nsIT 3850 Computer System Administration  
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**Laboratory # 5 - Domain Name System (DNS) Configuration**

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1. **Objectives**
2. Explain what is a domain name, TLD and DNS zone
3. Explain the DNS tree structure and the resource records
4. Explain how a DNS works.
5. Install and configure a DNS server.
6. **Material Required**

A RHEL Linux VM.

1. **Activity**
2. Go through the DNS material posted on Canvas.
3. The RHEL VM needs to have two network interfaces; one connected to NAT and the other connected to VMnet2 or ‘Private to my Mac’ (for MacOS users).
4. Have your RHEL server0 configured as a DNS server. Use the 3rd subnet of 192.168.100.0/27, assign the IP 192.168.100.65 and Mask 255.255.255.224 to your network adapter connected to the vSwitch VMnet2 or ‘Private to my Mac’ (for MacOS users).
5. Once the /etc/resolv.conf file is correctly configured, use the command sudo chattr +i /etc/resolv.conf to prevent the file updated automatically.
6. Once everything is correctly configured, take a snapshot of the current state of your system. We will need that configuration for our next Lab.
7. **Review Questions**

**\*Important\*. For each question where you are required for a screenshot, include the screenshot that clearly demonstrates you completed that step successfully.** Include any commands you executed for each step as well, if applicable**. All the screenshots for this lab and future labs must include your pawprint in the command prompt or have other information visible that identifies you (i.e. type/draw your pawprint).** This is to ensure that you are submitting your own work.

Answer the following questions and perform the following tasks. Construct your report in a document to submit on Canvas. Make sure to read the directions and the rubric carefully!

Graphical user interface, text

Description automatically generatedTo demonstrate the correct configuration of the DNS in your system, take screenshots of the below commands execution, the output should be similar to examples shown in the module on Canvas.

$ nslookup

A screenshot of a computer

Description automatically generated with medium confidenceserver0.infotc3850.com

A screenshot of a computer

Description automatically generated with medium confidence$ nslookup 192.168.100.65

A screenshot of a computer

Description automatically generated with medium confidence

Graphical user interface, text

Description automatically generated

$ dig

Graphical user interface, text

Description automatically generated$ dig server0.infotc3850.com

Graphical user interface, text

Description automatically generated$ dig -x 192.168.100.65

$ ping -c 4 server0.infotc3850.com

Graphical user interface, text

Description automatically generated

Graphical user interface, text

Description automatically generated

$ ping -c 4 infotc3850.com

**Note**. You do not need to have any previous configuration in this system, so if you want to have a fresh RHEL installation you can, or restore a previous snapshot. Otherwise, you can follow the steps on Canvas to disable the DHCP server.