OWG 2013 Plan

Executive summary

1. Firstly, to maintain the OSMF infrastructure.
2. Add API services redundancy and capacity through DB server replication.
3. Continue scaling tile serving system.
4. Set up a routing system.

Maintain the OSMF infrastructure

The central shared file system for OSMF core services is reaching the limits of its performance and capacity and needs to be replaced with a more modern server with higher disk capacity and performance.

The Nominatim search server is heavily reliant on a single SSD disk and, in the interests of redundancy, would benefit from having a disk mirror.

Some services are occasionally network-bound, and a good GigE switch may help alleviate that.

API services redundancy & scaling

We are currently running a single database server, which means it is a single point of failure. Although regular off-site backups are taken, a serious hardware failure would result in many weeks of downtime. To remedy this we will be adding a second server, which will also allow us to scale out much of the read load (currently >95% of the load). Once this infrastructure is in place, our exposure to hardware failure will be drastically lower, and our capacity for the API should be approximately doubled.

Tile serving

We currently operate tile cache servers in Australia, France, the Netherlands, Norway, Russia, Sweden and the UK, and we continue to solicit further world-wide tile cache server donations to provide improved access and reduced latency to tiles. In some places, this may require hardware purchasing, although most locations have been provided by gracious donors.

The tile rendering servers need disk and RAM upgrades to continue to provide real-time updates to tiles and to be able to handle the Carto version of the OSM style, which will be easier to maintain and easier for contributors to get started with (compared to Mapnik XML).

Routing

It is not certain that the software changes required for this will be available, but we anticipate the requirement for hardware to run routing import and calculation services.

Costing

The following table breaks down the anticipated, and approximate, cost of the 2013 plan.

We have had strong support for the API scaling and redundancy hardware costs in the past, and will run a donation drive to contribute to these costs. Also, we expect that routing services will be popular and would also be a candidate for a donation drive.

Description	Approximate cost
Maintenance	£18,700
Sundries	£5,000
API redundancy	£17,500
Tile serving	£7,000
Routing	£15,000
Total	**£63,200**