# Week 12 Linux Projects - Chapter 6 Linux Server Deployment

Activities

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**How to Create Screenshots:** Please use the Windows Snip and Sketch Tool or the Snipping Tool. Paste a screenshot of just the program you are working on. If you are snipping a virtual machine, make sure your focus is outside the virtual machine before you snip.

1. Press and hold down the **Windows key** & **Shift**, then type **S.** This brings up the on-screen snipping tool.
2. Click and Drag your mouse around whatever you want to snip.
3. Release the mouse button. This places the snip into the Windows Clipboard.
4. Go into Word or wherever you want to paste the snip. Hold down **CTRL**, then type **V** to paste the snip.

## Update Kali Linux

In Kali Linux in the terminal.

|  |
| --- |
| sudo apt update  sudo apt dist-upgrade -y |

# Figure It Out

There will be times in any assignment where you may miss a step or the instructions are not quite correct or as clear as they could be. Research and figure out what is needed to complete the assignment. Explain what you did and why. I am looking for evidence of understanding. Directions in IT are not always complete or accurate. They need interpretation and research. Take the concepts of that we are learning and figure out an answer.

# Project 6-1: Install Ubuntu Server

Time required: 45 minutes

In this hands-on project, you install Ubuntu Server 24.

In your virtualization software, that has the following characteristics:

The virtual machine DVD drive attached to the ISO file for the Ubuntu Server installation media.

**Note:** The Ubuntu Server Linux installation program does not use a graphical desktop. As a result, you must switch between buttons shown on the screen using the Tab key and press Enter to make your selections.

1. Download Ubuntu Server 24 LTS iso from <https://ubuntu.com/download/server>
2. In VirtualBox, create a new virtual machine called **Ubuntu Server**
3. VirtualBox will fill in the settings needed. Click **Finish**.
4. Start your Ubuntu Server Linux VM. Find the ISO you downloaded earlier. **Mount and Retry Boot**.
5. Press Enter to **Try or Install Ubuntu**.

**NOTE:** You are installing Linux server software. There is not a GUI. Your mouse will not work.

1. At the **Welcome** screen, ensure that **English** is selected, and press **Enter**.
2. **Installer update available:** Cursor up to **Update to the new installer** and press **Enter**.
3. **Keyboard configuration:** Press **Enter**.
4. **Choose the type of installation**: Press **Enter**.
5. **Network connections:** Press **Enter**.
6. **Configure proxy:** Press **Enter**.
7. **Ubuntu archive mirror configuration:** Wait until the test is complete.  
   Press **Enter.**
8. **Guided storage configuration:** Press **Tab** until you get to **Done**. Press **Enter**.
9. **Storage configuration:** Press **Enter. Are you sure you want to continue?** **Cursor down** to select **Continue**. Press **Enter.**
10. Profile setup:
    1. **Your name:** Type in your real name. Press **Tab**.
    2. **Your server’s name:** **ubuntu24** Press **Tab**.
    3. **Pick a username: user1** Press **Tab**.
    4. **Choose a password: Password01** Press **Tab**.
    5. **Confirm your password:** **Password01** Press **Tab**. Press **Enter** on **Done**.
11. **Upgrade to Ubuntu Pro:** press **Enter**
12. **SSH configuration:** Press the Space Bar to Select Install OpenSSH server
13. **Tab** to Done, press **Enter**.
14. **Featured Server Snaps:** **Tab** to Done. Press **Enter**.
15. **Installing system** will continue. Do not cancel. Wait until it is complete.
16. When **Reboot Now** appears at the bottom of the screen, Tab to **Reboot Now**. Press **Enter**.
17. You may have to press **Enter** to restart if you receive a CD-ROM error message.

**NOTE:** After the system has rebooted, note that a graphical login is not available.

1. Press **Enter** to bring up the login prompt. Log into tty1 as **user1** with the password **Password01**.
2. Type **sudo passwd root** and press **Enter** to set the root user password. When prompted, enter your password (**Password01**), and then enter the desired root password of **LINUXrocks!** twice to set the root user password to **LINUXrocks!**.
3. Insert a screenshot of your terminal screen at this point.
4. Click or tap here to enter text.
5. Type **poweroff** and press **Enter** to shutdown your server.

# Project 6-2: Setup OpenSSH

This guide will walk you through the process of installing, configuring, and securing OpenSSH Server on Ubuntu Server 24. We are going to switch to a bridged adapter so that we can access the server by using SSH from your local computer.

1. In VirtualBox Manager 🡪 Right Click on your Ubuntu Server 🡪 **Settings** 🡪 **Network** 🡪 **Bridged Adapter**.
2. Start Ubuntu Server and log in as user1.
3. Update your package index. Upgrade your server.

|  |
| --- |
| sudo apt update  sudo apt upgrade |

1. Check if SSH service is running:

|  |
| --- |
| sudo systemctl status ssh |

1. Enable SSH to start on boot:

|  |
| --- |
| sudo systemctl enable ssh |

1. Open the SSH configuration file:

|  |
| --- |
| sudo nano /etc/ssh/sshd\_config |

1. Make these recommended security changes:

|  |
| --- |
| # Disable root login  PermitRootLogin no  # Use SSH Protocol 2  Protocol 2  # Set maximum authentication attempts  MaxAuthTries 3  # Set idle timeout interval (in seconds)  ClientAliveInterval 300  ClientAliveCountMax 0  # Disable empty passwords  PermitEmptyPasswords no  # Specify which users can connect (optional)  AllowUsers your\_username  # Change default port (optional, replace 22 with your desired port)  Port 22 |

1. Save the file. Restart SSH.

|  |
| --- |
| Save the file (CTRL-S) (CTRL-X)  Restart SSH service:  sudo systemctl restart ssh |

1. On the Ubuntu Server 🡪 ip a (get IP address)
2. From your client machine, connect to the server:

|  |
| --- |
| # Windows: Use Putty to connect to Ubuntu Server  # Mac or Linux  ssh username@server\_ip |

1. Insert a screenshot showing remote ssh access to your server.
2. Click or tap here to enter text.

Your OpenSSH server is now set up and secured. Remember to keep your system updated and regularly review the security settings. Store your SSH private keys securely and maintain good password practices.

# Project 6-3: Setup SAMBA

Samba is an open-source software suite that provides file and print services for various Windows, Linux, and Unix-like operating systems. In this tutorial, we'll walk through the steps to set up Samba on an Ubuntu Server 24 system.

1. Right Click on your Ubuntu Server 🡪 Settings 🡪 Network 🡪 Bridged Adapter.
2. Start your Ubuntu Server and log in as user1.
3. Open a terminal and update the package index.

|  |
| --- |
| sudo apt update |

1. Install the Samba package:

|  |
| --- |
| sudo apt install samba |

1. The Samba configuration file is located at `/etc/samba/smb.conf`. You can edit this file using a text editor:

|  |
| --- |
| sudo nano /etc/samba/smb.conf |

1. To create a new shared directory, add the following section at the end of the file:

|  |
| --- |
| [share]  path = /srv/samba/share  valid users = user1  read only = no  browsable = yes |

1. Save and close the file.
2. Go to the root and create the folder path **/srv/samba/share**

### Create a Samba User

Samba uses its own user database, you'll need to create a Samba user for each user who will access the shared directory. To do this, run the following command:

|  |
| --- |
| sudo smbpasswd -a user1 |

1. You'll be prompted to enter and confirm the password for the Samba user.
2. Reboot the server: **sudo reboot**

### Verify Share Access

From a Linux or Mac client:

|  |
| --- |
| smbclient -L //ServerIPAddress -U user1 |

From Windows:

1. Open File Explorer
2. In the address bar type: **\\SERVER-IP\share**
3. Enter the Samba username and password when prompted

You should now be able to access the shared directory.

1. Insert a screenshot showing access to the shared directory.
2. Click or tap here to enter text.
3. You can delete your Ubuntu Server. We will not use it again.

## Assignment Submission

Submit this completed document in Blackboard.