



Grant Slater - State of the Map - 20 August 2022

Twitter: @Firefishy1

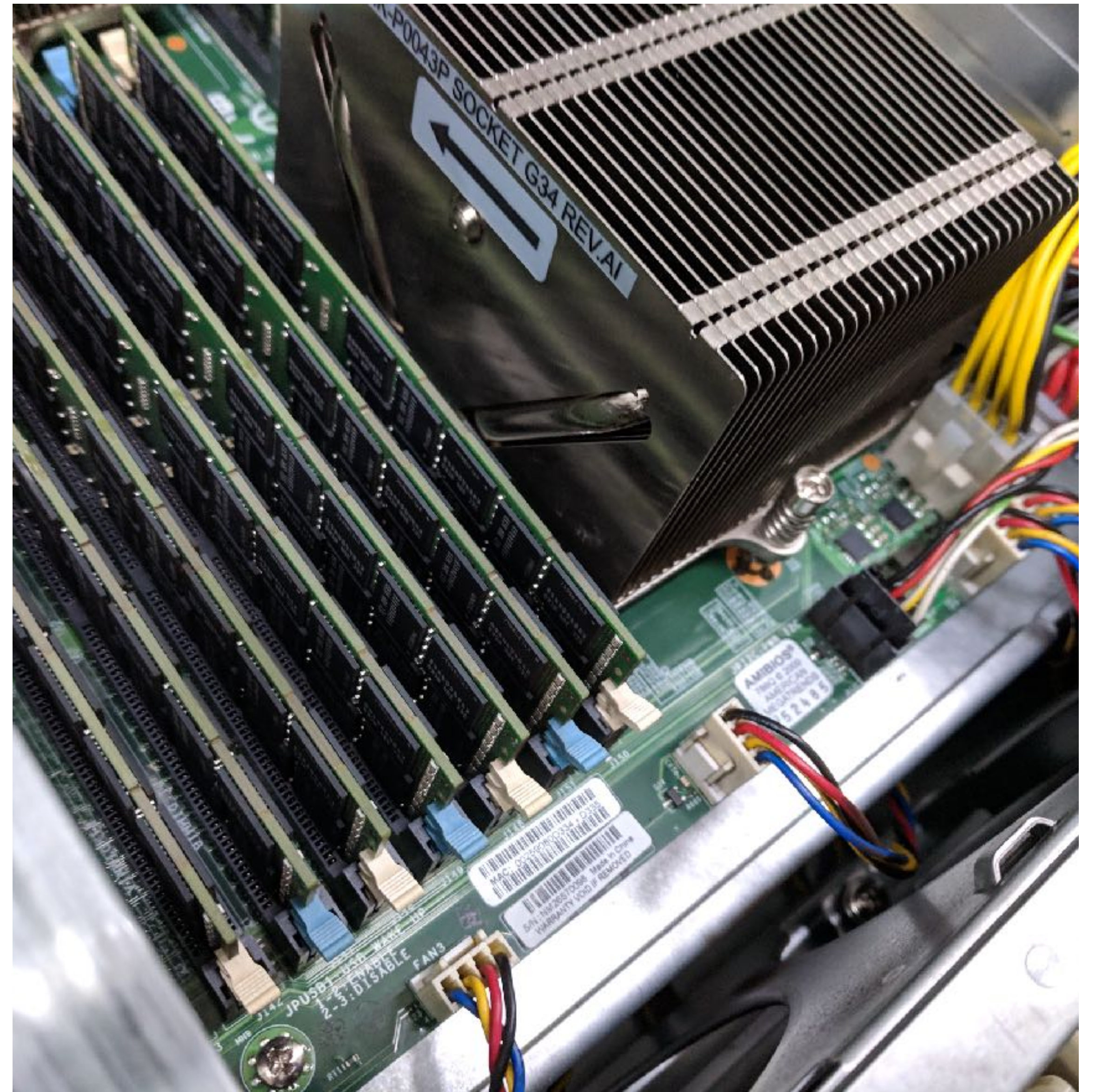
Running OpenStreetMap.org

Today and Tomorrow

Running OpenStreetMap.org

Today's talk

- Who?
- What?
- How?
- What is next?



Running OpenStreetMap.org

Who am I?

- 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



OSM Operations Team?

- Grant Slater (me)
- Tom Hughes
- Paul Norman
- Others help
- Other project based contributors

operations.osmfoundation.org



Running OpenStreetMap.org

Primary Services

- www.OpenStreetMap.org
 - Ruby on Rails app (“Rails Port”)
 - PostgreSQL replication cluster
 - AWS S3 object storage for GPX traces and User Images

Maintainers: Andy Allan + Tom Hughes

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



Running OpenStreetMap.org

We run many different services

- 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.openstreetmap.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 data centres [IE, GB, NL]

hardware.openstreetmap.org

OSMF Server Info

AboutThanks

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

Configuration Management

- Secret Sauce:
github.com/openstreetmap/chef

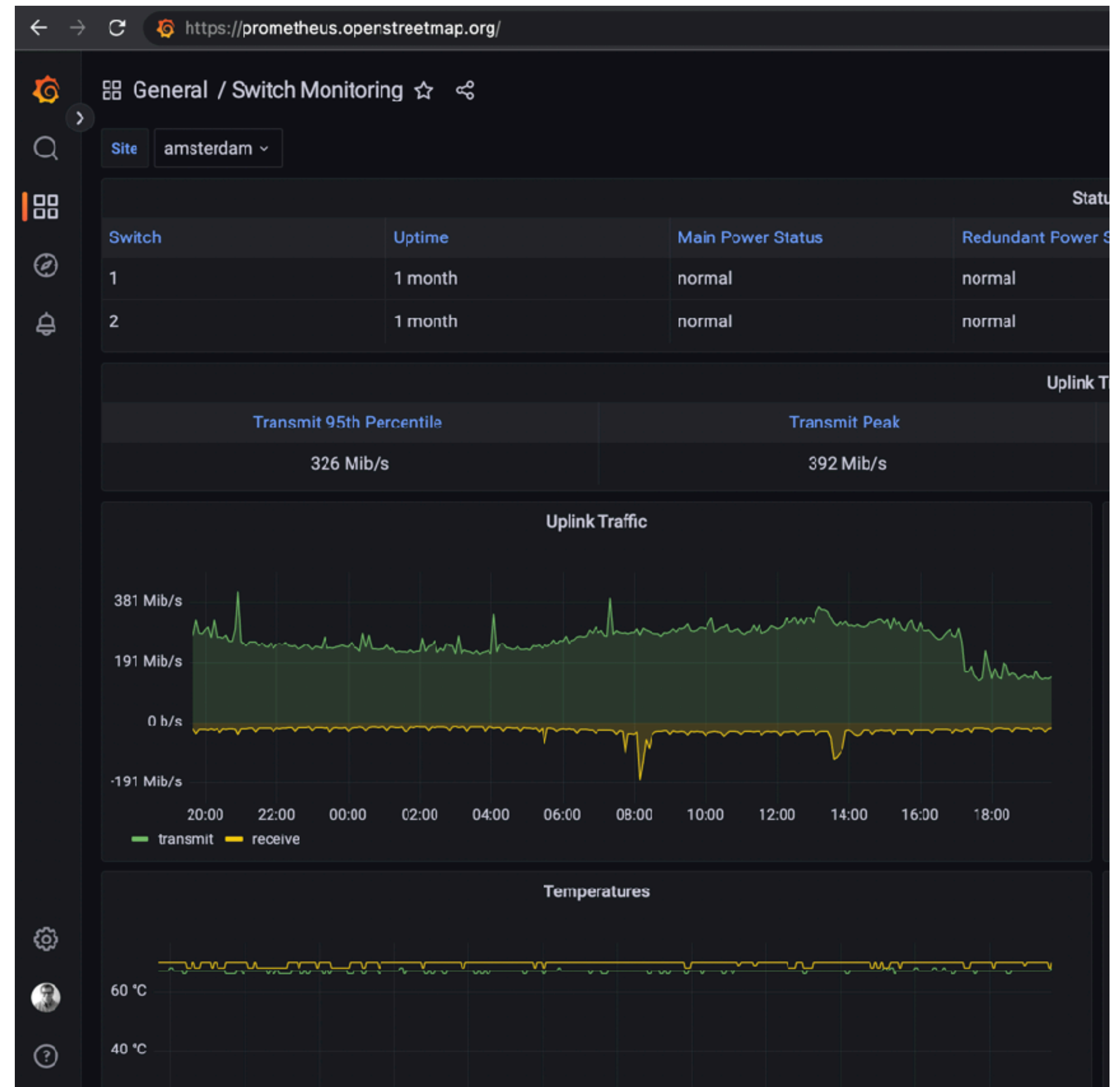


CHEF

Running OpenStreetMap.org

Automated Monitoring / Metrics / Alerting

- ~~Munin~~ (phase out)
- Prometheus
[prometheus.osm.org](https://prometheus.openstreetmap.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

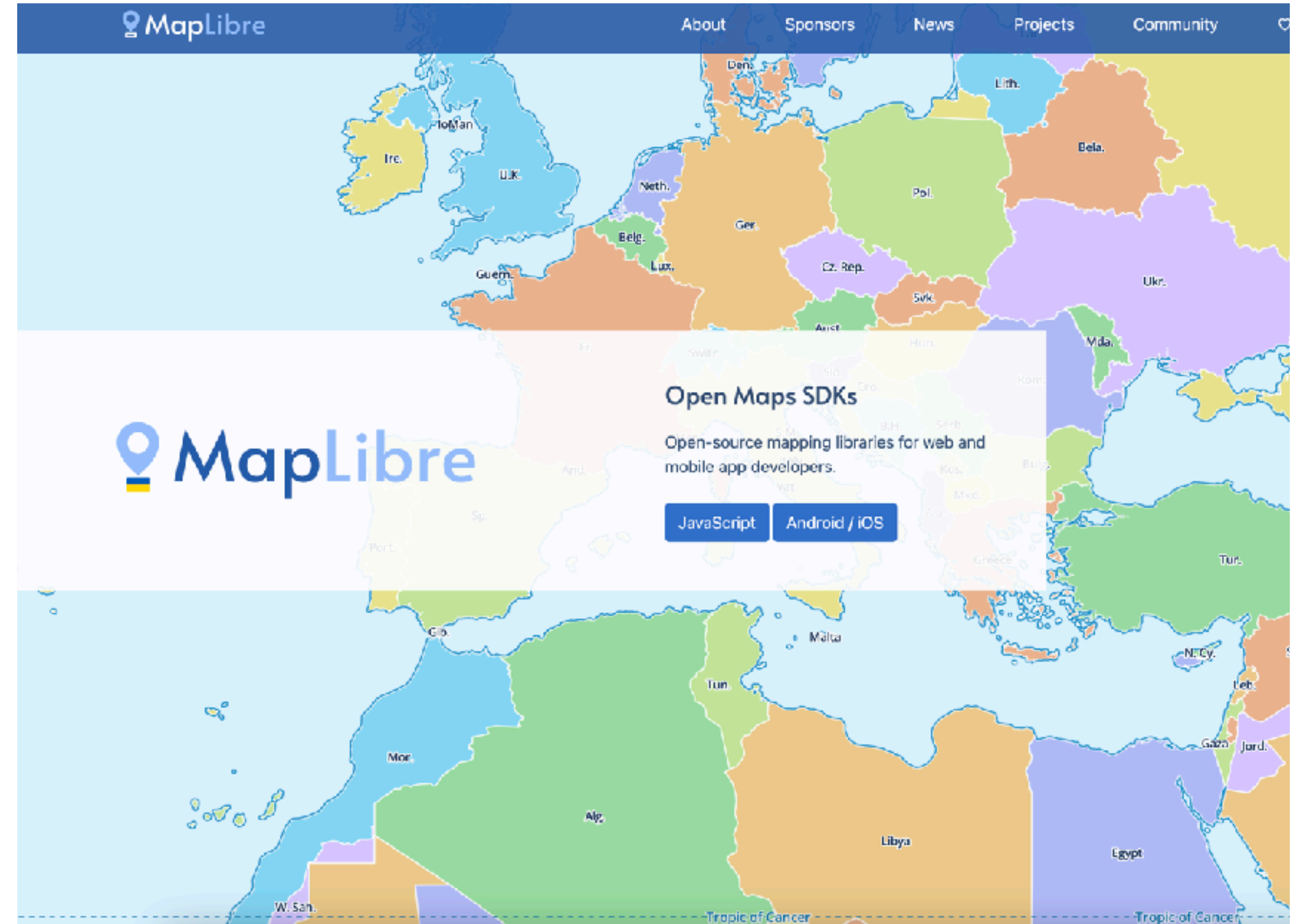
- community.openstreetmap.org
DONE
- wiki.openstreetmap.org



Running OpenStreetMap.org

Future: Vector Tiles on osm.org 🧑🏻

- Open   
- Schema?
- Generation?
- Distribution 
- Style?
- Rendering Framework 



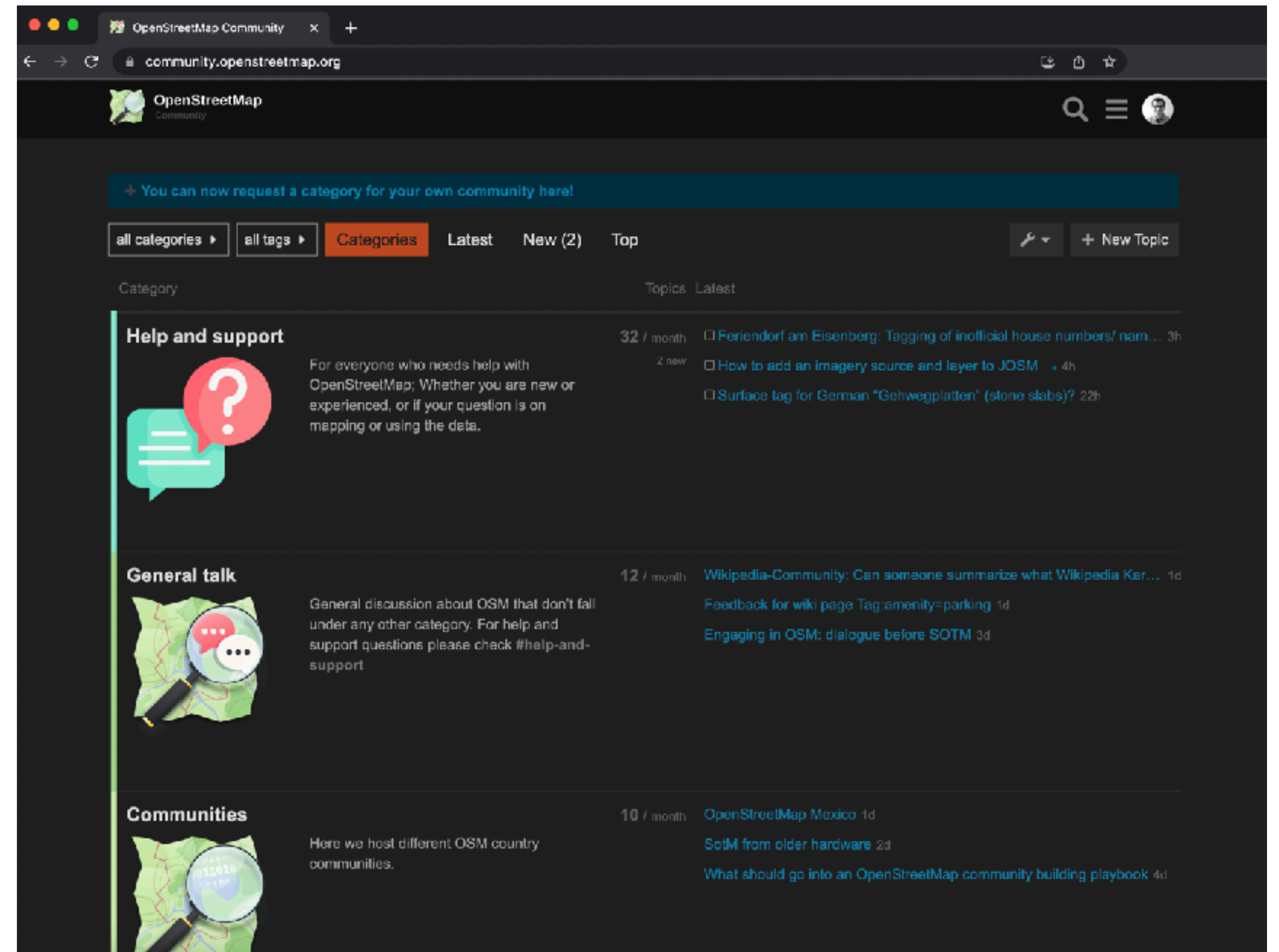
Running OpenStreetMap.org

Future: Improved Communications Forums

community.osm.org

Future replacement for:

- forums.osm.org
- Some local mailing lists?
- help.osm.org



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



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Want to get involved?

- Fortnightly video calls
- webchat.oftc.net
Channel: #osmf-operations
- operations.osmfoundation.org



Questions?

operations.osmfoundation.org

Twitter:

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