Linux 1
CPTR 2224
Lab 09

- Contact your instructor with your questions about the assignments.
- The student must insure all the answers are free from any malware.
- The student must ensure all answers are legal as defined by the class syllabus.
- All parts of your answers must be neat and easy to read.
- Paragraphs are at least four properly constructed English sentences.
- Embedding documents within documents does not work with the D2L Bright Space assignments.
- Plagiarism will not be tolerated.
- Unless noted, all lab sections must be done as unprivileged login.
- Labeling answers is highly recommended.

9. Lab 09: CIFS Networking, NTP and Cron

9.1. Upload each answer to the D2L Bright Space Assignment section 9.1 before the due date found in the 2224a.pdf document. Submit the entire text file generated by the script command or similar containing the following.

9.1.1. Install the class VPN software on your class virtual machine. Connect to the class VPN server before completing the following commands.
9.1.2. Use the **ip addr sh** command to report your class virtual machine IP addresses. Please label your answer.
9.1.3. Use the **ip -s link sh** command. Please label your answer.
9.1.4. Use the **ip route** command. Please label your answer.
9.1.5. Use the **ip maddr sh** command. Please label your answer.
9.1.6. Use the **ip neigh sh** command. Please label your answer.
9.1.7. Use the **ip tunnel sh** command. Please label your answer.
9.1.8. Use the **ip rule sh** command. Please label your answer
9.1.9. Successfully ping an external host 3 times from your Linux system.
9.1.10. Show the result of running the fortune program. Please label your answer.
9.1.11. Identify if an AI type program was used to complete this lab section. If an AI program is used, identify the AI system used.

9.2. Upload each answer to the D2L Bright Space Assignment section 9.2 before the due date found in the 2224a.pdf document. Submit a Portable Document Format (PDF) or word processing file containing the following.

9.2.1. Provide evidence your class Linux VM successfully connected to a remote CIFS or SMB share.
9.2.2. Provide evidence of listing files on a CIFS or SMB share.
9.2.3. Provide evidence of successfully copying at least five files from the SMB share to your class Linux system.
9.2.4. Provide documentation that explains how to connect to an SMB share and copy files from the share to the local host.
9.2.5. Identify if an AI type program was used to complete this lab section. If an AI program is used, identify the AI system used.

9.3. Upload each answer to the D2L Bright Space Assignment section 9.3 before the due date found in the 2224a.pdf document. Submit a Portable Document Format (PDF) or word processing file containing the following.

9.3.1. Successfully configure your Linux system to synchronize time using at least one NTP European pool server. Provide the contents of your NTP configuration file showing your login name, system name, and at least one NTP pool server. The configuration file must show at least one change you made. Please label your answer.
9.3.2. Show the log file or command line operation of successful time synchronization with NTP. Please label your answer. Consider using the command, “timedatectl status”. It must show European NTP servers.
9.3.3. On the command line only, provide the complete output of “/etc/chrony.conf” and “/etc/chrony.d/pool.conf” files.
9.3.4. Identify if an AI type program was used to complete this lab section. If an AI program is used, identify the AI system used.

9.4. Upload each answer to the D2L Bright Space Assignment section 9.4 before the due date found in the 2224a.pdf document. Submit the entire text file(s) generated by the script command or similar containing the following.

9.4.1. The remarks identify the bash shell script purpose, outside help credit, author, and creation date.
9.4.2. The script will write the current day and time to a file.
9.4.3. The script will write the current output of the fortune program to the same file.
9.4.4. Provide the output file showing the file has run at least four times. Note: the system must have AC power to work using the crontab or at commands. All runs will occur at the same time each hour.
9.4.5. Provide a copy of the source code in a separate document.
9.4.6. Provide the output of “sudo cat /var/log/messages | grep CRON”

9.4.7. Identify if an AI type program was used to complete this lab section. If an AI program is used, identify the AI system used.