Provision NVMe storage

ONTAP 9

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The topics in this section show you how to configure and manage NVMe with ONTAP System Manager in ONTAP 9.7 and later releases.

If you are using the ONTAP CLI to configure and manage NVMe, see this content:

- SAN Administration Guide
- SAN Configuration Guide

If you are using legacy OnCommand System Manager for ONTAP 9.7 and earlier releases to configure and manage NVMe, see the content for your ONTAP release:

- Cluster management using System Manager 9.6 and 9.7
- Cluster management using System Manager 9.5
- Cluster management using System Manager 9.3 and 9.4
- Cluster management using System Manager 9.2 and earlier

NVMe overview

You can use the non-volatile memory express (NVMe) protocol to provide storage in a SAN environment. The NVMe protocol is optimized for performance with solid state storage.

For NVMe, storage targets are called namespaces. An NVMe namespace is a quantity of non-volatile storage that can be formatted into logical blocks and presented to a host as a standard block device. You create namespaces and subsystems, and then map the namespaces to the subsystems, similar to the way LUNs are provisioned and mapped to igroups for FC and iSCSI.

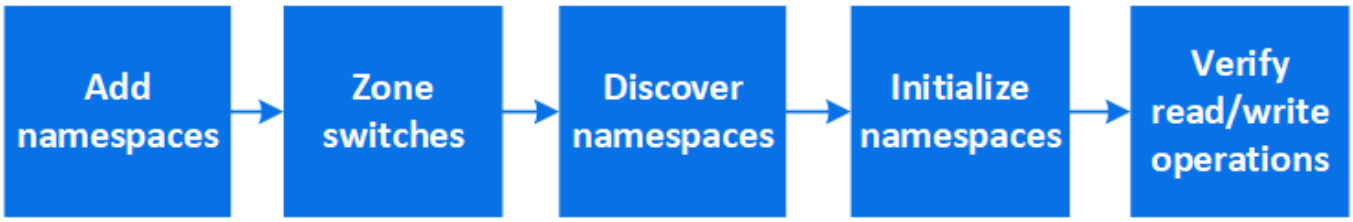
NVMe targets are connected to the network through a standard FC infrastructure using FC switches and host-side adapters.

Learn more about NVMe.

Provision NVMe storage for SUSE Linux

Create namespaces to provide storage for a SUSE Linux server using the NVMe protocol. Namespaces appear to Linux as SCSI disk devices.

This procedure creates new namespaces on an existing storage VM. Your storage VM must be configured for NVME, and your FC transport should already be set up.



Beginning in ONTAP 9.8, when you provision storage, QoS is enabled by default. You can disable QoS or choose a custom QoS policy during the provisioning process or at a later time.

Steps

1. In ONTAP System Manager, click **Storage > NVMe Namespaces** and then click **Add**.

   If you need to create a new subsystem, click **More Options**.

   a. If you are running ONTAP 9.8 or later and you want to disable QoS or choose a custom QoS policy, click **More Options** and then, under **Storage and Optimization** select **Performance Service Level**.

1. Zone your FC switches by WWPN. Use one zone per initiator and include all target ports in each zone.
2. On your Linux server, discover the new namespaces.
3. Initialize the namespace and optionally format it with a file system.
4. Verify the Linux server can write and read data on the namespace.

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