the homeserver talk

`whoami`

- Nemo
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agenda

0. What counts as a homeserver?
1. Why you should run one?
2. How do you get started?
3. All the gotchas!
4. CTA

homeserver

A *computer* which runs service(s) for personal use.

why?

motivation?

1. owning your data

motivation?

1. owning your data
2. de-googling

motivation?

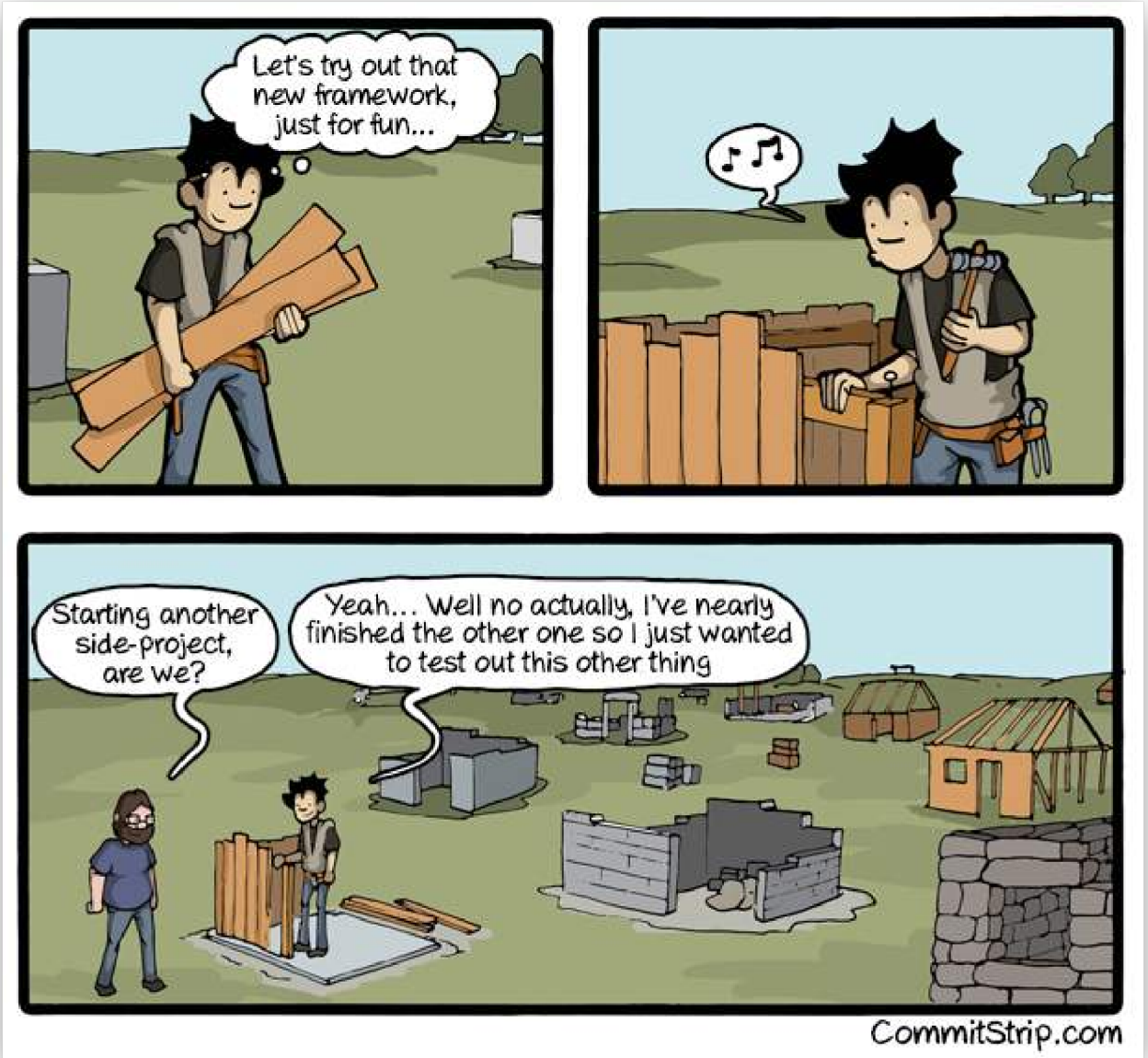
1. owning your data
2. de-googling
3. backing up your data locally

motivation?

1. owning your data
2. de-googling
3. backing up your data locally
4. learning/experimenting with tech

motivation?

1. owning your data
2. de-googling
3. backing up your data locally
4. learning/experimenting with tech
5. playing mario


Let's try out that new framework, just for fun...
Starting another side-project, are we?
Yeah... Well no actually, I've nearly finished the other one so I just wanted to test out this other thing
CommitStrip.com

time?

<5 hr a month


COOLER
MASTER

software

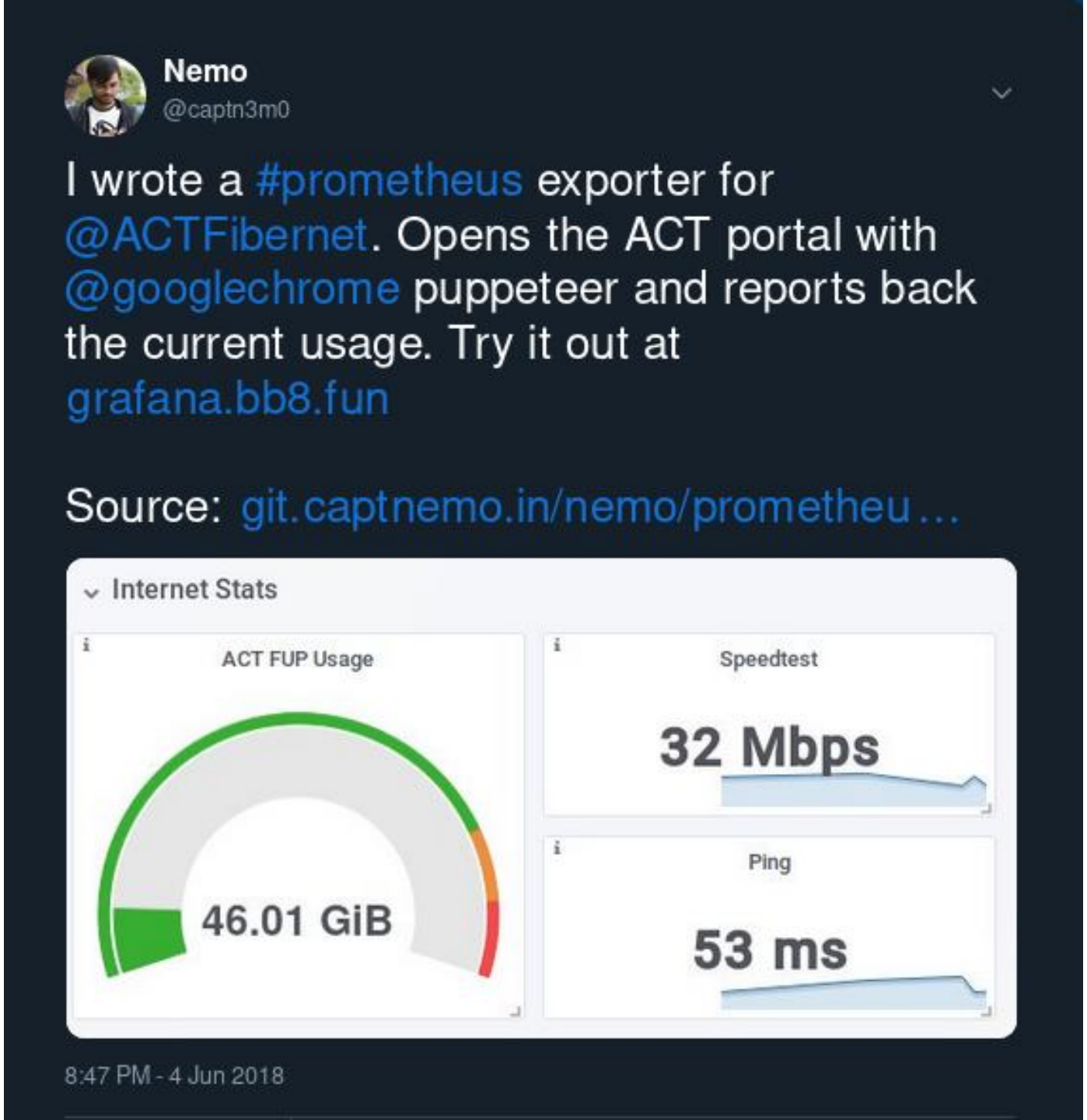
hardware

glue

what I run?

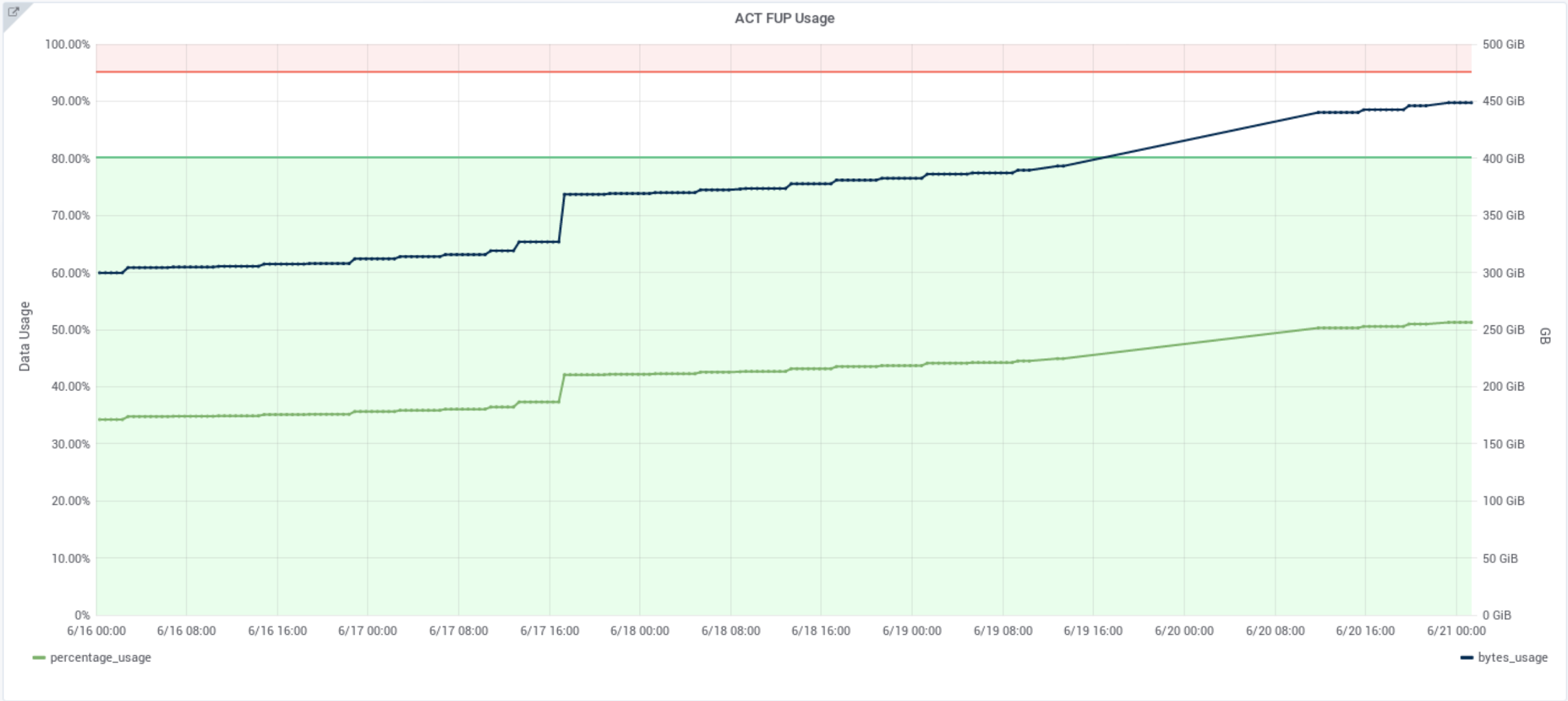
Monitoring

- Prometheus
- Grafana
- speedtest-exporter
- ACT Exporter
- CAdvisor


Nemo
@captn3m0
I wrote a #prometheus exporter for @ACTFibernet. Opens the ACT portal with @googlechrome puppeteer and reports back the current usage. Try it out at grafana.bb8.fun
Source: git.captnemo.in/nemo/prometheu …
Internet Stats
ACT FUP Usage
46.01 GiB
Speedtest
32 Mbps
Ping
53 ms
8:47 PM - 4 Jun 2018

Main Dashboard

This week so far



Media

- Airsonic (🎵) (Google Play)
- Jellyfin (📽) (Netflix)
- Kodi (📺) (Home Theater)
- Audioserve (🎙 📖) (Audible)

Content

- Nextcloud ☁️ ✅ (Drive/Calendar/Contacts/Documents)
- Miniflux (🗞️ `RSS`) (Feeds)
- Timemachine (💻 ⏮)
- wiki.js
- Radicale 📅 🗂️ (Contacts/Calendar)
- RSS Bridge
- Gitea (GitHub)
- ZNC (IRC)

hardware

Specs

- Intel i5-7600 3.5GHz
- Nvidia 1050 Ti 4GB
- 2x8GB DDR4 RAM
- 3x3TB Internal HDD
- MSI B250I Motherboard

- DO 1vCPU / 2GB RAM / 30GB SSD ($10/mo) (BLR1 region)
- + 100GB disk

A VM on the

- Scaleway: 4ARMv8/2GB/50GB - **300 INR**
- AWS Lightsail: 1vCPU/512MB/20GB - **250 INR**
- Digital Ocean: 1vCPU/1GB/25GB - **350 INR**

Beware of Persistent Storage cost

- Security: Footgun
- Batteries included
- OpEx

cloud storage

Storage	Cost/month	Retail
1TB-SSD	$100	$99
3TB-SSD	$300	$224
1TB	$25	$45
3TB	$75	$84

Indicative AWS:EBS Prices

Raspberry Pi 3

- 📝 1GB RAM
- 🌐 Wireless/BLE/Ethernet
- ⛓️ 4 USB ports
- 🎵 Audio/HDMI/Composite VGA
- ⚡ 2.5A
- 💸 **~3k INR**
- 📷, GPIO

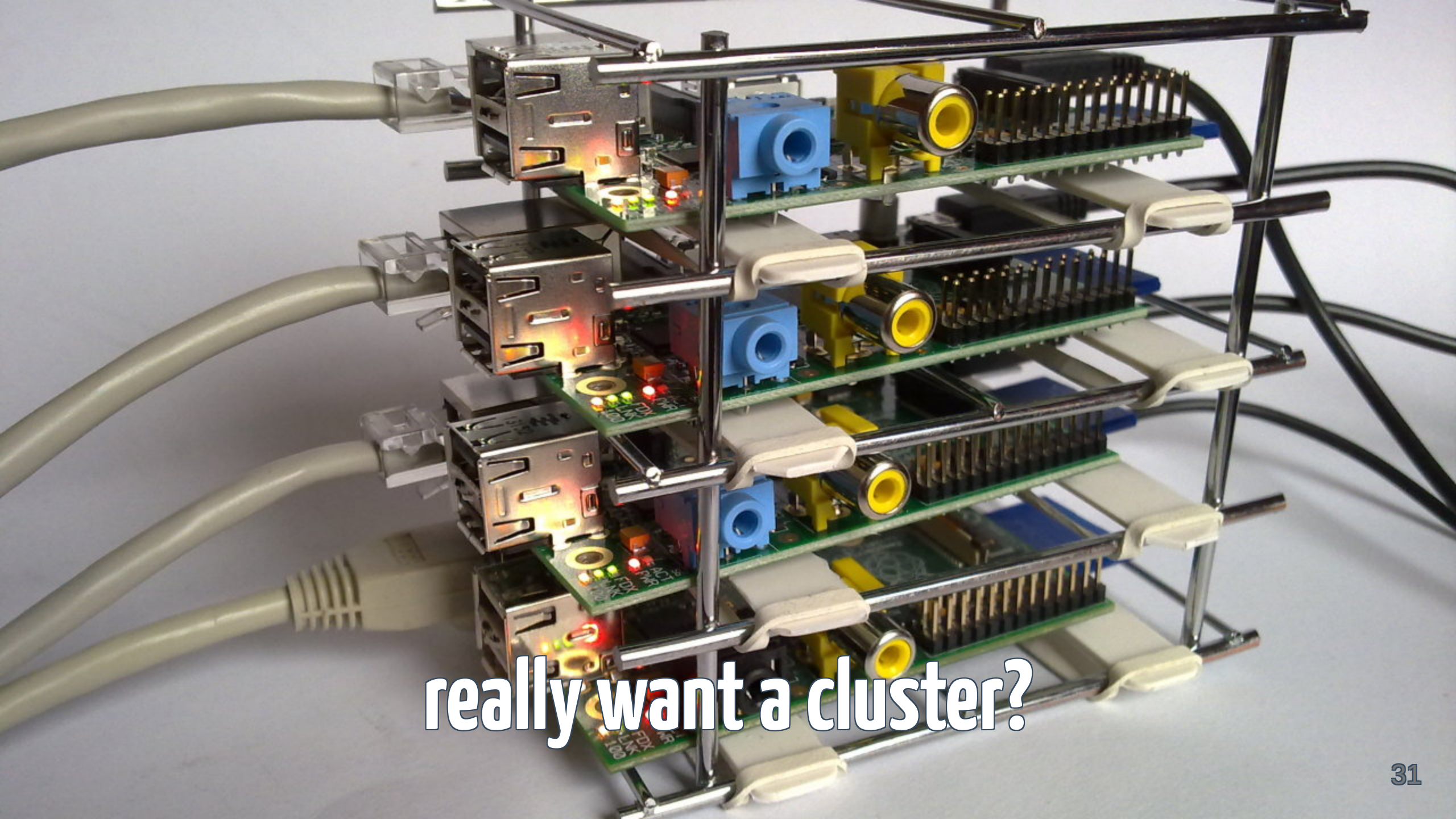

system76 Meerkat

Other Alternatives

1. Intel NUCs
2. Hetzner Server Auctions (20-50USD/mo).
3. NAS/Network device.
4. Gamer? `r/pcmasterrace/wiki`

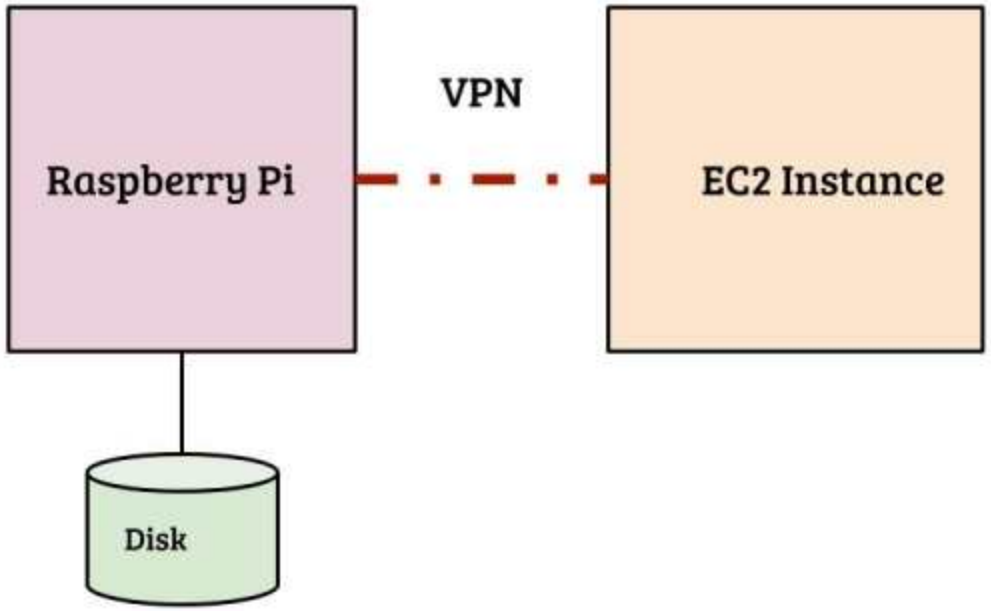

have some old laptops?


really into networking?


really want a cluster?

Hybrid

- Local Disk, Cloud Compute



	Cloud	Pi	PC*	Hybrid	NAS
Security 🔒	+	++	++	+	++
Utility	+++	-	💵	++	-
Cost	💸	+++	++	+	++
Setup-Ease	+	+	-	--	++
Ops-Ease	++	-	+	-	++
Storage	--	-	+	++	++
Gaming	--	-	++	++	--
HTPC	💵	+	++	++	+

glue

software

1. docker *
2. kubernetes
3. ansible/puppet/chef
4. helm?
5. tool-of-your-choice
6. Unraid
7. HomelabOS

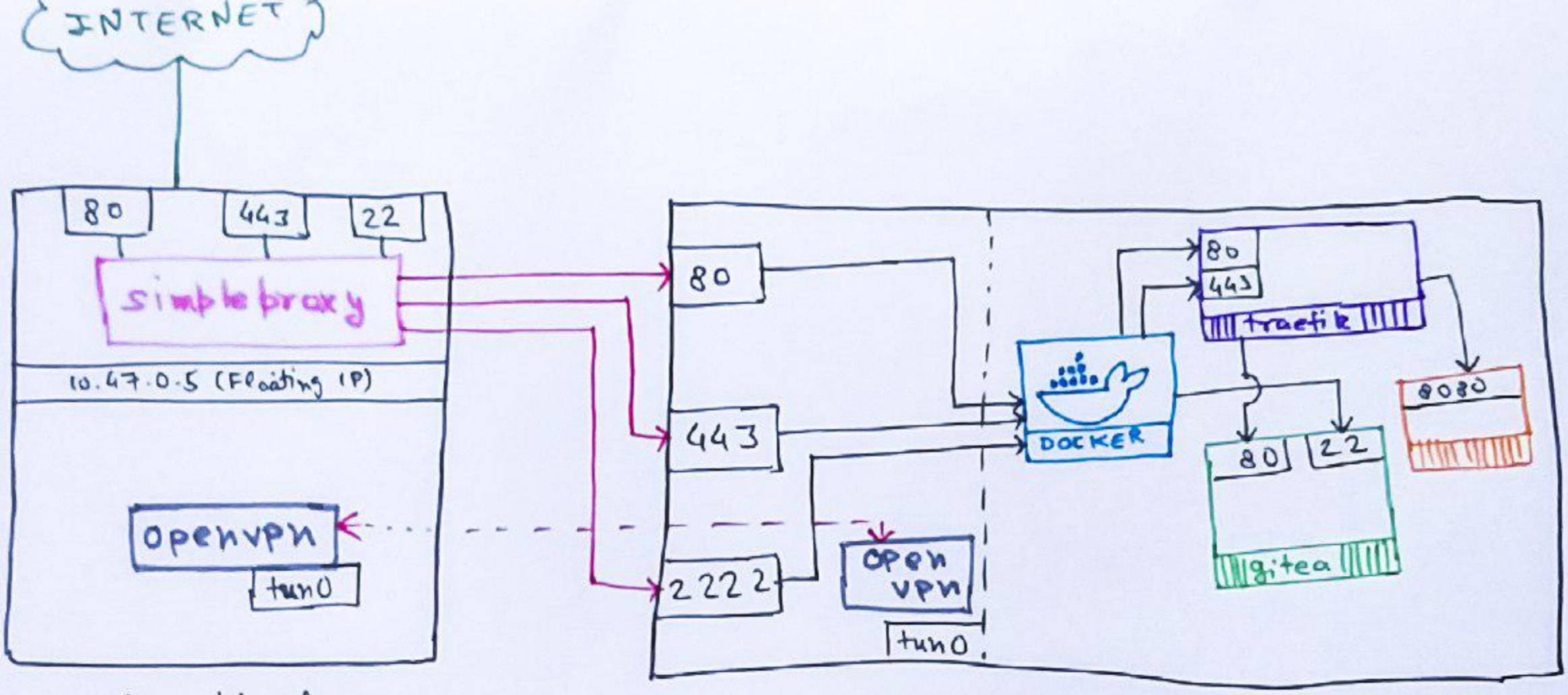
pick something dumb

containers?

- secure
- declarative configuration
- orchestration is 100x easier

networking

- Public + Static IP Address
- Floating/Elastic IP
- VPN
- Wildcard DNS/TLS



sydney.bbb.fun

(BLR1, Digital Ocean)

home server
(tatooine)

openVPN encrypted traffic

public internet traffic

internal traffic

security

security

1. Don't expose services
2. Expose services without auth over VPN only
3. Don't expose management services over Internet
4. Keep services behind Auth (even Basic Auth works)
5. Go Hybrid

buy a raspberry pi today

self-hosting references

- kickball/awesome-selfhosted
- linuxserver.io
- r/selfhosted

questions?

- me@captnemo.in
- @captn3m0
- captnemo.in/archive.html