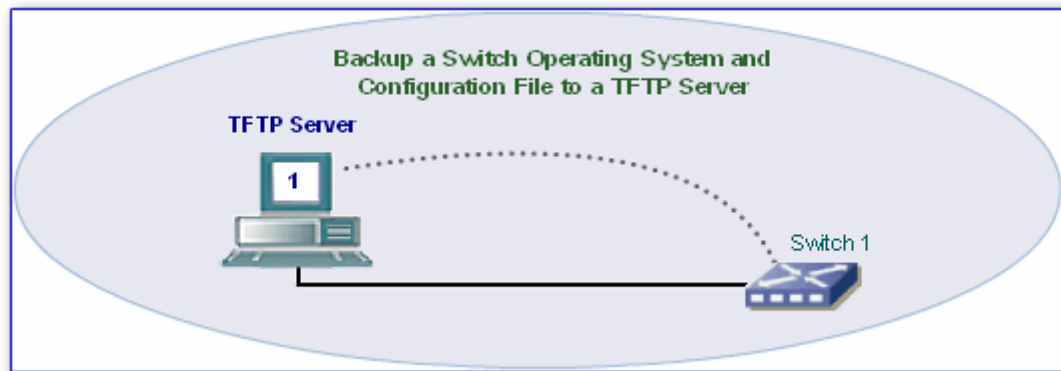**Portfolio Exercise 4a: Saving and Restoring a Switch Configuration and IOS**

Objectives

- Configure, save, and restore a switch configuration
- Manage switch operating system image files
- *Collect portfolio evidence for part of Grading Criteria P4*

Scenario

This practical provides you with the opportunity to demonstrate that you can configure a switch with a basic configuration, backup the configuration file and operating system image to a TFTP server and restore the configuration.

Task 1: Document the Configuration

a. Specify the configuration of the switch and the TFTP Server

Using the diagram above for reference, fill in the table below. Detail such as the switch name and IP addresses you may decide for yourself.

	Switch 1
Name	
Enable Secret Password	
VTY and Console Password	
VLAN IP Address and Subnet Mask	
Gateway IP Address and Subnet Mask	

Now decide on and IP address for the TFTP server and fill the table below.

	IP Address/CIDR Mask	**Default Gateway**
TFTP Server		

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TTask 2: Configure the Switch and TFTP Server

You will need to configure the switch as follows:-

- o Set the switch name and the enable, console and VTY passwords
- o Configure the VLAN management port with an IP address and subnet mask.
- o Specify the default gateway IP address and subnet mask.

a. Configure the switch

As a reminder, the various configuration commands are specified below. You will need remember which mode to be in for yourself, e.g. global configuration mode etc.

Delete any existing configuration including the startup configuration and any **vlan** database information stored in a **vlan.dat** file.

Set the switch's name using the **hostname** command

Set the enable password using the **enable secret** command

Set the line console and vty passwords using the **password** and **login** command

Set the IP address and subnet mask on the VLAN port using the **ip address** command and activate the port using the **no shutdown** command

Set the default gateway IP address and subnet mask using the **ip default-gateway** command.

Copy the operating system file to a TFTP server using the **copy flash:image_name tftp** command for a 2950. You cannot copy the IOS to a TFTP server with a 1900 switch.

Copy the configuration file to a TFTP server using the **copy flash:config.text tftp** command for a 2950 switch or the **copy nvram tftp://tftp_server_ip_address/file_name** command for a 1900 switch.

~~A screenshot of your running configuration is required~~

*Don't forget to save your configuration using the **copy run start** command*

b. Configure the TFTP Server

Configure the TFTP server with the IP address, subnet mask and default gateway as specified in your documentation.

Install the TFTP server software and configure it to store your files within an appropriate folder.

c. Verify Connectivity

If you have configured the switch and TFTP server correctly you should be able to…

- • Ping the Switch from the TFTP server

~~A printout showing output from ipconfig and the ping result is required~~

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Portfolio Exercise 4a: Saving and Restoring a Switch Configuration and IOS

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Task 3: Backup the IOS and Configuration to the TFTP Server

Now you have completed the configuration of the switch and set up a TFTP server you need to backup the switch's IOS image and your configuration file to the server.

a.   Backup the switch operating system

Write down the command you are going to use to copy the switch IOS image to the TFTP served.

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Copy the IOS image from Flash to the TFTP server, using the appropriate command

b.   Backup the switch configuration

Copy the switch configuration to the TFTP server.

Write down the name you gave to the backed up configuration file. _____

c.   Verify transfer of files

Check the TFTP log to verify that you have successfully transferred both the IOS image file and your configuration file.

~~A screenshot showing your saved files stored by the TFTP server is required~~

d.   Restore your switch configuration

Erase any existing configuration from the switch and reload it. You should see the default switch prompt when it reloads. Reconfigure the switch with the same IP address you used before you erased the configuration. This is so that you can connect to the TFTP server again.

Restore the backed up switch configuration from the TFTP server. You should see the switch copying the file. If the procedure completes successfully, you should also see your hostname revert back to the hostname in your saved configuration.

~~A screenshot showing that you restored the configuration is required~~

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Evidence

Please supply the following evidence to support your implementation of this task

~~Screenshots and configuration files required~~

- Screenshot or printout showing the switch's configuration, with annotation pointing out parts you specifically configured
- Screenshot showing TFTP server ipconfig and ping results
- A screenshot showing your saved files stored by the TFTP server is required
- A screenshot showing that you restored the configuration file

Please annotate, sign, date, put the portfolio exercise number and task number on all evidence pages