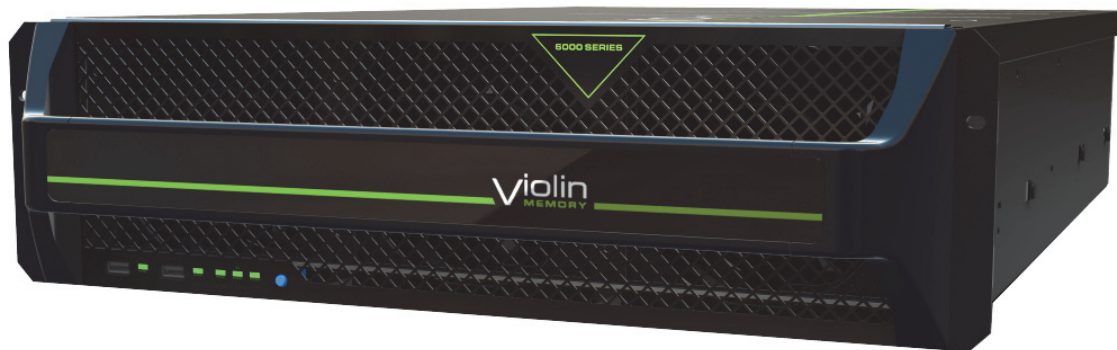




Violin 6000 Series All Flash Array Volume Driver V1.0.0 Configuration Guide For OpenStack Cinder Havana Release



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Preface

This preface outlines the organization of this book, describes document conventions, and provides information about additional resources.

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Intended Audience

This guide is intended for experienced systems administrators. Violin Memory assumes that you are experienced in installing and servicing high-performance storage systems.

Contact Violin Memory Customer Support for any assistance with installing and servicing this system. See [Contacting Violin Memory](#) on page 4 for contact information.

Reference Documents

In addition to this guide, the following Violin Memory documents comprise the documentation suite that will assist you with setting up, using and servicing the Violin 6000 Series All Flash Array. These guides are available for download from the Violin Memory Support site at <http://www.violin-memory.com/support/>

This document...	Provides this information...
Release Notes	This document describes the new features, resolved issues, known limitations and software upgrade instructions for the current release.
<i>Violin 6000 Series Memory Array Web Interface Guide</i>	This task-based guide provides instructions for managing, monitoring and configuring Violin Memory devices using the Web interface.
<i>Violin 6000 Series All Flash Array Installation Guide</i>	This guide provides instructions for installing the Violin 6000 Series All Flash Array in an equipment rack and completing the system setup and configuration.
<i>Violin 6000 Series Memory Array Slide Rail Installation Guide</i>	This guide provides instructions for installing the Violin 6000 Series All Flash Array slide rails in an equipment rack.
<i>Violin 6000 Series Memory Array Cable Management Installation Guide</i>	This guide provides instructions for installing the cable management arm on a Violin 6000 Series All Flash Array. It is included in the Violin 6000 Series All Flash Array shipping box.
<i>Violin 6000 Series All Flash Array Service Guide</i>	This guide describes how to safely replace the system components in a Flash Array.
<i>Violin Memory Command Line Reference Guide</i>	This guide is a reference for the Violin Memory Command Line Reference commands used to configure, manage and monitor Violin devices.
<i>Violin Memory SNMP Configuration Guide</i>	This guide explains how to configure SNMP on Violin devices using the CLI and describes the SNMP traps that can be generated.

Reference Documents

Document Conventions

Violin Memory documentation follows the conventions outlined in this section.

Important Information

The following table summarizes the notations used to call out important information, such as warning, caution, and note using example text.

Important Notations

Notation and Sample Text
WARNING! Only authorized, qualified, and trained personnel should attempt to work on this equipment.
Caution: Follow the listed safety precautions when working on the Violin 6000 Series All Flash Array.
Note: Read through this entire chapter and plan your installation according to your location before installing the equipment. The following procedures and the order in which they appear are general installation guidelines only.

Typographical Conventions

The following typographic conventions are used in this guide:

Format	Meaning
Bold	User Interface text.
<i>Italic</i>	Provides emphasis and identifies variables and document titles.
Courier	Command names, examples, and output.
Courier bold	Input you must type exactly as shown.
< <i>Courier italic</i> >	Information for which you must supply a value.
[]	Optional command parameters are enclosed within square brackets.
	Separates a set of command choices from which only one may be chosen.
{ }	Required command parameters that must be specified are enclosed within curly brackets.

Typographical Conventions

Security

Violin Memory, Inc., cannot be responsible for unauthorized use of equipment and will not make allowance or credit for unauthorized use or access.

Contacting Violin Memory

To obtain additional information or technical support for Violin Memory products, contact us at:

Phone: 1-855-VIOLIN-5 (1-855-846-5465)

International: +1 650-396-1500 Extension 3

Web site: <http://www.violin-memory.com>

When contacting Violin Memory Customer Support, please have the following information available:

- Model and serial number of the system for which you are requesting support.
- Software version.
- A brief description of the problem.

Volume Driver Configuration

The Volume Driver package for OpenStack Havana 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.

Installation

The released software is available as an installable tarball and a RHEL6.5 RPM. Software and support for existing Violin Memory customers is available from the Violin Memory Support portal at <http://www.violin-memory.com/support>

See the *Violin 6000 Series All Flash Array Volume Driver V1.0.0 Release Notes for OpenStack Cinder Havana Release* for installation instructions.

Basic Configuration with FibreChannel

You will need to alter your Cinder configuration, typically in `/etc/cinder/cinder.conf`.

The following list shows all of the available options and their default values:

```
# IP address or hostname of the v6000 master VIP (string
# value)
gateway_vip=

# IP address or hostname of mg-a (string value)
gateway_mga=

# IP address or hostname of mg-b (string value)
gateway_mgb=

# User name for connecting to the Memory Gateway (string
# value)
gateway_user=admin

# User name for connecting to the Memory Gateway (string
# value)
gateway_password=

# Use igroups to manage targets and initiators (bool value)
use_igroups=False

# Use thin luns instead of thick luns (bool value)
use_thin_luns=False
```

A typical configuration file section for using the Violin volume driver might look like this:

```
volume_driver=cinder.volume.drivers.violin.violin_fc.ViolinFCDriver
gateway_vip=1.2.3.4
gateway_mga=1.2.3.5
gateway_mgb=1.2.3.6
```

Note: If you add the configuration option `'verbose=True'` and/or `'debug=True'` to `cinder.conf`, you will receive helpful logging from the Violin driver in `/var/log/cinder/cinder-volume.log`.

Additional Configuration for Multibackend

Note: Multibackend is currently only available for the FCP driver.

This setup is specifically for users who want to use multiple storage drivers on their Cinder-volume nodes. In this case each driver instance must have a different configuration section with a unique name and configuration. The driver section names must then be added to the default configuration section using the `enabled_backends` key.

For example, to add a multi-backend configuration section for the violin FCP driver, you might do the following:

```
[violin-1]
volume_backend_name=VMEM_FCP
volume_driver=cinder.volume.drivers.violin.violin_fc.ViolinFCDriver
gateway_vip=1.2.3.4
gateway_mga=1.2.3.5
gateway_mgb=1.2.3.6

[DEFAULT]
enabled_backends=violin-1
```

Further information can be found in the *OpenStack Cloud Administrator Guide* at:

http://docs.openstack.org/admin-guide-cloud/content/multi_backend.html