

# OpenStack Primer

## An Overview

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# Cloud computing

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- anything as a Service (\*aaS)
- service on demand
- API access

# Available Cloud Platforms

Popular public cloud platforms: Internet based; little control on data and infrastructure.

- Amazon Web Services (AWS)
- Rackspace Cloud
- Domestic players like Sify, ISPs, etc.



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- Eucalyptus
- OpenStack

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Public and private clouds may be mixed and used in a hybrid cloud model.

# OpenStack

- Cloud framework
- Founded by NASA & Rackspace
- Compute & Storage in the beginning
- Written in Python
- REST based APIs
- Apache 2.0 Licensed

# Components

- Nova
- Swift

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- Glance
- Cinder

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- Sahar
- Zaqr
- Barbican
- Designate

- Manages instances and their lifecycle
- Multiple hypervisor support
- Multi-architecture support
- Host - Guest isolation; Guest - Guest isolation

# Swift

- Object Storage
- REST API
- Hash rings

# Glance

- Image delivery service
- Snapshots
- Multiple image formats supported
- Can use Swift as storage back-end

# Cinder

- Block storage service
- Persistent, Mountable

# Neutron

- Manages networking for instances
- Pluggable, Modular, Scalable
- API driven
- Extension framework: IDS / FWaaS / LBaaS / VPN
- ML2 plugin, L3 plugins

# Keystone

- Identity and access management
- Password, token and key based access mechanisms
- Multiple authentication mechanisms: X.509, KRB, LDAP, AD
- RBAC
- ...and APIs



# Other components

- Schedulers
- Distributed Queue
- Telemetry
- Orchestration

# Be a hero

- Development - Gerrit Flow, CLA, PEP8, DVCS
- Testing
- Security help
- Build, deploy and document
- File bugs ..or fix bugs
- UI/UX
- Document, blog and share

# Get Help

- #openstack on freenode
- Documentation [docs.openstack.org](https://docs.openstack.org)
- <https://ask.openstack.org>
- mailing lists
- Blogs, wikis, etc..
- Meetups

# Thank You!

Questions??