses of the PC network interface cards.

If running Windows 98, check by using **Start** > **Run** > **winipcfg**. Click on **More info**.

If running Windows 2000, check by using **Start** > **Run** > **cmd > ipconfig /all**.

b. PC1: 08-00-46-06-FB-B6

c. PC4: 0-08-74-4D-8E-E2

Step 5 Determine what MAC addresses that the switch has learned

a. To determine what MAC addresses the switch has learned use the **show mac-address-table** command as follows at the privileged exec mode prompt:

```
ALSwitch#show mac-address-table
```

b. How many dynamic addresses are there? 2

c. How many total MAC addresses are there? 6

d. Do the MAC addresses match the host MAC addresses? Yes

Step 6 Determine the show MAC table options

a. To determine the options the **mac-address-table** command has use the **?** option as follows:

```
ALSwitch(config)#mac-address-table ?
```

How many options are available for the **mac-address-table** command? 3

```
ALSwitch(config)#mac-address-table ?
  aging-time     Set MAC address table entry maximum age
  notification   Enable/Disable MAC Notification on the switch
  static         static keyword
```

b. There is an option to set a static MAC address in the table. Under what circumstances would this option be utilized? Port Security

Step 7 Setup a static MAC address

Setup a static MAC address on Fast Ethernet interface 0/4 as follows:

Note: Use the address that was recorded for PC4 in Step 4. The MAC address 00e0.2917.1884 is used in the example statement only.

```
2950:
ALSwitch(config)#mac-address-table static 00e0.2917.1884 interface
fastethernet 0/4 vlan 1

2900:
ALSwitch(config)#mac-address-table static 00e0.2917.1884 fastethernet
0/4 vlan 1
```



```
1900:
ALSwitch(config)#mac-address-table permanent 00e0.2917.1884 ethernet
0/4
```

Step 8 Verify the results

a. Enter the following to verify the **mac-address table** entries.

```
ALSwitch#show mac-address-table
```

b. How many total MAC addresses are there now? 5

c. How many static addresses are there? 5

d. Under what circumstances can other static or dynamic learning of addresses occur on switchport 4? Connecting a hub to that port

Step 9 Remove the static MAC entry

The **static mac-address-table** entry may need to be reversed. To do this, enter the configuration mode and reverse the command by putting a **no** in front of the entire old command string as follows:

Note: The MAC address 00e0.2917.1884 is used in the example statement only, use the MAC address that was recorded for the host on port 0/4.

```
2950:
ALSwitch(config)#no mac-address-table static 00e0.2917.1884 interface
fastethernet 0/4 vlan 1

2900:
ALSwitch(config)#no mac-address-table static 00e0.2917.1884
fastEthernet 0/4 vlan 1

1900:
ALSwitch(config)#no mac-address-table permanent 00e0.2917.1884 ethernet
0/4
```

Step 10 Verify the results

a. Enter the following to verify that the static MAC address was cleared:

```
ALSwitch#show mac-address-table static
```

b. How many total static MAC addresses are there now? 4

Step 11 Exit the switch

Type **exit**, as follows, to leave the switch welcome screen

```
Switch#exit
```

Once the steps are completed, logoff by typing **exit**, and turn all the devices off. Then remove and store the cables and adapter.


```
Switch>
Switch>enable
Switch#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname ALSwitch

ALSwitch(config)#enable secret class


ALSwitch(config)#line con 0
ALSwitch(config-line)#password cisco
ALSwitch(config-line)#login
ALSwitch(config-line)#line vty 0 15
ALSwitch(config-line)#password cisco
ALSwitch(config-line)#login

ALSwitch(config-line)#interface Vlan1
ALSwitch(config-if)#ip address 192.168.1.2 255.255.255.0
ALSwitch(config-if)#no shutdown

ALSwitch(config-if)#ip default-gateway 192.168.1.1

ALSwitch(config)#exit


ALSwitch#show mac-address-table
          Mac Address Table
-------------------------------------------

Vlan    Mac Address       Type        Ports
----    -----------       --------    -----
  All    0009.b7f6.61c0    STATIC       CPU
  All    0100.0ccc.cccc    STATIC       CPU
  All    0100.0ccc.cccd    STATIC       CPU
  All    0100.0cdd.dddd    STATIC       CPU
  1    0001.0276.8eec    DYNAMIC     Fa0/1
  1    0001.0276.90dd    DYNAMIC     Fa0/4
Total Mac Addresses for this criterion: 6

ALSwitch#configure terminal
ALSwitch(config)#mac-address-table ?
  aging-time    Set MAC address table entry maximum age
  notification  Enable/Disable MAC Notification on the switch
  static        static keyword


ALSwitch(config)#no mac-address-table static 00e0.2917.1884 interface
   fastethernet 0/4 vlan 1ALSwitch(config)#exit

ALSwitch#show mac-address-table
            Mac Address Table
-------------------------------------------

Vlan    Mac Address       Type        Ports
----    -----------       --------    -----
  All    0009.b7f6.61c0    STATIC       CPU
  All    0100.0ccc.cccc    STATIC       CPU
  All    0100.0ccc.cccd    STATIC       CPU
  All    0100.0cdd.dddd    STATIC       CPU
  1    0001.0276.8eec    DYNAMIC     Fa0/1
```



```
  1      0001.0276.90dd    STATIC      Fa0/4
Total Mac Addresses for this criterion: 6

ALSwitch#clear mac-address-table dynamic

ALSwitch#show mac-address-table
            Mac Address Table
------------------------------------------

Vlan    Mac Address        Type         Ports
----    -----------        --------     -----
  All    0009.b7f6.61c0     STATIC       CPU
  All    0100.0ccc.cccc     STATIC       CPU
  All    0100.0ccc.cccd     STATIC       CPU
  All    0100.0cdd.dddd     STATIC       CPU
  1    0001.0276.90dd     STATIC      Fa0/4
Total Mac Addresses for this criterion: 5

ALSwitch#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.

ALSwitch(config)#no mac-address-table static 00e0.2917.1884 interface
   fastethernet 0/4 vlan 1
ALSwitch(config)#exit


ALSwitch#clear mac-address-table dynamic

ALSwitch#show mac-address-table
            Mac Address Table
------------------------------------------

Vlan    Mac Address        Type         Ports
----    -----------        --------     -----
  All    0009.b7f6.61c0     STATIC       CPU
  All    0100.0ccc.cccc     STATIC       CPU
  All    0100.0ccc.cccd     STATIC       CPU
  All    0100.0cdd.dddd     STATIC       CPU
Total Mac Addresses for this criterion: 4
```

Erasing and Reloading the Switch

For the majority of the labs in CCNA 3 and CCNA 4 it is necessary to start with an unconfigured switch. Use of a switch with an existing configuration may produce unpredictable results. These instructions allow preparation of the switch prior to performing the lab so previous configuration options do not interfere. The following is the procedure for clearing out previous configurations and starting with an unconfigured switch. Instructions are provided for the 2900, 2950, and 1900 Series switches.

2900 and 2950 Series Switches

1. Enter into the privileged EXEC mode by typing **enable**.

   If prompted for a password, enter **class** (if that does not work, ask the instructor).

   ```
   Switch>enable
   ```

2. Remove the VLAN database information file.

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

   If there was no VLAN file, this message is displayed.

   ```
   %Error deleting flash:vlan.dat (No such file or directory)
   ```

3. Remove the switch startup configuration file from NVRAM.

   ```
   Switch#erase startup-config
   ```

   The responding line prompt will be:

   ```
   Erasing the nvram filesystem will remove all files! Continue? [confirm]
   ```

   Press **Enter** to confirm.

   The response should be:

   ```
   Erase of nvram: complete
   ```

4. Check that VLAN information was deleted.

   Verify that the VLAN configuration was deleted in Step 2 using the **show vlan** command. If previous VLAN configuration information (other than the default management VLAN 1) is still present it will be necessary to power cycle the switch (hardware restart) instead of issuing the **reload** command. To power cycle the switch, remove the power cord from the back of the switch or unplug it. Then plug it back in.

   If the VLAN information was successfully deleted in Step 2, go to Step 5 and restart the switch using the **reload** command.

5. Software restart (using the **reload** command)

Note: This step is not necessary if the switch was restarted using the power cycle method.

a. At the privileged EXEC mode enter the command **reload**.

```
Switch#reload
```

The responding line prompt will be:

```
System configuration has been modified. Save? [yes/no]:
```

b. Type **n** and then press **Enter**.

The responding line prompt will be:

```
Proceed with reload? [confirm] [Enter]
```

The first line of the response will be:

```
Reload requested by console.
```

After the switch has reloaded, the line prompt will be:

```
Would you like to enter the initial configuration dialog? [yes/no]:
```

c. Type **n** and then press **Enter**.

The responding line prompt will be:

```
Press RETURN to get started! [Enter]
```

1900 Series Switches

1. Remove VLAN Trunking Protocol (VTP) information.

```
#delete vtp
This command resets the switch with VTP parameters set to factory
defaults.
All other parameters will be unchanged.

Reset system with VTP parameters set to factory defaults, [Y]es or
[N]o?
```

Enter **y** and press **Enter**.

2. Remove the switch startup configuration from NVRAM.

```
#delete nvram
```

This command resets the switch with factory defaults. All system parameters will revert to their default factory settings. All static and dynamic addresses will be removed.

Reset system with factory defaults, [**Y**]es or [**N**]o?

Enter **y** and press **Enter**.

