

# Fall Bootcamp Homework 2

Linux + Windows Week

## Questions (10 points)

Answer the following questions

1. What are the purposes of the following directories in the Linux File System?
  - 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?
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?
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?
5. What is the most common command used to manage services in Linux? What is the most common program used to manage services in Windows?

## Initial Lab Setup

1. Connect to the VPN and visit `kamino.sdc.cpp`
2. Deploy the `CCDC_Fall_Bootcamp_2026` pod

## Linux Homework (20 points)

Troubleshoot the following issues on the Linux VM described by clients

1. I can't SSH into the Linux box with root. Can you help fix this?
2. For some reason the database is only accessible locally. It should ONLY be accessible from the Windows box.
3. To secure FTP, make sure anonymous login is disabled and only regular FTP is available.
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?

## 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.
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.
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?
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 visiting `cafe.space.station`?

## **Deliverables**

In a single PDF:

1. Answers to the questions above
2. Documentation on how you troubleshooted each problem