## Activity#1: Switch Lab

**Purpose:** By the end of this lab you should know how to:

* Log into a CISCO switch using Hyperterminal.
* Look up the configuration.
* Use basic IOS functionality.
* Change modes in IOS.
* Reconfigure a CISCO switch.

Please follow the steps below. Answer questions in the boxes.

**Switch1** or **Switch2**

**Part 0: Power off your switch & turn it back on.** (Note that your switch has no power button, and you have to unplug the power cord to turn it off.) This action is for resetting the switch to the initial configuration. [ only if you are using physical devices ]

**Part 1: Connect & Login \***

1. Start up HyperTerminal:

**Start menu > programs>Accessories>Communications**

1. Name the connection with your “group name”.
2. Ensure that the connection settings match those below:

* Connect using **COM1**(Serial port)
* Under port settings:
  1. **Bits per second:** 9600
  2. **Data bits:** 8
  3. **Parity:** None
  4. **Stop bits:** 1
* **Flow Control:** Hardware

1. **IMPORTANT:** Hit **ENTER** once to bring up the prompt.

[ \* Points 1 … 4, only if you are using physical devices ]

c) You might need to wait until the switch finishes booting and the prompt appears.

1. Make sure there is an Ethernet cable connecting the network interface card (NIC) on the back of your computer to any port of your switch. Write down the **port number** (written on the switch above the plug) your cable is plugged into.
2. Pay attention to how routers and switches are connected. Write down the **port number** of the port of the switch that connects to the router.
3. Configure on PCs an IP address (in network 192.168.1.0/24)
4. Open a command prompt (DOS prompt) on your computer (real or virtual).
5. Type “ping <*ip-address-of-some-PC*>” (i.e. “ping 212.163.59.10” or “ping 220.163.57.10”), and press **ENTER** to ping that PC.
6. Can you ping?

(If your answer is “No”, then try it again in a couple of minutes. If your answer is “No” again, then stop and report this to the teachers.)

**Part 2: Check the configuration on the switch**

1. At the switch prompt, type “show running-config” and press **ENTER**

b) Is it a valid input?

1. Now type "enable" and press **ENTER**. (This will change the mode from **User Mode** to **Privileged Exec Mode**)

d) Type "show running-config" and press **ENTER** again.

(When you see “----- More -----“, hit **SPACE** **BAR** to display more information)

e) What are the IP address and the Subnet Mask of this switch? (Hint: You will find this information under “interface vlan 1” in the config information that was displayed. They are displayed in the same line next to each other and the first number of Subnet Mask is 255)

1. Type “show mac-address-table” and press **ENTER**.

g) From the table displayed, find the MAC address of your computer. (**Hint**: Use the **port** number you used to connect to your PC for locating the corresponding record in the table end pay attention to the notation in use to express MAC address…)

**Part 3: IOS functionality**

1. At the switch prompt, type “?”. It gives a list of all available commands. What does the “reload” command do?
2. Type in "show ?" (with a space in between). What does the “show history” command do?
3. Type in "show ip ?" (space in between). What does the “show ip interface” command do?
4. Type in "sh?" (with no space in between). Then type in "con?" (again, no space in between). What happened with each? What is the "?" operator helping with in this context?
5. Type in "sh" then hit the <TAB> key. What happens? Now type in "disc" and hit

<TAB>. What does hitting <TAB> do?

**Part 4: Configure the switch.**

1. Configure the switch with the host name MyFirstSwitch.

Switch>enable

Switch#config terminal

Switch(config)#hostname MyFirstSwitch

1. Set the privilege exec mode password to *cisco*.

MyFirstSwitch(config)#enable password cisco

1. Set the privilege exec mode secret password to cisco123.

CustomerSwitch(config)#enable secret cisco123

1. Set the console password to cisco456.

MyFirstSwitch(config)#line console 0

MyFirstSwitch(config-line)#password cisco456

1. Configure the console line to require a password at login.

MyFirstSwitch(config-line)#login

1. Set the vty password to cisco789.

MyFirstSwitch(config-line)#line vty 0 15

MyFirstSwitch(config-line)#password cisco789

1. Configure the vty to require a password at login.

MyFirstSwitch(config-line)#login

MyFirstSwitch(config-line)#end

**Part 5: Finishing Up**

Type “exit” and press ENTER. Repeat three times to logout to **User Mode**.

EXTRA

* No ip-domain lookup
* Set the right connections with console cable