Configuring a SnapServer NFS Share as a VMware ESXi Datastore

September 2018

Summary

This application note describes how to use an NFS share on a SnapServer running GuardianOS 8.0.073 or later as an ESXi datastore on a VMware Hypervisor host running ESXi 5.0 or later.

Required Information, Tools, and Files

Before you begin these procedures, the following information, tools, and files are required.

Prerequisites

Prior to performing these procedures:

- Be sure you are running SnapServer GOS 8.0.073 or greater.
- If needed, access additional information on SnapServer found at the following links:
  https://www.overlandstorage.com/products/snapserver/index.aspx
  http://docs.overlandstorage.com/snapserver

This document assumes the reader is familiar with VMware vSphere Client, vSphere Web Client, or vCenter Server as required in the VMware environment. Additional information can be obtained through VMware's online knowledge base.

Best Practices

- While both Traditional and Dynamic RAID volumes and shares can be used as VMware NFS datastores, Traditional RAID provides better response to the high input/output operations per second (IOPS) load exercised by VMware hosts.
- Solid State Drives (SSD) are recommended for the SnapServer storage to provide lower latency and higher IOPS than traditional hard disk drives.
- A 10gig Ethernet connection between the VMware host and SnapServer is recommended for higher throughput to NFS datastores.
- NFSv3 is recommended over NFSv4 for better response and throughput.
- If multiple Ethernet interfaces are used on the SnapServer to support access to the NFS datastore by the VMware host, they should be bonded together in load balancing or failover mode when connected to the same subnet.
- The NFS.MaxQueueDepth setting on the VMware host should be changed from the default 4294967295 to **64** to prevent overrunning the SnapServer with simultaneous I/O requests. This can be configured in vSphere Client under **Configuration > Software > Advanced Settings > NFS**, and requires reboot of the VMware host.

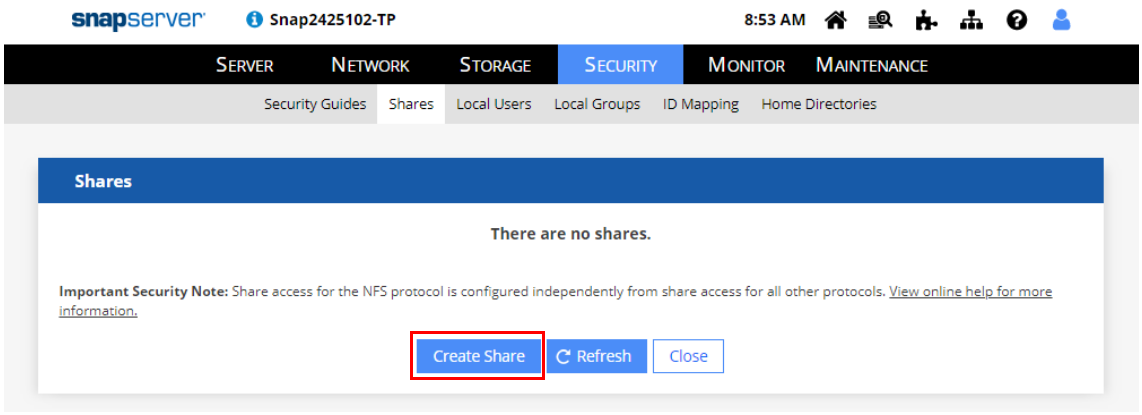
Preparing a SnapServer Share For Use as a VMware NFS Datastore

This procedure creates a new share dedicated as a VMware NFS datastore. This is recommended to avoid contention with any other file-sharing activity on the same SnapServer appliance. However, any SnapServer share can be used as a datastore with the appropriate NFS access configuration.

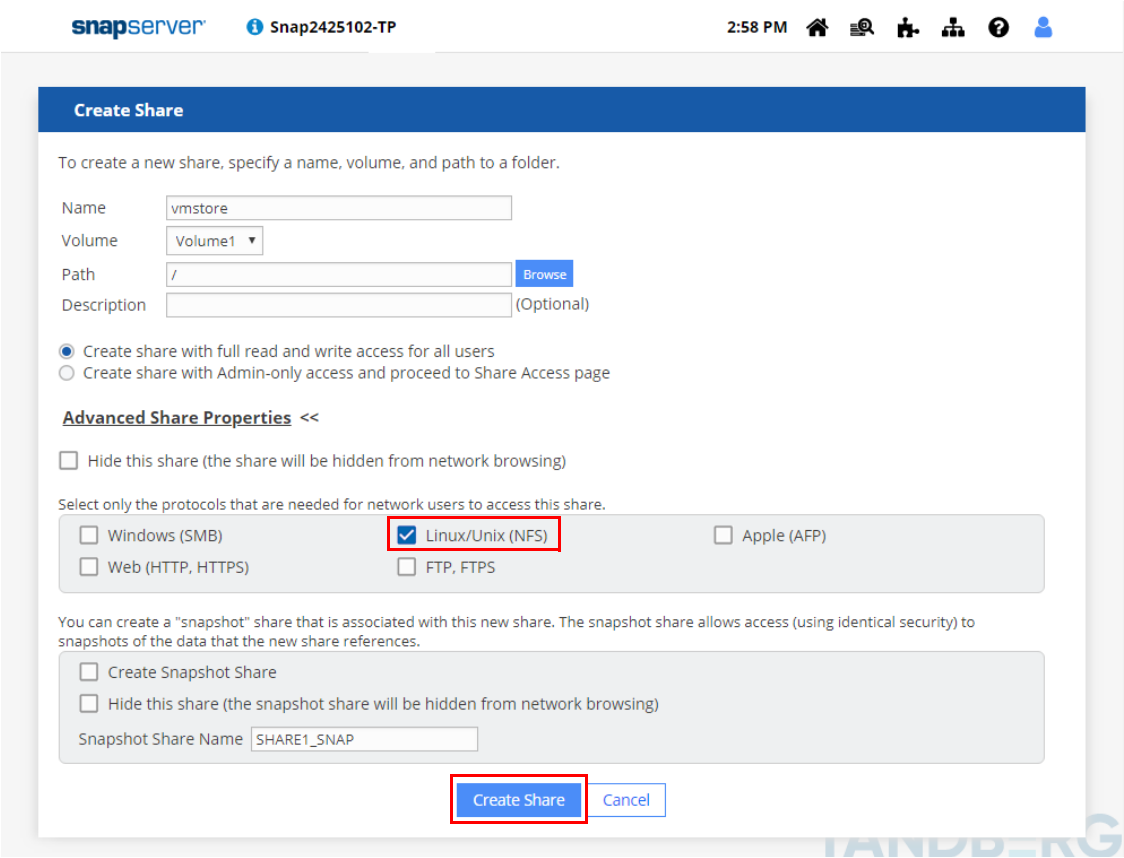
Perform the following steps to create a share on the SnapServer:

1. Use the SnapServer Web Management Interface to log into the **server**.

2. Browse to **Security > Shares** and click **Create Share**.

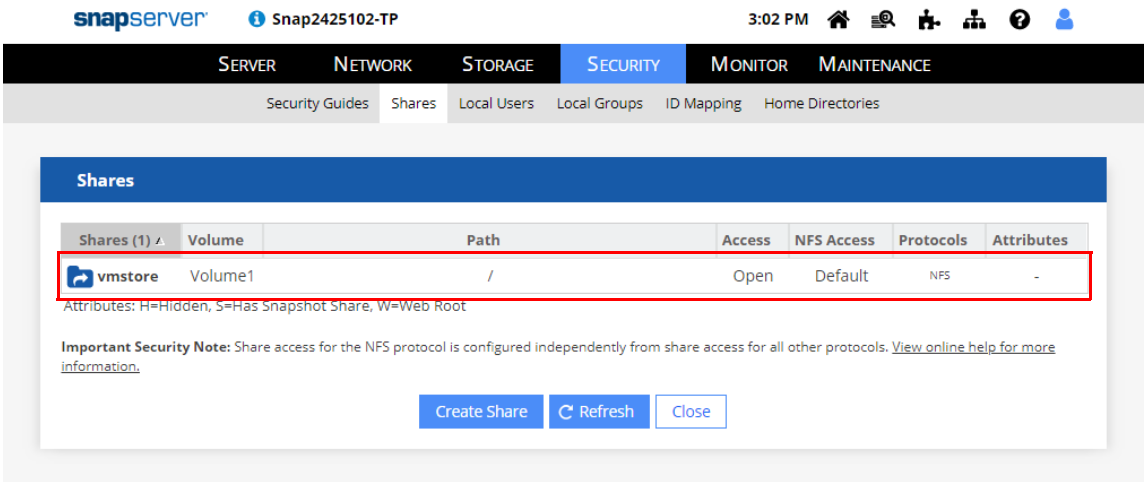


3. Provide the following **details**:
   - Share **Name** (for example, **`vmstore`**) or accept the default.
   - **Volume** for the datastore to use.
   - **Path** on the volume to use for the datastore.
   - Optionally, add a share **Description**.
   - Click **Advanced Share Properties** and uncheck all protocols except **NFS**.

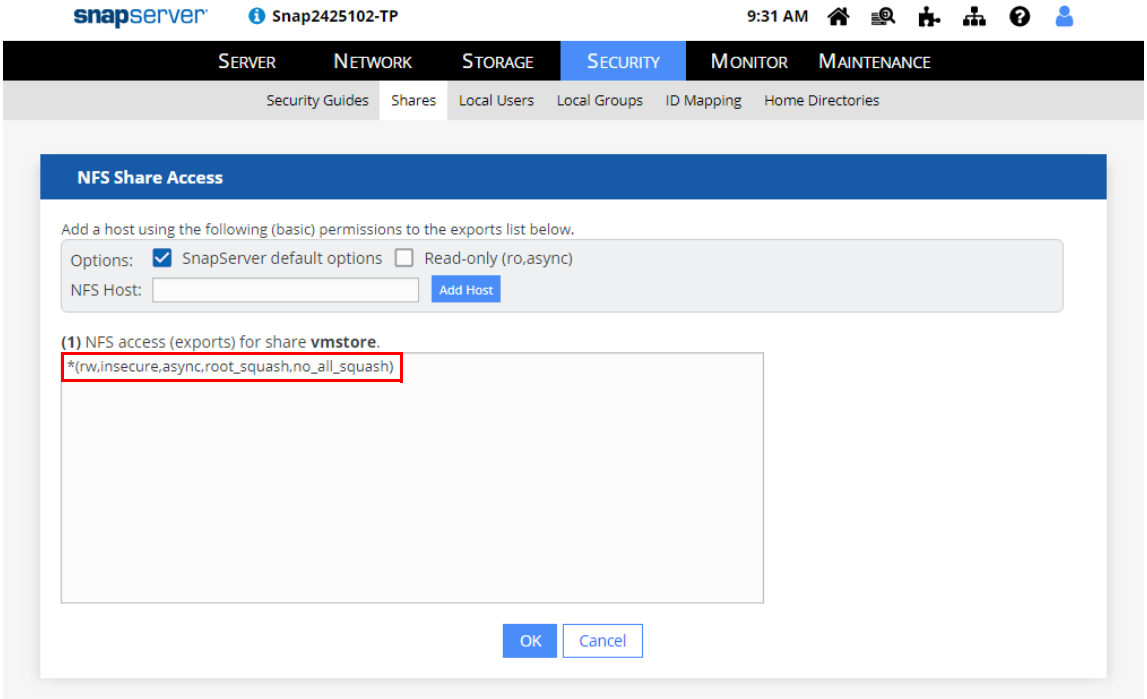


4. Click **Create Share**.

5. Verify that the **share** was created properly.



6. Under the **NFS Access** column on the **Shares** page, click the **Default** link to configure NFS Access for the share.



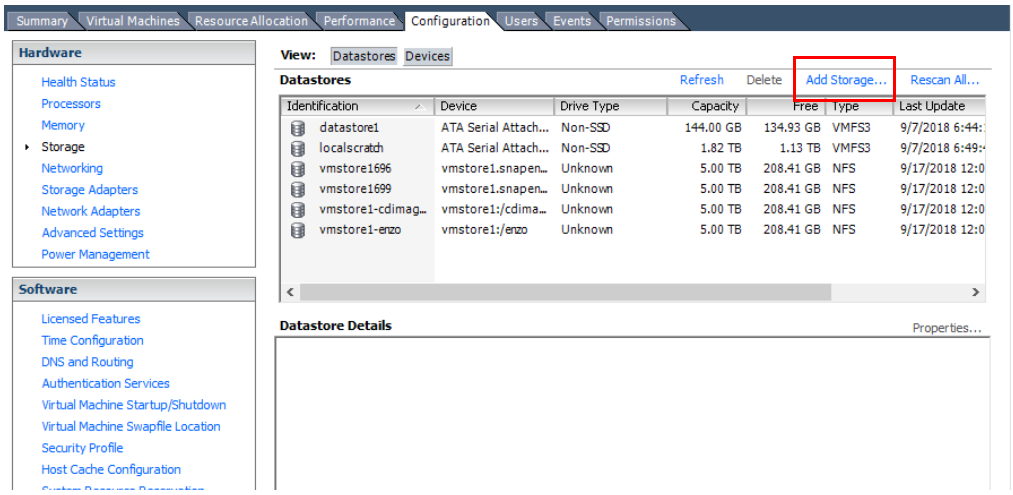
7. On the **NFS Share Access** page, modify the default **NFS export line**:
   - Change the **asterisk** at the beginning to the IP address of the VMware host.
   - Change the "**root_squash**" part to "no_root_squash."

   For example, "**`192.168.0.1(rw,insecure,async,no_root_squash,no_all_squash)`**".
8. Add any **additional export entries** in the field for other VMware hosts or NFS clients that need to access the datastore share.
9. Click **OK**.

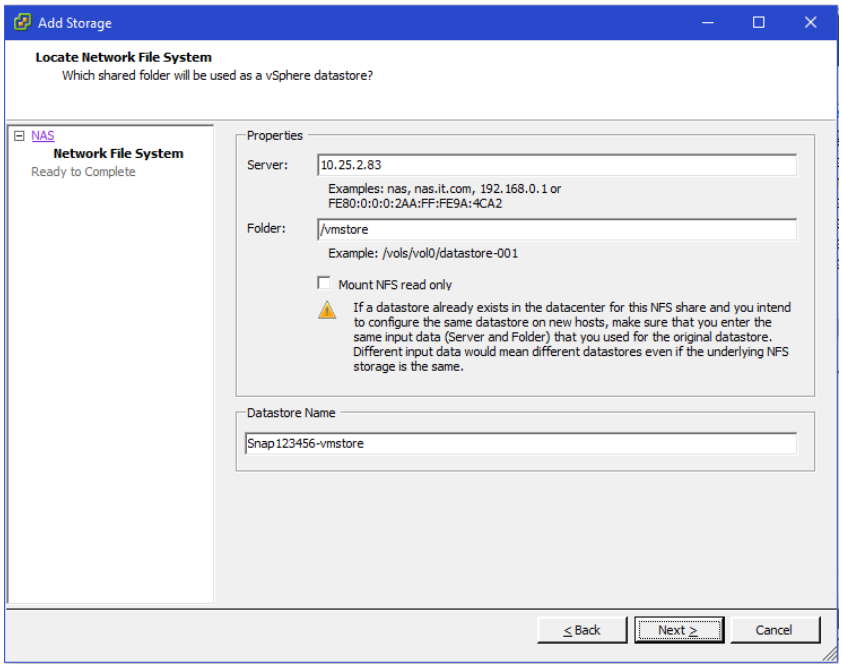
Creating a VMware Datastore on a SnapServer NFS Share

NOTE: The examples below use vSphere Client. The configuration is similar in other VMware interfaces.

1. Connect to the VMware host using **VMware vSphere Client**, **vSphere Web Client**, or **vCenter Server**.
2. On the **Configuration** tab, click **Add Storage** to launch the wizard.



3. In the first step of the wizard, select **Network File System** as the storage type, and click **Next**.
4. Enter the following for the SnapServer **datastore share**:

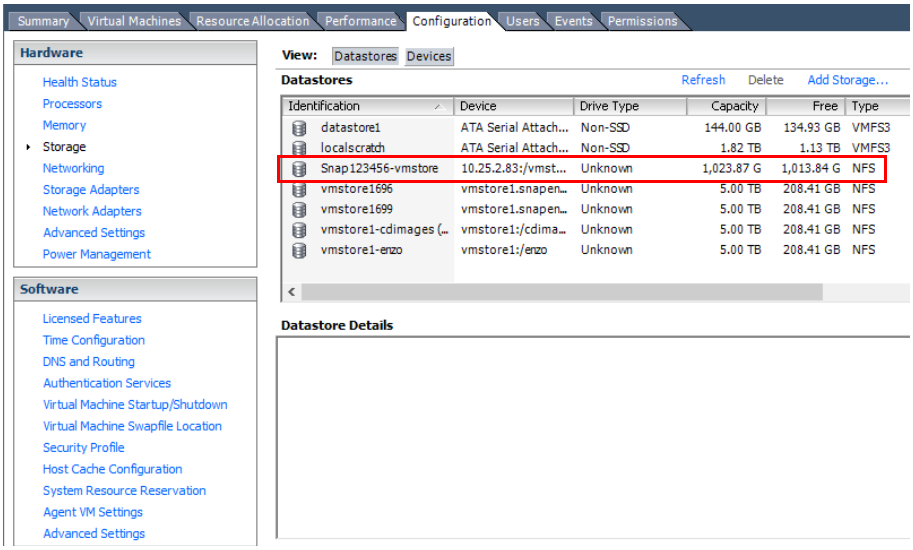


- **Server** – Enter the **server name**, **fully-qualified name** (FQDN), or **IP address** of the SnapServer.

NOTE: If using a hostname or FQDN, ensure the VMware host can resolve that name to the SnapServer's IP address. If using an IP address, ensure the IP is assigned statically or via a DHCP reservation. In both cases, ensure the VMware host connects to the desired SnapServer network interface to use for datastore storage communication.

- **Folder** – Enter the SnapServer share name preceded by a forward slash (/) and, optionally, followed by an subdirectory path (for example, **`/vmstore`**).
- **Mount NFS Read Only** – Ensure the option is not checked.
- **Datastore Name** – Enter a name to uniquely identify the datastore on the VMware host (for example, "**`snap123456-vmstore`**".

5. Click **Next** to continue wizard.
6. Confirm the **information** that is shown and click **Finish**.
7. Verify the **SnapServer NFS datastore** appears in the **Datastores** list.



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