



# LUUG Infra

by pew

<https://vtluug.org/files/2020/infra-pew.pdf>

# How to get involved?

- <https://vtluug.org/irc.html>
- #vtluug-infra on OFTC
  - Don't expect an answer right away
  - Use a desktop client for longer discussions
- #vtluug on OFTC has lots of graduates & other LUUG members
- Additional communication medium none of the previous sysadmins are in?
- <https://bash.vtluug.org/quotes>

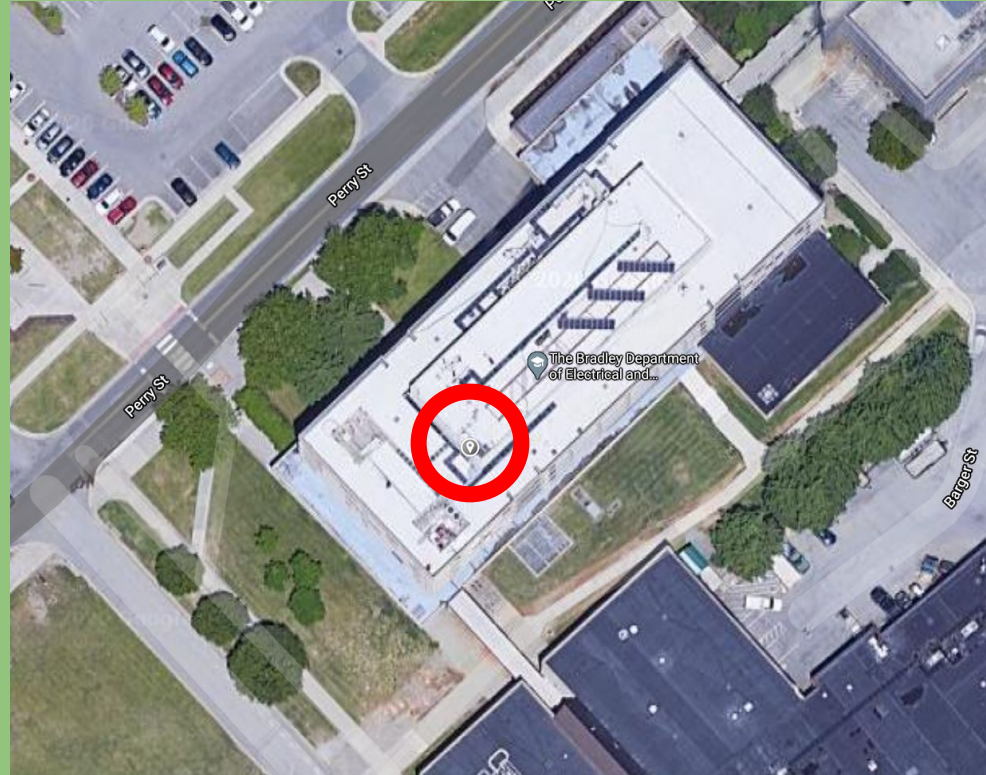


```
06:12 <@SketchCow> ls
06:12 <@SketchCow> WHERE'S MY DIRECTORY
```

```
+h4des      : hmmmmmm
+h4des      : campus is closed
+h4des      : it would be a real shame if
+h4des      : luug infra were to go down
+h4des      : and required an on-site diagnostic
+echarlie   : yeah. it would, wouldn't it?
+lukas      : is that a threat
```

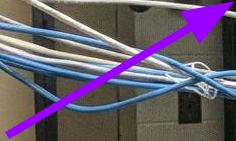
# We have infra?

- <https://vtluug.org/wiki/Infrastructure>
  - Mostly up to date
- <https://github.com/vtluug>

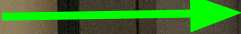




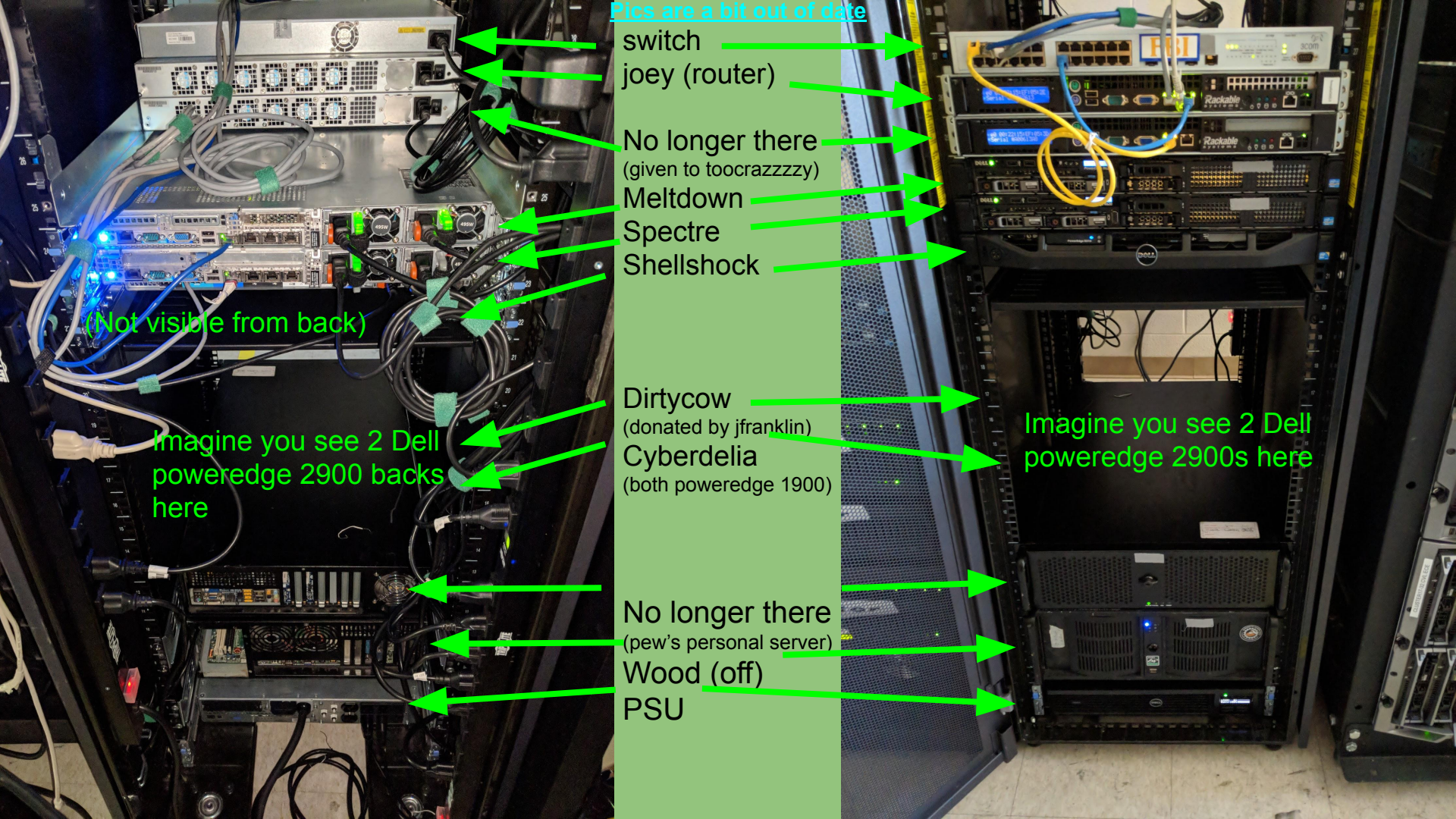
WUVT



LUUG







Pics are a bit out of date

switch

joe (router)

No longer there  
(given to toocrazzzzy)

Meltdown

Spectre

Shellshock

Dirtycow

(donated by jfranklin)

Cyberdelia

(both poweredge 1900)

No longer there

(pew's personal server)

Wood (off)

PSU

(Not visible from back)

Imagine you see 2 Dell  
poweredge 2900 backs  
here

Imagine you see 2 Dell  
poweredge 2900s here



## Misc parts sitting in rack

- Spare rack bolts
- Spare ethernet cords & pci cards
- Spare HDD: Hitachi 2TB 64MB Cache  
7200RPM 3.5" SATA III Heavy Duty Hard  
Drive -PC/CCTV DVR
  - <https://www.ebay.com/itm/131421389139>

This pic is a bit old



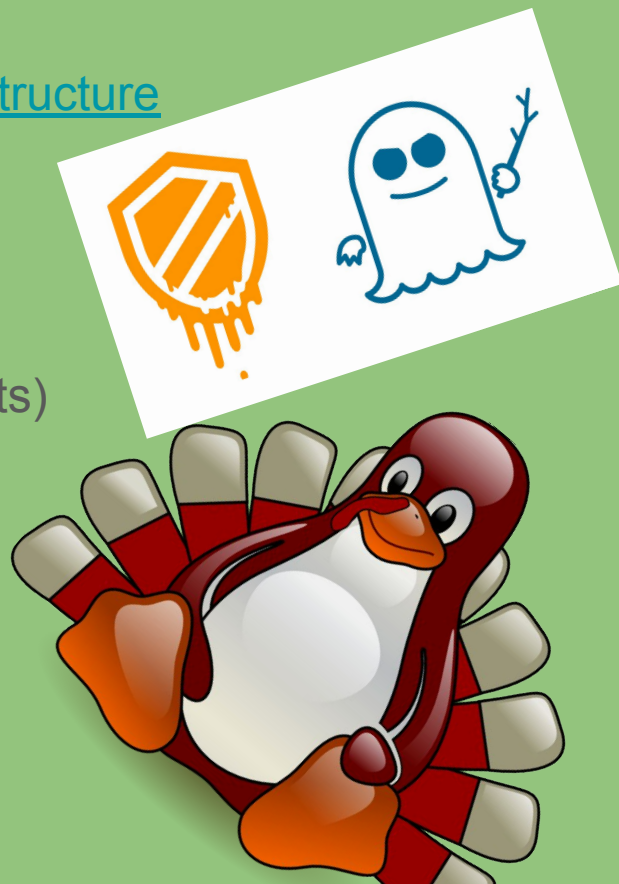
# Services

- <https://vtluug.org/wiki/Infrastructure#Services>
  - Shell server (great for idling in irc)
  - Email (@vtluug.org)
  - Irc bot (Wadsworth)
  - FreeIPA (LDAP)
  - <https://wiki.vtluug.org>
  - <https://gobblerpedia.org>
  - <https://bash.vtluug.org>
  - <https://hokieprivacy.org/>
  - Syncting relay: <https://relays.syncting.net>
  - Iodine DNS tunnel: <https://vtluug.org/wiki/Iodine>
  - Installfest-counter
  - Class\_util
  - Uptime: <https://uptime.vtluug.org/>
  - Random files: <https://vtluug.org/files/>



# Physical Hosts

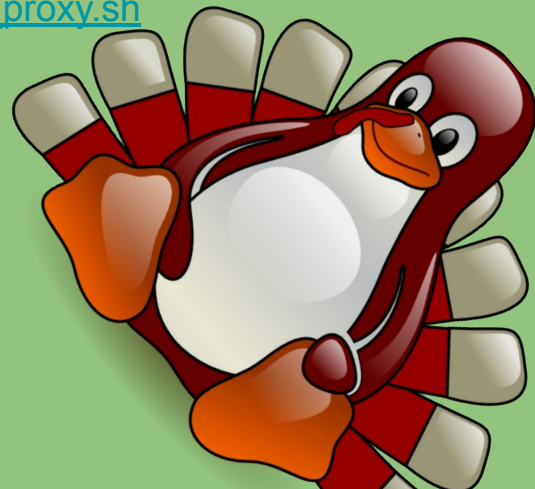
- [https://vtluug.org/wiki/Infrastructure#Physical\\_Infrastructure](https://vtluug.org/wiki/Infrastructure#Physical_Infrastructure)
- joey: router
- meltdown, spectre: VM hosts
  - Purchased in 2018 thanks to SBB
  - spectre isn't really used (feel free to do something with it)
- dirtycow: primary NAS, 8x2TB raidz2 (with snapshots)
  - Cyberdelia: secondary NAS, 8x1TB raidz2
  - Shellshock: secondary NAS, 3x500GB





# Networking

- [https://vtluug.org/wiki/Infrastructure#On\\_the\\_Network\\_Architecture](https://vtluug.org/wiki/Infrastructure#On_the_Network_Architecture)
  - <https://vtluug.org/w/images/2/27/Infra2019-network.png>
- 10.98.X.X/16
- 2607:b400:6:cc80/64
- 8 public IPs, all proxied through joey with arp proxying
  - [https://github.com/vtluug/scripts/blob/master/router/proxy/arp\\_proxy.sh](https://github.com/vtluug/scripts/blob/master/router/proxy/arp_proxy.sh)
  - I could probably do a whole talk about this



# More networking

- Networking scripts: <https://github.com/vtluug/scripts/tree/master/router>

- Some of these hosts were never actually created

```
# Bare metal hosts
10.98.0.1      joey.private.vtluug.org      # Rackable Systems      00:22:15:ef:07:a5
10.98.0.2      switch.private.vtluug.org    # 3com 3824              00:12:a9:d5:d4:20
10.98.0.3      meltdown.private.vtluug.org  # R620 #1                02:00:0a:62:00:03
10.98.0.4      spectre.private.vtluug.org   # R620 #2                02:00:0a:62:00:04
10.98.0.6      cyberdelia.private.vtluug.org # 2900 #1                00:15:17:6a:e0:98
10.98.0.7      dirtycow.private.vtluug.org  # 2900 #2                00:1e:c9:ef:13:f8
10.98.0.8      shellshock.private.vtluug.org # R310                   00:15:17:12:76:70

# VMs
10.98.0.10     chimera.private.vtluug.org   # FreeIPA                 02:00:0a:62:00:0a
10.98.0.11     sczi.private.vtluug.org      # Web                     02:00:0a:62:00:0b
10.98.0.12     acidburn.private.vtluug.org  # Shell                   02:00:0a:62:00:0c
10.98.0.16     mirror.private.vtluug.org    # Mirror                  02:00:0a:62:00:10
10.98.0.18     crashoverride.private.vtluug.org # Tahoe-LAFS              02:00:0a:62:00:12
10.98.0.19     wargame.private.vtluug.org   # Wargame                 02:00:0a:62:00:13

# Non-luug bare metal hosts
10.98.0.254    mjh.private.vtluug.org      # Mjh                     00:30:48:7e:28:da
```

# VMs

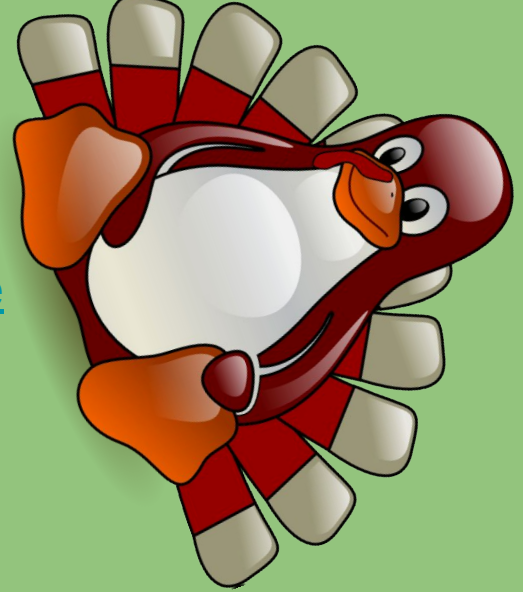
- Centos 7
  - chimera → FreeIPA
- Ubuntu 18.04.3
  - Acidburn → plain ol' shell server, email, irc bot
  - Sczi → web server (wiki, website, etc), everything else





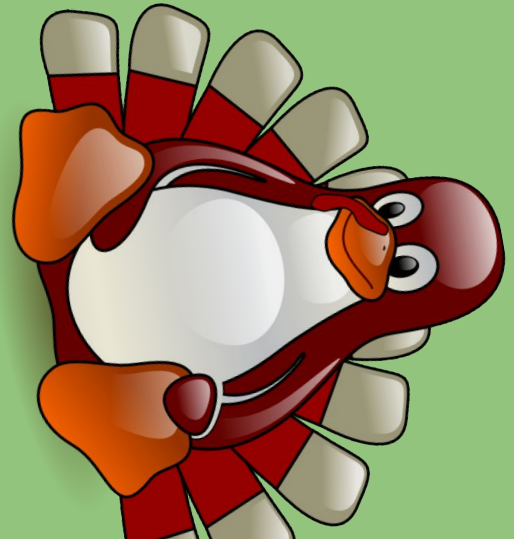
# How is all this stuff configured?

- Physical hosts & VMs: <https://github.com/vtluug/ansible>
- Networking scripts: <https://github.com/vtluug/scripts>
- Services: <https://github.com/vtluug/docker-manifests>
- Secrets: private git repo hosted on sczi
- DNS: <https://gandi.net>
- Want access? Ask in #vtluug-infra



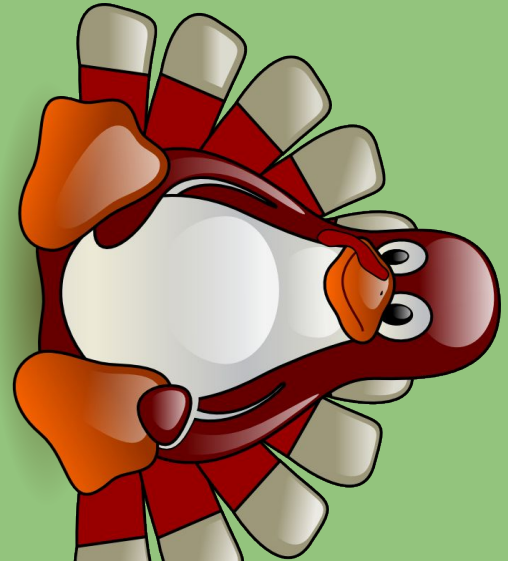
# User Accounts - FreeIPA

- <https://chimera.vtluug.org/ipa/ui/>
  - Yes, it's self-signed TLS. Deal with it. FreeIPA does not like \*not\* using it's own certs.
- luugusers group: all luug users
- officers group: officers, have sudo and can add/remove users
- New homedirs are created every 30 mins



# Docker services

- On sczi, <https://github.com/vtluug/docker-manifests>
- Nginx: only external HTTP service, forwards all connections to internal docker network
- wiki: mediawiki container, serves vtluug & gobblerpedia content
- vtluug-site: proxies <https://vtluug.github.io>
- dex: OIDC connector for use with LDAP backend
- hokieprivacy: serves <https://hokieprivacy.org/>
- pyqdb: serves <https://bash.vtluug.org>
- syncthing relay: see <https://relays.syncthing.net>
- class\_util: idk, ask pconte
- gitolite: private git repo hosting





# NFS

<https://github.com/vtluug/docker-manifests>  
cloned to /nfs/cistern/docker/apps

- <http://vtluug.github.io/rtfm.txt>

```
- All hosts:
- 755 root:root /home 10.98.0.7:/cistern/nfs/home
- 755 root:root /nfs
- 755 root:root /nfs/tank
- 775 nobody:luugusers /nfs/tank/share 10.98.0.6:/tank/nfs/share
- 777 root:root /nfs/tank/scratch 10.98.0.6:/tank/nfs/scratch
- 755 root:root /nfs/cistern
- 775 nobody:luugusers /nfs/cistern/share 10.98.0.7:/cistern/nfs/share
- 775,g+s nobody:officers /nfs/cistern/files 10.98.0.7:/cistern/nfs/files
- 755 root:root /nfs/keg
- 775 nobody:luugusers /nfs/keg/share 10.98.0.8:/keg/nfs/share
- Libvirt hosts only (meltdown, spectre):
- 755 root:root /nfs/cistern/libvirt 10.98.0.7:/cistern/nfs/libvirt
- 755 root:root /nfs/cistern/libvirt/images
- 755 root:root /nfs/cistern/libvirt/images/meltdown (For meltdown vms)
- 755 root:root /nfs/cistern/libvirt/images/spectre (For spectre vms)
- 755 root:root /nfs/cistern/libvirt/isos
- 775 root:root /var/lib/docker /dev/$hostname-vg/docker-lv # For restricting docker container sizes
- Docker Hosts only:
- 770 root:root /nfs/cistern/docker
- 755 root:root /nfs/cistern/docker/data 10.98.0.7:/cistern/nfs/docker/data
- Sczi Hosts only:
- 755 root:root /nfs/cistern/srv 10.98.0.7:/cistern/nfs/srv
```



**Cistern** → dirtycow zfs  
**Tank** → cyberdelia zfs  
**Keg** → shellshock zfs

# How do I host my react bitcoin miner wasm webapp on luug?

1. Make it run in a container

2. Example structure:

<https://github.com/vtluug/docker-manifests/tree/master/sczi/wiki>

3. Add a CNAME entry from WEBAPP.vtluug.org to sczi.vtluug.org

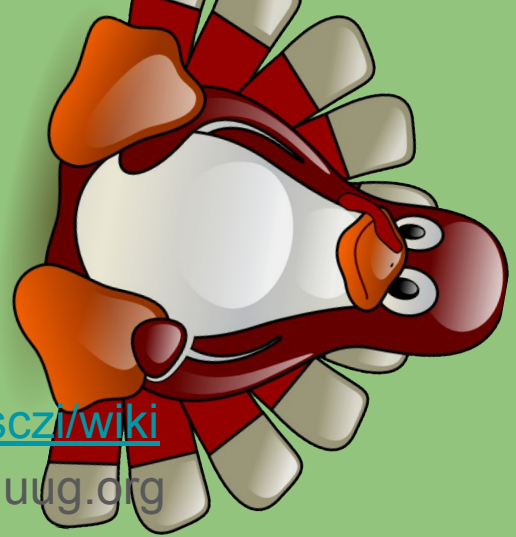
4. Add the domain to nginx config so it gets a TLS cert:

<https://github.com/vtluug/docker-manifests/blob/master/sczi/nginx/docker-compose.yml>

5. Add the nginx config to process the connection:

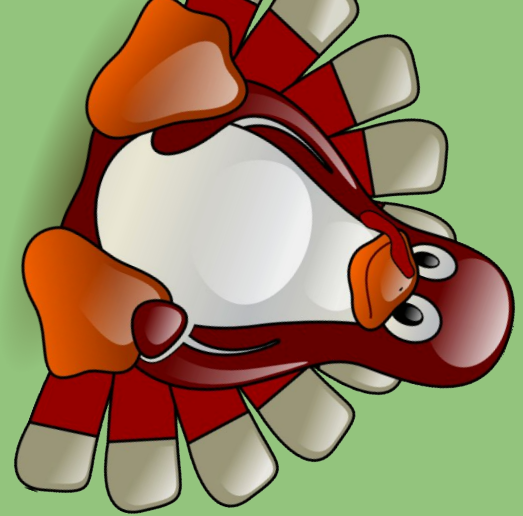
<https://github.com/vtluug/docker-manifests/tree/master/sczi/nginx/site-confs>

6. PR to <https://github.com/vtluug/docker-manifests>




# What to do?

- Something, anything, with spectre → not in use and powerful
- **Not** mine bitcoin, host linx/tor end node, or other stupid things
- Host irc bridge?
- Add more commands to the irc bot?
- Make sure backups work/do better backups?
- Update systems?
- Nextcloud?
- Mastodon?
- ArchiveTeam Warrior?
- More suggestions: <https://vtluug.org/services.html>






# hacktoberfest

 paulwalko commented 2 days ago • edited ▾

- linux is dead (and therefore watchtower as well)
- funkwhale is dead (will open additional PR to remove all those files)
- class\_util/dex/pyqdb had a couple minor typos
- installfest-counter has been added
- minor wiki update

Verified nginx still starts & the website still works

 paulwalko added hacktoberfest hacktoberfest-accepted and removed hacktoberfest labels 2 days ago

Seems legit



### docker-manifests

PHP 0 0 0 1 Updated 2 days ago

### vtluug.github.io

Temporary web page  
HTML 1 0 0 0 Updated 7 days ago

### mediawiki-docker-vtluug

Dockerfile 0 0 0 0 Updated on Jun 18

### phenny

This is phenny, a Python IRC bot.

python irc irc-bot  
Python 1 1 5 1 Updated on Apr 23

### scripts

Scripts for the router, ldap, etc.

networking  
Python 0 1 1 0 Updated on Jan 13

### ansible

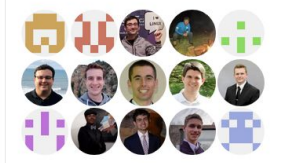
Ansible scripts for the things.

ansible playbook  
Shell MIT 0 1 0 0 Updated on Sep 9, 2019

### Top languages

Python JavaScript Shell  
PHP TeX

### People



Invite someone

# What happens if it all goes upside-down?

- cry
- <http://vtluug.github.io/rfm.txt>

