

In-Cloud Data Recovery with NetBackup Recovery Vault

Disaster Recovery for Storage-as-a-Service.

This paper is designed to highlight the steps customers will need to perform Image Sharing with NetBackup Recovery Vault.

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Revision History

Version	Date	Changes	Author
1.00	06/2022	Initial Version	Neil Glick

Introduction

Executive Summary

NetBackup™ Recovery Vault is a cloud-based storage-as-a-service offering that provides a seamless, fully managed secondary storage option for NetBackup customers. Seamlessly integrated with NetBackup, it provides an easy-to-use UI that simplifies provisioning, management, and monitoring of cloud storage resources and retention policies. Most NetBackup Recovery Vault customers will want to use Image Sharing, which is a feature in NetBackup that packages a minimal set of metadata with all backup data to make it self-describing. This allows backup data to be restored from a primary location onto a NetBackup primary server in an alternate domain or cloud environment to meet data compliance and governance requirements.

Target Audience

This document is targeted at customers interested in learning about using NetBackup Recovery Vault and Image Sharing to backup data from one site and recover it at another.

Why NetBackup Recovery Vault and Image Sharing

NetBackup Recovery Vault provides a fully managed cloud data protection tier that is seamlessly integrated with NetBackup to scale protection across any cloud model, while controlling costs. NetBackup Recovery Vault can use NetBackup Image Sharing to copy data from a primary site to an alternate site in a different domain or in the cloud. With NetBackup Recovery Vault and Image Sharing, you can copy your mission-critical data and restore it using a completely autonomous primary server located off-site. In the event the primary server is compromised, your mission-critical data can be converted to the alternate site to continue to meet data compliance and governance requirements.

Image Sharing and Recovery Vault Prerequisites and Requirements

Using Image Sharing with NetBackup Recovery Vault is simple, but some prerequisites will need to be met for Image Sharing and NetBackup Recovery Vault to work together:

1. Image Sharing requires an alternate NetBackup primary server be available on a different domain or cloud environment. This is generally achieved by deploying a NetBackup Cloud Recovery Server, which is an all-in-one node that includes both a primary and media server.
2. The Media Server Deduplication Pool (MSDP) for Image Sharing will need to be created at the alternate site.
3. When creating the MSDP storage server, the alternate primary server must be chosen, which cannot be a media server.
4. The name of the backup volume used at the alternate site must match the name of the volume at the primary site.
5. The NetBackup Recovery Vault cloud bucket used for primary backups will need to be used at the alternate site.
6. NetBackup Recovery Vault account credentials will need to be available or already in use.

You do not need to make any changes on the primary server as long as the data you wish to copy to the alternate site is located on a NetBackup Recovery Vault SaaS MSDP-C disk pool. If you do not have NetBackup Recovery Vault, contact your Veritas NetBackup Account Manager for a demonstration and additional documentation on the benefits of the SaaS offering.

Configuring Image Sharing on Your Primary Server With NetBackup Recovery Vault

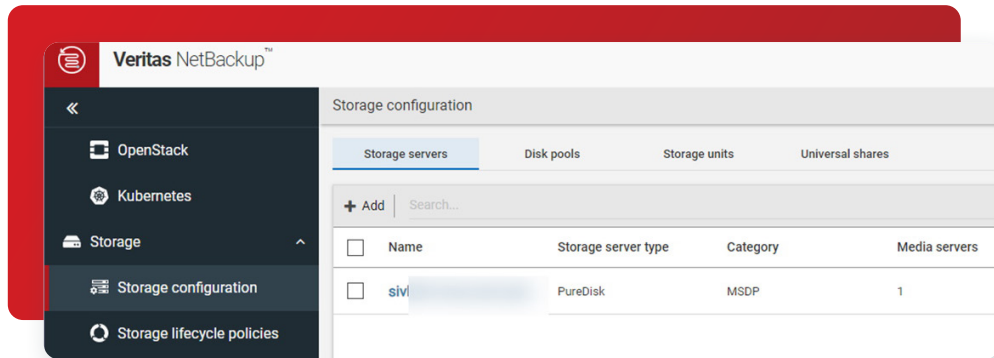
If new to NetBackup Recovery Vault you will need to create a disk pool and storage unit to back up the data you wish to copy to an alternate site. If you are already using NetBackup Recovery Vault, backed up data can be imported to an alternate site using Image Sharing. The example used in this document connects to NetBackup Recovery Vault in an Azure cloud environment. This document assumes the customer already has an MSDP storage server created at the primary site. For more information on how to add a storage

server, see the NetBackup Deduplication Guide:

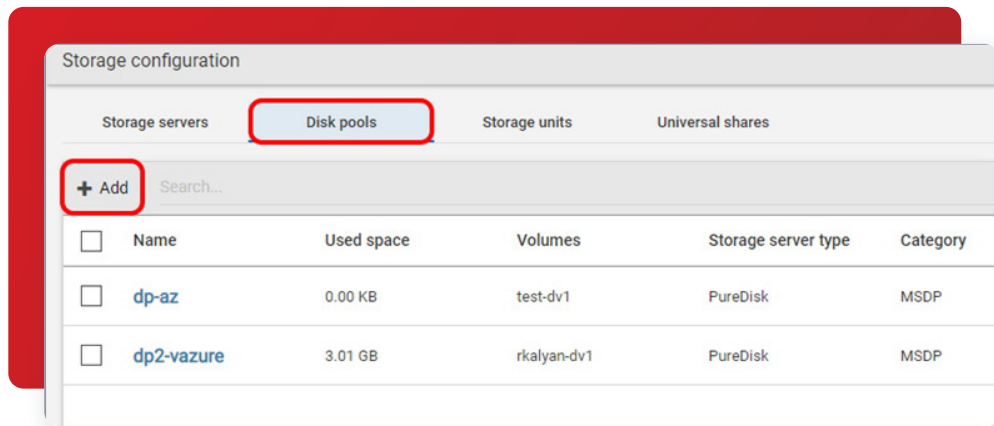
https://www.veritas.com/content/support/en_US/doc/25074086-146020141-0/v24630236-14602014.

1. To get started, from within your NetBackup primary server web UI, navigate to **Storage > Storage configuration**.

You should see your storage server(s) listed.

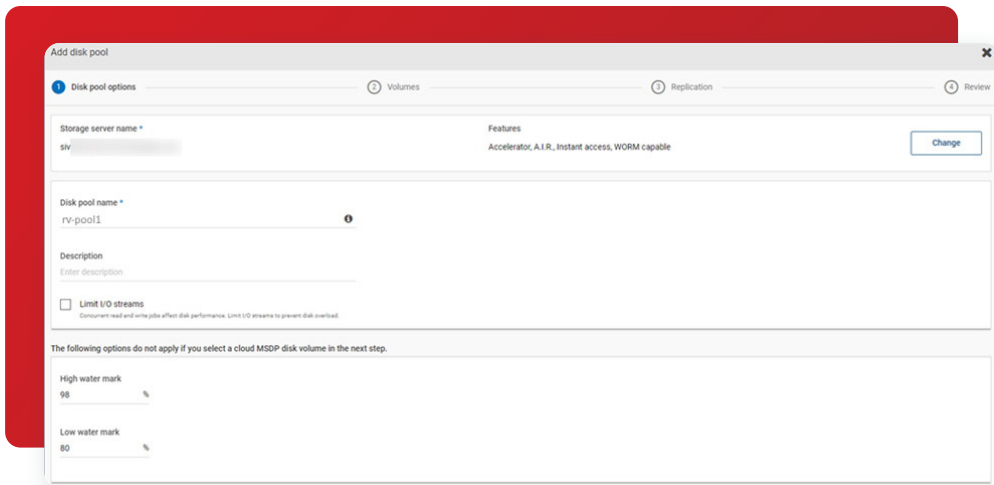


2. Click the **Disk pools** tab and then click **+ Add**.

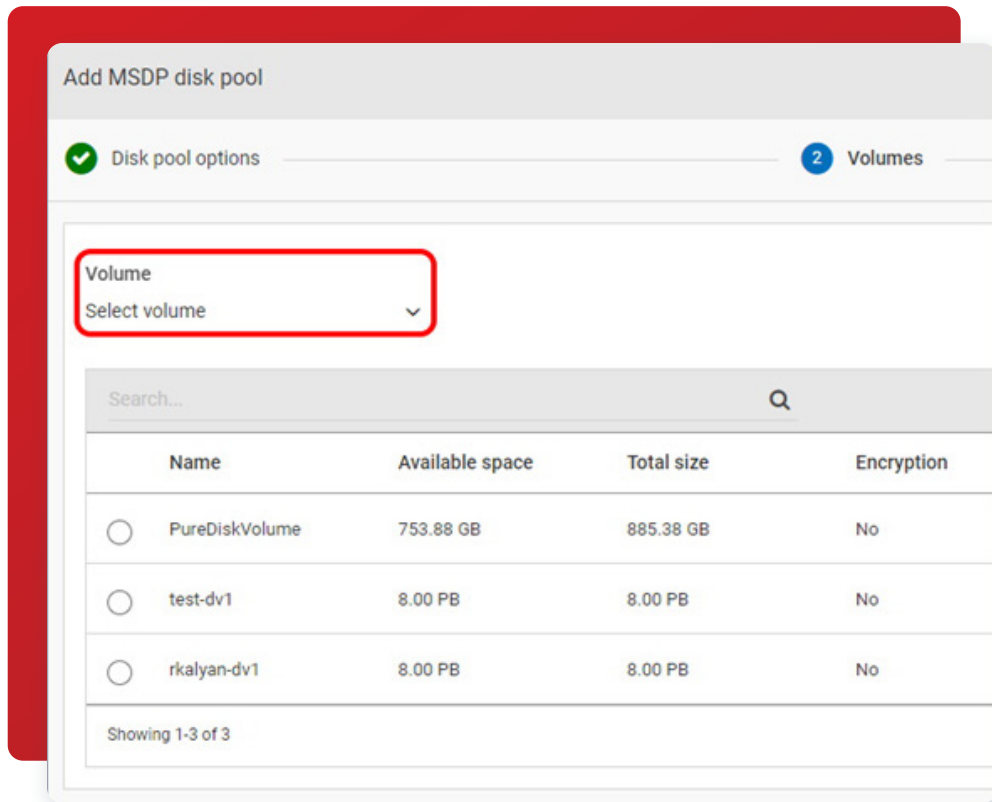


3. From this screen you will set the disk pool options:

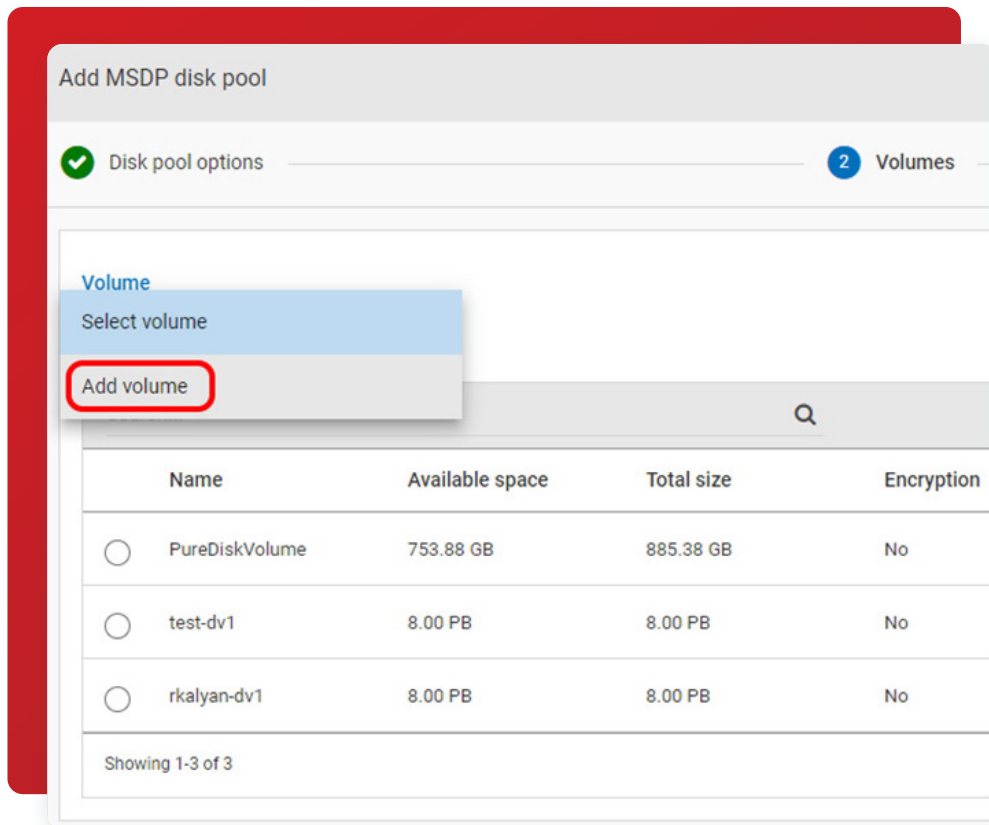
- Select the **Storage server name** where this disk pool will reside. In this example, we've chosen the storage server listed on the first screen.
- Provide a name for the disk pool. We've named it: **"rv-pool1"**.
- Provide a description of the pool, if needed.
- Select **Limit I/O streams**, if desired. This option could help limit disk I/O contention.
- Click **Next** at the bottom of the page to continue.



4. Next, you will need to define a new volume. From the Volumes page, you may already have volumes created (in the example screen below, there are three), but you will want to add a new one for NetBackup Recovery Vault, so click **Volume> Select volume**.

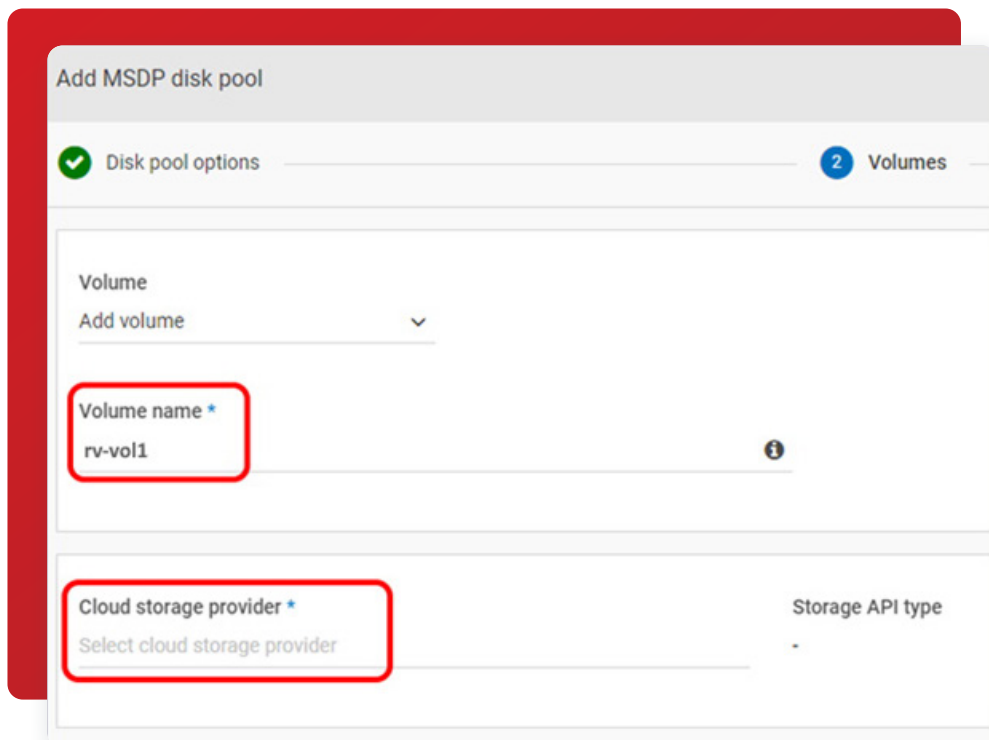


5. Click **Add volume** to begin the process.

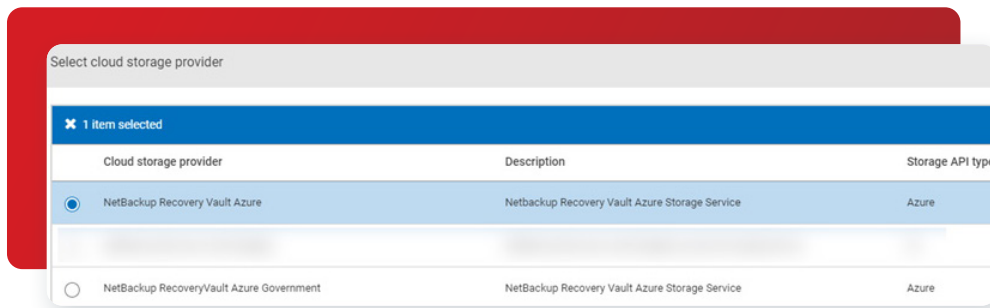


6. Provide a **Volume name** for the new volume and then click **Cloud storage provider**.

Note: The volume name at the primary site and the volume name at the alternate site must be the same.

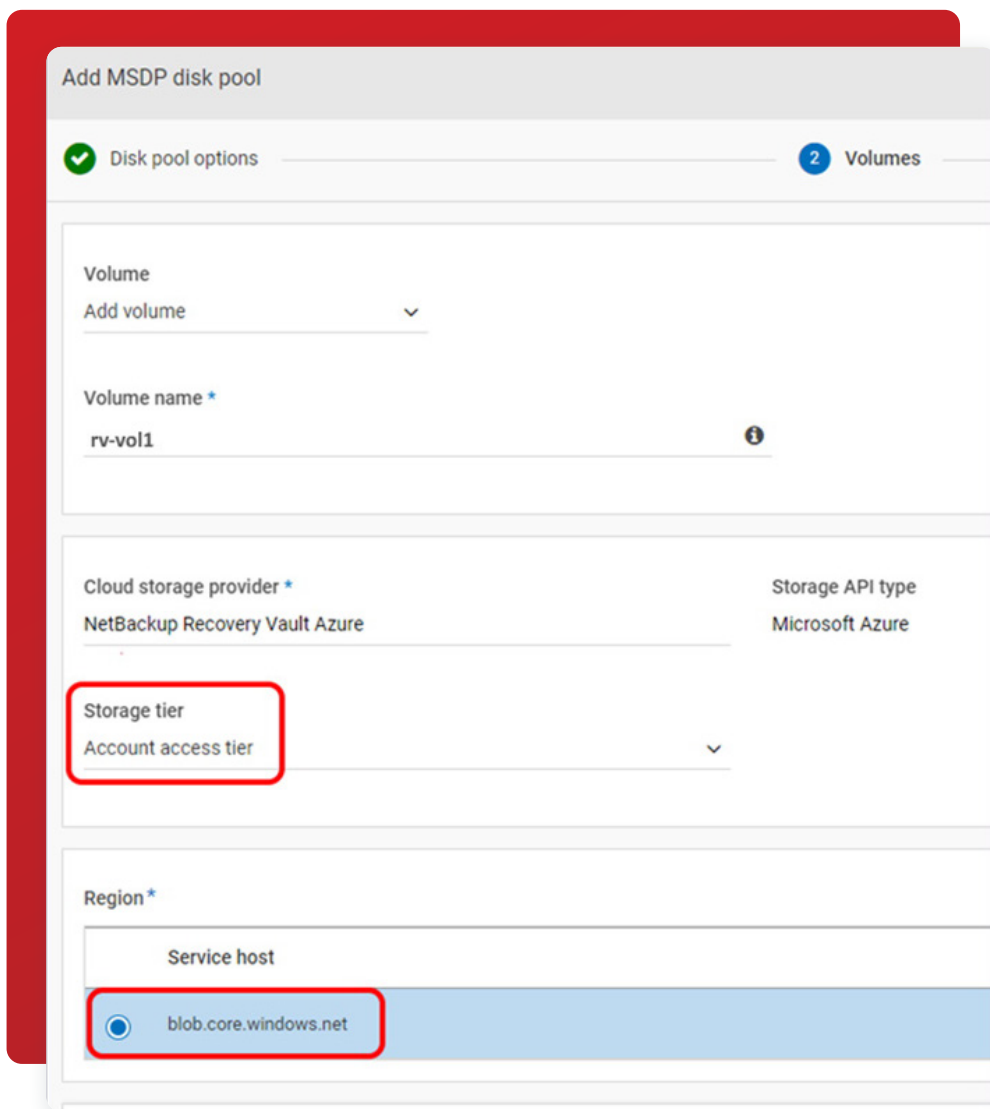


7. Search for "Netbackup Recovery Vault." In this example, we will choose NetBackup Recovery Vault Azure.



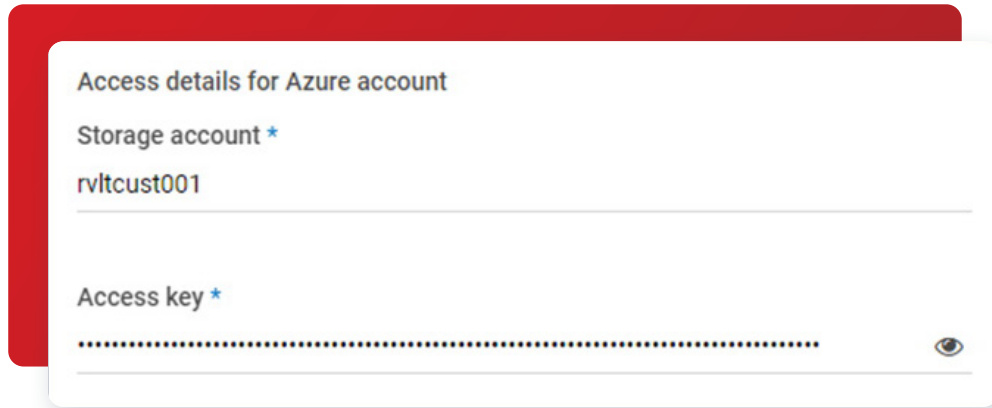
8. On the Add MSDP disk pool screen, select the appropriate Storage tier and Region to be used.

Note: The region is provided by the Veritas Recovery Vault Provisioning Team.



9. Next, enter the **Storage account** and **Access key**.

Note: The Veritas Recovery Vault Provisioning Team will provide these.




Access details for Azure account

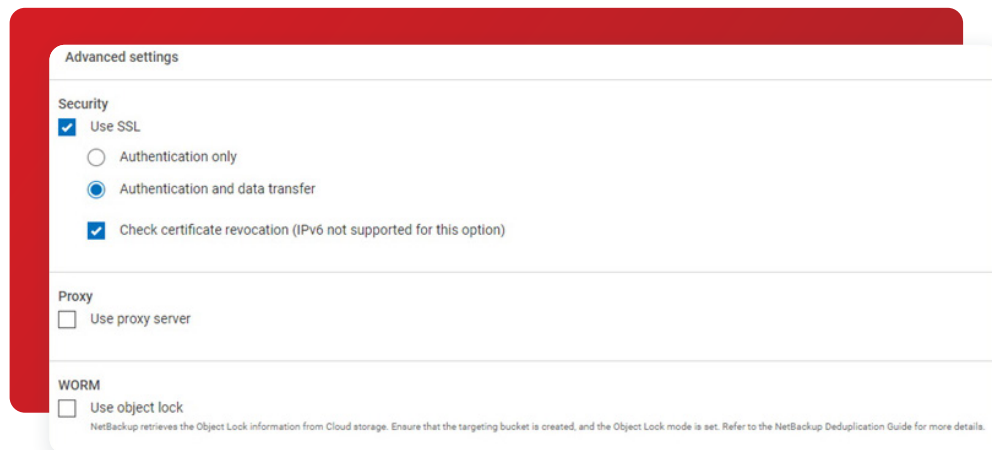
Storage account *

rvlrcust001

Access key *

..... 

10. Next, enter the required **Security**, **Proxy**, or **WORM** advanced settings preferences. Below are the default settings:



Advanced settings

Security

Use SSL

Authentication only

Authentication and data transfer

Check certificate revocation (IPv6 not supported for this option)

Proxy

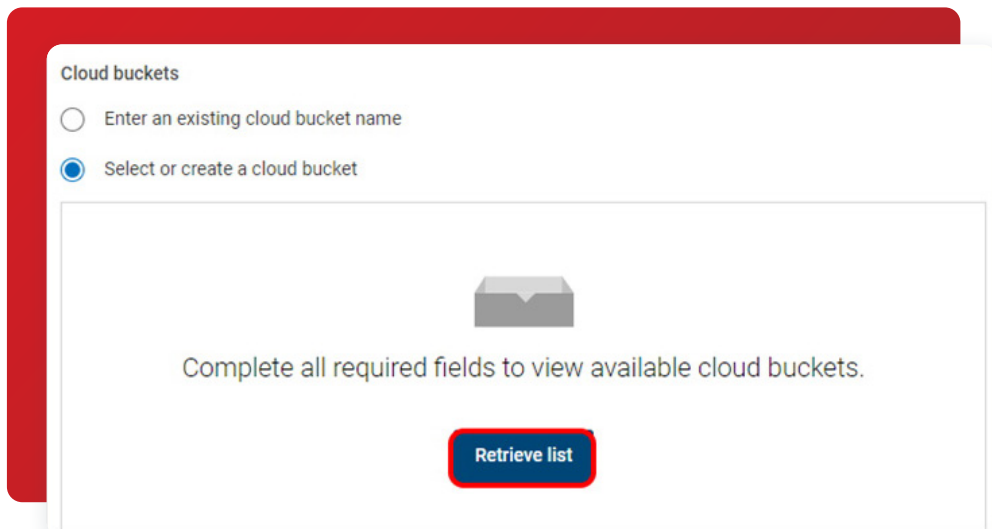
Use proxy server

WORM

Use object lock

NetBackup retrieves the Object Lock information from Cloud storage. Ensure that the targeting bucket is created, and the Object Lock mode is set. Refer to the NetBackup Deduplication Guide for more details.


11. Click **Select or create a cloud bucket** and then click **Retrieve list**. This process logs into your cloud storage provider (in this case Azure) using the credentials entered earlier and displays the new cloud bucket you created (with Microsoft Azure Storage Explorer or equivalent).



Cloud buckets

Enter an existing cloud bucket name

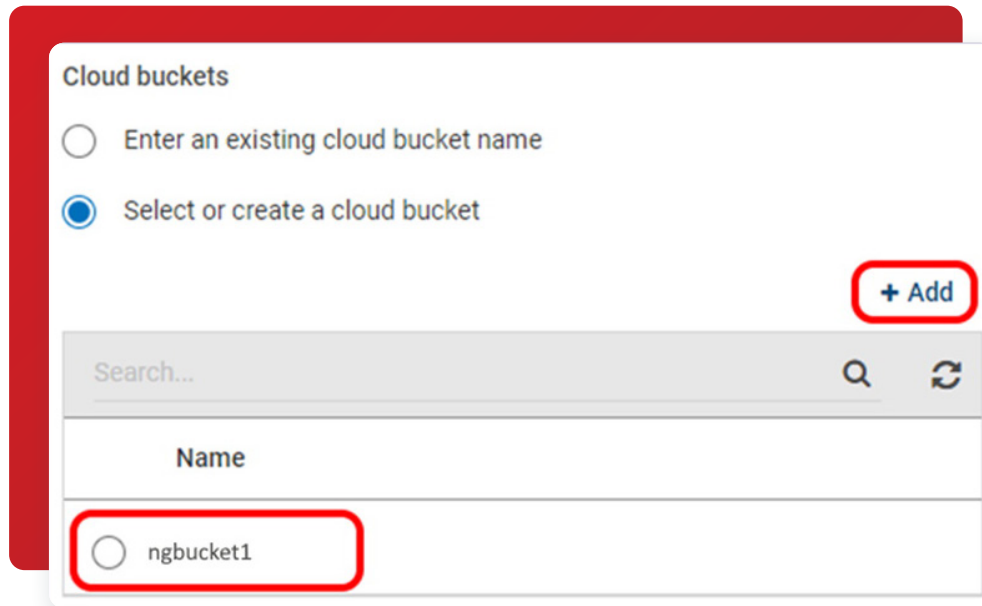
Select or create a cloud bucket



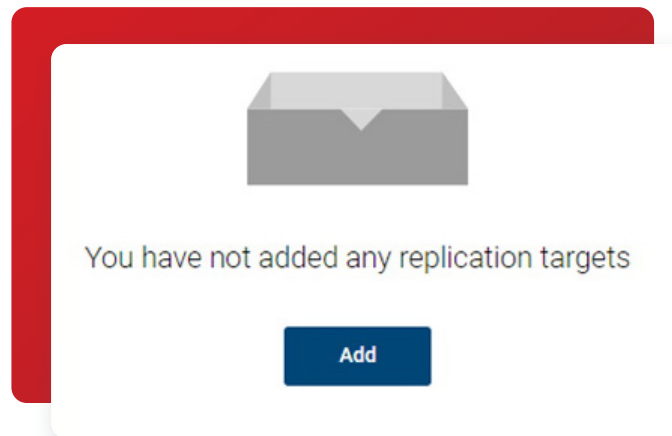
Complete all required fields to view available cloud buckets.

Retrieve list

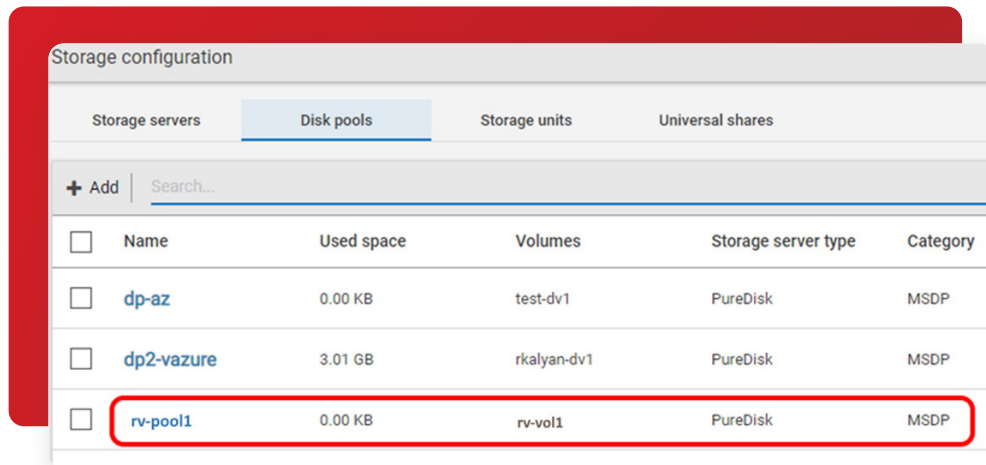
12. Select the new cloud storage bucket you created (with Microsoft Azure Storage Explorer or equivalent) from the list retrieved by NetBackup. You can also create a new bucket using the **+ Add** button after connecting to the new storage account. In our example, we are going to select **"ngbucket1"**. Of course, the name of your cloud bucket will be different, the one below is for reference only.



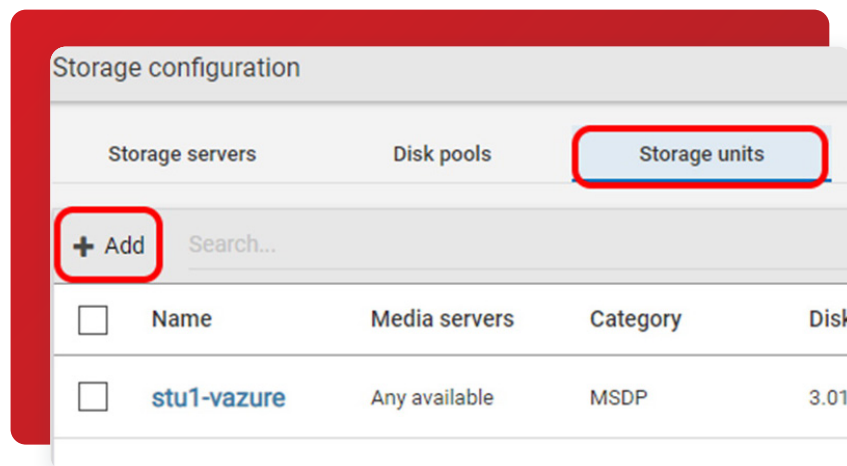
13. If you would like to set up replication targets, you can do that now. Otherwise, click Next (not shown in image below).



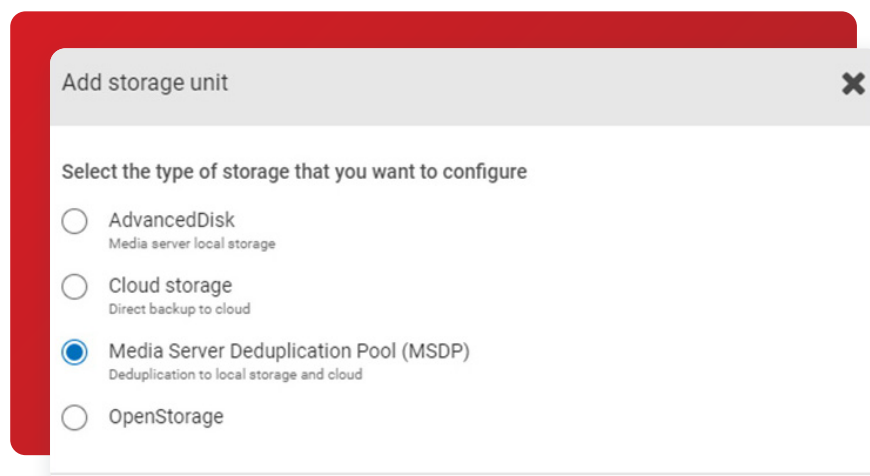
14. This brings you to the summary page. If everything looks good, you can create the new disk pool. In this example, we created the new "rv-pool1".



15. Next, you will need to add a storage unit, so you can use your new NetBackup Recovery Vault storage. Click the **Storage Units** tab and click + Add.



16. Select **Media Server Deduplication Pool (MSDP)** and click **Start**.



17. Provide the new MSDP storage unit a **Name** and select the **Maximum concurrent jobs** and **Maximum fragment size** you want. Click **Next** to continue.

Add MSDP storage unit

1 Basic properties

Name *
rv-stu1

Maximum concurrent jobs
1

Maximum fragment size
51200 MB

18. Select the NetBackup Recovery Vault volume you created earlier and then click **Next** to continue.

Add MSDP storage unit

Basic properties 2 Disk pool

Select a disk pool

Search...

Name	Used space	Volumes	Storage type	Storage server
<input type="radio"/> dp-az	0.00 KB of 8.00 PB use	test-dv1	PureDisk	si
<input type="radio"/> dp2-vazure	3.01 GB of 8.00 PB use	rkalyan-dv1	PureDisk	si
<input checked="" type="radio"/> rv-pool1	0.00 KB of 8.00 PB use	rv-vol1	PureDisk	si

Showing 1-3 of 3 (1 selected)

19. Select the media server you wish to use and then click **Next** to continue.

Add MSDP storage unit

Basic properties

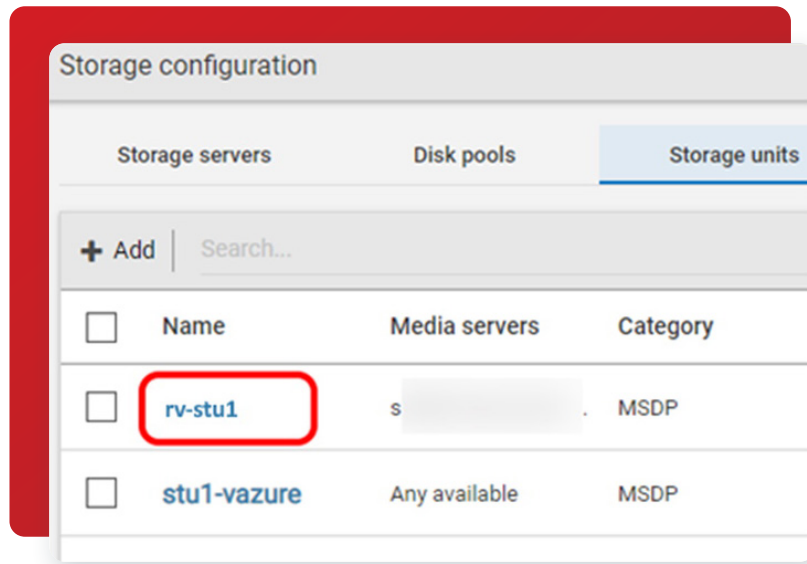
Select media server

Allow NetBackup to automatically select
 Manually select

Name

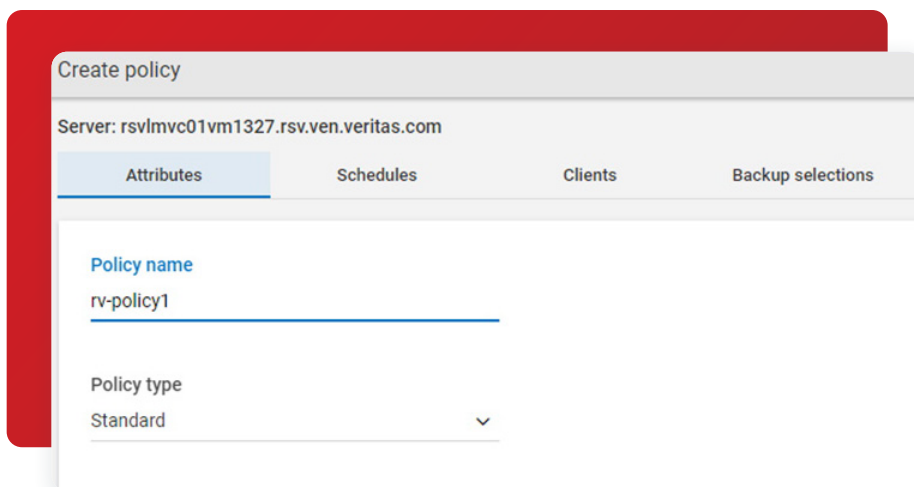
si

20. As shown, you can see the new “rv-stu1” storage unit was successfully created.



21. Next, you will need to create a backup policy so Image Sharing will have data that needs to be sent to your alternate site. Located under **Protection > Policies** you will **Create policy**:

- Name the policy.
- Choose the policy type.
- Create a schedule.
- Select the client(s) to be backed up.
- Choose what should be backed up on the clients.
- Click on Create when ready. (Not shown)

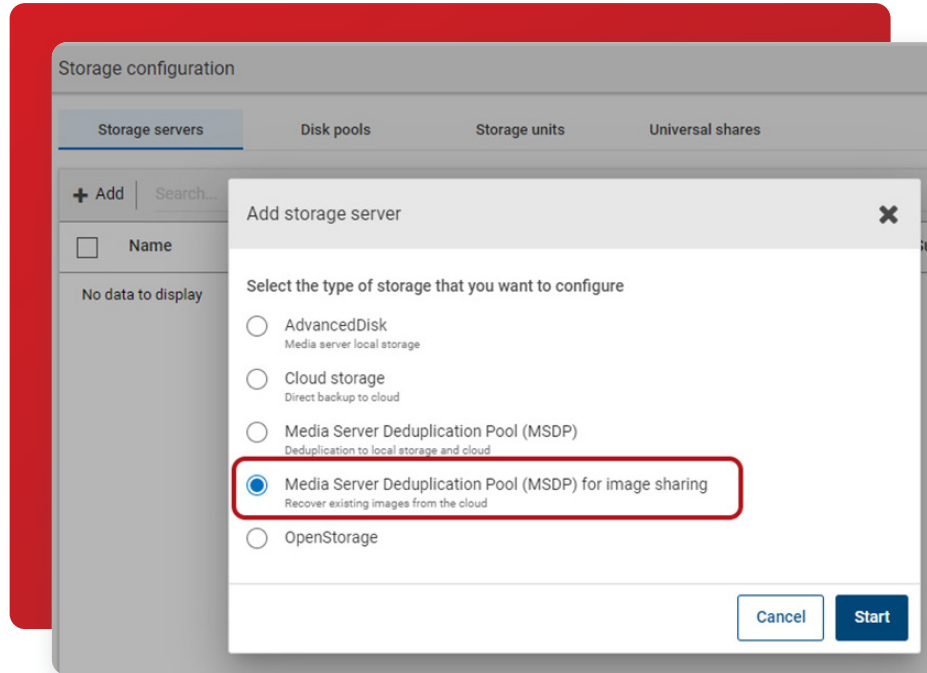


Running a Manual Backup in NetBackup Recovery Vault With Image Sharing

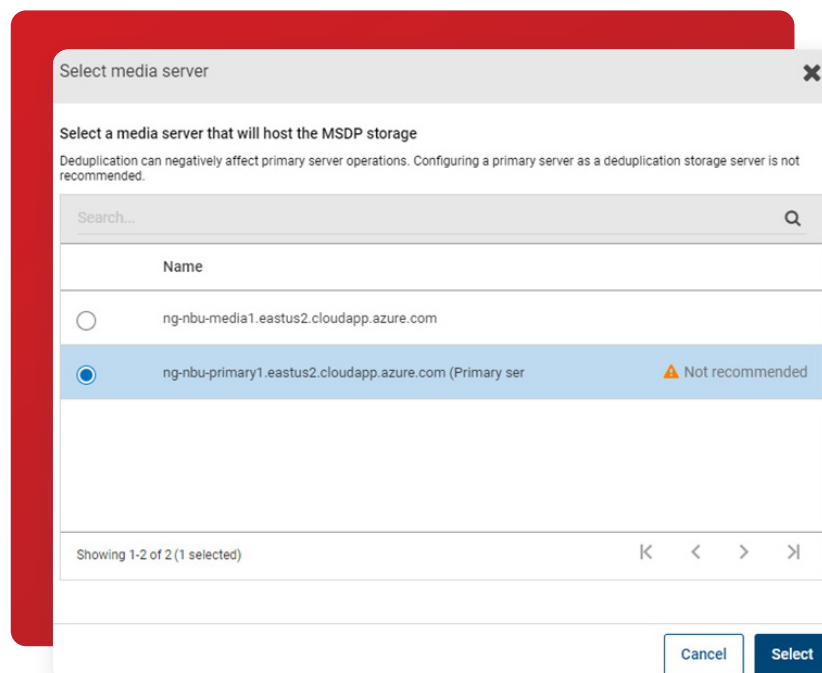
The next step is to take a manual backup to populate NetBackup Recovery Vault with the data you would like to copy to your alternate site. If you've already been using NetBackup Recovery Vault and have data backed up, this step is unnecessary.

Once the backup has run, the backup can be imported to the alternate site using Image Sharing. To do this:

1. Log onto the alternate site and create an MSDP with an Image Sharing storage server. Select **Media Server Deduplication Pool (MSDP) for image sharing** and click **Start**.



2. Next, select the **media server that will host the MSDP storage**. Traditionally, this is not a best practice but is mandatory for Image Sharing.



3. Enter the Storage server credentials: Username and Password.

The screenshot shows a configuration window titled "Add MSDP storage server for image sharing". It has two tabs: "1 Basic properties" (active) and "2 Storage server options". Under "Basic properties", there are three input fields: "Media server *" with the value "ng-nbu-primary1.eastus2.cloudapp.azure.com", "Storage server name" with the value "ng-nbu-primary1.eastus2.cloudapp.azure.com", and "Storage server credentials". Under "Storage server credentials", there are three fields: "Username *" with the value "bkadmin", "Password *" with masked characters ".....", and "Re-enter password *" with masked characters ".....".

4. Enter the storage path for the MSDP for Image Sharing. This does not have to be the same as the MSDP server at the primary site.

The screenshot shows the same configuration window, now on the "2 Storage server options" tab. The "Basic properties" tab is marked with a green checkmark. A red-bordered box highlights a warning message: "These attributes cannot be modified once the storage server is created." Below this, there are three sections: "Storage path *" with the value "/backups", "Use alternate path for deduplication database" with a sub-label "Enter alternate path for deduplication database" and a note "You can optimize performance if you place the deduplication database on a separate, faster disk storage system.", and "Use specific network interface" with a sub-label "Enter interface".

5. Once the MSDP for image sharing has been created you will need to create the disk pool.

Add disk pool

1 Disk pool options 2 Volumes

Storage server name *
ng-nbu-primary1.eastus2.cloudapp.azure.com

Features
Accelerator,

Disk pool name *
rv-pool1

6. Remember, when creating the volume at the alternate site, it must be the same name as the volume at the primary site.

Add MSDP disk pool

✓ Disk pool options 2 Volumes

Volume
Add volume

Volume name *
rv-vol1

7. Use the same cloud storage provider at the alternate site as you did at the primary site. In this example, we're using NetBackup Recovery Vault Azure.

Cloud storage provider *
NetBackup Recovery Vault Azure

Storage API type
Microsoft Azure

Storage tier
Account access tier

8. Use the same information you used at the primary site for Region and Account details.

The screenshot shows a form titled "Region*" with the following fields:

- Service host:** A dropdown menu with "blob.core.windows.net" selected.
- Access details for Azure account:**
 - Storage account*:** A text input field containing "nrv81rw0006acct1".
 - Access key*:** A text input field with a masked password (dots) and a toggle icon to show/hide the password.

9. Once the credentials have been entered, click on **Select or create a cloud bucket** and **Retrieve list** to get the list of storage buckets you have created.

The screenshot shows a form titled "Cloud buckets" with the following elements:

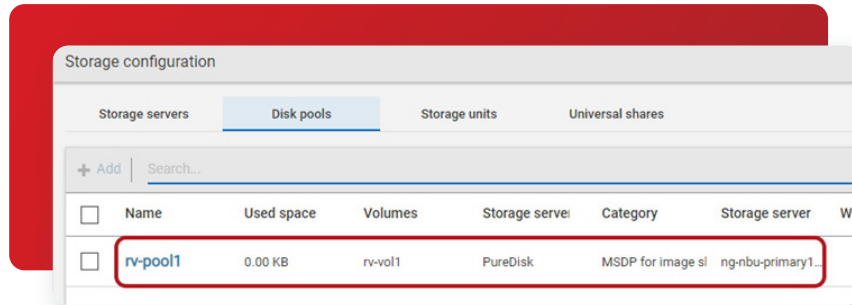
- Cloud buckets:** Two radio button options:
 - Enter an existing cloud bucket name
 - Select or create a cloud bucket
- Message:** "Complete all required fields to view available cloud buckets." with a folder icon above it.
- Retrieve list:** A blue button with white text.

10. Select the storage bucket that you've been using at the primary site.

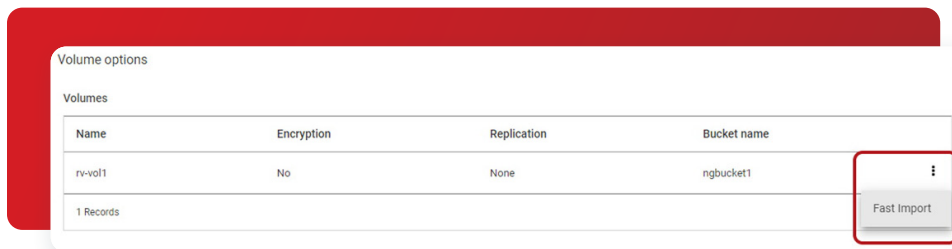
The screenshot shows the "Cloud buckets" list view with the following elements:

- Cloud buckets:** Two radio button options:
 - Enter an existing cloud bucket name
 - Select or create a cloud bucket
- Search:** A search input field with the placeholder text "Search...".
- Name:** A table header for the bucket list.
- Bucket List:** A list of buckets with radio button selection:
 - [Redacted bucket name]
 - ngbucket1

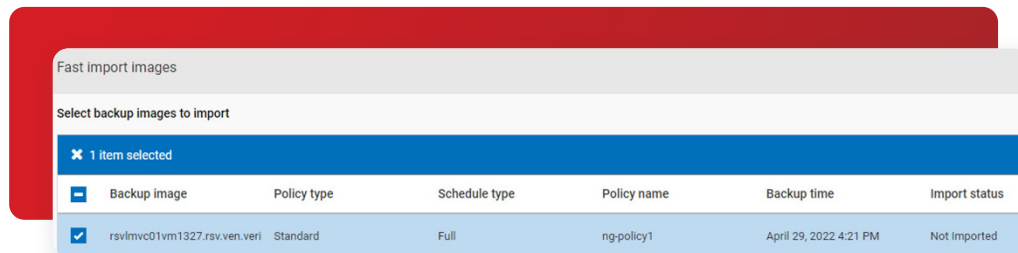
11. After the disk pool has been created, you can now import a backup from NetBackup Recovery Vault into your alternate primary server. Go to **Storage Configuration > Disk Pools** and click on the disk pool you just created.



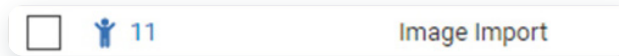
12. Under the **Volume options**, click on the three vertical dots and select **Fast Import**.



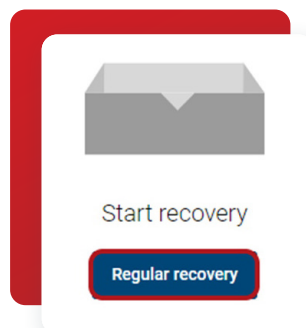
13. Select the backup you'd like to import and click on the Import button.



14. This will import the backup image, which can be browsed through NetBackup Recovery Vault to allow for file restores.

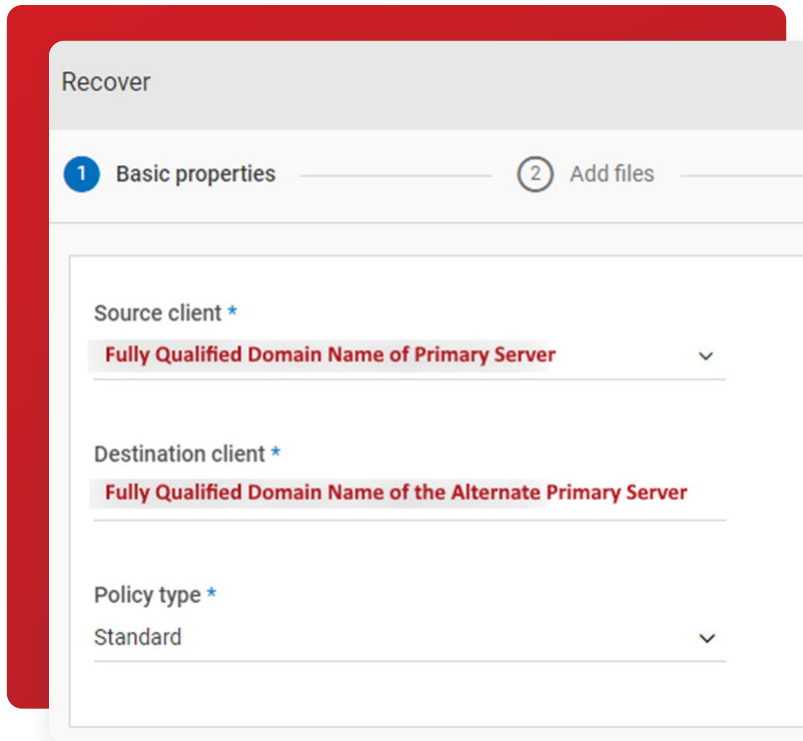


15. Under **Start recovery**, click on the **Regular recovery** button.



16. Then, enter the following information:

- a. Source Client - enter the fully qualified domain name of the primary server.
- b. Destination Client - enter the fully qualified domain name of the alternate primary server.
- c. Policy Type - select the policy type that was used to backup the data at the primary server.
For this example, it's Standard.



Recover

1 Basic properties 2 Add files

Source client *

Fully Qualified Domain Name of Primary Server

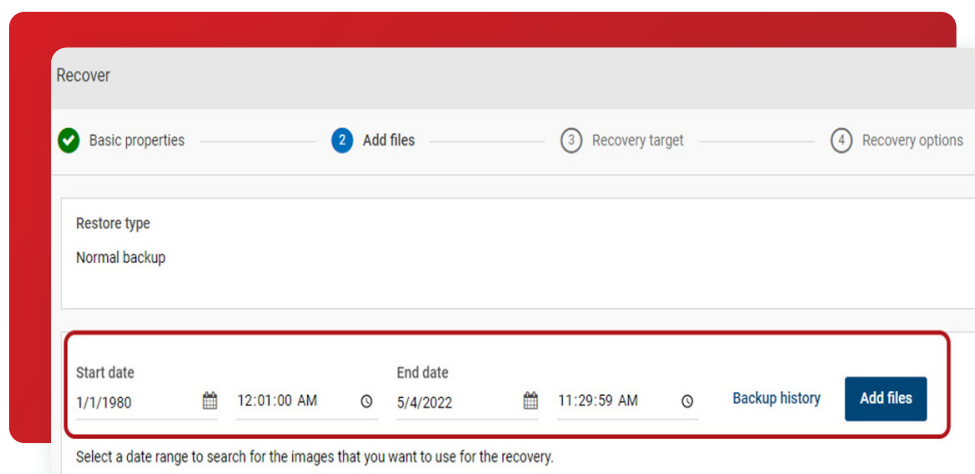
Destination client *

Fully Qualified Domain Name of the Alternate Primary Server

Policy type *

Standard

17. Enter the Start and End date and time of the backup. Then, click Add files.



Recover

Basic properties 2 Add files 3 Recovery target 4 Recovery options

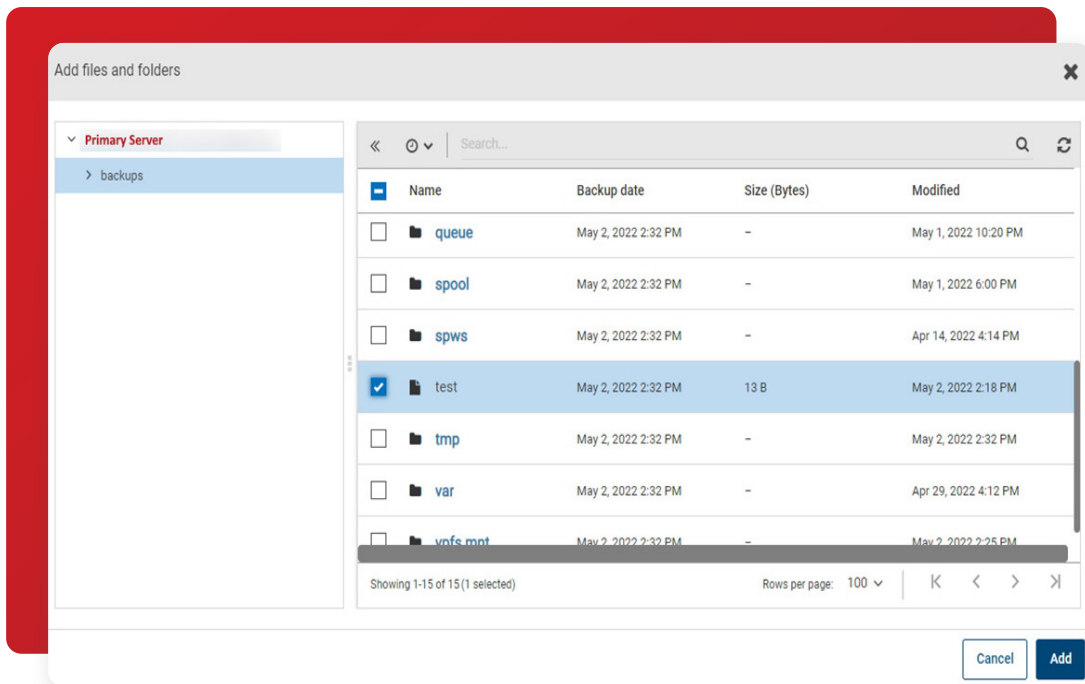
Restore type

Normal backup

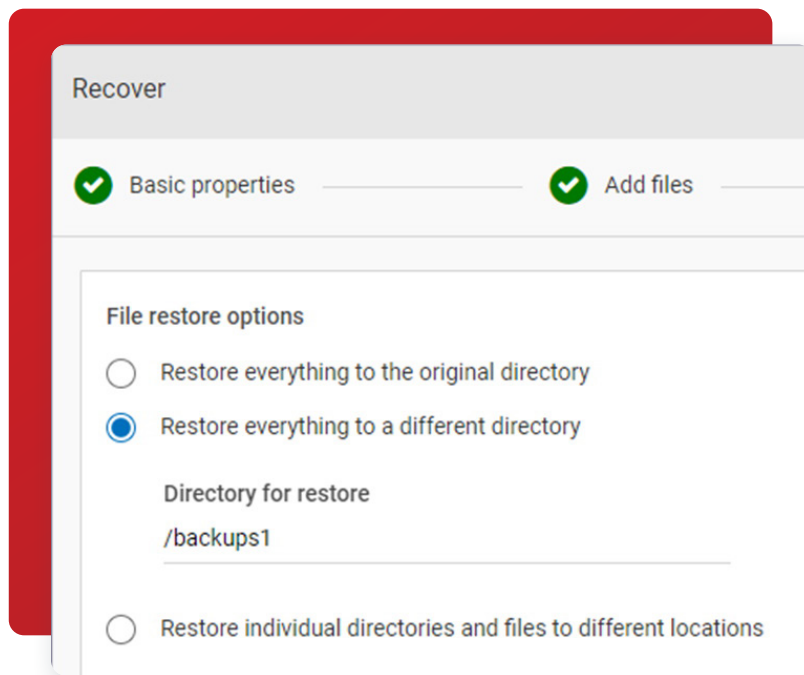
Start date 1/1/1980 12:01:00 AM 5/4/2022 11:29:59 AM Backup history Add files

Select a date range to search for the images that you want to use for the recovery.

18. The screen will display the backup data that's available. You can select what you'd like restored and click Add.



19. Enter where you'd like to restore the files. In this example, we're restoring the file(s) to an alternate location.



20. When you're happy with the restore selections, click on the Start Recovery button to begin the restore.



Conclusion

NetBackup Recovery Vault with Image Sharing simplifies the process of provisioning new storage in the cloud, reducing risk, enabling limitless scalability, lowering TCO, automating resiliency, and allowing for simple restores of critical data to an alternate NetBackup. With the easy-to-use UI, the management and monitoring of your cloud storage resources and retention policies, not to mention the provisioning of your storage and the protection of your data has never been easier.

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