

Homelabs: How and Why



Tonight's talk

<https://naly.me/>

- My experience getting started with linux from a server perspective
- Challenges and learning experiences
- Currently hosted software
- Live demo some stuff
- **Open the floor for questions**



Homelab: My Vision

- A machine/machines that can evolve into whatever I need it to - can be/host many things at once
- Host tools that can provide practical benefit to workflow
- Services—and network—need to be accessible from anywhere
- Some services need to be public facing



Homelab: My Challenges

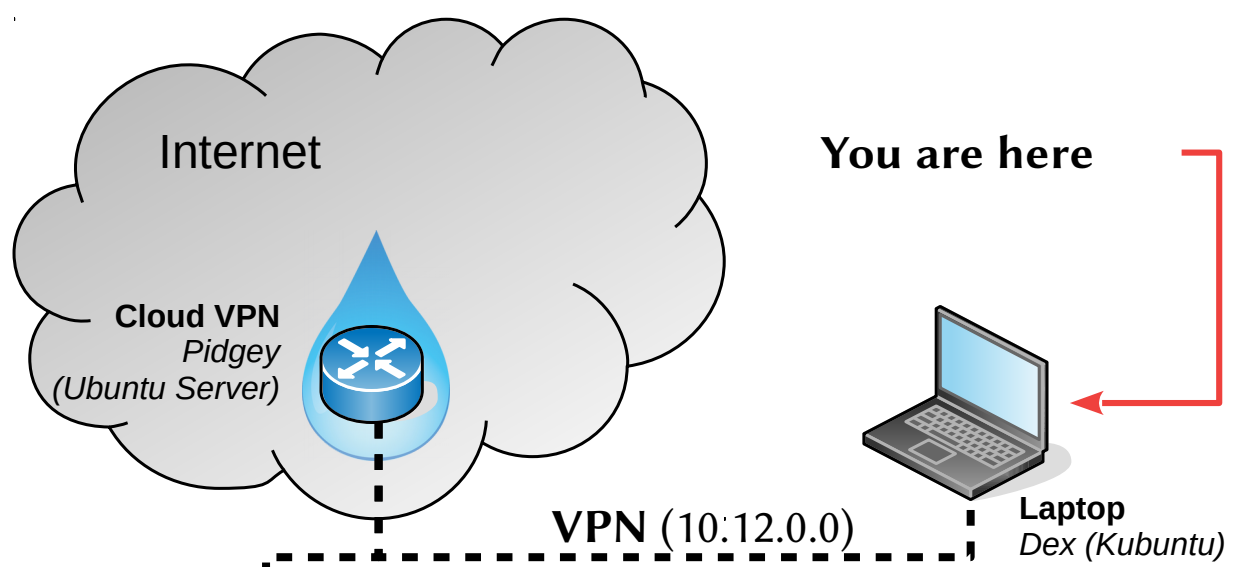
- **Goals are always loftier than experience**

This is a good thing!

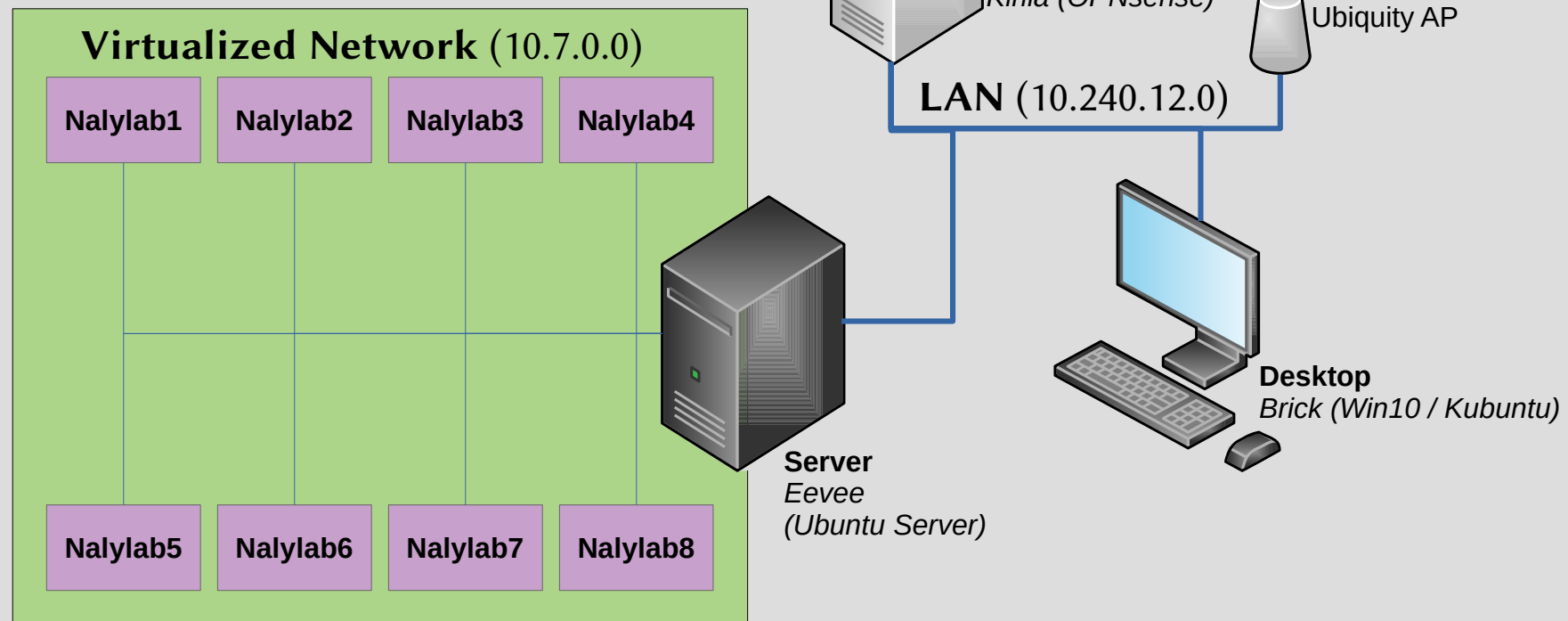
- \$\$\$
- Many apartments don't allow router access

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Network overview

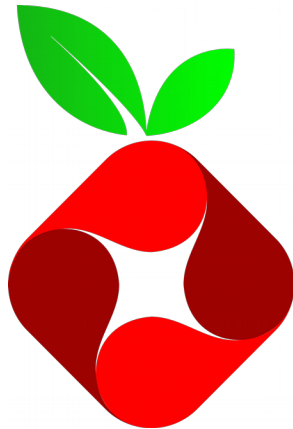


Apartment (Or any physical location)





nextcloud



Grafana
influxdb

PLEX



There's a lot to talk about.

Currently Selfhosted Software:



OpenVPN – *Provides networking backbone (WireGuard when??)*

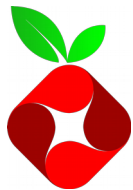
NFS – *Network Attached Storage*

LAMP Stack (Apache/MySQL) – *Personal website*



Nextcloud – *Dropbox-like file management solution*

Collectd + InfluxDB + Grafana – *Comprehensive monitoring*



Pi-Hole – *DNS-based network-wide ad blocking*

Bind9 – *DNS*

Deluge – *Torrent client*



Plex – *Media Streaming*

Gitea – *Lightweight git server*



Firefly III (WIP) – *Personal finance management*

Huginn (WIP) – *Automated web agents (Very fun)*



Nalylab1



Nalylab2



Nalylab3



Nalylab4

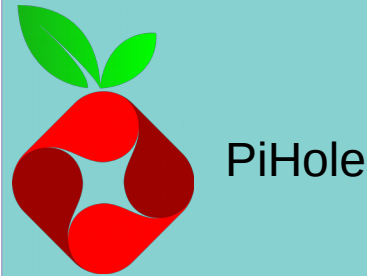


Nalylab5



Deluge

Nalylab6



Nalylab7



Nalylab8



Huginn



Firefly III



What to do next

- OctoPrint (Network-Attached 3D Printer)
- FreeIPA (Identity management)
- Automation (Why am I adding DNS records *manually!?*)
- Virtualized Remote Computing sounds fun (Selfhosted VCL Anyone?)
- Where's my backup!?! (\$\$\$)
- Expanding my own internet of things
 - The intersection of the Homelab and Electrical Engineering