

Volume Driver V4.0 Release Notes For OpenStack Cinder Kilo Release

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violin
MEMORY

Introduction

These release notes provide information about supported operations and known issues for the Volume Driver V4.0.0 for the OpenStack Cinder Kilo Release. For instructions on installing and configuring the Volume Driver V4.0.0, see the *Volume Driver V4.0 Installation and Configuration Guide for OpenStack Cinder Kilo Release*.

The OpenStack Cinder driver package from Violin Memory adds block-storage service support for Violin 7000 Series Flash Storage Platforms (FSPs) and 7700 FSP Controllers. The package is implemented as a storage “plug-in” using the standard Cinder storage driver API, and facilitates the creation, attachment and management of volumes (LUNs) between a 7000 Series FSP and different host servers.

All Cinder volume features required for the OpenStack Kilo release are supported, including volume, snapshot and clone operations. The 4.0.0 driver package release can be used with any OpenStack Kilo deployment for all 7000 Series FSPs and 7700 FSP Controllers running Concerto 7.5.7.

Supported Operations

7000 Series FSPs and 7700 FSP Controllers support the following operations:

- Create volume

The types of volumes (LUNs) that can be created are dedup, thick and thin. The LUN type is specified using cinder volume-type along with explicit extra-specs (that identify the LUN type). Additionally, a Violin-specific extra-spec called "storage_pool" is defined that allows you to select a specific storage pool on the backend for the volume being created. For more information on these extra specs, see the *Volume Driver V4.0 Installation and Configuration Guide for OpenStack Cinder Kilo Release*.

- Delete volume
- Attach volume
- Detach volume
- Create snapshot
- Delete snapshot
- Create cloned volume
- Initialize Connection (attach a volume to an instance)

- Terminate connection (detach a volume from an instance)
- Create volume from snapshot
- Create volume from image
- Extend volume
- Get volume statistics

Resolved Issues

- **28398:** Some snapshots are not deleted after a batch delete attempt from Horizon GUI or Cinder CLI with less than a 15 second delay.
- **28736:** When creating a volume from a volume/snapshot, Cinder driver reports success prior to the actual copy completing.
- **28869:** A snapshot of a dedup LUN may fail with the error "ViolinResourceNotFound: Backend storage resource unavailable."

Known Issues

- **28403:** When creating a new volume from an existing volume, the size of the new volume remains the same as the existing volume.

Workaround: The Violin Cinder driver does not accept a new size parameter for the new volume. Therefore, when creating a new volume from an existing volume, do not attempt to alter the size. If you require the size of the new volume to be larger than the old volume, wait for the new volume to be created and the content copied, then extend the LUN size.

- **28480:** Extending the LUN size of a dedup LUN will render the LUN unusable.

Workaround: Once a dedup LUN is created, its size cannot be altered. Doing so may leave the LUN unusable, and will have to be deleted.

- **28489:** Cannot create a new volume from an existing volume if the existing volume is not of type thick.

The volume type is inherited from the source, and a new volume type is not allowed to be specified for a volume created from another volume. The current release of the Violin Cinder driver only allows you to create a new volume from an existing volume if the existing volume is a thick LUN.

- **28731:** LUNs created outside of OpenStack and exported to the client running OpenStack might cause I/O disruptions on OpenStack-created LUNs during a Memory Gateway HA failover.

Workaround: Do not assign any LUNs to the client outside of OpenStack, directly from the array or through Symphony. If you must do so, as part of initial setup, un-assign the LUNs from the client and remove the LUNs before bringing up OpenStack Cinder on the client.

- **30213:** When creating an instance from a large snapshot of a volume, the operation occasionally fails. The reason is that Nova times out prematurely without allowing the copy to complete.

Workaround: To circumvent this issue, add the following settings to nova.conf:

```
block_device_allocate_retries = 600
block_device_allocate_retries_interval = 3
block_device_creation_timeout = 60
```

- **31246:** After migrating volumes from one storage pool to another, **/dev/mapper** still shows some of the maps to be in use. This is seen only if the migration happens while the volume is attached to the instance.

Workaround: Delete the residual maps using “dmsetup remove -f /dev/mapper/<mpath>”

RedHat Certification

Violin Memory Cinder Driver 4.0 is certified against RedHat OpenStack Platform 6.

The following is the configuration of the system used. This configuration is provided here as a reference only, with no specific requirement of the client server or the OS running on it as a prerequisite to use Violin Cinder Driver 4.0.

Server: Supermicro
Model Number:
Manufacturer: Supermicro
Product Name: X8DTH
Version: 1234567890

OS: RedHat 7.2
OpenStack: RHEL OpenStack Platform 7
HBAs: Qlogic 8G FC (QLogic QLE2562 - PCI-Express Dual Channel 8Gb Fibre Channel HBA)
Driver Version: 8.07.00.18.07.2-k
Firmware Version: 7.03.00

Driver: OpenStack Cinder Driver V4.0 (Kilo)
FC Switch: Brocade switch 300
Switch firmware version: v6.4.3d

Violin Array: 7300 FC
Aria Version: 7.1.1.0
Concerto version: 7.5.7

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