WEEK 4: JOURNAL PHASE 4: Initial System Configuration & Security

Task: System configuration and security setup using SSH

Machines Used: Linux Mint (workstation) and Ubuntu (server)

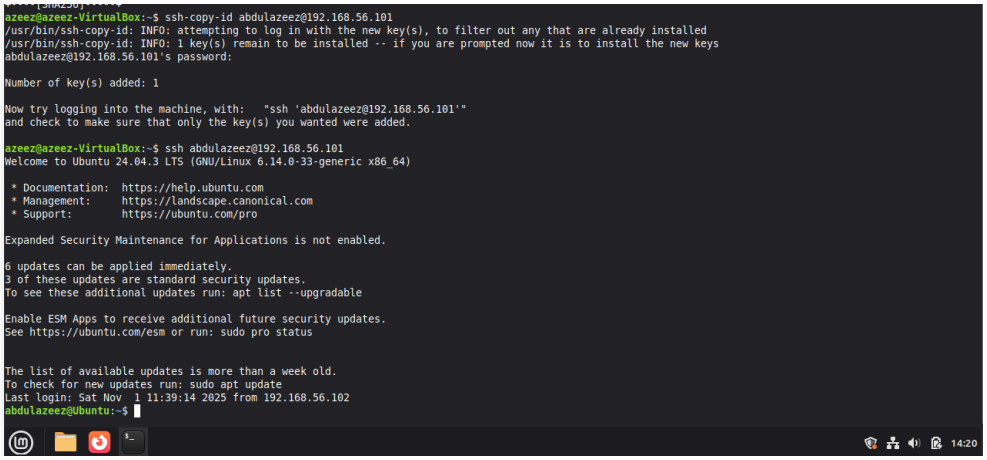
1. SSH Key-Based Authentication

For this part, I used Linux Mint to connect to my Ubuntu server.

I created an SSH key on Linux Mint and copied it to Ubuntu using:

ssh-copy-id abdulazeez@192.168.56.101

After that, I tested the connection and it logged me in without asking for a password, which shows the key-based authentication is working.



2. Firewall Configuration (Only allow Mint to connect)

On Ubuntu, I enabled the firewall (UFW) and set it so only my Mint machine (192.168.56.102) can connect through SSH.

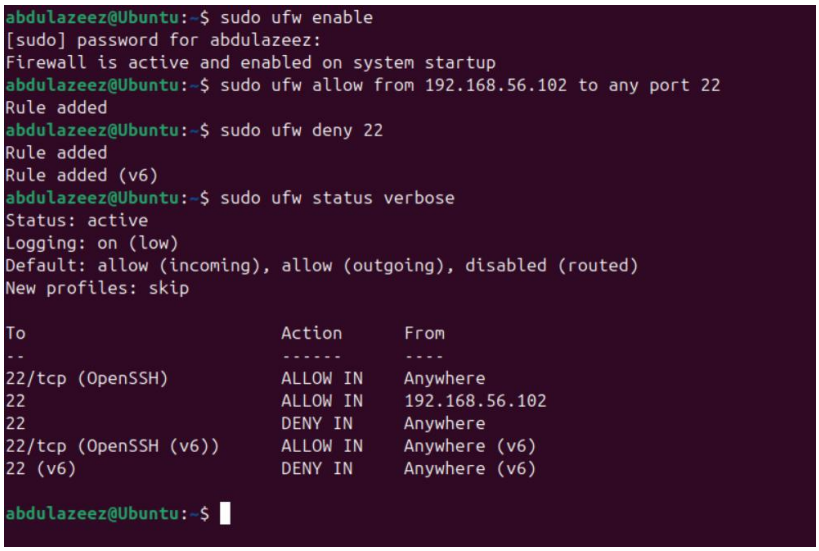
Commands used:

sudo ufw enable

sudo ufw allow from 192.168.56.102 to any port 22

sudo ufw deny 22

sudo ufw status verbose



3. sshd_config Before and After Change

I opened the SSH config file using:

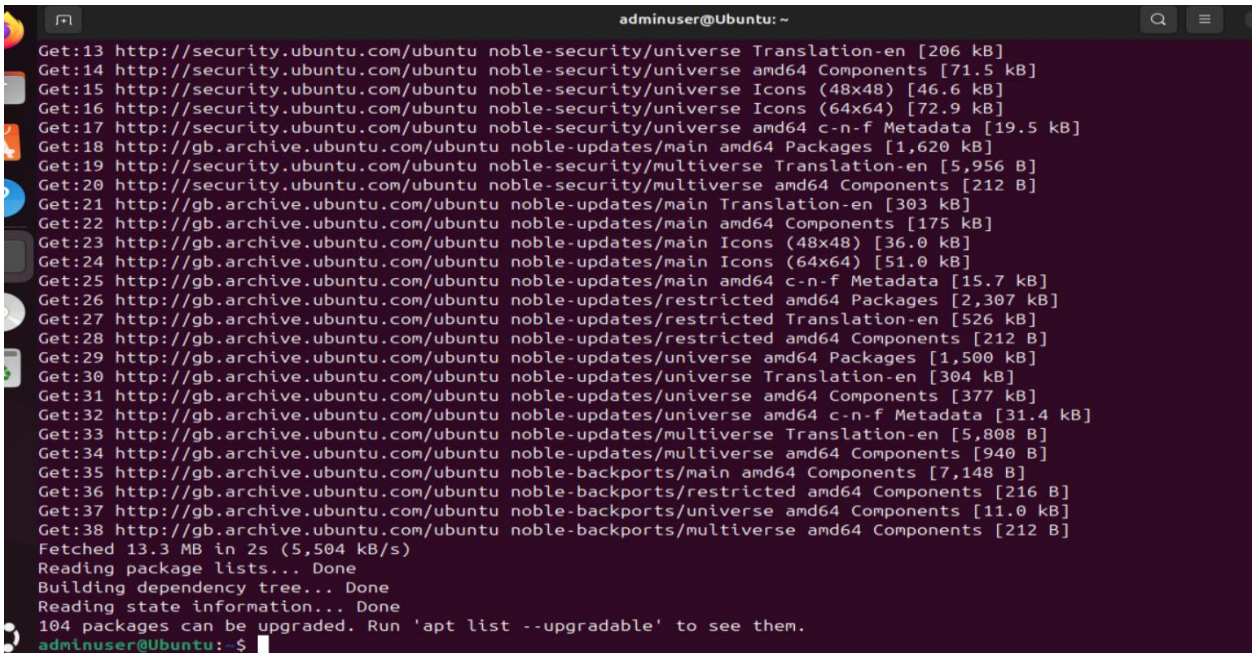
sudo nano /etc/ssh/sshd_config

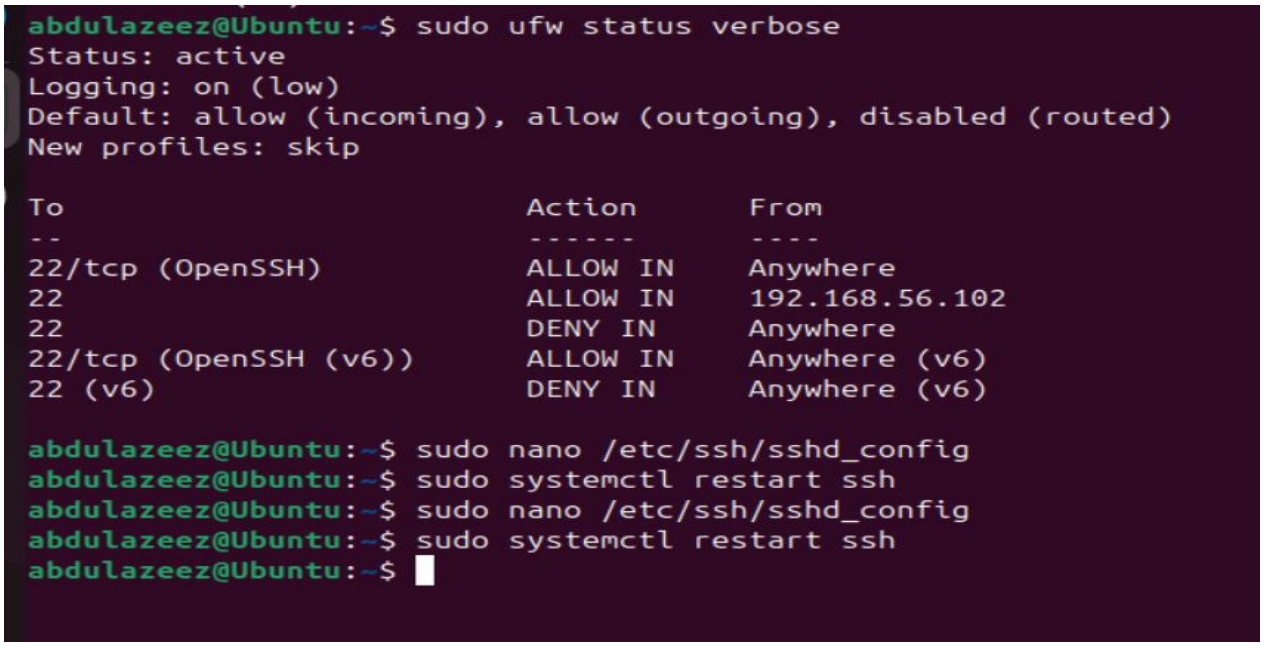
My file didn't have "PasswordAuthentication yes", so I added:

PasswordAuthentication no

Then restarted SSH:

sudo systemctl restart ssh





4. Creating a Non-Root Admin User

I created a new admin user called adminuser:

sudo adduser adminuser

sudo usermod -aG sudo adminuser

Then switched to the account and tested sudo:

su - adminuser

sudo apt update

```
adminuser@Ubuntu:~$ sudo ufw status numbered
Status: active

     To                         Action      From
     --                         ------      ----
[ 1] OpenSSH                    ALLOW IN    Anywhere
[ 2] 22                         ALLOW IN    192.168.56.102
[ 3] 22                         DENY IN     Anywhere
[ 4] OpenSSH (v6)               ALLOW IN    Anywhere (v6)
[ 5] 22 (v6)                    DENY IN     Anywhere (v6)

adminuser@Ubuntu:~$
```

5. Remote Administration Through SSH

All my changes on Ubuntu were done from Linux Mint using SSH.

Commands like:

sudo apt update

uname -a

prove the remote management is working.

6. Firewall Rules Documentation (Numbered)

I used:

sudo ufw status numbered

This shows the exact firewall rule order.

Conclusion

In Week 4, I configured secure access to my server. I set up SSH keys, updated the SSH configuration, created an admin user, and restricted the firewall to only my workstation. Everything was done through SSH with screenshots as evidence.