COHESITY

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Use Cohesity for Your NetBackup AdvancedDisk Storage

Leverage Cohesity's Web-scale Architecture for NetBackup AdvancedDisk

ABSTRACT

Cohesity's web-scale architecture provides the ideal platform to use as a storage library for your NetBackup backups and recoveries. Learn how to implement NetBackup data protection using Cohesity and take advantage of Cohesity as a globally deduplicated and compressed, encrypted, web-scale storage target to maximize your storage efficiency and reduce TCO.

Table of Contents

Figures

Tables

Introduction to Using Cohesity with NetBackup

Cohesity™ consolidates secondary data and applications, including backups, files, objects, test/dev, and analytics, on a single software-defined platform.

Inspired by web-scale architecture, Cohesity is a scale-out solution based on a unique distributed file system, SpanFS™. Cohesity modernizes and simplifies secondary data and application management by providing one platform for multiple secondary workloads.

Although most organizations begin their journeys to overcoming mass data fragmentation by simplifying data protection, Cohesity's flexible architecture allows easy expansion to additional use cases, further increasing operational simplicity and improves the ROI of Cohesity.

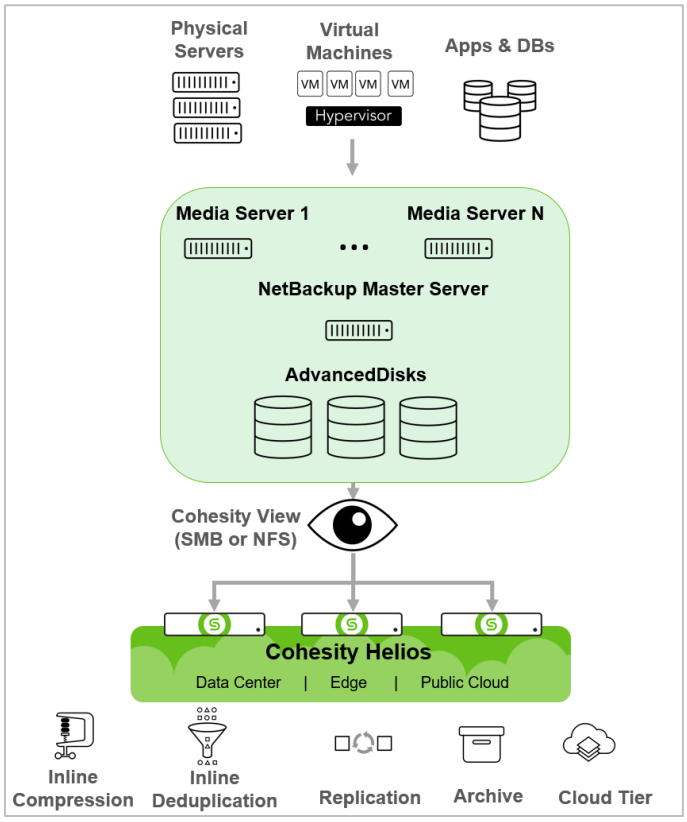
NetBackup supports a wide range of storage library types that offer various benefits. When NetBackup customers use Cohesity as the storage library for backups, they benefit from Cohesity's following features:

- **Web-scale**. Capacity grows with your business.
- **Performance**. Improved backup and restore times.
- **Storage efficiency**. Extremely high storage efficiency with global variable-length deduplication and compression.
- **Security**. Your data is always secure and encrypted both at rest and in flight.
- **Resilience**. Highly resilient and fault-tolerant architecture.

In our solution, Cohesity's SMB and NFS Views are used as an AdvancedDisk for NetBackup. Combining NetBackup with Cohesity provides a comprehensive, highly scalable, and flexible backup solution that fits any size organizations' data protection needs.

You can deploy NetBackup using either a single or a scale-out storage library where you can have multiple shares configured into AdvancedDisk. If you're backing up several different physical and virtualized workloads in parallel, you can use Cohesity as a scale-out storage library for multiple backup jobs. However, to take full advantage of Cohesity's web-scale architecture, Cohesity recommends you use scale-out AdvancedDisk storage (SoADS) for increased throughput and reduced backup & restore windows. SoADS is also an extremely effective way for organizations of all sizes to extend storage libraries when they run out of space. Instead of facing the long and cumbersome relocation of backups, users can add new storage libraries on demand to increase the space seamlessly.

Figure 1: Use Cohesity as a NetBackup Storage Library

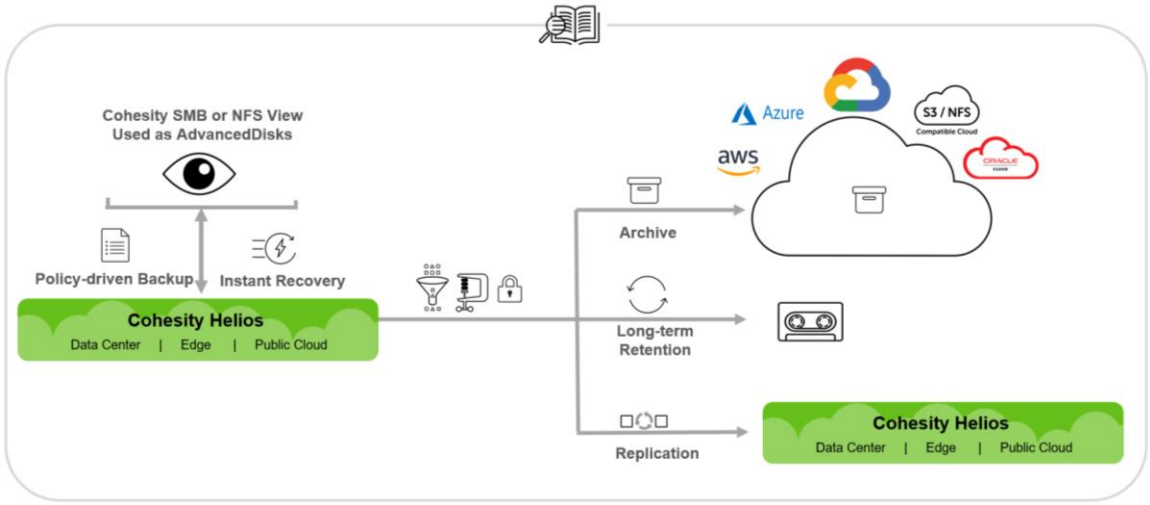


Benefits of Cohesity as a NetBackup AdvancedDisk

Once you start using Cohesity as an AdvancedDisk in NetBackup, you can immediately take advantage of Cohesity's powerful features, including:

- Inline deduplication and compression
- Single namespace
- CloudArchive and CloudReterive your data for long-term retention and disaster recovery in AWS, Azure, GCP, NAS, and S3-Compatible storages.
- CloudArchive and replicate your data for long-term retention and disaster recovery.
- Use Cloud Tier to reduce TCO.

Figure 2: Benefits of Using Cohesity as a NetBackup AdvancedDisk



These features make Cohesity an excellent choice as the AdvancedDisk storage. A scale-out approach increases parallelism among backup tasks and processes, reduces the time to run backups, and allows you configure as many SMB shares/NFS mounts as you have nodes in the Cohesity cluster.

What's more, Cohesity cluster nodes have a shared-nothing topology, and there are no single points of failure or inherent bottlenecks. As a result, both performance and capacity can scale linearly as more nodes are added to the cluster.

Table 1: Features and Benefits of Cohesity Platform

FEATURE	BENEFIT
Storage Efficiency	Maximizes storage capacity with Cohesity's advanced data-reduction technologies and app marker detection, global deduplication, and compression.
Web-scale Capacity	Offers modern web-scale distributed system with limitless scaling of performance and capacity.

FEATURE	BENEFIT
Fault Tolerance	Provides continuous availability architecture with a minimum replication factor of 2 for stored data. Any node can fail, and the system continues to function.
Simplicity	Simplifies deploying a global storage target to a few button clicks.
CloudArchive	Use CloudArchive for long-term retention and disaster recovery.
Disaster Recovery	Replicate to the cloud for cost-effective disaster recovery and business continuity.
Cloud Tier	Use automated, policy-based tiering to lower-cost storage for reduced TCO.

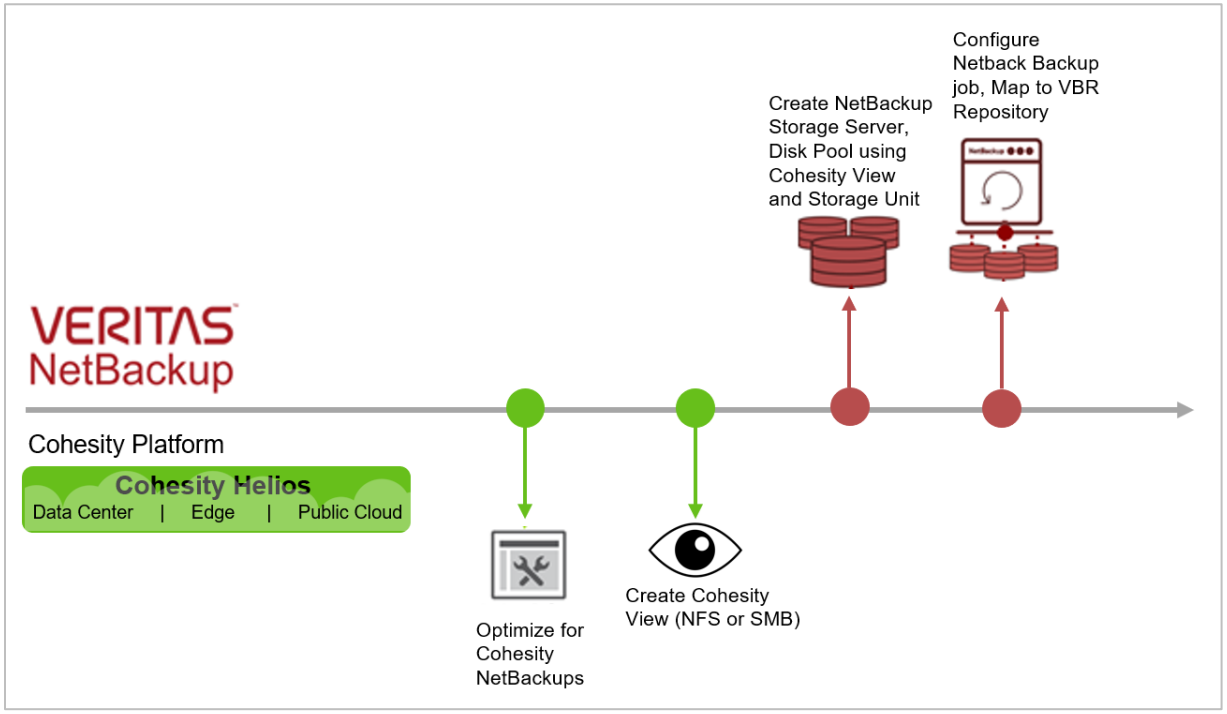
Configure Data Protection with NetBackup and Cohesity

To protect data using NetBackup, you need to configure a NetBackup backup job, associate a storage server, storage unit to store the data from the NetBackup backup job, and optimize the backup job settings storage unit level. Creating a storage library for NetBackup requires a pre-existing storage location. Cohesity provides this storage location with Cohesity View, a web-scale, globally deduplicated, and compressed storage, via SMB or NFS.

To use a Cohesity View as a storage library for NetBackup, you need to perform a few tasks:

1. Optimize Cohesity for NetBackup Storage Libraries (*for SMB*).
2. Create a Cohesity SMB View (for Windows) or NFS View (for Linux/Unix).
3. Create AdvancedDisk storage for SMB or NFS.
4. Configure your NetBackup backup jobs to use the AdvancedDisk that you created.

Figure 3: Configure Cohesity's Solution for NetBackup



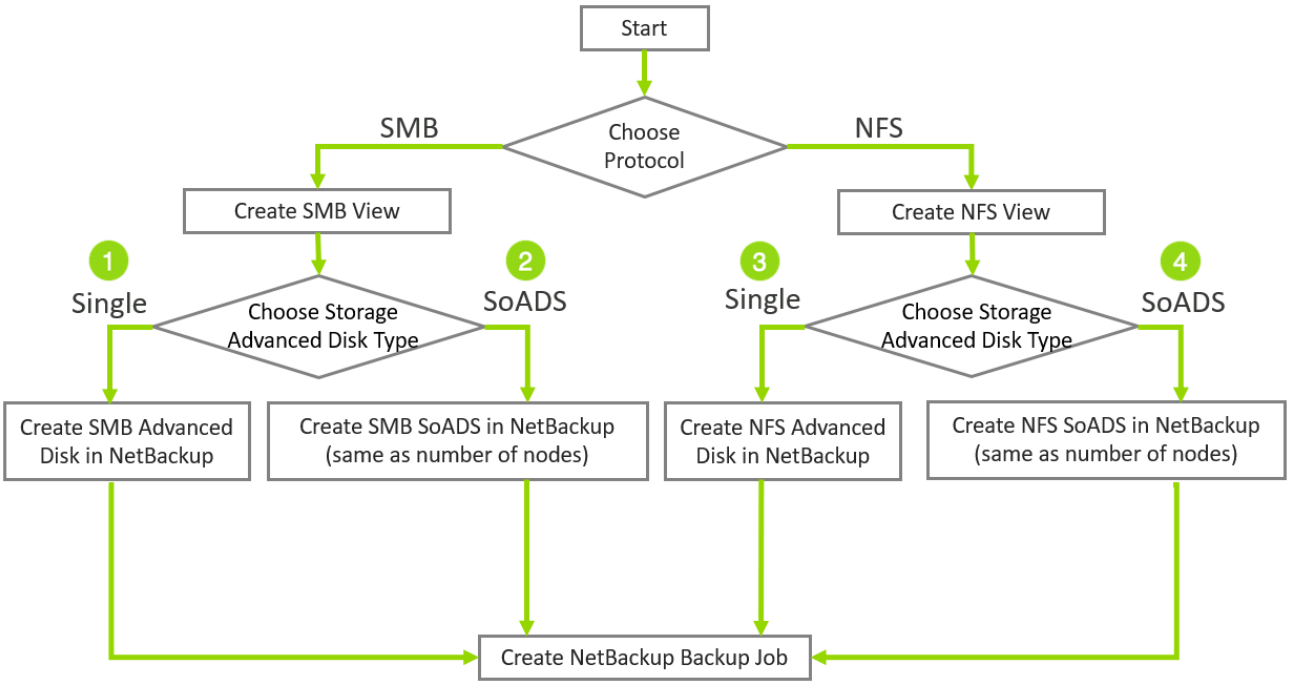
NOTE: For detailed NetBackup installation instructions, see Installing NetBackup Backup & Replication in the NetBackup documentation.

As you implement this solution, you have to make two choices:

- **Choose the protocol**. You can choose between using an SMB or NFS to connect NetBackup to Cohesity.
- **Choose the NetBackup storage library Type**. You can choose between a scale-out or single AdvancedDisk storage.

Use the decision tree in Figure 4 below to find the steps that apply to your environment.

Figure 4: Choose Protocol & NetBackup AdvancedDisk Type



1. **SMB**: If you decide to use SMB, you have to first create a Cohesity SMB View. After that, you can choose which type of NetBackup AdvancedDisk to create for SMB:
   - Create an SMB SoADS (*Recommended*).
   - Create a Single SMB AdvancedDisk Storage.
2. **NFS**: If you decide to use NFS, you have to first create a Cohesity NFS View. After that, you can choose which type of NetBackup AdvancedDisk to create for NFS:
   - Create an NFS SoADS (*Recommended*).
   - Create a Single NFS AdvancedDisk Storage.

IMPORTANT: Regardless of the protocol and operating system, Cohesity strongly recommends you use a scale-out storage library (SoADS) for NetBackup data protection. This is to ensure better write performance and throughput on Cohesity as it writes into all the nodes in parallel. See Table 2 to understand the benefits of using scale-out storage libraries.

Table 2: Benefits of SoADS Over Single AdvancedDisk Storage

NETBACKUP STORAGE LIBRARY	PROTOCOL	ACCESS METHOD	NOTES
Scale-out AdvancedDisk storage	SMB, NFS	Access via dedicated VIPs	• Scale-out increases parallelism among backup jobs, and thus reduces the backup window. • Configure as many SMB paths as the number of nodes in the Cohesity cluster. • Best suited for Cohesity storage.
Single AdvancedDisk storage	SMB, NFS	Access via FQDN	Recommended only if you want to run multiple backup jobs utilizing all the VIPs.

Create and Configure SMB Views

To use Cohesity's SMB View as AdvancedDisk storage, you have to create a Cohesity View, select appropriate QoS policy, and configure the View for SMB.

To create an SMB View to store NetBackup backed up data:

1. Use Existing / Create Storage Domain in Cohesity Storage.

   NOTE: Cohesity recommends having **Inline Deduplication** and **Inline Compression** enabled on the Cohesity Storage Domain in which you create the View. For details, see Create or Edit Storage Domains in the online Help.

2. Optimize SMB Performance.
3. Create an SMB View.
4. Create an SMB storage library on NetBackup.
5. Create a storage policy that uses the storage library you created.

   IMPORTANT: Before you create a Cohesity View to use with NetBackup, ensure that Cohesity is joined into Active Directory. For instructions on doing so, see Join Active Directory in the online Help.

Optimize SMB Performance with GFlags

Before proceeding to creating a View in Cohesity, Cohesity recommends you tune your Cohesity system settings to optimize SMB performance. To do so:

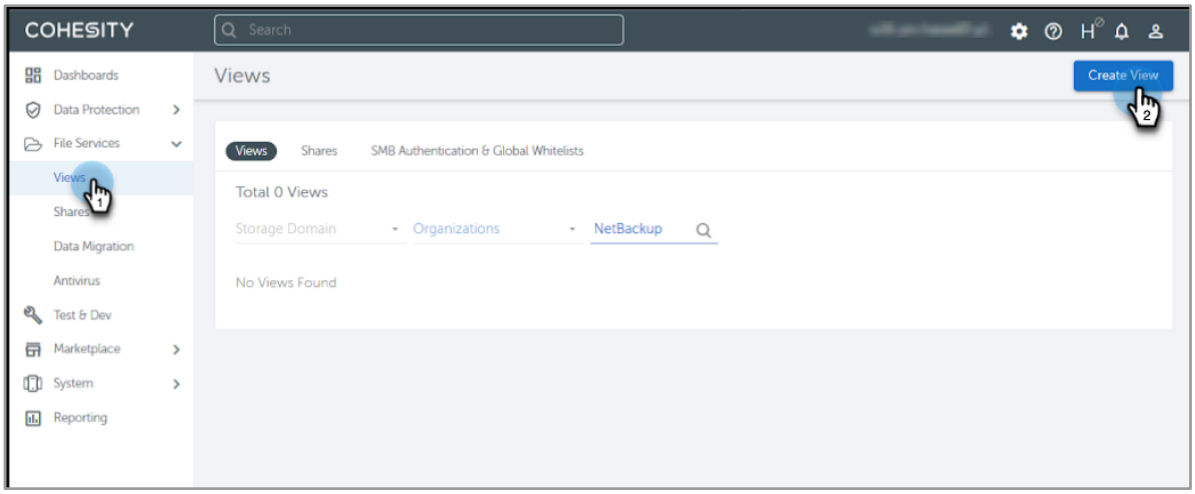
1. See Recommended settings when using Cohesity as a filer in the Cohesity Support portal for more detail.
2. Contact Cohesity Support to help you change the settings.

Create an SMB View

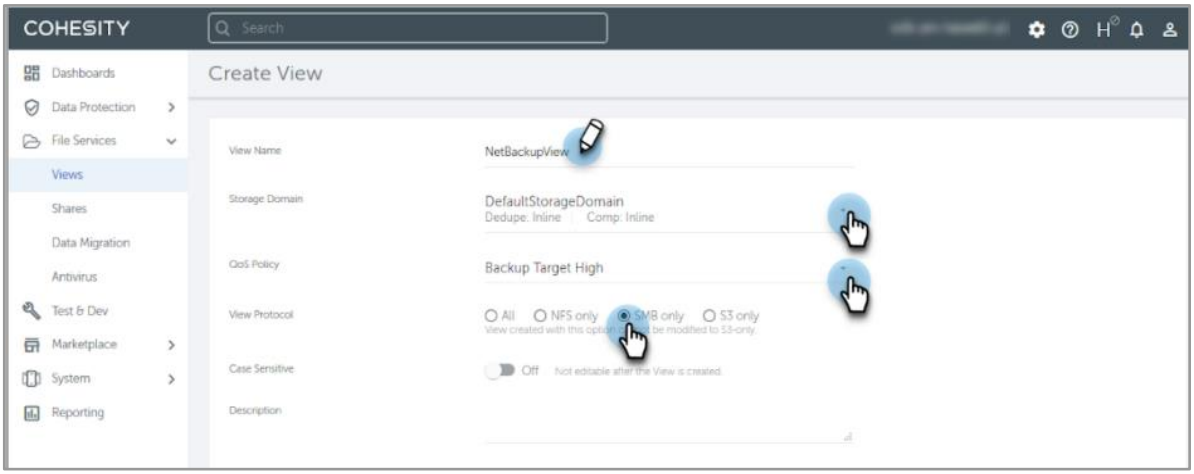
When you complete tuning Cohesity to optimize SMB performance, proceed to create a View for NetBackup storage.

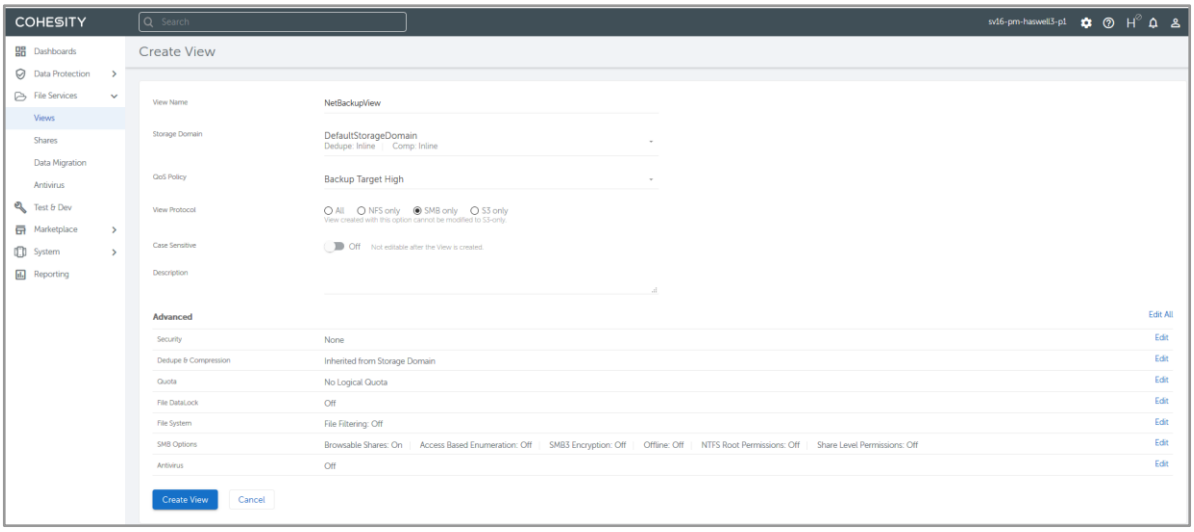
To create an SMB View for NetBackup:

1. Login into Cohesity and navigate to **File Services** > **Views.** On the **Views** page, click **Create View**.

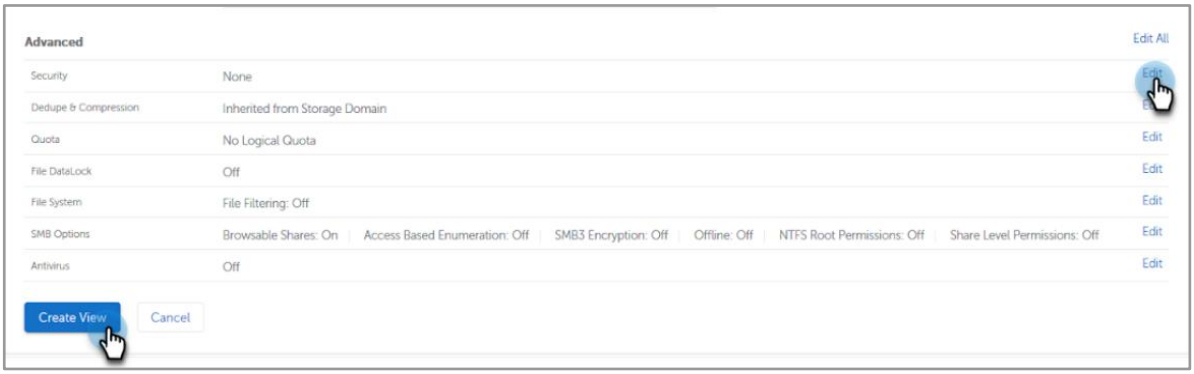


2. In the **Create View** form, enter a name for the **View**, choose a **Storage Domain** (with Inline Deduplication and Compression enabled), and for **View Protocol**, select **SMB only**. For **QoS Policy**, select **Backup Target High**.





3. Under **Advanced** settings**,** verify all default parameters. Use **Edit** to add or edit any parameter. Configure SMB authentication either via Active Directory or allowlist the particular media agent subnet range.



NOTE:

- You can also authenticate SMB via Active Directory. See Join Active Directory in the online Help.
- If you add more NetBackup Media servers in the future, ensure that they are added to the allowlist in this View.

4. When complete, click **Create View**.

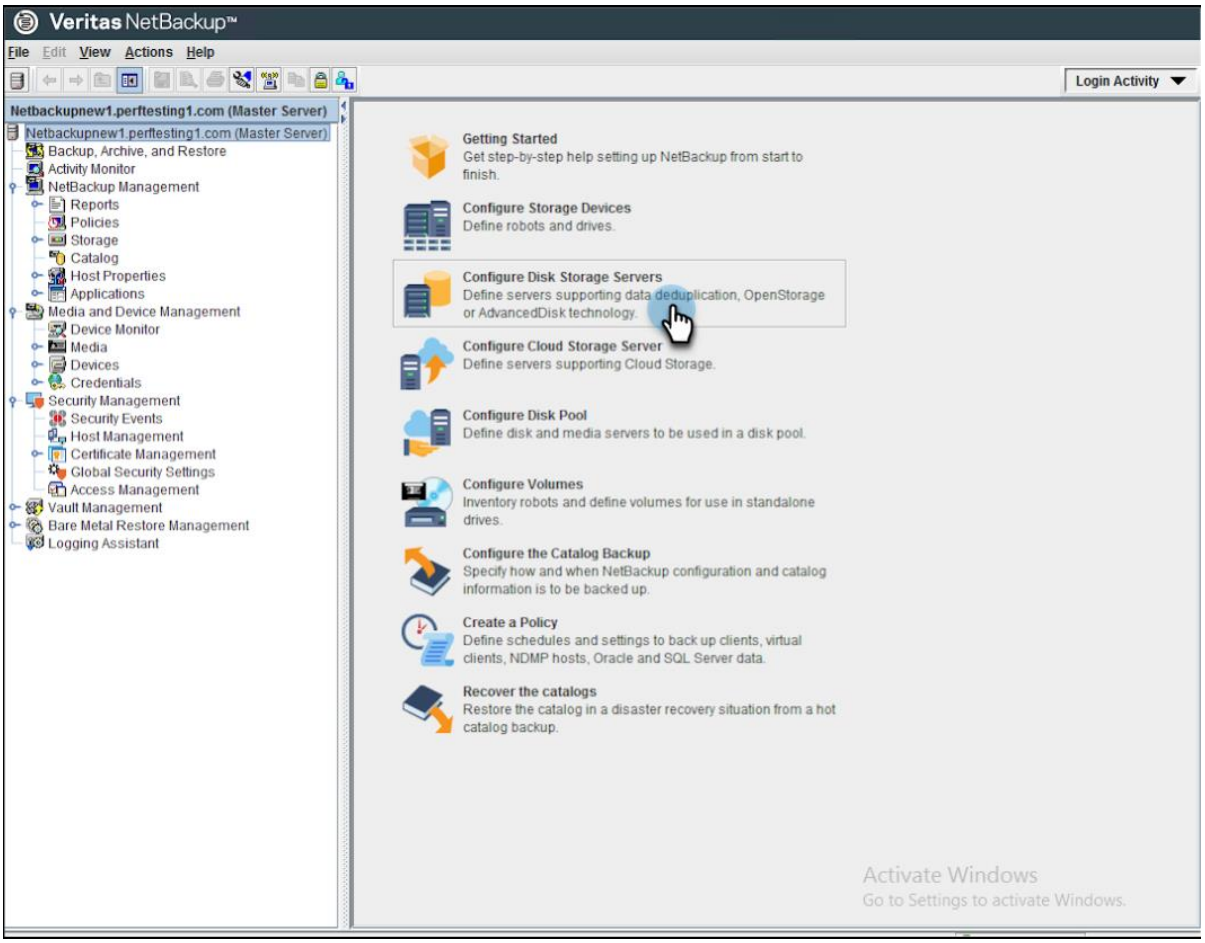
   Once you've done, you'll gain access to the newly created SMB Views. To verify, access the shares via IP address and/or FQDN.

Create an SMB Storage Library

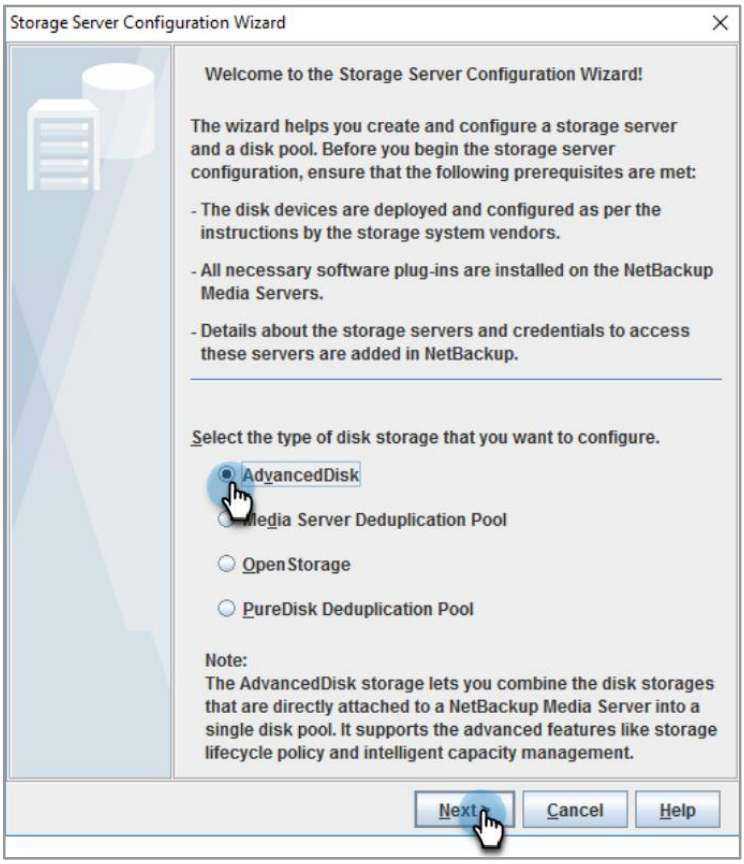
When you use a Cohesity SMB share to create an SMB storage library on NetBackup, you will need to choose the type of storage library. To store the data that you back up using NetBackup, you can create either a scale-out SMB AdvancedDisk storage or a single SMB AdvancedDisk storage. However, as mentioned earlier, Cohesity recommends using an SoADS over Single storage library for improved performance and efficiency.

To create an AdvancedDisk storage using NetBackup Storage Server Configuration Wizard,

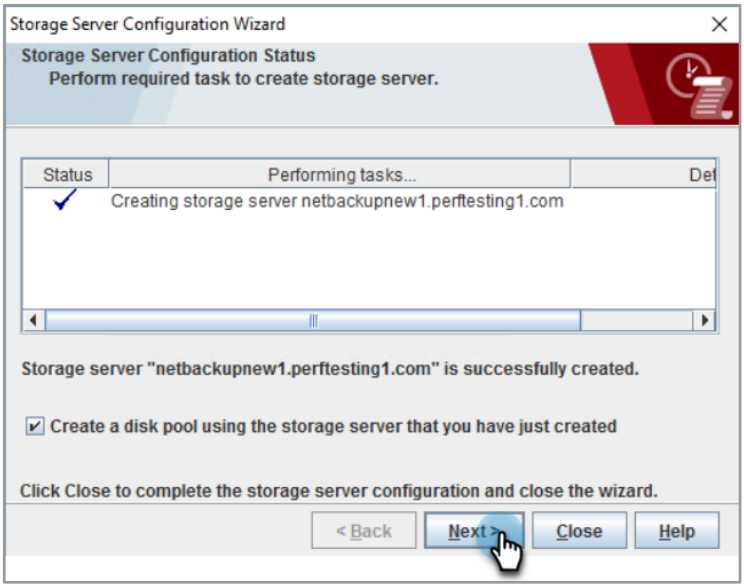
1. Log in to NetBackup Administration Console.
2. Select **Configure Disk Storage Servers** to start configuring the AdvancedDisk Storage.



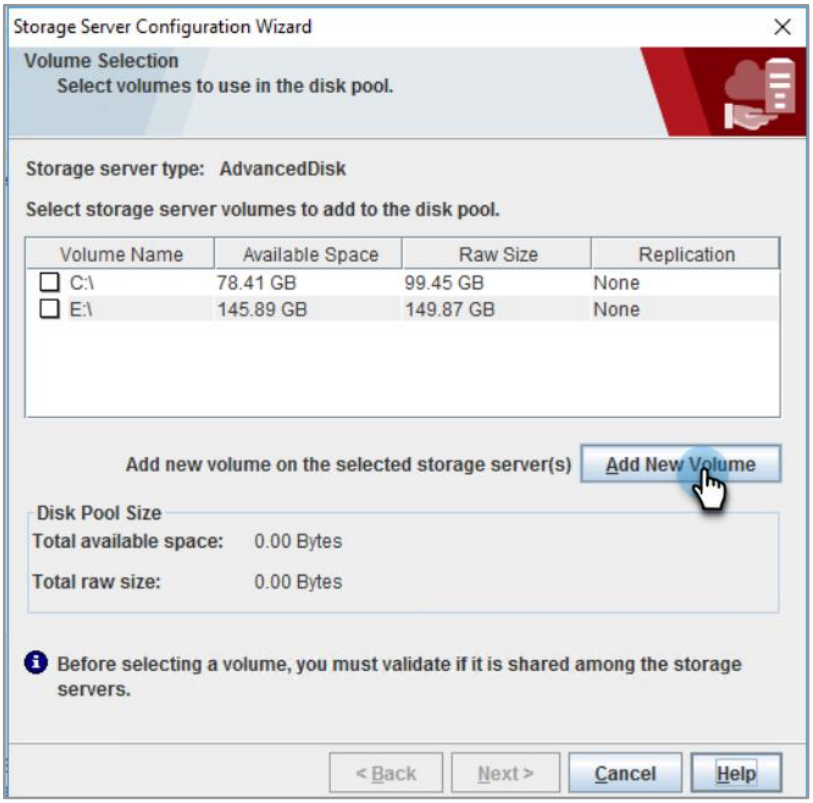
3. Select **AdvancedDisk** to configure AdvancedDisk storage and click **Next**.



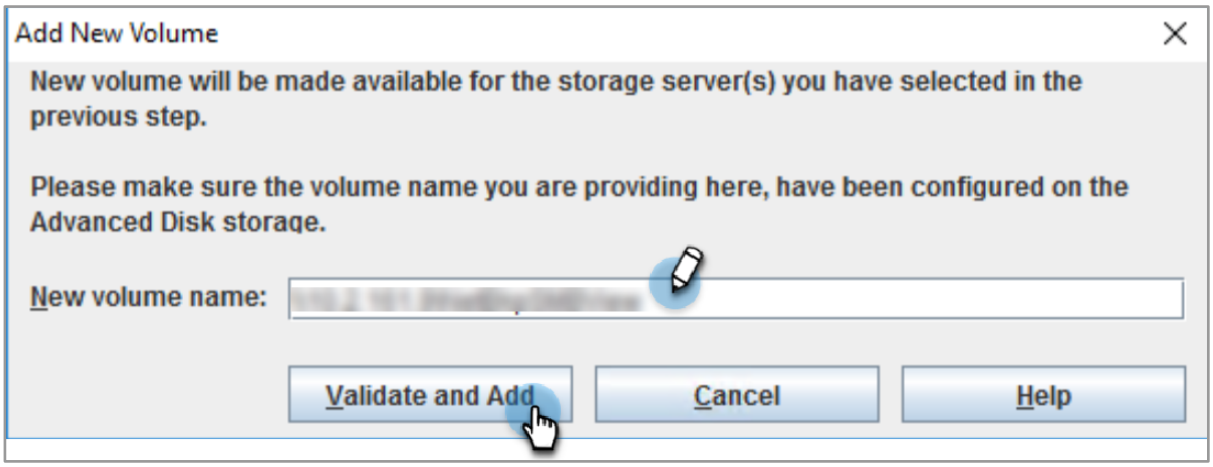
4. Review the storage server configuration and Click **Next**.



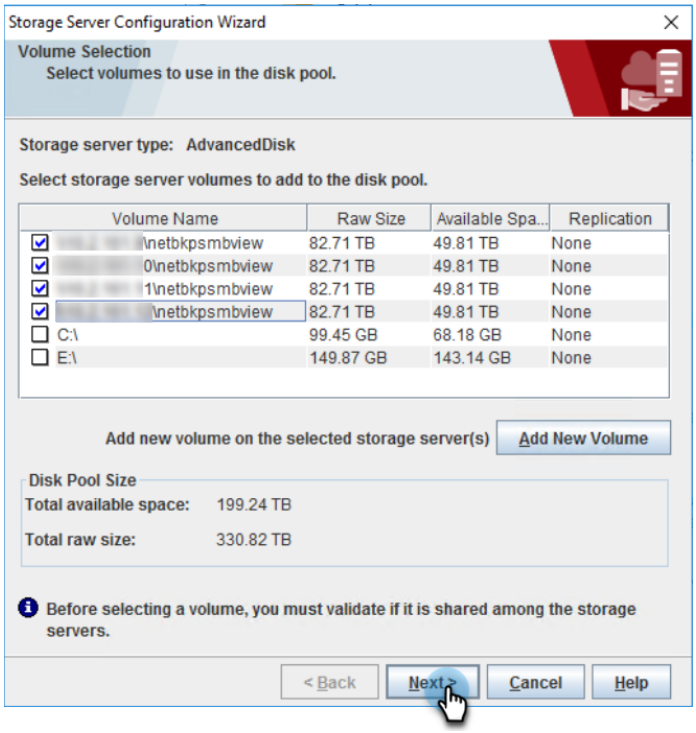
5. The **Volume Selection** screen shows you the current volumes and the space available in them. To add a new Volume, click **Add New Volume**.



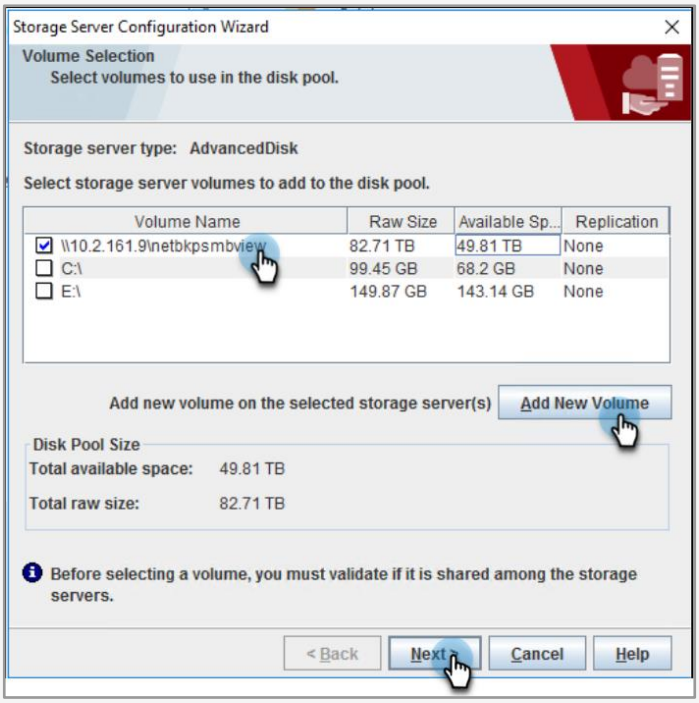
6. For **New volume name**, enter the path to the Cohesity SMB View you created and click **Validate and Add**.



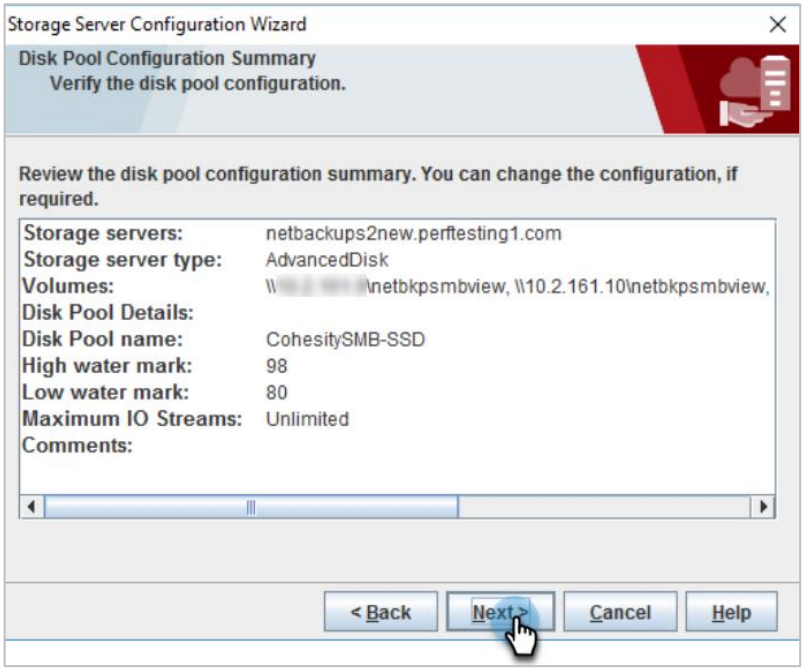
7. To create an SoADS, add as many volumes and VIPs as the number of nodes in the Cohesity cluster and click **Next** to continue.



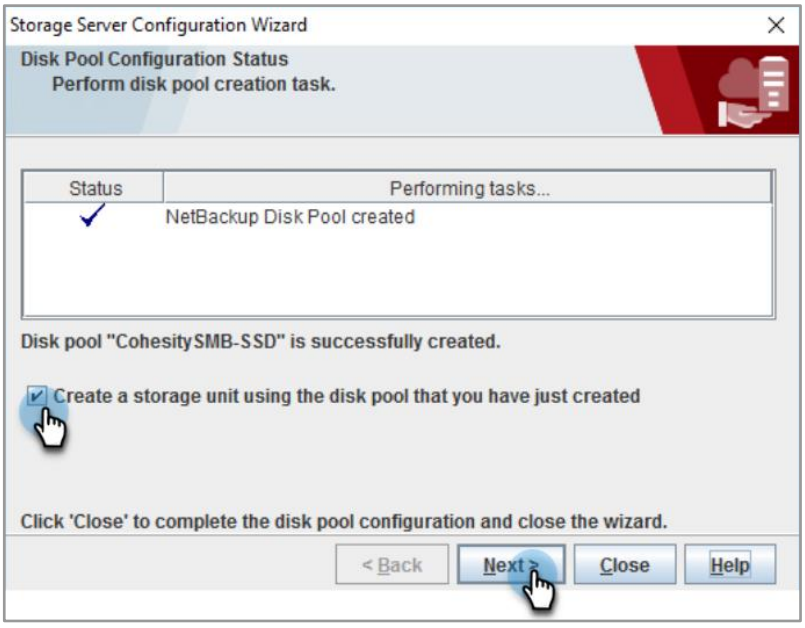
NOTE: You can also choose to have a Single SMB AdvancedDisk over a scale-out storage. To set up a Single AdvancedDisk storage, select or **Add** the single volume corresponding to the mount point you require and click **Next**.



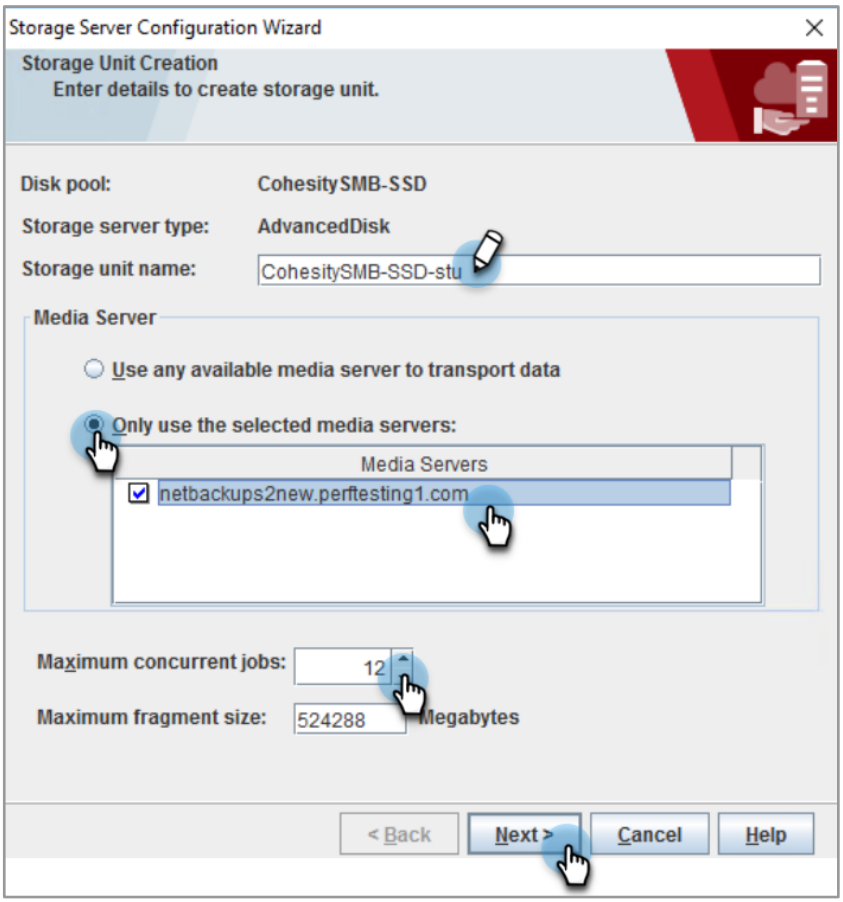
8. Review the AdvancedDisk disk pool configuration and click **Next** to continue.



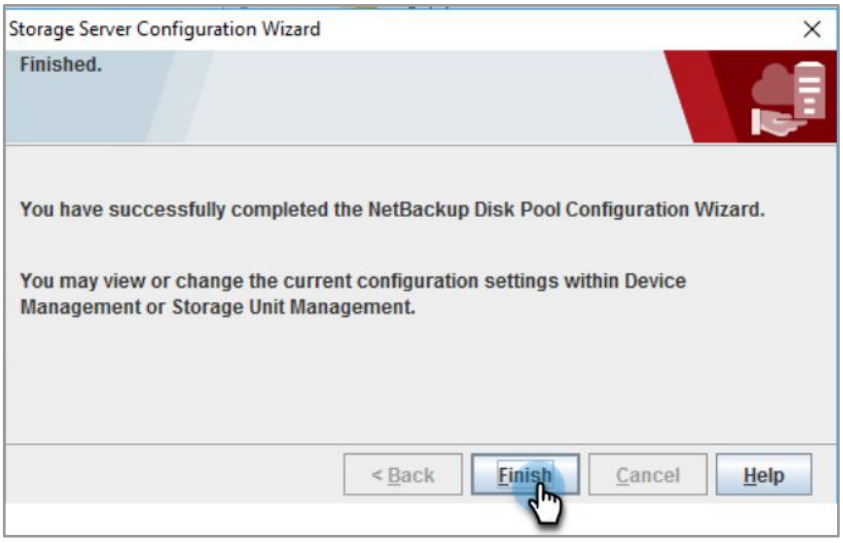
9. Once the AdvancedDisk disk pool is created, select **Create a storage unit using the disk pool that you have just created** to create a storage unit and click **Next**.



10. Enter a name for the storage unit. Under **Media Server**, select **Only use the selected media servers** and choose the media server. Set "**Maximum concurrent jobs"** to a number equal to or greater than 12 and click **Next**.



11. Click **Finish** to complete the AdvancedDisk library creation and close the wizard.



Create and Configure NFS Views

To use Cohesity's NFS View as AdvancedDisk storage, you have to create a Cohesity View, choose the appropriate QoS policy, and configure the View for NFS.

To create an NFS View for NetBackup storage library:

1. Use Existing / Create Storage Domain in Cohesity Storage.

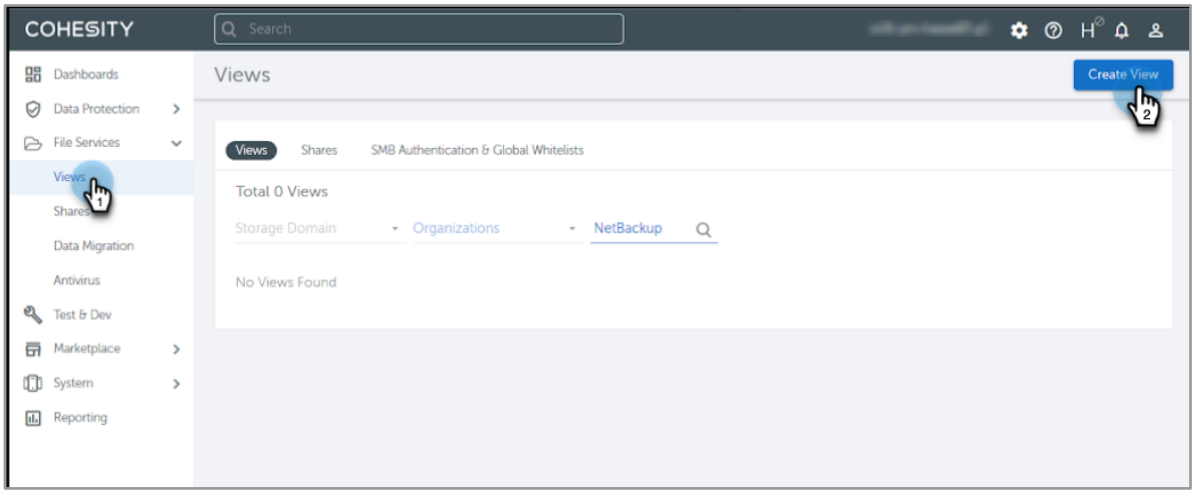
   NOTE: Cohesity recommends having **Inline Deduplication** and **Inline Compression** enabled on the Cohesity Storage Domain in which you create the View. For details, see Create or Edit Storage Domains in the online Help.

2. Create an NFS View for NetBackup AdvancedDisk storage.
3. Create an NFS storage library on NetBackup.
4. Configure your NetBackup backup jobs to use Cohesity storage.

Cohesity recommends enabling **Inline Deduplication** and **Inline Compression** on the Cohesity Storage Domain in which you will be creating your Cohesity Views. To enable them, or to create a new Storage Domain, see Create or Edit Storage Domains in the online Help.

To create an NFS View for NetBackup AdvancedDisk storage:

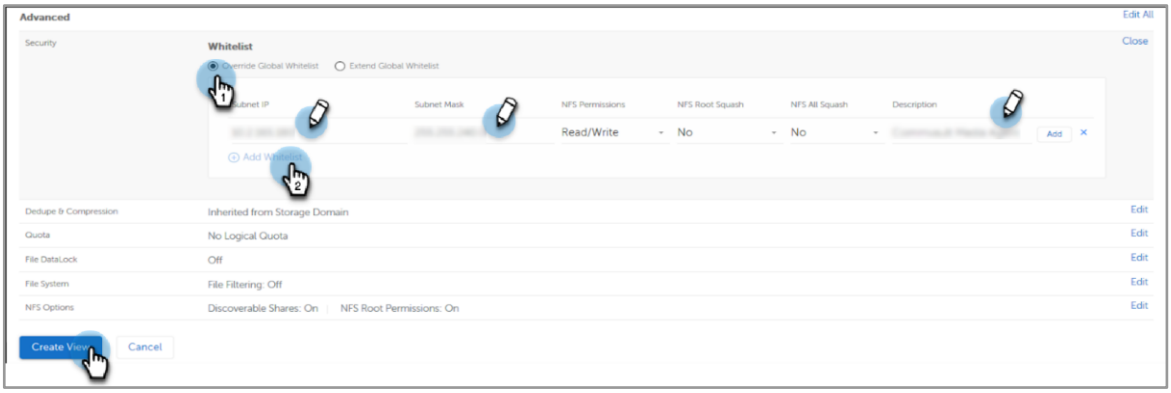
1. Log in to Cohesity and navigate to **File Services > Views**. On the **Views** page, click **Create View**.



2. In the **Create View** form, name the View, choose the **Storage Domain**, and select **Backup Target High** for the **QoS policy.** Under **View Protocol**, select **NFS only**.

> **IMPORTANT**: If you want to create a Single NFS AdvancedDisk over SoADS, select the **TestAndDev High** QoS policy.

3. In the same form, under **Advanced > Security > Whitelist**, click **Override Global Whitelist.** Click **Add Whitelist** and enter the **Subnet IP**, **Subnet Mask**, and a **Description** for *each* of your NetBackup servers. Finally, click **Create View** at the bottom of the form.



> **NOTE**: If you add more media servers in the future, ensure that they are added to the NFS allowlist in this View.

Now that you have created the NFS View on Cohesity, you can create the NetBackup AdvancedDisk storage that will use the NFS View as storage in the next chapter.

Create an NFS Storage Library

When you create a Cohesity NFS View to use with a NetBackup AdvancedDisk, the next step is to create a new Media Server on the same network as your Cohesity cluster to mount the Cohesity NFS View.

When you have your media server, you are ready to create either a scale-out SMB AdvancedDisk storage or a single SMB AdvancedDisk storage to store the data that you back up using NetBackup, you can. However, as mentioned earlier, Cohesity recommends using an SoADS over Single storage library for improved performance and efficiency.

Create a Media Server and Mount NFS Exports

To optimize Cohesity for NetBackup to achieve high throughput, you need to create a Linux media server and add it on Netbackup. To see how to set up a media server on NetBackup, see Veritas NetBackup Administrator's Guide.

Once the server is configured, log in to it and mount the Cohesity NFS Views onto the machine. Use the following Linux mount command to mount the NFS exports on media server:

```
mount -t nfs -o
noatime,vers=3,proto=tcp,rsize=1048576,wsize=1048576,timeo=10000,hard,intr,no
lock CohesityVIP1:/ViewName/mountpoint
```

IMPORTANT: While mounting the NFS Views, make sure that you follow the best practices mentioned in the Cohesity Support article for NFS Mount Options to achieve a stable connection and performance.

Once mounted, note down the mount points. You need the mount points while creating an AdvancedDisk storage in the next section.

NOTE: While configuring the media server for a scale-out AdvancedDisk storage, Cohesity recommends using as many NFS exports equal to the number of nodes in your cluster to get the best I/O performance.

Create an NFS AdvancedDisk Storage

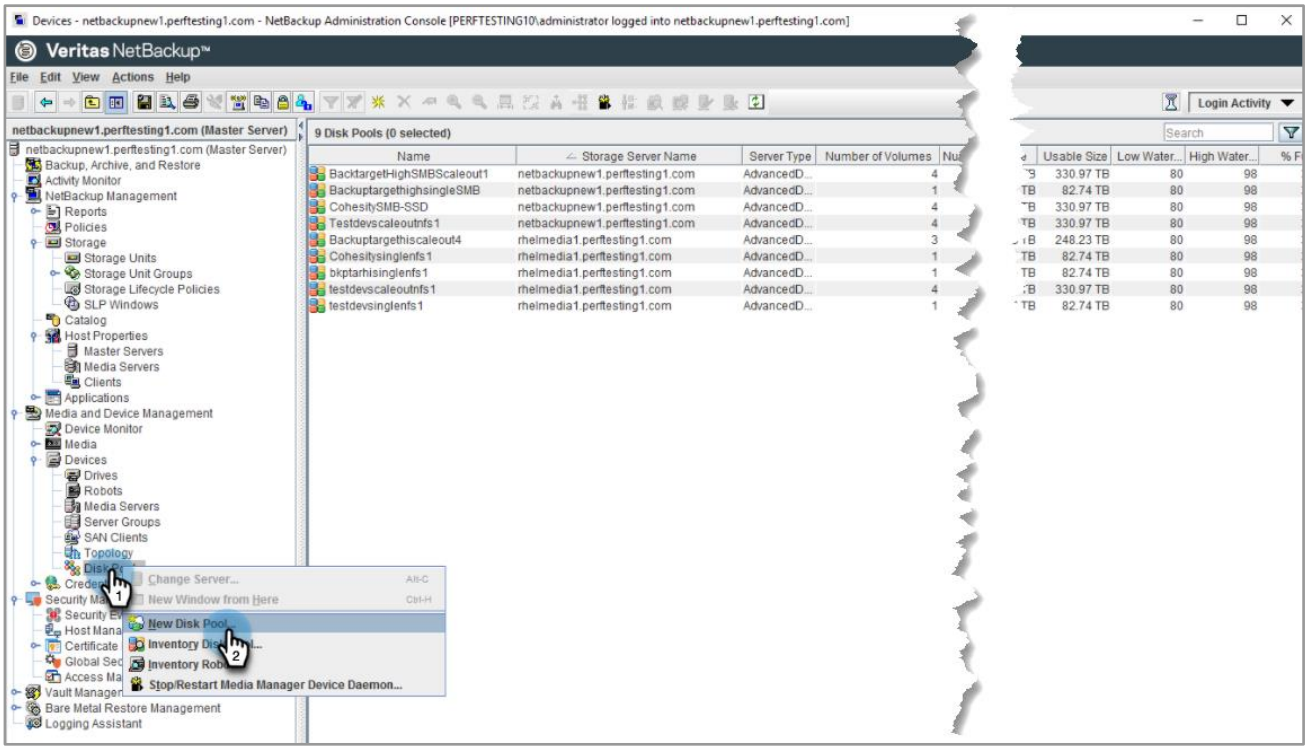
Once you have the media server created, it is time to create an NFS AdvancedDisk storage.

To create an AdvancedDisk storage using NetBackup Disk Pool Configuration Wizard,

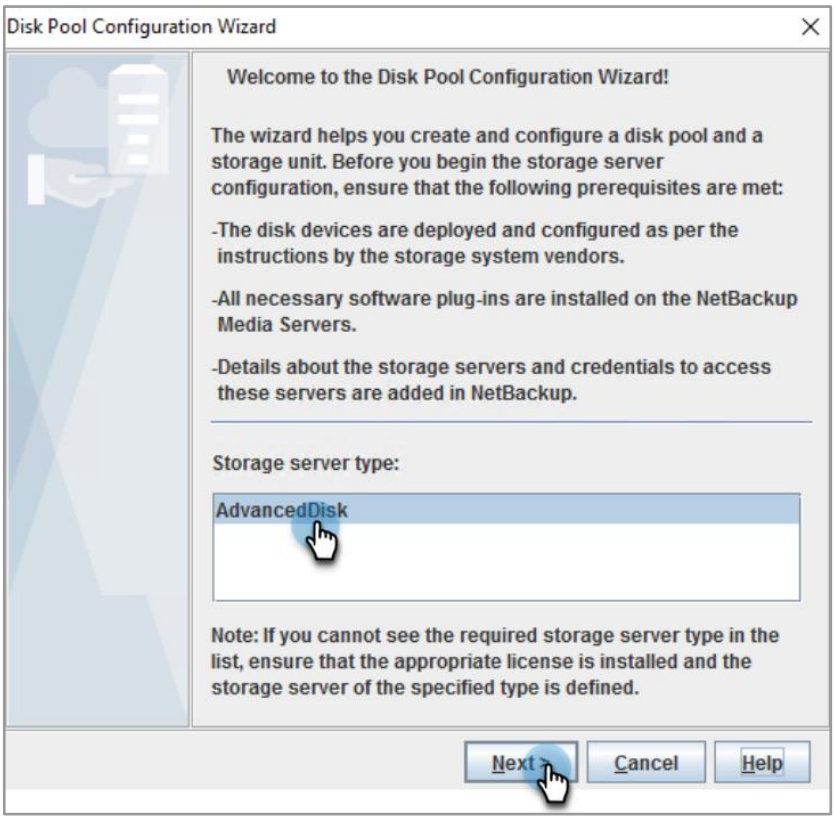
1. Log in to NetBackup Administrator Console.

   IMPORTANT: If you are using NFS as the only storage library and doesn't have a storage server created earlier, you'll need to create one first. For that, follow the steps 1 through 4 in the Storage Server Configuration Wizard here and click **Close**.

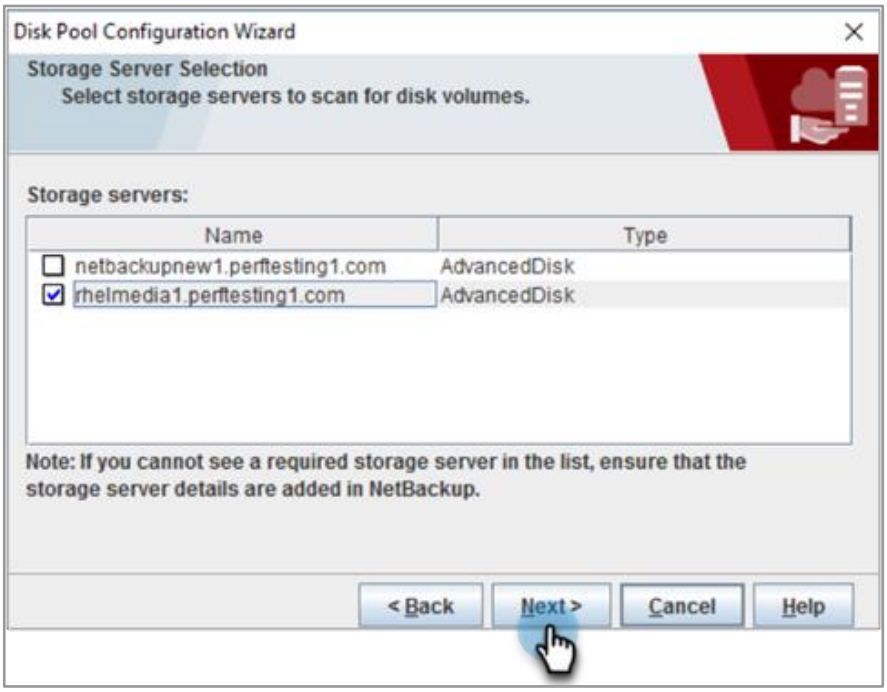
2. Right-click **Disk Pool** and select **New Disk Pool**.



3. Select the **AdvancedDisk** you created earlier as the **Storage server type** and click **Next.**

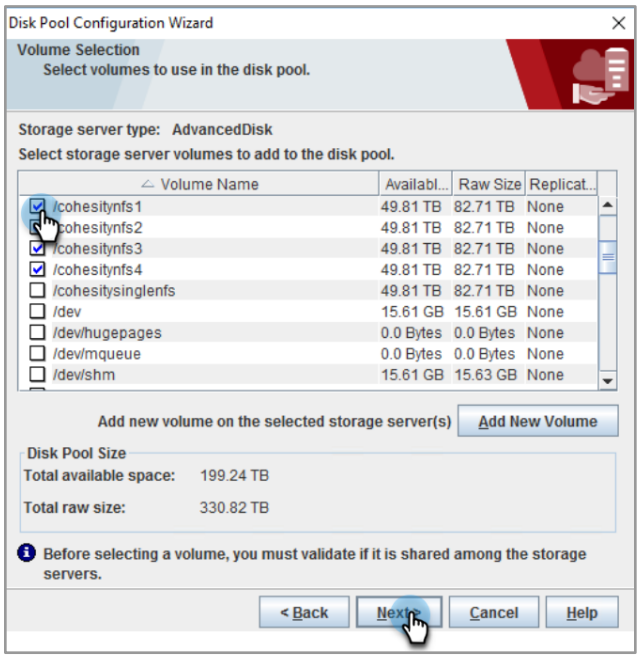


4. Select the Linux media server you created earlier and click **Next.**

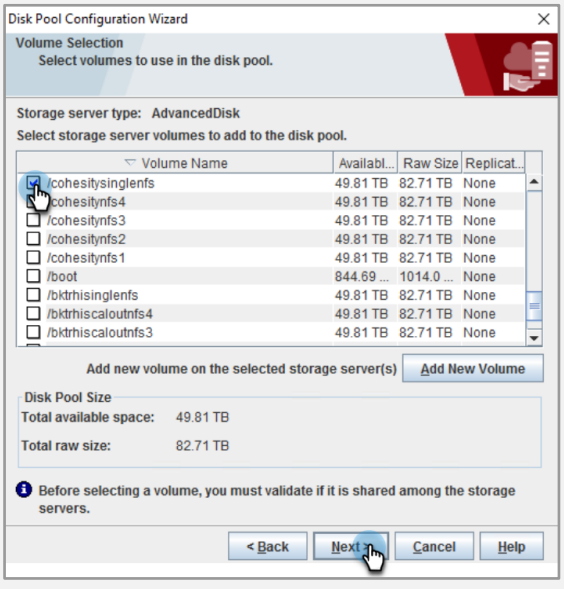


5. Using the output from the media server after mounting the NFS Views earlier, select the mount points you want to assign to the storage library from the list and click **Next**.

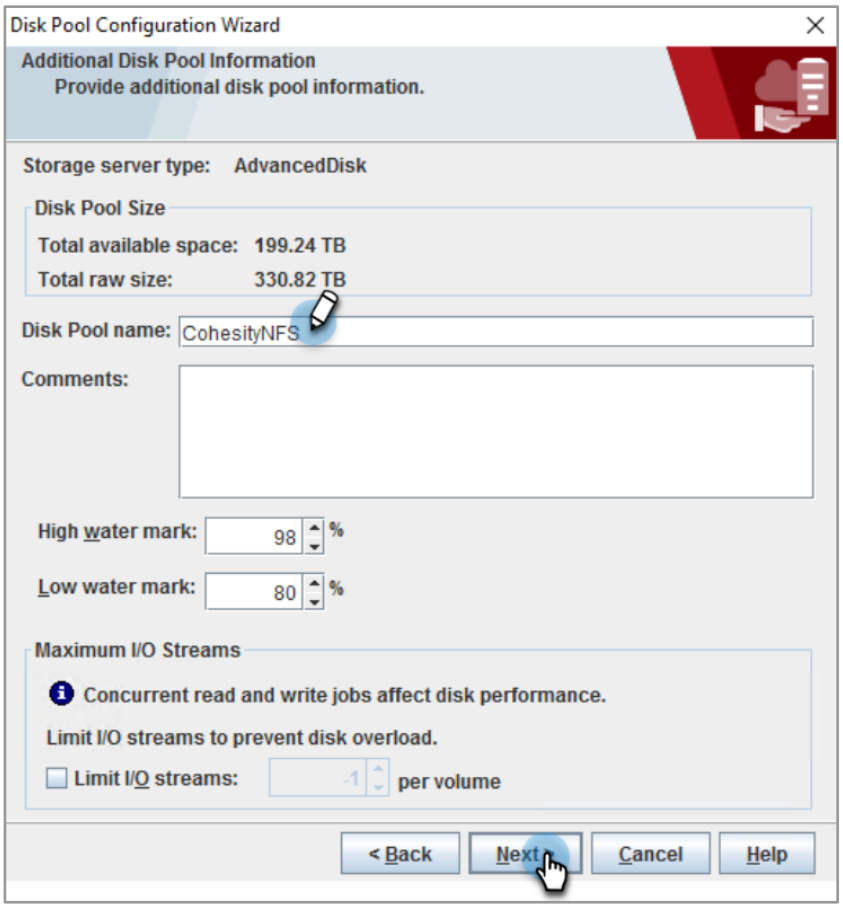
```
[root@rhelmedia1 ~]# df -h |grep cohesity
10.xx.xx.1:/cohesitynfs1          83T   33T   50T  40% /cohesitynfs1
10.xx.xx.2:/cohesitynfs2          83T   33T   50T  40% /cohesitynfs2
10.xx.xx.3:/cohesitynfs3          83T   33T   50T  40% /cohesitynfs3
10.xx.xx.4:/cohesitynfs4          83T   33T   50T  40% /cohesitynfs4
```



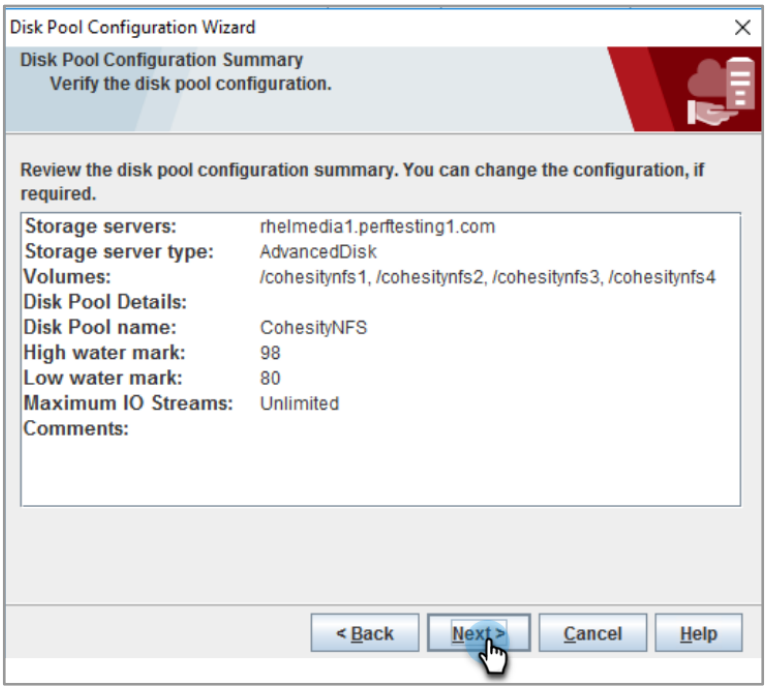
NOTE: You can also choose to have a Single NFS AdvancedDisk over a scale-out storage. To set up a Single AdvancedDisk storage, select the volume corresponding to the mount point you require and click **Next**.



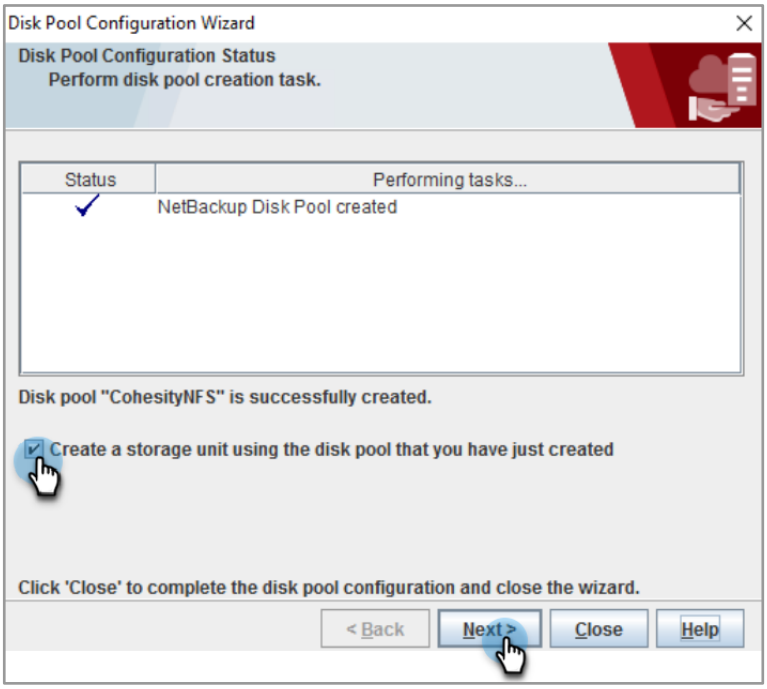
6. Enter a **name** for the AdvancedDisk Disk Pool and click **Next.**



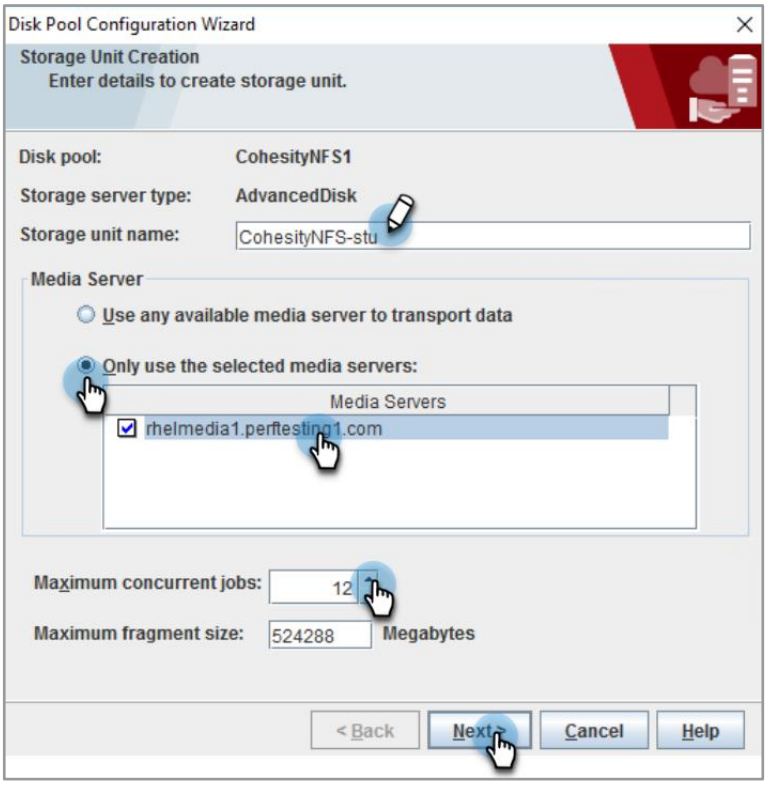
7. Review the configuration you have made and click **Next.**



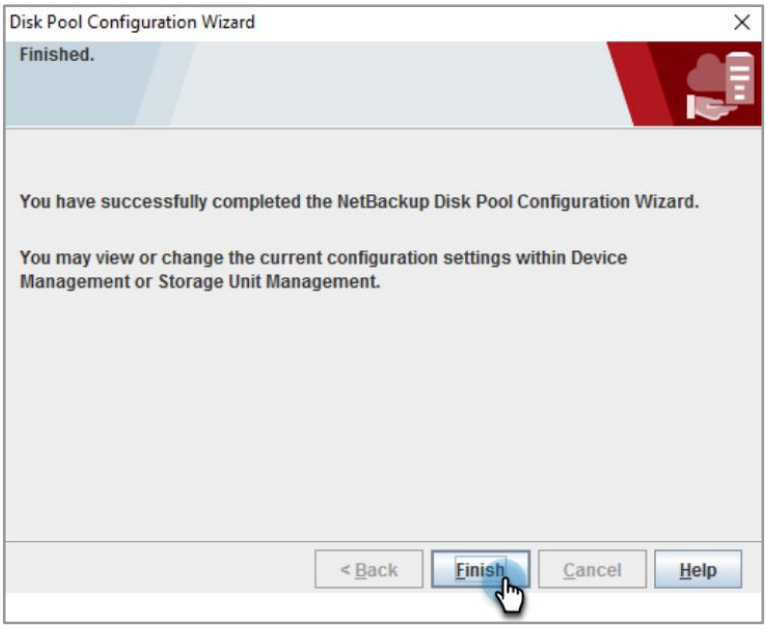
8. Once the AdvancedDisk disk pool is created, select **Create a storage unit using the disk pool that you have just created** to create a storage unit and click **Next**.



9. Enter a name for the storage unit. Under **Media Server**, select **Only use the selected media servers** and choose the media server you created. Set "**Maximum concurrent jobs"** to a number equal to or greater than 12 and Click **Next.**



10. Click **Finish** to complete the Disk pool Configuration Wizard.



You have completed configuring the NetBackup disk pool. Now that you have an AdvancedDisk storage library, proceed to create a backup job for NetBackup data management and protection.

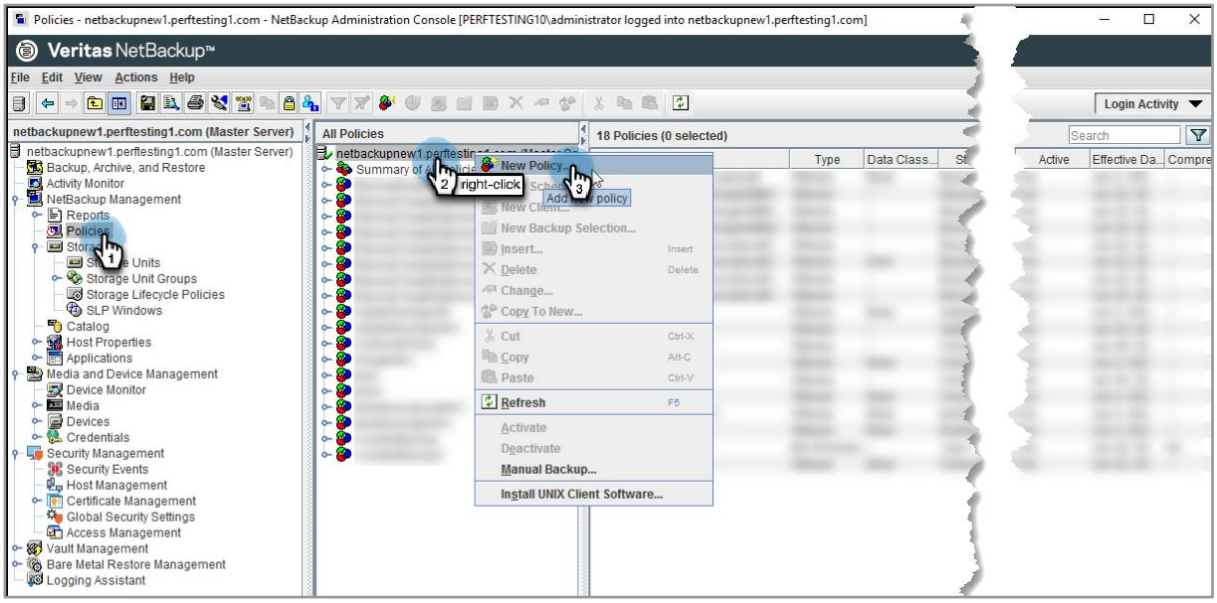
Configure a Backup Job with NetBackup

Now that you have created the Cohesity View and the AdvancedDisk (SoADS or regular) that connects to the Cohesity View, configuring a backup job on NetBackup involves a few tasks:

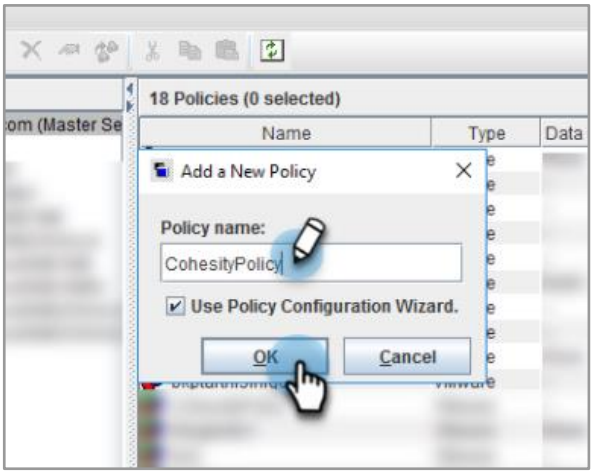
- Create a backup policy on NetBackup.
- Create a backup job and select the workloads.
- Optimize NetBackup for Cohesity Data Protection.

To create a backup policy and configure the backup job on NetBackup,

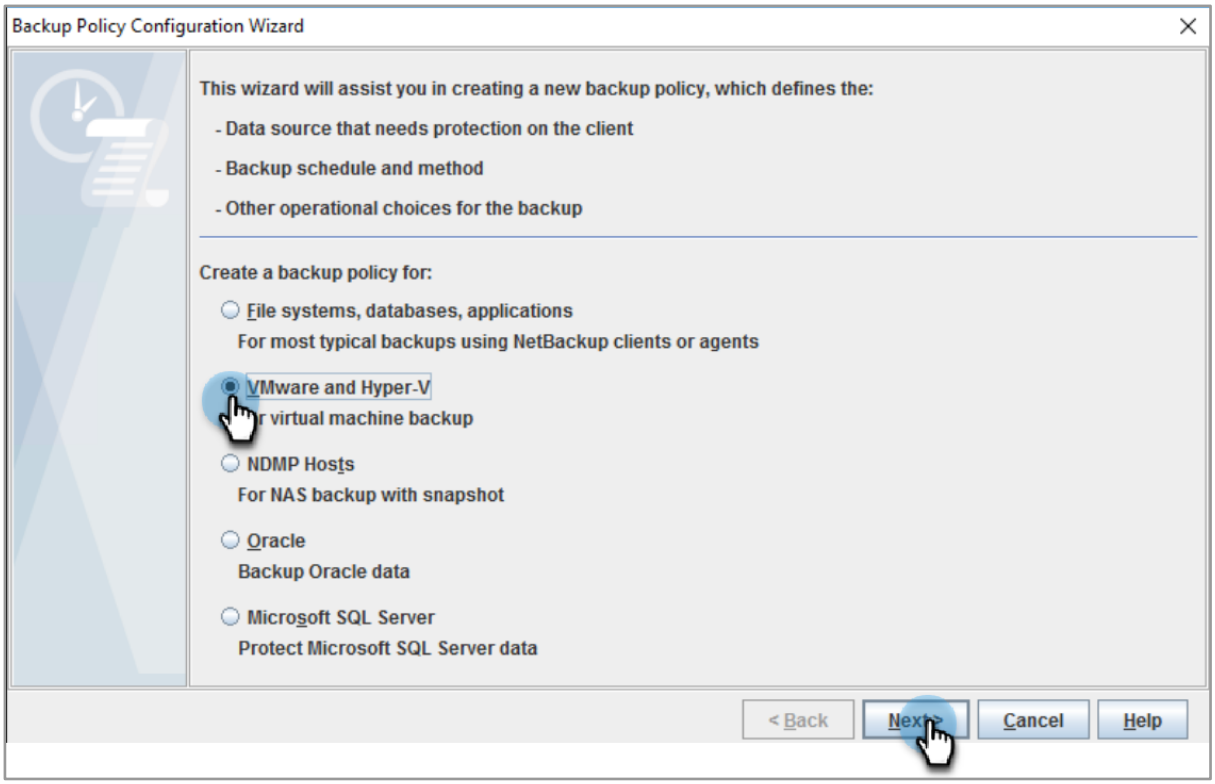
1. Log in to NetBackup Administration console.
2. Select **Policies** under **NetBackup Management** policies**.** Right-click the master server and select **New Policy** to create a policy.



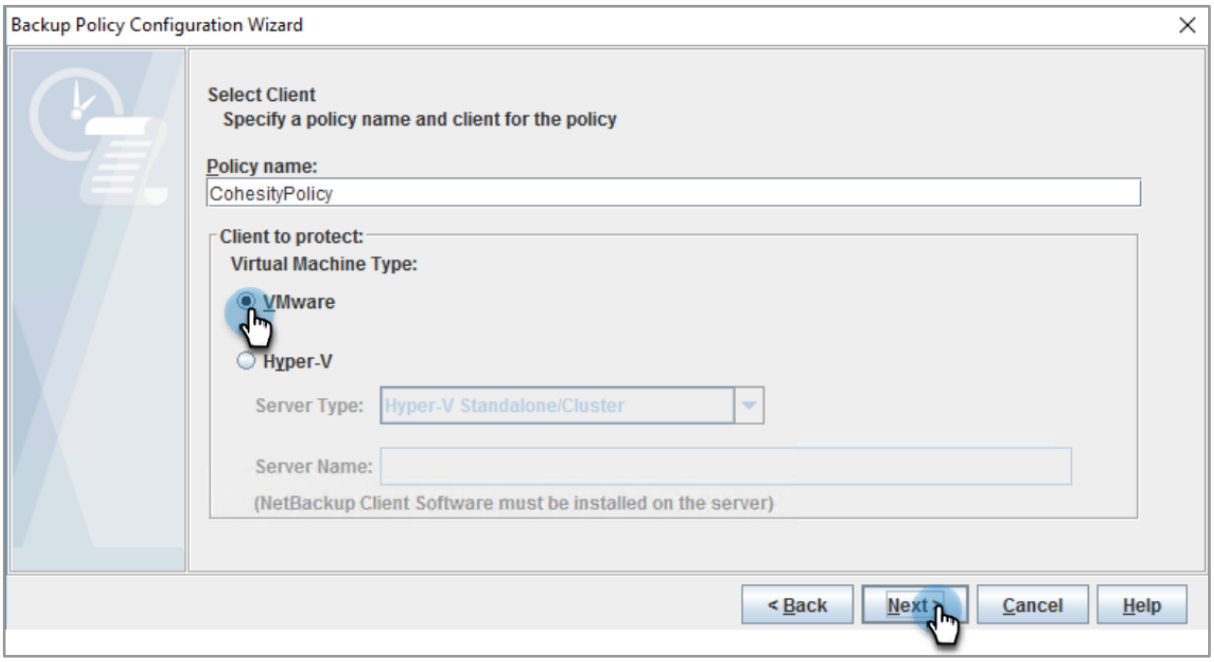
3. Name the policy and click **OK.**



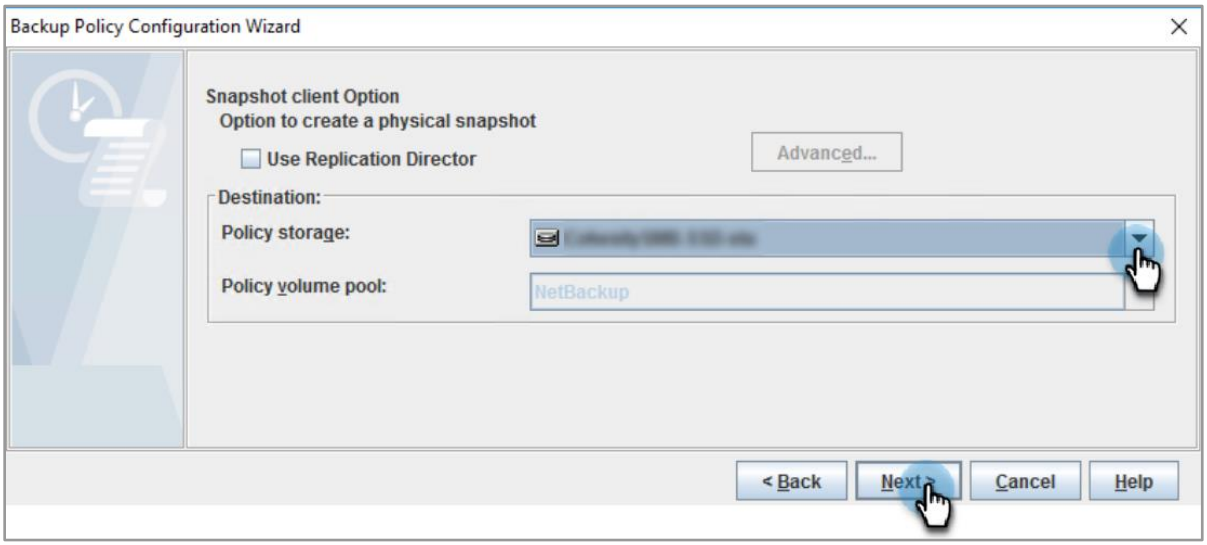
4. Select the workload type. To back up VMware workloads, select **VMware and Hyper-V**, and click **Next**.



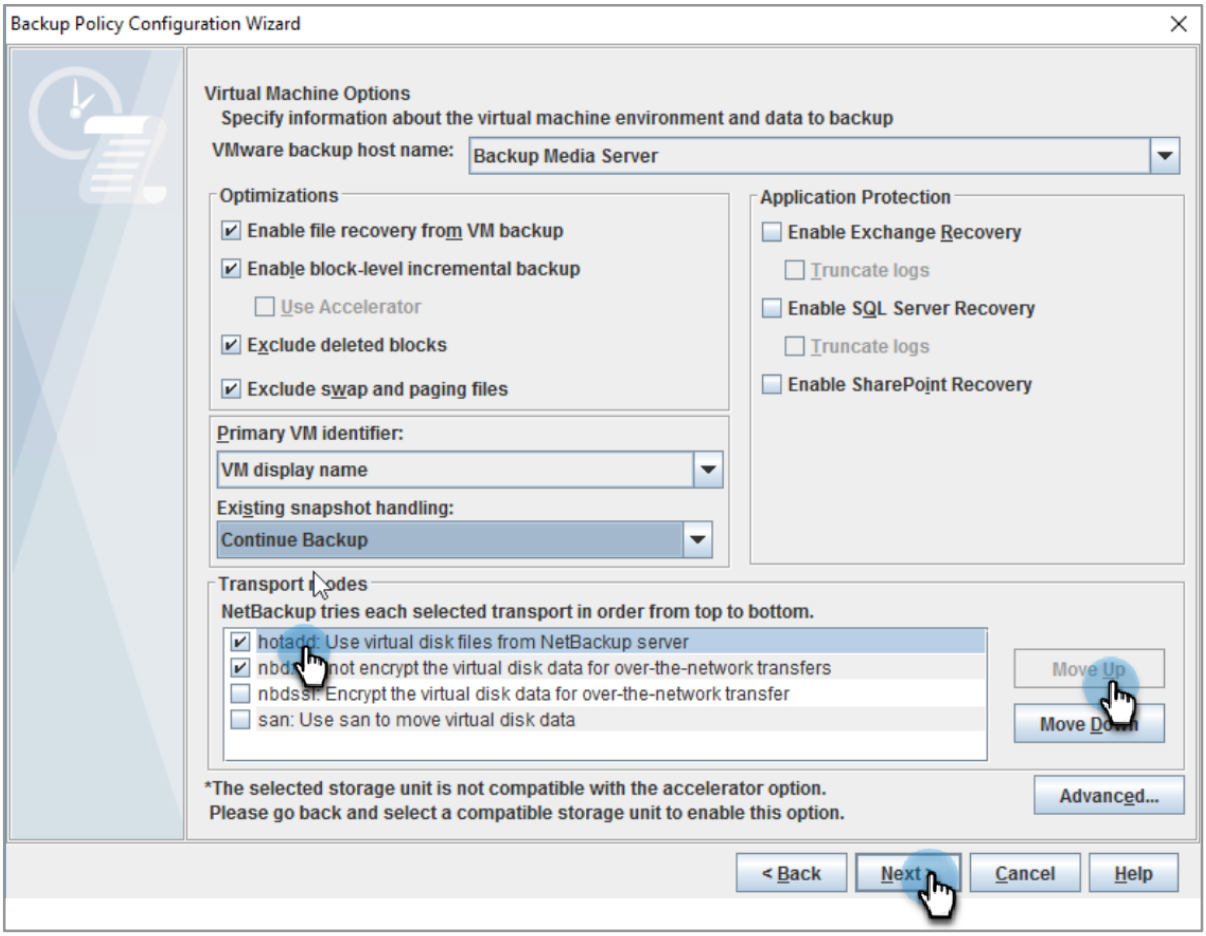
5. For **Virtual Machine Type,** select **VMWare** and click **Next**.



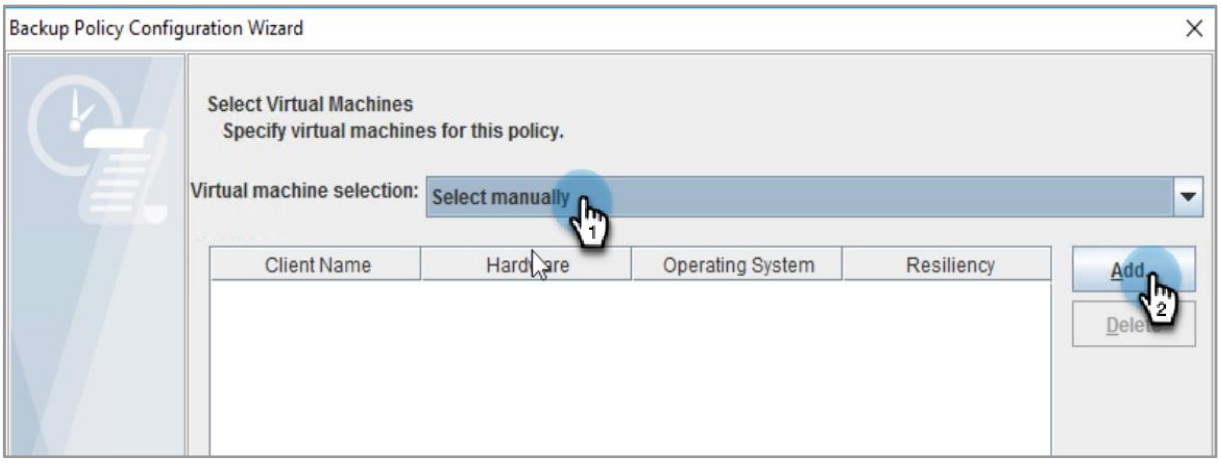
6. For **Policy storage** under **Destination**, select the Cohesity storage unit that you have created earlier and click **Next**.



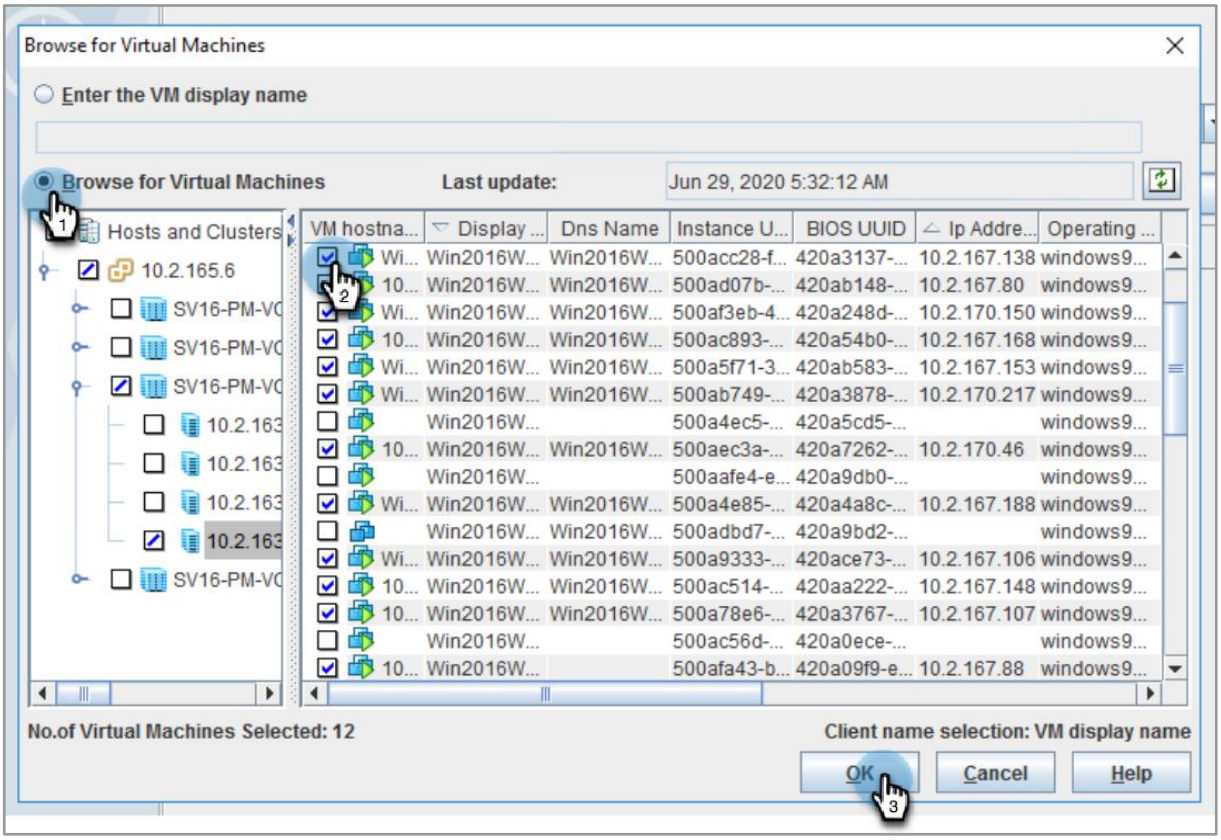
7. Under **Transport Modes**, move up **hot add** to top and click **Next.**



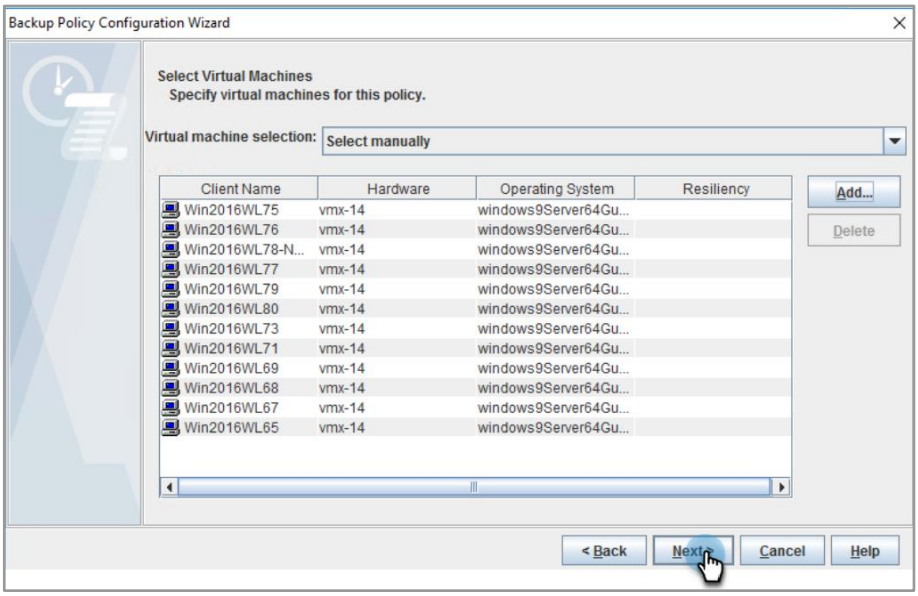
8. **For Virtual machine selection**, choose **Select manually**, and click **Add**.



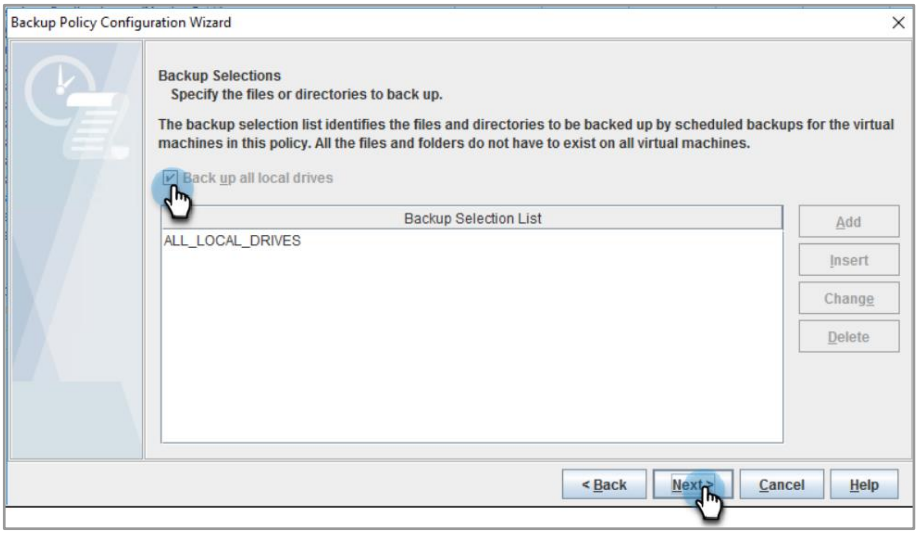
9. Browse for the available virtual machines and select the workloads that you want to backup. Click **OK** to continue.



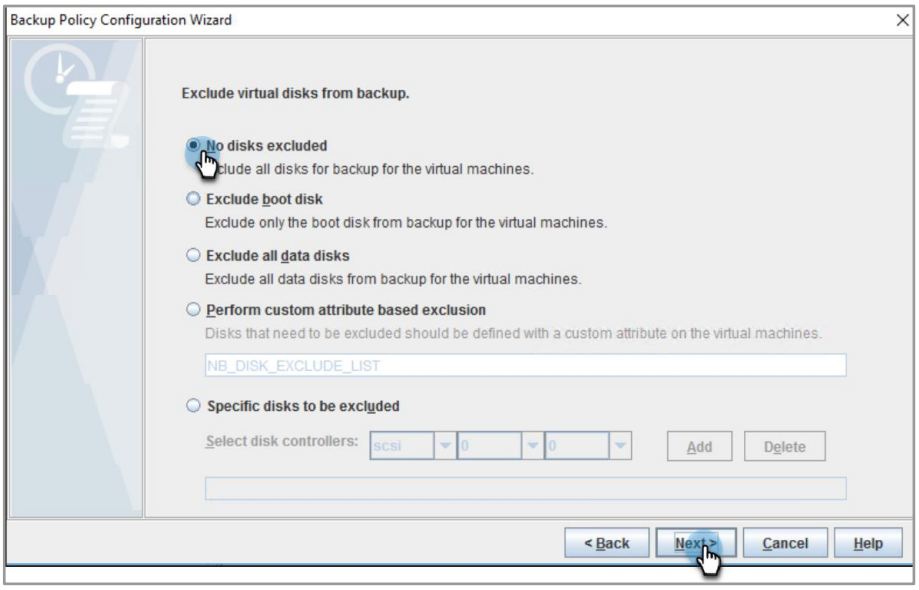
10. Verify the workloads and click **Next**.



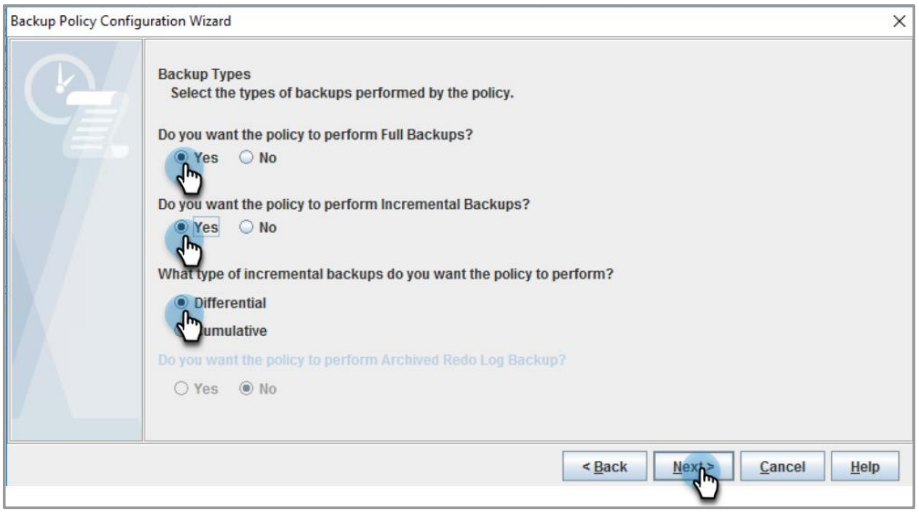
11. On the **Backup Selections** page, select **Back up all local drives** and click **Next**.



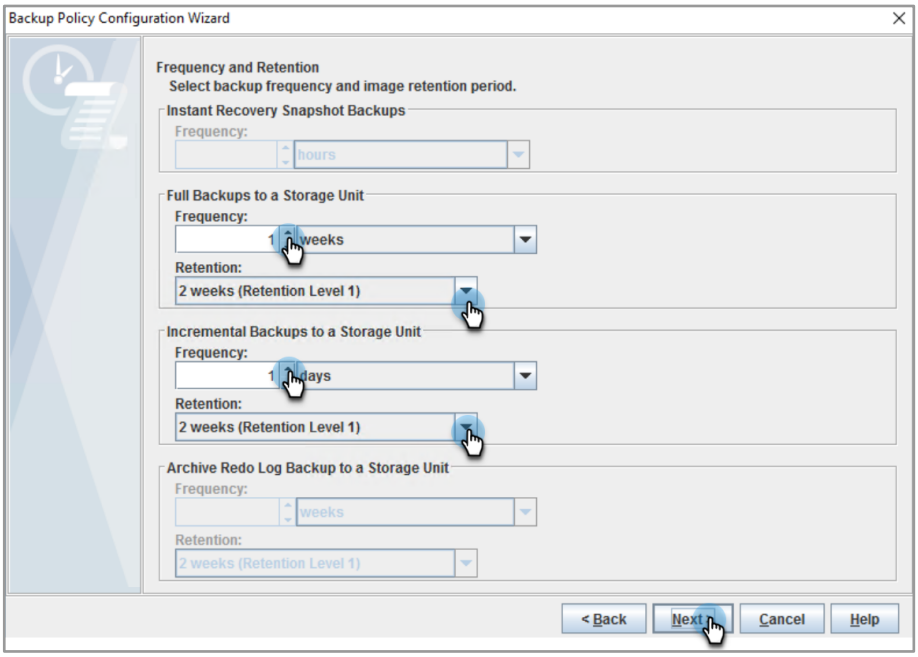
12. Under **Exclude virtual disks from backup**, select **No disks excluded** and click **Next**.



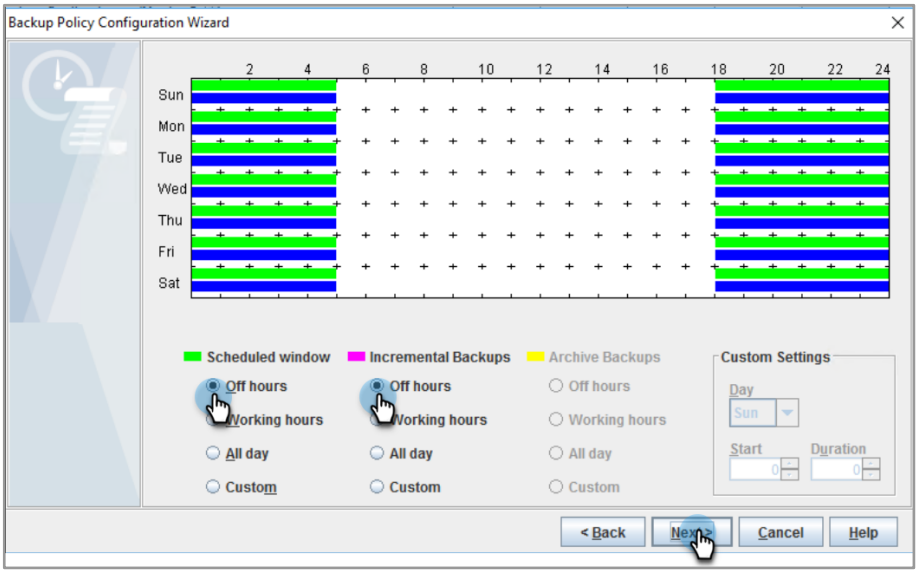
13. Choose the types of backups you want (full, incremental, differential, and cumulative backups) for the policy and click **Next**.



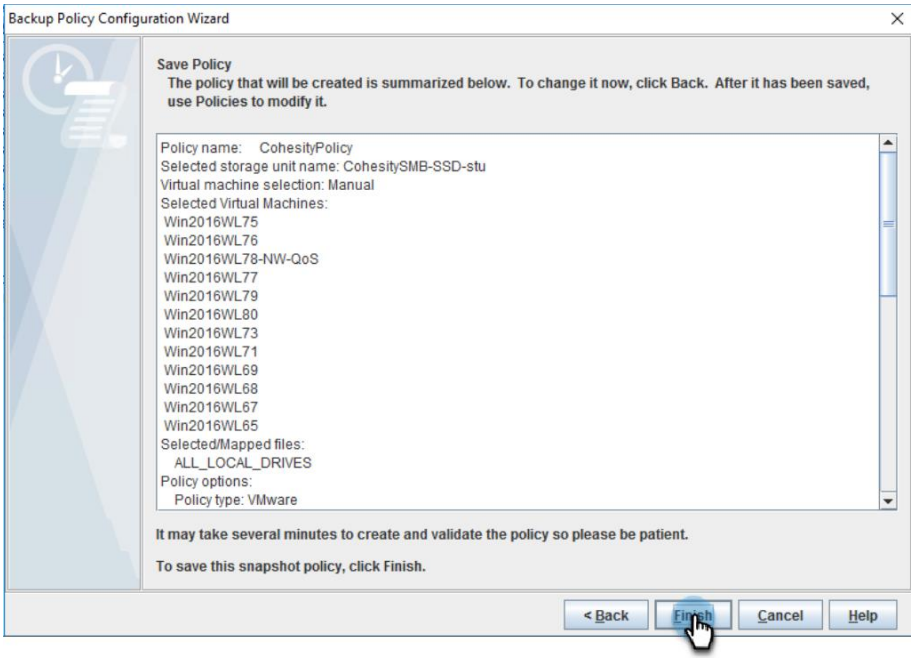
14. Set the **Frequency** and **Retention** periods for **Full** as well as **Incremental Backups** and click **Next**.



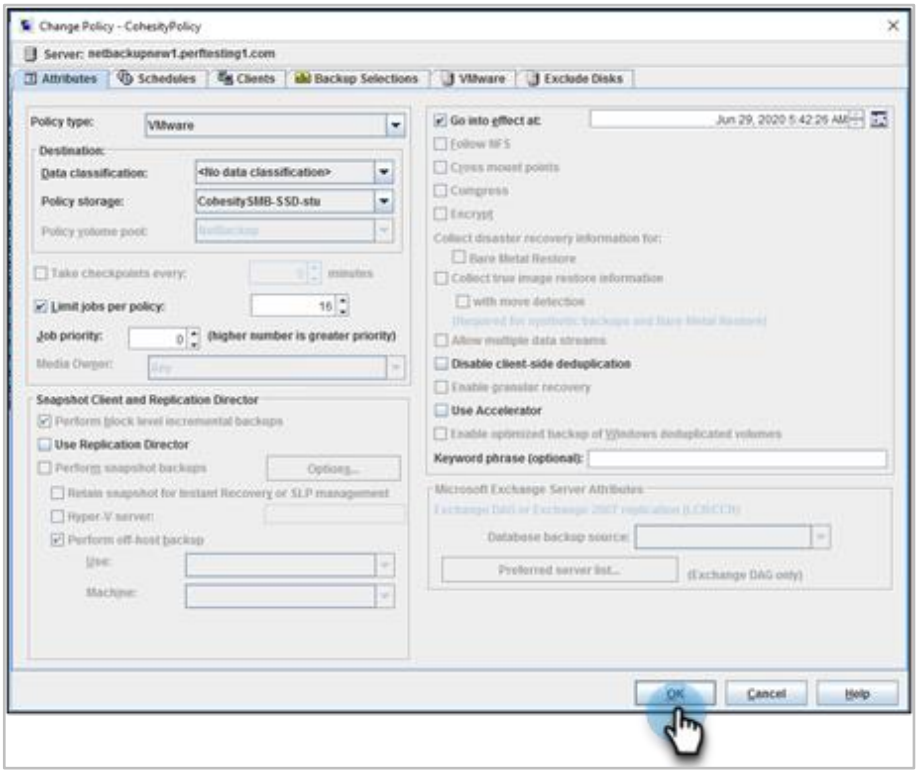
15. In the following page, set the **Scheduled window** for backups and click **Next**.



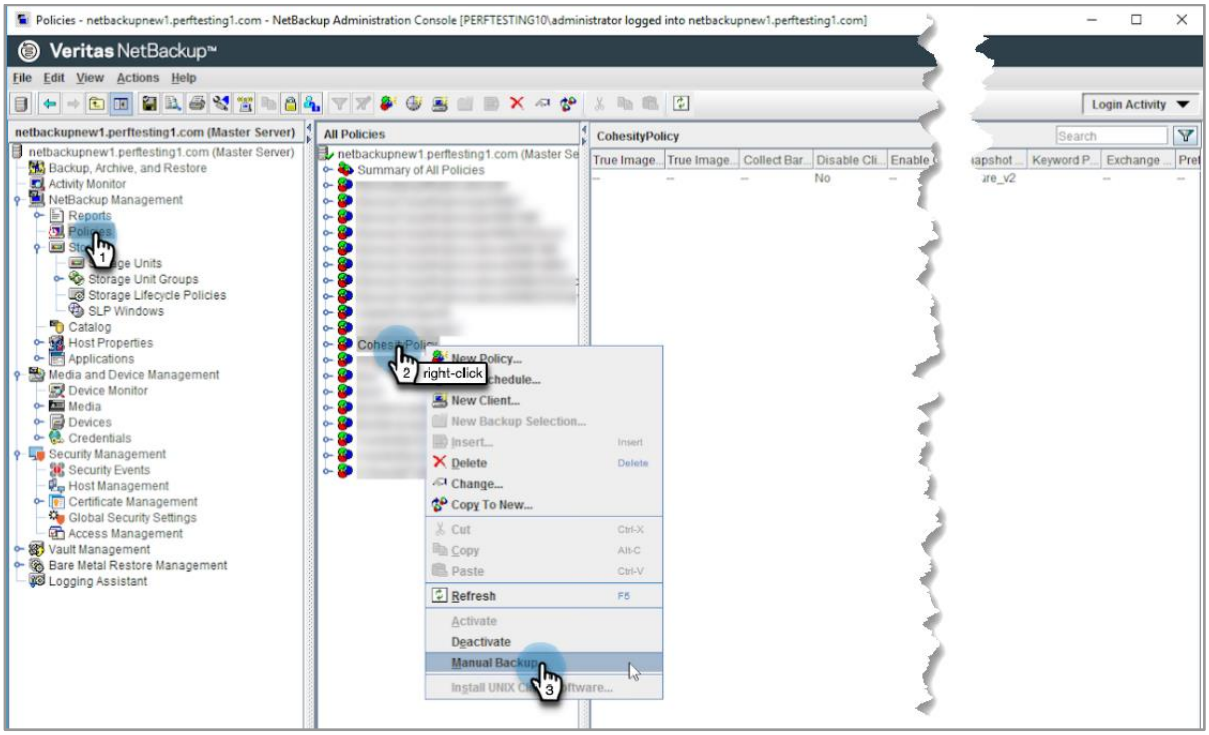
16. Before finalizing, verify the policy configuration summary. If satisfied with the settings applied, click **Finish**.



17. After finishing creating a new policy, you can always go back and edit the policy. To do this, navigate to the NetBackup Administration Console home page and right-click the newly created policy and select **Change Policy**. Click **OK** to close the window.



18. To manually start the backup job, right-click on the policy under **Policies** on NetBackup Administration Console home page and select **Manual Backup**.



Now you have manually initiated the data backup on NetBackup using the policy you created.

Tweak and Tune NetBackup for Performance

In addition to the data transfer optimization techniques discussed earlier, you can also tweak the NetBackup buffer settings on your operating system to improve the NetBackup data protection performance. For this, start by creating the following buffer parameter files.

- `NUM_DATA_BUFFERS_DISK`
- `SIZE_DATA_BUFFERS_DISK`

The location of the buffer parameters file varies according to the operating system used.

- For Windows, create the files in **install_path\netbackup\db\config.**
- For UNIX, create the files in **/usr/openv/netbackup/db/config**.

Once you have added the files in the appropriate file paths, set their values as follows:

For Windows, set the value of:

- `NUM_DATA_BUFFERS_DISK` as **16**.
- `SIZE_DATA_BUFFERS_DISK` as **1048576**.

For UNIX server, set the buffer parameter values using the following set of commands:

```
touch /usr/open/netbackup/db/config/NUMBER_DATA_BUFFERS
touch /usr/open/netbackup/db/config/SIZE_DATA_BUFFERS
echo 16 >> /usr/open/netbackup/db/config/NUMBER_DATA_BUFFERS
echo 1048576 >> /usr/open/netbackup/db/config/SIZE_DATA_BUFFERS
```

IMPORTANT: Cohesity recommends you deploy these tuning parameters in a test environment first and analyze the results before implementing in the production environment. Cohesity does not provide support for the tuning of NetBackup parameters.

Appendix A: Choose Optimal QoS Policy

Each Cohesity View is assigned a Quality of Service (QoS) policy that determines the priority of I/O (when contention occurs) and to which storage media it is written. There are two basic QoS principles, TestAndDev and Backup Target, each of which has variants by priority and storage media type.

Table 3: QoS Policies and I/O Workload Type

QOS POLICY	OPTIMIZED FOR I/O WORKLOAD TYPE	PRIORITY	STORAGE MEDIA
TestAndDev	Random reads and writes for NFS, SMB, and Cohesity Views.	High	SSD
		Low	
Backup Target	Sequential reads and writes for backups using Cohesity.	SSD	HDD
		High	
		Low	

Cohesity recommends the following QoS policies for AdvancedDisk:

- For SMB and NFS SoADS, use *Backup Target SSD*.
- For an NFS single/regular AdvancedDisk, use *TestAndDev High*.

Appendix B: Lab Setup and Configuration

All the setup, configuration, and best practices procedures discussed above were performed on NetBackup version 8.1.0 and Cohesity version 6.5.

Cohesity was running on a C3500 four-node cluster with four VIPs to access SMB shares and NFS exports through 10Gbps ethernet interfaces configured. NetBackup 8.1.0 was installed on Windows server 2016 along with Linux MediaAgents.

Table 4: Hardware and Software Configurations

HARDWARE/SOFTWARE	CONFIGURATION	QUANTITY
C3500	• 96 TB Raw Storage Space • 8 x Intel Xeon E5-2600 • 2.4 GHz 8-Core CPUs • 256 Memory • 8 x 10 GbE (VIPs) , 8 x 1 GbE	4 nodes
ESX Server 6.7	• 20 CPUs • 256 GB Memory	4 servers
DataStore	• 3 TB x 6 LUNs from All Flash SAN Storage	All 4 servers
NetBackup Server 8.1 (Trial Version)	• Windows 2016 • 16 CPUs x 2.5Ghz • 32 GB Memory	1 server
NetBackup Media 8.1 Sever	• Windows 2016 and Redhat Linux (for NFS) • 16 CPUs x 2.5Ghz • 32 GB Memory	4 MediaAgents

Appendix C: Terminology

There are several terms that are important to understand as you learn about the specific ways the Cohesity solution for NetBackup works.

Table 5: NetBackup and VMWare Terminologies

NETBACKUP AND VMWARE TERMS	DESCRIPTION
NetBackup master server	The NetBackup server that provides administration and control for backups and restores for all clients and servers in a master and media server cluster. NetBackup server supports only a single server, and it is the master.
NetBackup media server	The media server is responsible for receiving client data and placing it onto the backup storage media. Depending on the configuration that could be storage that is directly or indirectly available to the media server.
BasicDisk	BasicDisk refers to locally-attached or network-attached disk devices. The disk storage is exposed as a file system to a NetBackup media server. NetBackup stores backup data in the specified directory.
AdvancedDisk storage	AdvancedDisk storage are primarily the same as BasicDisk devices but with added features such as sharing, load balancing, and the use of storage lifecycle policies.
Storage server	An entity that writes data to and reads data from disk storage.
Storage unit	Refers to a storage device where NetBackup or Storage Migrator stores files. It can be a set of drives in a robot or consist of one or more single tape drives that connect to the same host.
Volume pool	A logical grouping that identifies a set of volumes by usage.
Volume	Enterprise Media Manager (EMM) volumes are logical units of data storage that are assigned media IDs and other attributes, which are recorded in the EMM volume database. A virtual device configured over raw physical disk devices. Consists of a block and character device.
Multiplexing	The process of sending concurrent-multiple backups from one or more clients to a single storage device and interweaving those images onto the media.
SAN / NBD	The SAN part of the acronym stands for storage area network and the NBD part stands for network block device, which is the failover mechanism if SAN mode can't occur. SAN is the most optimal configuration for backup jobs.

NETBACKUP AND VMWARE TERMS	DESCRIPTION
Hot-add	This is frequently used when referring to virtual appliance mode backups with NetBackup. Basically, once the virtual machine backup is underway, the associated VMDK files are added dynamically to the NetBackup server. This dynamic procedure can only happen when the virtual machine has a snapshot in place, and then the VMDK files of the source virtual machine are disconnected from the NetBackup server once the backup steps are completed.

Summary

Cohesity's NAS brings the best performance using web-scale architecture, using SMB and NFS NAS as a target for NetBackup AdvancedDisks delivers a comprehensive data protection solution to any organization. NetBackup and Cohesity delivers a proven backup solution that is infinitely scalable, highly available, and provides unparalleled performance.

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2.2	July 2024	Republishing
2.1	Dec 2021	Rebranding updates
2.0	Oct 2020	Major content update
1.0	Nov 2016	First release

ABOUT COHESITY

Cohesity is a leader in AI-powered data security and management. Aided by an extensive ecosystem of partners, Cohesity makes it easier to protect, manage, and get value from data – across the data center, edge, and cloud. Cohesity helps organizations defend against cybersecurity threats with comprehensive data security and management capabilities, including immutable backup snapshots, AI-based threat detection, monitoring for malicious behavior, and rapid recovery at scale. Cohesity solutions are delivered as a service, self-managed, or provided by a Cohesity-powered partner. Cohesity is headquartered in San Jose, CA, and is trusted by the world's largest enterprises, including six of the Fortune 10 and 44 of the Fortune 100.

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