Hewlett Packard Enterprise

HPE XP Storage Cinder Volume Driver Software 9.0.0 Release Notes

Release Notes

Description

HPE XP Storage Cinder Volume Driver software is a block storage management component available in the OpenStack environment. HPE XP Cinder Driver software enables high-performance and high-reliability of HPE storage features for backend storage managed by Cinder. This document provides the latest information as well as known issues and solutions about the HPE XP Storage Cinder Volume Driver software.

Supersede information

Supersedes: 8.1.1

Devices supported

- HPE XP8 Storage
- HPE XP7 Storage

Operating systems

Red Hat Enterprise Linux Server 8.2 (64-bit)

Languages

English

Features

- Distribution for the Open Stack Train release
- Added support for:
  - Quality of Service (QoS) configuration
  - Windows host mode
  - Revert-to-snapshot in High Availability (HA) configuration
  - GVG in High Availability (HA) configuration

Fixes

Not applicable

Prerequisites

The following software is required to use the HPE XP Cinder Driver software:

- Red Hat Enterprise Linux OpenStack Platform 16.1

- XP Configuration Manager REST API

Table 1: XP Configuration Manager REST API support

HPE Cinder Driver software version	Configuration Manager REST API		
	HPE XP8	HPE XP7	HPE XP 9500
5.1.0	N/A	8.5.4 or later	Not supported
6.1.0	N/A	8.5.4 or later	Not supported
6.2.0	N/A	8.5.4 or later	Not supported
6.3.0	10.0.0 or later	8.5.4 or later	Not supported
8.1.x	10.0.0 or later	8.5.4 or later	Not supported
9.0.0	10.0.0 or later	8.5.4 or later	Not supported

See "System requirements" in the user guide for other prerequisite information.

Technology Preview features

The Volume Replication feature is available as a technology preview.

Technology Preview features provide early access to upcoming Hewlett Packard Enterprise adapter product innovations, enabling you to test the functionality and provide feedback. However, these features are not covered under any Hewlett Packard Enterprise support plans, may not be functionally complete, and are not intended for production use. Although technology preview updates are included with the software code, it is recommended to only use these features within a separate test environment. Technology preview information is noted in the provided user documentation so you can determine whether to apply it to a test environment.

Because Technology Preview features are still under development, Hewlett Packard Enterprise cannot guarantee the stability or reliability of such features. If you are using Technology Preview features, you may not be able to seamlessly upgrade to subsequent releases of that feature. While Hewlett Packard Enterprise intends to fully support Technology Preview features in future releases, Hewlett Packard Enterprise may discover that a feature does not meet the standards for enterprise viability. If this happens, Hewlett Packard Enterprise cannot guarantee that Technology Preview features will be released in a supported manner. Some Technology Preview features may only be available for specific plug-in configurations.

Restrictions and considerations

None

Issues and workarounds

When using the Volume Replication function, volume creation operations might fail with the following error when executing volume creation operations while creating multiple volumes:

```
0732-E:  The REST API failed. (source:<errorSource>, ID: KART3000-E,
message:<message>, cause: <cause>, solution: <solution>, code: {u'SSB1':
u'D004', u'SSB2': u'E883'}, method: POST, url: https://xxx.xxx.xxx.xxx:23451/
ConfigurationManager/v1/objects/storages/xxxxxxxxxxxx/remote-mirror-copypairs,
params:<params>, body: <body>)
```

Additionally, unused LDEVs are left in the storage.

To resolve the issue:

1. After waiting some time, retry the volume creation operation.

2. Identify and delete any unused LDEVs.

Red Hat OpenStack Platform upgrade

Starting with Red Hat OpenStack Platform 16, it is necessary to obtain the RPM package of HPE XP Cinder Driver SW from the Hewlett Packard Enterprise site and create your own container image that includes HPE XP Cinder Driver SW.

When creating the container image, use the following instructions instead of the instructions in "Deploy HPE XP Cinder Driver SW (Red Hat)" in the *HPE XP Storage Cinder Volume Driver Software User Guide*.

NOTE:

- If you want to upgrade Red Hat OpenStack Platform from 13 to 16.1, contact Hewlett Packard Enterprise technical support for assistance.

- Since `hpexp_copy_version=1.0` is deprecated, it is recommended to use `hpexp_copy_version=2.0`. Use `hpexp_copy_version=1.0` only in the following scenarios:

  ◦ When Shared Memory Extension is not allowed to use Fast Snap(Clone)/Fast Snap(Snapshot) as storage specification

  ◦ When Shared Memory Extension needs to be added to use Fast Snap(Clone)/Fast Snap(Snapshot) as storage specification

Deploying HPE Cinder Driver SW (Red Hat)

In Red Hat OpenStack Platform, RPM packages are no longer installed on controller nodes. Instead, it is necessary to obtain the RPM package of HPE XP Cinder Driver SW from Hewlett Packard Enterprise and create a container image yourself including HPE XP Cinder Driver SW.

Install the HPE XP Cinder Driver SW driver based on the `openstack-cinder-volume` container image you obtained and use the container image you created. The sample steps are as follows.

Prerequisites

- `openstack-cinder-volume` container image that is provided by Red Hat from `registry.redhat.io`

- The appropriate version of the HPE XP Cinder Driver SW from the driver provider's site

Procedure

1. Create a local registry of Linux containers where you will store Red Hat OpenStack Platform container images.

2. Create a new directory on any Linux server where you will create a Cinder volume container image.

3. Put the installation RPM package of HPE XP Cinder Driver SW in the directory created in step 2.

4. Create the following file with the following content in the directory created in step 2.

   File: `Dockerfile`

   ```
   FROM registry.redhat.io/rhosp-rhel8/openstack-cinder-volume:16.1
   LABEL maintainer="Maintainer Name"\
       description="Red Hat OpenStack Platform 16.1 cinder-volume HPE XP Cinder Driver SW"\
       summary="Red Hat OpenStack Platform 16.1 cinder-volume HPE XP Cinder Driver SW"\
       name="hpe/rhosp16-openstack-cinder-volume-hpexp"\
       vendor="Hewlett Packard Enterprise"\
       version="9.0.0"
       release="207"
   USER root
   COPY hpexp-9.0.0-0_15.0.noarch.rpm/tmp
   RUN rpm -vh /tmp/hpexp-9.0.0-0_15.0.noarch.rpm
   USER cinder
   ```

5. Add the host of your local registry to the insecure registry list in the `/etc/containers/registries.conf` file.

   ```
   [registries.insecure]
   registries = [..., '<host>'
   ```

6. Create a Cinder volume container image and push it to your local registry.

   ```
   # podman login registry.redhat.io
   # podman build --format docker -t <host>:<port>/hpe/rhosp16-openstack-cinder-volume-hpexp:207 .
   # podman push <host>:<port>/hpe/rhosp16-openstack=cinder-volume-hpexp:207
   ```

7. Incorporate the created container image and specify the credentials for the Red Hat site in the `/home/stack/containers-prepare-parameter.yaml` file.

   ```
   parameter_defaults:
   ContainerImagePrepare:
   - push_destination: true
   excludes:
   - cinder-volume
   set:
   :(Omitted)
   - push_destination: true
   includes:
   - cinder-volume
   set:
   namespace: <host>:<port>/hpe
   name_prefix: rhosp16-openstack-
   name_suffix: '-hpexp'
   tag: 207
   ContainerImageRegistryCredentials:
   registry.redhat.io:
   <UID>:<Password>
   ```

   For details about how to specify settings for `containers-prepare-parameter.yaml`, see *Red Hat OpenStack Platform Director Installation and Usage*.

8. Create an environment file for HPE XP Cinder Driver SW.

To apply the settings of HPE XP Cinder Driver SW to a Cinder component during deployment, create a new environment file (for example, `custom_env.yaml`) and then edit the file, located in `/home/stack/templates/`.

```
# custom_env.yaml sample #
parameter_defaults:
CinderEnableIscsiBackend: false
CinderEnableRbdBackend: false
CinderEnableNfsBackend: false
NovaEnableRbdBackend: false
GlanceBackend: file
parameter_defaults:
ControllerExtraConfig:
cinder::config::cinder_config:
XP7_No1/volume_driver:
value: cinder.volume.drivers.hpe.hpexp.hpe_xp_fc.HPEXPFCDriver
XP7_No1/hpexp_storage_id:
value: 800000010199
XP7_No1/hpexp_storage_cli:
value: REST
XP7_No1/hpexp_rest_api_ip:
value: 172.16.18.108
XP7_No1/hpexp_rest_user:
value: HPEXP_USER
XP7_No1/hpexp_rest_password:
value: password
XP7_No1/hpexp_pool:
value: 47
XP7_No1/hpexp_target_ports:
value: CL1-A,CL2-A
XP7_No1/volume_backend_name:
value: XP7_No1
XP7_No2/volume_driver:
value: cinder.volume.drivers.hpe.hpexp.hpe_xp_fc.HPEXPFCDriver
XP7_No2/hpexp_storage_id:
value: 800000010200
XP7_No2/hpexp_storage_cli:
value: REST
XP7_No2/hpexp_rest_api_ip:
value: 172.16.18.109
XP7_No2/hpexp_rest_user:
value: HPEXP_USER
XP7_No2/hpexp_rest_password:
value: password
XP7_No2/hpexp_pool:
value: 48
XP7_No2/hpexp_target_ports:
value: CL3-A,CL4-A
XP7_No2/volume_backend_name:
value: XP7_No2
cinder_user_enabled_backends: ['XP7_No1', 'XP7_No2']
```

9. Deploy the container image. Run the `openstack overcloud deploy` command to deploy the components.

   When you run the command, specify the `containers-prepare-parameter.yaml` environment setting file and the environment file that you created in step 2.

For information about the `openstack overcloud deploy` command and deployment methods, see the *Red Hat OpenStack Platform Director Installation and Usage*.

Related information

The latest documentation for HPE XP Storage Cinder Volume Driver software is available at:

https://www.hpe.com/info/storage/docs

Available documents include the applicable version of the Cinder Volume Driver Software user guide.

Documentation feedback

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