



# Preparing your storage system

## Snapdrive for Unix

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# Table of Contents

- Preparing your storage system ..... 1
  - Verification of storage system readiness and licenses ..... 1
  - Storage system partner IP address or interface name confirmation ..... 1
  - Guidelines for NFS configurations ..... 2
  - Storage system volume preparation ..... 3
  - Volume optimization in an FC or iSCSI environment ..... 3
  - Resetting the snap reserve option ..... 3

# Preparing your storage system

Before you install SnapDrive for UNIX, you must prepare your storage system by ensuring that your storage system meets some requirements.

You must prepare your storage system by checking for the following conditions:

- Storage system readiness
- System requirements
- Storage system partner IP address
- SnapDrive for UNIX configurations in an NFS environment
- Volume preparation for UNIX LUNs and NFS entities
- The `snap reserve` option is set to 0
- In Data ONTAP operating in 7-Mode, the `vfiler.vol_clone_zapi_allow` configuration variable is set to `on`, to connect to a Snapshot copy for a volume or LUN in a vFiler unit.

## Verification of storage system readiness and licenses

Before you install SnapDrive for UNIX, you must verify the storage system readiness and check for licenses of certain software.

You must ensure that the following conditions are met:

- The storage systems are online.
- The storage systems meet the minimum system requirements for SnapDrive for UNIX.
- The HBAs or network interface cards (NICs) in your storage systems meet the requirements for your host operating system.

For more information about HBA cards, see the Interoperability Matrix.

- The hosts and the storage systems can communicate by using an Internet Protocol (IP).
- The licenses for the following are valid:
  - SnapRestore
  - MultiStore software
  - Secure HTTP access to the storage system

### Related information

[NetApp Interoperability](#)

## Storage system partner IP address or interface name confirmation

When you run the setup program on your storage system, it prompts you to provide an IP address or interface name for a partner storage system to use in case of a failover. If you

do not provide this, SnapDrive for UNIX cannot search for the storage entities on a storage system that it took over.

A partner IP address or the interface name is the IP address or the interface name of the partner storage system in an HA pair setup. If the primary storage system fails, the partner storage system takes over the functioning of the primary storage system.

## Example: storage system setup script

The following sample output of the storage system setup script requests the IP address:

```
storage_system_A> setup...
Should interface e0 take over a partner IP address during failover?
[n]: y
Please enter the IP address or interface name to be taken over by e0
[]: 10.2.21.35
storage_system_A> reboot -t 0
```

This example uses the IP address 10.2.21.35.

## Guidelines for NFS configurations

Before you install SnapDrive for UNIX, you should consider the location where the Network File System (NFS) service runs and the location to which the storage system directories are exported. You should check the NFS client permissions and the interface read-write permissions.

When you use SnapDrive for UNIX to restore or connect to NFS-mounted directories, you must ensure that the storage system directories are exported correctly to the host. If your host has multiple IP interfaces that can access the storage system, you must ensure that the directory is exported correctly to each one of them.

SnapDrive for UNIX issues warnings unless all such interfaces have read-write permissions, or, in the case of `snapdrive snap connect` with the `-readonly` option, or at least read-only permission. The `snapdrive snap restore` and `snapdrive snap connect` commands fail if none of these interfaces have permission to access the directory.

When you perform Single File SnapRestore (SFSR) as a root user, you must ensure that the storage system directories are exported with read-write permissions on the host and the following export rules must be set:

- `rw=<hostname>, root=<hostname>` in Data ONTAP operating in 7-Mode
- `rwrule = sys, rorule=sys, superuser= sys` in clustered Data ONTAP

### Related information

[ONTAP 9 NFS Reference](#)

[Data ONTAP 8.2 File Access and Protocols Management Guide for 7-Mode](#)

# Storage system volume preparation

You can either use the command prompt on the storage system or the FilerView option to create a storage system volume for the dedicated use of SnapDrive for UNIX.

You must complete the following tasks on the storage system to create a volume that can hold the SnapDrive for UNIX Logical Unit Numbers (LUN) or Network File System (NFS) entities attached to a single host:

- Create a storage system volume.
- If you are in an Fibre Channel or Internet Small Computer System Interface (iSCSI) environment, reset the `snapdrive snap reserve` option to zero percent on the storage system volume that holds all the LUNs attached to the host, for volume optimization.

When you create a volume on a storage system to hold LUNs or the NFS directory trees, you should be aware of the following:

- You can create multiple LUNs or NFS directory trees on a storage system volume.
- You should not store user data in the root volume on the storage system or vFiler unit.

## Related information

[ONTAP 9 NFS Reference](#)

[Data ONTAP 8.2 File Access and Protocols Management Guide for 7-Mode](#)

# Volume optimization in an FC or iSCSI environment

You can optimize your volume usage in a FC and Internet Small Computer System Interface (iSCSI) environment by having host-specific Logical Units Numbers (LUNs) on the same volume.

In addition to this, you can also optimize your volumes by performing a few other tasks:

- When multiple hosts share the same storage system, each host should have its own dedicated storage system volume to hold all the LUNs connected to that host.
- When multiple LUNs exist on a storage system volume, it is best for the dedicated volume, on which the LUNs reside to contain only the LUNs for a single host. It must not contain any other files or directories.

# Resetting the snap reserve option

When you use Data ONTAP in a Fibre Channel (FC) or Internet Small Computer System Interface (iSCSI) environment, you should reset the `snap reserve` option to zero percent on all storage system volumes that contains SnapDrive for UNIX LUNs.

By default, the `snap reserve` option for Data ONTAP 7.1.x is 20 percent.

## Resetting the snap reserve option on the storage system

When you use Data ONTAP in a Fibre Channel or Internet Small Computer System

Interface (iSCSI) environment, you should reset the `snap reserve` option to zero percent on the storage system, for volume optimization.

### Steps

1. Access the storage system either by running the `telnet` command from the host or from the storage system console.
2. Enter the following command:

```
snap reserve vol_name 0
```

`vol_name` is the name of the volume on which you want to set the `snap reserve` option.

## Resetting the snap reserve option by using FilerView

When you use Data ONTAP in an FC or iSCSI environment, you should reset the snap reserve option to 0 percent by using FilerView.

### Steps

1. Open a FilerView session to the storage system holding the volume whose `snap reserve` setting is to be changed.
2. From the main FilerView, navigate to **Volumes > Snapshot > Configure**.
3. In the **Volume** field, select the volume whose `snap reserve` setting is to be changed.
4. In the **Snapshot Reserve** field, enter 0.
5. Click **Apply**.

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