



# 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  - No longer actively maintained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



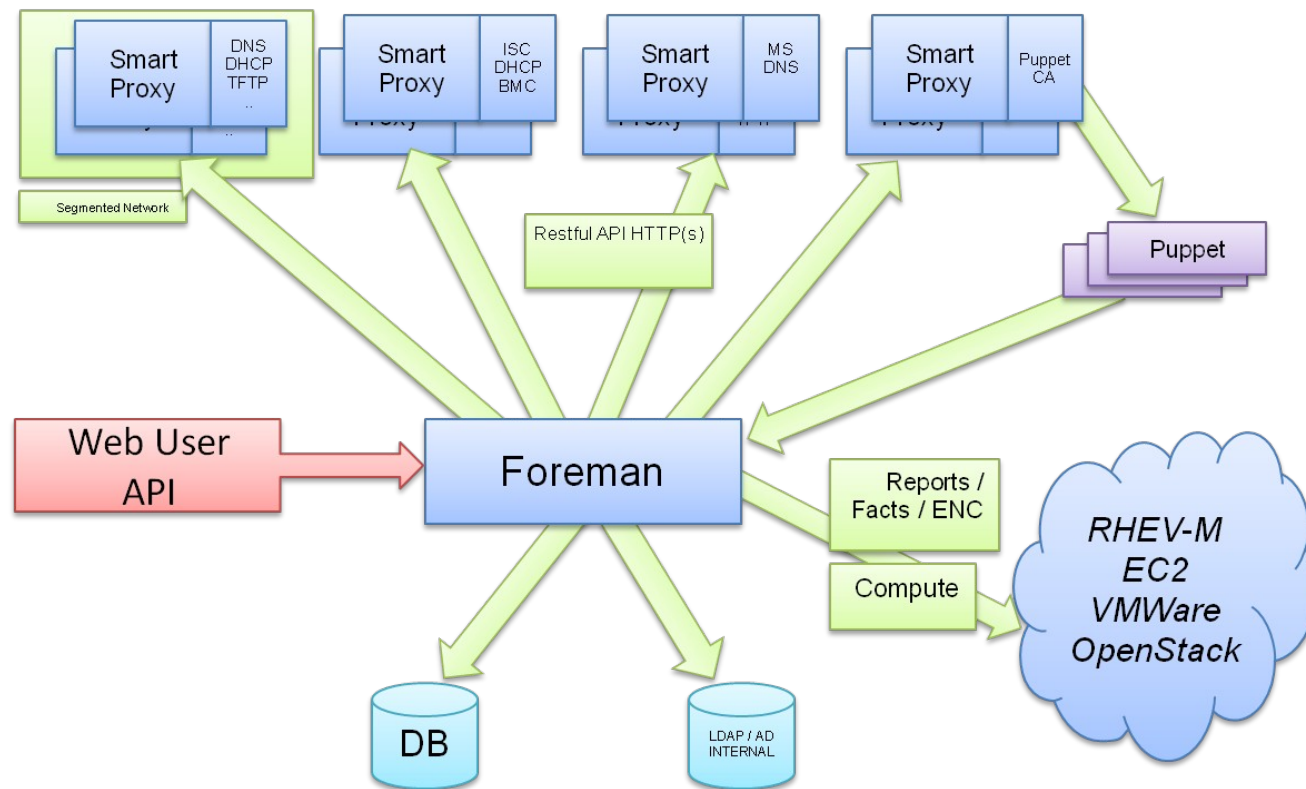
- Done by hand
- Boot from an external medium
  - custom ISO
- Configuration and integration by hand
  - error-prone
  - expensive

# Where we are headed to



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

# Foreman architecture



# Bootstrapping with Foreman

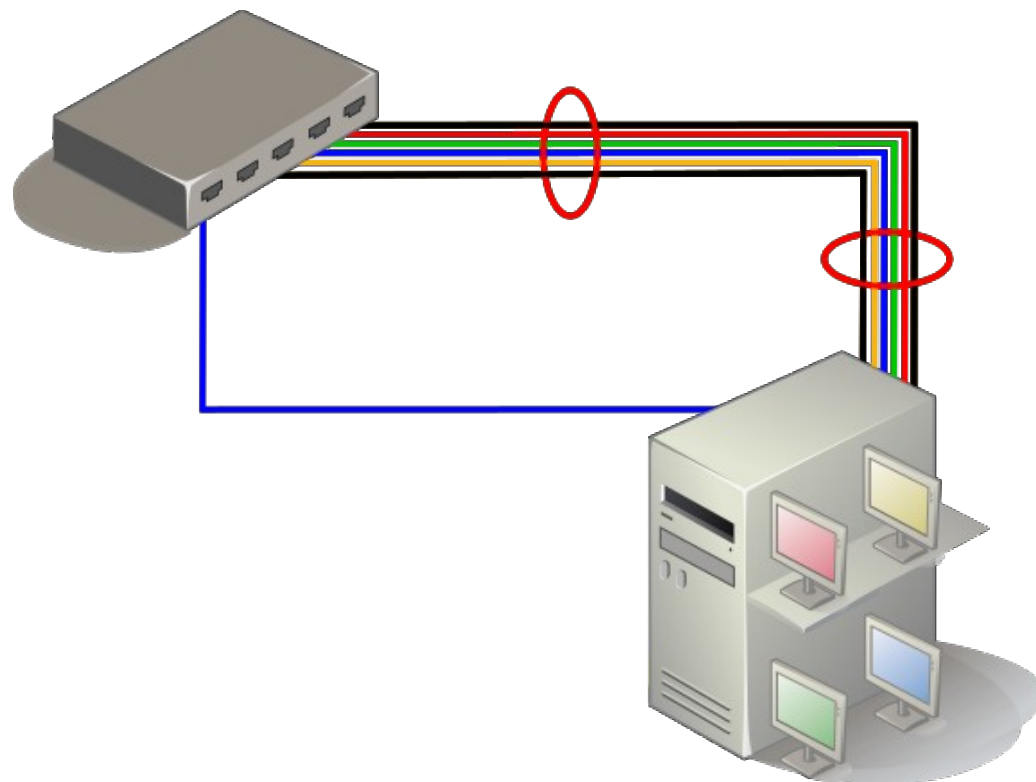


- PXE Boot via TFTP
  - Loads the Kernel, Initramfs
- Kickstart file via HTTP
  - Install the OS
  - Install Puppet
- Reboot
- Puppet takes control

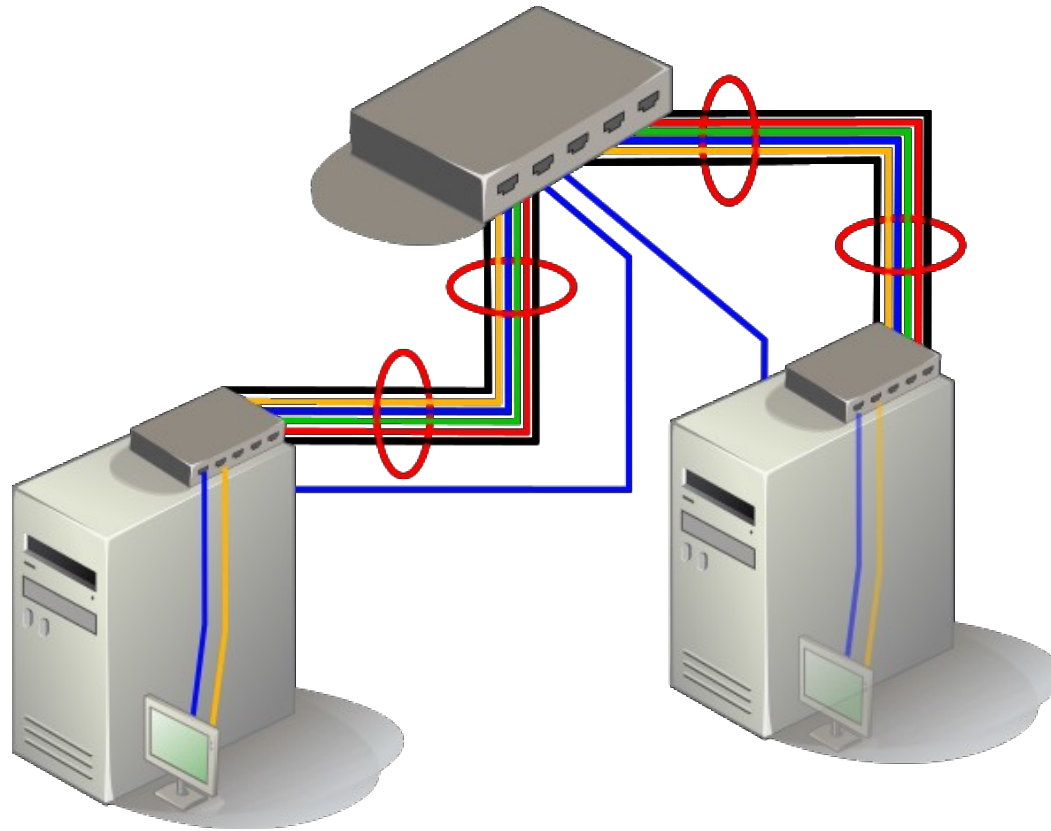
# Network setup



- 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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