

Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform

Release Notes

Version 10.0.1



Dell EMC Converged Platforms and Solutions

Contents

List of Tables.....	iv
Trademarks.....	5
Notes, Cautions, and Warnings.....	6
Chapter 1: Enhancements.....	7
Version 10.0.1 Enhancements.....	8
Chapter 2: Fixes.....	9
Version 10.0.1 Fixes.....	10
Chapter 3: Known Anomalies.....	11
BIOS.....	12
13G Boot Order.....	12
Dell EMC Jira CES-7739.....	12
Cinder and Red Hat Ceph Storage.....	12
Dell EMC Jira CES-6155.....	13
Dell EMC Jira CES-7917.....	13
Dell EMC PowerEdge FX and Networking.....	13
Dell EMC Jira CES-7643.....	13
Deployment.....	14
Dell EMC Jira CES-6220.....	14
Dell EMC Jira CES-7650.....	14
Dell EMC Jira CES-7740.....	14
Dell EMC Jira CES-7861.....	15
Dell EMC Jira CES-7997.....	15
Horizon and Ephemeral Storage.....	15
Launchpad 1678109.....	15
Horizon and Red Hat Ceph Storage.....	16
Launchpad 1572635.....	16
Host Migration.....	16
Red Hat Bugzilla 1245617.....	16
Red Hat Bugzilla 1267598.....	16
Instance High Availability.....	16
Red Hat Bugzilla 1386420, 1441368.....	17
Single-root I/O Virtualization (SR-IOV).....	17
SR-IOV reboot issue.....	17
SR-IOV IP Address.....	17
SR-IOV link.....	17
Chapter 4: Known Limitations.....	18
Version 10.0.1 Known Limitations.....	19

Appendix A: Tempest Results Notes.....	20
Failing Tests.....	21
Appendix B: References.....	23
To Learn More.....	24

List of Tables

Table 1: Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform Fixes..... 10

Table 2: Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform Limitations
for OVS-DPDK..... 19

Table 3: Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform Limitations
for SR-IOV..... 19

Table 4: Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform Limitations
for Ease of Use..... 19

Table 5: Failing Tests.....21

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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

Enhancements

Topics:

- [Version 10.0.1 Enhancements](#)

This chapter describes enhancements for the Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform, version 10.0.1.

Version 10.0.1 Enhancements

Enhancements include:

- Support for changing the size of a server with shared storage, using `nova-resize` commands
- Support for cold migrating instances from source hosts with shared storage
- Support for performance monitoring and analytics with Docker, `collectd`, InfluxDB, and Grafana
- Support for updating the BIOS and firmware on the following servers:
 - Dell EMC PowerEdge R430
 - Dell EMC PowerEdge R630
 - Dell EMC PowerEdge R730
 - Dell EMC PowerEdge R730xd
- Support for Cloudera Hadoop version 5.7.0 with OpenStack Sahara
- Support for performance monitoring and analytics
- Support for OpenShift Container Platform version 3.4
- Support for Pivotal Cloud Foundry version 1.11
- Deployment of HugePages through JetPack via Dell NFV Compute Role
- Deployment of Numa through JetPack via Dell NFV Compute Role
- Support of OVS-DPDK through JetPack
- Enhancement to SR-IOV scripts
- Enhancement to Ease-of-use scripts
- Documentation additions:
 - [BIOS and Firmware Update Guide](#)
 - [Hadoop Solution Deployment Guide](#)
 - [Performance Monitoring and Analytics Installation Guide](#)
 - [Deploying Pivotal Cloud Foundry 1.11](#)

Chapter 2

Fixes

Topics:

- [Version 10.0.1 Fixes](#)

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

Version 10.0.1 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 NFV Platform Fixes

Issue	Component	Tracking Number
A design flaw was found in the Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform version 10.0.0 Red Hat OpenStack Platform Director's use of TripleO to enable libvirt-based live migration. See https://access.redhat.com/solutions/3022771 for more information.	Host Migration	Red Hat Bugzilla 1428240
The sanity test creates a floating IP pool starting at .2. Many networks use .1 - .10 and 245 - 254 for network gear (i.e., switches). The sanity test should use .20 - .240.	Deployment	Dell EMC Jira CES-6593
Restarting the Red Hat OpenStack Platform Director Node fails after /tmp is purged. Errors similar to the following appear: <pre>error: Failed start domain director error: Failed to open file '/tmp/floppy-director.img'</pre>	Red Hat OpenStack Platform Director	Dell EMC Jira CES-6770
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.	Instance High Availability	Dell EMC Jira CES-6684
Overcloud deployment fails due to ironic on the Director Node locking one or more nodes, preventing them from advancing from the cleaning state to manageable.	Deployment	Dell EMC Jira CES-7619
When access to Dell Storage PS Series or SC Series backends is interrupted during cluster deployment, the deployment fails with a syntax error message that does not indicate an access failure.	Dell Storage	Dell EMC Jira CES-7689
Cinder Ceph Storage is initially lost when using Local Ephemeral Storage. The enable_rdb_backend variable in the <i>sample.ini</i> and <i>sample-fx.ini</i> files is now used to toggle both Local Ephemeral and Cinder Ceph Storage on/off: <ul style="list-style-type: none"> enable_rdb_backend=true — Cluster uses Local Ephemeral Storage and Cinder Ceph Storage enable_rdb_backend=false — Cluster uses Local Ephemeral Storage only. 	Cinder, Red Hat Ceph Storage	Dell EMC Jira CES-7727

Chapter

3

Known Anomalies

Topics:

- [BIOS](#)
- [Cinder and Red Hat Ceph Storage](#)
- [Dell EMC PowerEdge FX and Networking](#)
- [Deployment](#)
- [Horizon and Ephemeral Storage](#)
- [Horizon and Red Hat Ceph Storage](#)
- [Host Migration](#)
- [Instance High Availability](#)
- [Single-root I/O Virtualization \(SR-IOV\)](#)

This chapter describes currently-known defects for the Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform, version 10.0.1. Workarounds are provided whenever possible.



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

BIOS

BIOS defects in the Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform, version 10.0.1 include:

- [13G Boot Order](#) on page 12
- [Dell EMC Jira CES-7739](#) on page 12

13G Boot Order

Issue — The BIOS setting *Non RAID Disk Mode* can cause RAID configuration failures when set to *disabled*. As a result, nodes cannot be provisioned.

Tracking Number — N/A

Workaround — You can update the BIOS to set the boot order:

1. Boot to System BIOS.
2. Select *Device Settings*.
3. Select *Integrated NIC 1 Port 1* (this is interface *em1*).
4. Select *NIC Configuration*.
5. Using the dropdown, change the boot protocol from *PXE* to *None*.
6. In sequence, click on the *Back*, *Finish*, *Yes*, and *OK* buttons.
7. Repeat steps 2-4 for *Integrated NIC 1 Port 3*.
 - a. This time, change the boot protocol from *None* to *PXE*.
8. Reboot to System BIOS.
9. Select *BIOS Boot Settings*.
10. Select *Hard-Disk Drive Sequence*.
11. Select *Integrated NIC 1 Port 3 Partition 1*.
12. Use the + key to move the device to the top of the list.
13. In sequence, click on the *OK*, *Back*, *Back*, *Finish*, *Yes*, and *OK* buttons.
14. Reboot the system, which should now boot in the proper order.

Dell EMC Jira CES-7739

Issue — The BIOS setting *Non RAID Disk Mode* can cause RAID configuration failures when set to *disabled*. As a result, nodes cannot be provisioned.

Tracking Number — Dell EMC Jira [CES-7739](#)

Workaround — On system boot:

1. Press *[F2]* to invoke the BIOS System Setup console.
2. Navigate to *Device Settings > Integrated Raid Controller 1 > Controller Management > Advanced Controller properties > Non RAID Disk Mode*.
3. Change the setting from *disabled* to *enabled*.
4. Continue the system boot process.

Nodes should now be able to be provisioned.

Cinder and Red Hat Ceph Storage

Cinder and Red Hat Ceph Storage defects in the Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform, version 10.0.1 include:

- [Dell EMC Jira CES-6155](#) on page 13
- [Dell EMC Jira CES-7917](#) on page 13

Dell EMC Jira CES-6155

Issue — 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.

Tracking Number — Dell EMC Jira [CES-6155](#)

Workaround — To set Red Hat Ceph Storage as the default block storage Cinder backend:

1. Initiate `ssh` sessions to each Controller node.
2. Edit the `cinder.conf` file, and set the following attribute:

```
$ vi /etc/cinder/cinder.conf

default_volume_type = rbd_backend
```

3. Save and close `cinder.conf`.
4. Restart the required services:

```
$ 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
```

5. Test by creating a volume, and verifying that the volume created is in a Red Hat Ceph Storage backend:

```
$ cinder create -- display_name volume1 1
$ cinder show volume1
```

Dell EMC Jira CES-7917

Issue — The following error message, as well as a kernel stack trace, may appear in log files on Red Hat Ceph Storage nodes:

```
WARNING: at fs/xfs/xfs_aops.c:1244 xfs_vm_releasepage
```

Tracking Number — Dell EMC Jira [CES-7917](#)

Workaround — These messages are informational, do not negatively affect system performance, and can be safely ignored. See <https://access.redhat.com/solutions/2893711> for more information.

Dell EMC PowerEdge FX and Networking

Dell EMC PowerEdge FX and Networking defects in the Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform, version 10.0.1 include:

- [Dell EMC Jira CES-7643](#) on page 13

Dell EMC Jira CES-7643

Issue — Currently, Dell EMC PowerEdge FX chassis blades are not assigned individual IP addresses via DHCP. Node discovery discovers the chassis' service tag and assigns it to all the blades, which are then all assigned the chassis' IP address.

Tracking Number — Dell EMC Jira [CES-7643](#)

Workaround — Assign static IP addresses to individual blades in a Dell EMC PowerEdge FX chassis.

Deployment

Deployment defects in the Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform, version 10.0.1 include:

- [Dell EMC Jira CES-6220](#) on page 14
- [Dell EMC Jira CES-7650](#) on page 14
- [Dell EMC Jira CES-7740](#) on page 14
- [Dell EMC Jira CES-7861](#) on page 15
- [Dell EMC Jira CES-7997](#) on page 15

Dell EMC Jira CES-6220

Issue — The automation code expects the number of nodes that get registered in Ironic to match the number of nodes in the *sample.ini* and *sample-fx.ini* files. If the number of nodes does not match, then an error is declared.

Tracking Number — Dell EMC Jira [CES-6220](#)

Workaround — When `use_custom_instack_json` is set to *True* in the *sample.ini* and *sample-fx.ini* files, the user is responsible for ensuring the Ironic node info (specifically, the iDRAC address) precisely matches the initialization files.

Dell EMC Jira CES-7650

Issue — Automation fails to delete Ironic nodes in the Overcloud that are in the *clean wait* state during redeployment.

Tracking Number — Dell EMC Jira [CES-7650](#)

Workaround — To work around the issue:

1. Find the failed node by executing the following command:

```
$ ironic node-list
```

2. Note the GUID of the failed node in the output.
3. Delete the node by executing the following commands:

```
$ ironic node-set-maintenance <GUID> False
$ ironic node-set-provision-state <GUID> manage
$ ironic node-delete <GUID>
```

Dell EMC Jira CES-7740

Issue — The iDRAC console or Web session drops its connection during a Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform installation. This happens when the following commands are run:

- Manual installations: — `config_idrac.py`
- Automation installations — `config_idracs.py`

Tracking Number — Dell EMC Jira [CES-7740](#)

Workaround — To work around the issue:

Manual installations:

1. After `config_idrac.py` completes its run:

- a. Restart the iDRACs.
- b. Reset the iDRAC consoles or Web sessions.

Automation installations:

1. Monitor the `/auto_results` log on the SAH for "`config_idracs.py`".
2. After `config_idracs.py` completes its run:
 - a. Restart the iDRACs.
 - b. Reset the iDRAC consoles or Web sessions.

Dell EMC Jira CES-7861

Issue — Red Hat does not support Red Hat OpenStack Platform clusters deployed with two (2) Controller nodes.

Tracking Number — Dell EMC Jira [CES-7861](#)

Workaround — Use three (3) Controller nodes.

Dell EMC Jira CES-7997

Issue — Upon Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform cluster deployment completion the `~/pilot/overcloud_deployment.log` file is zero (0) bytes in size, providing no information about what was deployed.

Tracking Number — Dell EMC Jira [CES-7997](#)

Workaround — To work around the issue:

1. Depending upon your server architecture, open one of the following files in a text editor of your choice:
 - Dell EMC PowerEdge R-Series — `sample.ini`
 - Dell EMC PowerEdge FX — `sample-fx.ini`
2. Change the `deploy_overcloud_debug` variable setting to `true`.
3. Save the file.
4. Redeploy the cluster.

The `~/pilot/overcloud_deployment.log` will now contain useful debug data.

Horizon and Ephemeral Storage

Horizon and Ephemeral Storage defects in the Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform, version 10.0.1 include:

- [Launchpad 1678109](#) on page 15

Launchpad 1678109

Issue — In the Horizon Instance launcher, when selecting Image or Image snapshot as boot source, the *Create New Volume* option is set to **Yes** by default. This will initially create the instance via an image, but then store it on a volume.

Tracking Number — Launchpad [1678109](#)

Workaround — To create a true ephemeral image using Horizon:

1. Click on Launch Instance
2. Select the following options:
 - a. *Select Boot Source = Image*

b. *Create New Volume* = **No**

Horizon and Red Hat Ceph Storage

Horizon and Red Hat Ceph Storage defects in the Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform, version 10.0.1 include

- [Launchpad 1572635](#) on page 16

Launchpad 1572635

Issue — 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 *Update object* control:

```
Object with the name already exists
```

This same operation completes successfully when using the CLI.

Tracking Number — Launchpad [1572635](#)

Workaround — Use the CLI to perform this operation, instead of the Horizon GUI.

Host Migration

Host Migration defects in the Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform, version 10.0.1 include:

- [Red Hat Bugzilla 1245617](#) on page 16
- [Red Hat Bugzilla 1267598](#) on page 16

Red Hat Bugzilla 1245617

Issue — Cold migrate of host does not migrate the instances from source host.

Tracking Number — Red Hat Bugzilla [1245617](#)

Workaround — Configure SSH keys on the Compute nodes as documented [here](#).

Red Hat Bugzilla 1267598

Issue — If local ephemeral storage is being used, `nova resize` operations do not currently function.

Tracking Number — Red Hat Bugzilla [1267598](#)

Workaround — Configure SSH keys on the Compute nodes as documented [here](#).

Instance High Availability

Instance HA defects in the Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform, version 10.0.1 include:

- [Red Hat Bugzilla 1386420](#), [1441368](#) on page 17

Red Hat Bugzilla 1386420, 1441368

Issue — Currently, instances will work on the first attempt to evacuate them from a node, but will go into an `ERROR` state if you attempt to evacuate them a second time.

Tracking Number — Red Hat Bugzilla [1386420](#), [1441368](#)

Workaround — None.

Single-root I/O Virtualization (SR-IOV)

SR-IOV defects in the Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform, version 10.0.1 include:

- [SR-IOV reboot issue](#) on page 17
- [SR-IOV IP Address](#) on page 17
- [SR-IOV link](#) on page 17

SR-IOV reboot issue

Issue — The SR-IOV configuration on the instance clears after the nodes are rebooted

Tracking Number — N/A

Workaround — Rerun the SR-IOV script on the Instance

SR-IOV IP Address

Issue — SR-IOV script passes successfully, even when the same IP address is reused for bond assignment.

Tracking Number — N/A

Workaround — User's responsibility to use different IP addresses when creating the SR-IOV bonds.

SR-IOV link

Issue — SR-IOV script_pass instance does not execute if any of the links are down.

Tracking Number — N/A

Workaround — Ensure that all the links are up before executing the script

Chapter

4

Known Limitations

Topics:

- [Version 10.0.1 Known Limitations](#)

This chapter describes currently-known limitation for the Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform, version 10.0.1.

Version 10.0.1 Known Limitations

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 NFV Platform Limitations for OVS-DPDK

Limitations
Changing status of an active DPDK interface using OvS commands such as 'ovs-appctl netdev-dpdk/set-admin-state' will crash the ovs-vswitchd service.
In case the openvswitch service is restarted, all instances lose their network connectivity and must be restarted to restore the network connection. This is because OvS acts as a server for the unix sockets used for vhost-user ports.
OVS-DPDK performance degrades as the number of instances increases.

Table 3: Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform Limitations for SR-IOV

Limitations
In SR-IOV, a new default route is added for the external network in the instance. This route disables the instance from reaching other tenant networks. User must add routes exclusively to access other networks.
OpenStack created instances use persistent naming scheme for the network interfaces. In persistent naming scheme, the kernel applies enumerations to the interfaces such as eth[0,1,2..] as they are probed by the drivers. However, in case of multiple network interfaces, the naming pattern is not fixed for the interfaces. For example, an interface named “eth0” on one boot may end up as “eth1” on the next. In SR-IOV enabled instances, kernel can swap the tenant network interface “eth0” with one of the attached VFs after reboot. This will cause the instance to lose connectivity over the OpenStack tenant network. Hence, soft/hard reboot is not recommended for any SR-IOV enabled instance.
The script occasionally fails to attach a VF to the instance and exits with an error “internal error: unable to execute QEMU command ‘device add’: Device initialization failed”.
In OVS-DPDK mode 2, OVS-DPDK interface loses connectivity when VFs are attached to the instance. It comes back online after the soft/hard reboot of the instance. A fix has been added for OVS-DPDK mode 2 in the SR-IOV script where it reboots the instance after attaching the interfaces. Instance may lose connectivity in OVS-DPDK mode 2 while enabling the SR-IOV feature

Table 4: Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform Limitations for Ease of Use

Limitations
EOU script can create up to 9 security groups; security groups defined above this limit will be ignored and the script will skip to the next tenant.
“Tenant Name” in excel sheet cannot start with “-”; this corresponds to unary function in excel and is a limitation.

Appendix

A

Tempest Results Notes

Topics:

- [Failing Tests](#)

This appendix describes known Tempest failures for the Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform, version 10.0.1.

Failing Tests

Table 5: 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 NFV Platform, thus the following backup related tests will fail.
<pre>tempest.api.volume.admin.test_volumes_backup.VolumesBackupsV1Test.* tempest.api.volume.admin.test_volumes_backup.VolumesBackupsV2Test.*</pre>
Encrypted volumes are not configured in the Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform 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) has production support in the Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform, albeit with some limited functionality. The following tests may fail depending on the Neutron configuration.
<pre>neutron.tests.tempest.api.admin.test_routers_ dvr.RoutersTestDVR.test_centralized_router_update_to_dvr neutron.tests.tempest.api.test_routers.DvrRoutersTest.test_ convert_centralized_router</pre>
Nova

Failing Tests
These tests are failing due to regression in an RHOSP 10 configuration option: nova.conf#schedule_filter. The default has changed and passing incorrect scheduler_hints to the following tempest tests, causing the tests to fail. See logged Bugzilla defect: 1441809
<pre>tempest.api.compute.admin.test_servers_on_ multinodes.ServersOnMultiNodesTest.test_create_servers_on_different_hosts tempest.api.compute.admin.test_servers_on_ multinodes.ServersOnMultiNodesTest.test_create_servers_on_same_host</pre>
Telemetry
Telemetry installation is now configured to use Gnocchi in Dell EMC Ready Bundle for Red Hat OpenStack NFV Platform. Please use the Gnocchi API available on the metric endpoint to retrieve data. Therefore Ceilometer API tests may fail.
<pre>ceilometer.tests.tempest.api.test_telemetry_ notification_api.TelemetryNotificationAPITest.test_check_ glance_v1_notifications ceilometer.tests.tempest.api.test_telemetry_ notification_api.TelemetryNotificationAPITest.test_check_ glance_v2_notifications ceilometer.tests.tempest.api.test_telemetry_ notification_api.TelemetryNotificationAPITest.test_check_ nova_notification</pre>

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 NFV Platform visit <http://www.dell.com/learn/us/en/04/solutions/red-hat-openstack>.

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