



Norwegian
Meteorological
Institute

Openstack @ MET

What has happened since last time

2019-09-04

Today

Not much have changed since last time, but changes will come
Real soon now™

- 40 compute nodes
- ~650 VM's
- Running critical production

Ares

- OpenStack in two + 1 server rooms.
- availability zones (A-int,B-int,A-ext,B-ext,C-int,C-ext)
- A project is either internal or external
- 1 ceph in one server room
- 1 ceph spanning two server rooms (for legacy reasons)
- One API (haproxy, keepalived)
 - Pretty robust, but slow/sluggish
- Quorum site is just a room with a little cooling
- Impossible to keep updated
 - Docker containers
 - No way to set up from scratch any more
 - No staging environment
 - EOL

What is OpenStack used for today?

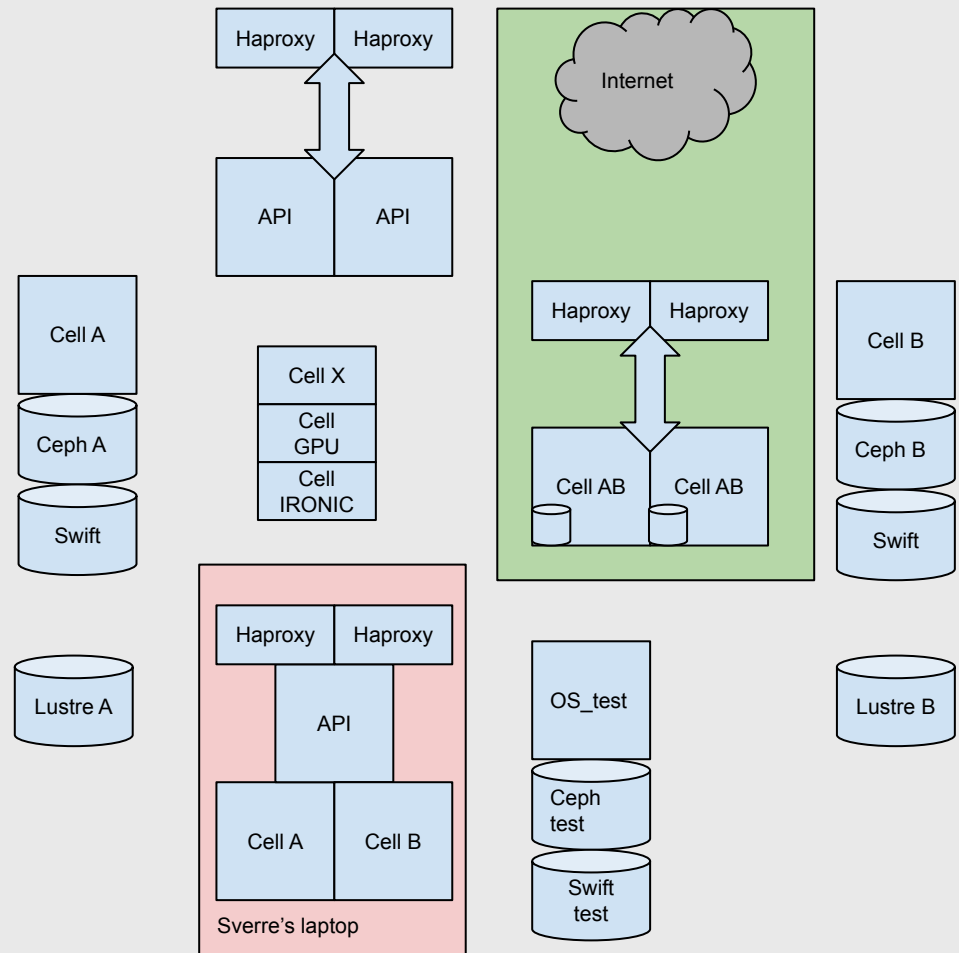
- Data distribution
 - yr, api.met.no, lyn.met.no, satellite images
- Data presentation
 - For other institutions (SVV, army, oil companies &c)
- Observations coming in
- Testing and development
- Gateway to 15PB parallell mass-storage
- Databases
- Wiki, kafka, k8s testing, gitlab, ticket, cups,

Goals for next OpenStack

- Must be able to update to new OpenStack releases with only downtime for a single cell.
- High available
- DNSaaS
- LBaaS
- Object store
- Faster storage (Ceph on SSD)
- Installed and managed with a supported tool (puppet-openstack)
- Extendable to a 3rd or 4th location
- Backup to Swift
- No single point of knowledge

Design API

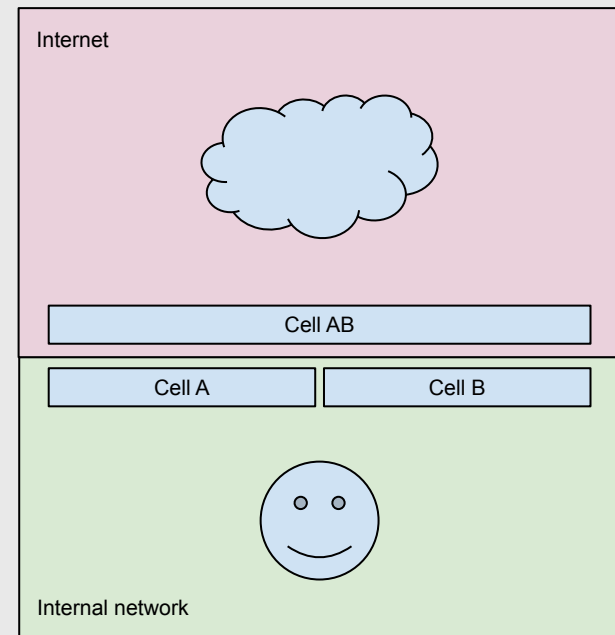
- Cell AB is running LBaaS, dnssaaS
- Users set up vms in Cell A and B



Network

Internal network only reachable from
Cell AB through load balancer

Cell A and B can only reach internet
and some selected internal services





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Questions?

- How do you deny a user access to a cell?
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