



CDS vCenter Plugin User Guide

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Overview

The *CDS vCenter Plugin* integrates Commvault Distributed Storage (CDS) functionality into the VMware vSphere Client, a Web browser-based application that connects to the vCenter Server in order to manage a vSphere infrastructure.

Using the plugin, all operations can be performed from a single pane of glass using the vCenter user interface. You would otherwise have to continuously switch between CDS and vCenter.

The plugin includes the following features:

- *Storage management*: The plugin provides simplified Virtual Disk functions, such as creation, mounting to an ESXi host, resizing, deletion, and mounting to additional ESXi hosts.
- *VM management*: The plugin adds CDS management functions to the VMware menu, such as the VM-related operations of managing snapshots.

Here are a few general guidelines and caveats for the plugin:

- The plugin currently supports operations only for NFS Virtual Disks.
- You can currently manage operations for only one storage cluster at a time using the plugin.
- If you use both the CDS plugin snapshot feature and the native VMware snapshot operations on the same VM, there could be inconsistencies in the VM state. The CDS software will identify any VMware snapshots and will then generate an error message to prevent you from creating CDS snapshots on that same VM.
- Linked clones are not supported. Instead, you can use full clones.
- Cold migration is not supported.
- NFS 4.0 datastores cannot be created in the plugin, but can be created in the CDS WebUI and then exported to the plugin.
- Scheduling of snapshots on VMs residing on NFS 4.0 datastores is not supported.

Prerequisites

Note the following prerequisites when using the plugin.

- [Supported vCenter Appliance versions](#)
- [Backend cluster requirement](#)
- [Registration with VCP Credentials](#)
- [Setting up multiple vCenters](#)

Supported vCenter Appliance versions

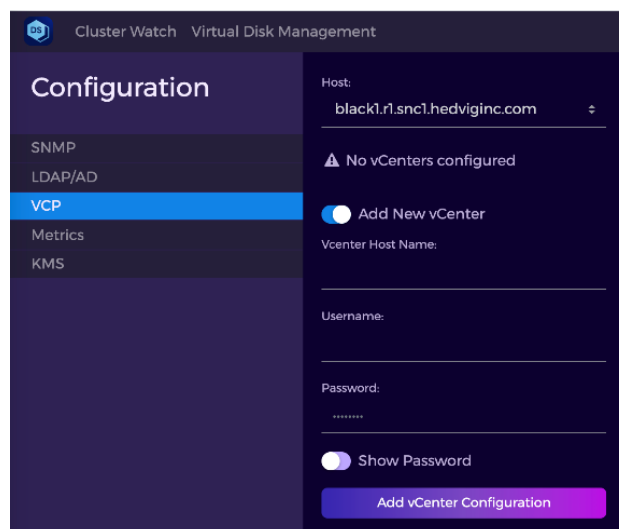
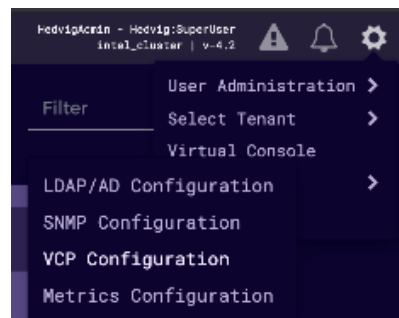
The plugin supports vCenter Appliance 6.7 Update 3j (6.7.0.45000) and above.

Backend cluster requirement

The backend cluster must be HTTPS enabled.

Registration with VCP credentials

Registration with VCP credentials is done in the CDS WebUI. Select **User -> Configuration -> VCP Configuration**, and complete the **VCP Configuration** dialog.



Setting up multiple vCenters

To connect multiple vCenters to the same storage cluster that is using the plugin, follow these steps.

1. Go to the **Configuration** section of the CDS WebUI, and select **VCP**.

Cluster Watch Virtual Disk Management

Configuration

- SNMP
- LDAP/AD
- VCP**
- Metrics
- KMS

Host: black1.r1.snc1.hedviginc.com

⚠ No vCenters configured

Add New vCenter

Vcenter Host Name: _____

Username: _____

Password: _____

Show Password

Add vCenter Configuration

2. Select **Add New vCenter**, enter the **Vcenter Host Name**, **Username**, and **Password**, and select **Add vCenter Configuration**.

Cluster Watch Virtual Disk Management

Configuration

- SNMP
- LDAP/AD
- VCP**
- Metrics
- KMS

Host: black1.r1.snc1.hedviginc.com

⚠ No vCenters configured

Add New vCenter

Vcenter Host Name: vcenterhostname

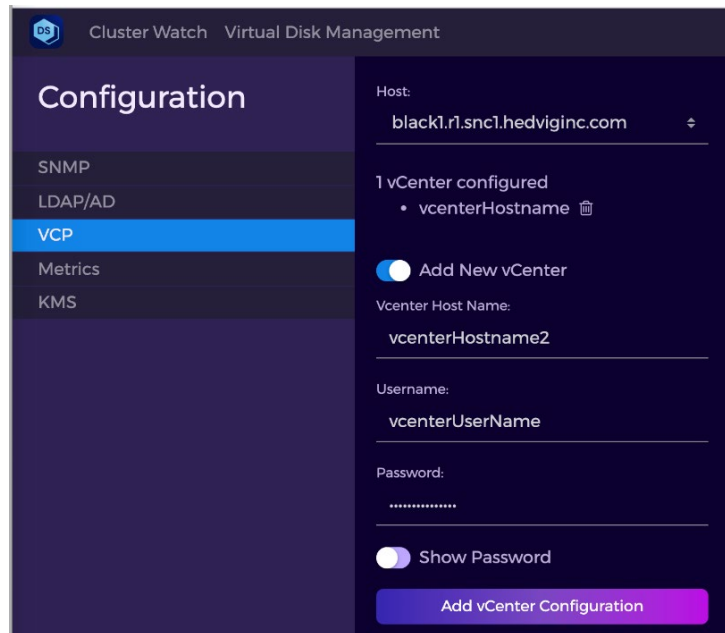
Username: VcenterUsername

Password: *****

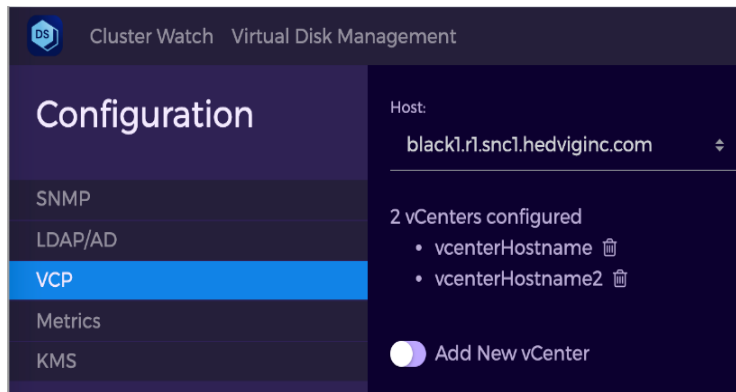
Show Password

Add vCenter Configuration

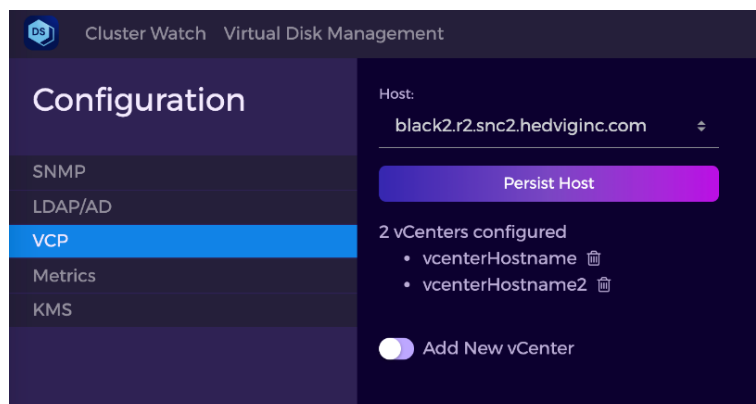
- To add a second vCenter, again select **Add New vCenter**, enter the second **Vcenter Host Name**, **Username**, and **Password**, and select **Add vCenter Configuration**.



- Notice that there are now 2 vCenters configured.

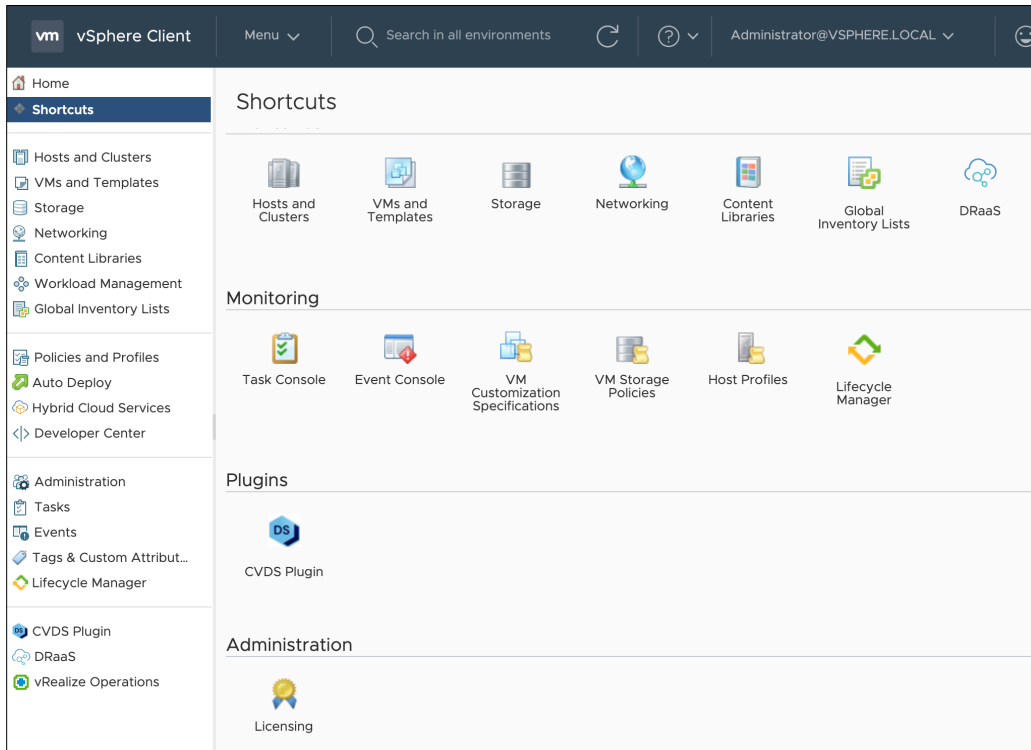


- If you want to persist the host, choose a different host, and select **Persist Host**.

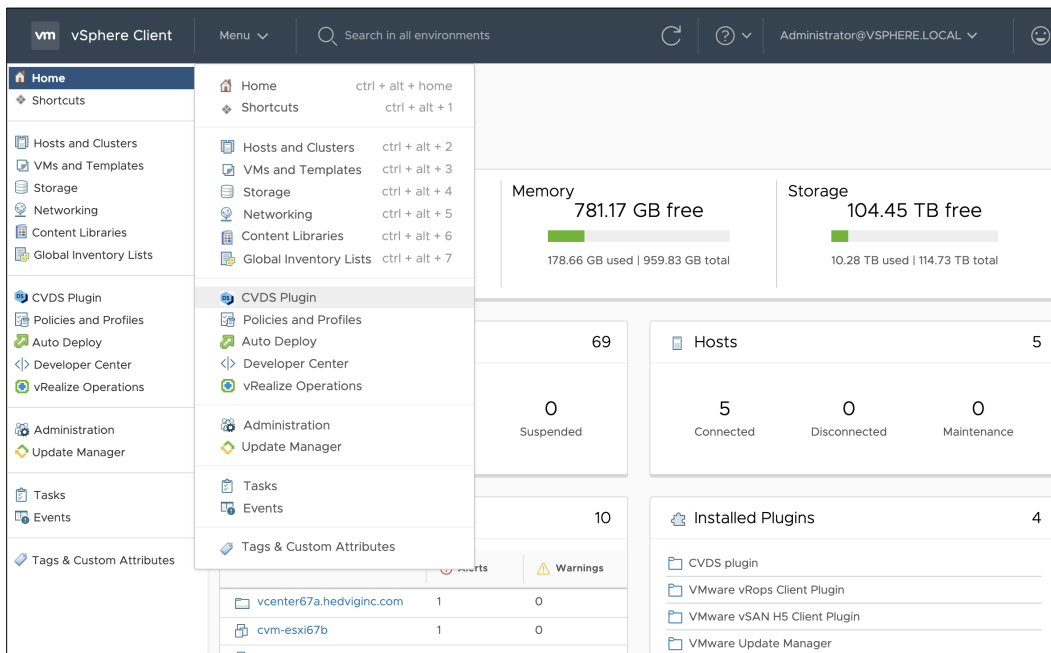


Logging into the plugin

After you have installed the plugin, the CDS Plugin icon is displayed on the home page.



You can also view it from the vSphere Client menu.



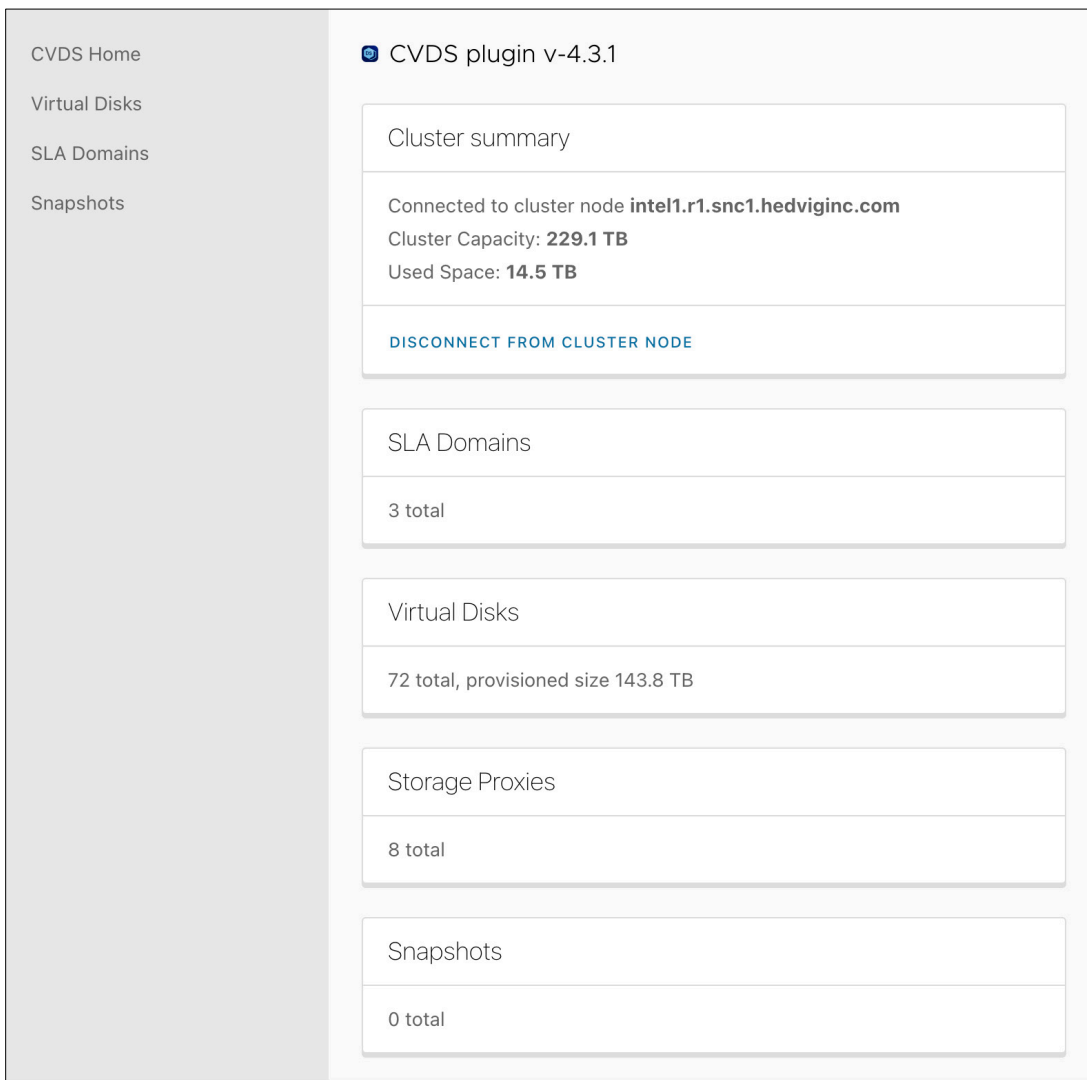
When you select the icon, the login page connects the plugin with your storage cluster.



The image shows a login form titled "Connect to cluster". It features a blue icon with the letters "CDS" to the left of the title. Below the title are two input fields: "Username" and "Password". At the bottom of the form is a blue button labeled "LOG IN".

CDS Home page

The CDS Home page displays a summary of your storage cluster and the plugin.

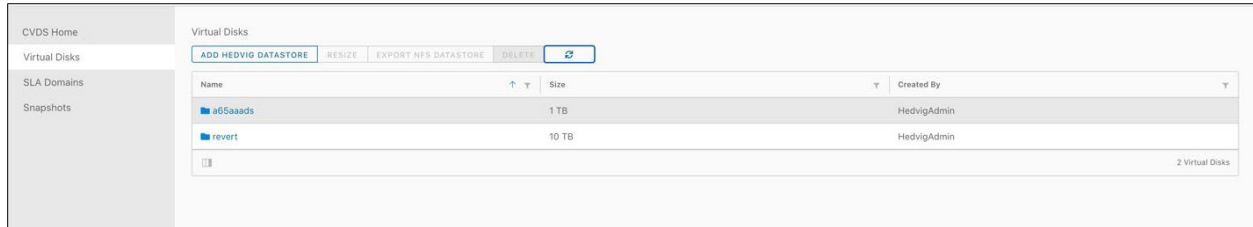


The image shows the CDS Home page dashboard. On the left is a sidebar with navigation links: "CVDS Home", "Virtual Disks", "SLA Domains", and "Snapshots". The main content area is titled "CVDS plugin v-4.3.1" and contains several summary cards:

- Cluster summary**: Connected to cluster node **intel1.r1.snc1.hedviginc.com**. Cluster Capacity: **229.1 TB**. Used Space: **14.5 TB**. A blue link "DISCONNECT FROM CLUSTER NODE" is visible below the summary.
- SLA Domains**: 3 total
- Virtual Disks**: 72 total, provisioned size 143.8 TB
- Storage Proxies**: 8 total
- Snapshots**: 0 total

Virtual Disks page

When you select Virtual Disks, all NFS Virtual Disks provisioned on the storage cluster are displayed.



From this page, you can create and view the Virtual Disks associated with your storage cluster.

Adding a Hedvig Datastore

You have options when creating a Hedvig Datastore. The following sections describe how to create various Virtual Disks, from within the plugin.

- [Creating a Data Center Aware Virtual Disk](#)
- [Creating a Compressed Data Center Aware Virtual Disk](#)
- [Creating a Deduplication-enabled Data Center Aware Virtual Disk](#)
- [Creating an Encrypted, Deduplication-enabled Data Center Aware Virtual Disk](#)
- [Creating a Rack Aware Virtual Disk](#)
- [Creating a Rack Aware Virtual Disk on another Data Center](#)
- [Creating a Virtual Disk and exporting with the DRS Cluster option](#)

Creating a Data Center Aware Virtual Disk

1. Create the Virtual Disk, selecting **Replication** as the **Protection Policy**, selecting **DataCenterAware** as the **Replication Policy**, and selecting the appropriate **Data Centers**.

The screenshot shows the 'Create Virtual Disk' configuration screen. On the left, a sidebar titled 'Add Hedvig Datastore' has 'Create Virtual Disk' selected. The main area is titled 'Create Virtual Disk' and contains the following fields and options:

- Name:** a65aaads
- Size:** 1
- Unit:** TB
- Encrypted:**
- Deduplication:**
- Protection Policy:** REPLICATION (selected), ERASURE CODING
- Compressed:**
- Client-side Caching:**
- Replication Policy:** DataCenterAware
- Replication Factor:** 3
- Residence:** HDD (selected), FLASH
- Data Centers:**
 - snc1
 - snc2
 - snc3

At the bottom right, there are 'CANCEL' and 'NEXT' buttons.

2. Export the datastore.

The screenshot shows the 'Export datastore' configuration screen. On the left, a sidebar titled 'Add Hedvig Datastore' has 'Export datastore' selected. The main area is titled 'Export datastore' and contains the following fields and options:

- Export NFS Datastore for Virtual Disk:** a65aaads
- Datastore Name:** a65aaads
- Target (HSP):** cvm-esxi6q.hedviginc.com
- Select an entity type, which requires access to the datastore:** ESXI HOST (selected), DRS CLUSTER
- ESXi Host Name:** esxi65a.hedviginc.com
- This will create NFS export /exports/a65aaads on the selected Hedvig Storage Proxy.**
- Use the internal vSwitch to mount the NFS exports:**

At the bottom right, there are 'CANCEL', 'BACK', and 'NEXT' buttons.

3. View the **Add Hedvig Datastore Summary**.

The screenshot shows a wizard interface for adding a Hedvig datastore. On the left, a vertical sidebar lists the steps: 'Create Virtual Disk', 'Export datastore', 'Summary', and 'Progress'. The 'Summary' step is currently selected and highlighted. The main content area is titled 'Summary' and contains a list of four items:

1. Virtual disk **a65aaads** will be created.
2. Datastore **a65aaads** will be created.
3. Datastore will be accessible from ESXi Host **esxi65a.hedviginc.com**.
4. Export **/exports/a65aaads** will be created on **cvm-esxi6q.hedviginc.com** Storage Proxy.

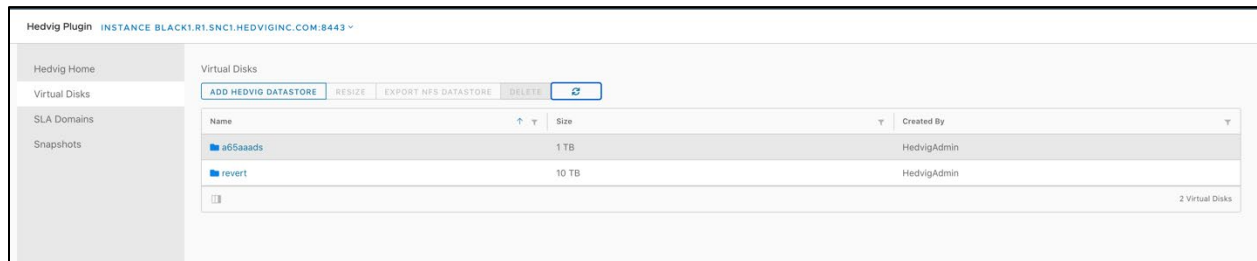
At the bottom right of the main area, there are three buttons: 'CANCEL', 'BACK', and 'NEXT'.

4. View the **Progress**.

The screenshot shows the same wizard interface, but now the 'Progress' step is selected and highlighted in the sidebar. The main content area is titled 'Progress' and displays a green progress bar with a checkmark icon and the text 'Completed successfully'.

At the bottom right of the main area, there are three buttons: 'CANCEL', 'BACK', and 'FINISH'.

- Return to the Virtual Disks page to see that your newly created Virtual Disk has been added.

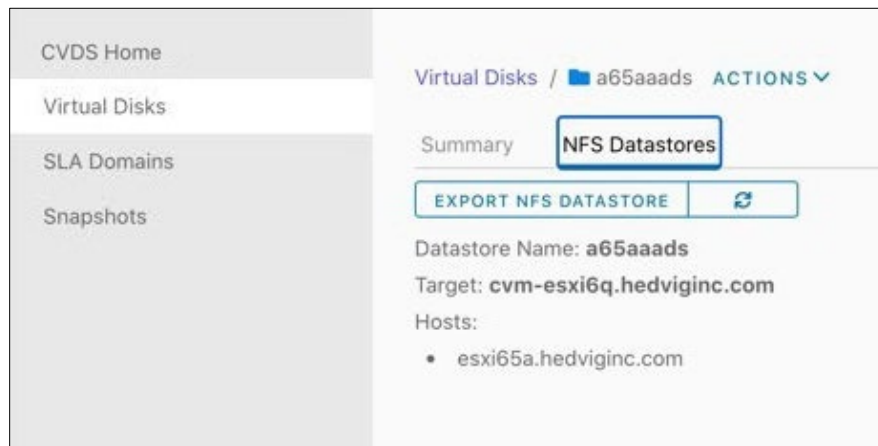


- Review the **Virtual Disks Summary** for your Virtual Disk.

The screenshot shows the 'Virtual Disks Summary' page for the 'a65aaads' disk. The breadcrumb is 'Virtual Disks / a65aaads ACTIONS'. The left sidebar has 'Virtual Disks' selected. The main area shows the following summary details:

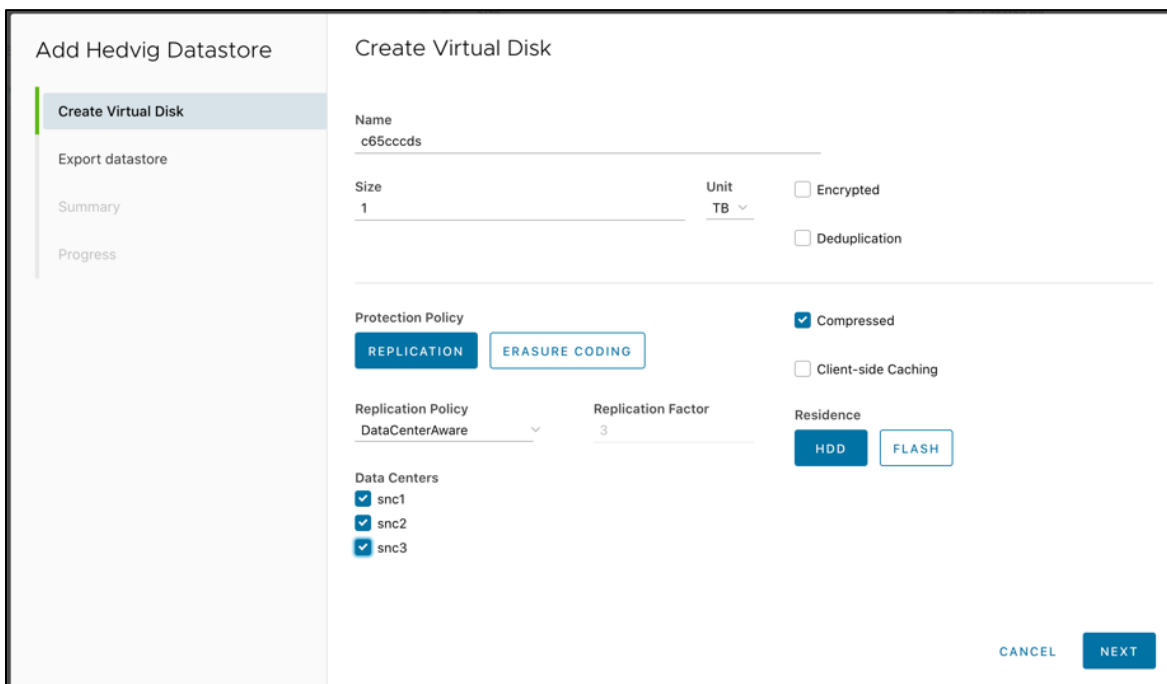
- Summary** | NFS Datastores
- Name:** a65aaads
- Block Size:** 512
- Cache Enabled:** No
- Clustered File System:** Yes
- Compressed:** No
- Controller:** cvm-esxi6q.hedviginc.com
- Created At:** 30-9-2020 18:36:22:052
- Created By:** HedvigAdmin
- Data Centers:** snc1, snc3, snc2
- Deduplication:** No
- Encryption:** No
- Exported Block Size:** 512
- Frozen:** No
- Has Clones:** No
- Is Clone:** No
- Mode:** Normal
- NFS Version:** 3
- OpenStack:** No
- Replication Factor:** 3
- Replication Policy:** DataCenterAware
- Residence:** HDD
- SCSI Serial Number:** 21
- Scsi3Pr:** No
- Size:** 1 TB
- Tenant:** Hedvig
- Version Counter:** 1
- Workload Type:** VIRTUALIZATION

- Review the **NFS Datastores** information to see the new datastore.



Creating a Compressed Data Center Aware Virtual Disk

- Create the Virtual Disk, selecting **Compressed** from the options, in addition to the previous options for Data Center Aware.



2. Export the datastore.

Add Hedvig Datastore

- Create Virtual Disk
- Export datastore**
- Summary
- Progress

Export datastore

Export NFS Datastore for Virtual Disk
c65cccds

Datastore Name
c65cccds

Target (HSP)
cvm-esxi6q.hedviginc.com

Select an entity type, which requires access to the datastore.

ESXI HOST DRS CLUSTER

ESXi Host Name
esxi65c.hedviginc.com

This will create NFS export **/exports/c65cccds** on the selected Hedvig Storage Proxy.

Use the internal vSwitch to mount the NFS exports.

CANCEL BACK NEXT

3. View the **Add Hedvig Datastore Summary**.

Add Hedvig Datastore

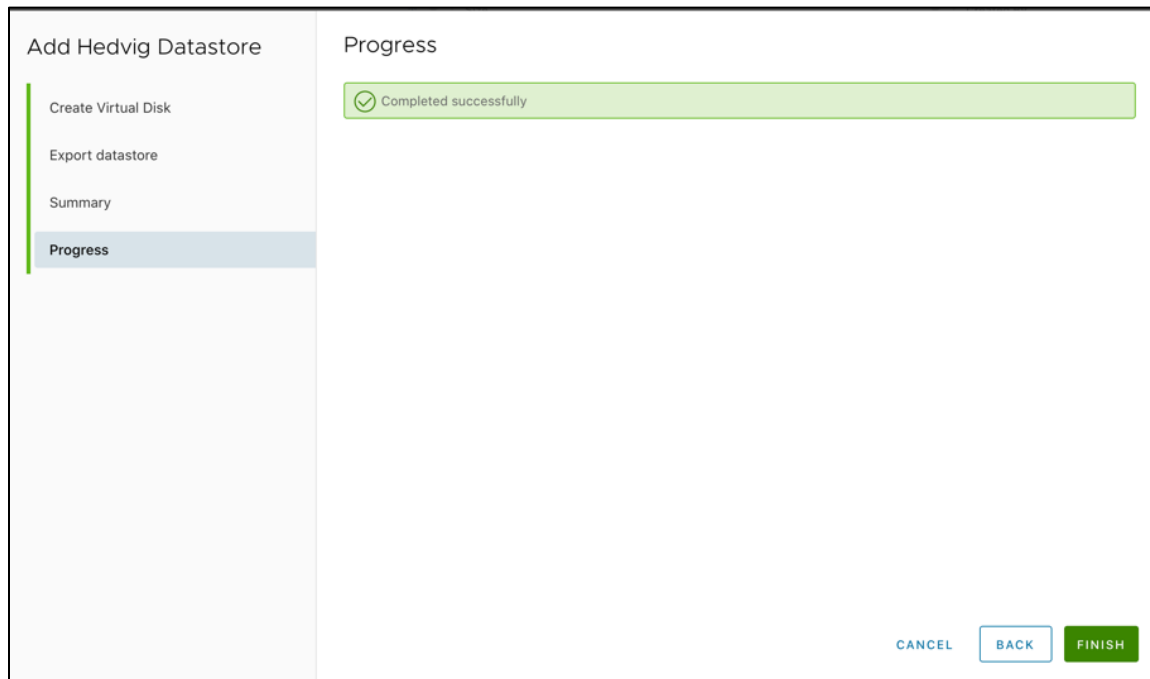
- Create Virtual Disk
- Export datastore
- Summary**
- Progress

Summary

- Virtual disk **c65cccds** will be created.
- Datastore **c65cccds** will be created.
- Datastore will be accessible from ESXi Host **esxi65c.hedviginc.com**.
- Export **/exports/c65cccds** will be created on **cvm-esxi6q.hedviginc.com** Storage Proxy.

CANCEL BACK NEXT

4. View the **Progress**.



Creating a Deduplication-enabled Data Center Aware Virtual Disk

1. Create the Virtual Disk, selecting **Deduplication** from the options, in addition to the previous options for Data Center Aware. Notice that **Compressed** is automatically selected, as well.

The screenshot shows the 'Create Virtual Disk' configuration screen. On the left, a sidebar titled 'Add Hedvig Datastore' has 'Create Virtual Disk' selected. The main panel is titled 'Create Virtual Disk' and contains the following fields and options:

- Name:** d65ddddd
- Size:** 1, **Unit:** GB
- Encrypted
- Deduplication
- Protection Policy:** REPLICATION (selected), ERASURE CODING
- Compressed
- Client-side Caching
- Replication Policy:** DataCenterAware
- Replication Factor:** 3
- Residence:** HDD (selected), FLASH
- Data Centers:**
 - snc1
 - snc2
 - snc3

Buttons for 'CANCEL' and 'NEXT' are located at the bottom right.

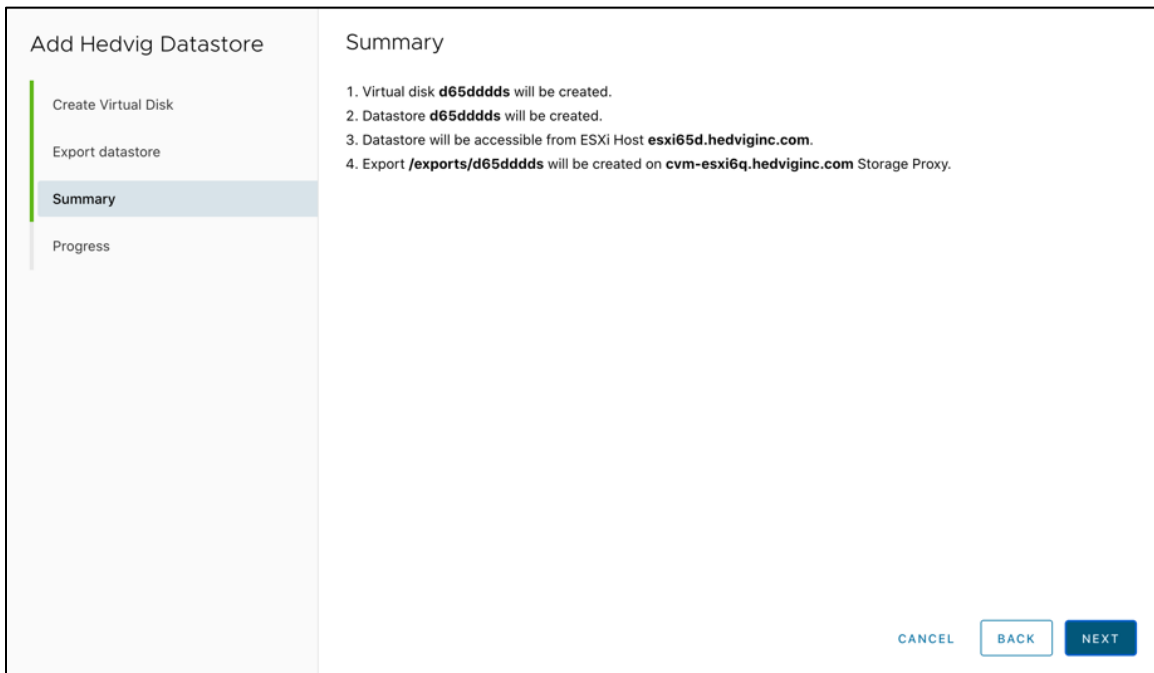
2. Export the datastore.

The screenshot shows the 'Export datastore' configuration screen. On the left, the sidebar 'Add Hedvig Datastore' has 'Export datastore' selected. The main panel is titled 'Export datastore' and contains the following fields and options:

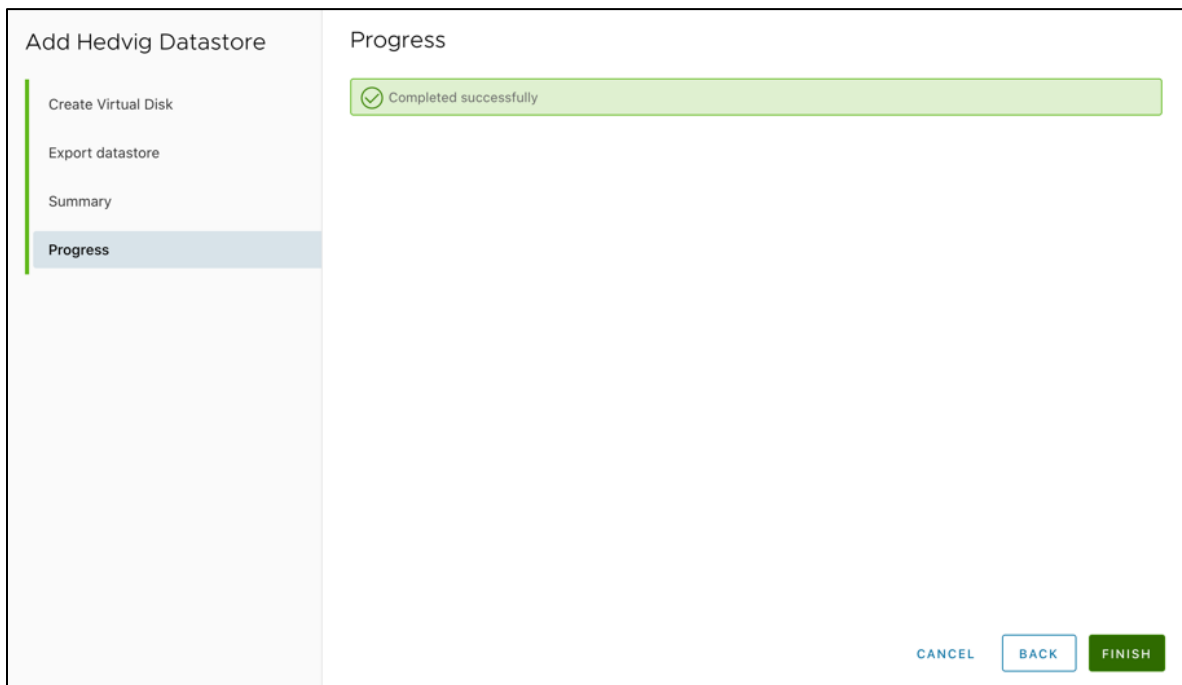
- Export NFS Datastore for Virtual Disk:** d65ddddd
- Datastore Name:** d65ddddd
- Target (HSP):** cvm-esxi6q.hedviginc.com
- Select an entity type, which requires access to the datastore:**
 - ESXI HOST
 - DRS CLUSTER
- ESXi Host Name:** esxi65d.hedviginc.com
- This will create NFS export /exports/d65ddddd on the selected Hedvig Storage Proxy.**
- Use the internal vSwitch to mount the NFS exports.

Buttons for 'CANCEL', 'BACK', and 'NEXT' are located at the bottom right.

3. View the **Add Hedvig Datastore Summary**.



4. View the **Progress**.



5. Review the **Virtual Disks Summary** for your Virtual Disk.

CVDS Home

Virtual Disks

SLA Domains

Snapshots

Virtual Disks / ■ d65ddddd ACTIONS ▾

Summary NFS Datastores

Name: d65ddddd

Block Size: 512

Cache Enabled: No

Clustered File System: Yes

Compressed: Yes

Controller: ■ cvm-esxi6q.hedviginc.com

Created At: 30-9-2020 18:43:14:823

Created By: ■ HedvigAdmin

Data Centers: snc1, snc3, snc2

Deduplication: Deduplication 0%

Compression 0%

Total Data Written 0 B

Total Data after Deduplication 0 B

Total Data after Deduplication & Compression 0 B

Encryption: No

Exported Block Size: 512

Frozen: No

Has Clones: No

Is Clone: No

Mode: Normal

NFS Version: 3

OpenStack: No

Replication Factor: 3

Replication Policy: DataCenterAware

Residence: HDD

SCSI Serial Number: 24

Scsi3Pr: No

Size: 1 GB

System Dedup Disk: HedvigDedup_512_TWO_WEEKS_Time_1

Tenant: Hedvig

Version Counter: 1

Workload Type: VIRTUALIZATION

Creating an Encrypted, Deduplication-enabled Data Center Aware Virtual Disk

1. Create the Virtual Disk, selecting **Encryption** and **Deduplication** from the options, in addition to the previous options for Data Center Aware. Notice that **Compressed** is automatically selected, as well.

The screenshot shows the 'Create Virtual Disk' configuration screen. On the left, a sidebar titled 'Add Hedvig Datastore' has 'Create Virtual Disk' selected. The main area is titled 'Create Virtual Disk' and contains the following fields and options:

- Name:** h65hhds
- Size:** 1 **Unit:** TB
- Encrypted
- Deduplication
- Protection Policy:** REPLICATION (selected) and ERASURE CODING
- Compressed
- Client-side Caching
- Replication Policy:** DataCenterAware
- Replication Factor:** 3
- Residence:** HDD (selected) and FLASH
- Data Centers:**
 - snc1
 - snc2
 - snc3

At the bottom right, there are 'CANCEL' and 'NEXT' buttons.

2. Export the datastore.

The screenshot shows the 'Export datastore' configuration screen. On the left, a sidebar titled 'Add Hedvig Datastore' has 'Export datastore' selected. The main area is titled 'Export datastore' and contains the following fields and options:

- Export NFS Datastore for Virtual Disk:** h65hhds
- Datastore Name:** h65hhds
- Target (HSP):** cvm-esxi6q.hedviginc.com
- Select an entity type, which requires access to the datastore:**
 - ESXI HOST
 - DRS CLUSTER
- ESXi Host Name:** esxi65h.hedviginc.com
- This will create NFS export /exports/h65hhds on the selected Hedvig Storage Proxy.**
- Use the internal vSwitch to mount the NFS exports.

At the bottom right, there are 'CANCEL', 'BACK', and 'NEXT' buttons.

3. View the **Add Hedvig Datastore Summary**.

Add Hedvig Datastore

Create Virtual Disk

Export datastore

Summary

Progress

Summary

1. Virtual disk **h65hhds** will be created.
2. Datastore **h65hhds** will be created.
3. Datastore will be accessible from ESXi Host **esxi65h.hedviginc.com**.
4. Export **/exports/h65hhds** will be created on **cvm-esxi6q.hedviginc.com** Storage Proxy.

CANCEL BACK NEXT

Creating a Rack Aware Virtual Disk

1. Create the Virtual Disk, selecting **Replication** as the **Protection Policy**, selecting **RackAware** as the **Replication Policy**, and selecting the appropriate **Data Centers**.

The screenshot shows the 'Create Virtual Disk' configuration page. On the left, a sidebar titled 'Add Hedvig Datastore' has 'Create Virtual Disk' selected. The main content area is titled 'Create Virtual Disk' and contains the following fields and options:

- Name:** a65aaads
- Size:** 1, **Unit:** TB
- Protection Policy:** REPLICATION (selected), ERASURE CODING
- Replication Policy:** RackAware
- Replication Factor:** 3
- Residence:** HDD (selected), FLASH
- Data Centers:** snc1 (selected), snc2, snc3
- Encrypted
- Deduplication
- Compressed
- Client-side Caching

At the bottom right, there are 'CANCEL' and 'NEXT' buttons.

2. Export the datastore.

The screenshot shows the 'Export datastore' configuration page. On the left, the sidebar 'Add Hedvig Datastore' has 'Export datastore' selected. The main content area is titled 'Export datastore' and contains the following fields and options:

- Export NFS Datastore for Virtual Disk:** a65aaads
- Datastore Name:** a65aaads
- Target (HSP):** cvm-esxi6q.hedviginc.com
- Select an entity type, which requires access to the datastore:** ESXI HOST (selected), DRS CLUSTER
- ESXi Host Name:** esxi65a.hedviginc.com
- This will create NFS export /exports/a65aaads on the selected Hedvig Storage Proxy.**
- Use the internal vSwitch to mount the NFS exports.

At the bottom right, there are 'CANCEL', 'BACK', and 'NEXT' buttons.

3. View the **Add Hedvig Datastore Summary**.

Add Hedvig Datastore

Create Virtual Disk

Export datastore

Summary

Progress

Summary

1. Virtual disk **a65aaads** will be created.
2. Datastore **a65aaads** will be created.
3. Datastore will be accessible from ESXi Host **esxi65a.hedviginc.com**.
4. Export **/exports/a65aaads** will be created on **cvm-esxi6q.hedviginc.com** Storage Proxy.

CANCEL BACK NEXT

Creating a Rack Aware Virtual Disk on another Data Center

1. Create the Virtual Disk, selecting **Replication** as the **Protection Policy**, selecting **RackAware** as the **Replication Policy**, and selecting a different **Data Center**.

The screenshot shows the 'Create Virtual Disk' configuration page. On the left, a sidebar titled 'Add Hedvig Datastore' has 'Create Virtual Disk' selected. The main area is titled 'Create Virtual Disk' and contains the following fields and options:

- Name:** a65ads1
- Size:** 1, **Unit:** TB
- Protection Policy:** REPLICATION (selected), ERASURE CODING
- Replication Policy:** RackAware
- Replication Factor:** 1
- Data Centers:** snc1, snc2, snc3 (snc3 is selected)
- Residence:** HDD (selected), FLASH
- Options:** Encrypted, Deduplication, Compressed, Client-side Caching (all unchecked)

Buttons for 'CANCEL' and 'NEXT' are located at the bottom right.

2. Export the datastore.

The screenshot shows the 'Export datastore' configuration page. On the left, a sidebar titled 'Add Hedvig Datastore' has 'Export datastore' selected. The main area is titled 'Export datastore' and contains the following fields and options:

- Export NFS Datastore for Virtual Disk:** a65ads1
- Datastore Name:** a65ads1
- Target (HSP):** cvm-esxi6q.hedviginc.com
- Select an entity type, which requires access to the datastore:** ESXI HOST (selected), DRS CLUSTER
- ESXi Host Name:** esxi65a.hedviginc.com
- Note:** This will create NFS export **/exports/a65ads1** on the selected Hedvig Storage Proxy.
- Option:** Use the internal vSwitch to mount the NFS exports. (unchecked)

Buttons for 'CANCEL', 'BACK', and 'NEXT' are located at the bottom right.

3. View the **Add Hedvig Datastore Summary**.

Add Hedvig Datastore

Create Virtual Disk

Export datastore

Summary

Progress

Summary

1. Virtual disk **a65ads1** will be created.
2. Datastore **a65ads1** will be created.
3. Datastore will be accessible from ESXi Host **esxi65a.hedviginc.com**.
4. Export **/exports/a65ads1** will be created on **cvm-esxi6q.hedviginc.com** Storage Proxy.

CANCEL BACK NEXT

Creating a Virtual Disk and exporting with the DRS Cluster option

1. Create the Virtual Disk, with the desired options.

The screenshot shows the 'Create Virtual Disk' configuration screen. On the left, a sidebar lists 'Create Virtual Disk', 'Export datastore', 'Summary', and 'Progress'. The main area is titled 'Create Virtual Disk' and contains the following fields and options:

- Name:** a65test1
- Size:** 10
- Unit:** TB
- Encrypted
- Deduplication
- Protection Policy:** REPLICATION (selected), ERASURE CODING
- Compressed
- Client-side Caching
- Replication Policy:** DataCenterAware
- Replication Factor:** 3
- Residence:** HDD (selected), FLASH
- Data Centers:** snc1, snc2, snc3 (all checked)

Buttons for 'CANCEL' and 'NEXT' are located at the bottom right.

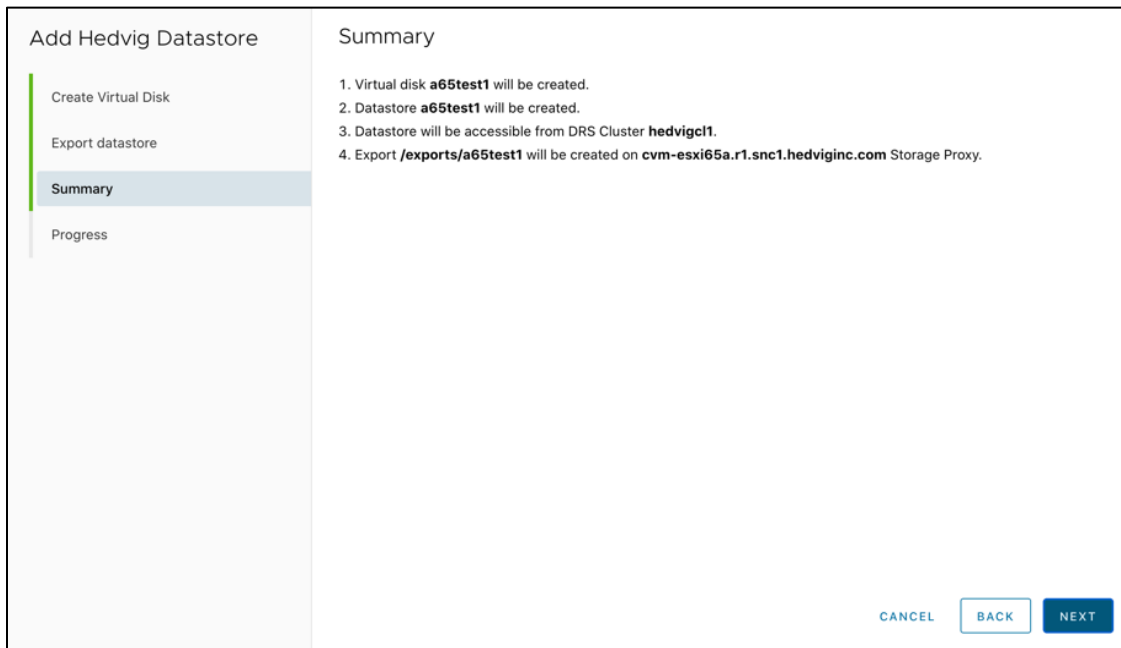
2. Export the datastore, selecting **DRS** (Distributed Resource Scheduler) **Cluster**.

The screenshot shows the 'Export datastore' configuration screen. On the left, a sidebar lists 'Create Virtual Disk', 'Export datastore', 'Summary', and 'Progress'. The main area is titled 'Export datastore' and contains the following fields and options:

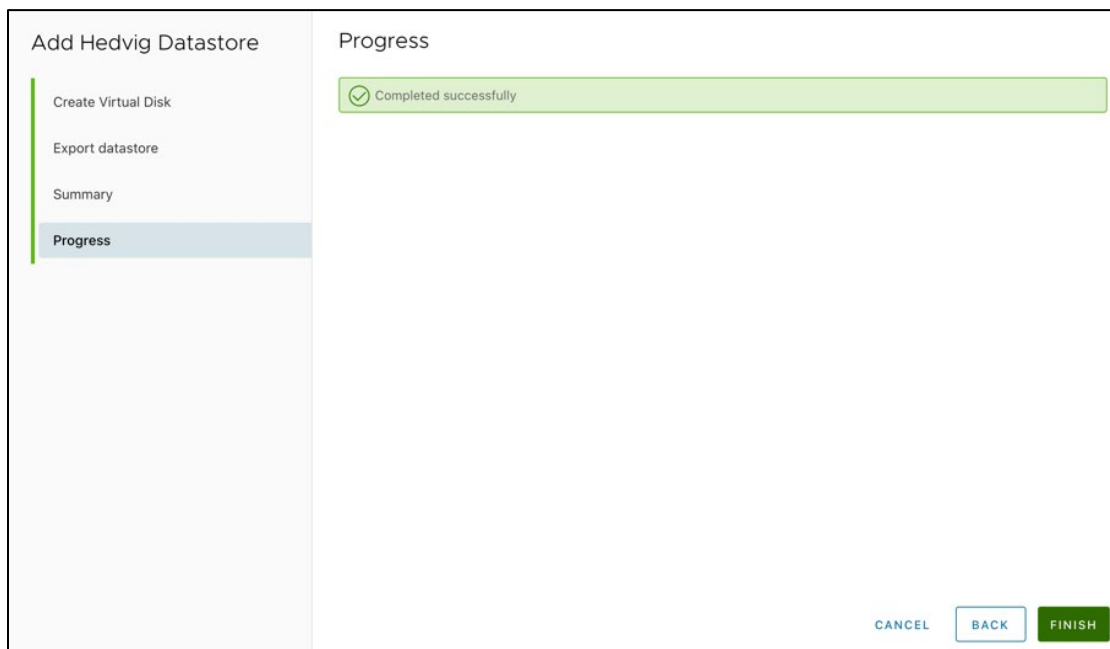
- Export NFS Datastore for Virtual Disk:** a65test1
- Datastore Name:** a65test1
- Target (HSP):** cvm-esxi65a.r1.snc1.hedviginc.com
- Select an entity type, which requires access to the datastore:** ESXI HOST, DRS CLUSTER (selected)
- DRS Cluster Name:** hedvigcl1
- Access will be added to 4 ESXi hosts of this cluster:**
 1. esxi65a.hedviginc.com
 2. esxi65h.hedviginc.com
 3. esxi65d.hedviginc.com
 4. esxi65c.hedviginc.com
- This will create NFS export /exports/a65test1 on the selected Hedvig Storage Proxy.**

Buttons for 'CANCEL', 'BACK', and 'NEXT' are located at the bottom right.

3. View the **Add Hedvig Datastore Summary**.



4. View the **Progress**.



5. Review the **Virtual Disks Summary** for your Virtual Disk.

The screenshot shows the 'Virtual Disks' interface. On the left is a navigation menu with 'CVDS Home', 'Virtual Disks', 'SLA Domains', and 'Snapshots'. The main content area is titled 'Virtual Disks / a65test1 ACTIONS'. Below the title are two tabs: 'Summary' (which is selected and highlighted with a blue box) and 'NFS Datastores'. The 'Summary' tab displays the following properties:

- Name: a65test1
- Block Size: 512
- Cache Enabled: No
- Clustered File System: Yes
- Compressed: No
- Controller: cvm-esxi65a.r1.snc1.hedviginc.com
- Created At: 02-10-2020 15:36:08:958
- Created By: HedvigAdmin
- Data Centers: snc1, snc3, snc2
- Deduplication: No
- Encryption: No
- Exported Block Size: 512
- Frozen: No
- Has Clones: No
- Is Clone: No
- Mode: Normal
- NFS Version: 3
- OpenStack: No
- Replication Factor: 3
- Replication Policy: DataCenterAware
- Residence: HDD
- SCSI Serial Number: 288
- Scsi3Pr: No
- Size: 10 TB
- Tenant: Hedvig
- Version Counter: 1
- Workload Type: VIRTUALIZATION

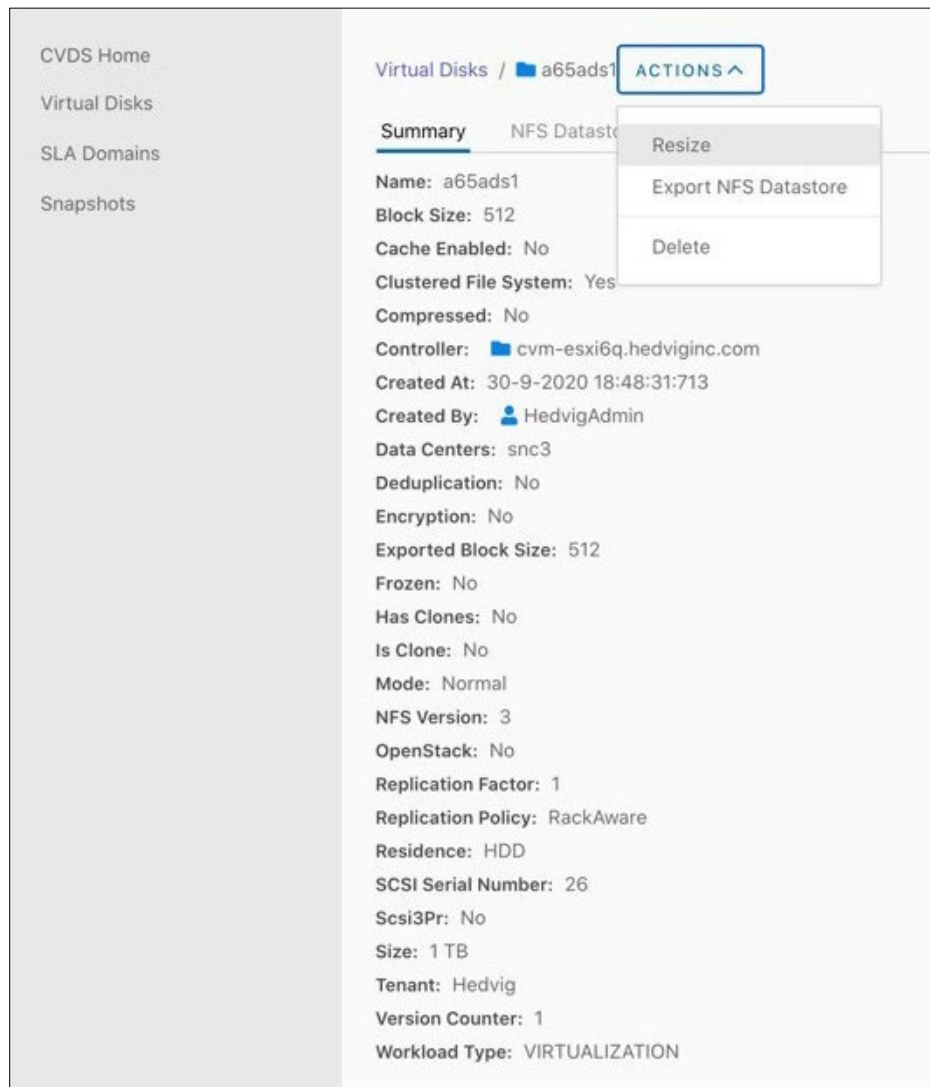
6. Review the **NFS Datastores** information to see the new datastore.

The screenshot shows the 'Virtual Disks' interface with the 'NFS Datastores' tab selected and highlighted with a blue box. Below the tabs is a button labeled 'EXPORT NFS DATASTORE' with a refresh icon. The main content area displays the following information:

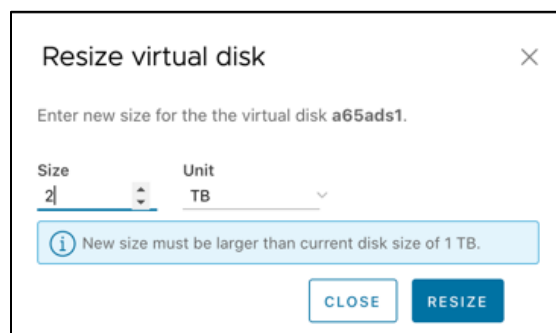
- Datastore Name: a65test1
- Target: cvm-esxi65a.r1.snc1.hedviginc.com
- Hosts:
 - esxi65a.hedviginc.com
 - esxi65c.hedviginc.com
 - esxi65h.hedviginc.com
 - esxi65d.hedviginc.com

Resizing a Virtual Disk

1. Select **Resize** from the **Actions** menu.



2. In the **Resize virtual disk** dialog, provide the new size. Note that you cannot choose a size smaller than the current size, that is, you cannot "shrink" the Virtual Disk.



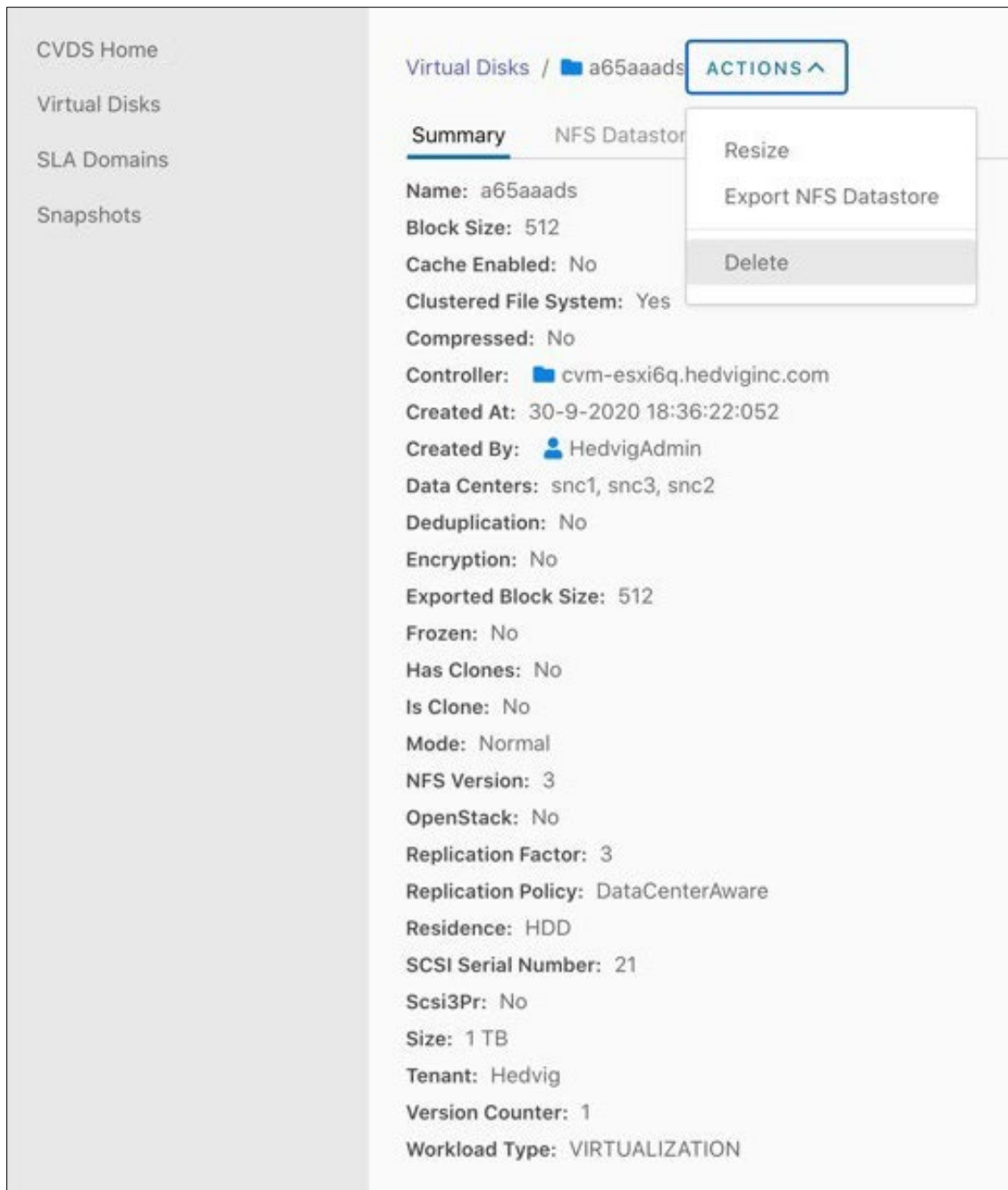
3. In the **Summary**, note that the new size of 2 TB is displayed.

The screenshot displays the CVDS Home interface. On the left is a navigation menu with the following items: CVDS Home, Virtual Disks, SLA Domains, and Snapshots. The main content area shows the path 'Virtual Disks / a65ads1' with an 'ACTIONS' dropdown menu. Below this, there are two tabs: 'Summary' (which is selected and underlined) and 'NFS Datastores'. The 'Summary' tab contains the following details:

- Name: a65ads1
- Block Size: 512
- Cache Enabled: No
- Clustered File System: Yes
- Compressed: No
- Controller: cvm-esxi6q.hedviginc.com
- Created At: 30-9-2020 18:48:31:713
- Created By: HedvigAdmin
- Data Centers: snc3
- Deduplication: No
- Encryption: No
- Exported Block Size: 512
- Frozen: No
- Has Clones: No
- Is Clone: No
- Mode: Normal
- NFS Version: 3
- OpenStack: No
- Replication Factor: 1
- Replication Policy: RackAware
- Residence: HDD
- SCSI Serial Number: 26
- Scsi3Pr: No
- Size: 2 TB
- Tenant: Hedvig
- Version Counter: 1
- Workload Type: VIRTUALIZATION

Deleting a Virtual Disk

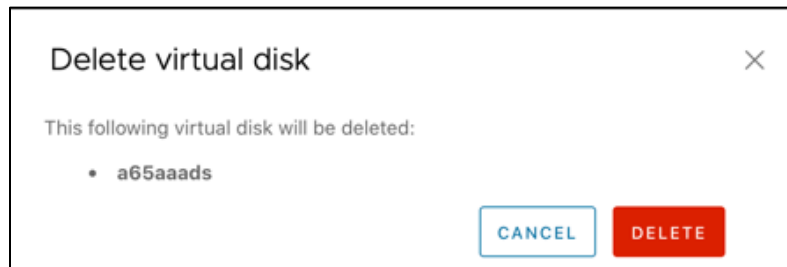
1. Select **Delete** from the **Actions** menu.



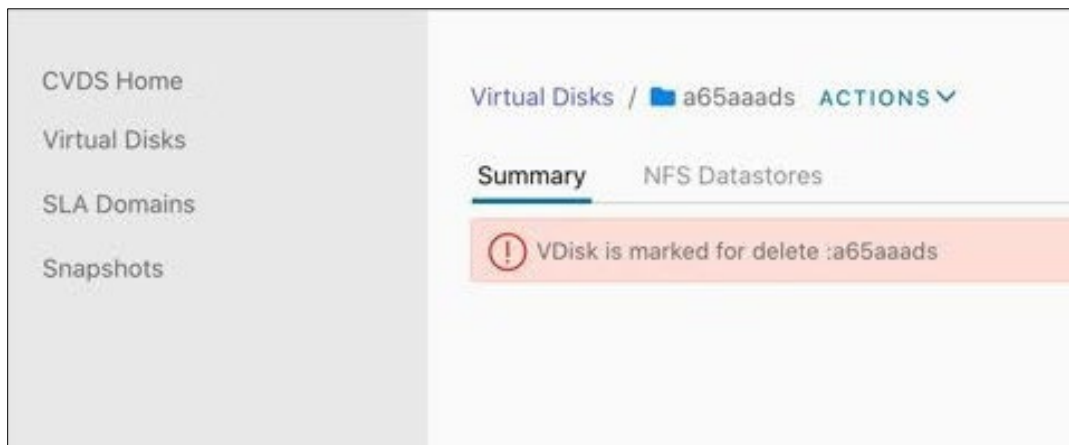
The screenshot displays the CVDS interface for a Virtual Disk. On the left is a navigation sidebar with links for CVDS Home, Virtual Disks, SLA Domains, and Snapshots. The main content area shows the details for a Virtual Disk named 'a65aaads'. An 'ACTIONS ^' button is highlighted with a red box, and a dropdown menu is open, showing three options: 'Resize', 'Export NFS Datastore', and 'Delete'. The 'Delete' option is highlighted with a grey background. Below the actions menu, the 'Summary' tab is selected, displaying the following properties:

- Name: a65aaads
- Block Size: 512
- Cache Enabled: No
- Clustered File System: Yes
- Compressed: No
- Controller: cvm-esxi6q.hedviginc.com
- Created At: 30-9-2020 18:36:22:052
- Created By: HedvigAdmin
- Data Centers: snc1, snc3, snc2
- Deduplication: No
- Encryption: No
- Exported Block Size: 512
- Frozen: No
- Has Clones: No
- Is Clone: No
- Mode: Normal
- NFS Version: 3
- OpenStack: No
- Replication Factor: 3
- Replication Policy: DataCenterAware
- Residence: HDD
- SCSI Serial Number: 21
- Scsi3Pr: No
- Size: 1 TB
- Tenant: Hedvig
- Version Counter: 1
- Workload Type: VIRTUALIZATION

2. In the **Delete virtual disk** dialog, make sure that this is the Virtual Disk you want to delete.

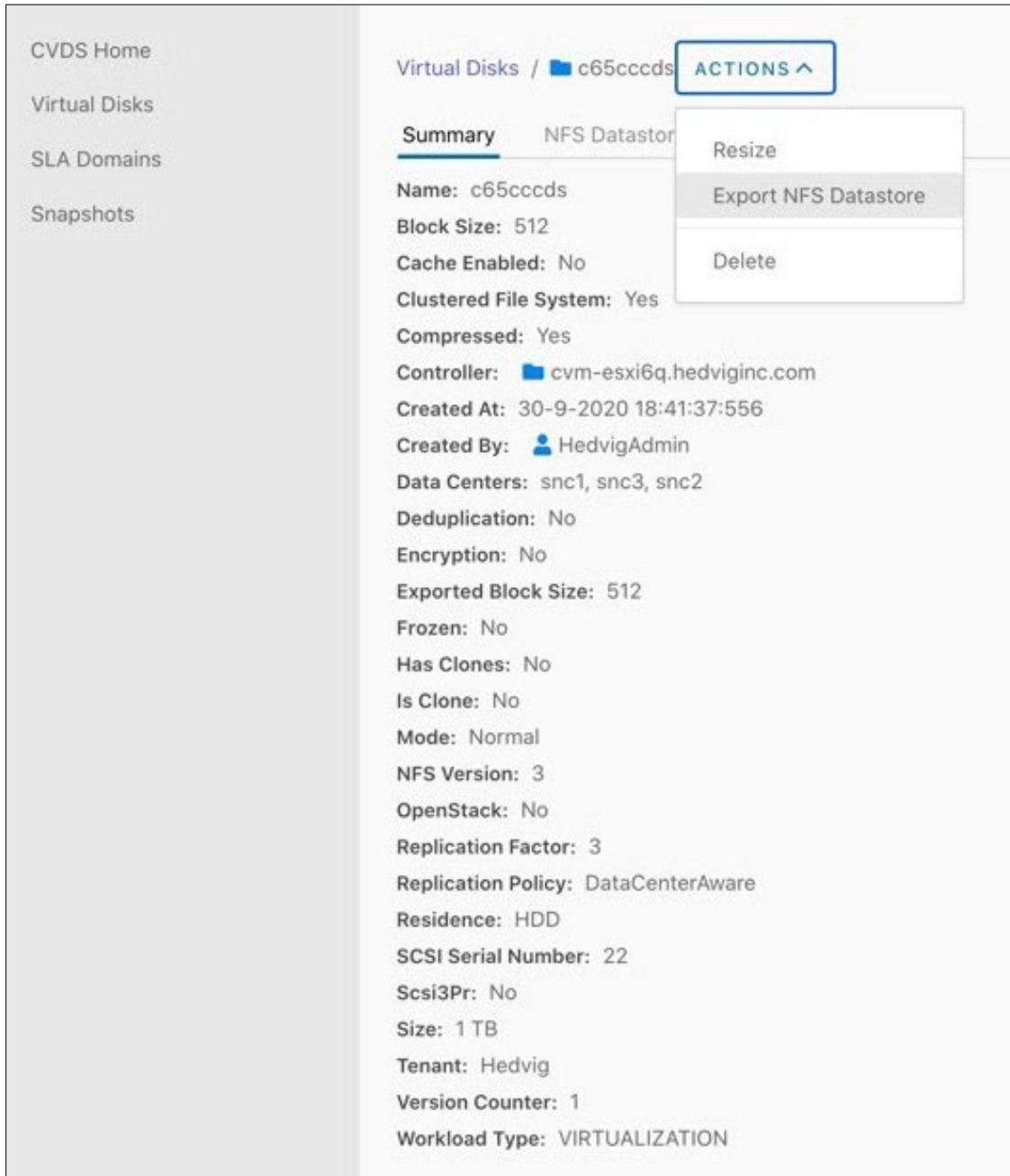


3. In the **Virtual Disks Summary**, note that this Virtual Disk is now marked for deletion.



Exporting an NFS Datastore

1. Select **Export NFS Datastore** from the **Actions** menu.



The screenshot displays the vSphere interface for an NFS Datastore. On the left, a navigation pane lists 'CVDS Home', 'Virtual Disks', 'SLA Domains', and 'Snapshots'. The main area shows the 'Virtual Disks' view for a datastore named 'c65cccds'. An 'ACTIONS ^' button is highlighted, and a dropdown menu is open, showing three options: 'Resize', 'Export NFS Datastore' (which is highlighted), and 'Delete'. Below the actions menu, the 'Summary' tab is selected, displaying the following properties for the NFS Datastore:

- Name: c65cccds
- Block Size: 512
- Cache Enabled: No
- Clustered File System: Yes
- Compressed: Yes
- Controller: cvm-esxi6q.hedviginc.com
- Created At: 30-9-2020 18:41:37:556
- Created By: HedvigAdmin
- Data Centers: snc1, snc3, snc2
- Deduplication: No
- Encryption: No
- Exported Block Size: 512
- Frozen: No
- Has Clones: No
- Is Clone: No
- Mode: Normal
- NFS Version: 3
- OpenStack: No
- Replication Factor: 3
- Replication Policy: DataCenterAware
- Residence: HDD
- SCSI Serial Number: 22
- Scsi3Pr: No
- Size: 1 TB
- Tenant: Hedvig
- Version Counter: 1
- Workload Type: VIRTUALIZATION

2. Complete the **Export datastore** dialog.

Export datastore for c65cccds ✕

Export NFS Datastore for Virtual Disk
c65cccds

Datastore Name
c65cds1

Target (HSP)
esxi65b-vip1.hedviginc.com ▼

Select an entity type, which requires access to the datastore.

ESXi Host Name
esxi65c.hedviginc.com ▼

This will create NFS export /exports/c65cccds on the selected Hedvig Storage Proxy.

Use the internal vSwitch to mount the NFS exports.

3. Review the **NFS Datastores** information to see the new datastore.

CVDS Home

Virtual Disks

SLA Domains

Snapshots

Virtual Disks / ■ c65cccds ACTIONS ▼

Summary NFS Datastores

EXPORT NFS DATASTORE
↻

Datastore Name: c65cds1
Target: esxi65b-vip1.hedviginc.com
Hosts:

- esxi65c.hedviginc.com

Datastore Name: c65cccds
Target: cvm-esxi6q.hedviginc.com
Hosts:

- esxi65c.hedviginc.com

SLA Domains page

You can map every VM to an SLA Domain, which will schedule snapshot creation for the VM, based on the periodicity and retention of the mapped SLA Domain.

Adding an SLA Domain

1. When you select SLA Domains, all available SLA Domains are listed.

CVDS Home		SLA Domains						
Virtual Disks		<input type="button" value="CREATE NEW"/> <input type="button" value="DELETE"/> <input type="button" value="REFRESH"/>						
SLA Domains		Name	Frequency	Start Time	End Time	Time Zone	Retention	
Snapshots		<input type="radio"/>	a67aSLA	every 30th minute	00:00	23:59	GMT	1 hour
		<input type="radio"/>	min	every 30th minute	00:00	23:59	GMT	1 hour
								2 SLA Domains

2. To create SLA Domains and schedule snapshots according to the periodicity and retention of the SLA Domain, use the **Add SLA domain** dialog.

Add SLA domain ✕

Domain Name
gold

Snapshots Schedule

Minutely
 Hourly
 Daily
 Weekly
 Monthly

Every 30 minute(s)

Starting at 00 00 and ending at 23 59

Retention 1 Hours

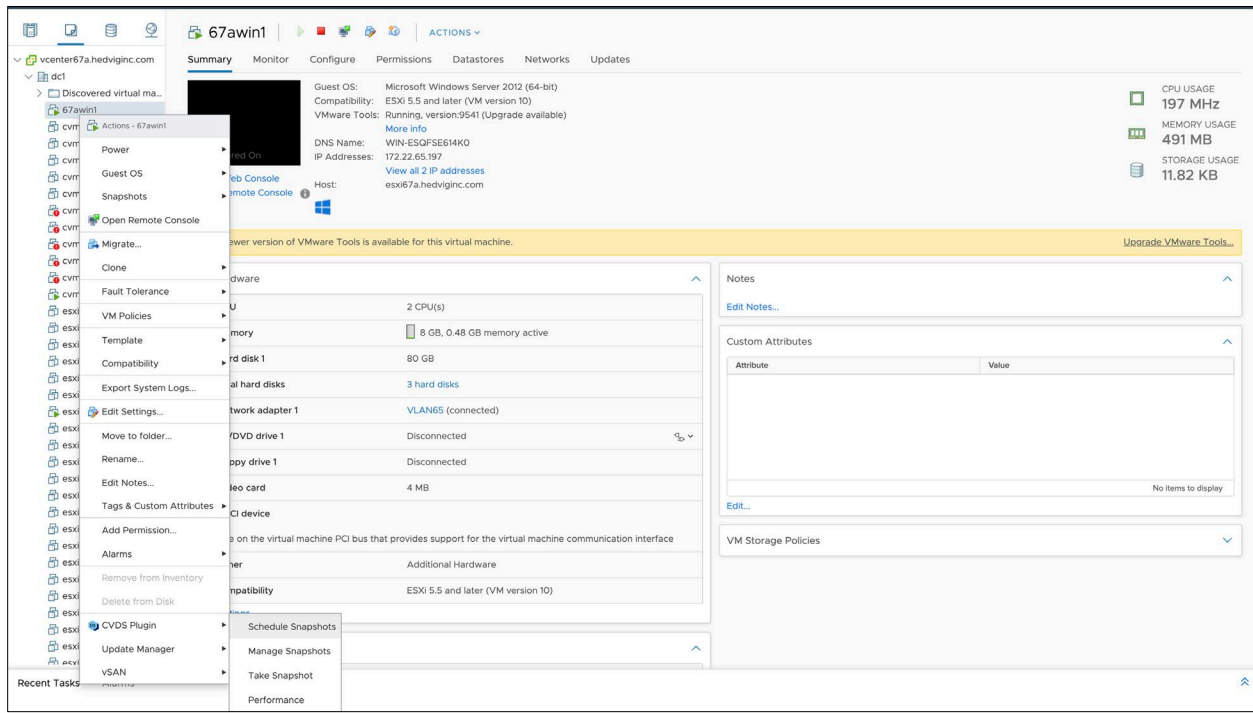
Timezone
[GMT] Greenwich Mean Time: GMT

3. Now, the **SLA Domains** page shows the newly created SLA Domain.

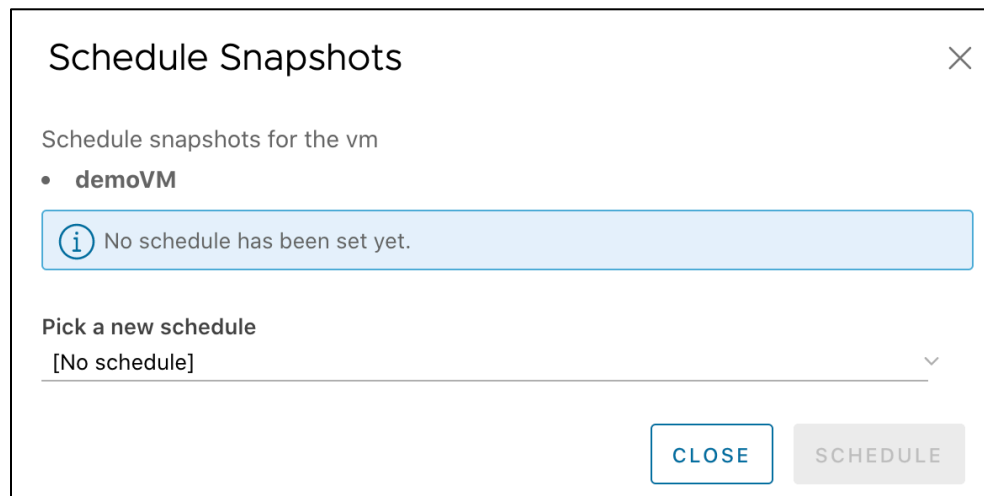
CVDS Home		SLA Domains						
Virtual Disks		<input type="button" value="CREATE NEW"/> <input type="button" value="DELETE"/> <input type="button" value="REFRESH"/>						
SLA Domains		Name	Frequency	Start Time	End Time	Time Zone	Retention	
Snapshots		<input checked="" type="radio"/>	c65cSLA	every 30th minute	08:00	23:59	GMT	1 hour
								1 SLA Domains

Scheduling snapshots

1. Select **Schedule Snapshots** from the vSphere Client menu.

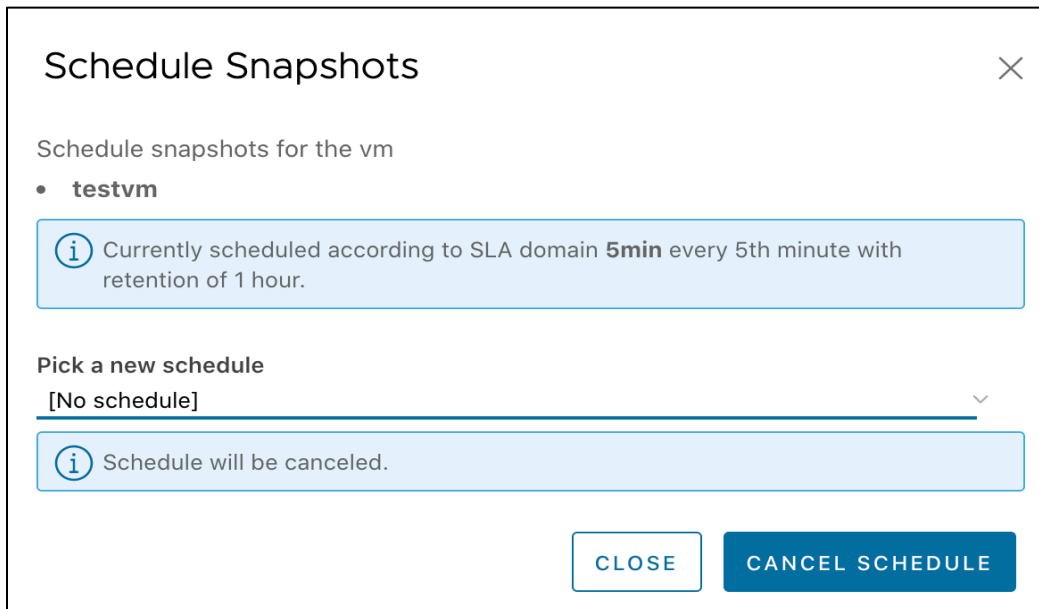


2. Complete the **Schedule Snapshots** dialog.



Note: You cannot use the VMware snapshot feature and the Schedule Snapshots feature in the same setup. The Schedule Snapshots feature expects no VMware snapshot to be present.

3. If you need to cancel a scheduled snapshot, select the **Cancel Schedule** button.



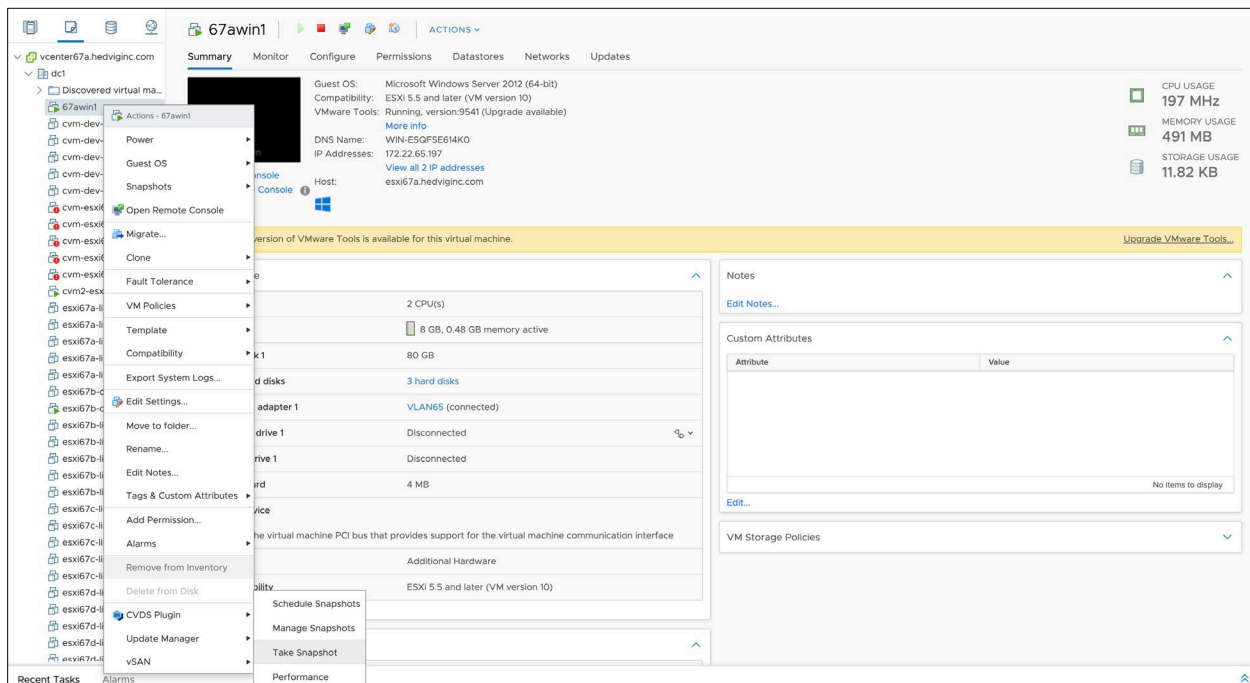
Snapshots page

The Snapshots page displays all of the snapshots for your system.

VM	Name	Description	Date
65vcp3	scheduleVCPc65cSLA	Created by VCP Snapshot Scheduler	09-30-2020 21:48:13
revertvm	s1	s1d	09-30-2020 15:52:44
revertvm	fr	g9	09-30-2020 16:55:12
65vcp3	scheduleVCPc65cSLA	Created by VCP Snapshot Scheduler	09-30-2020 22:03:11
65vcp1	snapshot_test2	snapshot_test2	09-30-2020 20:30:41
65vcp1	snapshot_test1	snapshot_test1	09-30-2020 20:27:07
revertvm	s3	d3	09-30-2020 16:58:05
65vcp2	scheduleVCPc65cSLA	Created by VCP Snapshot Scheduler	09-30-2020 21:48:13
65vcp2	scheduleVCPc65cSLA	Created by VCP Snapshot Scheduler	09-30-2020 21:33:12
65vcp2	scheduleVCPc65cSLA	Created by VCP Snapshot Scheduler	09-30-2020 22:03:11

Taking snapshots

1. Select **Take Snapshots** from the vSphere Client menu.



2. Complete the **Take Snapshot** dialog.

Take Snapshot ✕

Snapshot to take for the VM **65vcp1**

Snapshot Name

Description

3. View the new snapshot on the **Snapshots** page.

VM	Name	Description	Date
revertvm	s1	s1d	09-30-2020 15:52:44
revertvm	fr	gg	09-30-2020 16:55:12
65vcp1	snapshot_test1	snapshot_test1	09-30-2020 20:27:07
revertvm	s3	d3	09-30-2020 16:58:05

4 Snapshots

Reverting to a previous snapshot

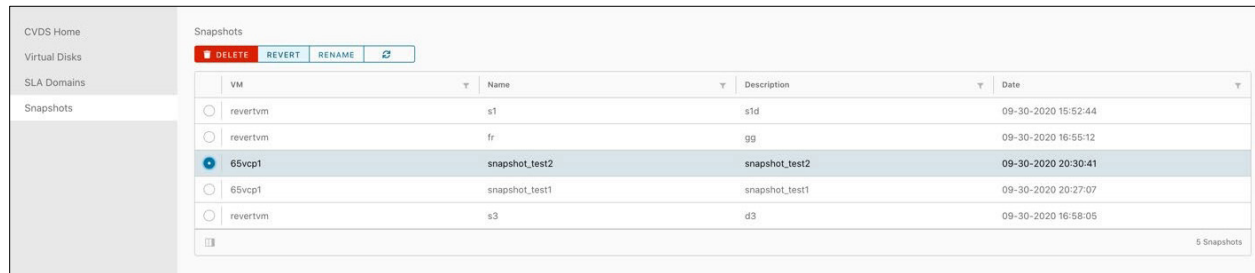
You can revert the current state of the VM to a given snapshot taken earlier.

1. Notice that there are two snapshots for 65vcp1 – snapshot_test1 and snapshot_test2, and suppose that you want to revert the VM back to the state that existed for snapshot_test2.

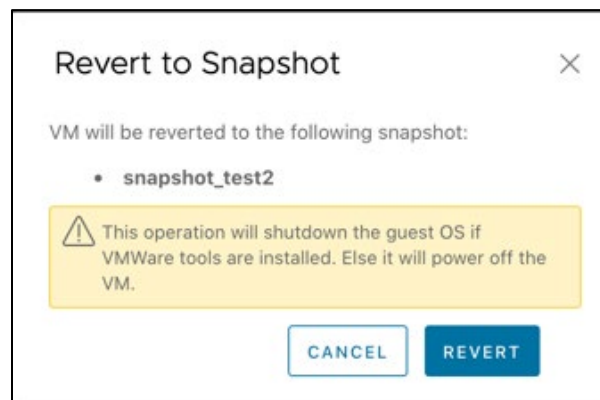
VM	Name	Description	Date
revertvm	s1	s1d	09-30-2020 15:52:44
revertvm	fr	gg	09-30-2020 16:55:12
65vcp1	snapshot_test2	snapshot_test2	09-30-2020 20:30:41
65vcp1	snapshot_test1	snapshot_test1	09-30-2020 20:27:07
revertvm	s3	d3	09-30-2020 16:58:05

6 Snapshots

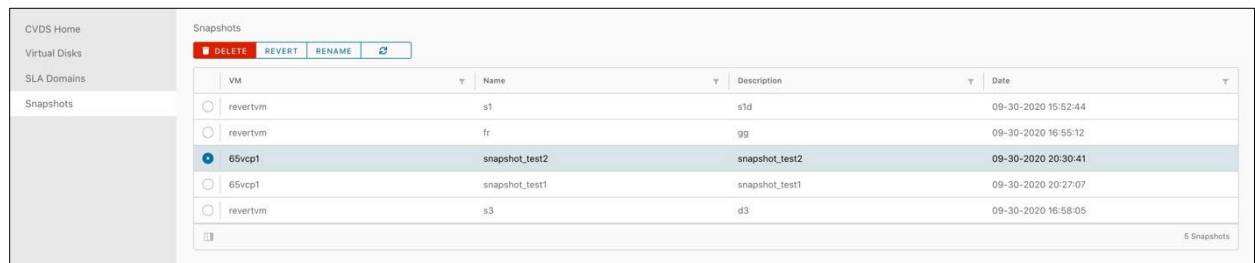
2. Select `snapshot_test2`, and then the **Revert** button.



3. Review the **Revert to Snapshot** dialog.



4. The VM has been reverted to `snapshot_test2`.



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Software-defined AES-256, FIPS compliant encryption of data in flight and at rest.