

Migration of a computation cluster to Debian

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Outline

Context

Hardware

Existing software

Solution

Institut de Génétique et Microbiologie (IGM):

- ▶ joint lab, CNRS & Université Paris Sud
- ▶ cluster part of the eBio platform, providing resources for scientists

Logilab:

- ▶ software services
- ▶ python specialist, Debian-based
- ▶ scientific computing / simulation

Hardware

Existing:

- ▶ 10 compute nodes
- ▶ 1 frontend
- ▶ 1 separate assembly node (lots of RAM and storage)
- ▶ 24-port 1Gb ethernet switch

New:

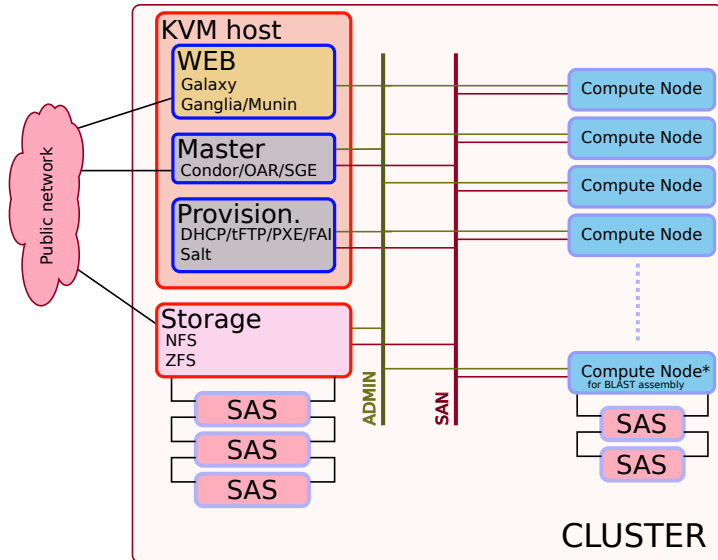
- ▶ 2 hosts for virtualization and storage
- ▶ 2 more storage bays



Existing software

- ▶ Based on RHEL5
- ▶ Sun Grid Engine (SGE) batch scheduler
- ▶ No shared storage
- ▶ No central management

Solution



Solution (2)

- ▶ One storage node using ZFS on Linux
- ▶ VM hosts for all services: provisioning, monitoring, frontend (submission host), databases, web server, ...
- ▶ Nodes reinstalled with FAI (<http://www.fai-project.org/>)
- ▶ Configuration/deployment with Salt (<http://www.saltstack.org/>)