

# OWG Summary 2013-07-01

**Present:** Matt, Grant, Tom, Sarah, Emilie, Jon, Andy

**Apologies:**

**Absent:**

## Actions since last meeting:

- Ordered and received new DB server (katla).
- Carto style renderer (Orm) is cheffed up and almost ready to go.
- Horntail replacement is on order.
- Wiki migration almost done.
- Canada, Germany, France (Lyon) - new tile cache locations.
- Ramoth - RAM & BIOS upgrade done.
- CGImap read-only backend done.

## Provisioning update:

- Amsterdam (trogdor) tile cache disk failing SMART - [Grant to contact to prompt replacement. DONE 3 July 2013].
- Disk cleanups on yevaud run once a month approximately. Grant thinks orm will need more disk for tile cache.

## Main agenda:

### UCL “decant” move

We will be moving the servers from UCL soon - although we don't know exactly when. As part of this, we expect that there won't be enough space to house all our equipment and have been asked to only take what we need.

We need to think about the following:

- Which servers do we need to keep running over the “decant” period (expected July-Sep, but we don't have any hard details)?
  - errol, yevaud, ridley, poldi, eustace, urmel, draco, sarei, norbert + external array (perhaps not), zark. (approx 19U?)
  - +idris
- Which servers do we want to keep, but can put in storage over the “decant” period?
  - nothing
- Which servers / other hardware is junk and we should get rid of?
  - UCL might be clearing out stuff too - see if they can take it.
  - Otherwise pay for recycling (guess £50/server-ish).

- Network switches + APC units will all be saved somewhere.
- RACKS: need to find out if we will need the racks (~£700 for a new rack), i.e: are we moving back? [Matt: find out whether we need the racks when we come back]

## Flipping over to Carto style

What's the procedure going to be here - what are the plans for yevaud, etc... after the flip?

For reference, previously minuted plan was:

- i. ~~Stop using Orm as a cache.~~ - DONE
  - ii. ~~Upgrade Orm so that it can be a renderer—SSD disks, RAM?~~ - RAM + SSD DONE
  - iii. ~~Chef up Orm & Yevaud.~~— Chef DONE
  - iv. Make Orm as rendering primary.
  - v. Switch over caches gradually.
  - vi. Re-image Yevaud + second SSD.
- Blockers:
    - Hardware on Orm (SSD controller being flaky)
    - Need tagged version of style (Andy will do in next week).

## Wiki migration

In progress, main item of work is writing the chef scripts to install / configure all the MediaWiki extensions we're using. Also install translate module.

## Horntail-new

Horntail is general services server - it has both a vast number of services and a large number of files (GPX traces, user images), which will need to be migrated.

Tom has been doing a lot of up-front work to get the stuff we can cheffed up. Still need chef scripts for osmosis replication, and some other small things. Will be a case of doing a gradual migration of each service.

## Katla

Do hardware & performance testing (e.g: different RAID configs). Get disk configuration sorted out & partitions built. Then chef it up as a slave. Some effort needed to figure out whether we want different tablespaces for gpx data, and if so how to change the schema without too much downtime. [Matt to start with this.] LSI controller package needs sorting out in chef but will wait until migration is done.

## Planning / Overspend

We reached our first funding goal, and "it has been decided" that we're going for a stretch goal. Several people, including potential donors, have asked what we will do with the extra money, but beyond the 2013 plan, we haven't (as OWG) discussed what our priorities are.

We should probably plan out - just roughly - what we would hand-wavingly expect the next 12 months / \$100k to be spent on.

- 2x routing servers - PLANNED
- backup improvements - PLANNED
- 1x international tile cache - PLANNED
- read-only postgres DB slaves.
  - 2U - 2x E5-2650, 64GB RAM
  - 4.8TB disk (10 x 600GB Cheetah SAS2 15k RAID6?), 2x512GB Samsung 840 Pro SSD (RAID1) for indexes.
  - e.g: S49373
  - approx £11.9k (inc VAT)
- horntail replica - to mitigate lead time for replacement.
  - same spec as horntail-new: 3U, 2x E5-2600, 128GB RAM, 20TB disk (4TB WD SAS2 7.2k RAID6).
  - approx £8.6k (inc VAT)
- horntail split up - run services on more than one machine.
  - git & chef: >=2GB RAM, >=2 cores, >= 5GB disk. (£40/mo, or S49381 £1.9k inc)
  - logs & logstash: logstash is real-time, so might need some CPU & memory (main collection point is redis), and obviously a few TB of disk. (FS13 bytemark dedicated equivalent?) (£129/mo, or S49382 £2.8k inc)
  - (aw)stats processing & serving: could be external - needs a fair chunk of CPU, and a few TB of disk? - do we want to do this any more?
  - supybot (and other misc stuff): could be external, very little resource requirements. Could run this on Shenron.
- off-site backup: probably need ~2TB to mirror what's on horntail, plus some overhead for growth. (encrypt off-site backups too?) (S1 bytemark equivalent?) (£325/mo, or S49383 £5.3k inc) (could alternatively / additionally use S3 for off-site backups)
- nominatim 2nd server.
  - 2U, 2xE5-2630, 128GB RAM, 512GB Samsung 840 Pro SSD, 6x600GB Seagate Cheetah 15k (RAID5 - 3TB): approx £8.8k (inc VAT) - e.g: S49421 or similar. [see also 3U equivalent £9.3k inc, S49422]
- all-SSD database server (for trialling as a read-slave to see if they fail after 6mo).
  - with commodity SSDs as quoted for katla, about £33k (inc VAT).
  - if we didn't go full-on RAID10 on the disks, it would be significantly cheaper.
- imagery hosting servers?
  - similar spec to horntail-new / -replica above: approx £8.6k (inc VAT) (could use S3 for this?)
- worldwide tile caches.
  - each tile cache server: 12GB+ (pref 32GB) RAM, >146GB fast disk.
  - e.g: S49353 - approx £3k (inc VAT), but more likely rented or donated.
- [munin server - but this might be more suitable for a VM]
  - 4-cores, 16GB RAM (currently - munin2 might need less). (£129/mo, or S49382 £2.8k inc)
- overpass API server (orm / smaug class? and could use smaug).
  - not completely sure of the specs here...

[Matt & Grant - approximately price these up - sent to group for review]

## Zoom 19 tiles

Previously minuted: "Seems possible. Might be small style issues. Would be nice to have, so go for it."

Carto will support this much, much more easily than XML. So we wait for Carto. Might want to implement something to switch z19/z20 to a memcached-based storage. Kai's new storage interface should make this easier.

## OWG membership

Kai Krueger has expressed an interest in joining. Andy to follow up to see if he's still interested.

## Priority-Immediacy matrix

	High priority	Medium priority	Low priority
Urgent (now)	* Upgrade Orm disks + ram (£2.7k) *	*	
Planned (<6mo)	* DB replica (£17.5k) * Second SSD for Yevaud (£350) * Another cache server (£0 - donation?) * Replacement for horntail (£10k).	* GigE switch (£850) * Second SSD for Poldi (£350)	* NA tile cache (£4k)
Future (6-18mo)			* Routing machines (2x £7.5k)