Automating OpenStack Testing
Improving the quality of OpenStack on Ubuntu

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FOSDEM
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Overview

- OpenStack Dev and QA 101
- OpenStack QA Challenges for Ubuntu
- The Ubuntu OpenStack QA Pipeline
- Future Plans
OpenStack
Dev and QA 101
OpenStack Development Process

- Gated Trunk
- Devstack - http://devstack.org/
- Github – http://github.com/openstack
- Gerrit – http://gerrit.openstack.org
- Smokestack - http://smokestack.openstack.org/
- Jenkins – http://jenkins.openstack.org
- Bare-metal Testing

- http://docs.openstack.org/developer/
OpenStack QA
Challenges for Ubuntu
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<th>Grizzly</th>
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Ubuntu OpenStack QA Pipeline
Ubuntu OpenStack QA – Build, Deploy and Test Pipeline

- Grizzly Trunk
- Folsom Stable
- Essex Stable
- Proposed Packaging Branches
- Package Build
- Testing PPA
- Lab Archive
- Ubuntu QA
  jenkins.qa.ubuntu.com

Flow:
- source
- binary
- results
Juju: Service Orchestration

- High Level Orchestration
- Service Coordination
- Scale up; and down
- Provider Abstraction...
Juju: Provider Abstraction

- Public and Private Cloud
- Bare Metal
- Local
• DevOps Knowledge Distilled
• Any language
• Metadata
• Configuration
• Hooks

```
- config.yaml
- copyright
- hooks
  - install
  - mongodb-relation-changed
  - mongodb-relation-departed
  - start
  - stop
  - upgrade-charm -> install
  - website-relation-changed
- metadata.yaml
- README.markdown
- revision
```
Juju: Charm Store

- Easy deploy with Juju
- http://jujucharms.com
MAAS - Metal-as-a-Service

- Cloud-like management of physical servers
- Juju integrated
- Fast Path Install
Summary

- Repeatable deployment on hardware
- Great for identifying cross project integration issues
- Invaluable both for tracking master and testing updates to stable releases
Future Plans

- 'Virtualized' MAAS – capacity expander
- HA and rolling upgrade testing
- OpenStack upgrade testing
OpenStack Resilience
Questions?

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- jamespage on Freenode IRC