Setting Up My Proxmox Hypervisor

1. Why Did I Choose to Create My Own Server with Proxmox?

I decided to set up my own server because I wanted the flexibility to create and manage virtual machines (VMs) from anywhere. My choice of Proxmox was driven by my preference for a Linux-based environment over Windows. Additionally, this project served as an excellent way to develop my Linux skills.

2. Challenges I Encountered

Prior to this project, my Linux knowledge was minimal, making the experience both exciting and challenging. As a first-time Proxmox user, some features were initially difficult to grasp. However, after familiarizing myself with them, I found Proxmox to be a powerful and enjoyable hypervisor to use.

3. Virtual Machines I Created on My Proxmox Hypervisor

a) Ubuntu Server with a VPN Service

- **Purpose:** To enable secure remote access to my home network and Proxmox hypervisor.

- **Software Used:** OpenVPN

- **Functionality:** This VPN allows me to connect remotely to my network and manage my hypervisor from anywhere.

b) Ubuntu Server as a NAS (Network-Attached Storage)

- **Purpose:** To create a lightweight NAS for file storage and management.

- **Why Ubuntu Server?**

    o To gain more experience with Linux.

- Ubuntu Server is lightweight and efficient.

- **Access Methods:**

    - **scp** for secure file transfers.

    - **ssh** for remote navigation and management.

c) Ubuntu Server as a Web Server

- **Purpose:** To host websites and applications.

- **Software Used:**

    - Apache2 (Web server)

    - MySQL (Database management system)

- **Why Ubuntu Server?** It provides a stable and high-performance environment for hosting web services.

d) Transitioning My VPN to a Raspberry Pi

Initially, I hosted my VPN service on Proxmox, but later I moved it to a Raspberry Pi. This change allowed me to use **Wake-on-LAN** to power on my Proxmox hypervisor remotely, reducing electricity consumption.

4. Next Steps

The next step in my journey is to set up a **GitLab server**. As a student, I often collaborate on projects with classmates, and having my own GitLab server will simplify teamwork and version control.

5. Conclusion

This project has been an exciting and educational experience. In just six months, I have significantly improved my understanding of Linux, networking, and server management. I look forward to further developing my skills, especially in network security and system administration.