

Dell EMC Ready Bundle for Red Hat OpenStack

Release Notes

Version 6.0.1



Dell EMC Converged Platforms and Solutions

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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.

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Chapter 1

Before You Begin

Topics:

- [*Critical Updates*](#)
- [*Upgrade Guidance*](#)
- [*Related Information*](#)

The Dell EMC Ready Bundle for Red Hat OpenStack includes software from several parties. You should be aware of updates and information that may impact your deployment.

Critical Updates


Vendors whose software is included in the Dell EMC Ready Bundle for Red Hat OpenStack may provide critical updates and upgrades after release. Please contact the vendors' support organizations for information about working with any updates or upgrades.

Dirty COW (Copy on Write) Patch

[CVE-2016-5195](#) identified a race condition in the Linux kernel's memory subsystem, known as Dirty COW (Copy on Write). For more information, please see <https://access.redhat.com/security/cve/cve-2016-5195>.

A file called `dirty_cow_patch.py` has been provided to assist you with applying the Dirty COW kernel updates required for RHEL 7.2. This script must be run from the *overcloud admin_user* user's *home/pilot* directory, as the *overcloud admin* user. The only requirements before running this script are:


- The Overcloud nodes be subscribed to Red Hat's CDN subscription services
- The correct repositories are available for the update process

 **Note:** Please refer to *Registering Overcloud Nodes with CDN* in the *Dell EMC Ready Bundle for Red Hat OpenStack Deployment Guide* for those instructions.

Once the requirements are met:

1. Log into the Director Node as the *admin_user*.
2. Execute the following commands:

```
# cd ~/pilot
# chmod 755 dirty_cow_patch.py
# ./dirty_cow_patch.py
```

 **Note:** Be prepared to wait ~45 minutes (9 nodes), or ~5 minutes per node, for the script to complete. The script uploads a minimal version lock file to each node, updates the kernel packages, and then reboots each node waiting for the cluster to stabilize, before moving on to the next node.

Upgrade Guidance

This topic provides the following upgrade information:

- [Add-ons Upgrade Guidance](#) on page 7
- [Virtual Machines Upgrade Guidance](#) on page 7

Add-ons Upgrade Guidance

Add-ons that were installed as part of the **initial** installation of the Dell EMC Ready Bundle for Red Hat OpenStack should function normally after a major solution upgrade from version 5.0.x to version 6.0.x.

However, normal functionality of add-ons installed **after** the initial installation is not guaranteed.

Affected add-ons include:

- Red Hat CloudForms
- OpenShift Container Platform
- Instance High Availability

Virtual Machines Upgrade Guidance

Be aware that:

- After updates — You must **reboot the cluster** for kernel changes to take effect. The VMs are stopped at this point.
- After both updates **and** upgrades — You must **restart the VMs**.

Related Information

Dell EMC recommends that, as a best practice, you become familiar with the following related information before deploying and using the Dell EMC Ready Bundle for Red Hat OpenStack.



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 9 Release Notes](#)
- [Red Hat Ceph Storage 1.3.2 Release Notes](#)

Chapter 2

Enhancements

Topics:

- [Enhancements Listing](#)

This topic describes enhancements for the Dell EMC Ready Bundle for Red Hat OpenStack, version 6.0.1.

Enhancements Listing

Enhancements include:

- Minor OpenStack Update
- Major OpenStack Upgrade
- Red Hat CloudForms version 4.2
- OpenShift Container Platform version 3.3
- CloudForms and OpenShift Integration
- Billing and Chargeback Reporting

Chapter

3

Fixes

Topics:

- [Version 6.0.1 Fixes](#)

This topic describes issues in the Dell EMC Ready Bundle for Red Hat OpenStack that have been corrected since the prior release.

Version 6.0.1 Fixes

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

Table 1: Dell EMC Ready Bundle for Red Hat OpenStack Fixes

Issue	Component	Tracking Number
The Director Node takes a long time to shut down upon reboot, and may appear to hang.	OpenStack, Director Nodes	Red Hat Bugzilla 1178497
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 1314732 , 1316016
After an Overcloud deployment, Ceilometer exceptions fill up the log files on the Controller nodes.	OpenStack, Ceilometer	Red Hat Bugzilla 1337655
If the ARP cache on a network device (router or switch) does not update correctly, intermittent connectivity failures to floating IP (FIP) addresses may result.	OpenStack, Networking	Red Hat Bugzilla 1384108
CLI host evacuation fails when using the <code>--on-shared-storage</code> option to the <code>nova host-evacuate</code> command. The Red Hat OpenStack Platform 9 Instances and Images Guide incorrectly references this deprecated option.	OpenStack, Host Evacuation	Red Hat Bugzilla 1384110
Page 10, step 15 of the Dell EMC Ready Bundle for Red Hat OpenStack Adding and Removing Compute and Storage Nodes Technical Guide does not indicate how to extract the original invocation of the <code>deploy-overcloud.py</code> script.	OpenStack, Documentation	Dell EMC Jira CES-6649
Currently, when the last HA router of a tenant is deleted, the tenant's HA network is not removed.	OpenStack, Networking	Launchpad 1367157

Chapter

4

Known Anomalies

Topics:

- [Version 6.0.1 Known Anomalies](#)

This section describes currently-known defects for the Dell EMC Ready Bundle for Red Hat OpenStack, version 6.0.1. Workarounds are provided whenever possible.

Version 6.0.1 Known Anomalies

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

Table 2: Dell EMC Ready Bundle for Red Hat OpenStack 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"> 1. Boot to System BIOS. 2. Select <i>Device Settings</i>. 3. Select <i>Integrated NIC 1 Port 1</i> (this is interface <i>em1</i>). 4. Select <i>NIC Configuration</i>. 5. Using the dropdown, change the boot protocol from <i>PXE</i> to <i>None</i>. 6. In sequence, click on the <i>Back</i>, <i>Finish</i>, <i>Yes</i>, and <i>OK</i> buttons. 7. Repeat steps 2-4 for <i>Integrated NIC 1 Port 3</i>. <ol style="list-style-type: none"> a. This time, change the boot protocol from <i>None</i> to <i>PXE</i>. 8. Reboot to System BIOS. 9. Select <i>BIOS Boot Settings</i>. 10. Select <i>Hard-Disk Drive Sequence</i>. 11. Select <i>Integrated NIC 1 Port 3 Partition 1</i>. 12. Use the + key to move the device to the top of the list. 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. 14. Reboot the system, which should now boot in the proper order.
Cold migrate of host does not migrate the instances from source host when using Horizon.	OpenStack, Horizon	Red Hat Bugzilla 1245617	None.
If local ephemeral storage is being used, <i>resize</i> operations do not currently function.	OpenStack, Compute Nodes	Red Hat Bugzilla 1267598	None.

Issue	Component	Tracking No.	Workaround
<p>Creating a snapshot of an empty Dell Storage SC Series Cinder volume fails. To reproduce:</p> <ol style="list-style-type: none"> 1. Create an empty SC Series volume. 2. Try to create a snapshot of the empty volume. 3. A new snapshot is listed with a status of <code>error</code> instead of <code>available</code>. 	OpenStack, Cinder, Dell Storage SC Series	Red Hat Bugzilla 1369978	<p>Ensure that the Dell Storage SC Series Cinder volume contains data before attempting to take a snapshot of it.</p>
<p>On clusters with multi-backend storage with Red Hat Ceph Storage as one of the backends, Red Hat Ceph Storage should be the default block storage Cinder backend, but it is not.</p>	OpenStack, Cinder, Red Hat Ceph Storage	Dell EMC Jira CES-6155	<p>To set Red Hat Ceph Storage as the default block storage Cinder backend:</p> <ol style="list-style-type: none"> 1. Initiate <code>ssh</code> sessions to each Controller node. 2. Edit the <code>cinder.conf</code> file, and set the following attribute: <pre>vi /etc/cinder/ \ cinder.conf default_volume_type = \ rbd_backend</pre> 3. Save and close <code>cinder.conf</code>. 4. Restart the required services: <pre>sudo pcs resource \ restart openstack- cinder-api sudo pcs resource \ restart openstack- cinder-volume sudo pcs resource \ restart openstack- cinder-backup sudo pcs resource \ restart openstack- cinder-scheduler</pre> 5. Test by creating a volume, and verifying that the volume created is in a Red Hat Ceph Storage backend: <pre>cinder create -- \ display_name volume1 1 cinder show volume1</pre>

Issue	Component	Tracking No.	Workaround
The automation code expects the number of nodes that get registered in ironic to match the number of nodes in the stamp-specific initialization file. If the number of nodes does not match, then an error is declared.	OpenStack, Automation Deployment	Dell EMC Jira CES-6220	When <code>use_custom_instack_json</code> is set to <code>True</code> in the stamp-specific initialization file, the user is responsible for ensuring the ironic node info (specifically, the iDRAC address) precisely matches the initialization file.
Updates or upgrades from RHOSP version 8 to version 9 may occasionally fail for a variety of reasons.	OpenStack, Upgrade	Dell EMC Jira CES-6572	Issues encountered during testing include: <ul style="list-style-type: none"> Services or resources under <code>pacemaker</code> are left <i>Unmanaged</i>. <ul style="list-style-type: none"> To fix, set the services or resources under <code>pacemaker</code> back to <i>Managed</i>. Services or Resources under <code>PCS</code> are left <i>disabled</i>. <ul style="list-style-type: none"> To fix, set the set the services or resources under <code>PCS</code> to <i>enabled</i>.
If Instance HA is installed in your environment, it cannot be removed in the Dell EMC Ready Bundle for Red Hat OpenStack, version 6.0.1. This will affect removing a Compute Node if Instance HA was installed.	OpenStack, Instance HA	Dell EMC Jira CES-6590	See <i>Removing a Compute Node</i> in the Dell EMC Ready Bundle for Red Hat OpenStack Technical Guide, Adding and Removing Compute and Storage Nodes , for instructions to remove a Compute node if Instance HA is installed.
The sanity test creates a floating IP pool starting at <code>.2</code> . Many networks use <code>.1 - .10</code> and <code>245 - 254</code> for network gear (i.e., switches). The sanity test should use <code>.20 - .240</code> .	OpenStack, Deployment	Dell EMC Jira CES-6593	None.
When configuring the Solution Admin Host, two networks external to the cluster are required: <ul style="list-style-type: none"> External Network for Management with at least 3 IP addresses; for the SAH, Director Node, and Red Hat Ceph Storage Admin Node. This is the default route. Public API network used for the RESTful API in OpenStack. 	OpenStack, Networking	Dell EMC Jira CES-6604	The External Network for Tenants (Floating IP Network) does not need to be brought to the Director Node, but can be used for the External Network. You must then ensure that when creating the External Network for Tenants (Floating IP), there are no overlapping IP addresses.
If Instance HA is installed in your environment, updates and upgrades will fail for the Dell EMC Ready Bundle for Red Hat OpenStack, version 6.0.1.	OpenStack, Instance HA	Dell EMC Jira CES-6643	None at this time. This issue is currently under investigation. If updates and upgrades are important to your organization, do not enable Instance HA.

Issue	Component	Tracking No.	Workaround
<p>Due to differing system node types, a cluster sometimes needs more time to stabilize the nodes. Therefore, enabling Instance HA during an automated installation may fail.</p>	<p>OpenStack, Instance HA</p>	<p>Dell EMC Jira CES-6684</p>	<p>Dell EMC recommends that you do not enable Instance HA during automated installations.</p> <p>Instead, proceed with the enablement of Instance HA, following the procedure in the <i>Scripted HA Installation</i> section of the Dell EMC Ready Bundle for Red Hat OpenStack Deployment Guide.</p>
<p>Restarting the RHEL OSP Director Node fails after <i>/tmp</i> is purged. Errors similar to the following appear:</p> <pre>error: Failed start domain director error: Failed to open file '/tmp/floppy- director.img'</pre> <p>The XML descriptions of both VMs define floppy drive configurations that reference a source file in <i>/tmp</i>. Once <i>/tmp</i> is cleaned out, the VMs can no longer start.</p>	<p>OpenStack, Red Hat OpenStack Director, Tempest</p>	<p>Dell EMC Jira CES-6770</p>	<p>Remove the offending devices in the XML after installation:</p> <pre><disk type='file' device='floppy'> <driver name='qemu' type='raw' /> <source file='/tmp/floppy- director.img' /> <target dev='fda' bus='fdc' /> <address type='drive' controller='0' bus='0' target='0' unit='0' /></pre>

Issue	Component	Tracking No.	Workaround
The default gateway on the Controller nodes is on the Provisioning network. Some environments prefer it to be on the Public API network.	OpenStack, Networking	Dell EMC Jira CES-6823	<p>To set the default gateway on the Controller nodes to the Public API network:</p> <ol style="list-style-type: none"> 1. Open <i>pilot/templates/nic-configs/controller.yaml</i> in a text editor. 2. Remove the following text: <pre># CHANGEME: The following sets the default route on the # controller nodes to be the IP of the Director node on # the provisioning network. This can be changed to a # gateway IP on the external network if available. - default: true next_hop: {get_param: ControlPlaneDefaultRoute}</pre> 3. Save and close the file. <p>This setting, located near the end of the file, will now take effect:</p> <pre>ip_netmask: 0.0.0.0/0 next_hop: {get_param: ExternalInterface DefaultRoute}</pre>
Accessing Calamari returns an Internal Server Error with SELinux enforcing.	OpenStack, Calamari, SELinux	Dell EMC Jira CES-7151	<p>Set SELinux to permissive, then restart web server on the Red Hat Ceph Storage Admin Node:</p> <pre># setenforce 0 # systemctl restart httpd</pre>
<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> <pre>Object with the name already exists</pre> <p>This same operation completes successfully when using the CLI.</p>	Horizon, Red Hat Ceph Storage	Launchpad 1572635	Use the CLI to perform this operation, instead of the Horizon GUI.

Appendix

A

Tempest Results Notes

Topics:

- [Failing Tests](#)

This appendix describes known Tempest failures for the Dell EMC Ready Bundle for Red Hat OpenStack, version 6.0.1.

Failing Tests

Table 3: Failing Tests

Failing Tests
Cinder
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 EMC Ready Bundle for Red Hat OpenStack, 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 EMC Ready Bundle for Red Hat OpenStack 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>
Neutron
Neturon Distributed Virtual Router (DVR) is currently a technical preview only in the Dell EMC Ready Bundle for Red Hat OpenStack. The following tests may fail depending on the Neutron configuration.
<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>

Failing Tests
Listing virtual interfaces is not supported in the Dell EMC Ready Bundle for Red Hat OpenStack.
<pre>tempest.api.compute.servers.test_virtual_ interfaces.VirtualInterfacesTestJSON.test_list_virtual_interfaces</pre>
Nova
EC2 support has been deprecated in the Dell EMC Ready Bundle for Red Hat OpenStack, and the nova-cert service not running on the overcloud controller nodes, therefore the following tests will fail.
<pre>tempest.api.compute.certificates.test_ certificates.CertificatesV2TestJSON.test_create_root_certificate tempest.api.compute.certificates.test_ certificates.CertificatesV2TestJSON.test_get_root_certificate</pre>
Even with Firewall as a Service (FWaaS) disabled in your overcloud deployment you may see the teardown phase of the FWaaS fail, this failure can be safely ignored.
<pre>tearDownClass (neutron_fwaas.tests.tempest_ plugin.tests.scenario.test_fwaas.TestFWaaS)</pre>
Resize
The Resize feature is not currently supported by the solution, and is a known issue. See the following defect:
<ul style="list-style-type: none"> • https://bugzilla.redhat.com/show_bug.cgi?id=1221776
<pre>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</pre>
Telemetry

Failing Tests

Gnocchi is only available as a tech preview in the Dell EMC Ready Bundle for Red Hat OpenStack, and Gnocchi related tests may fail.

```
gabbi.suitemaker.tempest.scenario.gnocchi.test_  
live_post_some_measures_to_the_metric_on_instance.test_request  
  
gabbi.suitemaker.tempest.scenario.gnocchi.test_  
live_get_instance_measures_with_poll.test_request
```

Appendix

B

References

Topics:

- [To Learn More](#)

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

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

To Learn More

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

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