Cybera Site Report

PRESENTED BY Joe Topjian
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@cybera
Who Am I?

- Joe Topjian
- Calgary, Alberta, Canada
- Cybera
Who Am I?
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Block Storage

Why??

- Because no one else was doing it
- Converged Compute and Storage
- Resilient volumes
- Volumes were "plain files"
$ file volume-f86d8747...  
QEMU QCOW Image (unknown version)

$ du -sh volume-f86d8747...  
608K    volume-f86d8747...

$ du -sh --apparent-size volume-f86d8747...  
5.1G    volume-f86d8747...
Block Storage

Reality:

- Gluster is weird
- ElasticSearch would kill the cloud
Block Storage

LVM / iSCSI Block Storage

- Dedicated hardware
- LVM Groups Exported via iSCSI
- Switched From virtio to virtio-scsi
Block Storage

virtio-scsi

$ glance image-show c054f947...

Property 'hw_disk_bus' | scsi
Property 'hw_disk_bus_model' | virtio-scsi
Property 'hw_scsi_model' | virtio-scsi

- Drives show up as /dev/sdx instead of /dev/vdx
- mdadm and zfs work much better
Volume Affinity

$ cinder create --display-name vol01 5

$ cinder create --display-name vol02 5 \
   --hint different_host=xxx

$ cinder create --display-name vol03 5 \
   --hint different_host=xxx \
   --hint different_host=yyy
Future Features

- Encryption at Rest
OpenStack Swift Encryption at Rest

- Newton Release
- Google "swift encryption at rest"
Test:

$ echo "hello world" > file.txt

$ swift upload test file.txt
Before:

$ cd /srv/node/sdx/objects/…

$ grep -R "hello world" *
522/004/10… hello world
Object Storage

After:

$ cd /srv/node/sdx/objects/

$ grep -R "hello world" *
Add Application to “quick-env-1”

Application Name: MySQL

MySQL Application
Apache License, Version 2.0

Application Name: Enter a desired name for the application. Just A-Z, a-z, 0-9, dash and underline are allowed
Add Application to “quick-env-1”

IP address to restrict remote access to the database:
10.0.0.1

MySQL Root Password:

MySQL Application

Database Configuration: Specify the MySQL database properties

IP address to restrict remote access to the database: If IP address is specified - remote access will be enabled and root user will get all privileges connecting from that IP. Otherwise remote access will be disabled by deafult, to enable it - please proceed with manual configuration.

Password: Please provide the root MySQL password.
Add Application to “quick-env-1”

**Volume size:**

5

**MySQL Application**

A volume will be created to host the MySQL databases.

**Volume size:** Size of the volume (in GB) to be created for MySQL.
Add Application to “quick-env-1”

- **Instance flavor:** m1.small
- **Instance image:** Ubuntu 14.04
- **Key Pair:** No keypair
- **Instance Naming Pattern:** Optional

**MySQL Application**

Specify the instance parameters.

**Instance flavor:** Select the instance flavor.

**Instance image:** Select an image. It must be Ubuntu-based.

**Key Pair:** Select the Key Pair to access the instances. You can login to instances using this Key Pair after the deployment of application.

**Instance Naming Pattern:** Specify a string that will be used in instance hostname. Only A-Z, a-z, 0-9, dash, and underline are allowed.
Add Application to “quick-env-1”

Check to enable backups: [ ]

Openstack password: [ ]

Confirm password: [ ]

MySQL Application

Check to enable backups: Set to true to enable backups to object storage (every 10 days and every 3 months).

Password: Please provide your OpenStack password to access the object storage service.

[ ] Retype your password

[ ] Back [ ] Create
Future Data/Storage-focused Apps

- ownCloud
- Spark
- Hadoop
Questions?

Thanks!

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