Concurrent Aquari Storage
Concurrent Computer Corporation
Test Report

Document History

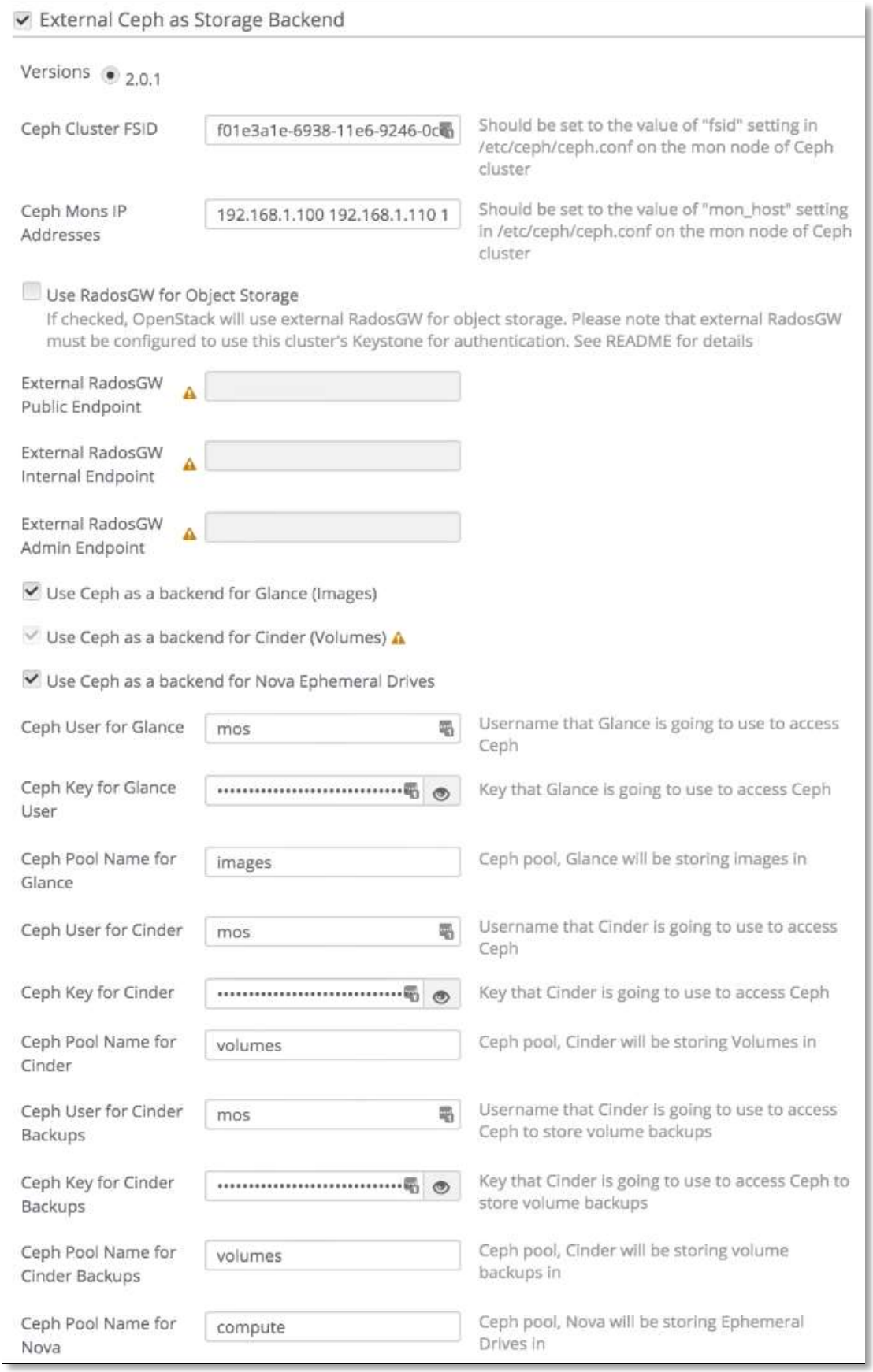
Version	Revision Date	Description
0.1	16-12-2016	Submitted

Functional tests result

Tempest - All Test Results

Summary: ***Configure and validate Aquari Storage as Ceph RBD backend in Fuel***	
Success	- Install Fuel plugin for Ceph - Provision Ceph pools for Glance, Cinder and Nova - Configure external Ceph as a storage backend for Mirantis OpenStack. See attached picture bellow for more details. - Upload 10 various OS images to Glance - Provision 100 instances - Create volumes and attach them to instances - Backup instances - Use Temptest tools to validate APIs (test log is attached)
skip	N/A
expected failure	N/A
failure	N/A
Full Log – Click Here	

Pic 1.1 Fuel Ceph plugin configuration


External Ceph as Storage Backend
Versions
2.0.1
Ceph Cluster FSID
f01e3a1e-6938-11e6-9246-0c
Should be set to the value of "fsid" setting in /etc/ceph/ceph.conf on the mon node of Ceph cluster
Ceph Mons IP Addresses
192.168.1.100 192.168.1.110 1
Should be set to the value of "mon_host" setting in /etc/ceph/ceph.conf on the mon node of Ceph cluster
Use RadosGW for Object Storage
If checked, OpenStack will use external RadosGW for object storage. Please note that external RadosGW must be configured to use this cluster's Keystone for authentication. See README for details
External RadosGW Public Endpoint
External RadosGW Internal Endpoint
External RadosGW Admin Endpoint
Use Ceph as a backend for Glance (Images)
Use Ceph as a backend for Cinder (Volumes)
Use Ceph as a backend for Nova Ephemeral Drives
Ceph User for Glance
mos
Username that Glance is going to use to access Ceph
Ceph Key for Glance User
Key that Glance is going to use to access Ceph
Ceph Pool Name for Glance
images
Ceph pool, Glance will be storing images in
Ceph User for Cinder
mos
Username that Cinder is going to use to access Ceph
Ceph Key for Cinder
Key that Cinder is going to use to access Ceph
Ceph Pool Name for Cinder
volumes
Ceph pool, Cinder will be storing Volumes in
Ceph User for Cinder Backups
mos
Username that Cinder is going to use to access Ceph to store volume backups
Ceph Key for Cinder Backups
Key that Cinder is going to use to access Ceph to store volume backups
Ceph Pool Name for Cinder Backups
volumes
Ceph pool, Cinder will be storing volume backups in
Ceph Pool Name for Nova
compute
Ceph pool, Nova will be storing Ephemeral Drives in

Performance Test Results

RADOS bench

Aquari

Execute performance tests using S3 interface on R2 and R3 pools	
success	Test cases include: - Random reads - Sequential reads - Writes A typical block workload pattern will use 4MiB object sizes

Test Scenario	Throughput per Data Node (MB/s)	
	R2 Pool	R3 Pool
Sequential Read	1943	1463
Random Read	1623	1749
Write	913	665

Test environment:

- Aquari Storage configured with 6 data nodes with 30 drives each
- Test was performed with 4MiB objects against S3 pools
- Aquari 2.2 software with Ceph v0.94.9

Resiliency Test Results

Test scenario	Result
Pull out OSD (drive) from the enclosure during IO. Aquari Storage must continue servicing IO commands. Ceph must start rebalancing.	Passed
Pull out data node from the cluster. Aquari Storage must continue servicing IO commands. Ceph must start rebalancing	Passed
Provision VMs and store them on the Ceph backend with failed Data Node Verify Aquari notifications upon data node abnormal removal	Passed Passed