Release Notes

CSI driver for Dell EMC Isilon

Version 1.2

June 2020

These release notes contain supplemental information about this version of CSI driver for Dell EMC Isilon and include the following topics:

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Revision History

The table in this section lists the revision history of this document.

Table 1. Revision History

Revision	Date	Description
01	December 2019	First release of the product.
02	April 2020	Second release of the product.
03	June 2020	Third release of the product.

Product Description

The CSI driver for Dell EMC Isilon is a plug-in that is installed into Kubernetes to provide persistent storage using Dell EMC storage system.

The CSI driver for Dell EMC Isilon and Kubernetes communicate using the Container Storage Interface protocol. The CSI driver for Dell EMC Isilon conforms to CSI specification v1.2. It is verified with Kubernetes versions 1.14.10 and 1.16 with the Red Hat Enterprise Linux 7.6 and 7.7 host operating system. The CSI driver for Dell EMC Isilon is also supported on OpenShift 4.2 and 4.3 with master nodes running Red Hat Enterprise Linux CoreOS and worker nodes running Red Hat Enterprise Linux 7.6 and 7.7.

The CSI driver for Dell EMC Isilon has two components:

- Controller plug-in
- Node plug-in

Controller Plug-in

The Controller plug-in is deployed in a StatefulSet in the cluster with maximum number of replicas set to 1. There is one pod for the Controller plug-in that gets scheduled on any node which is not necessarily the master.

This pod contains the CSI driver for Dell EMC Isilon container and a few sidecar containers like the *provisioner* and *attacher*, that the community provides.

The Controller plug-in primarily deals with provisioning activities like creating volumes, deleting volumes, attaching the volume to a node, and detaching the volume from a node.

Node Plug-in

The Node plug-in is deployed in a DaemonSet in the kubernetes cluster. The Node plug-in deploys the pod containing the driver container on all nodes in the cluster (where the scheduler can schedule the pod).

The Node plug-in communicates with the Kubelet to perform tasks like identifying, publishing, and unpublishing a volume to the node where the plug-in is running.

Features of the CSI driver for Dell EMC Isilon

The CSI driver for Dell EMC Isilon has the following features:

- Persistent Volume (PV) capabilities:
  - Create
  - List
  - Delete
  - Mount
  - Unmount
- Supports mounting volumes as NFS export
- Supports snapshot capabilities:
  - (i) **NOTE: Snapshot capabilities are not supported on OpenShift.**

  - Create snapshot

- o Create volume from snapshot
- o Delete
- Supports static and dynamic provisioning of volumes and volume expansion
- Supports the following access modes:

  - o SINGLE_NODE_WRITER
  - o MULTI_NODE_READER_ONLY
  - o MULTI_NODE_MULTI_WRITER
- Conforms to CSI 1.1 specification
- Supports Kubernetes 1.14 and 1.16
- Supports OpenShift 4.2 and 4.3
- Supports Isilon OneFS 8.1, 8.2, and 9.0
- Supports Red Had Enterprise Linux 7.6 and 7.7 as host operating system
- Supports HELM charts (Helm2, Helm3) installer
- Supports installation in OpenShift envrionments by using Dell CSI Operator

(i) **NOTE: Volume Snapshots is an Alpha feature in Kubernetes. It is recommended for use only in short-lived testing clusters. This recommendation is because features in the Alpha stage have an increased risk of issues and a lack of long-term support. See Kubernetes documentation for more information about feature stages.**

Resolved Issues

The table contains the issues that were resolved in this release.

Table 2. Resolved Issues

Problem summary	Found in version	Resolved in version
No issues were resolved in this release of CSI driver for Dell EMC Isilon.		

Known Problems and Limitations

The table in this section lists the known problems and limitations for this release.

Table 3.

Issue	Resolution or workaround, if known
Root clients are not getting added to the nfs export if pods are scheduled simultaneously on different worker nodes and share the same PVC.	Add a time delay between scheduling of pods, to ensure that pods are not scheduled simultaneously on different worker nodes.
Creating snapshot fails if the parameter `IsiPath` in `volume snapshot class` and related `storage class` are not the same. The driver uses the incorrect `IsiPath` parameter and tries to locate the source volume due to the inconsistency.	Ensure `IsiPath` in *VolumeSnapshotClass* yaml and related storageClass yaml are the same.
While deleting a volume, if there are files or folders created on the volume that are owned by different users. If the Isilon credentials used are for a nonprivileged Isilon user, the **delete volume** action fails. It is due to the limitation in Linux permission control.	To perform the **delete volume** action, the user account must be assigned a role that has the privilege `ISI_PRIV_IFS_RESTORE`. The user account must have the following set of privileges to ensure that all the CSI Isilon driver capabilities work properly: • ISI_PRIV_LOGIN_PAPI • ISI_PRIV_NFS • ISI_PRIV_QUOTA • ISI_PRIV_SNAPSHOT • ISI_PRIV_IFS_RESTORE • ISI_PRIV_NS_IFS_ACCESS In some cases, ISI_PRIV_BACKUP is also required, for example, when files owned by other users have mode bits set to 700.

Table 3. (continued)

Issue	Resolution or workaround, if known
When creating volume from a snapshot, the owner of the new files or folders that are copied from the source snapshot is the Isilon user who is specified in `secret.yaml`. So the original owner of a file or folder might not be the owner of the newly created file or folder.	If the original owner wants to retain the ownership, user must manually rectify it, for example, use the `chown` command after the new volume is created. Also, the parameter `rootClientEnabled` should be set to True in `storageclass yaml` at this time.

Software Download

Learn where to find the software files for this release of CSI driver for Dell EMC Isilon.

The CSI driver for Dell EMC Isilon is available from Support Site. Click the CSI driver for Dell EMC Isilon 1.2 download link.

Additional resources

This section provides information about CSI driver for Dell EMC Isilon, get support, and provide feedback.

Documentation

This section lists the related documentation for CSI driver for Dell EMC Isilon.

The CSI driver for Dell EMC Isilon is available on CSI Isilon GitHub page. The documentation includes the following:

- CSI driver for Dell EMC Isilon Release Notes (this document)
- CSI driver for Dell EMC Isilon Product Guide

Troubleshooting and getting help

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

The Dell Container Community

For any CSI driver setup, configuration issues, questions or feedback, join the Dell EMC Container community at https://www.dell.com/community/Containers/bd-p/Containers.

Product information

For documentation, release notes, software updates, and other information about Dell EMC products, go to Dell EMC Support Site.

Technical support

The CSI driver for Dell EMC Isilon image available on Dockerhub is officially supported by Dell EMC.

The source code 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 Dell EMC storage issues, contact Dell EMC Support.

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.