

Homelab Escapades

Newcastle Cybersecurity Group

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Public speaking skills: a solid 2.5/10 - remind me now that I
should slow down and chill-out

If you have questions at any
point feel free to jump in!



\$whoami: I work for nib as part
of the cybersecurity function



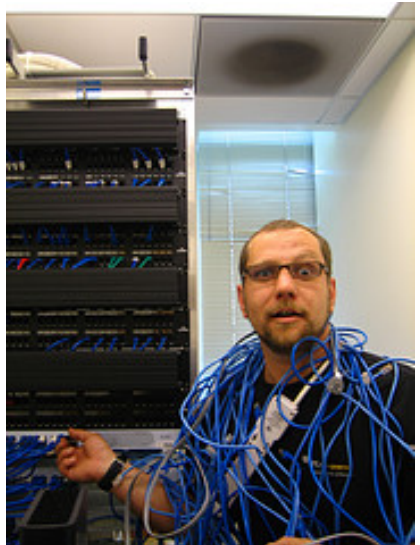
Previous lives as:

- developer
- retail assistant
- pizza cutter
- lawn mower



What am I not?

- A sysadmin
- Good at making presentation slides



Does any of this matter?

Just keep in mind, I'm just some
dude throwing some things
together and hoping for the best

Nope



But why am I here presenting?

~_(\ツ)_/-

- Home networks are fun
- Breaking your own stuff will assist in teaching you
- Can run some cool services for yourself/family/friends

Who is currently running their own hobby networks?

What are you currently running?

Am I going to be making any assumptions?

- We're not wanting to have a large number of physical devices
- We care about the security of our stuff

Are there reasons to not run a service on your home network?



What services might we want to run?



Should we expose these services?



I want to be able to access my
services from anywhere!



- ① Buy a domain, or use a freebie
- ② Pester your ISP for a static address (or big-brain it with some dynamic DNS)
- ③ Setup some port forwards

fin

Okay, cool, I have the things available on the interwebs...

Should we leaving our
applications in a default state?



Nope! Let's apply some defence
in depth!



Ever looked at the dumpsterfire
that is an nginx config?

```
user www-data;
worker_processes auto;
pid /run/nginx.pid;
include /etc/nginx/modules-enabled/*.conf;

events {
    worker_connections 768;
    # multi_accept on;
}

http {

    ##
    # Basic Settings
    ##

    sendfile on;
    tcp_nopush on;
    tcp_nodelay on;
    keepalive_timeout 65;
    types_hash_max_size 2048;
    # server_tokens off;

    # server_names_hash_bucket_size 64;
    # server_name_in_redirect off;

    include /etc/nginx/mime.types;
    default_type application/octet-stream;

    ##
    # SSL Settings
    ##

    ssl_protocols TLSv1 TLSv1.1 TLSv1.2; # Dropping SSLv3, ref: POODLE
    ssl_prefer_server_ciphers on;

    ##
```

I don't actually mind them, but
we'll assume that we ain't got
time for that



How to get around learning the intricacies of nginx?

Get some SWAG!







This SWAG...

<https://github.com/linuxserver/docker-swag>



Why SWAG?

It's a batteries included approach to us getting Authelia in the mix.

Default configs for nginx come with options for Authelia included but disabled.

Note: **SWAG** is not required, it will just make your life easier
in managing a reverse proxy

If you have the know-how of setting up a reverse proxy of your
choosing, you could do so.

We're looking to deploy this model to our network:

