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Test Report

Version 1.0

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Table of contents

[Conclusion](#)

[New Issues Found](#)

[Solution Under Test](#)

[Test Result Details](#)

[Test Environment & Tools](#)

1. Conclusion

The solution under test is validated and verified according to the Test Plan and is **NOT READY** for production deployment.

During the testing phase the following tests were executed:

- Smoke OSTF tests;
- HA tests (partial);
- Simplified performance testing;
- Functional manual testing.

Cloud is operational but the performance is below expected levels. Using in production is not recommended.

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
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3. Solution Under Test

Deployment Overview

Component	Configuration
Sizing and Segregation	22 nodes, 1 Region
OpenStack Release	MOS 9.2, Mitaka on Ubuntu 14.04
Controller High Availability	HA, 3 controllers
Host OS	Ubuntu 14.04
Hypervisor type	KVM
Object storage configuration	Ceph
Cinder configuration	Ceph
Additional components	Sahara, Murano
Tenant Network Isolation	Neutron (VLAN)
Keystone configuration	LDAP
Glance configuration	Ceph
Number of Controllers	3 nodes
Number of Compute Nodes	16
Number of Storage Nodes	3
Other Nodes	3 x Telemetry Mongo DB

Plugin & Component overview

Plugin/Component name	Version
Zabbix Fuel plugin	2.5.1

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

Component	Extension
LDAP	Manually configured domain

4. Test Result Details

Overall solution test status

Solution Feature / Requirement Tested	How tested	Status	Comments
Mirantis Openstack deployment	OSTF	ACCEPTED	Sahara tests failed by timeout, passed when executed manually; Heat autoscaling test failed by timeout – autoscaling and all of it's components are in working state.
Performance	SPT	NOT ACCEPTED	Ceph shows critically low performance, unable to execute VM to VM test - iperf cannot be downloaded over admin_floating_net.
HA	HA manual tests	ACCEPTED	Not all tests were executed due to the limited access to the cloud

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
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OSTF Health Check

Test Owner: Nikita Zaporozhets

Test Date: 05/11/2017

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
Sahara	Sahara test for launching a simple Vanilla2 cluster	Failed	Sahara tests failed by timeout, passed when executed manually.
Heat	Check stack autoscaling	Failed	Heat autoscaling test failed by timeout – autoscaling and all of it's components are in working state

Functional Tempest tests

Tempest tests were not executed due to the limited access to the cloud

HA Tests

Test Owner: Nikita Zaporozhets

Test Date: 05/11/2017

Not all tests were executed due to the limited access to the cloud

Passed	123
Failed	1
Skipped	1
TOTAL:	125

Performance Tests (SPT)

Test Owner: Nikita Zaporozhets

Test Date: 05/11/2017

Ceph shows critically low performance, unable to execute VM to VM test - iperf cannot be downloaded over admin_floating_net.

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

During cloud validation some OSTF and HA scenarios were performed manually.

Rally load tests

Rally tests were not executed due to the limited access to the cloud

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	9.2	Smoke	Standard Fuel
SPT	-	Performance	Acceptance testing to evaluate cloud performance
HA	-	High availability	OpenStack HA testing during the hardware failovers

Results of OSTF

<input type="checkbox"/> Sanity tests. Duration 30 sec - 2 min	Expected Duration	Actual Duration	Status
<input type="checkbox"/> Ceilometer test to list meters, alarms, resources and events	180 s.	1.2	✓
<input type="checkbox"/> Request flavor list	20 s.	0.2	✓
<input type="checkbox"/> Request image list using Nova	20 s.	0.2	✓
<input type="checkbox"/> Request instance list	20 s.	0.5	✓
<input type="checkbox"/> Request absolute limits list	20 s.	0.1	✓
<input type="checkbox"/> Request snapshot list	20 s.	0.3	✓
<input type="checkbox"/> Request volume list	20 s.	0.1	✓
<input type="checkbox"/> Request image list using Glance v1	10 s.	0.0	✓
<input type="checkbox"/> Request image list using Glance v2	10 s.	0.0	✓
<input type="checkbox"/> Request stack list	20 s.	0.0	✓
<input type="checkbox"/> Request active services list	20 s.	0.2	✓
<input type="checkbox"/> Request user list	20 s.	0.1	✓
<input type="checkbox"/> Check that required services are running	180 s.	0.5	✓
<input type="checkbox"/> Check that required services are running	180 s.	0.5	✓
<input type="checkbox"/> Check internet connectivity from a compute	100 s.	0.3	✓
<input type="checkbox"/> Check DNS resolution on compute node	120 s.	0.8	✓
<input type="checkbox"/> Create and delete Murano environment	10 s.	1.0	✓
<input type="checkbox"/> Get list of Murano Artifact applications packages	10 s.	0.6	✓
<input type="checkbox"/> Get list of Murano applications categories	10 s.	0.1	✓
<input type="checkbox"/> Request list of networks	20 s.	0.2	✓
<input type="checkbox"/> Sahara test for checking CRUD operations on HDP2 templates	80 s.	4.0	✓
<input type="checkbox"/> Sahara test for checking CRUD operations on Vanilla2 templates	80 s.	1.2	✓
<input type="checkbox"/> Functional tests. Duration 3 min - 14 min	Expected Duration	Actual Duration	Status
<input type="checkbox"/> Create instance flavor	30 s.	2.7	✓
<input type="checkbox"/> Check create, update and delete image actions using Glance v2	70 s.	3.1	✓
<input type="checkbox"/> Create volume and boot instance from it	350 s.	48.7	✓
<input type="checkbox"/> Create volume and attach it to instance	350 s.	70.1	✓

<input type="checkbox"/>	Create volume and attach it to instance	350 s.	70.1	✓
<input type="checkbox"/>	Instance live migration	200 s.	51.6	✓
<input type="checkbox"/>	Check network connectivity from instance via floating IP	300 s.	48.9	✓
<input type="checkbox"/>	Create keypair	25 s.	0.4	✓
<input type="checkbox"/>	Create security group	25 s.	0.8	✓
<input type="checkbox"/>	Check network parameters	50 s.	0.1	✓
<input type="checkbox"/>	Launch instance	200 s.	33.1	✓
<input type="checkbox"/>	Launch instance with file injection	200 s.	29.2	✓
<input type="checkbox"/>	Launch instance, create snapshot, launch instance from snapshot	300 s.	58.8	✓
<input type="checkbox"/>	Create user and authenticate with it.	80 s.	0.7	✓
<input type="checkbox"/>	HA tests. Duration 30 sec - 8 min	Expected Duration	Actual Duration	Status
<input type="checkbox"/>	Check state of haproxy backends on controllers	10 s.	1.1	✓
<input type="checkbox"/>	Check data replication over mysql	10 s.	3.2	✓
<input type="checkbox"/>	Check if amount of tables in databases is the same on each node	10 s.	2.8	✓
<input type="checkbox"/>	Check if amount of tables in databases is the same on each node	10 s.	2.8	✓
<input type="checkbox"/>	Check galera environment state	10 s.	1.2	✓
<input type="checkbox"/>	Check pacemaker status	10 s.	1.6	✓
<input type="checkbox"/>	RabbitMQ availability	100 s.	13.5	✓
<input type="checkbox"/>	RabbitMQ replication	100 s.	21.5	✓
<input type="checkbox"/>	Platform services functional tests. Duration 3 min - 60 min	Expected Duration	Actual Duration	Status
<input type="checkbox"/>	Ceilometer test to check alarm state and get Nova notifications	90 s.	28.2	✓
<input type="checkbox"/>	Ceilometer test to check events and traits	40 s.	39.7	✓
<input type="checkbox"/>	Ceilometer test to check notifications from Glance	5 s.	4.2	✓
<input type="checkbox"/>	Ceilometer test to check notifications from Keystone	5 s.	4.7	✓
<input type="checkbox"/>	Ceilometer test to check notifications from Neutron	40 s.	6.8	✓
<input type="checkbox"/>	Ceilometer test to check notifications from Sahara	40 s.	0.4	—
Correctly registered image to create Sahara cluster not found.				
<div> <div>Target component: Ceilometer</div> <div> Scenario: 1. Find a correctly registered Sahara image </div> </div>				

<input type="checkbox"/>	Ceilometer test to check events from Cinder	150 s.	75.7	✓
<input type="checkbox"/>	Ceilometer test to create, check and list samples	5 s.	0.9	✓
<input type="checkbox"/>	Ceilometer test to create, update, check and delete alarm	120 s.	93.4	✓
<input type="checkbox"/>	Typical stack actions: create, delete, show details, etc.	720 s.	43.7	✓
<input type="checkbox"/>	Advanced stack actions: suspend, resume and check	900 s.	72.9	✓
<input type="checkbox"/>	Check stack autoscaling	2200 s.	1806.9	✗
<p>Time limit exceeded while waiting for terminating the 2nd instance per autoscaling alarm to finish. Please refer to OpenStack logs for more details.</p> <div> <p>Target component: Heat</p> <p>Scenario:</p> <ol style="list-style-type: none"> 1. Create test flavor. 2. Create a keypair. 3. Save generated private key to file on Controller node. 4. Create a security group. 5. Create a stack. 6. Wait for the stack status to change to 'CREATE_COMPLETE'. 7. Create a floating IP. 8. Assign the floating IP to the instance of the stack. 9. Wait when the instance is ready to connect. 10. Wait for the 2nd instance to be launched. 11. Wait for the 2nd instance to be terminated. 12. Delete the file with private key. 13. Delete the stack. 14. Wait for the stack to be deleted. </div>				

<input type="checkbox"/>	Check stack rollback	470 s.	18.6	✓
<input type="checkbox"/>	Update stack actions: Inplace, replace and update whole template	1300 s.	100.0	✓
<input type="checkbox"/>	Check creation of stack with Wait Condition/Handle resources	820 s.	50.6	✓
<input type="checkbox"/>	Check application deployment in Murano environment with GLARE	1200 s.	67.7	✓
<input type="checkbox"/>	Sahara test for launching a simple Vanilla2 cluster	1200 s.	563.8	✗
<p>Cluster failed to build and is in "Error" status. Please refer to OpenStack logs for more details.</p> <div> <p>Target component: Sahara</p> <p>Scenario:</p> <ol style="list-style-type: none"> 1. Create a cluster template 2. Create a cluster 3. Wait for the cluster to build and get to "Active" status 4. Check deployment of Hadoop services on the cluster 5. Check ability to log into cluster nodes via SSH 6. Delete the cluster 7. Delete the cluster template </div>				

<input type="checkbox"/>	Cloud validation tests. Duration 30 sec - 2 min	Expected Duration	Actual Duration	Status
<input type="checkbox"/>	Check disk space outage on controller and compute nodes	20 s.	5.8	✓

<input type="checkbox"/>	Cloud validation tests. Duration 30 sec - 2 min	Expected Duration	Actual Duration	Status
<input type="checkbox"/>	Check disk space outage on controller and compute nodes	20 s.	5.8	✓
<input type="checkbox"/>	Check log rotation configuration on all nodes	20 s.	6.1	✓
<input type="checkbox"/>	Configuration tests. Duration 30 sec - 2 min	Expected Duration	Actual Duration	Status
<input type="checkbox"/>	Check usage of default credentials on master node	20 s.	1.4	✗
<p>Default credentials for ssh on master node were not changed. Please refer to OpenStack logs for more details.</p> <div> <p>Target component: Configuration</p> <p>Scenario:</p> <ol style="list-style-type: none"> 1. Check user can not ssh on master node with default credentials. </div>				
<input type="checkbox"/>	Check if default credentials for OpenStack cluster have changed	20 s.	0.0	✓
<input type="checkbox"/>	Check usage of default credentials for keystone on master node	20 s.	0.2	✓