

Fall Bootcamp Homework 2 Rubric

Linux + Windows Week

Questions (10 points)

Each question is 2 points (5 total questions). Grade based on accuracy and completeness.

1. What are the purposes of the following directories in the Linux File System? **(0.4 points per directory)**
 - a. /etc, /home, /root, /var, /usr
2. What is the command used to change file permissions such as read, write, and execute? What are the two variants of a command to change the permissions of a file called "script.sh" so that *only you* can execute it? **(1 point for each command)**
3. In a couple of sentences, explain the concept of Active Directory and domains. What is the role of the server that typically provides Domain Name Services (DNS)? Why is it convenient to domain join computers? **(1 point for explanation; 0.5 for other 2 questions)**
4. What is the PowerShell command to view the current Windows Defender Firewall rules? What is the PowerShell command to create a new firewall rule that blocks incoming HTTP traffic? **(1 point each)**
5. What are the most common commands used to manage services in Linux? What is the most common program used to manage services in Windows? **(1 point each)**

Linux Homework (20 points)

5 points for each. Grade based on documentation (screenshots, details, etc.) and correctness (whether or not they actually solved the issue and proved it).

1. I can't SSH into the Linux box with root. Can you help fix this?
 - a. PermitRootLogon yes; systemctl enable --now ssh
2. For some reason the database is only accessible locally. It should ONLY be accessible from the Windows box.
 - a. bind-address set to Windows IP address in **/etc/mysql/mariadb.conf.d/50-server.cnf**
3. To secure FTP, make sure anonymous login is disabled and only regular FTP is available.
 - a. Remove anonymous in vsftpd, stop + disable tftp
4. I'm not sure why, but whenever I use vim, it enters nano, and whenever I use nano, it enters vim. Can you fix this?
 - a. Fix binaries (vim.real and nano.real) in /usr/bin

Windows Homework (20 points)

Troubleshoot the following issues on the Windows VM described by clients

1. Fix the RDP permissions so that only the CoreEngineer user can RDP. No other users should be able to RDP.
 - a. Modified Remote Desktop Users group and proved only CoreEngineer can RDP. Other methods of doing this are accepted
2. I know you just fixed the database, but the website I have should be displaying the data in the only table I've set up in the database. I've already configured the site to display everything properly, but it seems it cannot connect to the Linux box's database.
 - a. Configured the website to access database with correct user and password

3. Our new intern seemed to mess up the firewall rules this past week. Can you fix them and make sure HTTP, HTTPS, database, RDP, ping, and SMB are allowed?
 - a. Turned on all firewalls and created rules for all protocols. Ping has a rule in the list already, and can be enabled.
4. I'm moving the website to production, so it needs a proper domain. Can you add a DNS record so that the website can be accessed by the Linux VM by visiting cafe.space.station?
 - a. DNS record created and proved that it can be accessed via the Linux VM

Deliverables

The person should only submit 1 PDF. Otherwise, give them 50% of the points they earned.