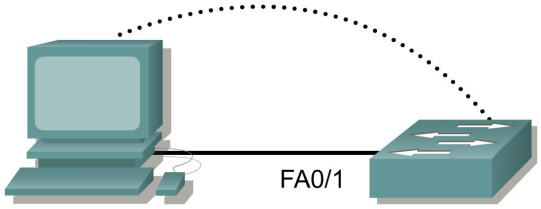
Lab 6.2.7b Managing Switch Startup Configuration Files – 2900XL Series



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

Straight-through cable	
Serial cable	
Console (Rollover)	
Crossover cable	

Objective

- Create and verify a basic switch configuration.
- Backup the switch startup configuration file to a TFTP server and then restore it.

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 host attached to the switch

Configure the host to use the same subnet for the address, mask, and default gateway as on the switch. This host will act as the TFTP server in this lab. Be sure to take note of the IP address assigned.

Step 3 Verify connectivity

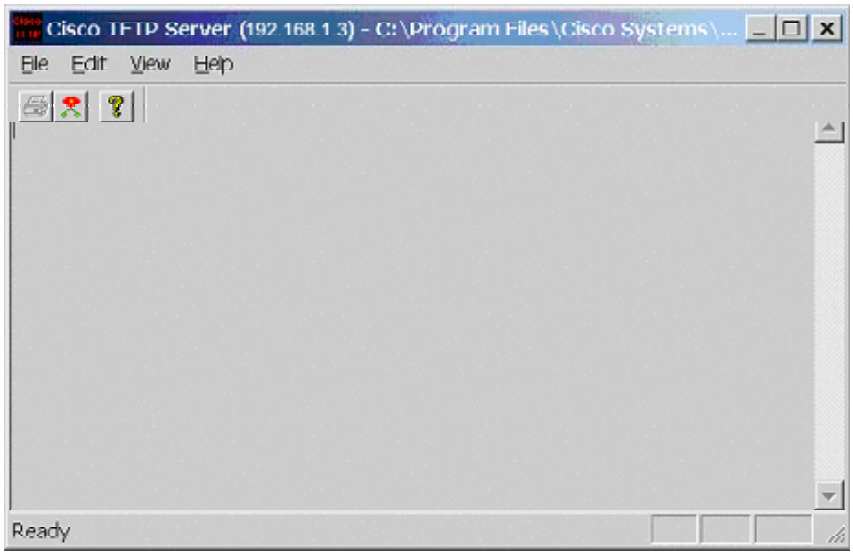
a. To verify that the host and switch are correctly configured, ping the switch IP address from the host.

b. Was the ping successful? Yes

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

Step 4 Starting and configuring the Cisco TFTP server

a. The TFTP server that is shown may not be like the one that is used in this classroom. Please check with the instructor for the operating instructions of the TFTP server used in place of the Cisco TFTP server.



b. Once the TFTP server is running and shows the correct address configuration on the workstation, copy the IOS file to the switch.

Step 5 Copying the startup configuration file to TFTP server

a. Verify that the TFTP server is running and that it can be pinged from the switch.

b. What is the IP address of the TFTP server? 192.168.1.10

c. From the console session, enter **`show flash`**.

`2900:`

```
dir flash:
```

`1900:`

```
(command not available)
```

d. What is the name and length of the startup configuration image stored in flash?

config.text, 1,296 bytes

e. From the console session in the Privileged EXEC mode, enter the **`copy running-config startup-config`** command, to make sure that the running configuration file is saved to the startup configuration file. Then type the **`copy startup-config tftp`** command. At the prompt enter the IP address of the TFTP server as follows:


```
ALSwitch#copy running-config startup-config
Destination filename [startup-config]?[enter]
Building configuration...
[OK]

ALSwitch#copy start tftp
Address or name of remote host []? 192.168.1.3
Destination filename [alswitch-confg]?[enter]
!!
744 bytes copied in 1.60 secs (744 bytes/sec)
ALSwitch#
```

1900:

```
ALSwitch#copy nvram tftp://192.168.1.3/alswitch-config
Configuration upload is successfully completed
```

Step 6 Verify the transfer to the TFTP server

a. Verify the transfer to the TFTP server by checking the log file. Click on **View > Log File**. The output should look similar to the following:

```
Mon Sep 16 14:10:08 2002: Receiving 'switch.confg' file from
192.168.1.2 in binary mode
Mon Sep 16 14:11:14 2002: Successful.
```

b. Verify the flash image size in the TFTP server directory. To locate it click on **View** > **Options.** This will show the TFTP server root directory. The output should be similar to the following, unless the default directories were changed:

```
C:\Program Files\Cisco Systems\Cisco TFTP Server
```

c. Locate this directory using the File Manager and look at the detail listing of the file. The file length in the **show flash** command should be the same file size as the file stored on the TFTP server. If the file sizes are not identical in size, check with the instructor.

Step 7 Restore the startup configuration file from the TFTP server

a. To restore the startup configuration file, first the switch must be erased. Then reconfigure the switch with just the VLAN 1 IP address of 192.168.1.2 255.255.255.0. Finally type the command **copy tftp startup-config** at the Privileged EXEC mode prompt as shown in the following:

```
Switch#copy tftp startup-config
Address or name of remote host []? 192.168.1.10
Source filename []? alswitch-confg
Destination filename [startup-config]? Accessing
tftp://192.168.1.10/alswitch-confg...
Loading alswitch-confg .from 192.168.1.10 (via Vlan1): !
[OK - 1622 bytes]
[OK]
1622 bytes copied in 22.796 secs (71 bytes/sec)
Switch#
```

Note: It is important that this process is not interrupted.

Was the operation successful? Yes

1900:

```
ALSwitch#copy tftp://192.168.1.3/alswitch-config nvram
TFTP successfully downloaded configuration file
```

Step 8 Test the restored startup configuration image (Not supported on the 1900)

Verify that the switch image is correct. To do this, cycle the switch power and observe the switch prompt. If it has returned to the name that was assigned to it in the original configuration, the restoration is complete. Type the command **show startup-config** to see the restored configuration.

Once these 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

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)#exit
ALSwitch(config)#interface Vlan1
ALSwitch(config-if)#ip address 192.168.1.2 255.255.255.0
ALSwitch(config-if)#no shutdown
ALSwitch(config-if)#exit
ALSwitch(config)#ip default-gateway 192.168.1.1

ALSwitch(config)#exit


ALSwitch#show flash

Directory of flash:/

2  ---x         108   Mar 01 1993 00:05:15  info
3  -rwx        1312   Mar 01 1993 00:00:59  startup-config
4  d--x         768   Mar 01 1993 00:08:17  html
177  ---x         600   Mar 10 1993 20:29:42  vlan.dat
6  ---x     1798150   Mar 01 1993 00:06:59  c2900xl-c3h2s-mz.120-5.WC5.bin
257  ---x         108   Mar 01 1993 00:08:20  info.ver
19  -rwx        8192   Mar 01 1993 00:08:20  e2rb.bin
7  -rwx         312   Mar 01 1993 00:01:52  env_vars
9  -rwx        1296   May 12 1993 01:46:08  config.text


3612672 bytes total (379392 bytes free)


ALSwitch#dir flash:
```



```
Directory of flash:/

2   ---x          108   Mar 01 1993 00:05:15  info
3   -rwx         1312   Mar 01 1993 00:00:59  startup-config
4   d--x          768   Mar 01 1993 00:08:17  html
177   ---x          600   Mar 10 1993 20:29:42  vlan.dat
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7   -rwx          312   Mar 01 1993 00:01:52  env_vars
9   -rwx         1296   May 12 1993 01:46:08  config.text


3612672 bytes total (379392 bytes free)


ALSwitch#copy running-configuration startup-configuration
Destination filename [startup-config]?
Building configuration...
[OK]

ALSwitch#copy startup-configuration tftp
Address or name of remote host []? 192.168.1.10
Destination filename [alswitch-confg]?
!!
1216 bytes copied in 1.368 secs (1216 bytes/sec)


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


ALSwitch#copy tftp startup-configuration
Address or name of remote host []? 192.168.1.10
Source filename []? alswitch-confg
Destination filename [startup-config]?
Accessing tftp://192.168.1.10/alswitch-confg...
Loading alswitch-confg from 192.168.1.10 (via VLAN1): !
[OK - 1216 bytes]
[OK]
1216 bytes copied in 3.707 secs (405 bytes/sec)
ALSwitch#exit



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
```


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.

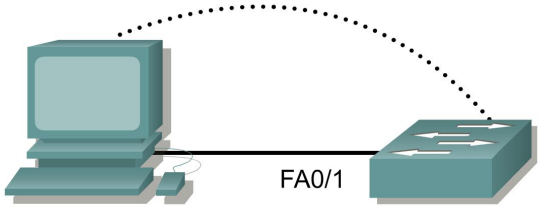
   ```
   #delete nvram
   ```

   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 6.2.7b Managing Switch Startup Configuration Files – 2950 Series



Switch Designation	Switch Name	Enable Secret Password	Enable, VTY, and Console Passwords	VLAN 1 IP Address	Default Gateway IP Address	Subnet Mask
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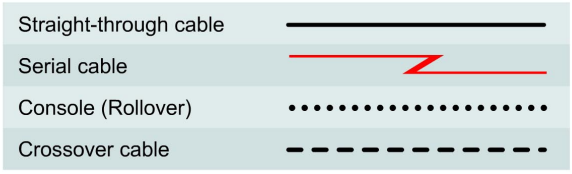

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Note: Go to the erase and reload instructions at the end of this lab. Perform those steps on all switches in this lab assignment before continuing.

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Step 2 Configure the host attached to the switch

Configure the host to use the same subnet for the address, mask, and default gateway as on the switch. This host will act as the TFTP server in this lab. Be sure to take note of the IP address assigned.

Step 3 Verify connectivity

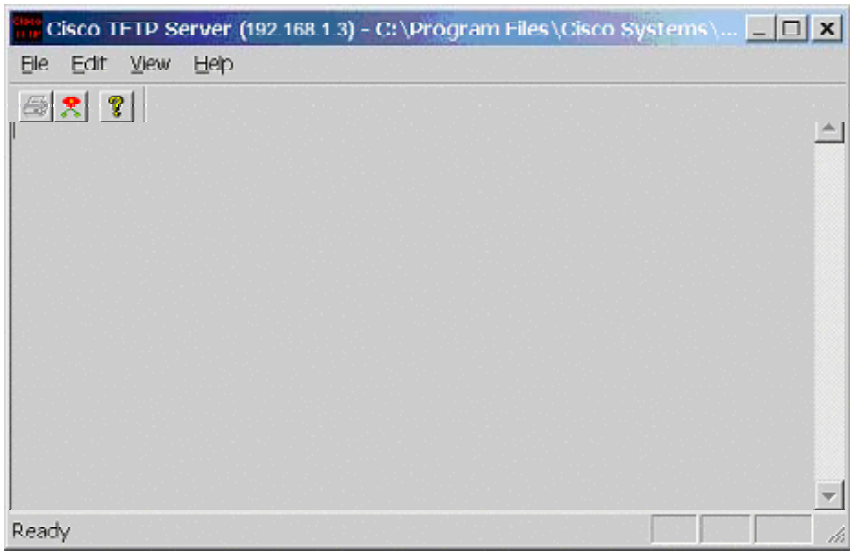
a. To verify that the host and switch are correctly configured, ping the switch IP address from the host.

b. Was the ping successful? Yes

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

Step 4 Starting and configuring the Cisco TFTP server

a. The TFTP server that is shown may not be like the one that is used in this classroom. Please check with the instructor for the operating instructions of the TFTP server used in place of the Cisco TFTP server.



b. Once the TFTP server is running and shows the correct address configuration on the workstation, copy the IOS file to the switch.

Step 5 Copying the startup configuration file to TFTP server

a. Verify that the TFTP server is running and that it can be pinged from the switch.

b. What is the IP address of the TFTP server? 192.168.1.10

c. From the console session, enter **`show flash`**.

`2900:`

```
dir flash:
```

`1900:`

```
(command not available)
```

d. What is the name and length of the startup configuration image stored in flash?

config.text, `1622 bytes`

e. From the console session in the Privileged EXEC mode, enter the **`copy running-config startup-config`** command, to make sure that the running configuration file is saved to the startup configuration file. Then type the **`copy startup-config tftp`** command. At the prompt enter the IP address of the TFTP server as follows:


```
ALSwitch#copy running-config startup-config
Destination filename [startup-config]?[enter]
Building configuration...
[OK]

ALSwitch#copy start tftp
Address or name of remote host []? 192.168.1.3
Destination filename [alswitch-confg]?[enter]
!!
744 bytes copied in 1.60 secs (744 bytes/sec)
ALSwitch#
```

1900:

```
ALSwitch#copy nvram tftp://192.168.1.3/alswitch-config
Configuration upload is successfully completed
```

Step 6 Verify the transfer to the TFTP server

a. Verify the transfer to the TFTP server by checking the log file. Click on **View > Log File**. The output should look similar to the following:

```
Mon Sep 16 14:10:08 2002: Receiving 'switch.confg' file from
192.168.1.2 in binary mode
Mon Sep 16 14:11:14 2002: Successful.
```

b. Verify the flash image size in the TFTP server directory. To locate it click on **View** > **Options.** This will show the TFTP server root directory. The output should be similar to the following, unless the default directories were changed:

```
C:\Program Files\Cisco Systems\Cisco TFTP Server
```

c. Locate this directory using the File Manager and look at the detail listing of the file. The file length in the **show flash** command should be the same file size as the file stored on the TFTP server. If the file sizes are not identical in size, check with the instructor.

Step 7 Restore the startup configuration file from the TFTP server

a. To restore the startup configuration file, first the switch must be erased. Then reconfigure the switch with just the VLAN 1 IP address of 192.168.1.2 255.255.255.0. Finally type the command **copy tftp startup-config** at the Privileged EXEC mode prompt as shown in the following:

```
Switch#copy tftp startup-config
Address or name of remote host []? 192.168.1.10
Source filename []? alswitch-confg
Destination filename [startup-config]? Accessing
tftp://192.168.1.10/alswitch-confg...
Loading alswitch-confg .from 192.168.1.10 (via Vlan1): !
[OK - 1622 bytes]
[OK]
1622 bytes copied in 22.796 secs (71 bytes/sec)
Switch#
```

Note: It is important that this process is not interrupted.

Was the operation successful? Yes

1900:

```
ALSwitch#copy tftp://192.168.1.3/alswitch-config nvram
TFTP successfully downloaded configuration file
```

Step 8 Test the restored startup configuration image (Not supported on the 1900)

Verify that the switch image is correct. To do this, cycle the switch power and observe the switch prompt. If it has returned to the name that was assigned to it in the original configuration, the restoration is complete. Type the command **show startup-config** to see the restored configuration.

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

```
Switch>enable
Switch#config terminal

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)#exit
ALSwitch(config)#interface Vlan1
ALSwitch(config-if)#ip address 192.168.1.2 255.255.255.0
ALSwitch(config-if)#no shutdown
ALSwitch(config-if)#exit
ALSwitch(config)#ip default-gateway 192.168.1.1
ALSwitch(config)#end


ALSwitch#show flash

Directory of flash:/

5   -rwx     2888547   Mar 02 1993 23:15:37  c2950-i6q4l2-mz.121-13.EA1.bin
6   -rwx         109   Mar 02 1993 23:18:10  info
7   drwx         832   Mar 02 1993 23:18:00  html
18  -rwx         109   Mar 02 1993 23:18:10  info.ver
22  -rwx         311   Mar 02 1993 23:23:07  env_vars
24  -rwx        1622   Mar 02 1993 00:59:20  config.text

7741440 bytes total (2871296 bytes free)


ALSwitch#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]

ALSwitch#copy startup-config tftp
```



```
Address or name of remote host []? 192.168.1.10
Destination filename [alswitch-confg]?
!!
1622 bytes copied in 0.044 secs (36864 bytes/sec)

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

ALSwitch#reload
00:24:41: %SYS-7-NV_BLOCK_INIT: Initalized the geometry of nvramoad
Proceed with reload? [confirm]

00:24:43: %SYS-5-RELOAD: Reload requested

C2950 Boot Loader (C2950-HBOOT-M) Version 12.1(11r)EA1, RELEASE SOFTWARE
(fc1)
Compiled Mon 22-Jul-02 18:57 by antonino
WS-C2950-24 starting...
Base ethernet MAC Address: 00:0a:b7:72:2b:40
Xmodem file system is available.
Initializing Flash...
flashfs[0]: 17 files, 2 directories
flashfs[0]: 0 orphaned files, 0 orphaned directories
flashfs[0]: Total bytes: 7741440
flashfs[0]: Bytes used: 4870144
flashfs[0]: Bytes available: 2871296
flashfs[0]: flashfs fsck took 10 seconds.
...done initializing flash.
Boot Sector Filesystem (bs:) installed, fsid: 3
Parameter Block Filesystem (pb:) installed, fsid: 4
Loading "flash:c2950-i6q4l2-mz.121-
13.EA1.bin"...###############################################################
###############################################################################
###############################################################################
###############################################################################
########################################

File "flash:c2950-i6q4l2-mz.121-13.EA1.bin" uncompressed and installed,
entry point: 0x80010000
executing...

           Restricted Rights Legend

Use, duplication, or disclosure by the Government is
subject to restrictions as set forth in subparagraph
(c) of the Commercial Computer Software - Restricted
Rights clause at FAR sec. 52.227-19 and subparagraph
(c) (1) (ii) of the Rights in Technical Data and Computer
Software clause at DFARS sec. 252.227-7013.

           cisco Systems, Inc.
           170 West Tasman Drive
           San Jose, California 95134-1706



Cisco Internetwork Operating System Software
```



```
IOS (tm) C2950 Software (C2950-I6Q4L2-M), Version 12.1(13)EA1, RELEASE
SOFTWARE (fc1)
Copyright (c) 1986-2003 by cisco Systems, Inc.
Compiled Tue 04-Mar-03 02:14 by yenanh
Image text-base: 0x80010000, data-base: 0x805A8000


Initializing flashfs...
flashfs[1]: 17 files, 2 directories
flashfs[1]: 0 orphaned files, 0 orphaned directories
flashfs[1]: Total bytes: 7741440
flashfs[1]: Bytes used: 4870144
flashfs[1]: Bytes available: 2871296
flashfs[1]: flashfs fsck took 9 seconds.
flashfs[1]: Initialization complete.
Done initializing flashfs.
POST: System Board Test : Passed
POST: Ethernet Controller Test : Passed
ASIC Initialization Passed

POST: FRONT-END LOOPBACK TEST : Passed
cisco WS-C2950-24 (RC32300) processor (revision E0) with 20839K bytes of
memory.
Processor board ID FHK0634Z08M
Last reset from system-reset
Running Standard Image
24 FastEthernet/IEEE 802.3 interface(s)

32K bytes of flash-simulated non-volatile configuration memory.
Base ethernet MAC Address: 00:0A:B7:72:2B:40
Motherboard assembly number: 73-5781-10
Power supply part number: 34-0965-01
Motherboard serial number: FOC06330DJG
Power supply serial number: PHI06290B8Q
Model revision number: E0
Motherboard revision number: B0
Model number: WS-C2950-24
System serial number: FHK0634Z08M

            --- System Configuration Dialog ---

Would you like to enter the initial configuration dialog? [yes/no]:
00:00:17: %SPANTREE-5-EXTENDED_SYSID: Extended SysId enabled for type vlan
00:00:20: %SYS-5-RESTART: System restarted --
Cisco Internetwork Operating System Software
IOS (tm) C2950 Software (C2950-I6Q4L2-M), Version 12.1(13)EA1, RELEASE
SOFTWARE (fc1)
Copyright (c) 1986-2003 by cisco Systems, Inc.
Compiled Tue 04-Mar-03 02:14 by yenanh
00:00:24: %LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to up
00:00:25: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1,
changed state to up
% Please answer 'yes' or 'no'.
Would you like to enter the initial configuration dialog? [yes/no]: n


Press RETURN to get started!

Switch>enable
Switch#config terminal
```



```
Switch(config)#interface vlan 1
Switch(config-if)#ip add 192.168.1.2 255.255.255.0
Switch(config-if)#no shutdown

Switch(config-if)#end
Switch#

Switch#copy tftp startup-config
Address or name of remote host []? 192.168.1.10
Source filename []? alswitch-confg
Destination filename [startup-config]?
Accessing tftp://192.168.1.10/alswitch-confg...
Loading alswitch-confg .from 192.168.1.10 (via Vlan1): !
[OK - 1622 bytes]
[OK]
1622 bytes copied in 22.796 secs (71 bytes/sec)
Switch#
Switch#
00:02:32: %SYS-5-CONFIG_NV_I: Nonvolatile storage configured from
tftp://192.168.1.10/alswitch-confg by console

Switch#reload
Proceed with reload? [confirm]

00:02:56: %SYS-5-RELOAD: Reload requested

C2950 Boot Loader (C2950-HBOOT-M) Version 12.1(11r)EA1, RELEASE SOFTWARE
(fc1)
Compiled Mon 22-Jul-02 18:57 by antonino
WS-C2950-24 starting...
Base ethernet MAC Address: 00:0a:b7:72:2b:40
Xmodem file system is available.
Initializing Flash...
flashfs[0]: 18 files, 2 directories
flashfs[0]: 0 orphaned files, 0 orphaned directories
flashfs[0]: Total bytes: 7741440
flashfs[0]: Bytes used: 4872192
flashfs[0]: Bytes available: 2869248
flashfs[0]: flashfs fsck took 10 seconds.
...done initializing flash.
Boot Sector Filesystem (bs:) installed, fsid: 3
Parameter Block Filesystem (pb:) installed, fsid: 4
Loading "flash:c2950-i6q4l2-mz.121-
13.EA1.bin"...###############################################################
###############################################################################
###############################################################################
###############################################################################
#######################################

File "flash:c2950-i6q4l2-mz.121-13.EA1.bin" uncompressed and installed,
entry point: 0x80010000
executing...

                Restricted Rights Legend

Use, duplication, or disclosure by the Government is
subject to restrictions as set forth in subparagraph
(c) of the Commercial Computer Software - Restricted
Rights clause at FAR sec. 52.227-19 and subparagraph
```



```
(c) (1) (ii) of the Rights in Technical Data and Computer
Software clause at DFARS sec. 252.227-7013.

           cisco Systems, Inc.
           170 West Tasman Drive
           San Jose, California 95134-1706


Cisco Internetwork Operating System Software
IOS (tm) C2950 Software (C2950-I6Q4L2-M), Version 12.1(13)EA1, RELEASE
SOFTWARE (fc1)
Copyright (c) 1986-2003 by cisco Systems, Inc.
Compiled Tue 04-Mar-03 02:14 by yenanh
Image text-base: 0x80010000, data-base: 0x805A8000


Initializing flashfs...
flashfs[1]: 18 files, 2 directories
flashfs[1]: 0 orphaned files, 0 orphaned directories
flashfs[1]: Total bytes: 7741440
flashfs[1]: Bytes used: 4872192
flashfs[1]: Bytes available: 2869248
flashfs[1]: flashfs fsck took 9 seconds.
flashfs[1]: Initialization complete.
Done initializing flashfs.
POST: System Board Test : Passed
POST: Ethernet Controller Test : Passed
ASIC Initialization Passed

POST: FRONT-END LOOPBACK TEST : Passed
cisco WS-C2950-24 (RC32300) processor (revision E0) with 20839K bytes of
memory.
Processor board ID FHK0634Z08M
Last reset from system-reset
Running Standard Image
24 FastEthernet/IEEE 802.3 interface(s)

32K bytes of flash-simulated non-volatile configuration memory.
Base ethernet MAC Address: 00:0A:B7:72:2B:40
Motherboard assembly number: 73-5781-10
Power supply part number: 34-0965-01
Motherboard serial number: FOC06330DJG
Power supply serial number: PHI06290B8Q
Model revision number: E0
Motherboard revision number: B0
Model number: WS-C2950-24
System serial number: FHK0634Z08M


Press RETURN to get started!


00:00:17: %SPANTREE-5-EXTENDED_SYSID: Extended SysId enabled for type vlan
00:00:20: %SYS-5-CONFIG_I: Configured from memory by console
00:00:20: %SYS-5-RESTART: System restarted --
Cisco Internetwork Operating System Software
IOS (tm) C2950 Software (C2950-I6Q4L2-M), Version 12.1(13)EA1, RELEASE
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```



```
00:00:23: %LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to up
00:00:24: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1,
changed state to down
00:00:25: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1,
changed state to up
00:00:55: %LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed
state to up

User Access Verification

Password:
ALSwitch>enable
Password:
ALSwitch#show running-config
Building configuration...

Current configuration : 1622 bytes
!
version 12.1
no service pad
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname ALSwitch
!
enable secret 5 $1$ke3B$B3oG6e/.FLlqKbko7f.Bt0

!
ip subnet-zero
!
spanning-tree mode pvst
no spanning-tree optimize bpdu transmission
spanning-tree extend system-id
!
!
interface FastEthernet0/1
 no ip address
!
interface FastEthernet0/2
 no ip address
!
interface FastEthernet0/3
 no ip address
!
interface FastEthernet0/4
 no ip address
!
interface FastEthernet0/5
 no ip address
!
interface FastEthernet0/6
 no ip address
!
interface FastEthernet0/7
 no ip address
!
interface FastEthernet0/8
 no ip address
!
```



```
interface FastEthernet0/9
 no ip address
!
interface FastEthernet0/10
 no ip address
!
interface FastEthernet0/11
 no ip address
!
interface FastEthernet0/12
 no ip address
!
interface FastEthernet0/13
 no ip address
!
interface FastEthernet0/14
 no ip address
!
interface FastEthernet0/15
 no ip address
!
interface FastEthernet0/16
 no ip address
!
interface FastEthernet0/17
 no ip address
!
interface FastEthernet0/18
 no ip address
!
interface FastEthernet0/19
 no ip address
!
interface FastEthernet0/20
 no ip address
!
interface FastEthernet0/21
 no ip address
!
interface FastEthernet0/22
 no ip address
!
interface FastEthernet0/23
 no ip address
!
interface FastEthernet0/24
 no ip address
!
interface Vlan1
 ip address 192.168.1.2 255.255.255.0
 no ip route-cache
!
ip default-gateway 192.168.1.1
ip http server
!
!
line con 0
 password cisco
 login
line vty 0 4
```



```
 password cisco
 login
line vty 5 15
 password cisco
 login
!
end

ALSwitch#
```

```
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
```


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**.

