CIS232 – Homework - NAT

This assignment requires that you successfully configure your virtual server as a NAT/Masquerading server.
Requirements:
- You must have successfully completed the DHCP assignment before starting this assignment.
- You'll need to add a second network card to your VMWare Server and then configure that card with a static IP address. The IP address must be on the college network. Each student has been assigned an IP address for use in this assignment. Please refer to the below table for your IP address.
- Revise DHCP settings as necessary to ensure that all necessary TCP/IP settings needed at the client machine are received from the DHCP server.

Use the IP Address Assigned to you for the External card. DNS, subnet and Gateway settings for the external card are: DNS: 172.16.110.11 & 172.16.110.18 Subnet: 255.255.0.0 Gateway: 10.131.0.1	
Name	**IP Address**
Binger, Ryan	10.131.1.220
Chaves, Brandon	10.131.1.221
Dellasandro, Rock	10.131.1.222
DiPrimio, Steven	10.131.1.223
Downing, Stephen	10.131.1.224
Malcolmson, Robert	10.131.1.232
Medeiros, Jarrod	10.131.1.225
Moore, Seth	10.131.1.226
Tavares, Edmilson	10.131.1.227
To, Anthony	10.131.1.230
Yen, Johnson	10.131.1.231

After testing your configuration to ensure it works, answer the following questions and provide screenshots where appropriate.
Take the screenshots after you've confirmed it works and if you've made changes to a configuration after taking the snippet, please don't forget to update the image.

Server
1. Provide a screenshot of the full summary tab within VM Settings screen of your Virtual Server (web client). (I need to see the adapter(s) and the network that each is on.)
2. While in Yast / DHCP Server, provide a screenshot of the Interface Configuration/Card Selection screen. (It's called *Interface Configuration* if Yast is set to expert settings and *Card Selection* if it's not set to Expert settings.)
3. What is the name of your server's internal card? Note: any questions regarding the internal card settings will refer to this card as *internal* (the card's name is likely eth0 but please confirm)
4. What is the name of your server's external card? Note: any questions regarding the external card settings will refer to this card as *external* (the card's name is likely eth1 but please confirm)
5. Display the contents of the /etc/sysconfig/network/ifcfg-*internal* file.
6. Display the contents of the /etc/sysconfig/network/ifcfg-*external* file.
7. Execute the wicked command to display the adapter information for all adapters. Include the command and its output.
8. Display the last 3 or 4 lines of the /etc/resolv.conf file
9. Display the contents of the /etc/dhcpd.conf file.
10. Display the contents of the /var/lib/dhcp/db/dhcpd.leases file.

11. While in Yast's Firewall configuration screen, provide the following screenshots:
- **a.** Startup
- **b.** Interfaces – make sure I can see all columns of information
- **c.** Allowed Services for the External Zone
- **d.** Allowed Services for the Internal Zone
- **e.** Masquerading

12. Confirm you can access the Internet. Ping www.bristolcc.edu 3 times (-c 3). Provide the prompt, the command and its output as your answer to this question.

13. Open a browser and access BCC's home page. Provide a screenshot which confirms access was successful. Include your entire virtual window, including the title bar, in the screenshot.

Client

1. Provide a screenshot of the full summary tab within VM Settings screen of your Virtual Client (web client). If you're using the desktop client then a screenshot of the hardware tab within VM Settings.

2. What is the name of your client's network card? Note: any questions regarding the card settings will refer to this card as *netname*

3. Use the ifconfig command to show me <u>*only*</u> the settings for *netname*

4. Show me the contents of the /etc/sysconfig/network/ifcfg-*netname* file.

5. Show me the contents of the /var/lib/wicked/lease-*netname*.dhcp-ipv4.xml file

6. Confirm you can access the Internet. Ping www.bristolcc.edu 3 times (-c 3). Provide the prompt, the command and its output as your answer to this question.

7. Open a browser and access BCC's home page. Provide a screenshot which confirms access was successful. Include your entire virtual window, including the title bar, in the screenshot.