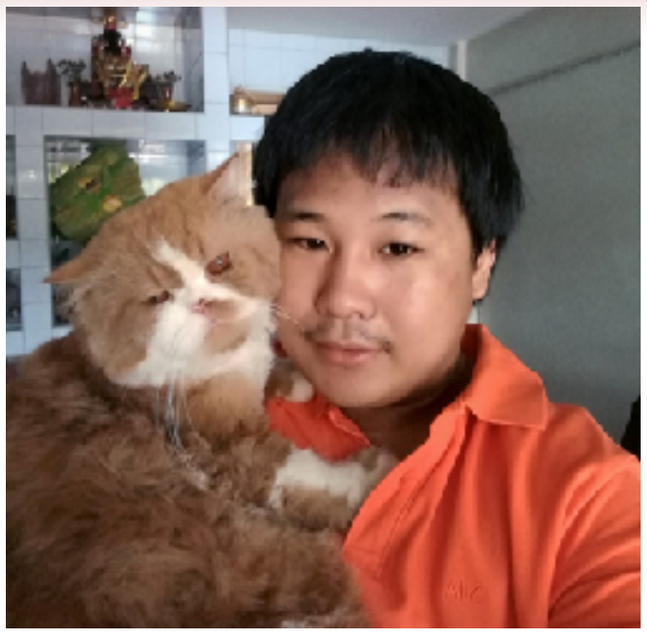
Case Study: Utilizing Mirantis Fuel to install OpenStack Ansible

Charnsilp Chinprasert, Cloud Architect
Khomkrit Viangvises, OpenStack Evagelist

2ndCLOUD OPENSTACK-CONTAINER CONFERENCE AND WORKSHOP 2016
Grand Postal Building, Bangrak, Bangkok | September 22-23, 2016

Who are we



Mr. Charnsilp Chinprasert

Cloud Architect, Nipa

6 Months OpenStack experiences

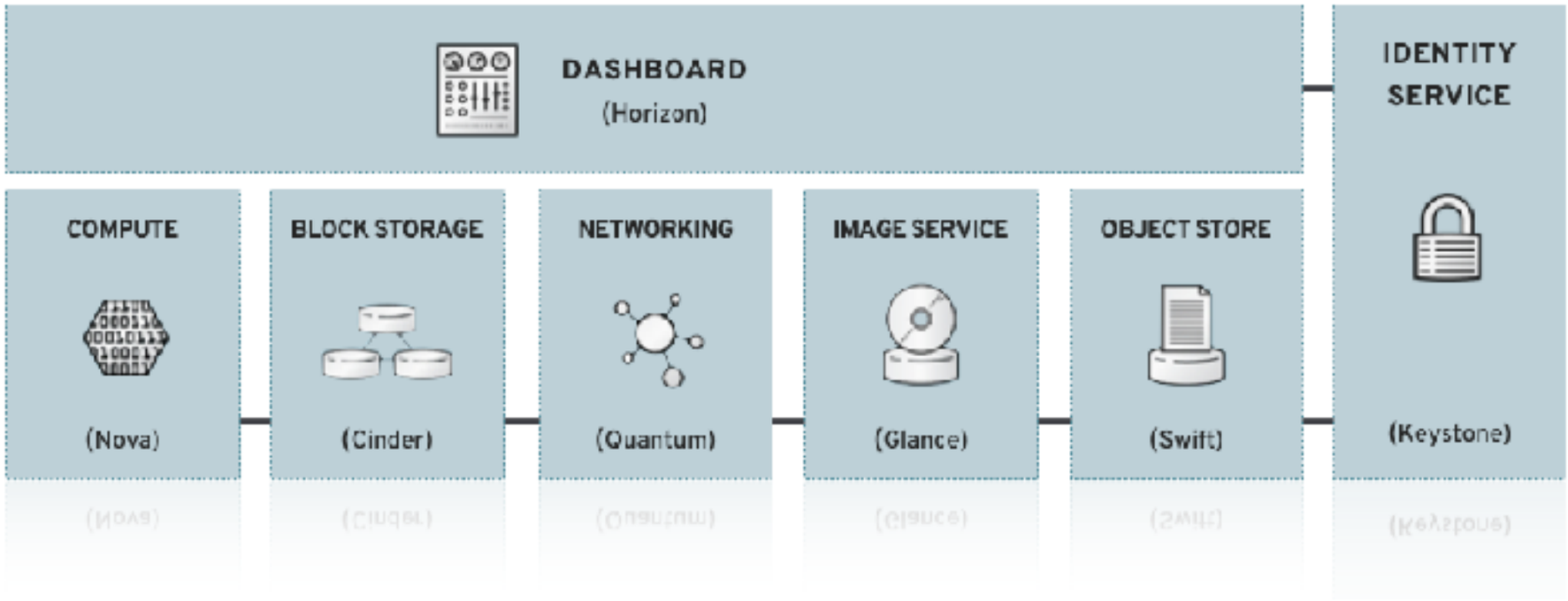
Mr. Khomkrit Viangvises

OpenStack Evangelist, Nipa

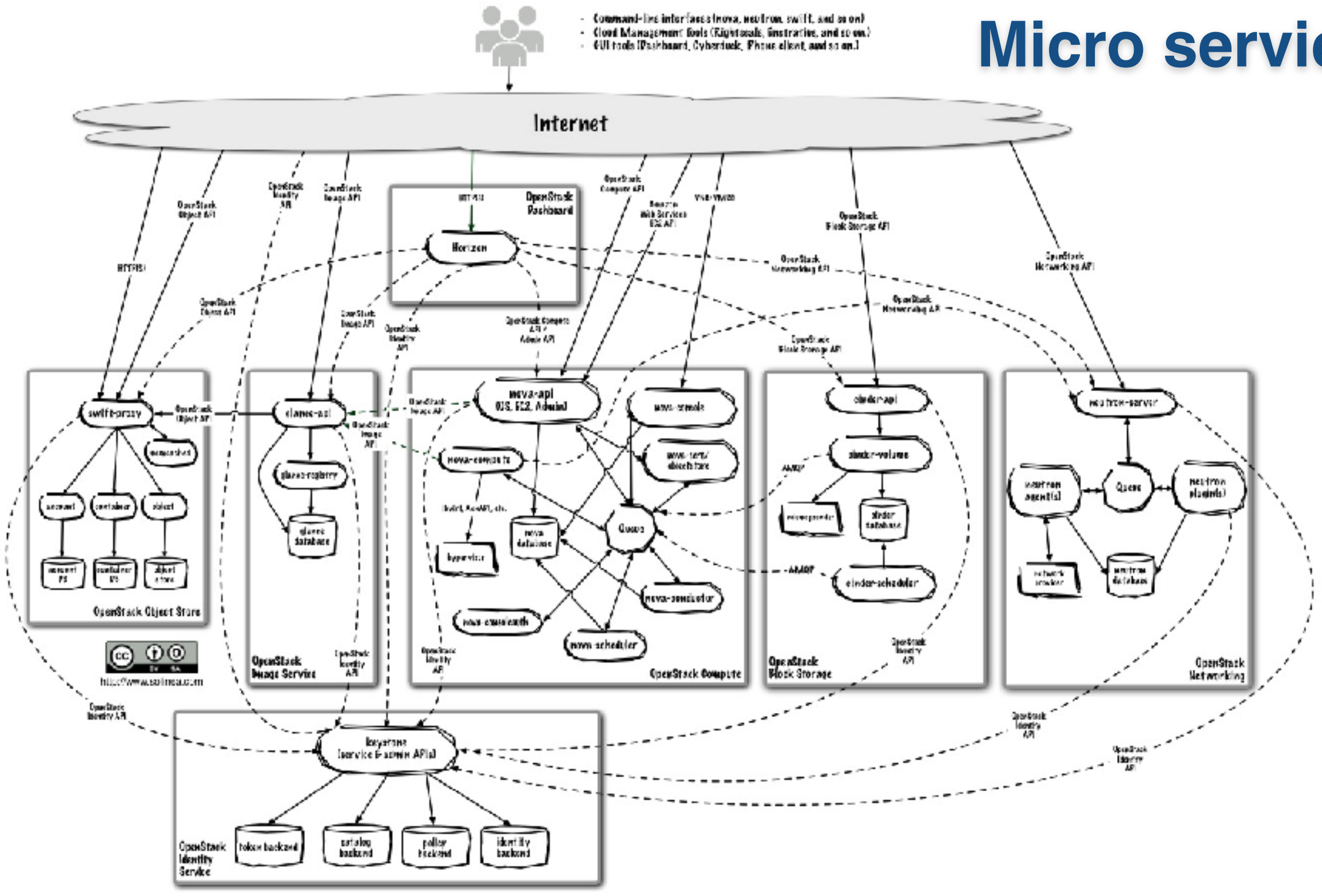
4 years of OpenStack experiences

Case Study: Utilizing Mirantis Fuel to install OpenStack Ansible

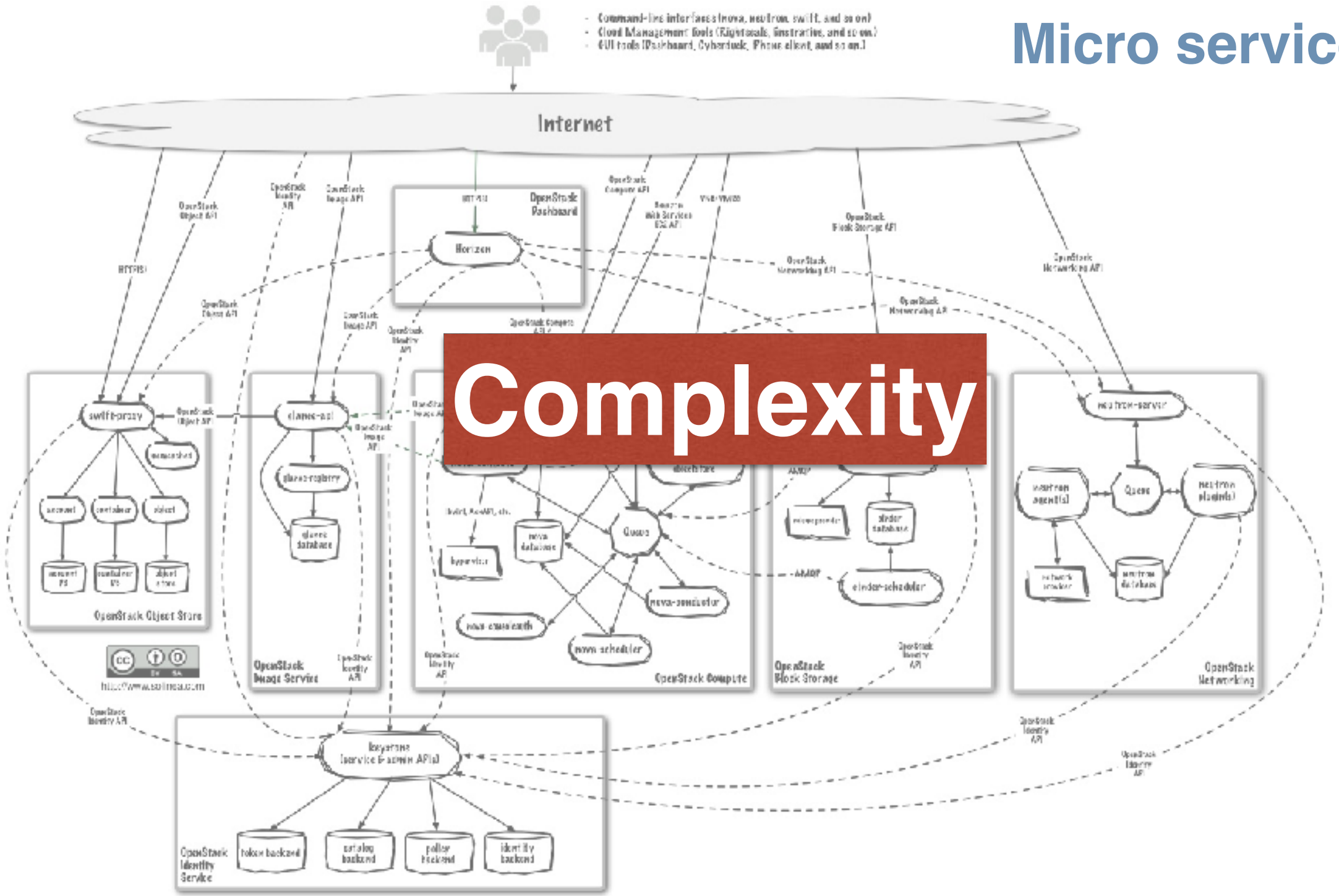
OpenStack Architecture



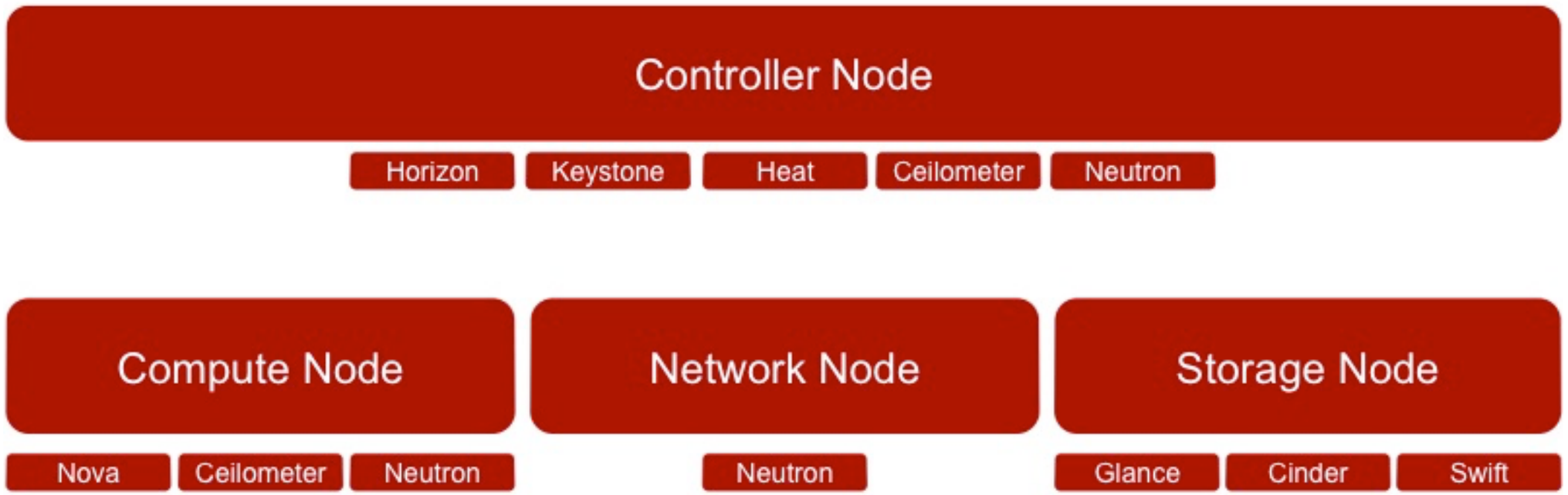
Micro services



Micro services



Complexity



More than 20+ nodes !!!!

Image Optimization

Hardware Design

Typo

High Availability

Logging

Hardware Design

Scalable

Monitoring

Human Error ?

Security

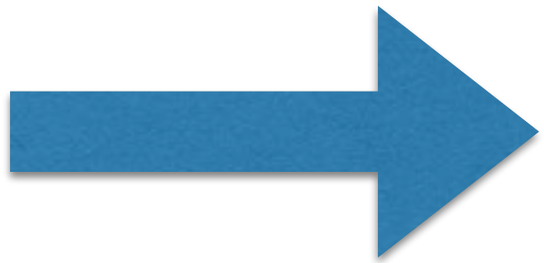
Security bug patch

Network Design

Configuration management

Api Health Check

Simple
Stable
Scalable
Security
Automated



OpenStack
Distros

OpenStack Distros

https://www.openstack.org/marketplace/distros/

OpenStack Distros

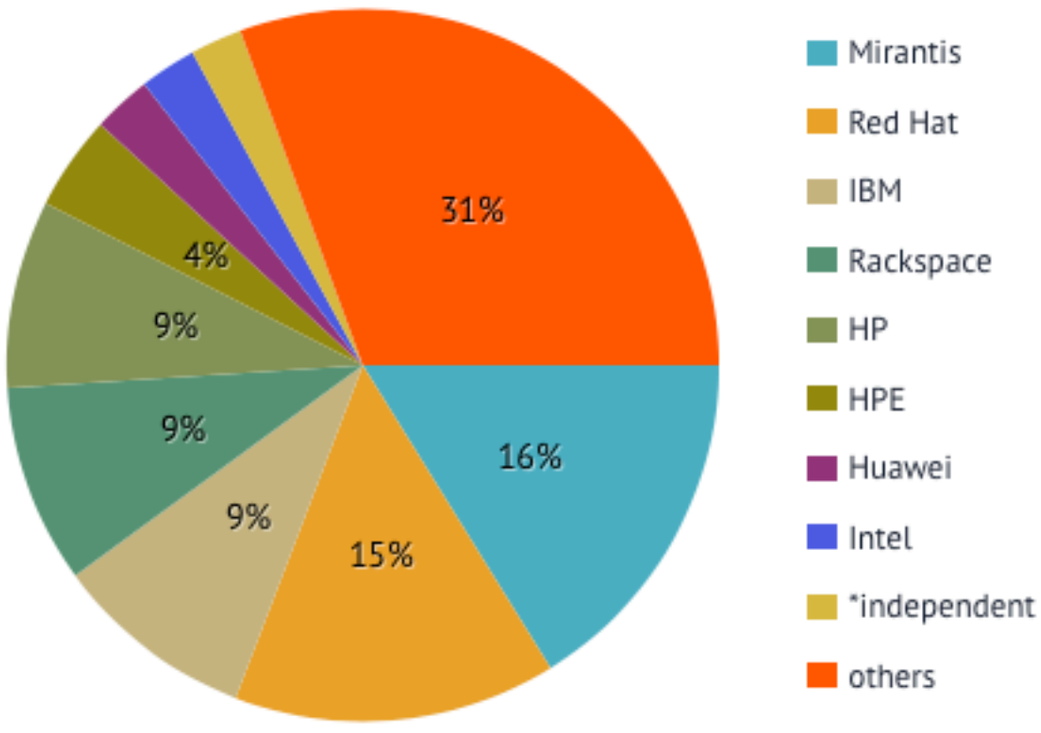
OpenSource!!

MIRANTIS

FUEL

Fuel (Mirantis)

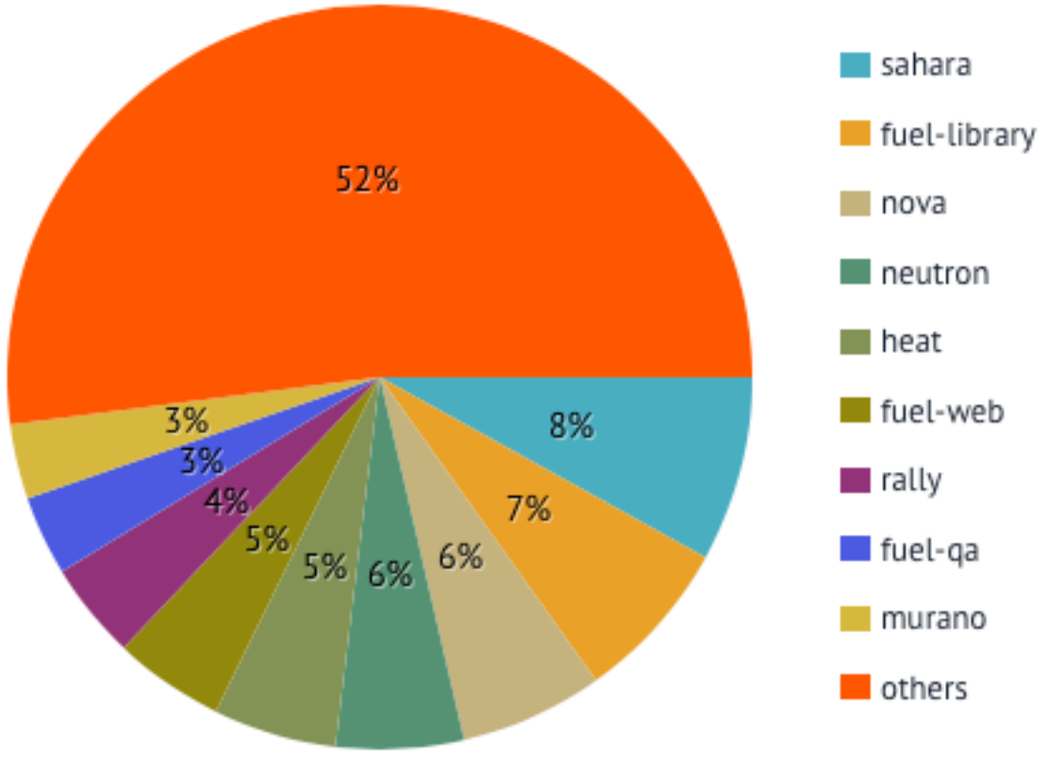
Contribution by companies



Show 10 entries Search:

#	Company	Reviews
1	Mirantis	169070
2	Red Hat	153268
3	IBM	95562

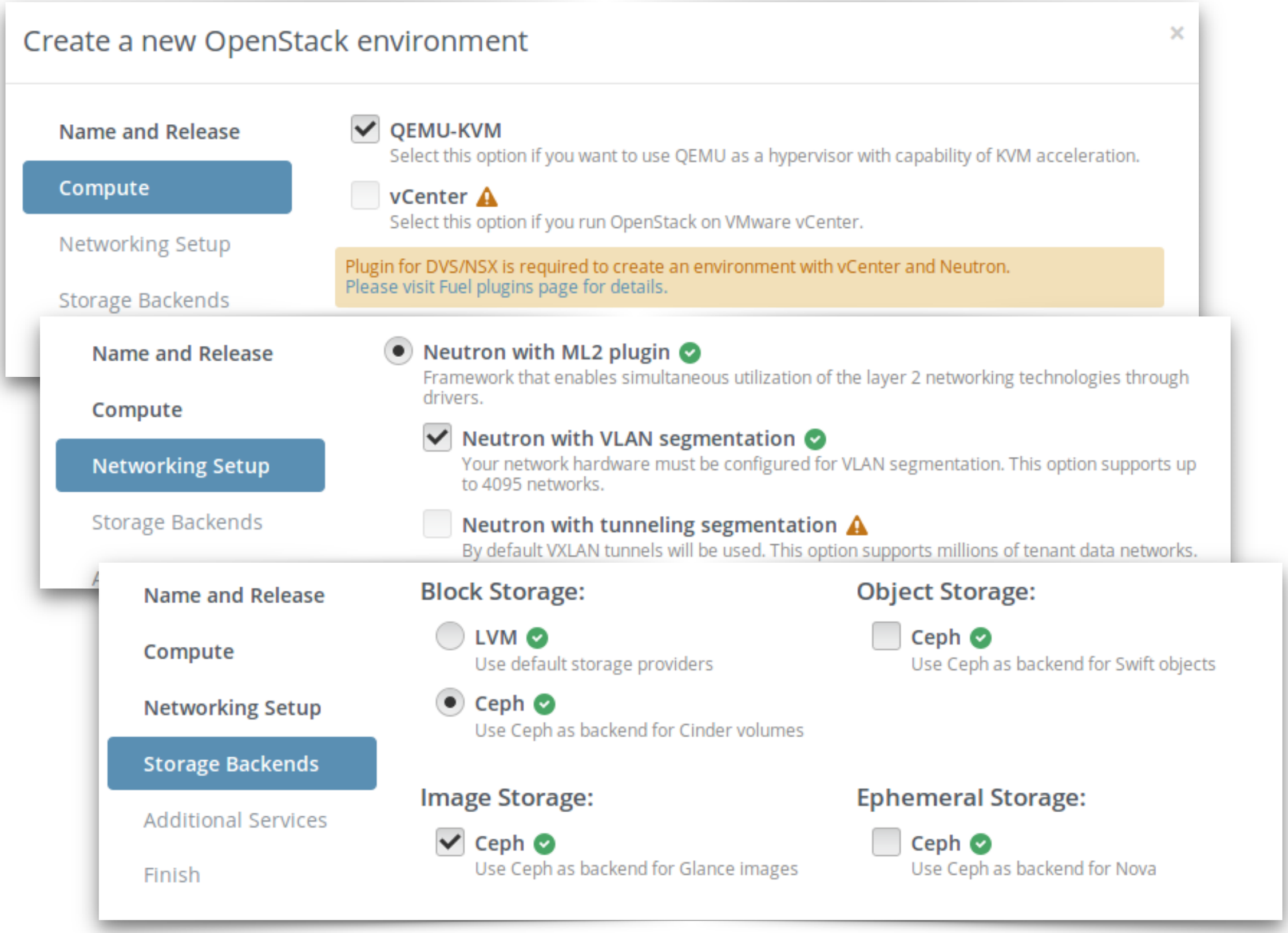
Contribution by modules



Show 10 entries Search:

#	Module	Reviews
1	sahara	13604
2	fuel-library	11996
3	nova	10518

Setup Wizard



Hardware Discovery

Cluster Summary

Welcome to the New OpenStack Environment!

You must add at least one node to your environment in order to deploy.

+ Add Nodes

Summary

Name	MItaka02
Status	New
OpenStack Release	Mitaka on Ubuntu 14.04
Compute	QEMU
Network	Neutron with VLAN segmentation
Storage Backends	Ceph RBD for volumes (Cinder) Ceph RBD for images (Glance)

Delete Environment

Reset Environment

Capacity

CPU (Cores)	0 (0)	RAM	0 bytes	HDD	0 bytes

Node Statistics

No nodes found in this environment. Please add nodes in the Nodes tab and try again.

Documentation

Quick access to the documentation on how to deploy and configure your OpenStack environment:

- OpenStack Documentation
- Plugin Developer Documentation

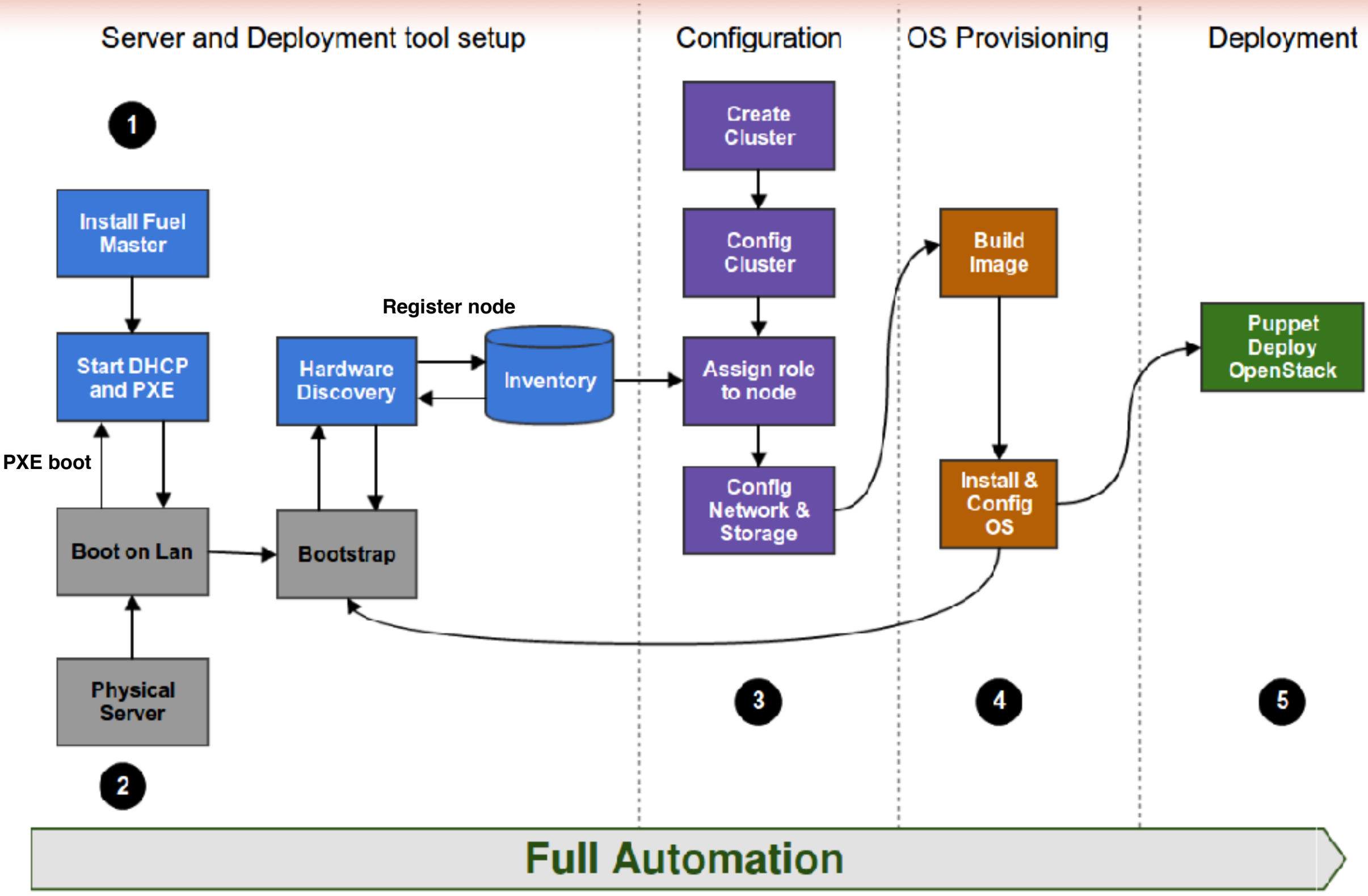
Fuel (Mirantis)

(Mirantis)

Pros

- Wizard driven deployment
- Plugin Framework
- Built-in-Health Check (Pre-Post)
- Multi Cluster Management
- Hardware discovery
- Inventory Management

Fuel (Mirantis)



Fuel (Mirantis)

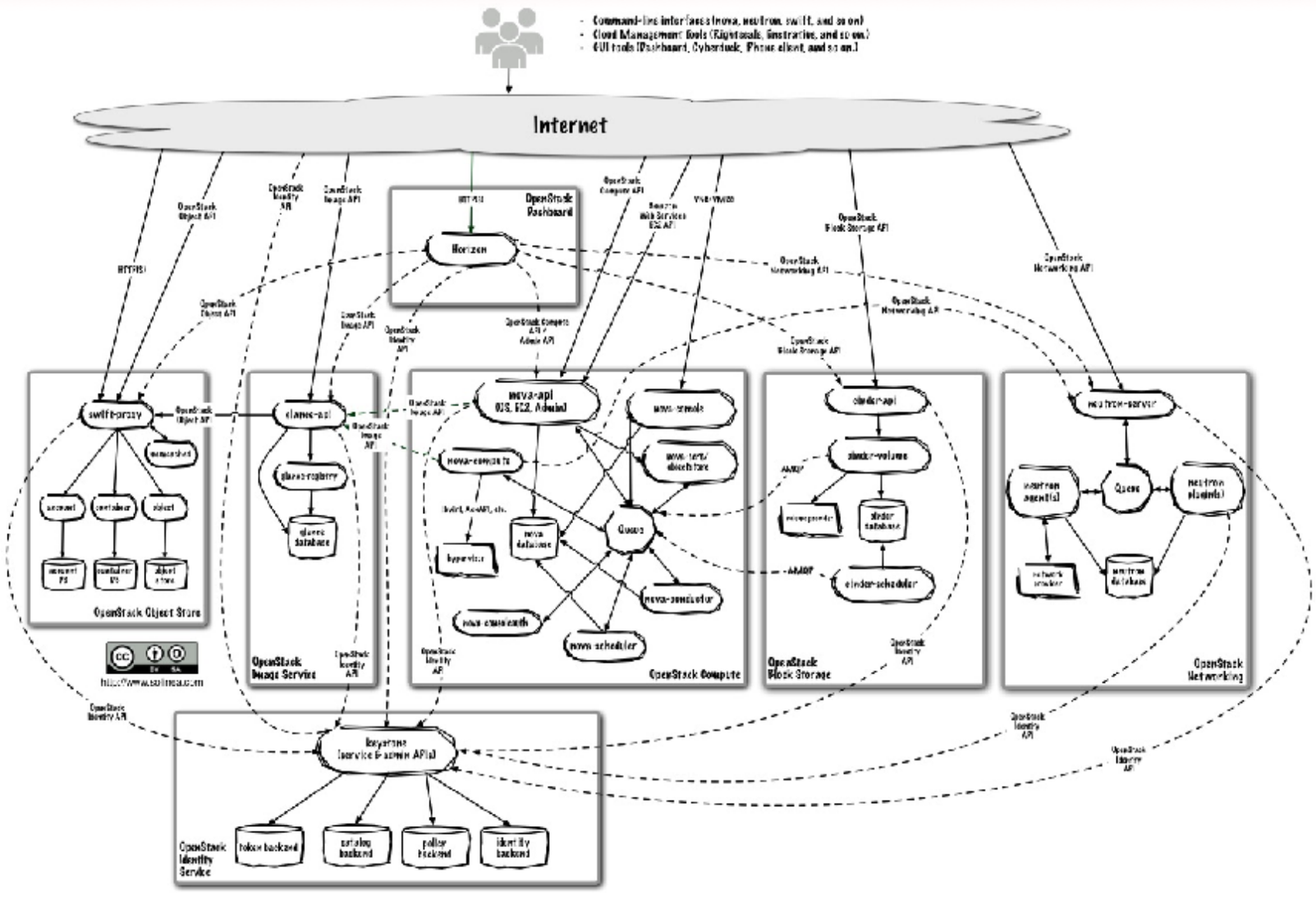
(Mirantis)

Cons

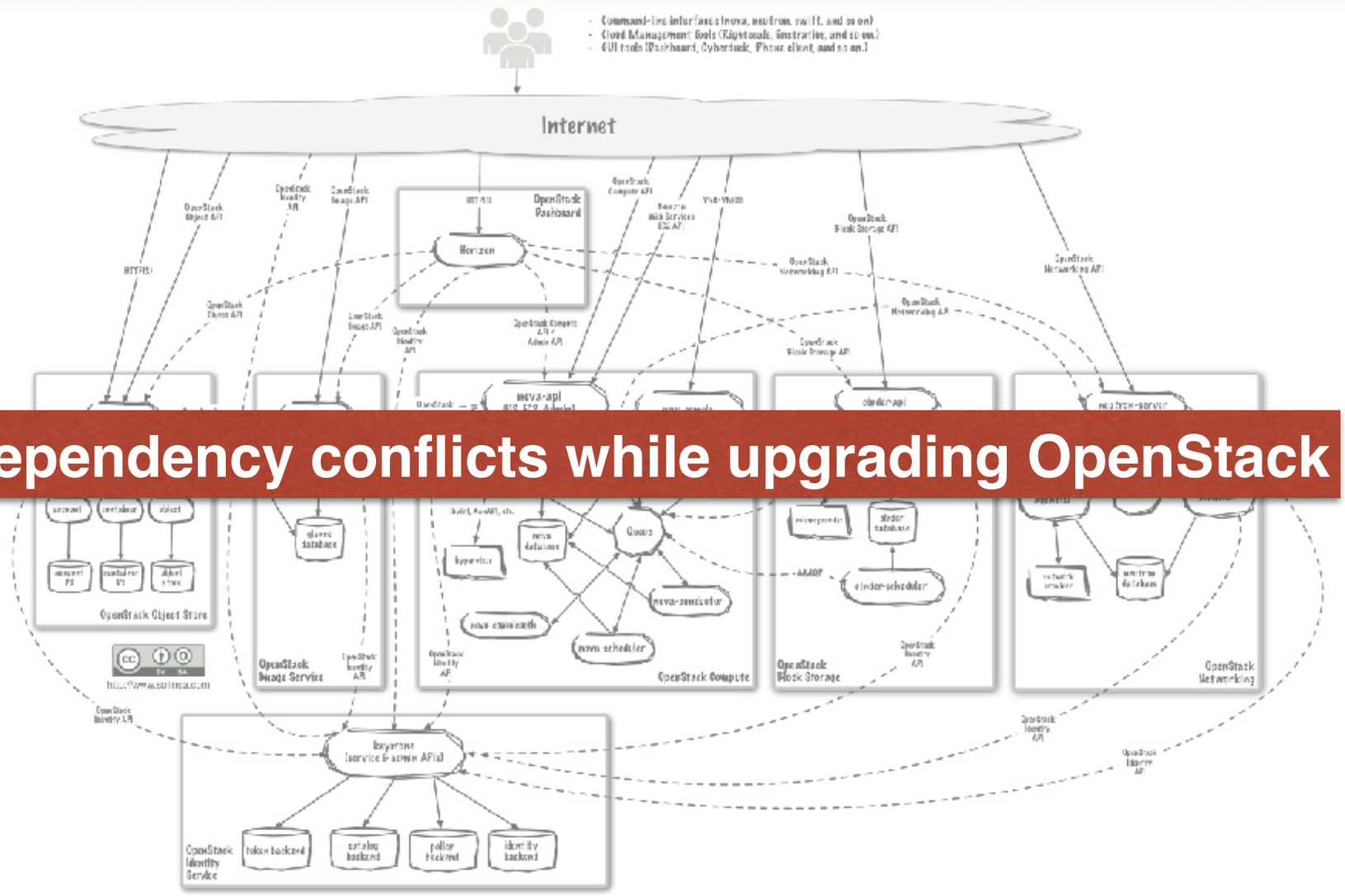
- Cannot Detach Network node from Controller node
- **Non-Flexible Architect deployment**
- Hard to customize Fuel

OpenStack Ansible

OpenStack Ansible (RackSpace)

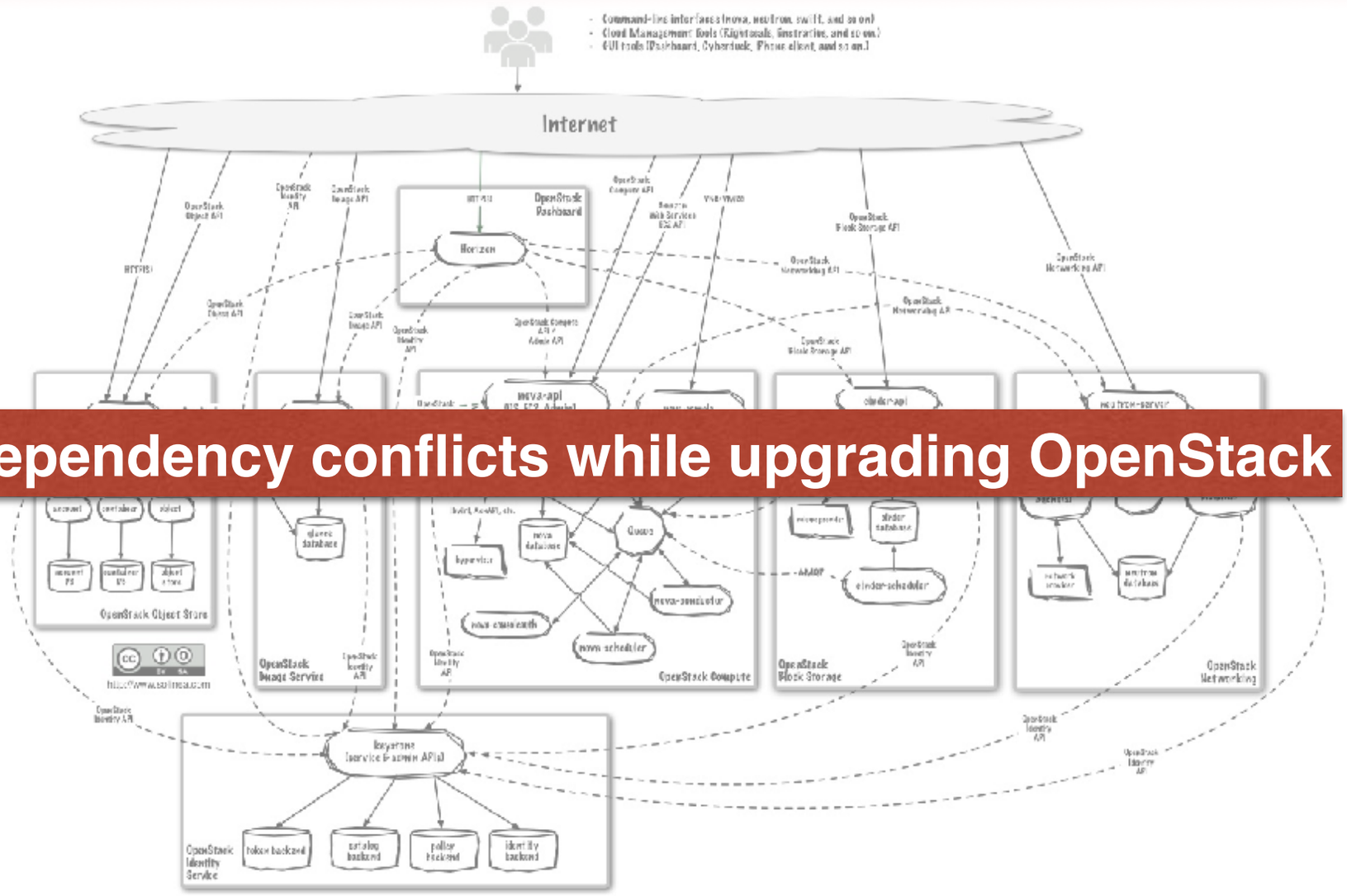


OpenStack Ansible (RackSpace)



Dependency conflicts while upgrading OpenStack

OpenStack Ansible (RackSpace)



Dependency conflicts while upgrading OpenStack

OpenStack Ansible (RackSpace)

- Deploy
- Maintain
- Upgrade

ANSIBLE

OpenStack Ansible (RackSpace)

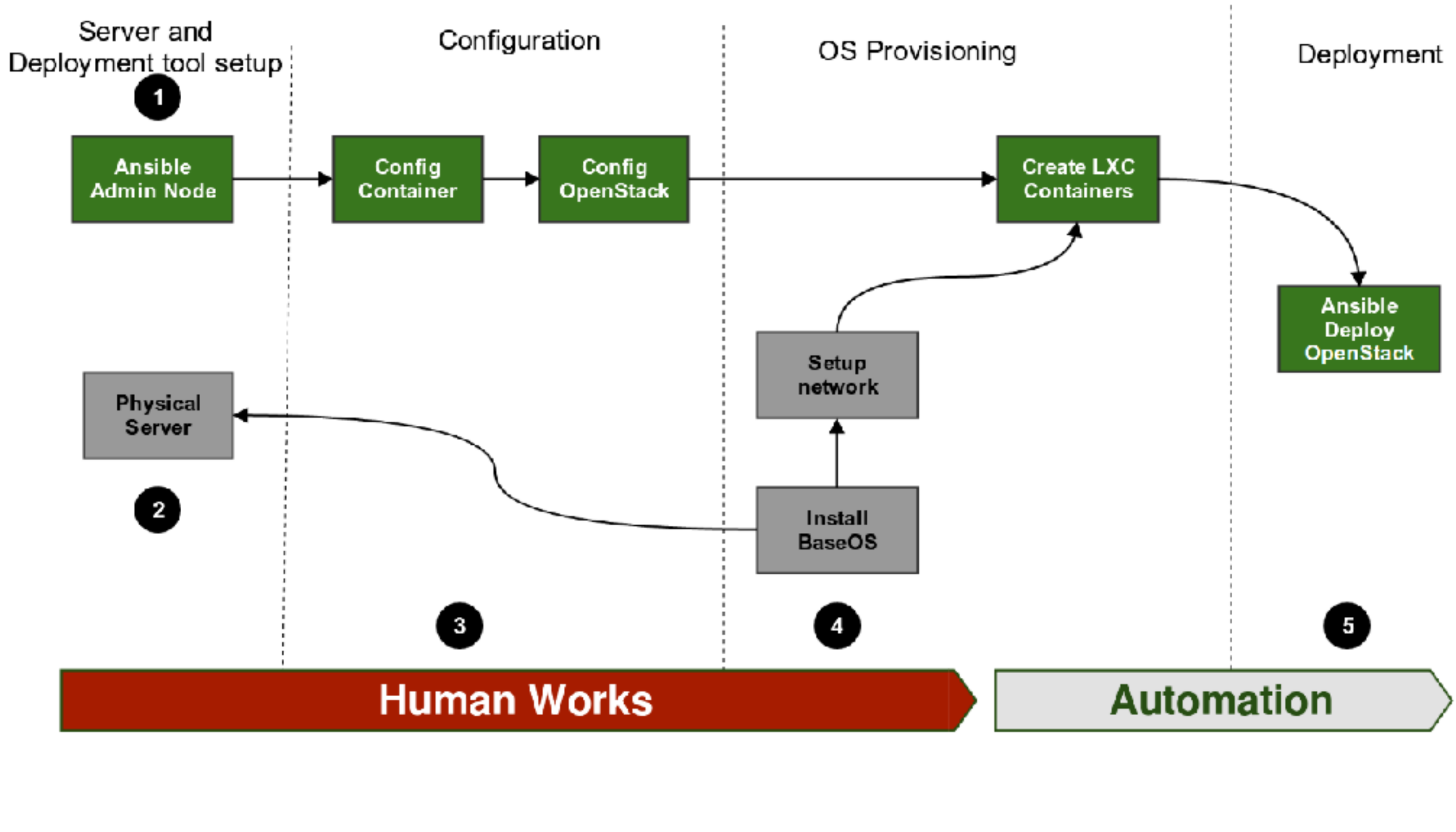
- A set of **ansible playbooks** to manage an OpenStack cloud
  - Deploy
  - Maintain
  - Upgrade
- Supports source based installation
- Uses **LXC containers**
- Contributed by **Rackspace** since kilo release

OpenStack Ansible (RackSpace)

Pros

- Flexible Architect deployment
- Container based
- Build form **upstream sources**
- Security follow by STIGs
- Easy to Customization

OpenStack Ansible (RackSpace)



OpenStack Ansible (RackSpace)

Cons

- OS installation manually
- Network setup manually
- No vendor support
- Stable version may got bugs
- No GUI wizard

FUEL

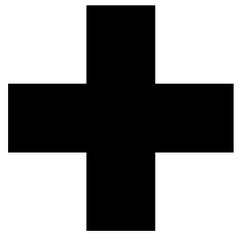
Easy & Powerful

ANSIBLE

Flexible & Scalable

Solution

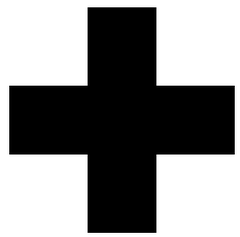
FUEL



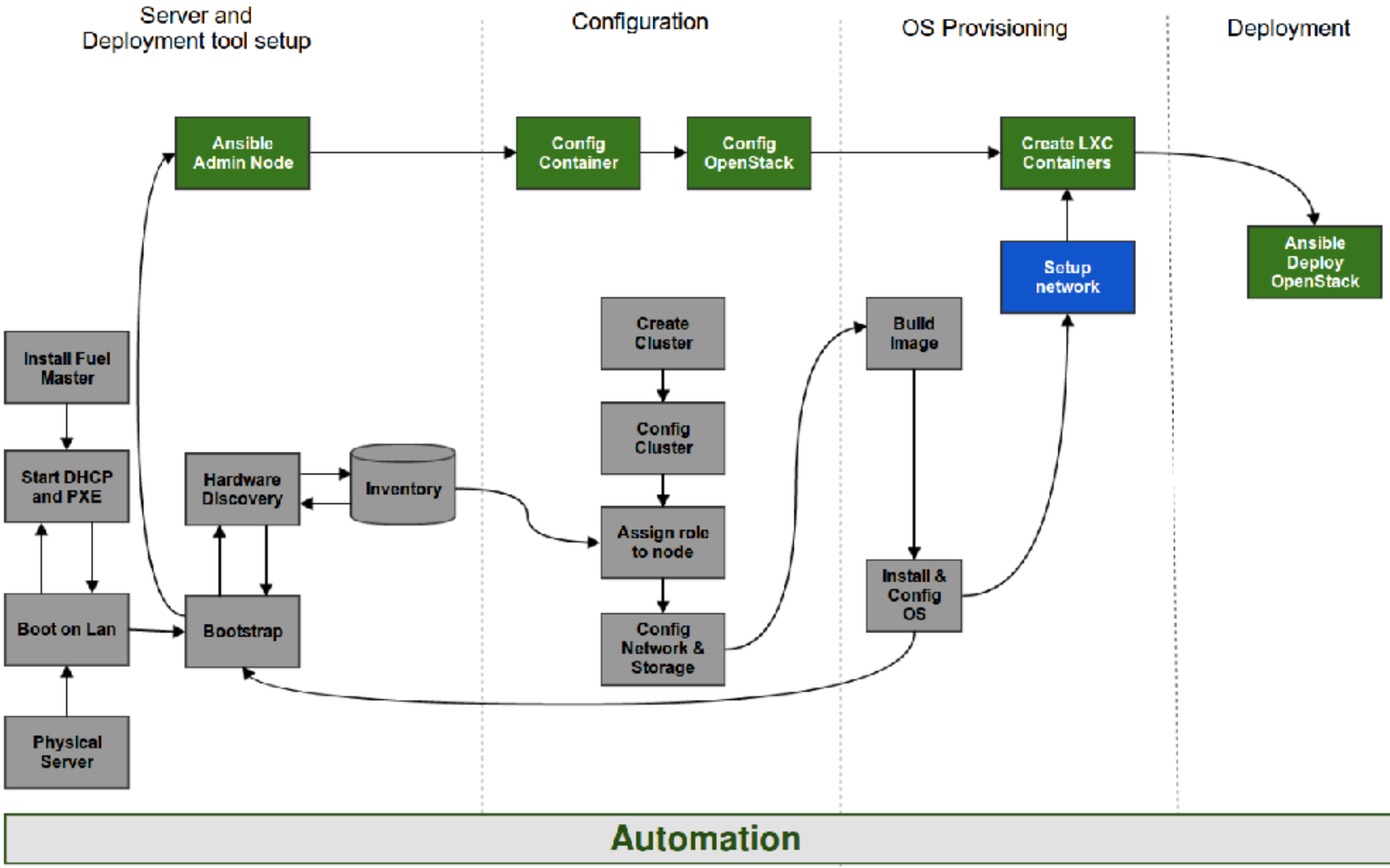
ANSIBLE

Easy & Powerful

Flexible & Scalable



- **Hardware Discovery**
- **Inventory management**
- **PXE OS Installation**
- **OpenStack Deployment**



Setup network

Custom Ansible Playbooks

DEMO

Q & A