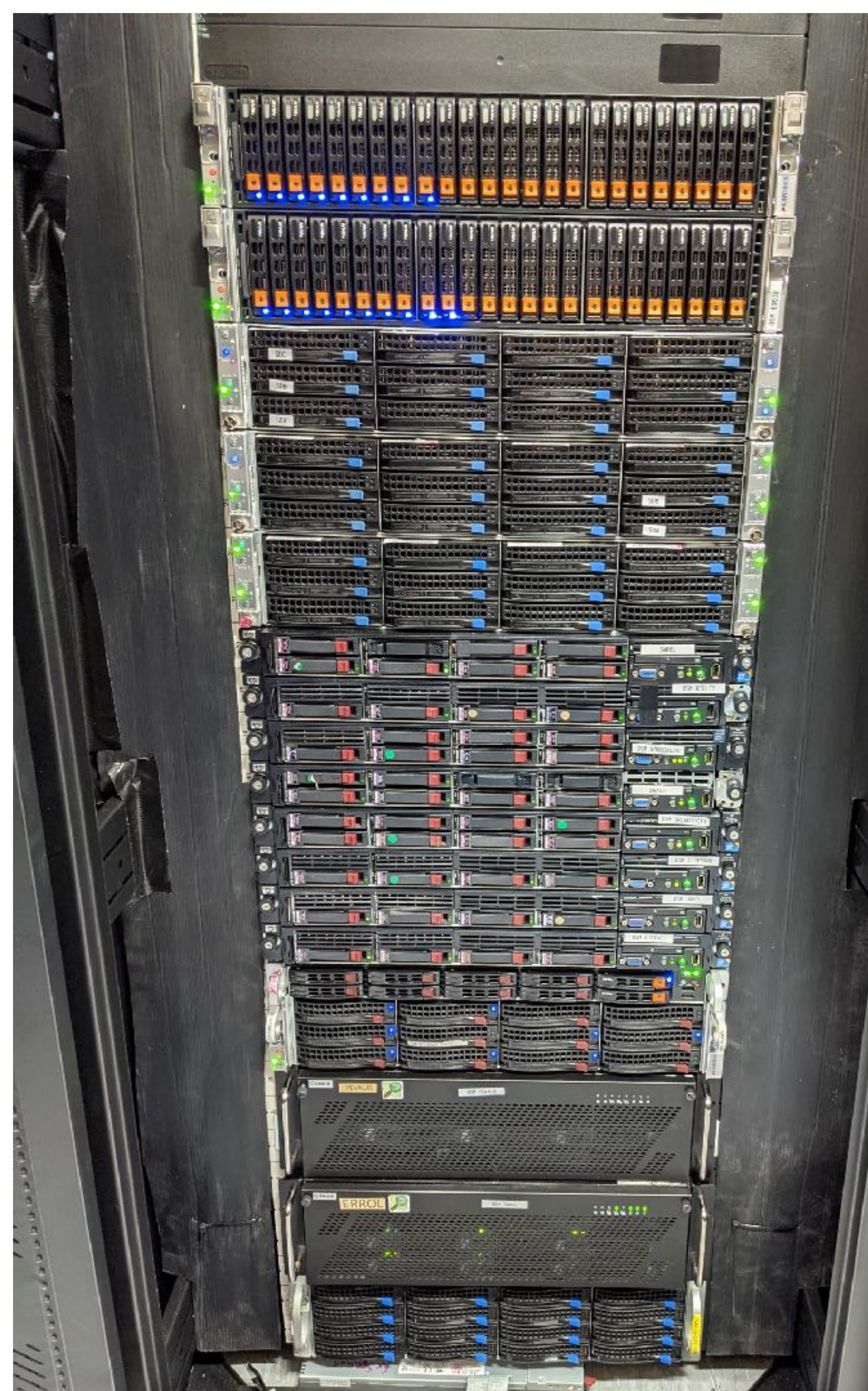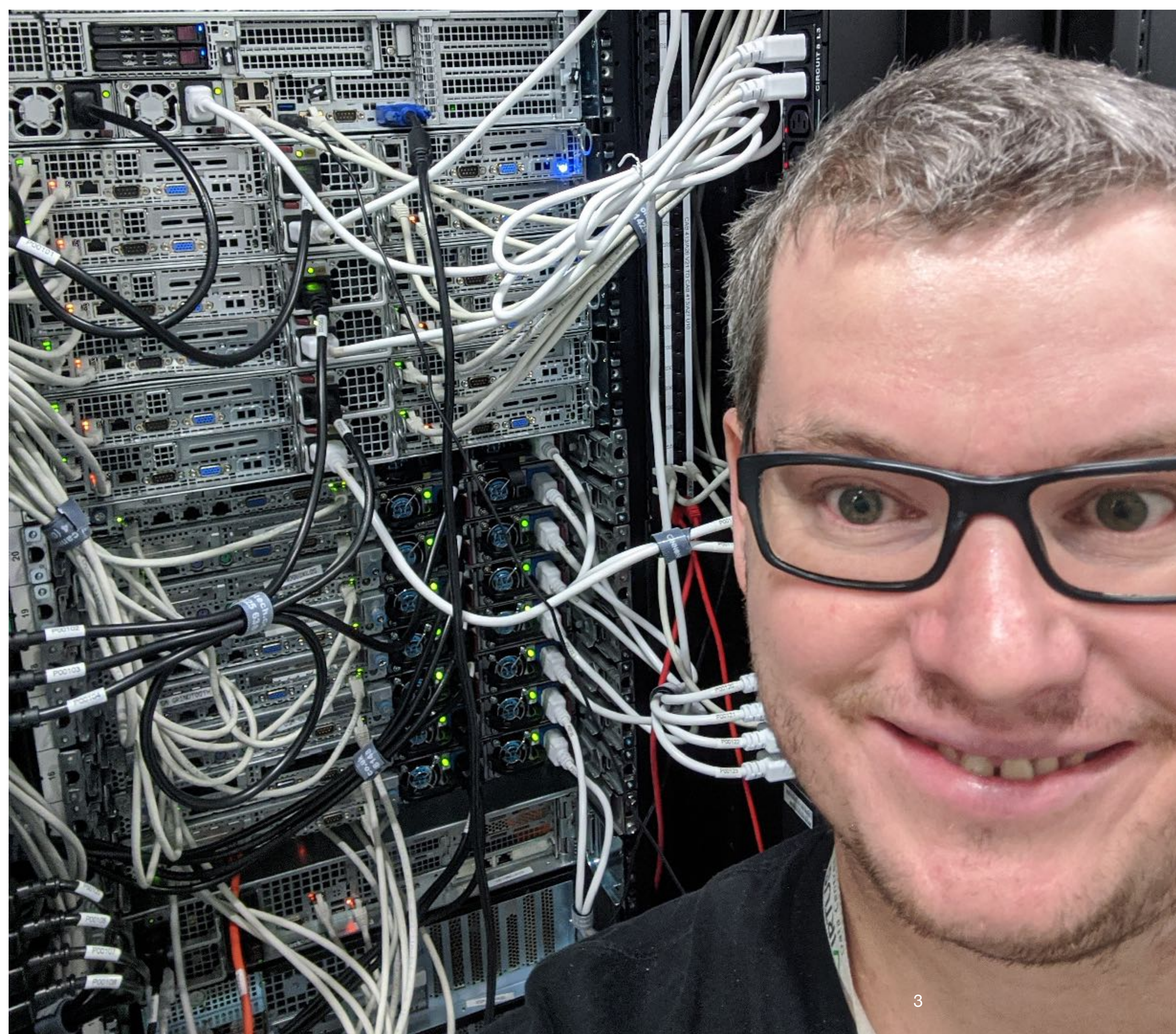**Grant Slater - State of the Map - 20 August 2022**

Twitter: @Firefishy1

Running OpenStreetMap.org
Today and Tomorrow

2

Running OpenStreetMap.org

Who am I?

- Site Reliability Engineer (SRE)

- Volunteer OSM sysadmin for over 15 years

- DevOps Engineer with a consultancy background

- Since May 2022 a full-time employee of the OpenStreetMap Foundation ❤️

Grant Slater

Twitter: @Firefishy1

Running OpenStreetMap.org

OSM Operations Team?

- Day to day

  - Grant Slater (me)

  - Tom Hughes

  - Paul Norman

- Others help

- Other project based contributors
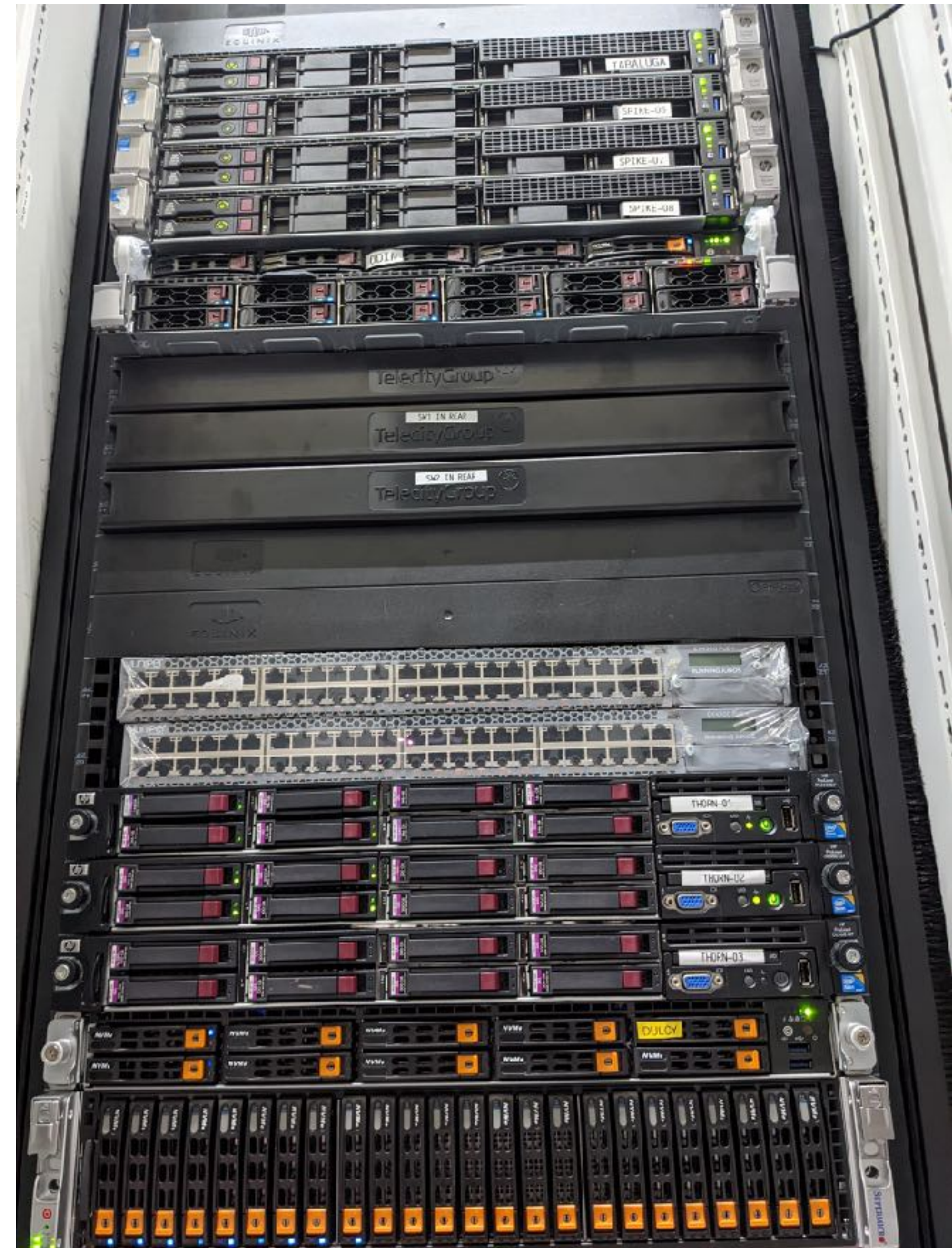
operations.osmfoundation.org

Running **OpenStreetMap.org**

Main service we run…

- www.OpenStreetMap.org

  - Ruby on Rails app ("Rails Port")

  Maintainers: Andy Allan + Tom Hughes

- cgimap (C++) - optimised implementation of API calls

Running OpenStreetMap.org

But we run many other services too…

- www.openstreetmap.org ("Rails Port")
- nominatim.openstreetmap.org (Sarah Hoffmann)
- taginfo.openstreetmap.org (Jochen Topf)
- tile.openstreetmap.org (Fastly DNS)
- render.openstreetmap.org (Tile Render Backends)
- planet.openstreetmap.org (Matt Amos - planetdump-ng)
- PostgreSQL database cluster (Primary / Follower)
- Open-Source Ticket Request System (OTRS)
- blog.openstreetmap.org (Wordpress + Translations)
- wiki.openstreetmap.org (Mediawiki)
- wiki.osmfoundation.org (Mediawiki)
- dmca.openstreetmap.org
- donate.openstreetmap.org
- matomo.openstreetmap.org (Formerly piwik, web analytics)
- Imagery (Out of copyright, Government Aerial…)
- prometheus.openstreetmap.org

- chef.openstreetmap.org (Configuration Management)
- hardware.openstreetmap.org (assets)
- acme.openstreetmap.org (certificates)
- forum.openstreetmap.org
- community.openstreetmap.org
- lists.openstreetmap.org
- help.openstreetamp.org (Question & Answer)
- mail (+ anti spam)
- blogs.openstreetmap.org (Blog aggregation)
- Overpass (internal for www.osm.org)
- CI/CD Pipelines (Continuous Test and Deploy of new code)
- Dev Hosting (Developer tool server and test API)
- Backup Management
- Secrets Management
- Tile Log Analysis
- join.osmfoundation.org

Running **OpenStreetMap.org** Hardware?

hardware.osmfoundation.org

55 servers

3 main data centres [IE, GB, NL]

Amsterdam: Primary

Dublin: Secondary

OSMF Server Info — About | Thanks

Equinix Amsterdam

Server	Description	Stats	Last Contact
dulcy	Nominatim geocoding server	munin	20:59
ironbelly	Web server for planet.openstreetmap.org / Planet file generation server	munin	21:22
karm	Read only database mirror for www.openstreetmap.org	munin	21:21
lockheed	Subversion server	munin	21:07
norbert	Web server for planet.openstreetmap.org	munin	21:06
odin	Tile server	munin	21:05
snap-01	Primary database server for www.openstreetmap.org	munin	20:58
spike-06	Frontend web server for www.openstreetmap.org	munin	21:11
spike-07	Frontend web server for www.openstreetmap.org	munin	21:10
spike-08	Frontend web server for www.openstreetmap.org	munin	21:19
tabaluga	Wiki server	munin	20:58
thorn-02		munin	19 July
thorn-03		munin	19 July

Equinix Dublin

Server	Description	Stats	Last Contact
culebre	Tile server	munin	21:07
fafnir		munin	21:19
gorwen	Overpass server	munin	21:00
horntail	Web server for planet.openstreetmap.org	munin	21:11
idris		munin	20:56
jakelong	Discourse server	munin	21:10
konqi		munin	21:04
longma	Nominatim geocoding server	munin	21:04
naga		munin	21:14
snap-03	Read only database mirror for www.openstreetmap.org	munin	21:19

Running **OpenStreetMap.org**

How… Configuration Management

- Secret Sauce:
  github.com/openstreetmap/chef

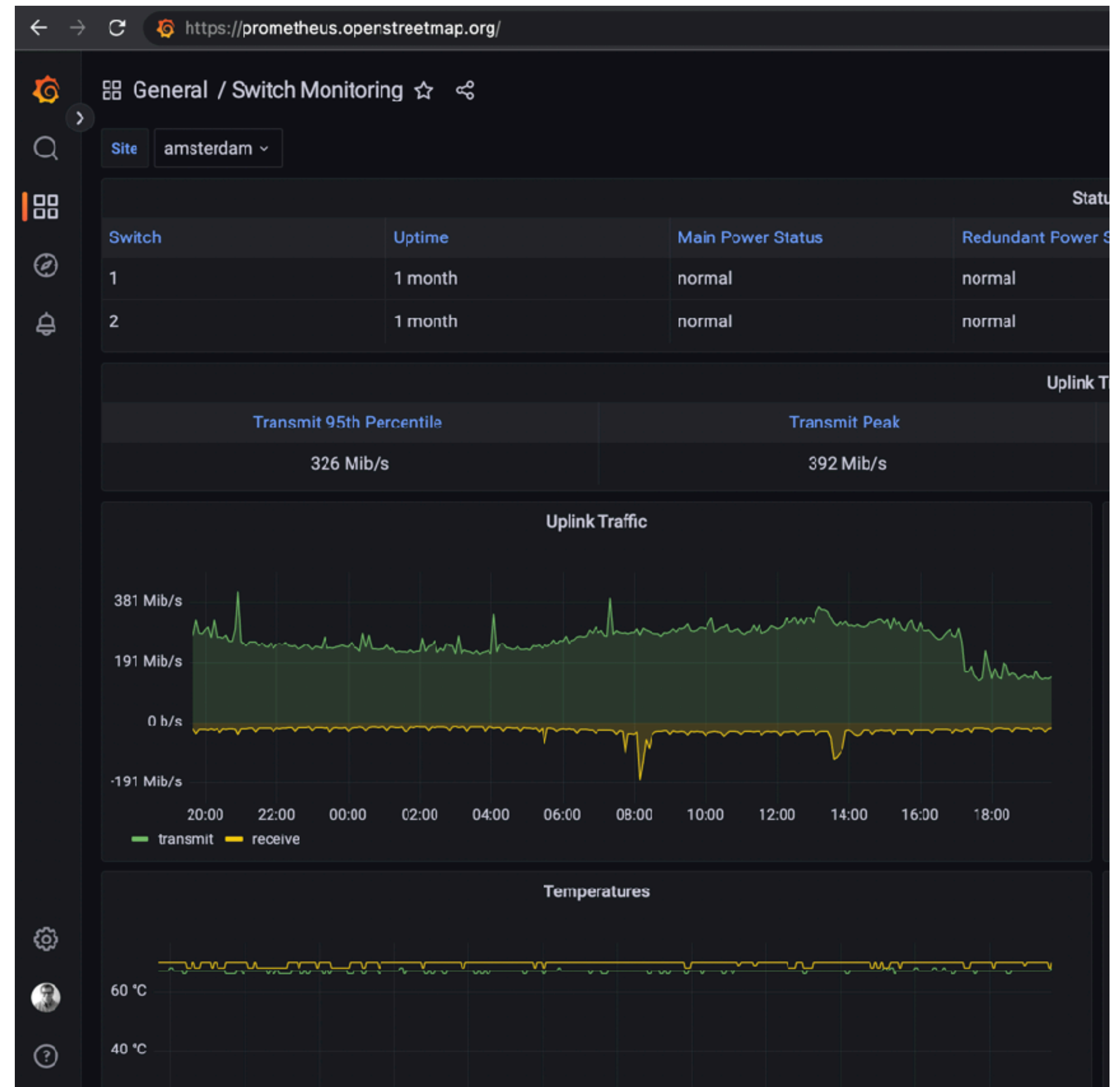- Backlog
  github.com/openstreetmap/operations

Running OpenStreetMap.org

How… Automate Monitoring, Metrics & Alerting

- ~~Munin~~ (phase out)

- Prometheus
  prometheus.osm.org

- AlertManager

- Pagerduty (pending)

Running OpenStreetMap.org

tile.openstreetmap.org (OSM Carto)

- ~~Own Content Distribution Network~~

- fastly.com sponsored Content Distribution Network (Cache)

- Bandwidth 32 Terabytes/day 3 Gigabits/second

- 2,500,000,000 requests per day

Running OpenStreetMap.org

Single Sign-on

- community.openstreetmap.org DONE
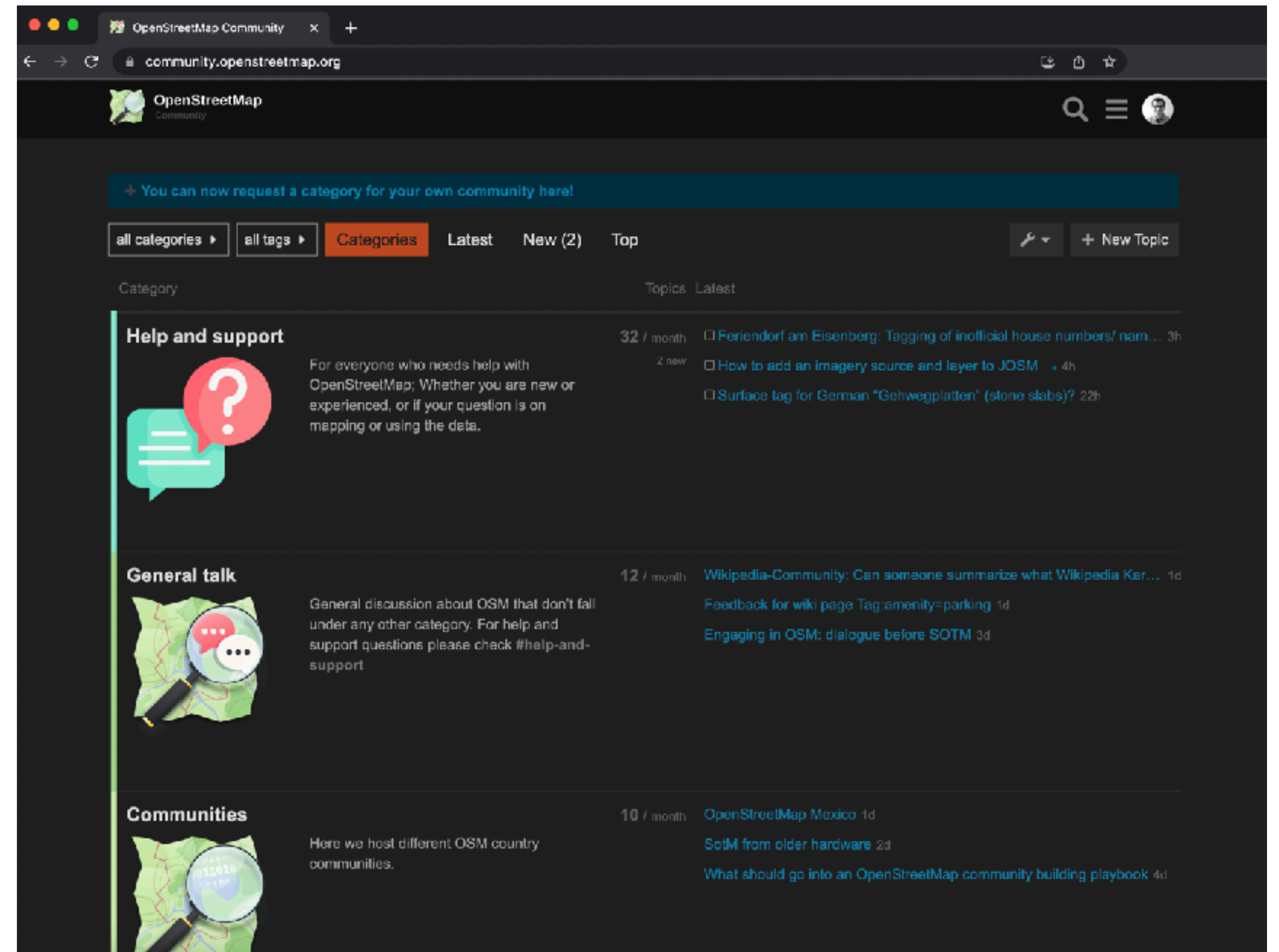
- wiki.openstreetmap.org

Running OpenStreetMap.org

Future: Improved Communications Forums

community.osm.org

Future replacement for:

- forum.osm.org

- help.osm.org ("Q&A")

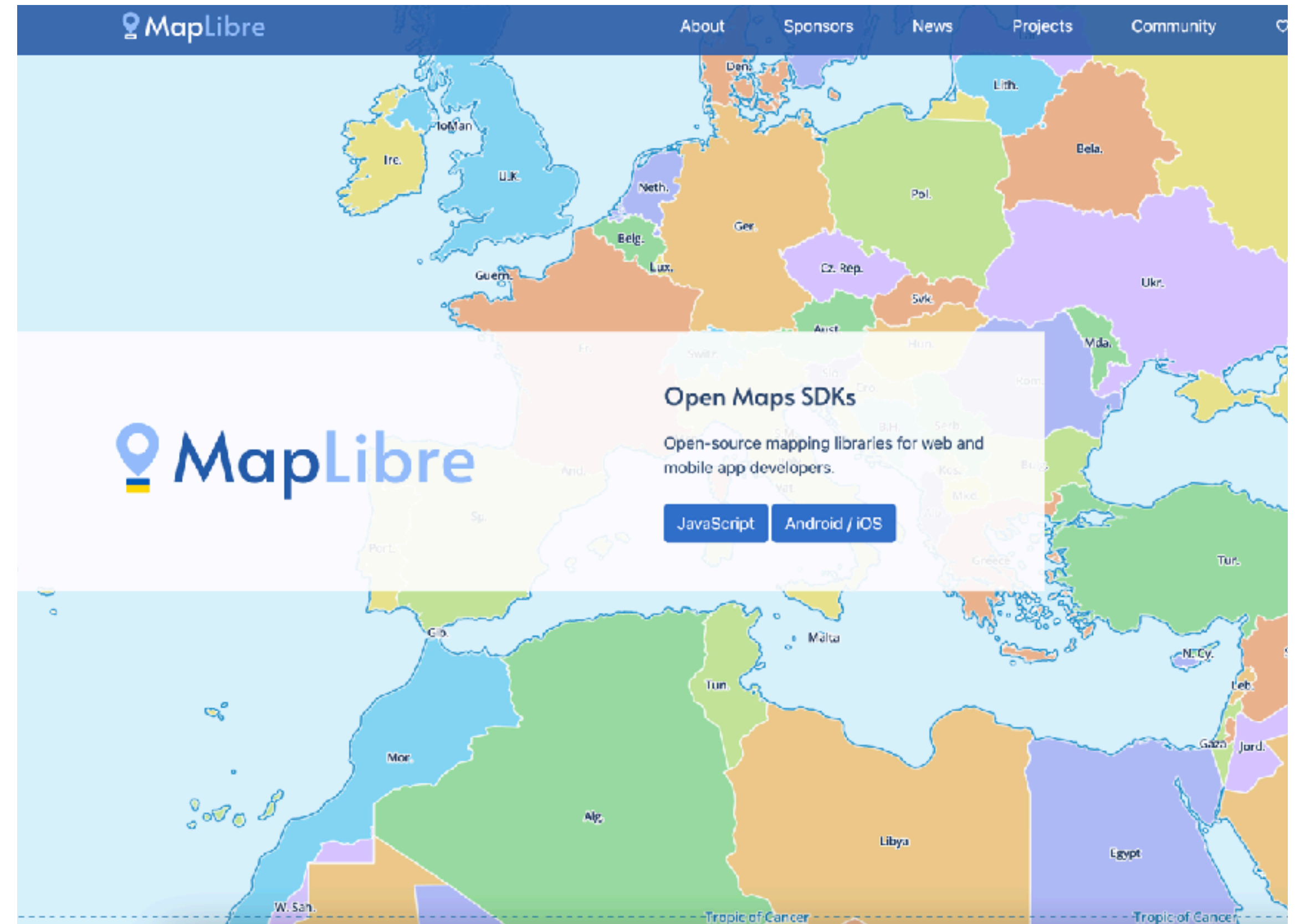- Some local mailing lists may want to migrate?

Running **OpenStreetMap.org**

Future: Vector Tiles on osm.org 🎅🎁

- Open ✅✅✅

- Schema?

- Generation?

- Distribution ✅

- Style?

- Rendering Framework ✅

Join our vector tiles group to help influence direction.

Running **OpenStreetMap.org**

Future: Build Resilience

- Bus Factor (The human factor)

- Reducing Single Points of Failure (network, database…)

- Reducing complexity and overall technical debt

- Reply on others when not compromising our values

Running OpenStreetMap.org

Future: Tactical Cloud / PaaS / SaaS

- planet.openstreetmap.org official co-distribution under AWS Open Data Sponsorship Program

- Enhancing our offering?

  - Map Photos?

Running **OpenStreetMap.org**

Want to get involved?

- Video calls every 2nd week Thursday

- webchat.oftc.net
  Channel: #osmf-operations

- operations.osmfoundation.org

Questions?

operations.osmfoundation.org

Twitter:

@firefishy1

@OSM_Tech