

Introduction & Plan for the Semester

BUILD I.T. (FORMERLY HOMELAB CLUB)

Who are we

Treasurer
Anson Cook

President
Jason Pang

Staff Advisor
Megan Steeley

Why This Club Exists

- Community
 - Share knowledge
 - Troubleshoot
 - Resources (servers, drives, etc.)
 - Show off cool things
- Encourage others
 - Labs and projects
 - Sharing ideas

Logistics

WHAT IS GOING TO BE HAPPENING

What We Do

LABS

First-hand experience with network concepts

Guided tutorial, no prior experience needed

SOCIALS

Time to ask about certifications and other related topics

Show homelabs and what can be built off of the labs

Meetings

Weekly on most Wednesdays from 5pm to 6pm in IRB 3137

For project weeks, RSVP gives priority for hardware

- An RSVP is not required to attend
- You can bring an micro sd card if you want to save progress
- If you wish to follow along with similar hardware, a Pi 4 is what we use

Please arrive on time for lab meetings

Meetings

The majority of the meetings will likely be labs

Covering one topic per meeting, aim to be 1 hour long

Topics will be related to CompTIA Net+ certification

What We Use

Raspberry Pi4: Relatively cheaper, small, abundant, highly configurable, existing community

- You can likely get a better price to performance with used or refurbished computers
- SD cards are not ideal for heavy read write operations

Raspberry Pi OS: based on Debian Linux

- Linux is free, has good support for most hardware, lightweight, easily configurable

What to Use

In this economy, whatever you already have or can find cheap

Generally Linux will be the easiest for the majority of what you want to do

- However certain applications (AD) are easier on Windows
- Similarly Macs can also be used depending on what you are trying to do

Beyond the Club

WHY WHAT WE TALK ABOUT IS IMPORTANT/USEFUL

CompTIA Network+

The labs are intended to supplement other studying

- We will not have the time to cover everything from the certification
- The labs can however help to understand more deeply content from the exam
- The labs may help with PBQs on the actual exam

The labs we do are applicable to real world network/IT jobs

Personal Projects (Homelab)

Homelab

- Home, generally a focus on self hosting using whatever computers from a Raspberry Pi, old computer or laptop, all the way to rack mounted servers
- Lab, a place to experiment and learn about technologies used in production without breaking production
- Can be used for video game servers, extra storage, and more

Benefits of Self Hosting

Data privacy: under your control rather than on a random server in a data center

Economics: if you want to retain data and avoid subscriptions

Adaptability: easily repurpose hardware, customization

Bridging Homelab and End Devices

Generally best method is to use a vpn via the cloud rather than port forwarding

- We will likely get into VPN in one of the labs

For free cloud instances:

- Oracle cloud provides 2 AMD based vm and 1 ARM vm
- Google cloud provides 1 e2-micro instance

More Information

Slides will be posted to the website when the meeting is done

Ask questions in the Discord

CompTIA Network+ Exam objectives: <https://www.examcompass.com/comptia-certifications/network-plus/comptia-network-plus-n10-009-exam-objectives.pdf>

Ideas for what to self-host: <https://awesome-selfhosted.net/>

Extra

THE REST OF THE USEFUL STUFF

Club Resources

Discord:

<https://discord.gg/H6MsBwSTwZ>

Announcements

Q&A and chat with others

Easiest method of reaching out to officers

Website:

<https://suddenlysixam.club/>

Upcoming meetings and past meetings

Documentation and slides

Survey



Question, comments, concerns?

Website



Discord



Terplink



RSVP to Next Meeting

Learn about DNS and how to setup a DNS server

