

Violin 6000 Series All Flash Array Volume Driver V1.0.0 Release Notes For OpenStack Cinder Havana Release

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Introduction

These release notes provide information about and instructions for installing the Violin 6000 Series All Flash Array Volume Driver for the OpenStack Cinder Havana Release.

The OpenStack Cinder driver package from Violin Memory adds block-storage service support for Violin 6000 Series All Flash Arrays. 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 Flash Array and different host servers.

All Cinder volume features required for the OpenStack “Havana” release are supported, including volume, snapshot and clone operations. The 1.0.0 driver package release can be used with any OpenStack Havana deployment for all 6000 Series arrays running V6.3.0.4 or V6.3.1 using FibreChannel HBAs.

Known Issues

- **16566:** If a LUN is deleted and the flash space is allocated for a new LUN, the old data is still present.

Workaround: In a multi-tenant configuration, the volumes need to be zeroed out before reallocation.

- **24498:** If the array has rebooted while the Cinder driver has active connection to the array, the driver may take up to 15 minutes to reconnect.

Workaround: Restart Cinder driver service to reconnect.

- **24523:** If the `use_igroups` flag is toggled by a user, the array fails volume exports with an error similar to the following:

```
“failure: Initiator wwn.xx.yy.xx.yy.xx.yy.xx conflict found in <server-name>”
```

Workaround:

1. Remove all volume exports from OpenStack.
2. Update the `use_igroups` setting.
3. Re-export volumes.

- **24526:** When multiple volumes are created and exported with image copy and unexport all together, it may take more than 60 seconds to complete the creation of all of the volumes. VM startup requires that volume-based root disks complete this process in less than 60 seconds.

Workaround: Create one volume at a time. Confirm the operation is successful before issuing the next operation.

- **24553:** After a MG mastership change in a running array, the Cinder driver is unable to gather certain statistics. This is because the cluster ID has incremented to above 2; the Cinder driver assumes cluster node ID is always 1 and 2.

There is no workaround at this time.

- **24626:** Attempting to boot a server from a snapshot of a bootable volume does not work. Attempting to create a server from a snapshot results in “Block Device Mapping is Invalid.”

There is no workaround at this time.

- **24629:** Exporting a large number of volumes (25+) at the same time causes **vexportd** to queue requests, preventing some exports from completing in a timely fashion.

When this happens, on the client the status shows as error creating, but the LUN exists and is exported on the Memory Gateway (MG) side. These volumes can be cleaned up by manually un-exporting the LUN on the MG side, and then issuing the “`cinder force-delete <name>`” command on the client side.

Workaround: Export smaller numbers of LUNs at a time or insert a short pause between export requests.

Installation

Follow the instructions in this section to download and install the volume driver package. Contact Violin Memory Customer Support if you need assistance.

Supported Configurations

This release supports the following configurations:

- OpenStack Havana release deployments
- 6000 Series All Flash Arrays running V6.3.0.4 or V6.3.1
- FibreChannel HBAs

Note: The Volume Driver is not supported on All Flash Arrays running G5.6.x.

Downloading the Software

1. Go to <http://www.violin-memory.com/support/>
2. Log in to Customer Support using your Violin Memory Customer Portal user name and password. (If you do not have an account, click **Register** and then complete the on-screen form.)
3. Click the **Software Downloads** tab.
4. From the OpenStack Cinder folder, download the appropriate files to a client computer (laptop).

Installing the Software

Follow the instructions below, depending on your environment.

Note: The RPM is only for use on Red Hat Enterprise Linux 6.5 systems.

RPM Installation

1. Install the RPM on all Cinder volume hosts. For example:

```
rpm -Uvh openstack-cinder-vmemdriver-x.x.x.noarch.rpm
```
2. Ensure that FibreChannel is enabled and the HBAs are configured on the All Flash Array. See the *Violin 6000 Series All Flash Array Installation Guide* for more information.
3. Configure Cinder to use one of the Violin drivers. See the *Violin 6000 Series All Flash Array Volume Driver V1.0.0 Configuration Guide For OpenStack Cinder Havana Release* for instructions.
4. Restart cinder-volume.

Tarball Installation

1. Unzip the tarball on the machine(s) running Cinder's volume service (cinder-volume). For example:

```
tar -zxvf openstack-cinder-vmemdriver-x.x.x.tar.gz
```
2. Recursively copy the Cinder directory to the same directory as your Cinder code installation.

- Devstack example:

```
cp -r cinder /opt/stack/cinder
```

- Ubuntu 12.04 example:

```
cp -r cinder /usr/local/lib/python2.7/dist-packages/cinder
```

3. Ensure that FibreChannel is enabled and the HBAs are configured on the All Flash Array. See the *Violin 6000 Series All Flash Array Installation Guide* for more information.
4. Configure Cinder to use one of the Violin drivers. See the *Violin 6000 Series All Flash Array Volume Driver V1.0.0 Configuration Guide For OpenStack Cinder Havana Release* for instructions.
5. Restart cinder-volume.

Product Documentation

PDF versions of product guides are available for download from the Violin Memory Customer Support portal. Go to <http://www.violin-memory.com/support/> to view and download the most up-to-date product documentation.

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