

# CSI Driver for Dell EMC PowerStore

Version 1.1

## Release Notes

September 2020

These release notes contain supplemental information about CSI Driver for Dell EMC PowerStore. Topics include:

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# Revision History

The following table presents the revision history of this document.

**Table 1. Revision history**

Revision	Date	Description
02	September 2020	Updated for version 1.1.
01	May 2020	First release of the product.

## Product Description

The CSI Driver for Dell EMC PowerStore is a plug-in that is installed into Kubernetes to provide persistent storage provisioning for Dell EMC PowerStore storage arrays.

The CSI Driver for Dell EMC PowerStore and Kubernetes communicate using the Container Storage Interface protocol. The CSI Driver for Dell EMC PowerStore conforms to CSI specification v1.1.

This release of the CSI Driver for Dell EMC PowerStore supports Kubernetes versions 1.17, 1.18, and 1.19, and OpenShift versions 4.3 and 4.4.

## New Features

The CSI Driver for Dell EMC PowerStore now supports the following features:

- OpenShift 4.3 and 4.4 with Red Hat Enterprise Linux CoreOS and Red Hat Enterprise Linux 7.8
- NFS volumes
- Dell EMC Storage CSI Operator deployment
- ONLINE and OFFLINE volume expansion
- Raw Block Volumes
- Persistent volume (PV) capabilities:
  - Create from Snapshot
  - Create from Volume
  - Resize
- Access Modes:
  - For block volumes mounted with a filesystem:
    - SINGLE\_NODE\_WRITER
    - SINGLE\_NODE\_READER\_ONLY
  - For raw block volumes and NFS volumes:
    - SINGLE\_NODE\_WRITER
    - MULTI\_NODE\_MULTI\_WRITER

## Changed Features

This section contains CSI Driver for Dell EMC PowerStore features that changed for version 1.1:

- Supports Kubernetes version 1.17, 1.18, and 1.19
- Supports CentOS versions 7.6, 7.7, and 7.8 as host operating system
- Supports Red Hat Enterprise Linux 7.6, 7.7, and 7.8 as host operating system

## Resolved Issues

There are no resolved issues for this release.

## Known Issues

This section describes the known issues associated with this release of the product.

### Known issues

Issue	Resolution or workaround, if known
Known Kubernetes issue observed: <a href="https://github.com/kubernetes/kubernetes/issues/84169">https://github.com/kubernetes/kubernetes/issues/84169</a> . If you are publishing volumes concurrently with more scale, you can see slowness in the attach and detach operations in Kubernetes (1.17 and 1.18) and OpenShift (4.4).	Upgrade to the latest Kubernetes and OpenShift patches, which contain the fix: 1.17.8+, 1.18.5+, and OpenShift 4.4.1.

## Limitations

This section contains the limitations for the CSI Driver for Dell EMC PowerStore.

The CSI Driver for Dell EMC PowerStore does not support:

- Topology (VOLUME\_ACCESSIBILITY\_CONSTRAINTS).
- Snapshots in OpenShift 4.3.
- Using both iSCSI and FC connectivity on the same node is not supported.

## Software Media, Organization, and Files

This section provides information about where to find the software files for this release of CSI Driver for Dell EMC PowerStore.

The software package is available for download from the [CSI Driver for Dell EMC PowerStore GitHub](#) page.

## Additional Resources

This section provides more information about the product, how to get support, and provide feedback.

### Documentation

This section lists the related documentation for CSI Driver for Dell EMC PowerStore.

The CSI Driver for Dell EMC PowerStore is available on the [CSI Driver for Dell EMC PowerStore GitHub](#) page. The documentation includes the following:

- CSI Driver for Dell EMC PowerStore Release Notes (this document)
- CSI Driver for Dell EMC PowerStore Product Guide

## Troubleshooting and Getting Help

Use the resources in this topic to get help and support.

### Product information

For documentation, release notes, software updates, and other information about Dell EMC products, go to [Dell EMC Online Support](#).


### Technical support

The CSI Driver for Dell EMC PowerStore image, which is the built driver code, is available on Dockerhub and is officially supported by Dell EMC.

The source code for CSI Driver for Dell EMC PowerStore available on Github is unsupported and provided solely under the terms of the license attached to the source code. For clarity, Dell EMC does not provide support for any source code modifications.

For any CSI driver issues, questions, or feedback, join [Dell EMC Container community](#).

## Notes, cautions, and warnings

 **NOTE:** A NOTE indicates important information that helps you make better use of your product.

 **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

 **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.