

# **Dell Red Hat OpenStack Cloud Solution Release Notes - Version 5.0**



# Contents

---

Trademarks..... 3

Notes, Cautions, and Warnings..... 4

Before You Begin..... 5

Enhancements..... 6

Fixes..... 7

Known Anomalies..... 8

Tempest Results Notes..... 13

References..... 16

    To Learn More..... 16

## Trademarks

---

© 2014-2016 Dell Inc. All rights reserved. Reproduction of this material in any manner whatsoever without the express written permission of Dell Inc. is prohibited. For more information, contact Dell.

Trademarks used in this text: Dell™, the DELL logo, PowerEdge™, and Dell Networking™ are trademarks of Dell Inc. Intel® and Xeon® are registered trademarks of Intel Corporation in the U.S. and other countries. Microsoft® and Windows® are registered trademarks of Microsoft Corporation in the United States and/or other countries.

Red Hat®, Red Hat Enterprise Linux®, and Ceph are trademarks or registered trademarks of Red Hat, Inc., registered in the U.S. and other countries. Linux® is the registered trademark of Linus Torvalds in the U.S. and other countries. Oracle® and Java® are registered trademarks of Oracle Corporation and/or its affiliates.

DISCLAIMER: The OpenStack® Word Mark and OpenStack Logo are either registered trademarks/service marks or trademarks/service marks of the OpenStack Foundation, in the United States and other countries, and are used with the OpenStack Foundation's permission. We are not affiliated with, endorsed or sponsored by the OpenStack Foundation or the OpenStack community.




Firefox® and the Firefox logo are registered trademarks of the Mozilla Foundation.

The Midokura® name and logo, as well as the MidoNet® name and logo, are registered trademarks of Midokura SARL.

Other trademarks and trade names may be used in this publication to refer to either the entities claiming the marks and names or their products. Dell Inc. disclaims any proprietary interest in trademarks and trade names other than its own.

## Notes, Cautions, and Warnings

---

-  A **Note** indicates important information that helps you make better use of your system.
-  A **Caution** indicates potential damage to hardware or loss of data if instructions are not followed.
-  A **Warning** indicates a potential for property damage, personal injury, or death.

This document is for informational purposes only and may contain typographical errors and technical inaccuracies. The content is provided as is, without express or implied warranties of any kind.

## Before You Begin

---

The Dell Red Hat OpenStack Cloud Solution includes software from several parties. You should be aware of information that may impact your deployment. Dell recommends that, as a best practice, you become familiar with the following related information before deploying and using the Dell Red Hat OpenStack Cloud Solution.



**Note:** The following list is not all-encompassing. It represents the major Solution components with which you should be familiar. Subscription access may be required.

- [\*Red Hat Enterprise Linux Server 7 Release Notes\*](#)
- [\*Red Hat OpenStack Platform 8 Release Notes\*](#)
- [\*Red Hat Ceph Storage 1.3.2 Release Notes\*](#)

## Enhancements

---

This topic describes enhancements for the Dell Red Hat OpenStack Cloud Solution, version 5.0.

Enhancements include:

- Red Hat OpenStack Platform version 8
- Red Hat OpenStack Director
- Support for Intel® Xeon® E5-2600 v4 (Broadwell) server CPUs
- Updated firmware for hardware components:
  - PowerEdge R630 and R730xd
  - iDRAC with LFC
  - RAID
  - NICs



**Note:** See "*Tested BIOS and Firmware*" in the [Dell Red Hat OpenStack Cloud Solution Hardware Deployment Guide](#) for specific firmware versions.

- Support for Cinder multiple concurrent backends
- Support for Dell Storage SC Series as a backend for Cinder
- Ephemeral and Cinder volume evacuation on a Red Hat Ceph Storage backend
- Improved Tempest results generation and analysis
- Support for node maintenance mode

## Fixes

---

This topic describes issues in the Dell Red Hat OpenStack Cloud Solution that have been corrected since the prior release.

Subscriptions are required to view Red Hat Bugzilla and Dell JIRA defect tracking systems.

**Table 1: Dell Red Hat OpenStack Cloud Solution Fixes**

Issue	Component	Tracking Number
Horizon can occasionally time out, resulting in error messages similar to:  <b>Error:</b> Unauthorized: Unable to retrieve <object>.	OpenStack, Horizon	Dell JIRA <a href="#">3959</a>

## Known Anomalies

This section describes currently-known defects for the Dell Red Hat OpenStack Cloud Solution, version 5.0. Workarounds are provided whenever possible.

Subscriptions are required to view Red Hat Bugzilla and Dell JIRA defect tracking systems.

**Table 2: Dell Red Hat OpenStack Cloud Solution Defects**


Issue	Component	Tracking No.	Workaround
<p>The boot order of 13G Servers, ordered with LOM daughter card, differs from that in prior server orders.</p> <p>The solution requires that the first 1G NIC be set to PXE boot. However, the NIC boot order as factory-configured is set to boot the first NIC, which is a 10G NIC.</p>	BIOS	N/A	<p>You can update the BIOS to set the boot order:</p> <ol style="list-style-type: none"> <li>1. Boot to System BIOS.</li> <li>2. Select <i>Device Settings</i>.</li> <li>3. Select <i>Integrated NIC 1 Port 1</i> (this is interface <i>em1</i>).</li> <li>4. Select <i>NIC Configuration</i>.</li> <li>5. Using the dropdown, change the boot protocol from <i>PXE</i> to <i>None</i>.</li> <li>6. In sequence, click on the <i>Back</i>, <i>Finish</i>, <i>Yes</i>, and <i>OK</i> buttons.</li> <li>7. Repeat steps 2-4 for <i>Integrated NIC 1 Port 3</i>. <ol style="list-style-type: none"> <li>a. This time, change the boot protocol from <i>None</i> to <i>PXE</i>.</li> </ol> </li> <li>8. Reboot to System BIOS.</li> <li>9. Select <i>BIOS Boot Settings</i>.</li> <li>10. Select <i>Hard-Disk Drive Sequence</i>.</li> <li>11. Select <i>Integrated NIC 1 Port 3 Partition 1</i>.</li> <li>12. Use the + key to move the device to the top of the list.</li> <li>13. In sequence, click on the <i>OK</i>, <i>Back</i>, <i>Back</i>, <i>Finish</i>, <i>Yes</i>, and <i>OK</i> buttons.</li> <li>14. Reboot the system, which should now boot in the proper order.</li> </ol>
If local ephemeral storage is being used, <i>resize</i> operations do not currently function.	OpenStack, Compute Nodes	Red Hat Bugzilla <a href="#">975014</a>	None.
The Director Node takes a long time to shut down upon reboot, and may appear to hang.	OpenStack, Director Nodes	Red Hat Bugzilla <a href="#">1178497</a>	<p>On the Director Node, execute the following commands:</p> <pre>\$ sudo openstack-service stop \$ sudo ip netns delete \$(ip netns) \$ sudo poweroff</pre>



Issue	Component	Tracking No.	Workaround
<p>Problem is <i>notification_driver</i> is not set in all required configuration files, and in Glance the <i>rabbit_hosts</i> may not be set when deploying the Overcloud.</p>	<p>OpenStack, Ceilometer</p>	<p>Red Hat Bugzilla <a href="#">1314732</a>, <a href="#">1316016</a></p>	<p><b>Controller Nodes</b></p> <ol style="list-style-type: none"> <li>1. SSH into each Controller.</li> <li>2. Execute the following commands: <pre>sudo -i grep rabbit_hosts /etc/nova/nova.conf</pre> <p>The above command will return something like "192.168.140.24,192.168.140.22".</p> </li> <li>3. Copy the value for step below, referred to as RABBIT_HOSTS.</li> <li>4. Open <i>glance-api.conf</i> and set the following attributes: <pre>vi /etc/glance/glance-api.conf rabbit_hosts = RABBIT_HOSTS notification_driver = messagingv2</pre> </li> <li>5. Save and close <i>glance-api</i>.</li> <li>6. Open <i>glance-registry.conf</i> and set the following attributes: <pre>vi /etc/glance/glance-registry.conf rabbit_hosts = RABBIT_HOSTS notification_driver = messagingv2</pre> </li> <li>7. Save and close <i>glance-registry.conf</i>.</li> <li>8. Open <i>cinder.conf</i> and set the following attribute: <pre>vi /etc/cinder/cinder.conf notification_driver = messagingv2</pre> </li> <li>9. Save and close <i>cinder.conf</i>.</li> <li>10. Restart the required services: <pre>systemctl restart openstack-glance-api.service openstack-glance-registry.service openstack-cinder-api.service openstack-cinder-scheduler.service</pre> </li> </ol>

Issue	Component	Tracking No.	Workaround
(Continued) Problem is <i>notification_driver</i> is not set in all required configuration files, and in Glance the <i>rabbit_hosts</i> may not be set when deploying the Overcloud.	OpenStack, Ceilometer	Red Hat Bugzilla <a href="#">1314732</a> , <a href="#">1316016</a>	<p><b>Compute Nodes</b></p> <ol style="list-style-type: none"> <li>1. SSH into each Compute node.</li> <li>2. Edit <i>nova.conf</i> and set the following attribute value: <pre>sudo -i vi /etc/nova/nova.conf notification_driver = messagingv2</pre> </li> <li>3. Save and close <i>nova.conf</i>.</li> <li>4. Restart the required services: <pre>systemctl restart openstack-ceilometer- compute.service openstack-nova- compute.service</pre> </li> </ol> <p><b>Storage Nodes</b></p> <ol style="list-style-type: none"> <li>1. SSH into each Storage node.</li> <li>2. Edit <i>nova.conf</i> and set the following attribute value: <pre>sudo -i vi /etc/cinder/ cinder.conf notification_driver = messagingv2</pre> </li> <li>3. Save and close <i>cinder.conf</i>.</li> <li>4. Restart the required service: <pre>systemctl restart openstack-cinder- volume.service</pre> </li> </ol>
Cold migrate of host does not migrate the instances from source host when using Horizon.	OpenStack, Horizon	Red Hat Bugzilla <a href="#">1245617</a>	None.
When creating a medium-sized VM with a 1GB image, a message similar to the following appears:  <pre>Exception during message handling: Timed out waiting for a reply to message ID &lt;message_id&gt;</pre>	OpenStack, Messaging	Red Hat Bugzilla <a href="#">1341120</a>	None.

Issue	Component	Tracking No.	Workaround
Overcloud deployment fails if a pending Lifecycle Controller configuration job exists on a node.	OpenStack, Deployment	Dell Jira <a href="#">3692</a>	<ol style="list-style-type: none"> <li>1. Clear the pending configuration job by powering on the node.</li> <li>2. Monitor the node's console until the configuration job completes.</li> <li>3. Power off the node.</li> <li>4. Reattempt deployment.</li> </ol>
<p>When a <code>swift list</code> command is executed at the CLI after containers are created in Horizon, the following error message appears:</p> <pre> /usr/lib/python2.7/site-packages/keystoneclient/service_catalog.py:196: UserWarning: Providing attr without filter_value to get_urls() is deprecated as of the 1.7.0 release and may be removed in the 2.0.0 release. Either both should be provided or neither should be provided. 'Providing attr without filter_value to get_urls() is ' </pre>	OpenStack, Containers	Dell JIRA <a href="#">5085</a>	<ol style="list-style-type: none"> <li>1. Set the <code>OS_REGION_NAME</code> variable at the CLI: <pre> \$ export OS_REGION_NAME=regionOne </pre> </li> <li>2. Execute the <code>swift list</code> command again. The list of containers is now displayed.</li> </ol>
After deploying the Overcloud, output from the <code>neutron net-list</code> command indicates that the tenant network is attached to vLAN 130.	OpenStack, Networking	Dell JIRA <a href="#">5087</a>	vLAN 130 is used by GRE, which is not part of the Dell Red Hat OpenStack Cloud Solution. This output can safely be ignored.
Dell Storage SC Series local ephemeral volume instance fails with Nova evacuation.	OpenStack, Nova, Dell Storage SC Series	Dell JIRA <a href="#">5095</a>	None.
Live migration fails with timeout errors for Dell Storage SC Series volume instances with attached PS Series or SC Series volumes.	OpenStack, Storage	Dell JIRA <a href="#">5228</a>	<p>On each Compute node:</p> <ol style="list-style-type: none"> <li>1. Edit the <code>nova.conf</code> file, uncommenting the <code>live_migration_completion_timeout</code> and <code>live_migration_progress_timeout</code> configuration parameters for <code>libvirt</code>.</li> <li>2. Run the following command: <pre> \$ sudo systemctl restart openstack-nova-compute </pre> </li> </ol>

Issue	Component	Tracking No.	Workaround
Currently, there is no ability to specify Overcloud nodes' domain names. The domain name defaults to <i>localdomain</i> .	OpenStack, Deployment	Dell JIRA <a href="#">5238</a>	None.
Currently, there is no ability to specify Overcloud nodes' static IP addresses.	OpenStack, Deployment	Dell JIRA <a href="#">5244</a>	None.
Currently, when the last HA router of a tenant is deleted, the tenant's HA network is not removed.	OpenStack, Networking	Launchpad <a href="#">1367157</a>	None.
<p>Currently, while using the Horizon GUI, if you edit a file on your disk that is stored in a container, an error similar to the following is displayed when you attempt to upload the latest version of that file with the <i>Update object</i> control:</p> <div> <p>Object with the name already exists</p> </div> <p>This same operation completes successfully when using the CLI.</p>	Horizon, Red Hat Ceph Storage	Launchpad <a href="#">1572635</a>	Use the CLI to perform this operation, instead of the Horizon GUI.
All shipped Overcloud images, used by Red Hat OpenStack Director to deploy OpenStack environments, have the same default root password. This could enable an attacker to gain root access to machines deployed by Red Hat OpenStack Director.	OpenStack, Red Hat OpenStack Director	Red Hat <a href="#">CVE-2016-4474</a>	<p>Change the root password on all machines deployed by Red Hat OpenStack Director.</p> <p> <b>Note:</b> Since the updated images described in the linked article were unavailable until after the Dell Red Hat OpenStack Cloud Solution version 5.0 was released, Dell has not tested them. Therefore we recommend changing the root passwords as a known remediation.</p>

## Tempest Results Notes

[Table 3: Failing Tests](#) on page 13 describes known Tempest failures for the Dell Red Hat OpenStack Cloud Solution, version 5.0.

**Table 3: Failing Tests**

Failing Tests
<b>Cinder</b>
These tests are invalid if backends defined in <i>cinder.conf</i> do not declare <i>vendor_name</i> or <i>storage_protocol</i> attributes. The backend will be valid and fully functional, but the test will fail and should be ignored in such cases.
<pre>tempest.api.volume.admin.test_volume_types.VolumeTypesV1Test.test_ volume_crud_with_volume_type_and_extra_specs  tempest.api.volume.admin.test_ volume_types.VolumeTypesV2Test.test_volume_crud_with_volume_type_and_ extra_specs</pre>
Cinder backup service is not deployed and configured in the Dell Red Hat OpenStack Cloud Solution, thus the following backup related tests will fail.
<pre>tempest.api.volume.admin.test_volumes_ backup.VolumesBackupsV1Test.test_volume_backup_create_get_ detailed_list_restore_delete  tempest.api.volume.admin.test_volumes_ backup.VolumesBackupsV2Test.test_volume_backup_create_get_ detailed_list_restore_delete</pre>
Encrypted volumes are not configured in the Dell Red Hat OpenStack Cloud Solution by default, thus the following encrypted volume related tests will fail.
<pre>tempest.scenario.test_encrypted_cinder_ volumes.TestEncryptedCinderVolumes.test_encrypted_cinder_volumes_cryptsetup  tempest.scenario.test_encrypted_cinder_ volumes.TestEncryptedCinderVolumes.test_encrypted_cinder_volumes_luks</pre>
<b>Neutron</b>

Failing Tests
<p>Neturon Distributed Virtual Router (DVR) is currently a technical preview only in the Dell Red Hat OpenStack Cloud Solution. The following tests may fail depending on the Neutron configuration.</p> <pre> tempest.api.network.admin.test_routers_dvr.RoutersTestDVR.test_ centralized_router_update_to_dvr  tempest.api.network.admin.test_routers_dvr.RoutersTestDVR.test_ distributed_router_creation  tempest.api.network.test_routers.DvrRoutersTest.test_ convert_centralized_router  tempest.api.network.test_routers.DvrRoutersTest.test_ create_distributed_router </pre>
<p>Listing virtual interfaces is not supported in the Dell Red Hat OpenStack Cloud Solution.</p> <pre> tempest.api.compute.servers.test_virtual_ interfaces.VirtualInterfacesTestJSON.test_list_virtual_interfaces </pre>
Nova
<p>EC2 support has been deprecated in the Dell Red Hat OpenStack Cloud Solution, and the nova-cert service not running on the overcloud controller nodes, therefore the following tests will fail.</p> <pre> tempest.api.compute.certificates.test_ certificates.CertificatesV2TestJSON.test_create_root_certificate  tempest.api.compute.certificates.test_ certificates.CertificatesV2TestJSON.test_get_root_certificate </pre>
Resize

## Failing Tests

The Resize feature is not currently supported by the solution, and is a known issue. See the following defect:

- [https://bugzilla.redhat.com/show\\_bug.cgi?id=1221776](https://bugzilla.redhat.com/show_bug.cgi?id=1221776)

```
tempest.api.compute.admin.test_migrations.MigrationsAdminTest.test_list_migrations_in_flavor_resize_situation
```

```
tempest.api.compute.servers.test_delete_server.DeleteServersTestJSON.test_delete_server_while_in_verify_resize_state
```

```
tempest.api.compute.servers.test_disk_config.ServerDiskConfigTestJSON.test_resize_server_from_auto_to_manual
```

```
tempest.api.compute.servers.test_disk_config.ServerDiskConfigTestJSON.test_resize_server_from_manual_to_auto
```

```
tempest.api.compute.servers.test_server_actions.ServerActionsTestJSON.test_resize_server_confirm
```

```
tempest.api.compute.servers.test_server_actions.ServerActionsTestJSON.test_resize_server_confirm_from_stopped
```

```
tempest.api.compute.servers.test_server_actions.ServerActionsTestJSON.test_resize_server_revert
```

```
tempest.scenario.test_network_advanced_server_ops.TestNetworkAdvancedServerOps.test_server_connectivity_resize
```

## References

---

Additional information can be obtained at <http://www.dell.com/en-us/work/learn/openstack-cloud> or by e-mailing [openstack@dell.com](mailto:openstack@dell.com).

If you need additional services or implementation help, please contact your Dell sales representative.

## To Learn More

For more information on the Dell Red Hat® OpenStack Cloud Solution visit <http://www.dell.com/learn/us/en/04/solutions/red-hat-openstack>.

© 2014-2016 Dell Inc. All rights reserved. Trademarks and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. Specifications are correct at date of publication but are subject to availability or change without notice at any time. Dell and its affiliates cannot be responsible for errors or omissions in typography or photography. Dell's Terms and Conditions of Sales and Service apply and are available on request. Dell service offerings do not affect consumer's statutory rights.

Dell, the DELL logo, the DELL badge, and PowerEdge are trademarks of Dell Inc.