MIRANTIS

US HEADQUARTERS

Sunnyvale, CA

525 Almanor Ave 4th Floor,
Sunnyvale, CA 94085
+1-650-963-9828 Phone
+1-650-963-9723 Fax

APPLE

EPIC UK
LONDON

Test Report

Version 1.0
05/05/2017
Author(s):

> *Tetiana Korchak: tkorchak@mirantis.com*
> *Max Lvov: mlvov@mirantis.com*

Table of contents

1. Conclusion

The solution under test is validated and verified according to the Test Plan and is **READY** for production deployment.

During the testing phase the following tests were executed:

- Smoke OSTF tests;
- Functional Tempest tests;
- Load Rally tests;
- HA tests;
- Simplified performance testing;
- Functional manual testing.

Full description of the tests that were ran during cloud validation is attached at the end of this test report.

2. New Issues Found

Brief description of the unexpected results, problems, or defects that occurred during the testing. Severity is defined by QA team based on the issue importance understanding.

JIRA link/Issue name	Severity	Summary	Comments
https://bugs.launchpad.net/cinder/+bug/1690263	Major	This issue leads to "Non bootable device"	When using netapp+image cache+copyoffload tool, volume created from cache is broken

3. Solution Under Test

Deployment Overview

Component	Configuration
Sizing and Segregation	23 nodes, 1 Region
OpenStack Release	MOS 8.0, Liberty on Ubuntu 14.04
Controller High Availability	HA, 4 controllers
Host OS	Ubuntu 14.04
Hypervisor type	KVM
Object storage configuration	Cinder LVM over iSCSI for volumes
Cinder configuration	Cinder and NetApp integration
NetApp storage family	Clustered data ONTAP
NetApp storage protocol	NFS
Additional components	Sahara, Murano
Tenant Network Isolation	Contrail
Networking model	Contrail 3.0.2
Keystone configuration	OpenLDAP
Glance configuration	Glance and NetApp integration
Number of Controllers	4 nodes
Number of Compute Nodes	13
Number of Storage Nodes	4
Other Nodes	3 x Contrail; 3 x LMA node; 4 x Barbican

Plugin & Component overview

Plugin/Component name	Version
contrail	contrail-4.0-4.0.0-1.noarch.rpm
glance-nfs	glance_nfs-1.0-1.0.3-1.noarch.rpm
cinder-netapp	cinder_netapp-4.2-4.2.2-1.noarch.rpm
apple-tuning	apple_tuning-1.0-1.0.9-1.noarch.rpm
elasticsearch-kibana	elasticsearch_kibana-0.9-0.9.0-1.noarch.rpm
influxdb-grafana	influxdb_grafana-0.9-0.9.0-1.noarch.rpm
lma-infrastructure-alerting	lma_infrastructure_alerting-0.9-0.9.0-1.noarch.rpm
lma-collector	lma_collector-0.9-0.9.0-1.noarch.rpm
ldap	ldap-1.0-1.0.13-1.noarch.rpm
barbican	barbican-1.0-1.0.7-1.noarch.rpm

Customer-specific extensions and integrations (not covered by Plugins)

Component	Extension
cinder-netapp	static uid and gid for cinder user implemented
ldap	POSIX group support

4. Test Result Details

Overall solution test status

Solution Feature / Requirement Tested	How tested	Status	Comments
Mirantis Openstack deployment	OSTF, Tempest, manual scenarios, Rally, SPT, HA	Accepted	-
cinder_netapp-4.2-4.2.2-1	Rally, Tempest, manual scenarios	Accepted	-
contrail-4.0-4.0.0-1	OSTF, Rally	Accepted	-

Status explanation:
ACCEPTED - critical tests passed successfully, functionality accepted; no unresolved major issues
NOT ACCEPTED - critical tests failed, functionality not accepted; there are unresolved major issues
BLOCKED - can't test because of blocking by other issues/functionality

Exit criteria

Criterion	Status	Comments
All planned functional test cases were executed	Yes	Tempest, Rally
All planned non-functional tests were performed	Yes	Manual testing
NetApp functionality was verified	Yes	Rally, manual testing
Solidfire functionality was verified	No	Solidfire functionality is not available

OSTF Health Check

Test Owner: Max Lvov
Test Date: 05/02/2017

Full list of performed test is attached at the end of the test report.

Passed	50
Failed	1
Skipped	0
TOTAL:	51

The table below summarizes the results of OSTF testing (only skipped and failed tests):

Area	Test ID & Description	Result	Comments
Configuration tests	Check if default credentials for OpenStack cluster have changed	Failed	Issue with OSTF test itself

Functional Tempest tests

Test Owner: Tetiana Korchak
Test Date: 05/03/2017

Full list of performed test is attached at the end of the test report.

Passed	100
Failed	3
Skipped	16
TOTAL:	119

The table below summarizes the results of Tempest testing (only skipped and failed tests):

Area	Test ID & Description	Result	Comments
tempest.scenario.test_network_basic_ops.TestNetworkBasicOps.test_network_basic_ops	Basic network operation test	Failed	https://bugs.launchpad.net/tempest/+bug/1586931
tempest.scenario.test_volume_boot_pattern.TestVolumeBootPattern.test_volume_boot_pattern	Check that volume is bootable, validation is done with different conditions	Failed	https://bugs.launchpad.net/cinder/+bug/1690263
tempest.scenario.test_volume_boot_pattern.TestVolumeBootPatternV2.test_volume_boot_pattern	Check that volume is bootable, validation is done with different conditions	Failed	https://bugs.launchpad.net/cinder/+bug/1690263

HA Tests

Test Owner: Tetiana Korchak
Test Date: 05/08/2017

Full list of performed test is attached at the end of the test report.

Passed	123
Failed	1
Skipped	1
TOTAL:	125

Performance Tests (SPT)

Test Owner: Tetiana Korchak
Test Date: 05/04/2017

Test name	Result
Glance upload	128.91MB/s
Glance download	210.75MB/s
Block Storage Write 4k	8.0MB/s
Block Storage Write 1M	331MB/s
Block Storage Write 1G	704MB/s
Number of nodes (during iperf HW to HW tests)	23
HW to HW (best)	9.9
HW to HW (best) - 10 Threads	9.91
HW to HW (worst)	0.491
HW to HW (worst) - 10 Threads	6.77
VM to VM - VMs on same node - via Private IP - 1 thread	29.5Gbits/sec
VM to VM - VMs on different HW nodes - via Private IP - 1 thread	9.00Gbits/sec
VM to VM - VMs on different HW nodes - via Private IP - MILTI 10 thread	8.31Gbits/sec
VM to VM - via Floating IP and VMs are on different nodes - 1 thread	8.06Gbits/sec
VM to VM - diff nodes, VMs connected to separate networks connected by vRouter - via Private IP - 1 thread	8.92Gbits/sec

Functional manual tests

Test Owner: Tetiana Korchak, Max Lvov
Test Date: 05/08/2017 - 05/10/2017

Manual tests were performed during issue investigation (https://bugs.launchpad.net/cinder/+bug/1690263)

Rally load tests

Test Owner: Tetiana Korchak

Test Date: 05/04/2017

Full list of performed test is attached at the end of the test report.

Passed	104
Failed	1
Skipped	0
TOTAL:	105

The table below summarizes the results of Rally testing (only skipped and failed tests):

Area	Test ID & Description	Result	Comments
NeutronNetworks.create_and_update_ports	Test checks if it's possible to create port and update its information	Failed	Contrail doesn't allow to update fields "device_id" and "name"
HeatStacks.create_stack_and_scale	Test checks create stack and scale functionality	Passed	Failed due to timeout
NeutronNetworks.create_and_delete_subnets	Test checks create and delete subnets functionality	Passed	Fails coused by contrail
NovaServers.boot_server_from_volume_and_live_migrate	Live Migration failed: Migration complete but instance did not change host	Passed	Steps were checked manually and issue was not reproduced

5. Test Environment & Tools

Essential information about test environment, test framework and tools have been used during the testing.

Test Tools

Information about the tools used during the testing.

Tool name	Version	Test Type	Tool Configuration
OSTF	8.0	Smoke	Standard Fuel
SPT	latest	Performance	Acceptance testing to evaluate cloud performance
Tempest	15.0.0	Functional	Set of integration tests to be run against a live OpenStack cluster.
Rally	0.9.0	Load	Framework for performance analysis and benchmarking
HA	-	High availability	OpenStack HA testing during the hardware failovers