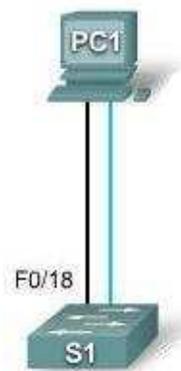


## Lab 2.5.2: Managing Switch Configuration File and Password recovery

### Topology Diagram



### Addressing Table

Device	Hostname / Interface	IP Address	Subnet Mask	Default Gateway
PC 1	Host-A	172.17.99.21	255.255.255.0	172.17.99.1
Switch1	VLAN99	172.17.99.11	255.255.255.0	172.17.99.1

#### Step 1: Create a basic configuration.

Use the following commands to configure a hostname, line access passwords, and the enable secret password.

```
Switch#configure terminal
Switch(config)#hostname ALSwitch
ALSwitch(config)#exit
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
```

Create VLAN 99 and assign user ports to this VLAN using the commands shown below. Return to privileged EXEC mode when finished.

```
ALSwitch(config)#vlan 99
ALSwitch(config-vlan)#name user
ALSwitch(config-vlan)#exit
ALSwitch(config)#interface vlan 99
ALSwitch(config-if)#ip address 172.17.99.11 255.255.255.0
```

```
ALSwitch(config-if)#no shutdown
%LINK-5-CHANGED: Interface Vlan99, changed state to up
ALSwitch(config-if)#exit
ALSwitch(config)#interface fa0/18
ALSwitch(config-if)#switchport access vlan 99
ALSwitch(config-if)#end
ALSwitch#
```

### Step 2: Configure the host attached to the switch.

Configure the host to use the IP address, mask, and default gateway identified in the addressing table at the beginning of the lab. This host acts as the TFTP server in this lab.

### Step 3: Verify connectivity.

To verify that the host and switch are correctly configured, ping the switch IP address that was configured for VLAN 99 from the host.

Was the ping successful? \_\_\_\_\_

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

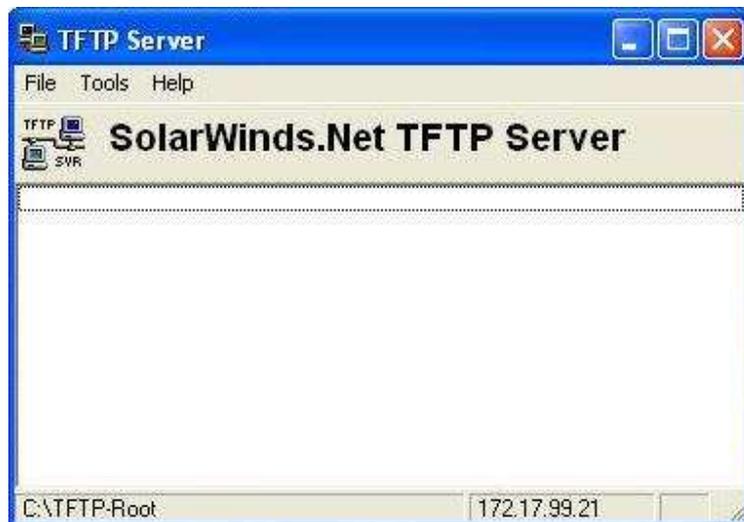
## Task 2: Starting and Configuring the TFTP Server

### Step 1: Start up and configure the TFTP server.

The TFTP server that is shown in this lab is the Solar Winds server.

Start the server on the host **Start > All Programs > SolarWinds 2003 Standard Edition > TFTP Server**.

The server should start up and acquire the IP address of the Ethernet interface, and use the C:\TFTP-Root directory by default.



## Task 3: Back Up and Restore a Configuration File from a TFTP Server

### Step 1: Copy the startup configuration file to the TFTP server.

In 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.

```
ALSwitch#copy running-config startup-config
```

```
Destination filename [startup-config]?[enter] Building configuration...  
[OK]
```

Back up the saved configuration file to the TFTP server with the command **copy startup-config tftp**. At the prompt, enter the IP address of the TFTP server:

```
AlSwitch#copy startup-config tftp  
Address or name of remote host []? 172.17.99.21  
Destination filename [alswitch-confg]? [enter]  
!!  
1452 bytes copied in 0.445 secs (3263 bytes/sec)#
```

### Step 2: Verify the transfer to the TFTP server.

Verify the transfer to the TFTP server by checking the command window on the TFTP server. The output should look similar to the following:

```
Received alswitch-confg from (172.17.99.11), 1452 bytes
```

Verify that the alswitch-confg file is in the TFTP server directory C:\TFTP-root.

### Step 3: Restore the startup configuration file from the TFTP server.

To restore the startup configuration file, the existing startup configuration file must be erased and the switch reloaded.

```
AlSwitch#erase nvram  
Erasing the nvram filesystem will remove all configuration files!  
Continue? [confirm]  
[OK]  
Erase of nvram: complete  
AlSwitch#  
AlSwitch#reload  
Proceed with reload? [confirm] [enter]
```

When the switch has reloaded, you must reestablish connectivity between the switch and the TFTP server before the configuration can be restored. To do this, configure VLAN 99 with the correct IP address and assign port Fast Ethernet 0/18 to VLAN 99. When you are finished, return to privileged EXEC mode.

```
Switch>enable  
Switch#configure terminal  
Enter configuration commands, one per line. End with CNTL/Z.  
Switch(config)#interface vlan 99  
Switch(config-if)#ip address 172.17.99.11 255.255.255.0  
Switch(config-if)#no shutdown  
Switch(config-if)#exit  
Switch(config)#interface fastethernet 0/18  
Switch(config-if)#switchport access vlan 99  
Switch(config-if)#end  
Switch#
```

After VLAN 99 is up, verify connectivity by pinging the server from the switch.

```
Switch#ping 172.17.99.21
```

If the ping is unsuccessful, troubleshoot the switch and server configuration. Restore the configuration from the TFTP server with the **copy tftp startup-config** command.

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

```
Switch#copy tftp startup-config
```

```
Address or name of remote host []? 172.17.99.21
Source filename []? alswitch-config
Destination filename [startup-config]? [enter]
Accessing tftp://172.17.99.21 /alswitch-config...
Loading alswitch-config from 172.17.99.21 (via Vlan99): !
[OK - 1452 bytes]
1452 bytes copied in 9.059 secs (160 bytes/sec)
Switch#
00:21:37: %SYS-5-CONFIG_NV_I: Nonvolatile storage configured from
tftp://172.17.99.21 /alswitch-config by console
Switch#
```

Was the operation successful? \_\_\_\_\_

#### Step 4: Verify the restored startup configuration file.

In privilege EXEC mode, reload the switch again. When the reload is complete, the switch should show the ALSwitch prompt. Type the command **show startup-config** to verify that the restored configuration is complete, including the line access and enable secret passwords.

### Task 4: Recover Passwords on the Catalyst 2960

#### Step 1: Reset the console password.

Have a classmate change the console and vty passwords on the switch. Save the changes to the startup-config file and reload the switch.

Now, without knowing the passwords, try to gain access to the switch.

#### Step 2: Recover access to the switch

Make sure that a PC is connected to the console port and a HyperTerminal window is open. Turn the switch off. Turn it back on while holding down the **MODE** button on the front of the switch at the same time that the switch is powered on. Release the **MODE** button after the SYST LED stops blinking and stays on.

The following output should be displayed:

```
The system has been interrupted prior to initializing the flash files
system. The following commands will initialize the flash files system,
and finish loading the operating system software:
flash_init
load_helper
boot
```

To initialize the file system and finish loading the operating system, enter the following commands:

```
switch:flash_init
switch:load_helper
switch:dir flash:
```

Note: Do not forget to type the colon (:) after **flash** in the command **dir flash:**.

Type **rename flash:config.text flash:config.old** to rename the configuration file. This file contains the password definition.

### Step 3: Restart the system.

Type the **boot** command to boot the system. Enter **n** when prompted to continue the configuration dialog, and **y** when asked if you want to terminate auto-install.

To rename the configuration file with its original name, type the command **rename flash:config.old flash:config.text** at the privileged EXEC mode prompt.

Copy the configuration file into memory:

```
Switch#copy flash:config.text system:running-config
Source filename [config.text]?[enter]
Destination filename [running-config][enter]
```

The configuration file is now reloaded. Change the old unknown passwords as follows:

```
ALSwitch#configure terminal
ALSwitch(config)#no enable secret
ALSwitch(config)#enable secret class
ALSwitch(config)#line console 0
ALSwitch(config-line)#password cisco
ALSwitch(config-line)#exit
ALSwitch(config)#line vty 0 15
ALSwitch(config-line)#password cisco
ALSwitch(config-line)#end
ALSwitch#copy running-config startup-config
Destination filename [startup-config]?[enter] Building configuration...
[OK]
ALSwitch#
```

Terminate your console connection and then reestablish it to verify that the new passwords have been configured. If not, repeat the procedure.

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