





ubuntu
Supported by Canonical



OpenStack Design Summit Summary

Swiss and Rhone Alpes - OpenStack User Group Meeting
6th December, 2013 - CERN

Belmiro Moreira

belmiro.moreira@cern.ch @belmiromoreira



My Design Summit Goals

- Operations "best practices"
- Scalability and architecture design
- Nova design sessions

- "shake" and "challenge" my knowledge and preconceptions with all user stories, products, companies, discussions...

Deep Dive into the CERN Cloud Infrastructure

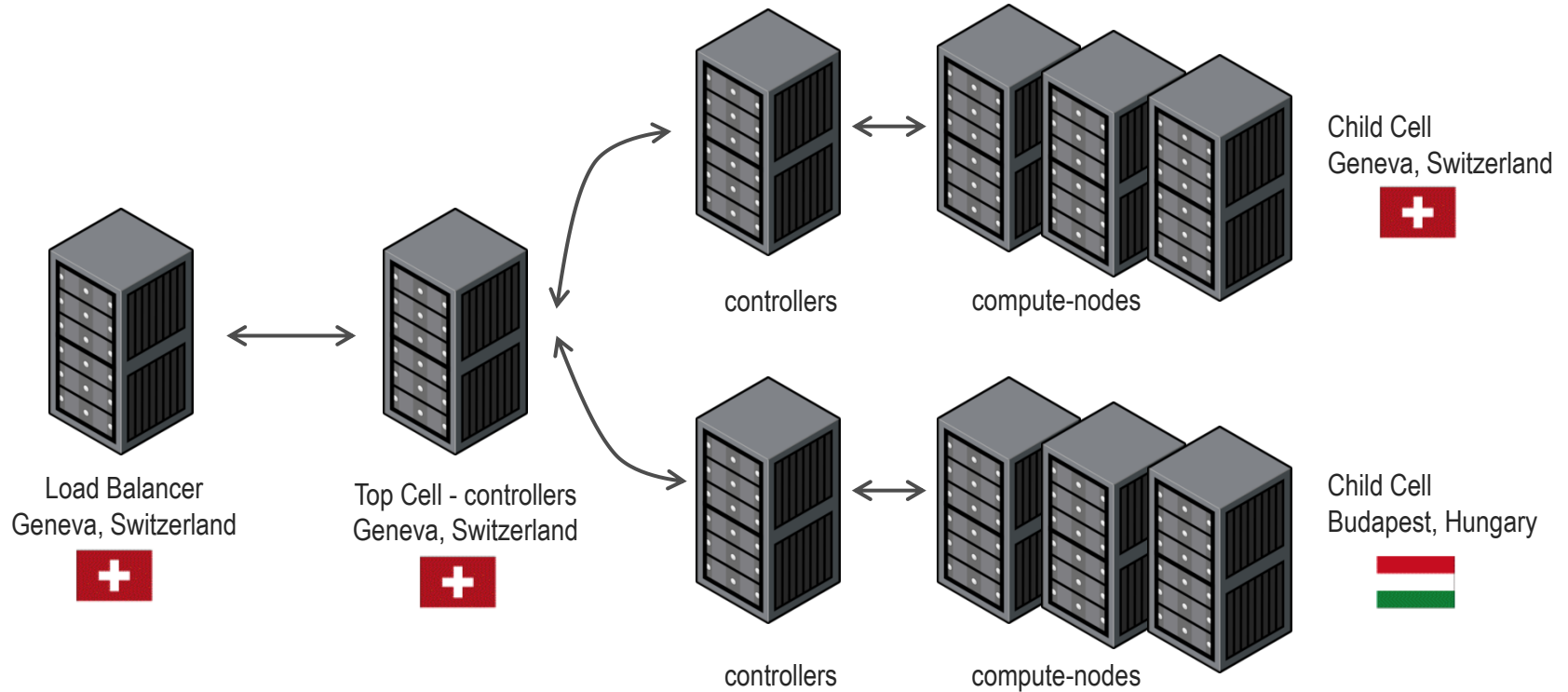


www.openstack.org/summit/openstack-summit-hong-kong-2013/session-videos/presentation/deep-dive-into-the-cern-cloud-inf

OpenStack at CERN

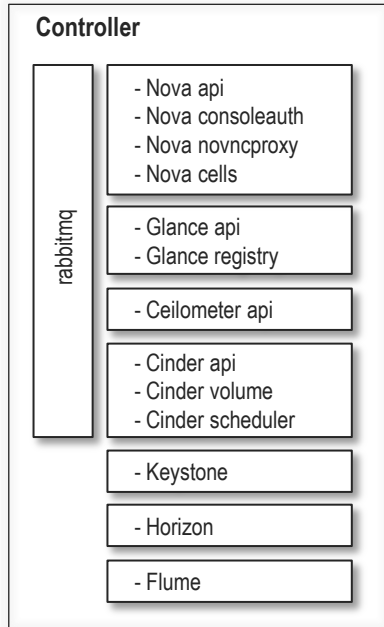
- +3 Children Cells – Geneva and Budapest Computer Centers
- HA+1 architecture
- Integrated with CERN accounts and network infrastructure
- Monitoring OpenStack components status
- Ceilometer
- Glance - Ceph backend
- Cinder - Ceph backend

Architecture Overview

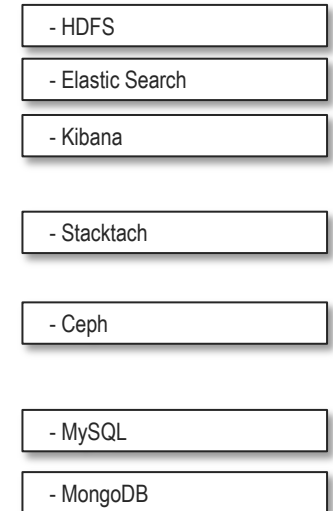
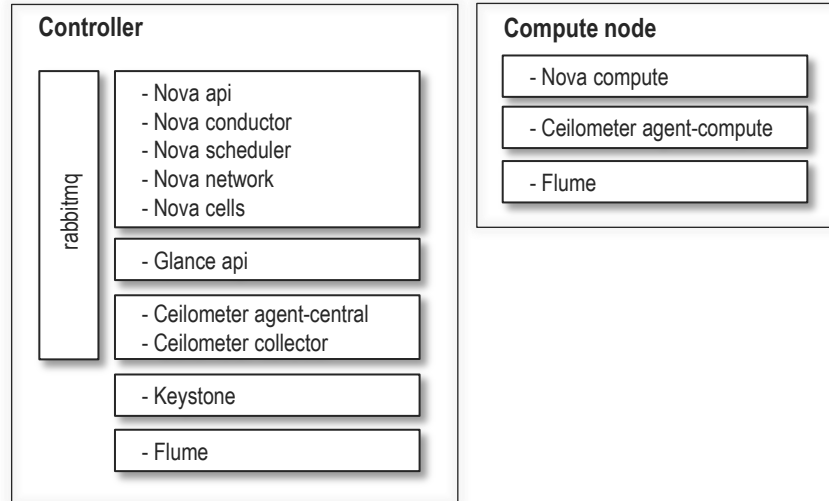


Architecture Components

Top Cell



Children Cells



OpenStack at CERN by Numbers

- Adding +100 compute nodes every week
- Today we have:
 - ~ 36000 cores
 - ~ 3500 VMs

Design Sessions



Design Summit Sessions - Nova (Icehouse)

1. Live Upgrades
2. Scheduler redesign
3. Nova API v3
4. Cells

Design Summit Sessions - Glance (Icehouse)

1. Image status consistency with Nova
2. Properties/Status per location
3. Deprecate API v1 in J*

OpenStack Design Summit – The day after

Icehouse Etherpads

<https://wiki.openstack.org/wiki/Summit/Icehouse/Etherpads>

Session Videos

<http://www.openstack.org/summit/openstack-summit-hong-kong-2013/session-videos>

Photos

<http://www.flickr.com/photos/108527511 @N02/with/10830960026>

OpenStack Design Summit –

The day after

- Infrastructure "refresh" when moving into OpenStack
- We are finding the same "problems" at scale
- Hybrid and Federated clouds interest growing
- Lots of projects/ideas around but focus in "stability" in core components

belmiro.moreira@cern.ch
@belmiromoreira



www.cern.ch