



Bootstrapping OpenStack with Foreman and Puppet

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Where we are coming from



- Small cloud company
 - Mostly PaaS
- FOSS-Cloud.org based cloud
 - libvirt based
 - No longer actively maintained
 - GlusterFS storage back end

Bootstrapping nodes



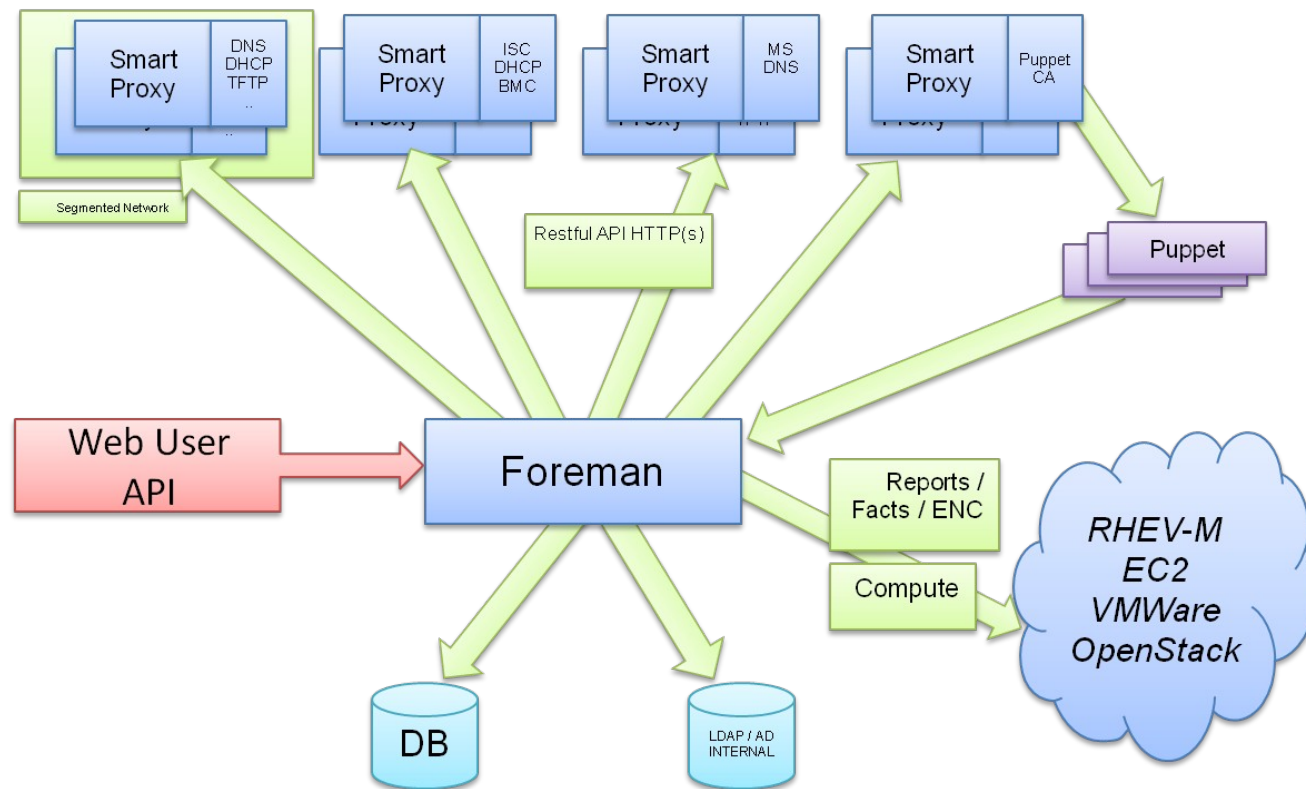
- Done by hand
- Boot from an external medium
 - custom ISO
- Configuration and integration by hand
 - error-prone
 - expensive

Where we are headed to



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

Foreman architecture



Bootstrapping with Foreman

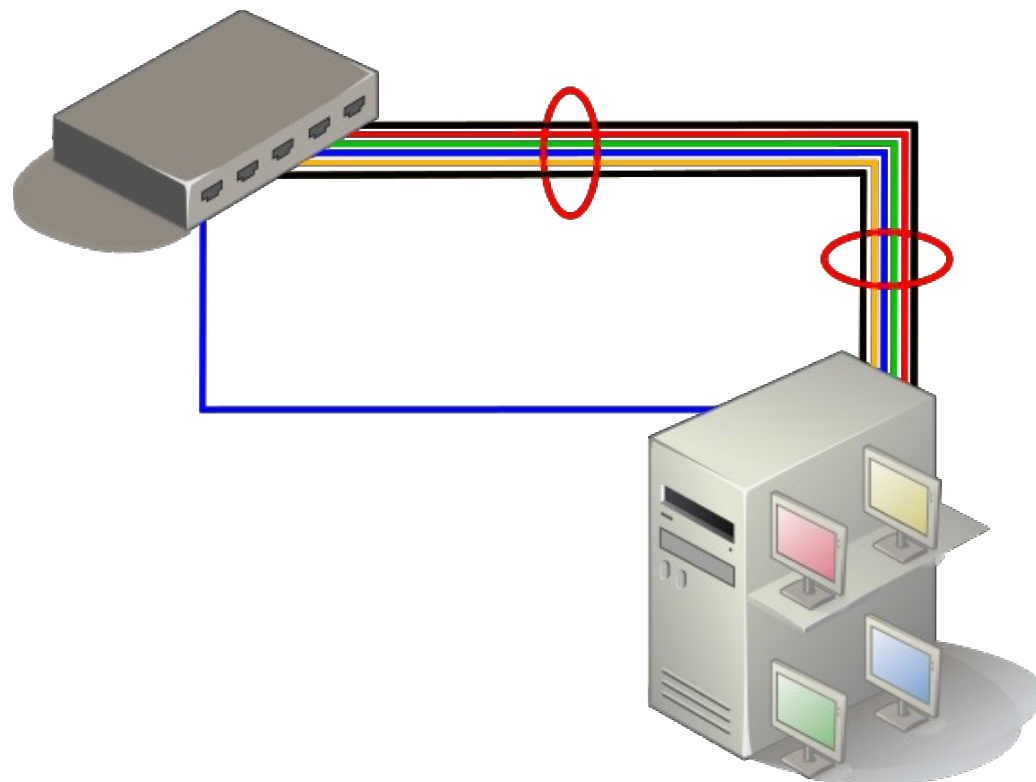


- PXE Boot via TFTP
 - Loads the Kernel, Initramfs
- Kickstart file via HTTP
 - Install the OS
 - Install Puppet
- Reboot
- Puppet takes control

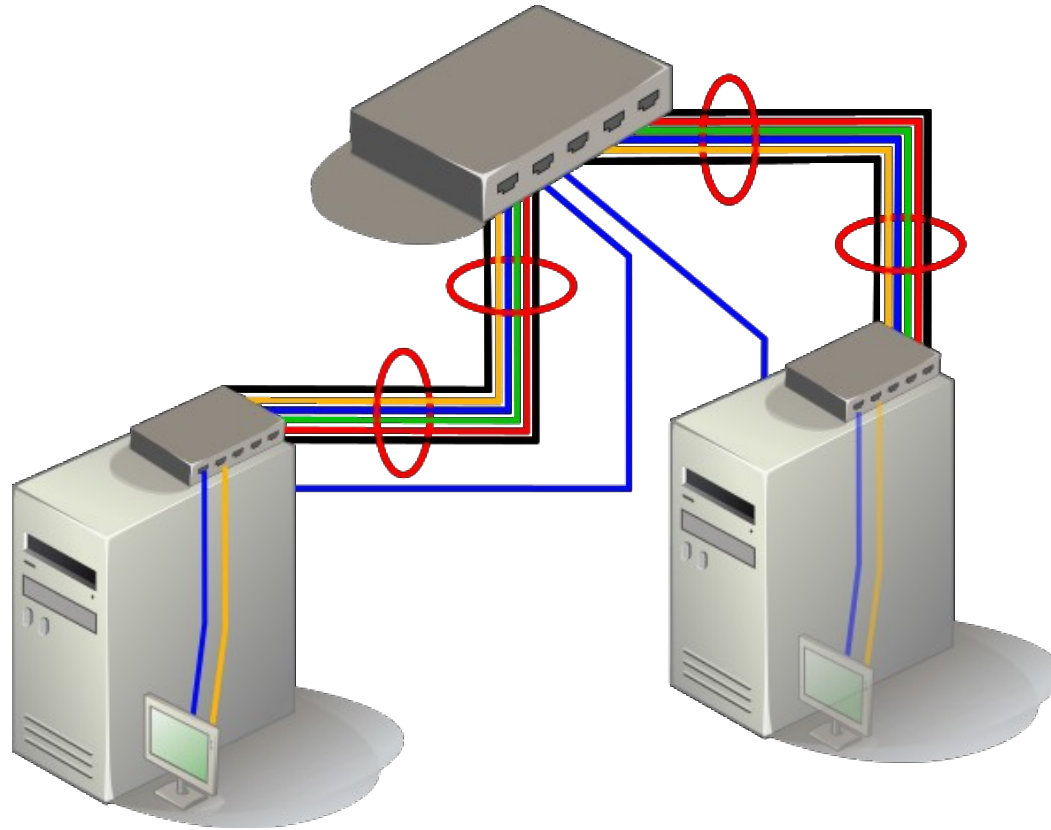
Network setup



- 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 bootstrapping



Questions?





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