Hewlett Packard Enterprise

Field guide

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HPE CLOUD VOLUMES

Using Zerto with HPE Cloud Volumes Backup

CONTENTS

1. Overview 3
2. Lab environment 3
3. Install Zerto 4
4. Create an HPE Cloud Volumes Backup Store 4
5. Create a repository for HPE Cloud Volumes in Zerto 4
6. Create and run a backup job 6
   General 6
   VMs—Protection 6
   Recovery site 6
   Storage 7
   Recovery 8
   NICs 8
   Long Term Retention 9
   Summary 9
   Manual trigger retention 10
   View Long Term Retention—Viewing results 11
7. Restore from HPE Cloud Volumes 12
   Restore plan 12
   Restore settings 13
   VM settings 13
   VM settings 14
   Summary 14
   Monitoring 15
   Restore 15
   Deleting a retention set 16

1. OVERVIEW

This document will provide an overview for using Zerto™ with HPE Cloud Volumes Backup (CV Backup). It is meant to provide a general overview and is not intended to be a comprehensive review of Zerto features and functions.

The Secure Client is a Linux®-based proxy server that needs to be set up and run to back up data from Zerto to HPE CV Backup. This is required to enforce end-to-end security over the open internet. Detailed instructions can be found at "HPE Cloud Volumes Backup—Using the Secure Client". Additional information can also be found in the online help.

The focus of the remainder of this document is Zerto and assumes you have already installed and configured the Secure Client.

NOTE
See HPE SPOCK for Cloud Volumes to get the latest detail on supported systems and software.

2. LAB ENVIRONMENT

- VMware ESXi™ 7.0 UI
- Virtual machine instances (CentOS 8, Windows Server 2016)
- Zerto v8.5 build 0850082270
- Chrome browser version 87
- HPE Secure Client* (running on CentOS 8 VMware® virtual machine)

* **Note:** HPE recommends HPE Secure Client to be run on a server-grade hypervisor suitable for production use.

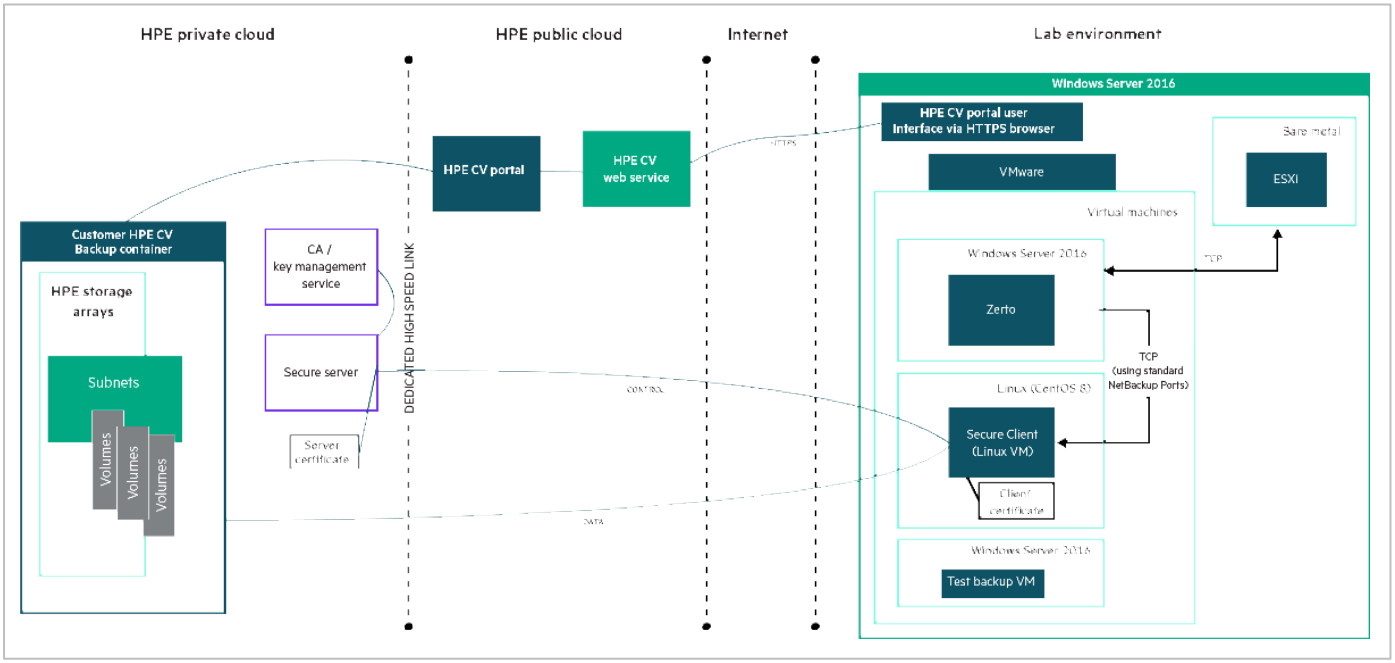


FIGURE 1. Lab environment as tested

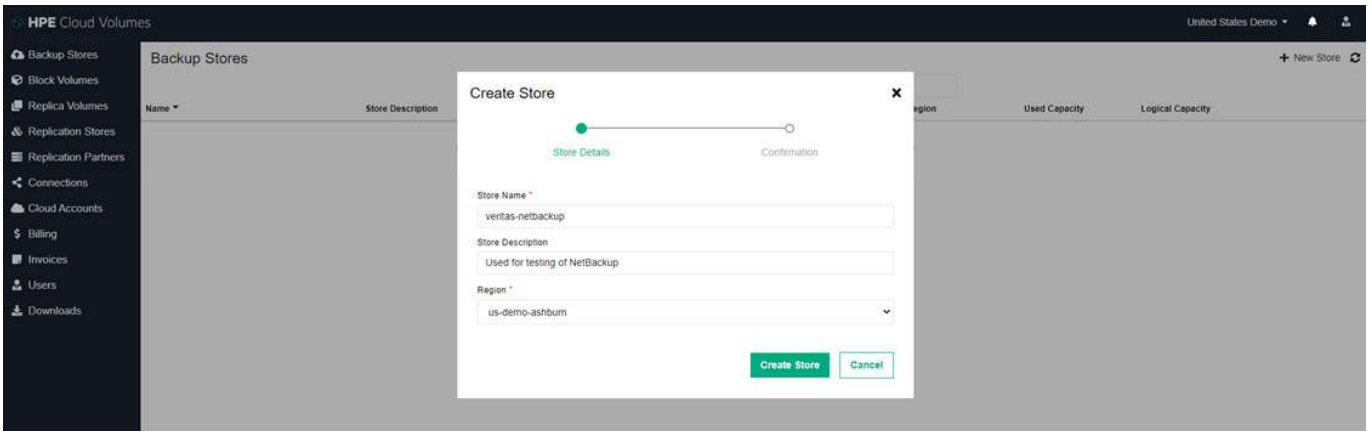
3. INSTALL ZERTO

Information on how to install is provided by Zerto and is outside the scope of this document. See the Administrative Guide, which can be found from the Zerto GUI (under Help/Installation) or by going to the Zerto website.

4. CREATE AN HPE CLOUD VOLUMES BACKUP STORE

The Backup Store will be where your data is stored on the HPE cloud.

1. Log in to the HPE CV Backup web portal and navigate to Backup Stores and click **+ New Store**. Give your store a store name, store description; and select the region closest to your physical location. Click **Create Store**.

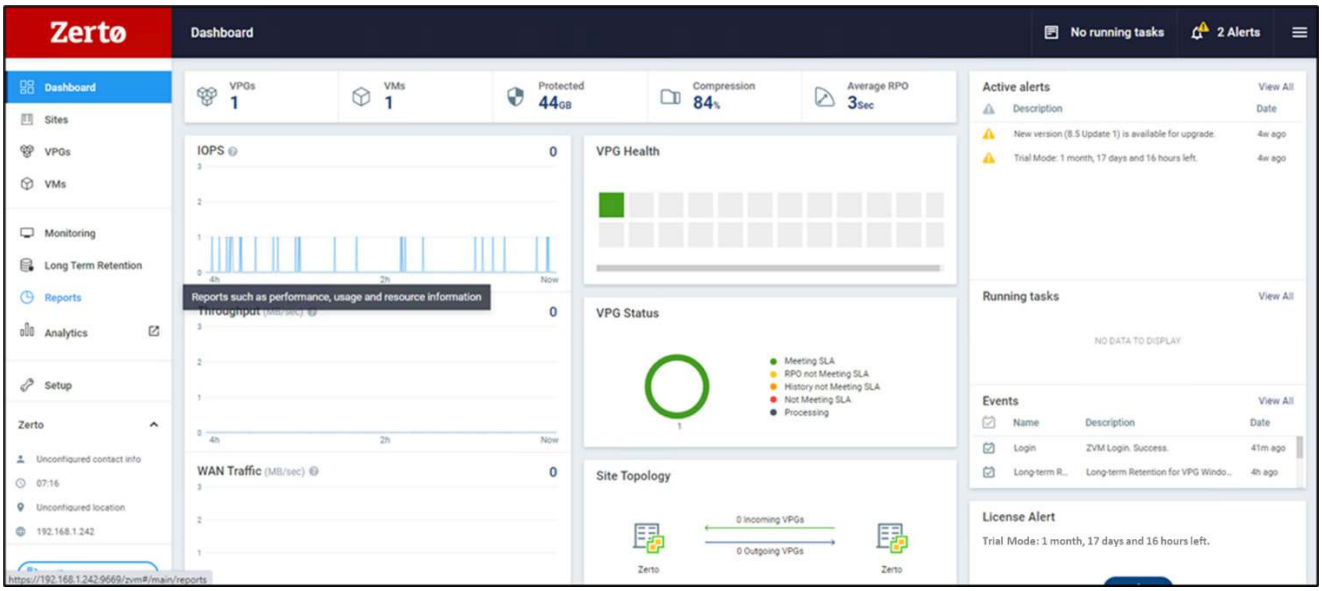


NOTE
The name must be less than 50 characters: be all lowercase; be a single word; and contain letters, numbers, and dashes.

2. Download the text file that contains your user name and password, and then click Close. We will user this information later.
3. It is possible to regenerate the credentials later if you need to edit the Backup Store.

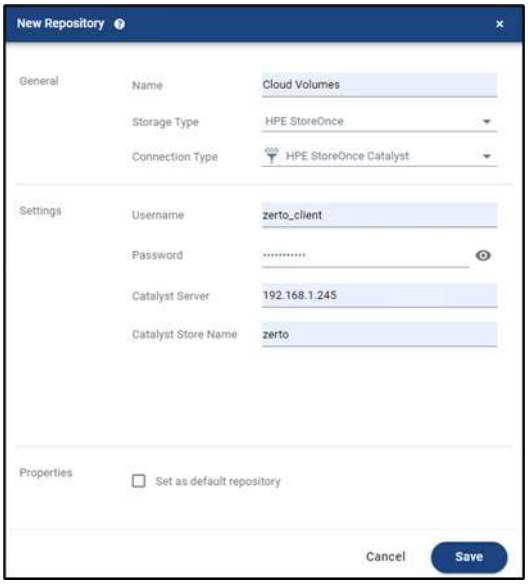
5. CREATE A REPOSITORY FOR HPE CLOUD VOLUMES IN ZERTO

1. Log in to the Zerto GUI. You will land on the **Dashboard** (Your dashboard will have different values.).

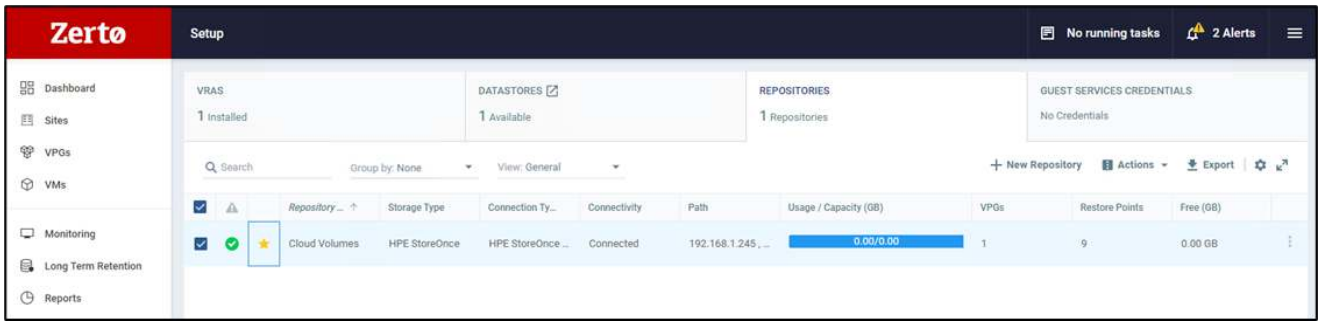


2. Navigate to **Setup** using the left sidebar menu.

3. Once in Setup, click the **+ New Repository**. We will use this to create a connection to HPE Cloud Volumes via the Secure Client. Provide the following information:
   a. Name: A description that suits your needs.
   b. Storage Type: HPE StoreOnce
   c. Connection Type: HPE StoreOnce Catalyst
   d. Username: This is the user name provided by the HPE Cloud Volumes Backup Store in the text file downloaded.
   e. Password: Password for the Backup Store in the text file downloaded.
   f. Catalyst Server: The IP address of the Secure Client.
   g. Catalyst Store Name: This should auto-populate on a drop-down list with the name of the available HPE Cloud Volumes Backup Stores. If it does not, something is wrong with your connection to HPE Cloud Volumes. Go back to the Secure Client and verify it is running and connected to your account. Review the online help at: docs.cloudvolumes.hpe.com/help/cvbu-support-tool/overview/.



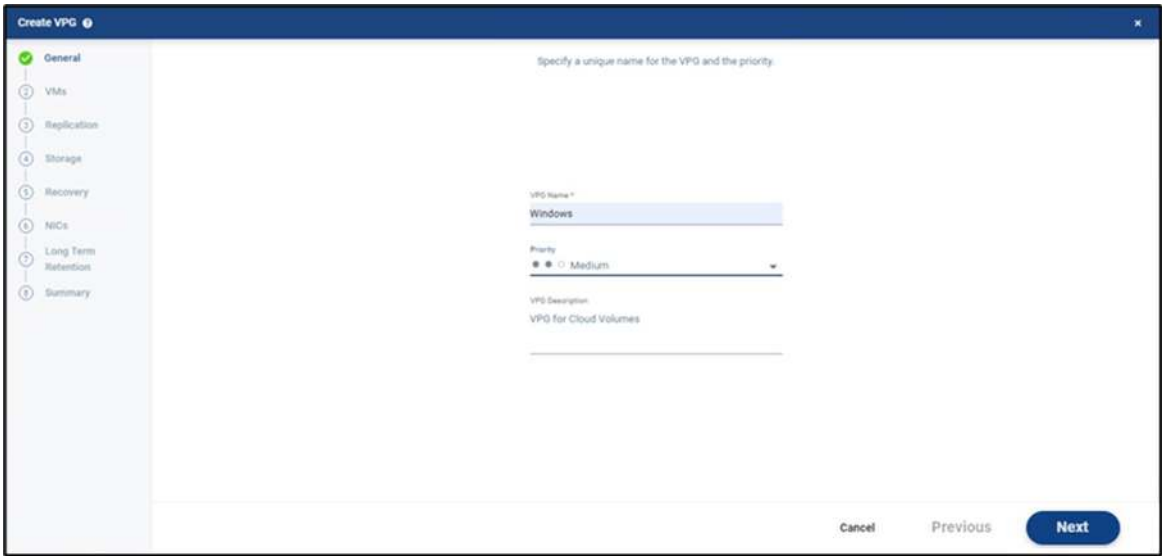
4. Once done, click **Save**. Zerto will add the new repository with the Connectivity column showing Connected. You can edit this configuration by selecting the checkbox on the left of each row and choosing Edit from the Actions menu.



6. CREATE AND RUN A BACKUP JOB

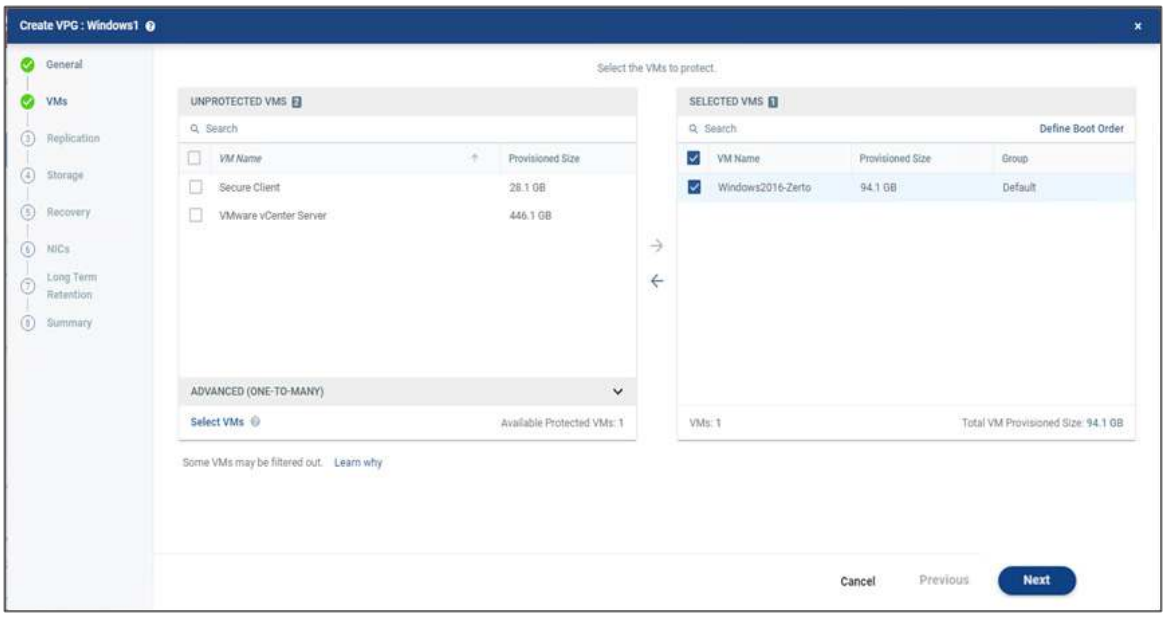
General

Click the **VPGs** (Virtual Protection Groups) sidebar menu link, and then click + **New VPG**. Give it a name and description. We used medium priority in this example. Click **Next**.



VMs—Protection

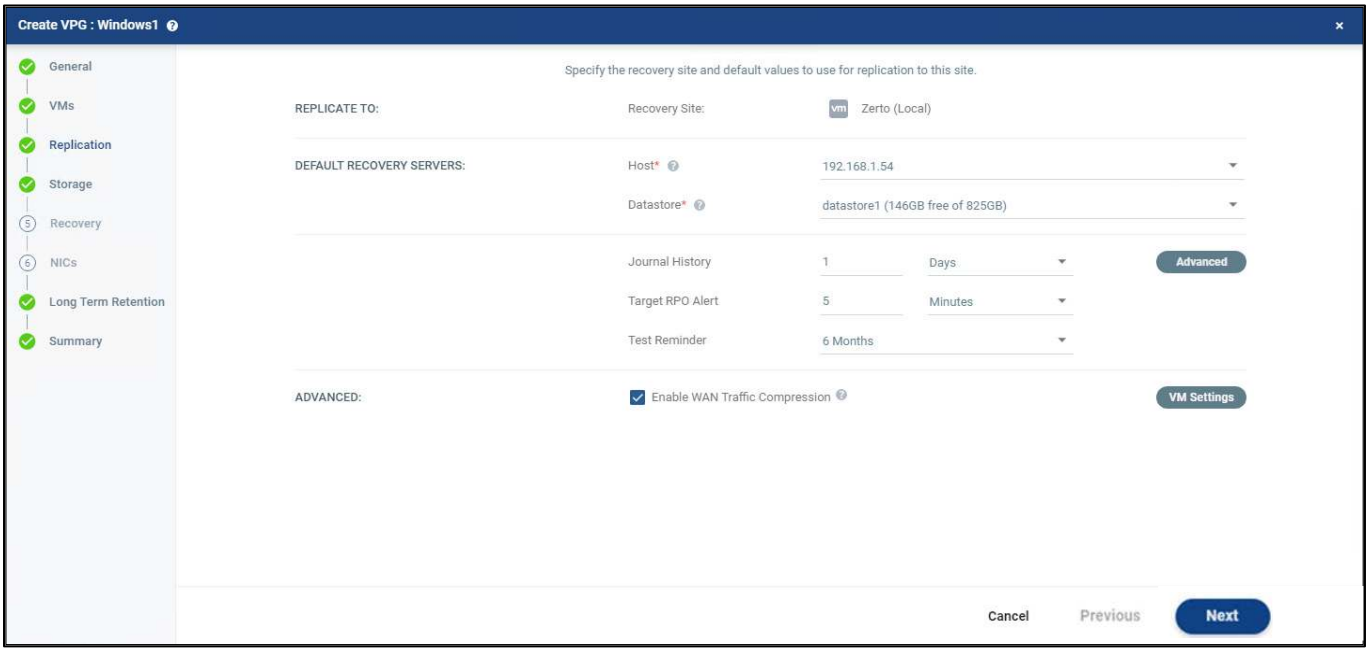
Select a VM or VMs to include in the new VPG. We have selected a standard build Windows2016 virtual machine to include. Click **Next**.



Recovery site

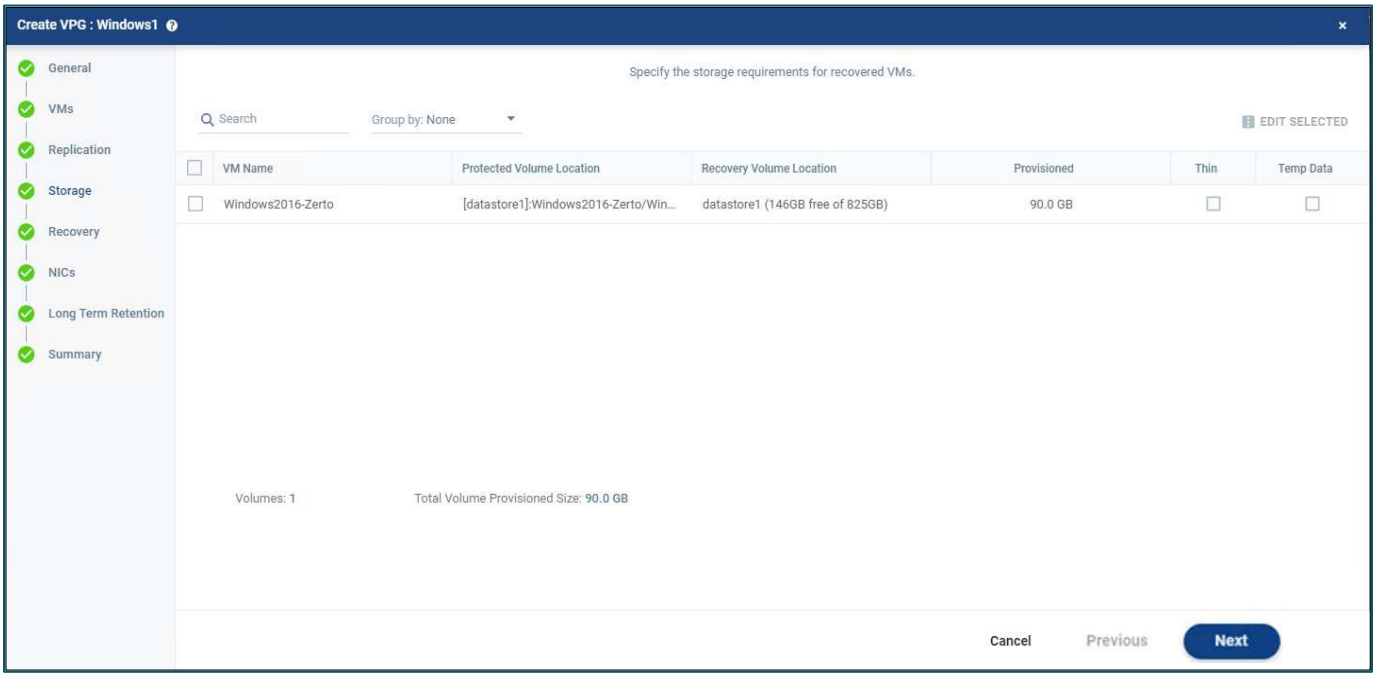
1. Replicate To
   a. Recovery Site will be Zerto (Local) or whatever your local Zerto site was named.
2. Default Recovery Servers:
   a. Host: The IP address of the ESXi server (or wherever your default recovery point may be if different).
   b. Datastore: The name of the Zerto datastore you created during installation.
   c. The next three selections are maintenance items related to the job that you may set as you please.

3. Advanced:
   a. Check the checkbox to Enable **WAN Traffic Compression** (as we will be sending the job over the WAN to HPE Cloud Volumes). Click **Next**.



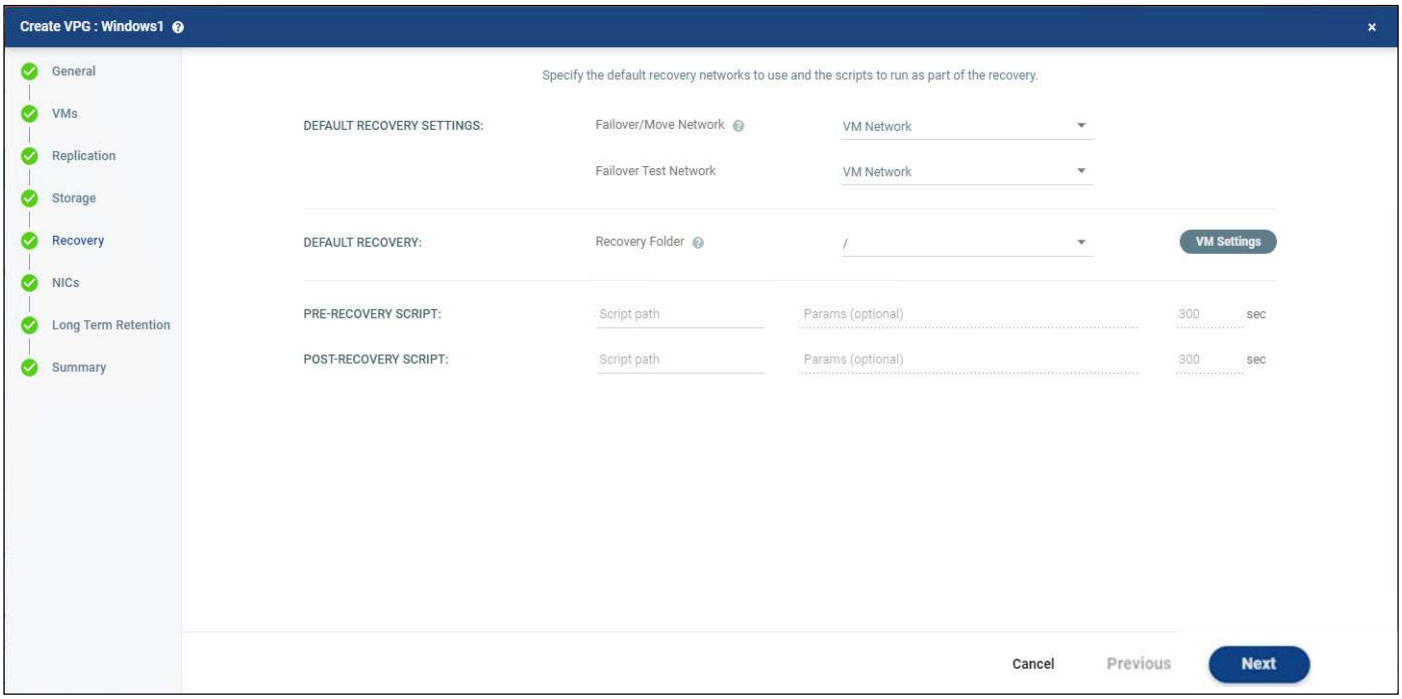
Storage

Using the default Zerto settings, click **Next**.



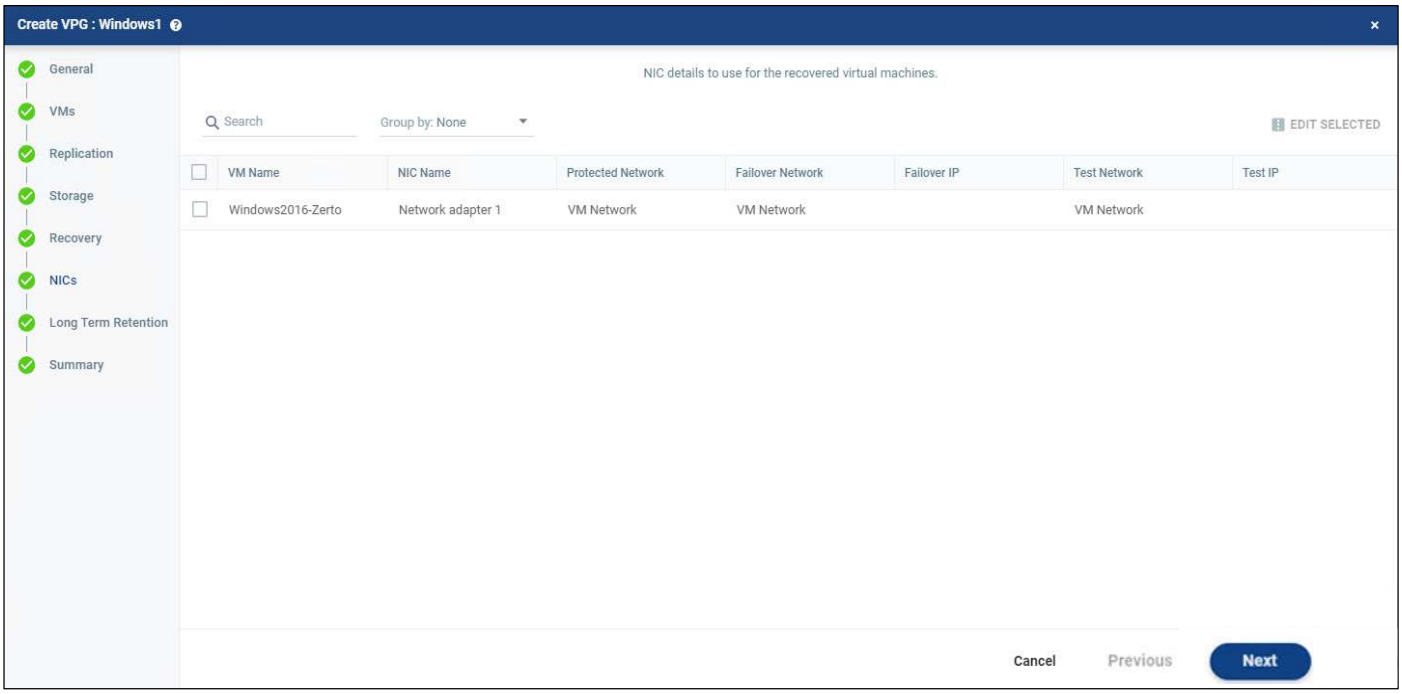
Recovery

Using Zerto default selections, as we will later recover to the same VMware ESXi server, click **Next**.



NICs

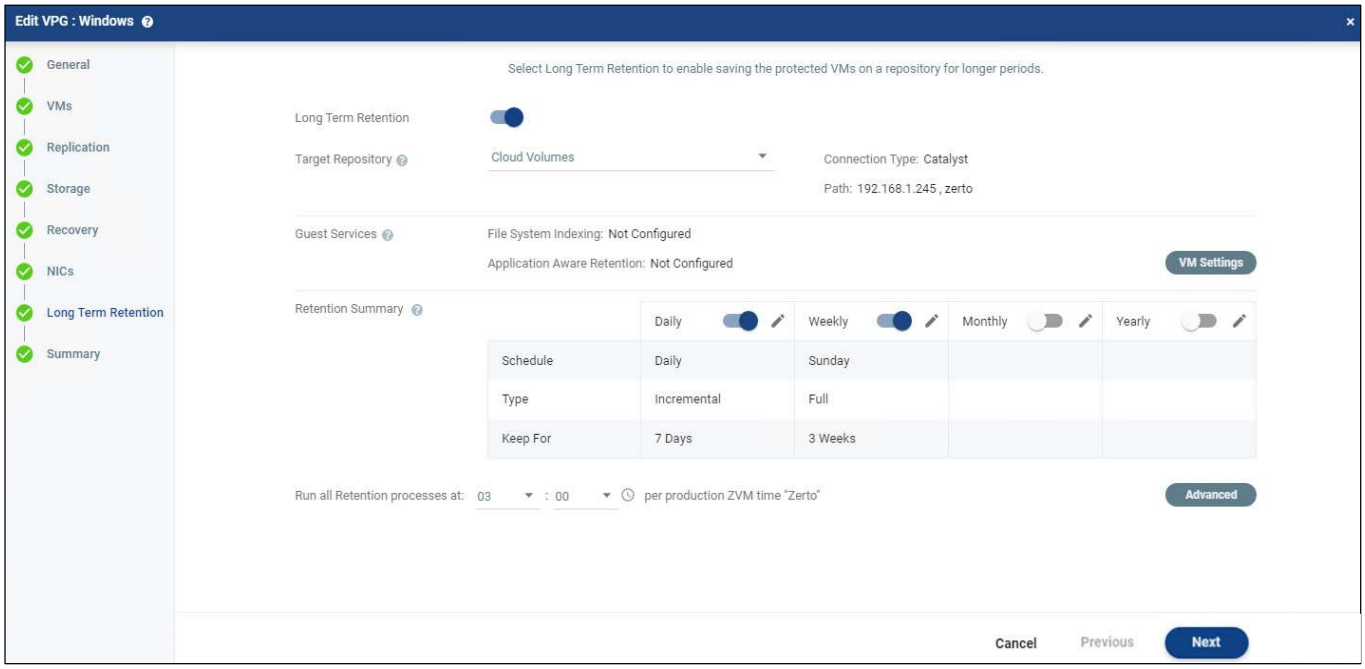
Using Zerto default settings, click **Next**.



Long Term Retention

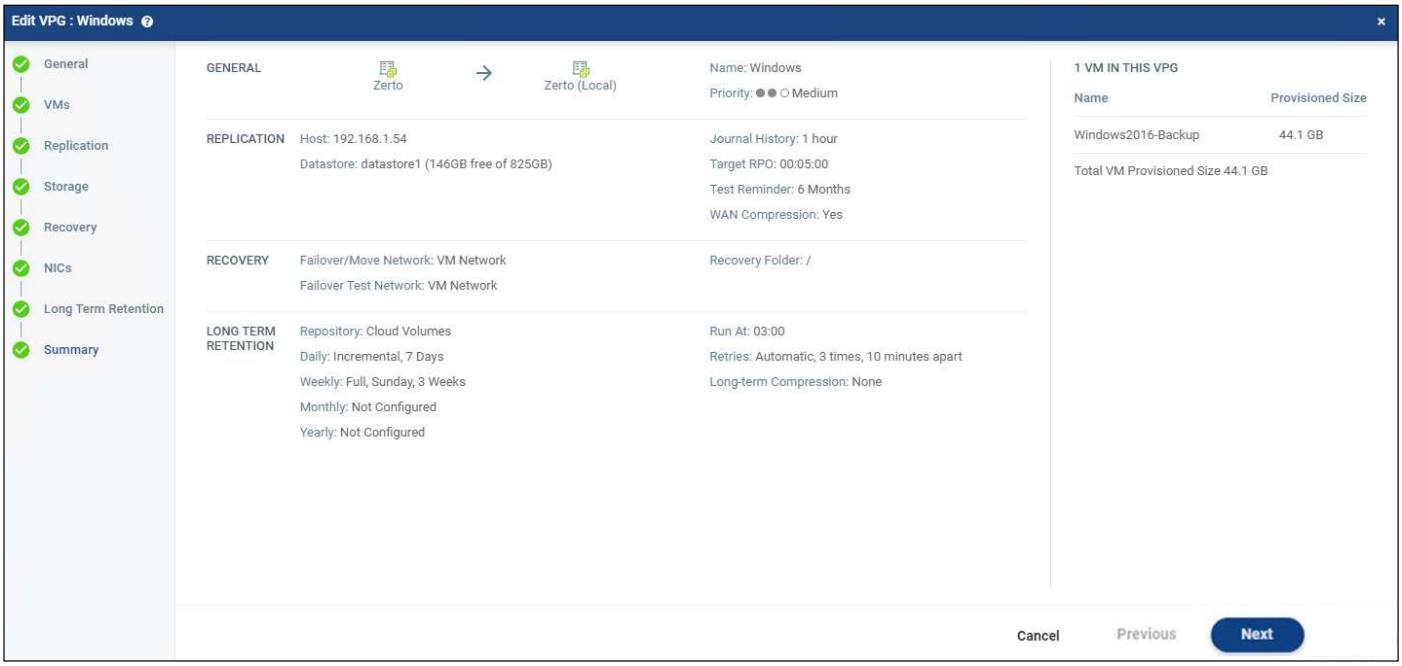
Zerto can manage retention policies for VPGs.

1. The Target Repository should be the name of tour Cloud Volumes repository in Zerto.
2. The Retention Summary was set as shown in the following:
   a. Daily incremental backup with 7-day retention.
   b. Sunday full back with 3-week retention.
3. You may set yours differently, to suit your testing needs. Click **Next**.

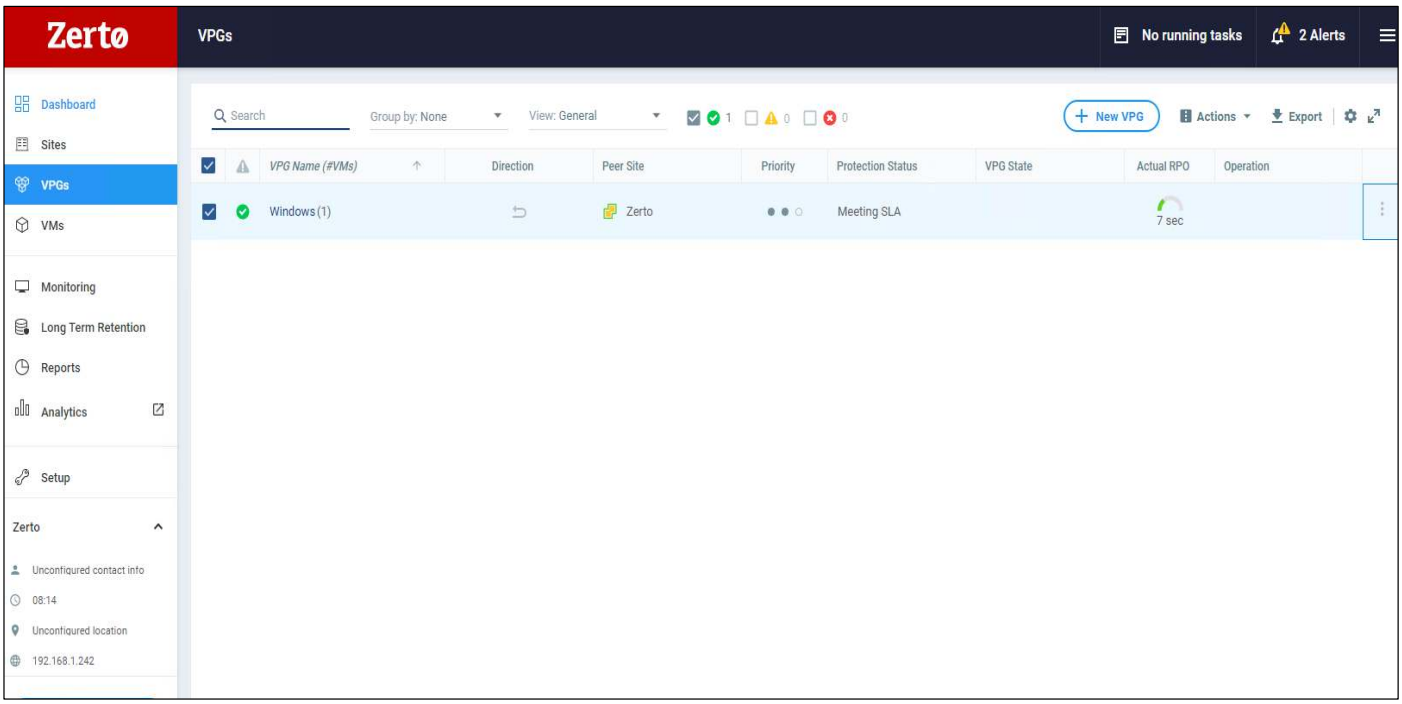


Summary

You will be presented a summarization of all your selections. When satisfied, click **Done**.



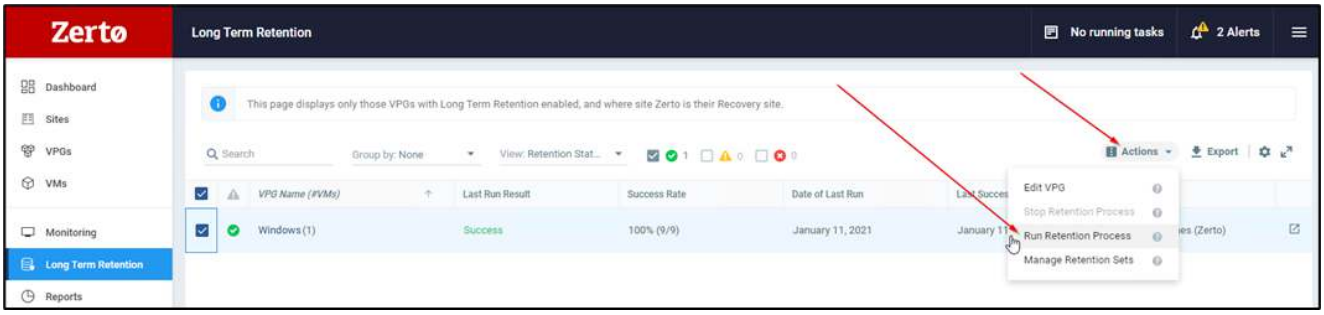
The new VPG will be listed.



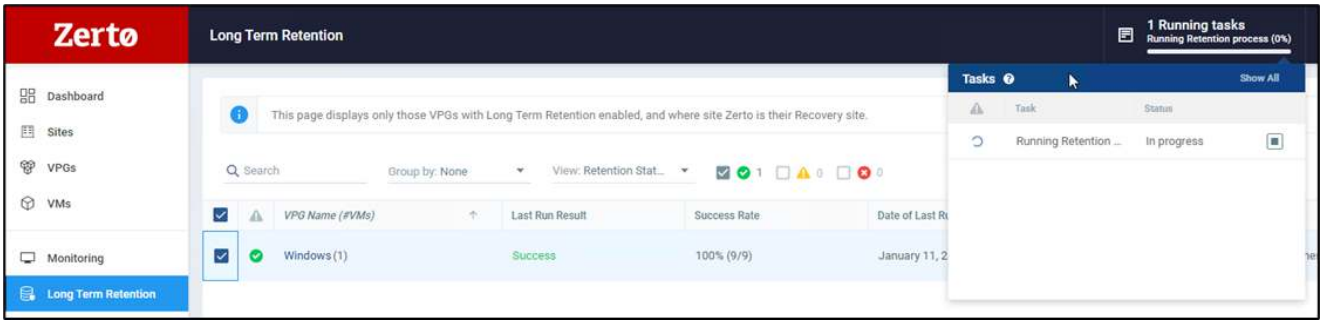
Manual trigger retention

Instead of waiting for the job to start based on retention timing, you can manually start it as shown in the following:

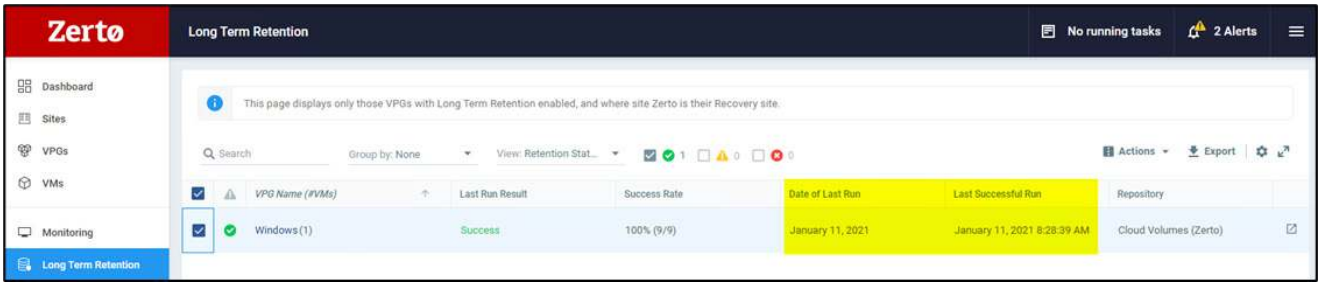
1. Select the **VPG**.
2. Click the **Actions** menu.
3. Click **Run Retention Process**. You will receive a warning that this manual run will interrupt any scheduled runs. Assuming this is ok in your environment, click **OK**.



4. The new process will appear on the taskbar with a status.



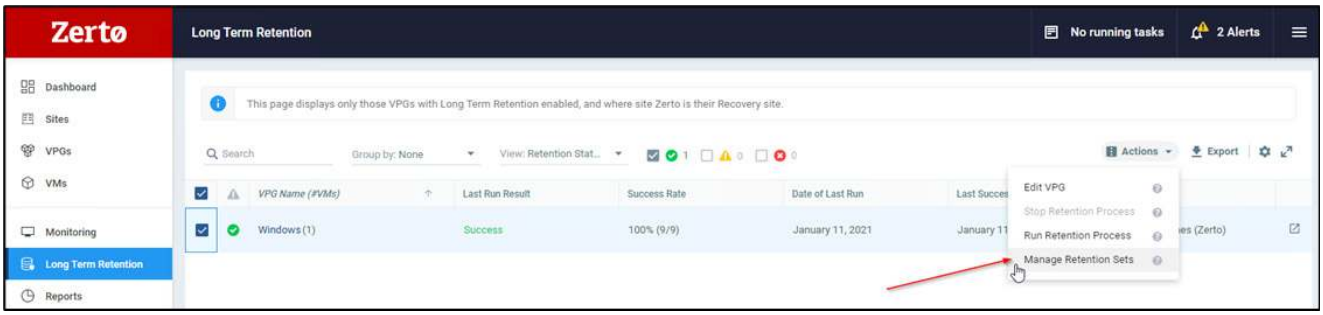
5. Once the job completes, the VPG will update with the date of the last run and time of last successful run.



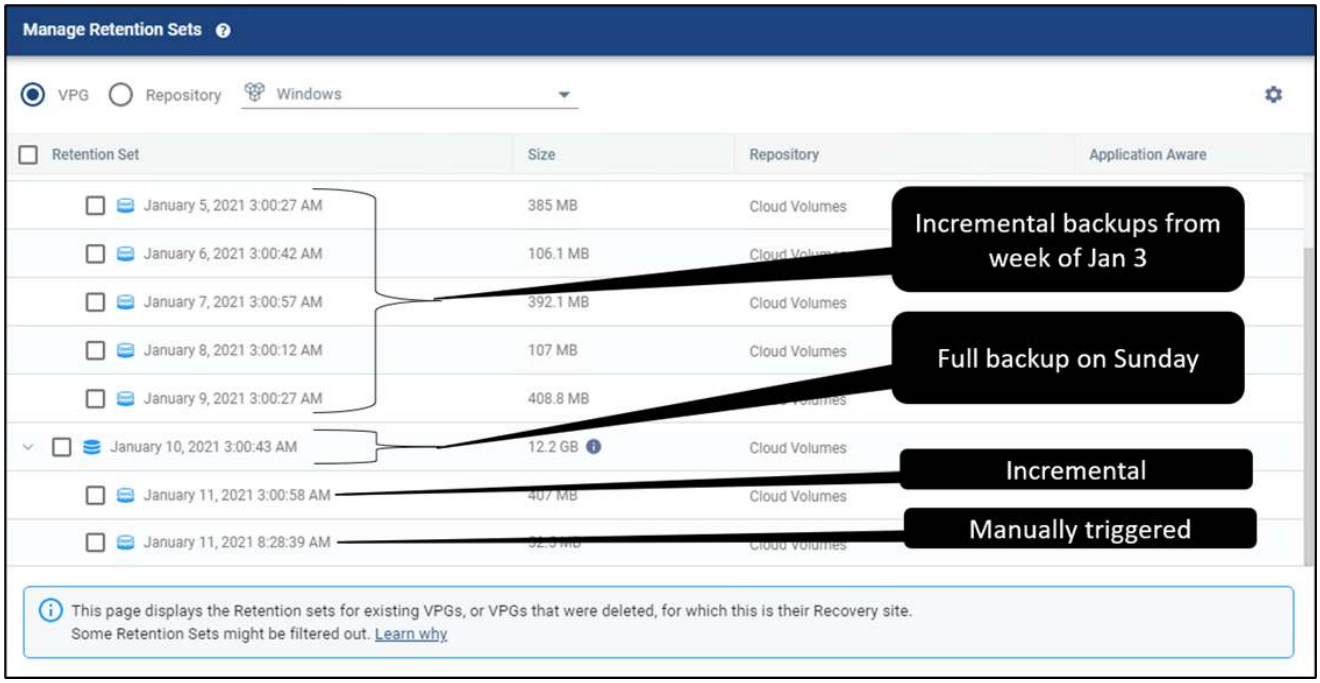
View Long Term Retention—Viewing results

In this example, we revisited the Zerto portal after a few weeks to see how the protection was progressing and what the results looked like.

1. Select the VPG, click Actions menu, and then **Manage Retention Sets**.



2. Retention Sets are listed, grouped (collapsed) by Full Retention Set date.
3. It is also possible to trigger a deletion of incremental or full jobs by selecting a corresponding checkbox and clicking **Delete**.



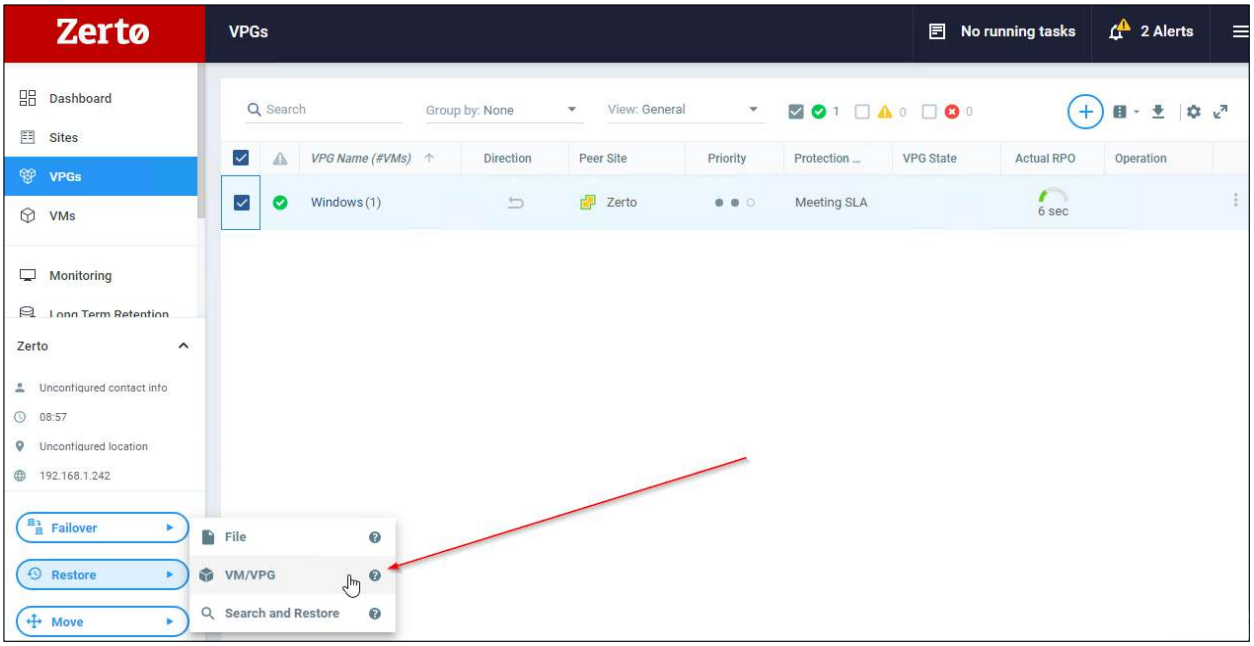
4. Click **Cancel** when done reviewing.

7. RESTORE FROM HPE CLOUD VOLUMES

We will demonstrate a restore of a virtual machine from HPE Cloud Volumes with default options. There are many options provided by Zerto that are outside the scope of this document.

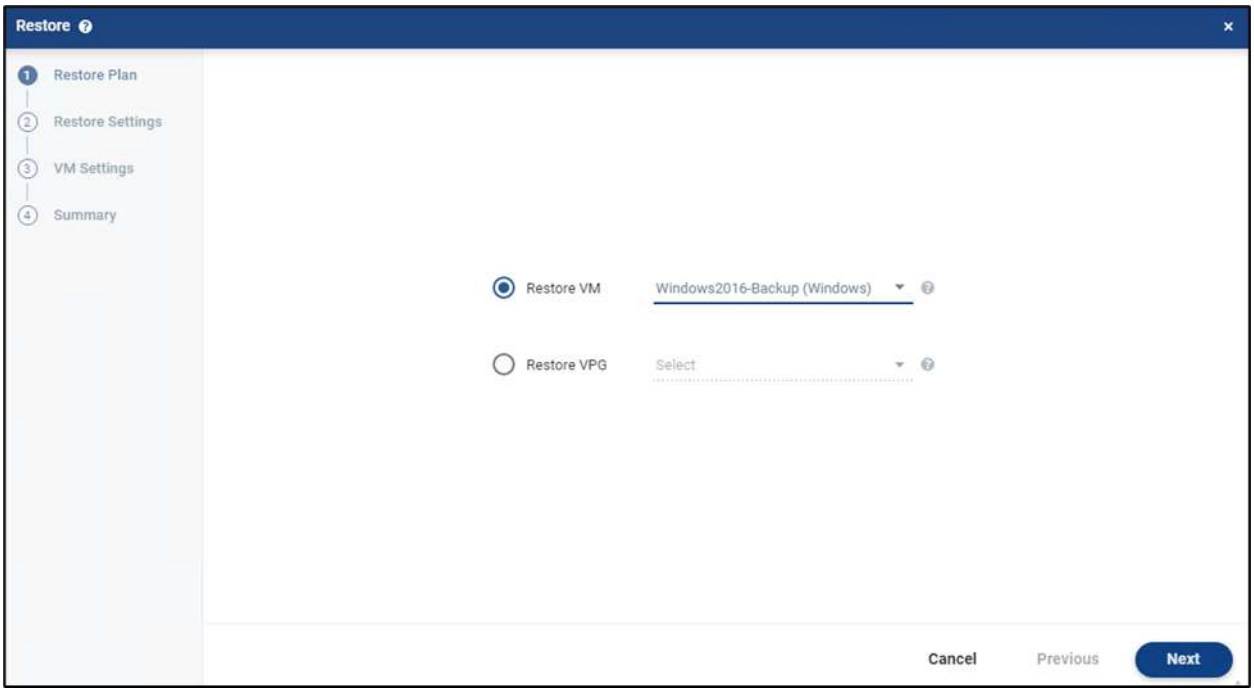
We will recover the virtual machine to a new one, using our ESXi server.

Click **Restore** in the Zerto sidebar menu and select **VM/VPG**.



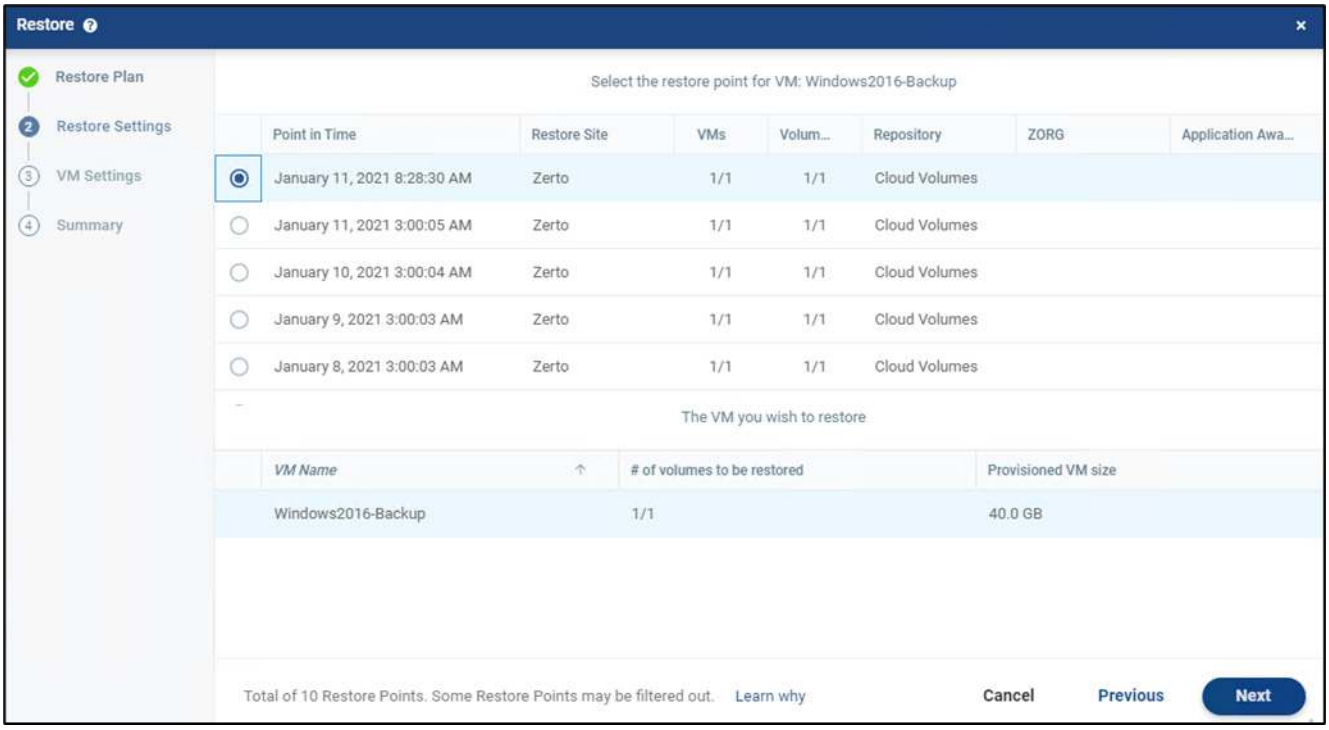
Restore plan

Select Restore VM, choose the machine you wish to restore, and click **Next**.



Restore settings

Select the **Point in Time** you wish to use for the restore. Zerto will manage building the restored virtual workload based on your selection. Click **Next**.



VM settings

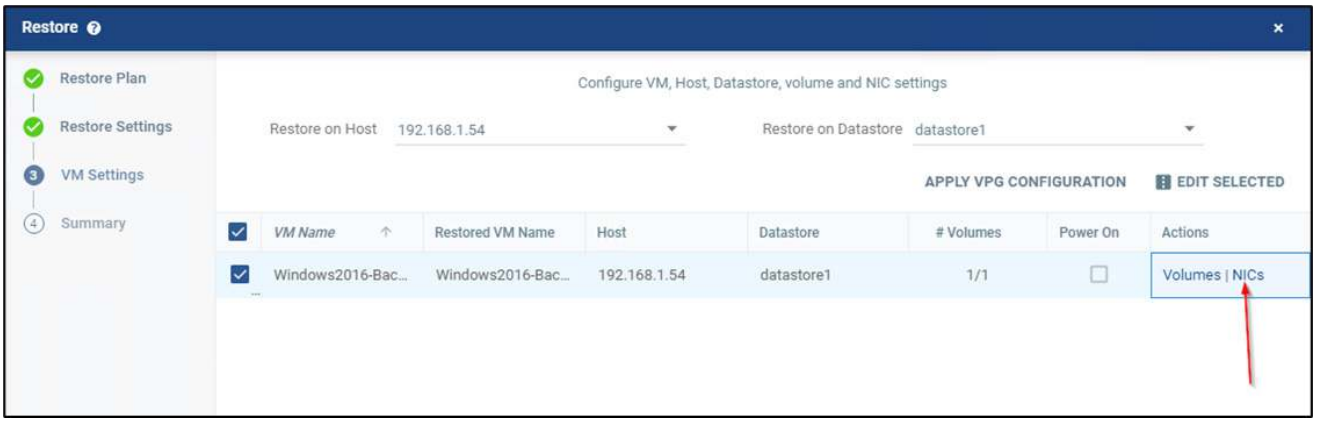
Select the host and datastore you want to restore. In our case, we will restore to the ESXi server and datastore1.

NOTE

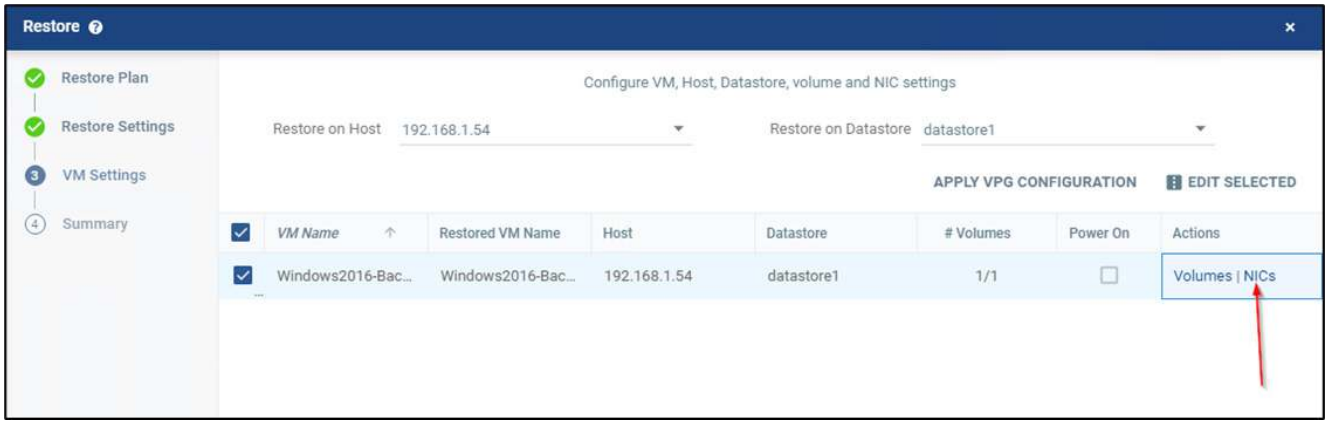
Since the VM we are restoring is still alive, we should take the additional step to ensure that the restored VM does not try to use the same NIC MAC address as the old one. We could alternately stop the old VM to avoid this step, but it is shown this way for completeness.

---

1. Select the VM to be restored and select **NICs**.



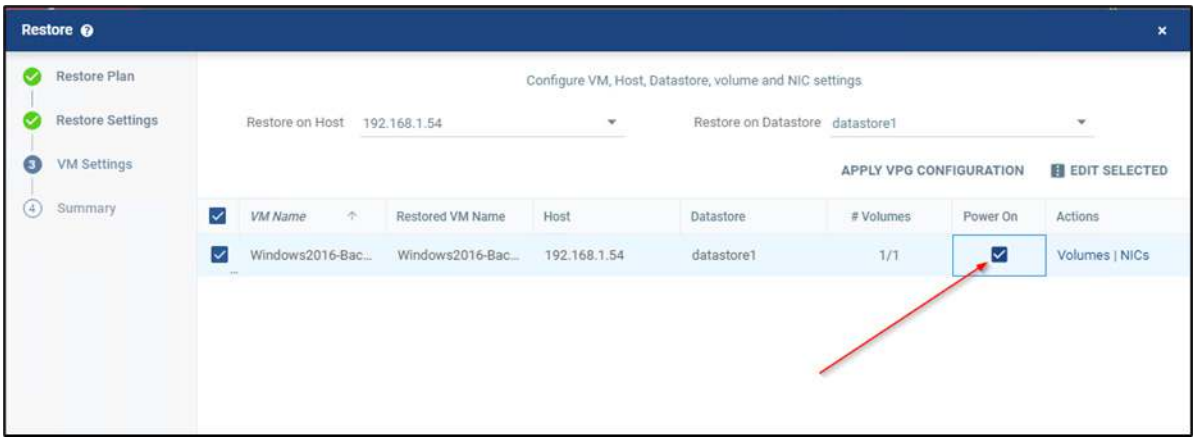
2. Select New MAC for the network adapter.



3. Click **Done** and then **Next**.

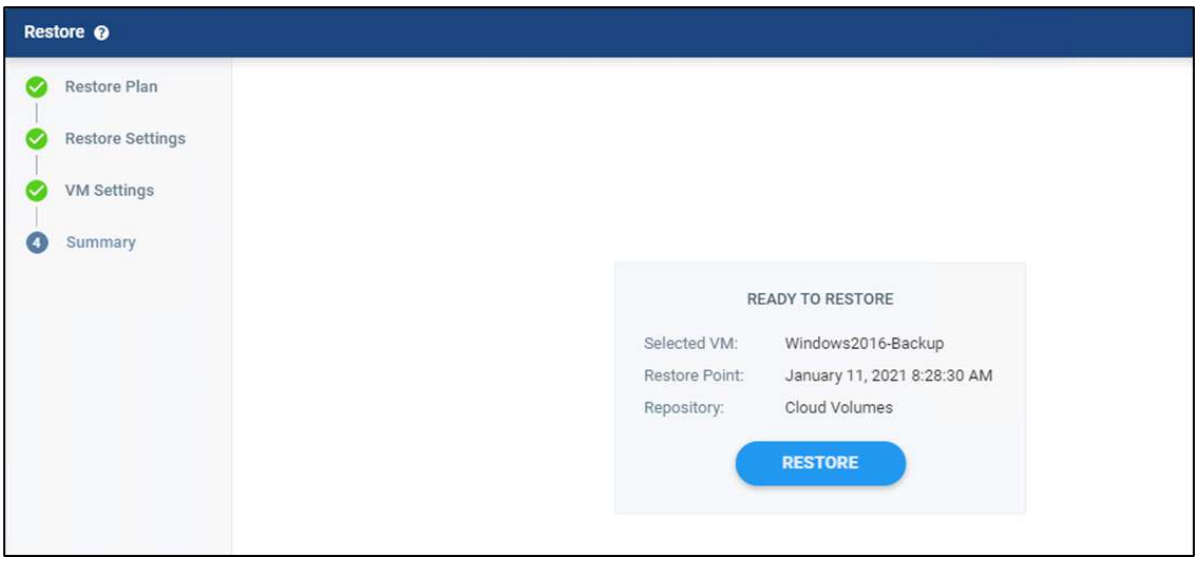
VM settings

Click the checkbox to power on the restored VM after restoration.



Summary

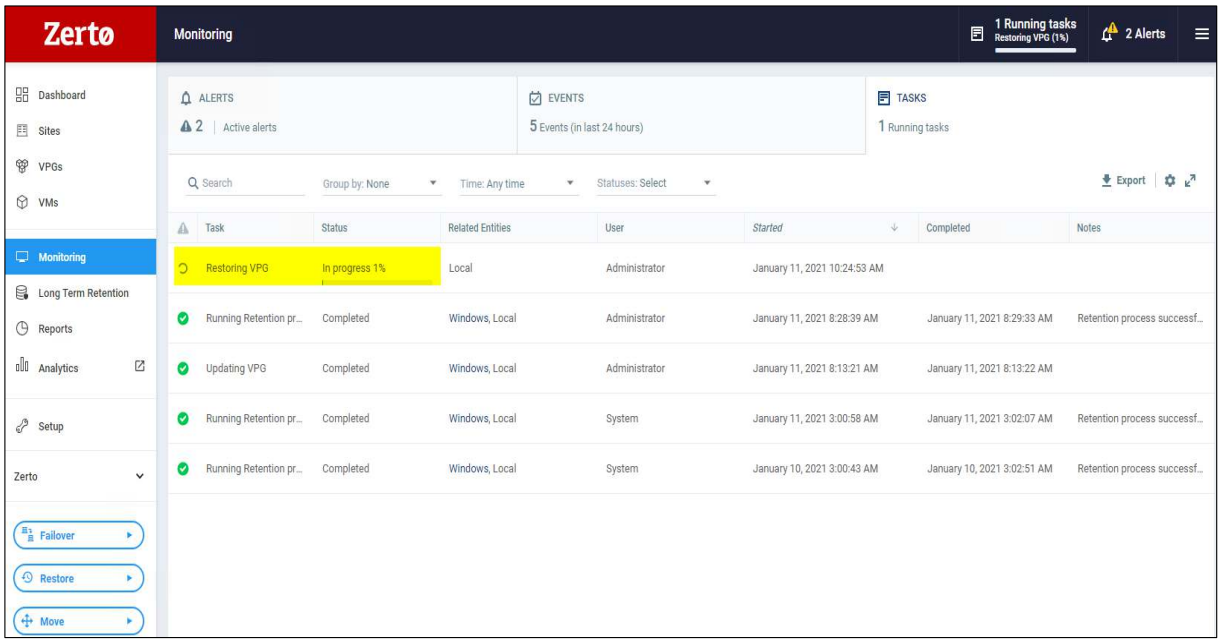
Click the **RESTORE** button.



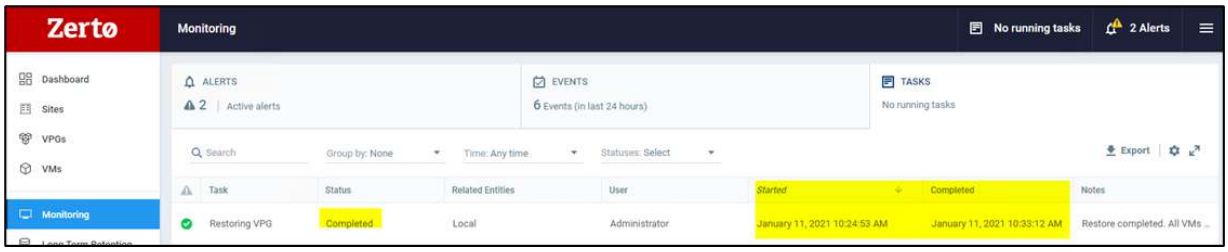
Monitoring

Earlier, we used the taskbar to see the running job. This time we will use the **Monitoring** feature.

1. Click **Monitoring** from the Zerto sidebar menu.
2. The restore job is shown running in yellow restoring the selected VM from HPE Cloud Volumes back to the local ESXi server.

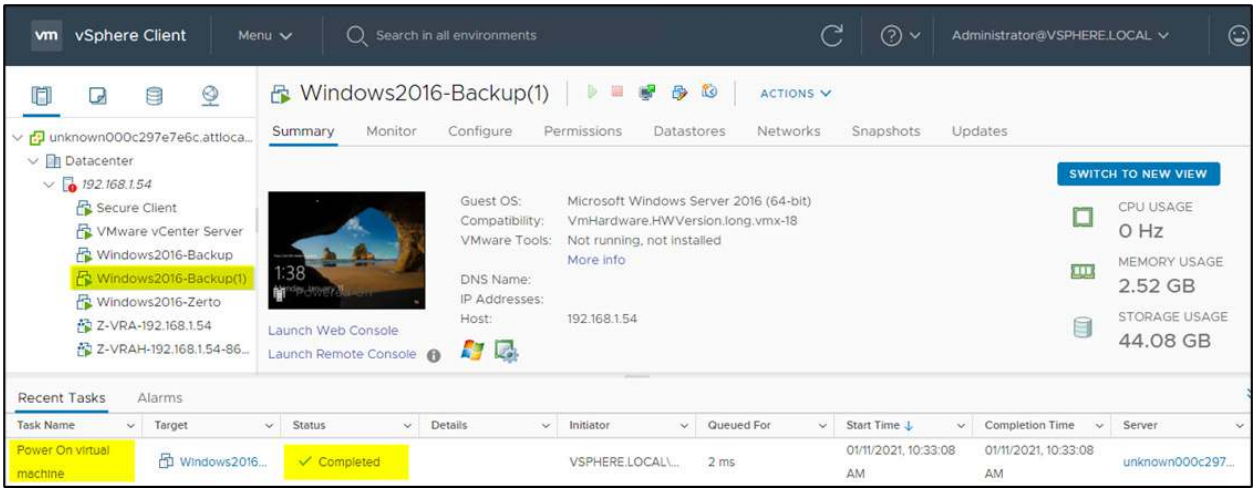


3. Once the restore job is completed, the **Monitoring** column will show **Completed**. Processing time will vary based on the speed of the internet connection and to a lesser extent, local compute resources.
4. You can calculate processing time once completed from the difference between **Started** and **Completed** times.



Restore

Navigate to the vSphere Client portal and log in. You will see the restored VM listed as "Windows2016-Backup(1)", which should be left in a running state post restore by Zerto. The ability to create the VM in an off state is an option as well.

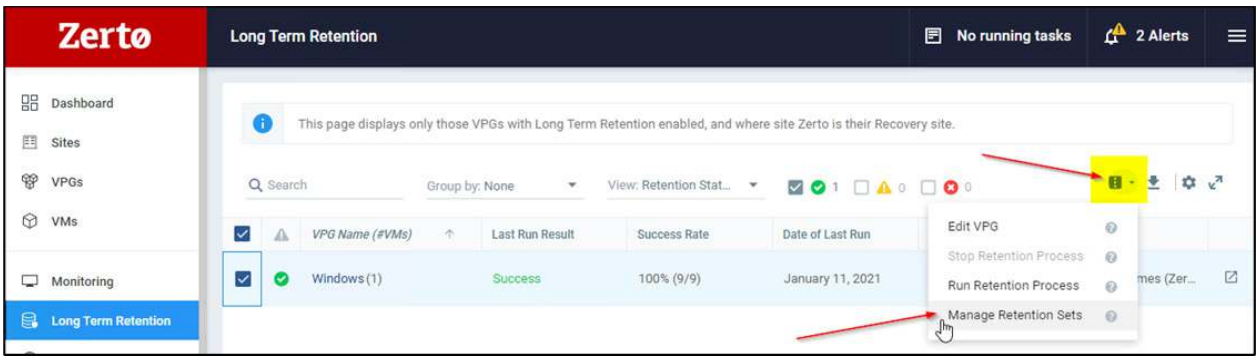


Deleting a retention set

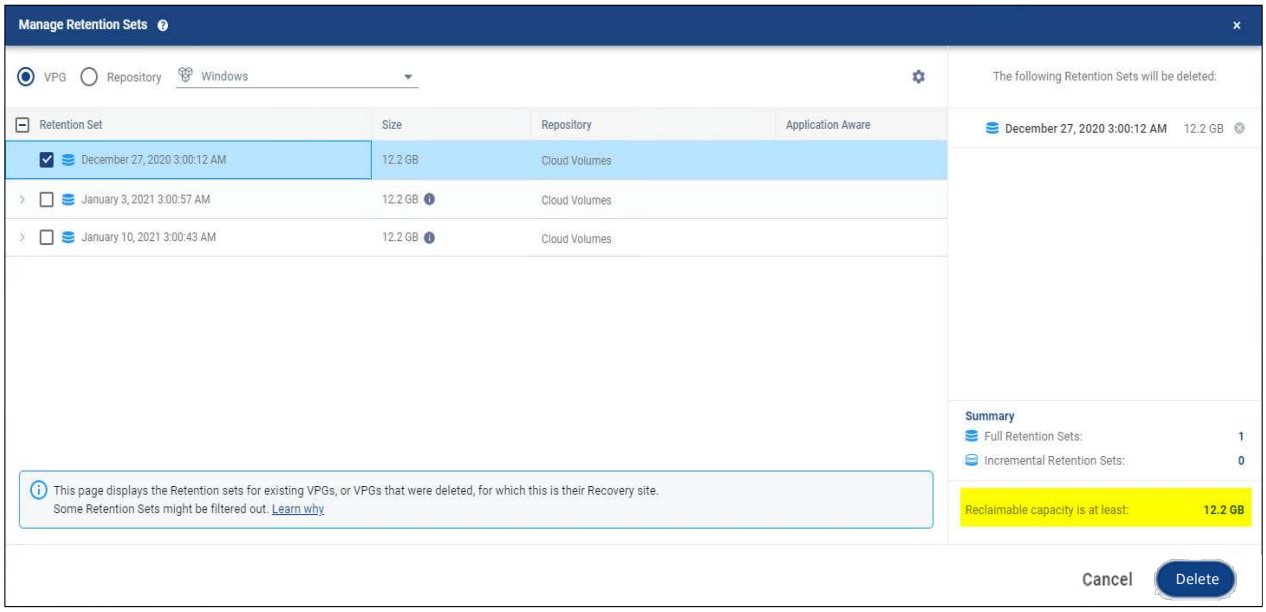
Retention sets stored in HPE Cloud Volumes are managed via the Zerto portal. To delete a set or sets, navigate to Long Term Retention in the Zerto left sidebar menu.

1. Select a **Long Term Retention** checkbox next to the VPG you wish to work with.
2. Click the **three dots** Action menu and select **Manage Retention Sets**.

NOTE
You can perform the same actions from the VPGs menu as well.

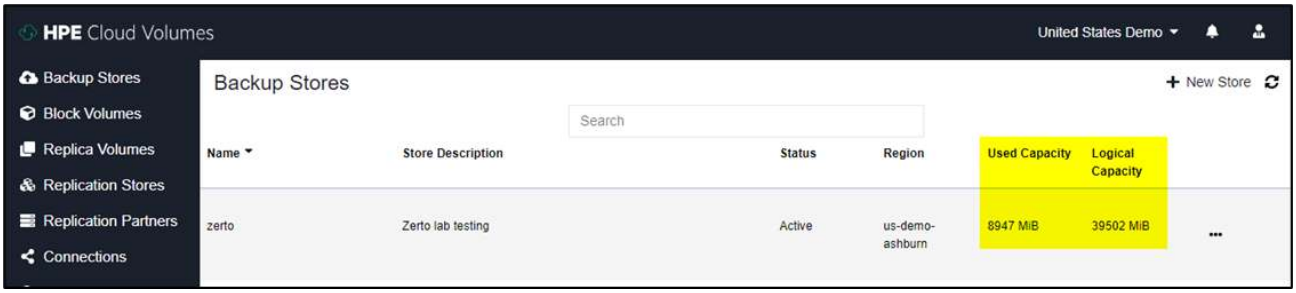


3. Select a retention set for deletion and note the estimated reclaimable space. Before clicking delete, you may want to take note of the Backup Store size in HPE Cloud Volumes as described in the next steps.

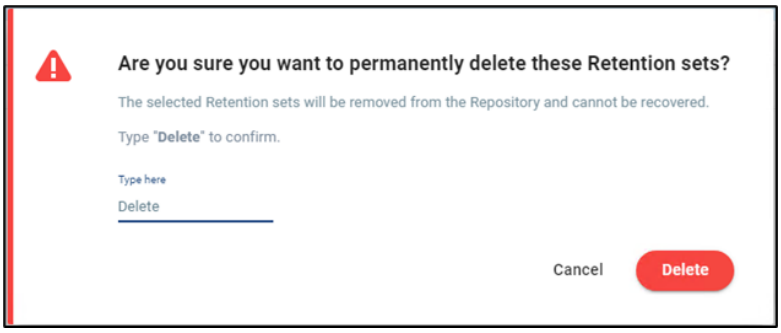


4. You may wish to take note of the Used and **Logical capacity** shown for the HPE Cloud Volumes Backup Store.

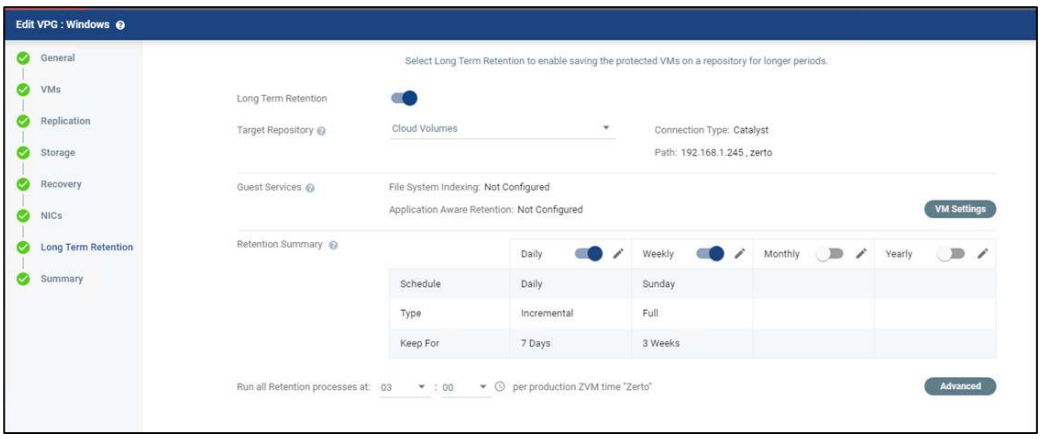
Prior to deletion:



In Zerto, click **Delete**, and you will be prompted to type **Delete** again as confirmation.



This action does not automatically delete the data from HPE Cloud Volumes as the Zerto Long Term Retention policy was set to a specific keep for that determines when Zerto will instruct HPE Cloud Volumes to delete the daily, weekly, monthly, or yearly retention sets. For example, the following VPG is set to keep **Daily** to 7 days and **Weekly** to 3 weeks.



When a retention set is deleted, it sets the retention set's expiration time to the current time. Once the **keep for** time is reached, it will delete the metadata, and then during the next garbage collection cycle, the actual data will be deleted. This part can take up to 48 hours, as the garbage collection process happens once a day.

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