

Background & Motivation

Motivation and Learning Journey

My journey into building a homelab started with a desire to learn more about Docker Swarm and Raspberry Pi. Initially, my motivation was simply to experiment with these technologies, but as I delved deeper into the project, I realized that I was gaining much more than just technical knowledge about the hardware. I discovered the incredible potential of self-hosting a variety of services and the empowerment that comes with it.

Through this project, I had the opportunity to explore and understand various IT concepts and tools that have significantly enhanced my technical skills:

- **Docker Networks and Docker Swarm:** I learned how to set up and manage containers, orchestrate them across multiple nodes, and effectively use Docker Swarm for scaling and managing these containers.
- **Traefik Reverse Proxy:** I explored how to use Traefik as a reverse proxy, understanding its role in managing and routing incoming traffic to the appropriate services while ensuring SSL certification for secure connections.
- **VPNs and NAT:** I gained hands-on experience with both WireGuard VPN and OpenVPN, learning how to configure secure remote access to my network. I also deepened my understanding of Network Address Translation (NAT) and its significance in networking.
- **Portainer:** I learned how to use Portainer as a powerful and user-friendly tool for managing Docker environments, making it easier to monitor, deploy, and control my Docker containers.
- **Home Assistant and Jellyfin:** I explored home automation with Home Assistant and media server management with Jellyfin, realizing the convenience and control that come with hosting these services locally.
- **Vaultwarden:** I discovered the benefits of using Vaultwarden for secure password management, integrating it into my daily life and appreciating the privacy it offers by hosting it myself.

One of the most empowering aspects of this journey has been the realization that, with Docker and Linux as my foundation, I can host virtually any service I desire, provided it's available for the ARMv8 architecture. This has opened up a world of possibilities for me, enabling me to customize my digital environment exactly to my needs.

A Project for Everyone with Passion

This homelab project is an excellent opportunity for anyone who wants to dive deeper into IT and self-hosting. It offers a hands-on way to learn about a wide range of technologies, from containerization and networking to automation and media servers. However, it's important to note that this project requires a genuine passion for learning and the willingness to research and troubleshoot on your own. While I provide full guides and resources, the ability to independently solve problems and continuously learn is essential for success.

If you're excited about technology and ready to take on the challenge, building a homelab is a fantastic way to gain practical skills and a deeper understanding of the IT world.

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