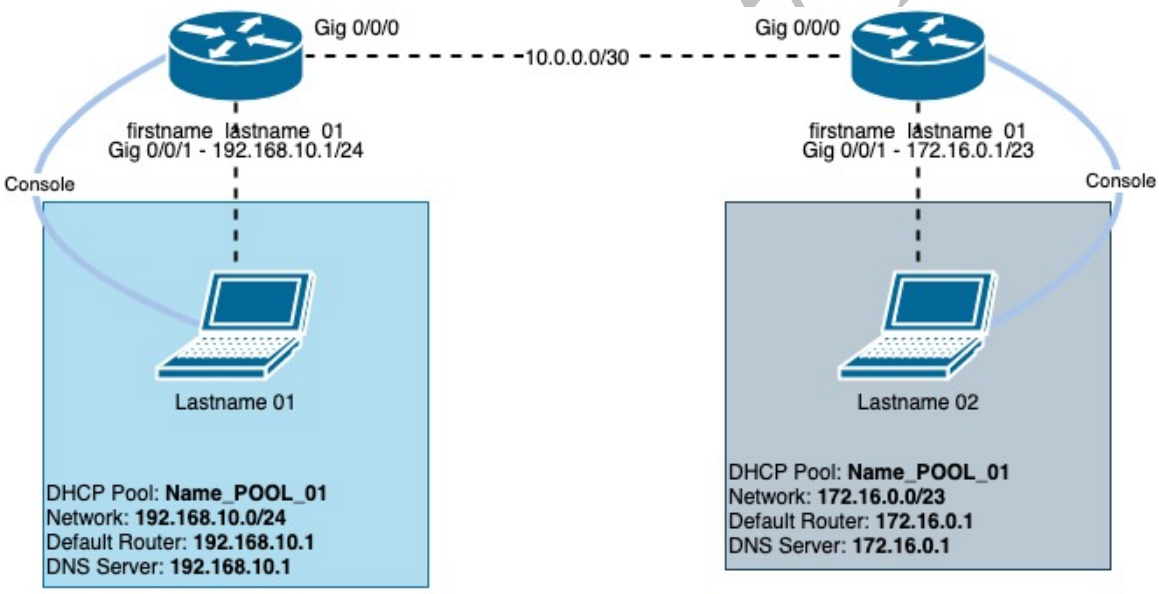
CSC387 Lab 01 – Basic IOS Configuration

Instructions

It's time to start configuring some of the virtual equipment. The previous administrator did not finish configuring these devices. In fact, why don't you go ahead and start from a blank slate…that would be great!

The following should be completed on Packet Tracer. Please take a screen shot of each of the Verification Steps (below) and submit in a labeled single word document using the screenshot guide in the class content on D2L. Make sure your device names are visible in the screen shot! Don't forget to save your Packet Tracer file.

Network Diagram



Basic IOS Configuration

1. Configure the following passwords on the devices:
   a. Console: **cisco**
   b. VTY: **telnet**
   c. Enable: **cisco**
   d. Use the command to encrypt all passwords

2. Set a banner message of the day on each of the routers to give a meaningful description as to what they are**.**

3. Set a hostname on each of your routers to **<firstname>_<lastname>_01** and **<firstname>_<lastname>_02** (e.g. scott_paulsen_01 and scott_paulsen_01).

4. Create a user account for yourself along with a password.

    - Configure the console, auxiliary, and VTY lines to use the local login authentication.

Verification Step 1

5. Set a description on each interface (e.g. connection to firstname_lastname_02).

6. Assign an IP address to each interface using a **10.0.0.0/30** subnet mask to connect the two routers together. The firstname_lastname_01 router should take the lower of the two IPs.

Verification Step 2

7. On the internal side, configure the interface of firstname_lastname_01 to **192.168.10.0/24** and firstname_lastname_02 to **172.16.0.0/23.**

8. Turn off IP domain lookups on each of the routers.

Verification Step 3

DHCP

1. On the firstname_lastname_01 router, configure DHCP with the following guidelines:
    a. Excluded addresses: **192.168.10.1**
    b. Pool Name: **Name_POOL_01** (e.g. Paulsen_POOL_01)
    c. Network: **192.168.10.0/24**
    d. Default router: **192.168.10.1**
    e. DNS server: **192.168.10.1**

2. On the firstname_lastname_02 router, configure DHCP with the following guidelines:
    a. Excluded addresses: **172.16.0.1**
    b. Pool Name: **Name_POOL_02** (e.g. Paulsen_POOL_01)
    c. Network: **172.16.0.0/23**
    d. Default router: **172.16.0.1**
    e. DNS server: **172.16.0.1**

3. Connect a laptop to the GigabitEthernet 0/0/1 interface on each of the routers, set it to DHCP, and verify that it is able to get an address. If you are only testing with one laptop, you will have to do this one at a time.

Verification Step 4

4. When your laptop has an IP address, you should be able to Telnet into the router that you are connected to. If you are on Windows, use Putty or install the telnet client.

Verification Step 5

SSH

1. Pick one of the two routers to set SSH up on. Configure SSH with the following guidelines:
    a. IP domain name: **dsu.edu**
    b. Crytpo Key: **rsa**, size of **1024**
    c. SSH version: **2**

Verification Step 6

Verification Steps

1. When you log out of the router, you should be prompted to enter your username and password. At this point, you will also see the MOTD. Lastly, when entering privileged exec mode, you will also need a password.

2. Firstname_lastname_01 and firstname_lastname_02 should be able to ping each other with their WAN interfaces (gig 0/0/0).

3. From privileged exec (not in config mode), type some sort of command that does not exist to see if it attempts to perform a DNS lookup. It'll take a while if it does, you'll know.

4. From the laptop, open the command prompt and do an **ipconfig /all**. When you find your Ethernet Adapter, you should see that DHCP is enabled and that you received and IPv4 address. If you have VMware installed, make sure you are looking at your actual physical adapter, not a virtual one.

5. From one of the laptops, telnet into the router and show that you are able to successfully log in.

6. Verity you are able to SSH from your laptop to the router that you have configured SSH access on. Show that you can log in.

What to Turn In

When you have finished the lab, you have two options:

1. Go through each of the verification steps and take a screenshot. Please try to show each step in a single, clear screenshot to cut down the number of images. Also, paste all screenshots into a single Word/PDF document. Do not upload them to D2L as individual images.