Using a hardware based Firewall / Router
Please answer questions on Page Three

1. Logon to Windows 7 using the provided password. Bring up a command prompt(**Start/Programs/Accessories/Command Prompt**), and type the following command:

    i**pconfig /all** (in all cases, there is a space AFTER ipconfig)

    Look at the front of the list for the section titled **Ethernet adapter**
    Write down the **IPv4 address** of your computer. Write down the address of the **DHCP server**. Write down the address of your **Default gateway**.

2. Type the following command from a command prompt (to release the IP address assigned to the computer):

    ipconfig /release

3. Disconnect the yellow network cable from the back of your computer (see me for details), and plug it into the Internet port on the back of the router. Take the cable supplied with the router and plug it into the port where you removed the cable from (on the back of the computer), and plug the other end of the cable into any of the four numbered ports on the back of the router.

4. You will need to set the router to the factory defaults. Do this by first plugging the router into a power supply, then with a pen, push in and hold the small round button on the back of it (for at least 20 seconds) until the power light flashes. Once the lights stop flashing, continue with the next step.

5. Type the following command from a command prompt (to obtain a new IP address):
    ipconfig /renew

6. Repeat step 1 (you don't need to logon again, but do retype the **ipconfig /all** command). Record the NEW **IPv4, DHCP server**, and **Default gateway** addresses.

7. Start Internet Explorer. Enter the following address into the address bar: http://192.168.1.1. This is the ip address of your router. At the logon box enter **admin** (lower case and no quotes) in BOTH the **Username** and **Password** fields.

8. Click the **Setup** tab and write down the **Device IP** address. Click on the **DHCP** tab and write down the **starting** and **ending** IP addresses. Subtract the starting from the ending address (and add 1 because both the starting and ending addresses are included) to determine how many computers this router is configured to support. Record that value. On the **System Summary** tab note the Internet (**WAN1**) IP Address. Does this address look more like the original address (step 1) or your NEW address (step 6)?

9. To slightly improve security, click on the **Setup** tab, then the **Password** sub-tab, and change the **Gateway Password** to **Cis420**. Click **Save Settings**. Also click on the **UPnP** sub-tab and confirm that the UPnP Function is set to **No**. Scroll to the bottom of the screen and click on **Save Settings**. Wait about 10 seconds before proceeding to the next step.

10. Repeat step 7, but instead use the new password from step 9. Does it work now?

11. From Internet Explorer, enter the following URL:

    ftp://ftp.microsoft.com

    You will see an FTP directory from the Microsoft FTP server. Click on any file or directory link in the window to verify that you could download. Close Internet Explorer completely.

12. Reopen Internet Explorer and log back onto the firewall. Complete the following steps:

    Click on the **Firewall** tab
    Click the **Access Rules** sub-tab
    Click **Add New Rule**
    Change the **Action** drop-down to say **Deny**
    In the **Service** drop-down, select **FTP**
    From the **Source Interface** drop-down select **Any**
    Select **Any** in both the **Source** and **Destination IP** drop-downs
    Click **Save Settings**

13. Repeat step 11, but select a different (from your first attempt) link on the FTP page. Are the results different from when you did this the first time? What message do you get?

14. Disconnect the cables and router, and put everything back the way it was.

Answers to questions on the LAB. Submit to instructor at the end of class.

Your Name: _____

1. IP Address of your computer _____

   DHCP server address _____

   Default Gateway address _____

6. IP Address of your computer _____

   DHCP server address _____

   Default Gateway address _____

8. Device IP Address _____

   Starting Address _____

   Ending Address _____

   Number of possible addresses _____

   WAN address like step 1 or 6? _____

10. Does it work with the new PW? _____

11. Are the results different? _____

   Message? _____

   . _____

   . _____

   . _____

FOR 10 POINTS EXTRA CREDIT: With the firewall connected, you can connect to my

website, Amazon, Yahoo, most anywhere EXCEPT http://www.chaffey.edu &

http://blackboard.chaffey.edu . WHY?_____

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