Bootstrapping OpenStack with Foreman and Puppet

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stoney cloud

Where we are coming from

- ## Small cloud company
  - Mostly PaaS

- ## FOSS-Cloud.org based cloud
  - libvirt based
  - No longer actively maintained
  - GlusterFS storage backend

Bootstrapping nodes

- Done by hand

- Boot from an external medium
  - custom ISO

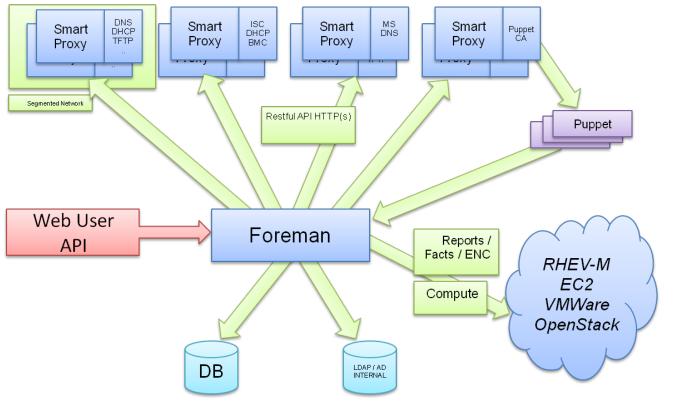- Configuration and integration by hand
  - error-prone
  - expensive

Where we are headed to

- OpenStack
  - Ceph storage back end
  - Foreman for bootstrapping
  - Puppet for configuration management

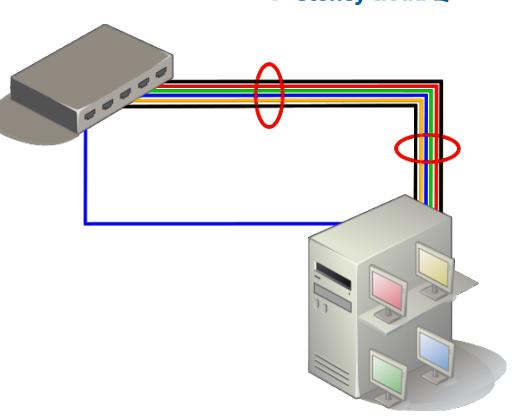# Foreman architecture

Bootstrapping with Foreman

- PXE Boot via TFTP
  - Loads the Kernel, Initramfs
- Kickstart file via HTTP
  - Install the OS
  - Install Puppet
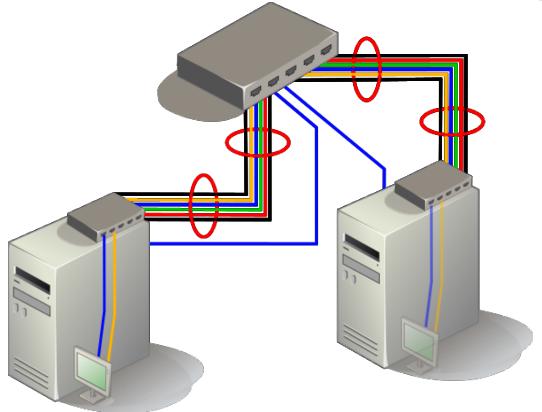- reboot
- Puppet takes control

Network setup

- Idea
  - Bonded 10 Gb/s interfaces
  - VLANs (on top of the bond)

- Problem
  - No BIOS support
    for PXE Boot via VLAN

- Solution
  - Dedicated NIC

OpenStack bootstraping

Questions?

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