open-e JovianVHR

OPEN-E JOVIANVHR JUMP START

Date: 2025.08.28

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1. INSTALL OPEN-E JOVIANVHR ON A PHYSICAL SERVER

Download and extract the ISO file using your preferred compression software (e.g., 7zip or WinZip) to an empty USB Flash Drive.
The ISO can be obtained from here: **https://www.open-e.com/products/open-e-jovianvhr/open-e-jovianvhr-free-trial/**

After extracting the ISO file on your USB Flash Drive, the root directory must contain the following directories ONLY: bxxxx, boot, and file mmenu_upd.sh where the xxxx is the software build number (for systems that support BIOS. If your system supports UEFI, it is also required to keep the EFI directory).

- To make your USB Flash Drive bootable, enter the “boot” directory and run the “bootinst.exe” (For Windows) or “bootinst.sh” (For Linux). Follow the prompt, then remove the USB Flash Drive.
- You can now boot your storage server installer with a USB Flash Drive.

NOTE: The prepared USB Flash Drive will run the software installer by default. If you wish to test or use the USB Flash Drive for non-mission-critical or non-production purposes, you can boot Open-E JovianVHR directly from it instead of running the software installer. To make this default change, run the „config.exe” from the boot directory and select „r” to remove the default boot of the software installer.

1.1 BOOTING OPEN-E JOVIANVHR INSTALLER

General Hardware requirements:

- The minimum size for the Open-E JovianVHR boot medium is 16GB. The installer creates up to 128GB boot medium partition size if bigger than 16GB boot disk is present. A recommended Open-E JovianVHR boot medium uses an HDD or SSD device. The USB Flash Drive can be used as an Open-E JovianVHR boot medium for testing purposes or non-mission-critical applications.
- Minimum of 8GB RAM plus 1GB per 1TB of pool space.
- Mirrored “Write Log” is recommended.
- An Uninterruptible Power Supply (UPS) is strongly recommended.

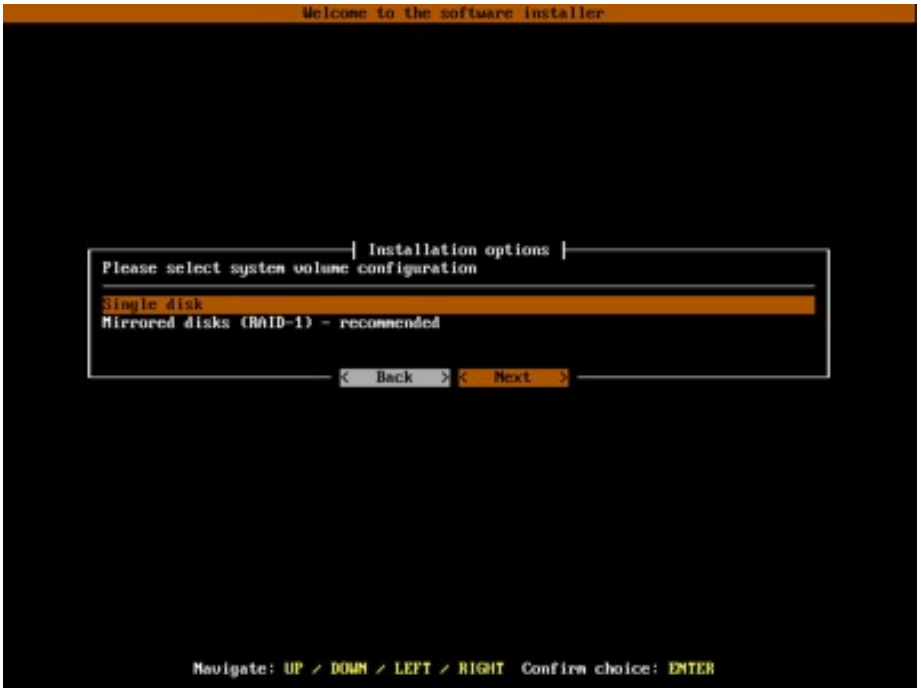
Plug your installer media (USB Flash Drive) into the storage appliance.

The first boot menu will show the software version. You can press enter, or it will skip and continue automatically within 5 seconds.

The second menu allows you to select to boot Open-E JovianVHR or to install the software on a writable boot media in your system using the interactive installer utility. Select “Run software installer” to install Open-E JovianVHR on a writable boot media in your system.

Please follow the instructions while running the installer. The installer optionally can install the system on a single disk or on mirrored disks (RAID1). If a single disk is selected, it is still creating degraded RAID1 on the single disk, but the system will not create error events about degraded RAID1. It will be possible to add a second disk and get redundant RAID1 anytime in the future.

Once the boot media becomes redundant RAID1, the system will generate error events if any disk of the mirror fails.



Finally, reboot your storage server from the new boot media (set your BIOS boot options back from USB to the medium where you installed the software).

NOTE: Open-E JovianVHR can be used for evaluation up to 60 days with the trial product key. The Trial Key can be downloaded after registration from: **https://www.open-e.com/partner-portal/partner-area/products/jovian-vhr-trials/**

1.2. INITIALIZE HARDWARE

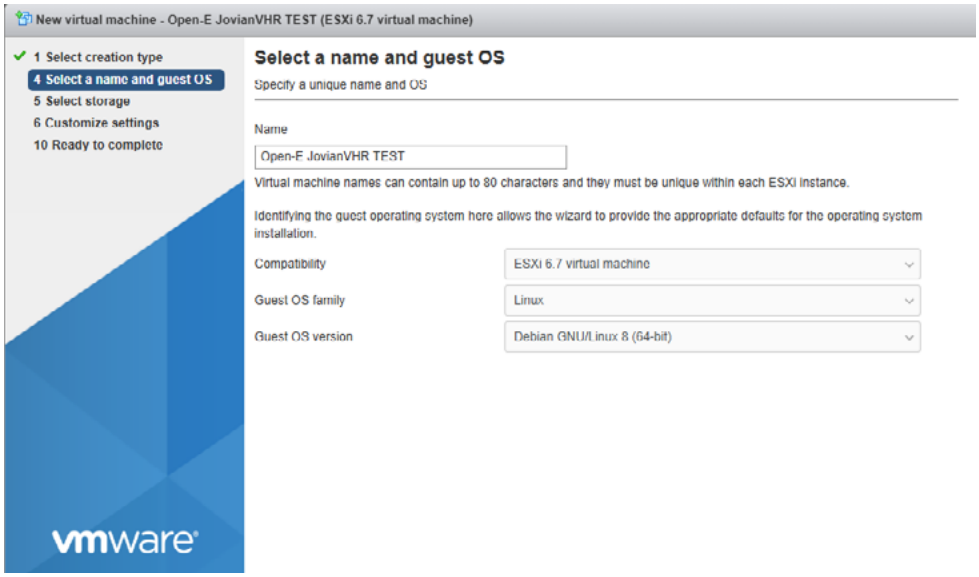
Before using Open-E JovianVHR, you should have the hard disk drives connected to the SATA, SAS, or NVMe ports on the motherboard or SAS HBA, and the LAN Card and other NICs already in your server.

Connect the keyboard and monitor (they will be needed for setup only). Later, you can run the server in “headless mode” (without keyboard and monitor).

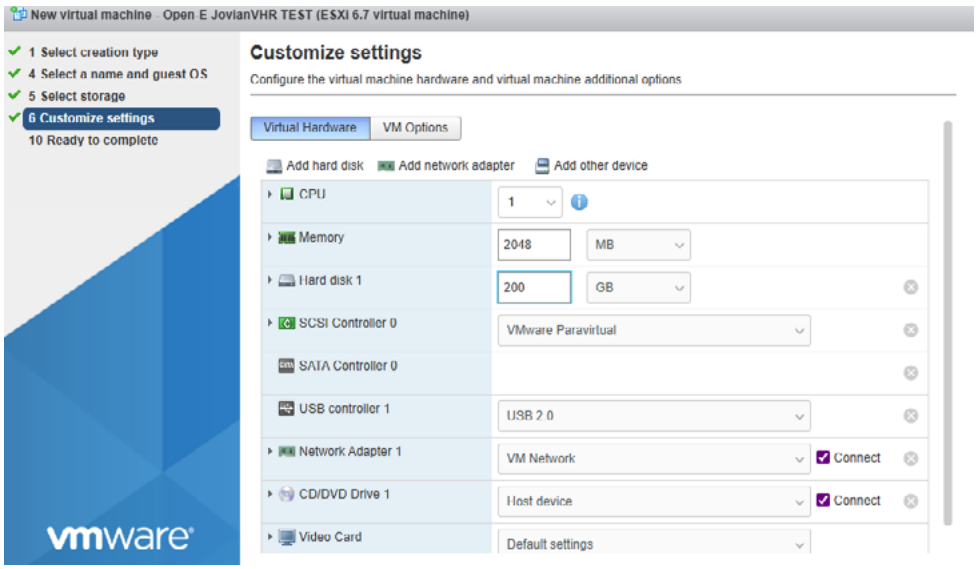
NOTE: Please check the motherboard BIOS if the „headless mode” is enabled. In some cases, systems will not boot if the keyboard is not connected. You’ll find more about the headless mode in the motherboard’s BIOS manual.

2. INSTALL OPEN-E JOVIANVHR AS A VIRTUAL MACHINE

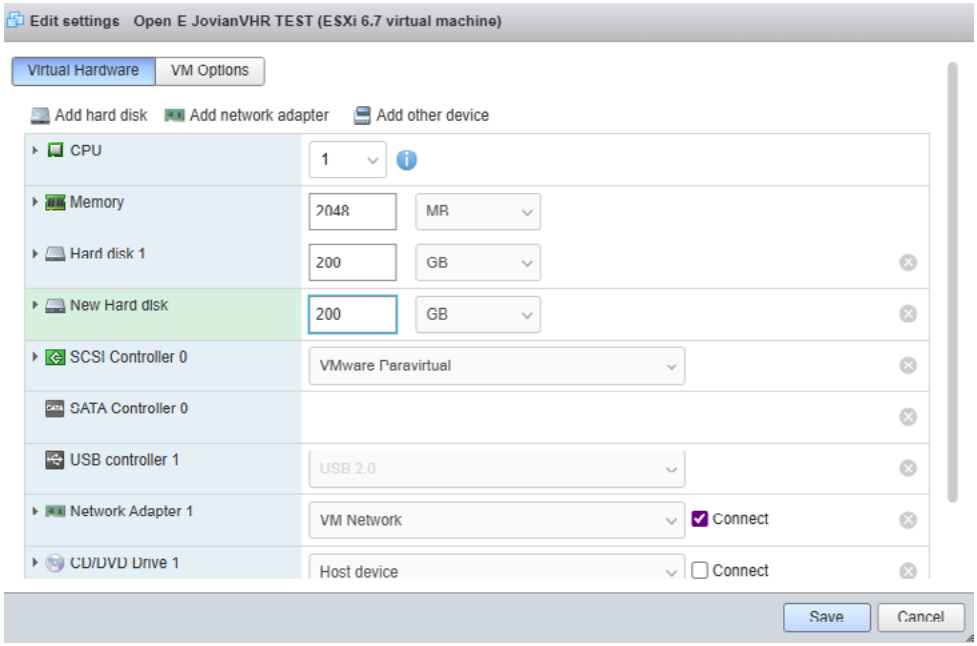
- In the ESX host menu, select “New Virtual Machine”, and in the wizard, click on the “Next” button.
- Enter the VM name. In this example, we have: Open-E JovianVHR TEST



- Next, select the destination host and then select the datastore for the VM.
- Next, confirm the compatibility with ESXi 6.0 or later.
- In the guest OS step, please select Linux and Debian 8 (64-bit)
- In the customize step (screenshot below), please use 2 CPU, enter 12 GB or more for Memory, and 200GB or more for the New Hard disk.



- Next, power on the Open-E JovianVHR TEST VM, and please follow the instructions while running the installer.
- Next steps are the same as described in the Booting Open-E JovianVHR installer section.
- Once the Open-E JovianVHR TEST VM is up and running, you need to add drives for data storage, as during the virtual machine creation, only a single boot disk was configured.
- In Virtual Machine Edit Settings, click on “Add hard disk” –> select “New Hard Disk” and click on the “Save” button.
- Here, another disk is inserted. To confirm it, click on the “Save” button.



- Now the Open-E JovianVHR TEST is ready for pool creation.

3. STORAGE CONFIGURATION

3.1. PREPARING FOR THE WEBGUI ADMINISTRATION

After the boot process has finished, Open-E JovianVHR will show you information about all its network settings. The standard IP Address setting for Open-E JovianVHR is: IP address 192.168.0.220 and Netmask 255.255.255.0. This setting can be changed manually by entering the following key sequence: left „**Ctrl**" + left „**Alt**" + „**N**".

3.2. ENTERING THE PRODUCT KEY AND LOGGING INTO OPEN-E JOVIANVHR

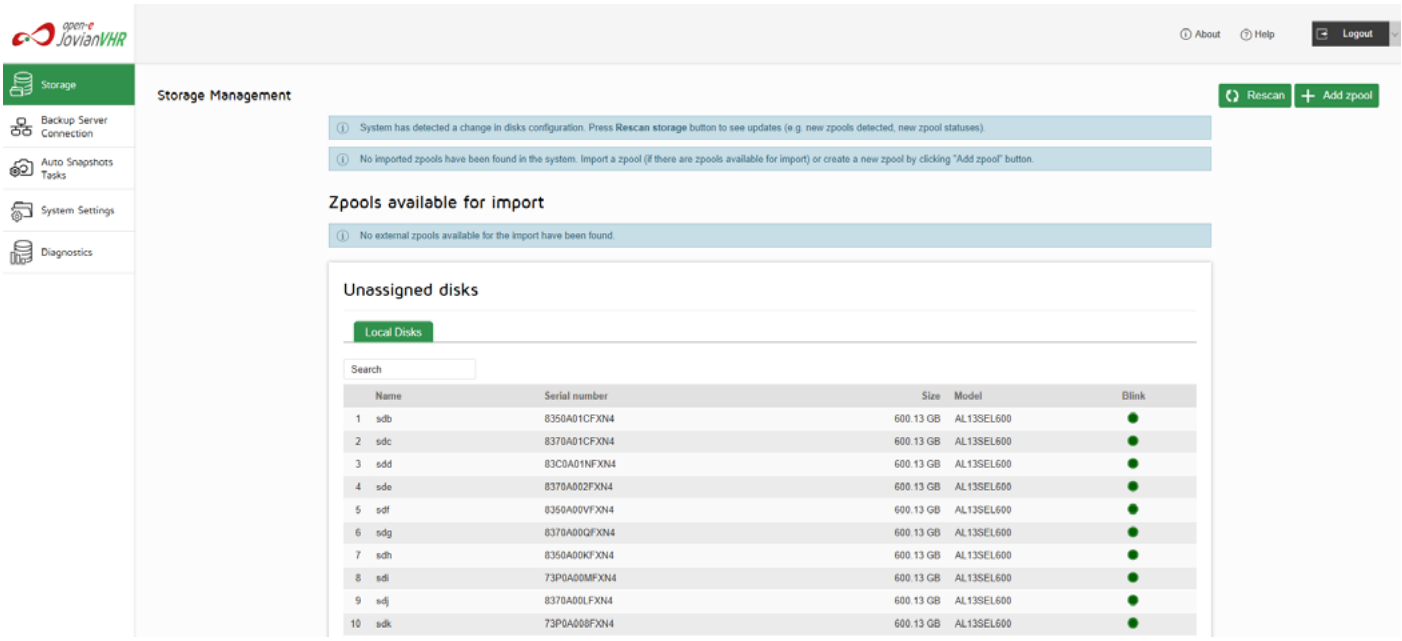
Connect to Open-E JovianVHR via the network using any standard browser, and type the IP address into the URL entry line: **https://192.168.0.220**

Next, a window for entering the product key will appear. If you already have one, please enter it and click the apply button. Log into Open-E JovianVHR by using the default password: „admin". Now you will be able to set all server parameters to get started.

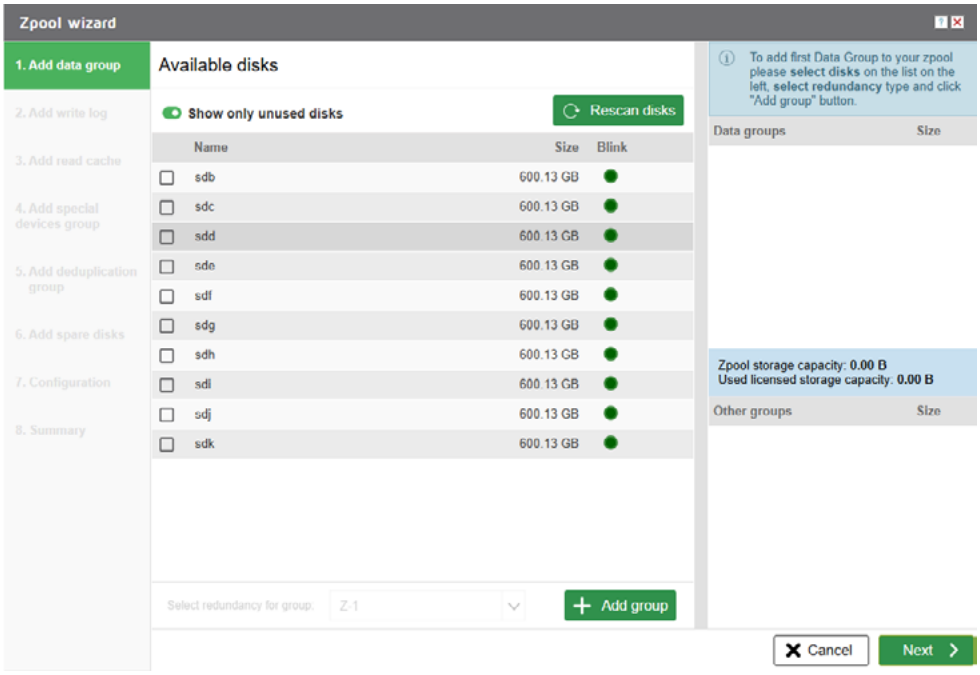
NOTE: Be aware that the password is case-sensitive.

3.3. CREATING ZPOOLS

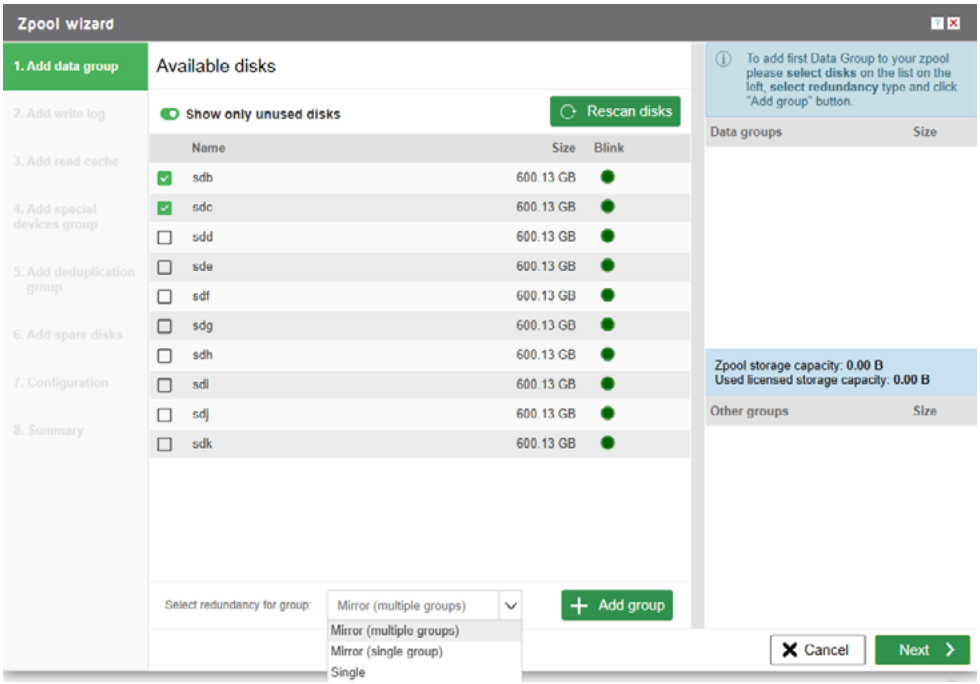
- To create a new zpool, please go to the "Storage" menu, then click the "Add zpool" button in the upper right corner to run the "Zpool wizard".



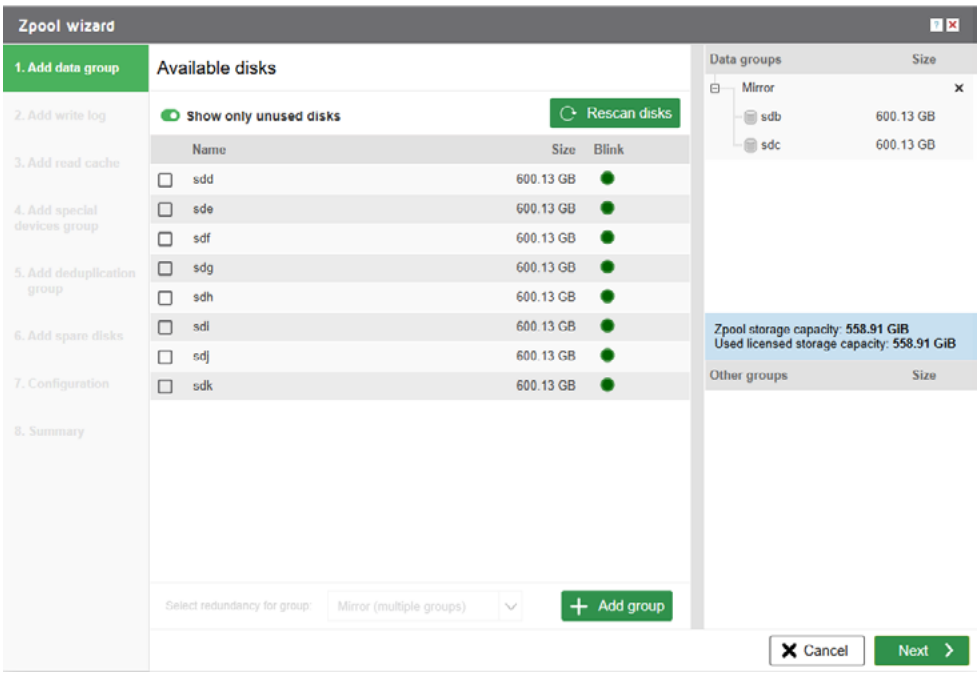
- After starting the “Zpool wizard”, all available disks will be listed.



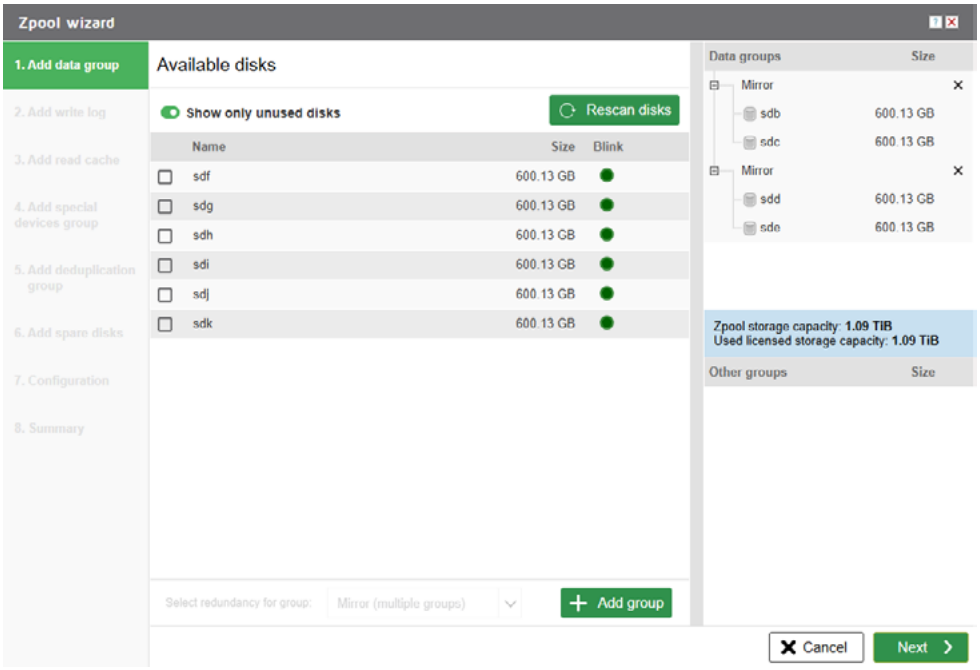
- Next, select the disks and redundancy level and click the “Add group” button.



- The created group will be displayed in the “Configuration preview” window on the right side.

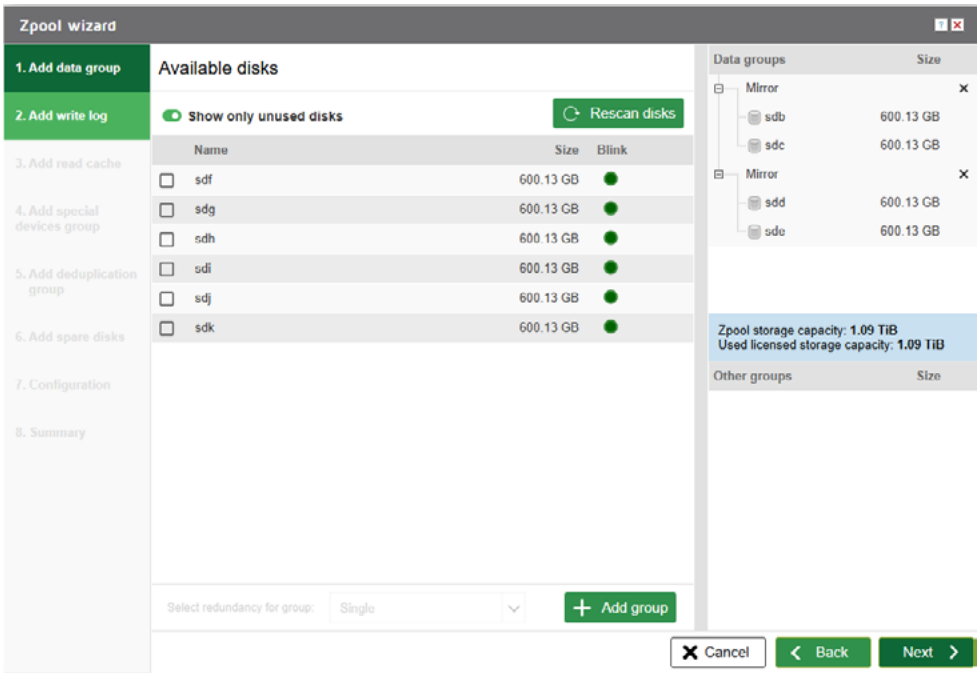


- In this example, we have 2 mirror groups added.
- The created 2 mirror groups will be displayed in the “Configuration preview” on the right side. After adding all groups, click the “Next” button.

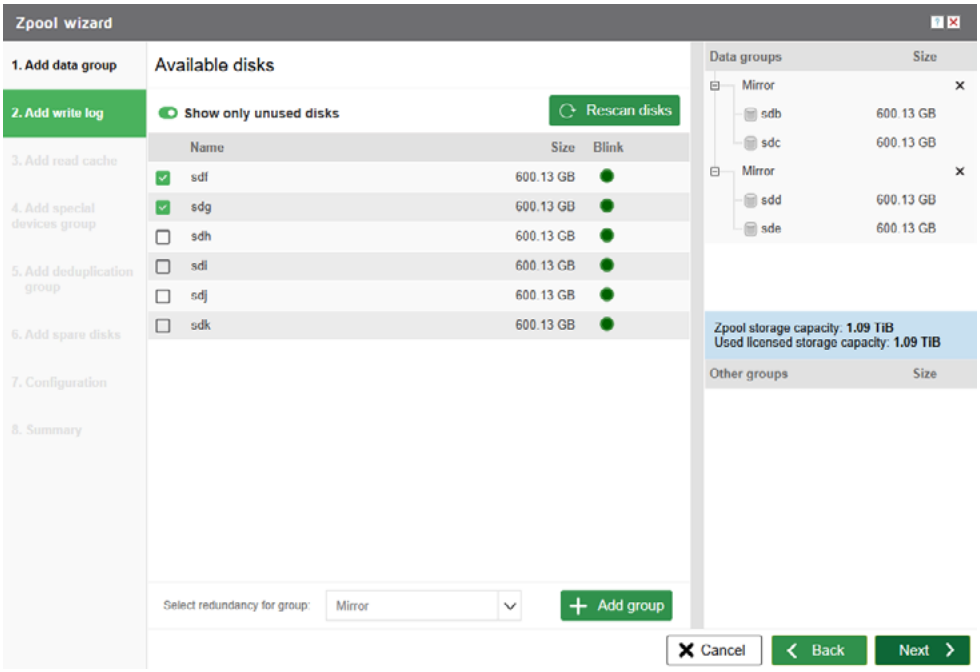


- In the next step, you can create a write log (ZIL on SLOG).

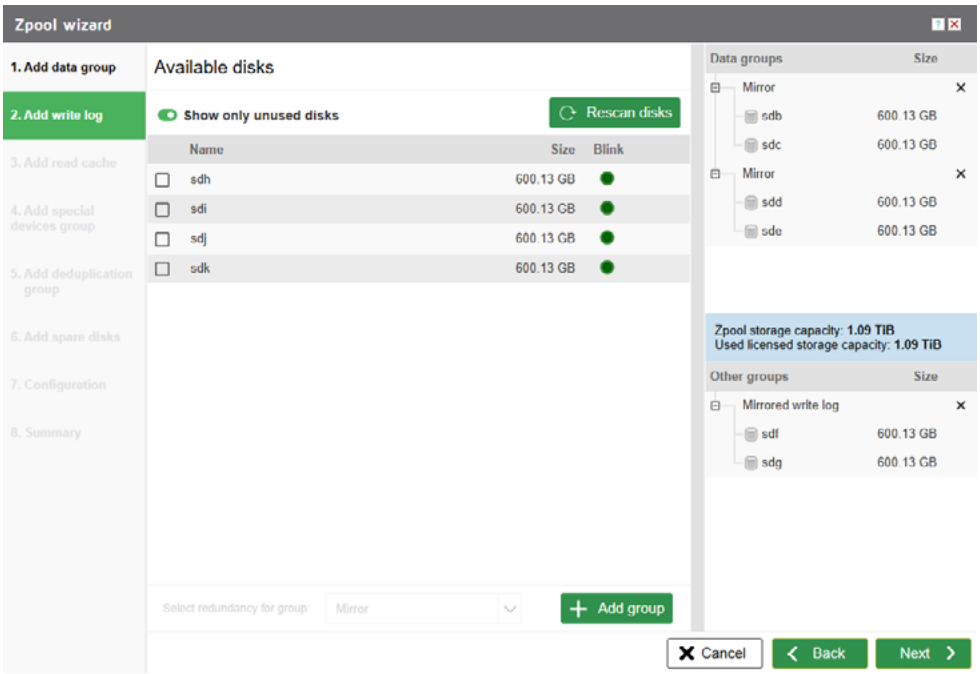
NOTE: Mirrored and fast SSD disks are strongly recommended for the random writes IOPS.



- Select the fastest disks from the list on the left and create a mirror set for the redundancy level, then click the “Add group” and then the “Next” button.

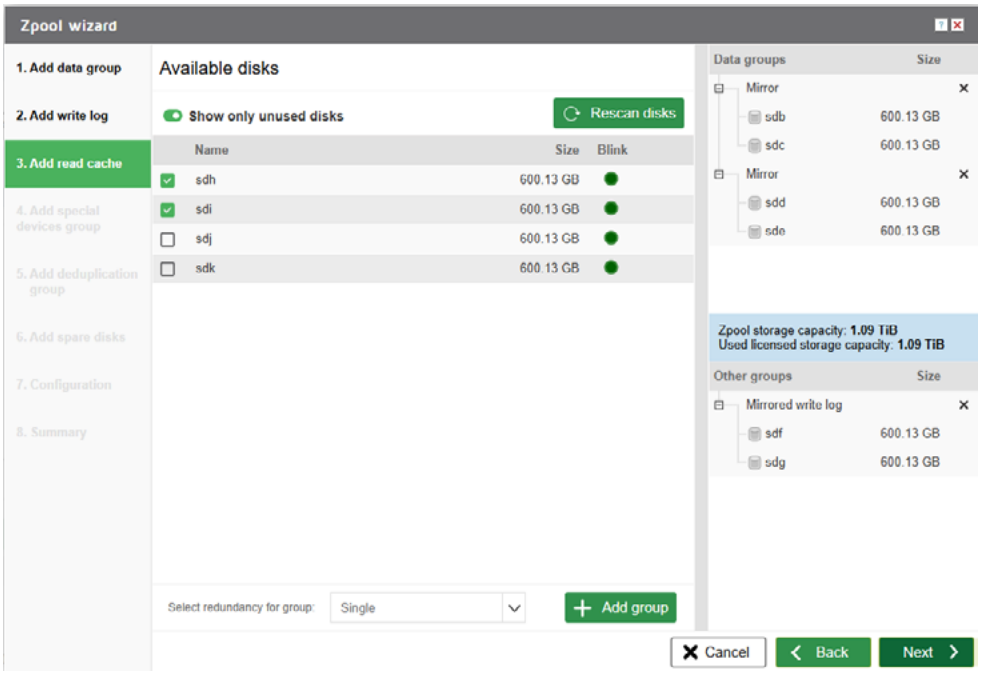


- The created “write log” will be displayed in the „Configuration preview” on the right side.

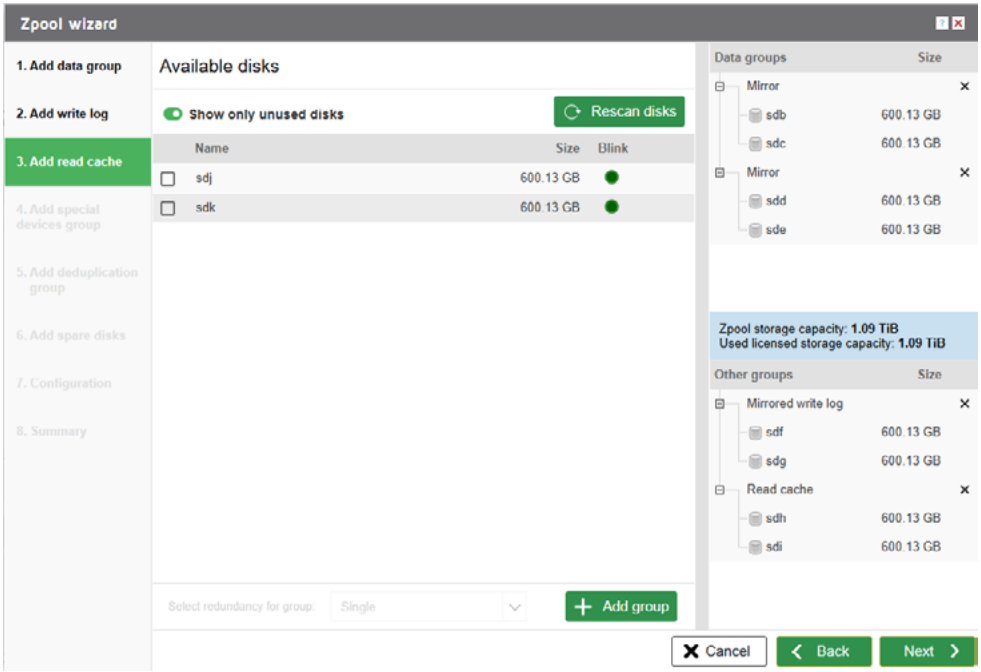


- In the next step, you will want to create the read cache. Select the disks from the list on the left and select redundancy „Read Cache", type and click „Add group", and then the „Next" button.

NOTE: For fast random read IOPS, it is recommended to use SSD disks.

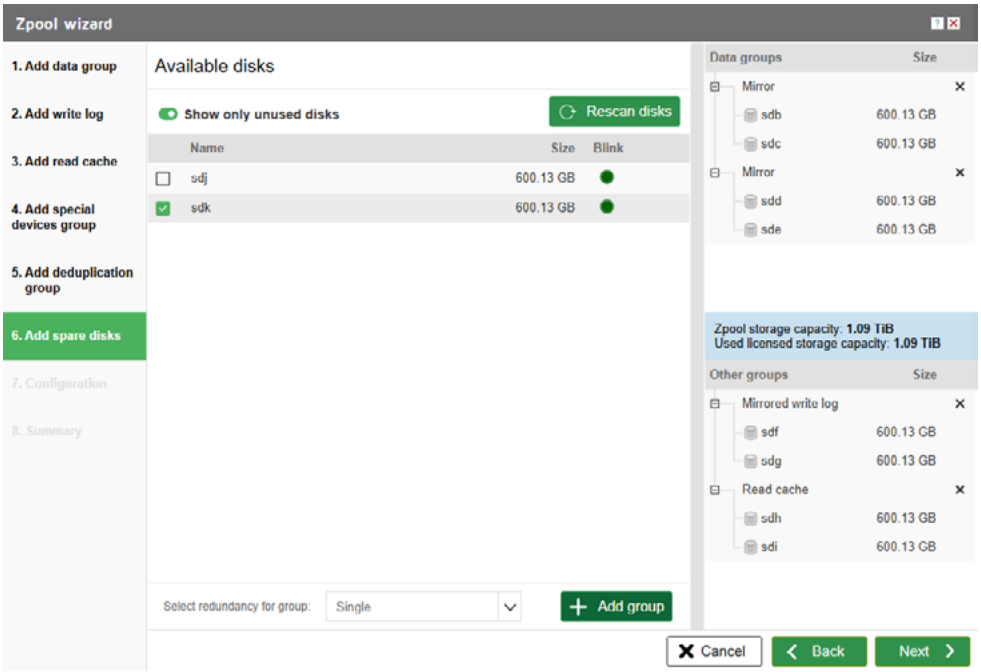


- The created read cache will be displayed in the "Configuration preview" on the right side.

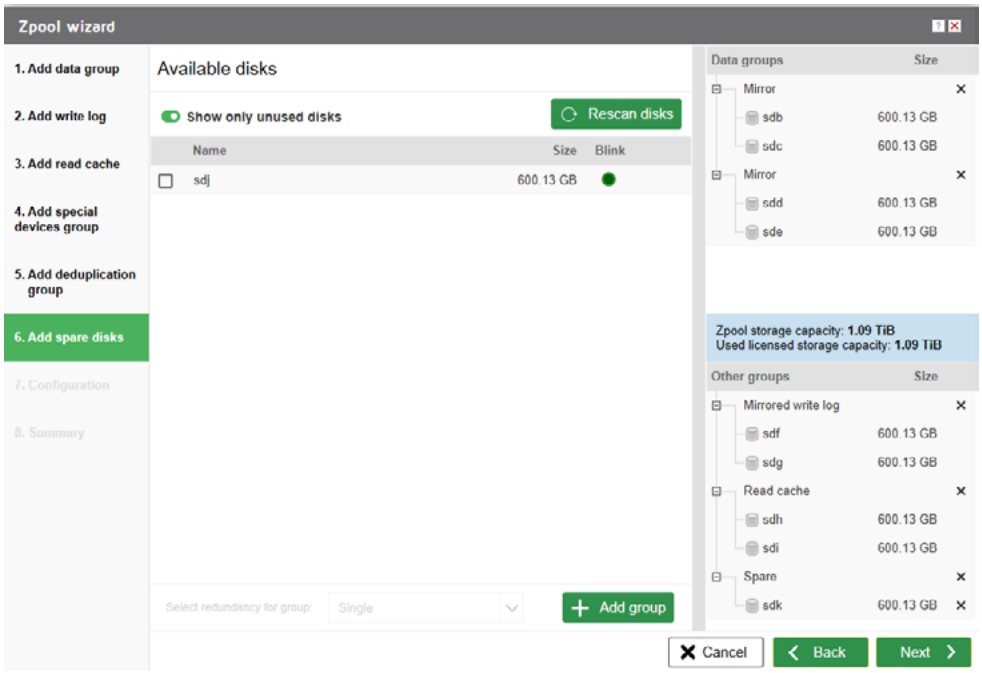


- In the „Add spare disks", please select the disk from the available disks list, click „Add group", and then click the „Next" button.

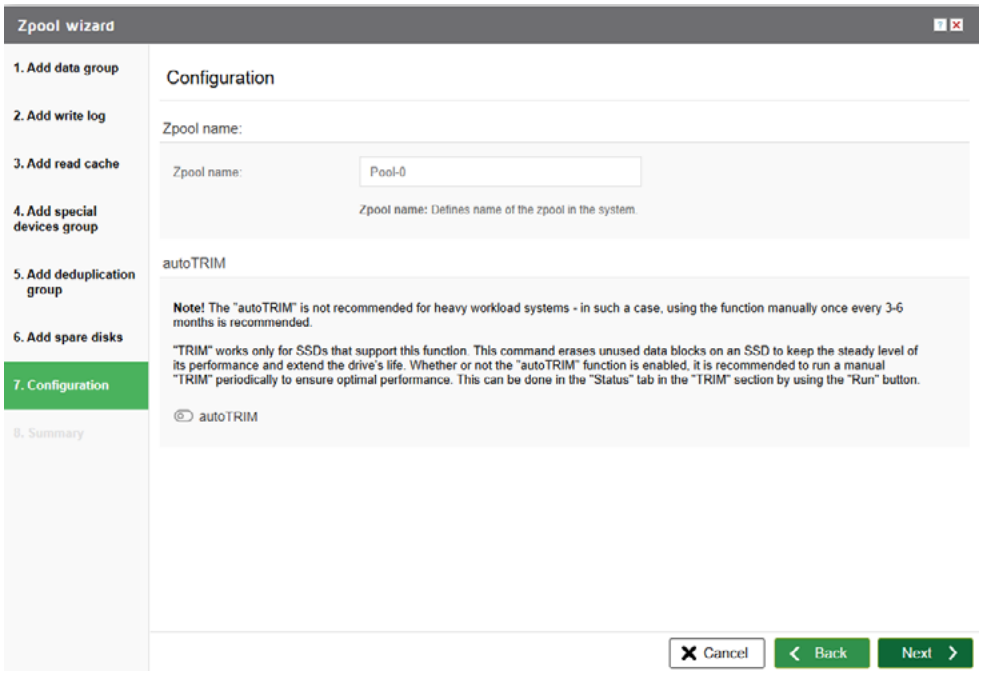
NOTE: "Spare disks" are optional. If no disks are tagged as spare disks, it is still possible to replace a faulty disk with any unassigned disk. You can skip this step by clicking "Next".



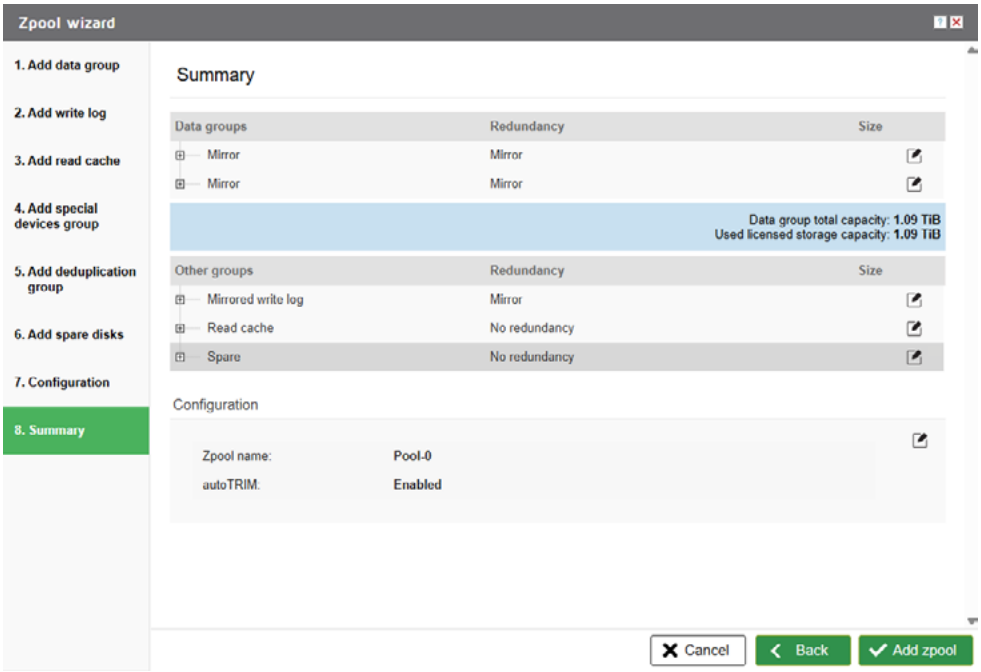
- The created „spare disks" will be displayed in the "Configuration preview" on the right side. Now click the „Next" button.



- In the next step, enter the zpool name and click the „Next" button.



- In „Summary", you can see an overview of the zpool configuration. If the settings need to be modified, click the „Back" button and make the required changes. If it is correct, click the „Add zpool".



- At this point, you have configured a new zpool.

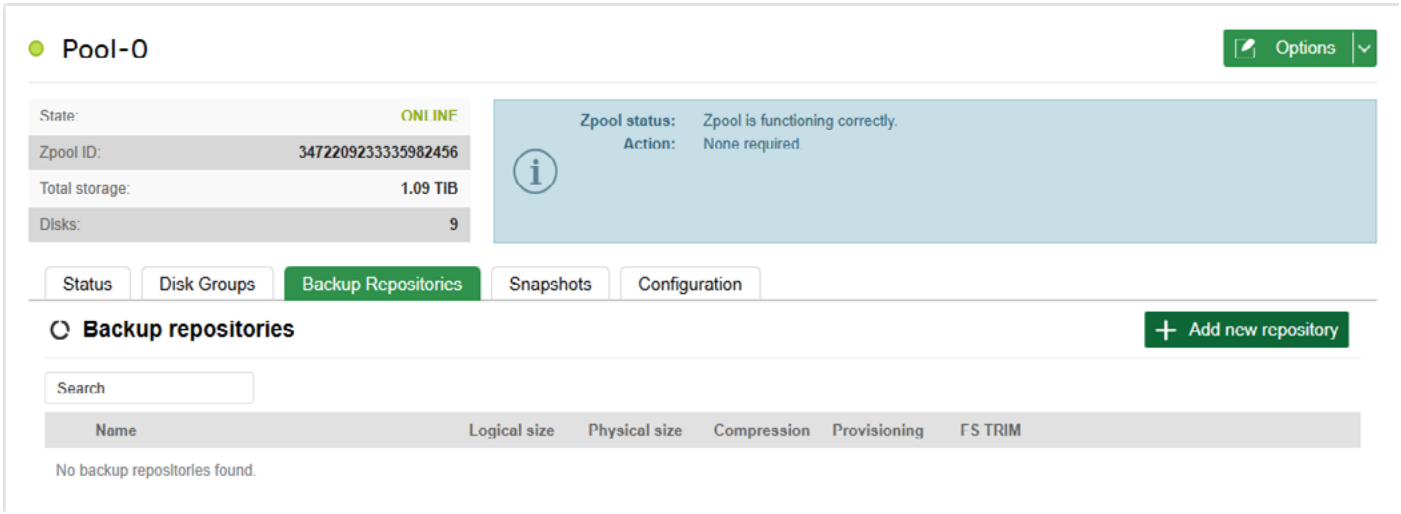
4. CONFIGURING A HARDENED BACKUP REPOSITORY IN OPEN-E JOVIANVHR

4.1. PREREQUISITES

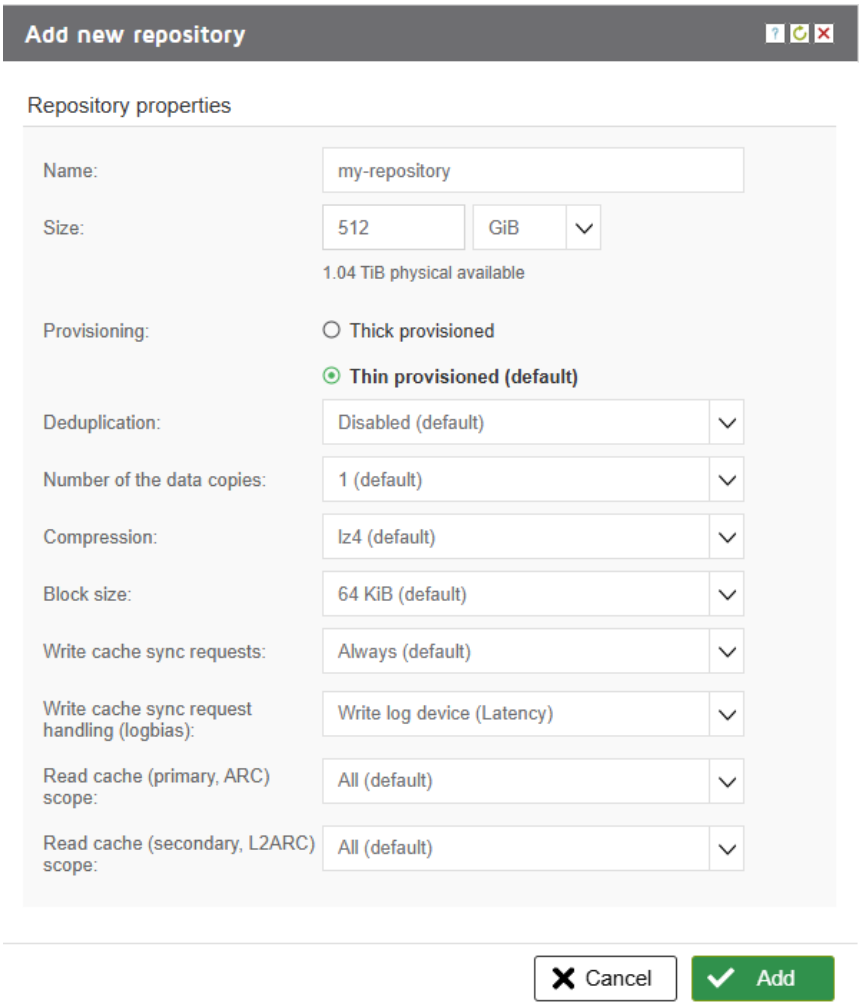
- Open-E JovianVHR installed.
- Storage pool created.
- Time is synchronized between Open-E JovianVHR and the Veeam server

4.2. SERVER SETUP

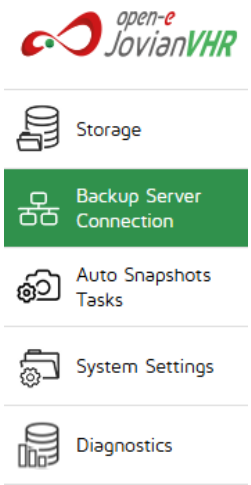
- Log in to the Open-E JovianVHR server.
- Select the desired pool and go to the Backup Repositories.

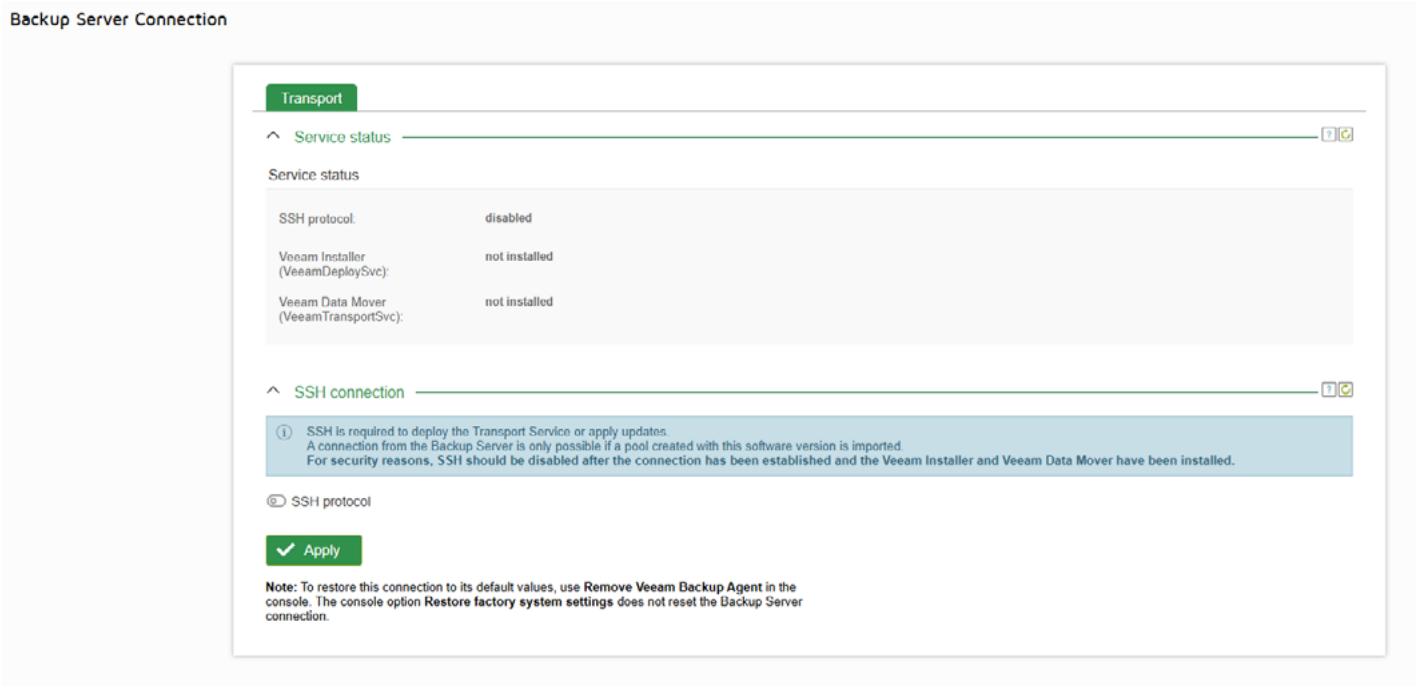


- Click the “Add New Repository” button:

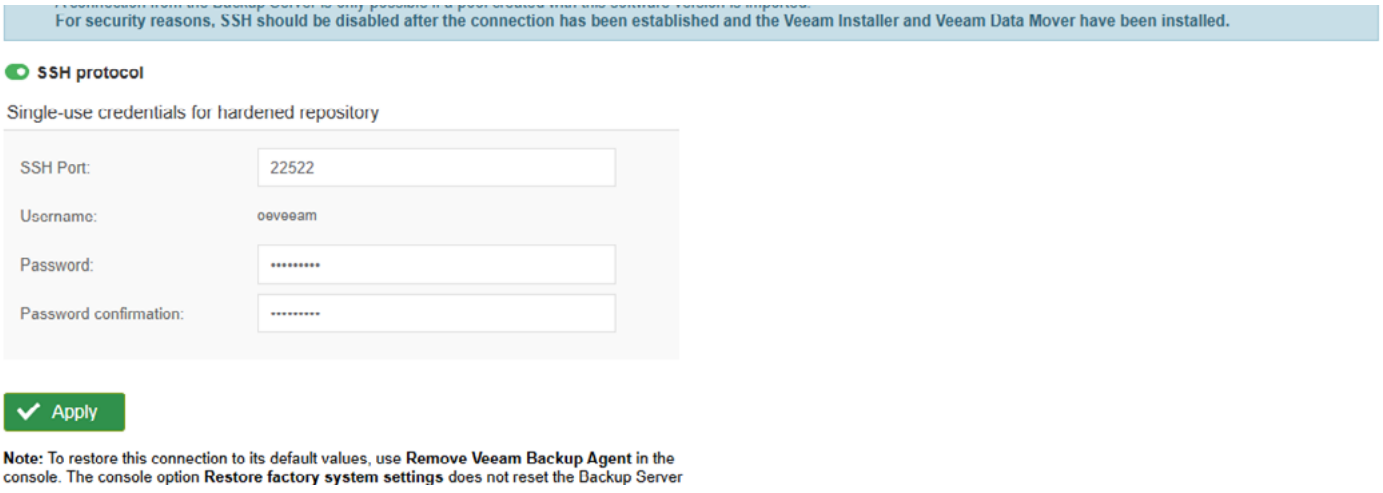


- Complete the repository details and click “Add”.
- Go to “Backup Server Connection” in the left menu.

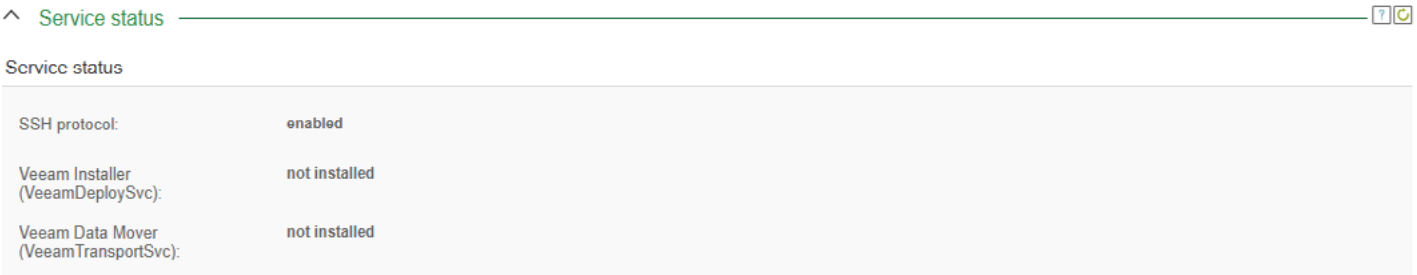




- Enable the SSH protocol, set the password, and note the SSH port for later.



- Click “Apply”. The SSH protocol will change its status to “Enabled”.



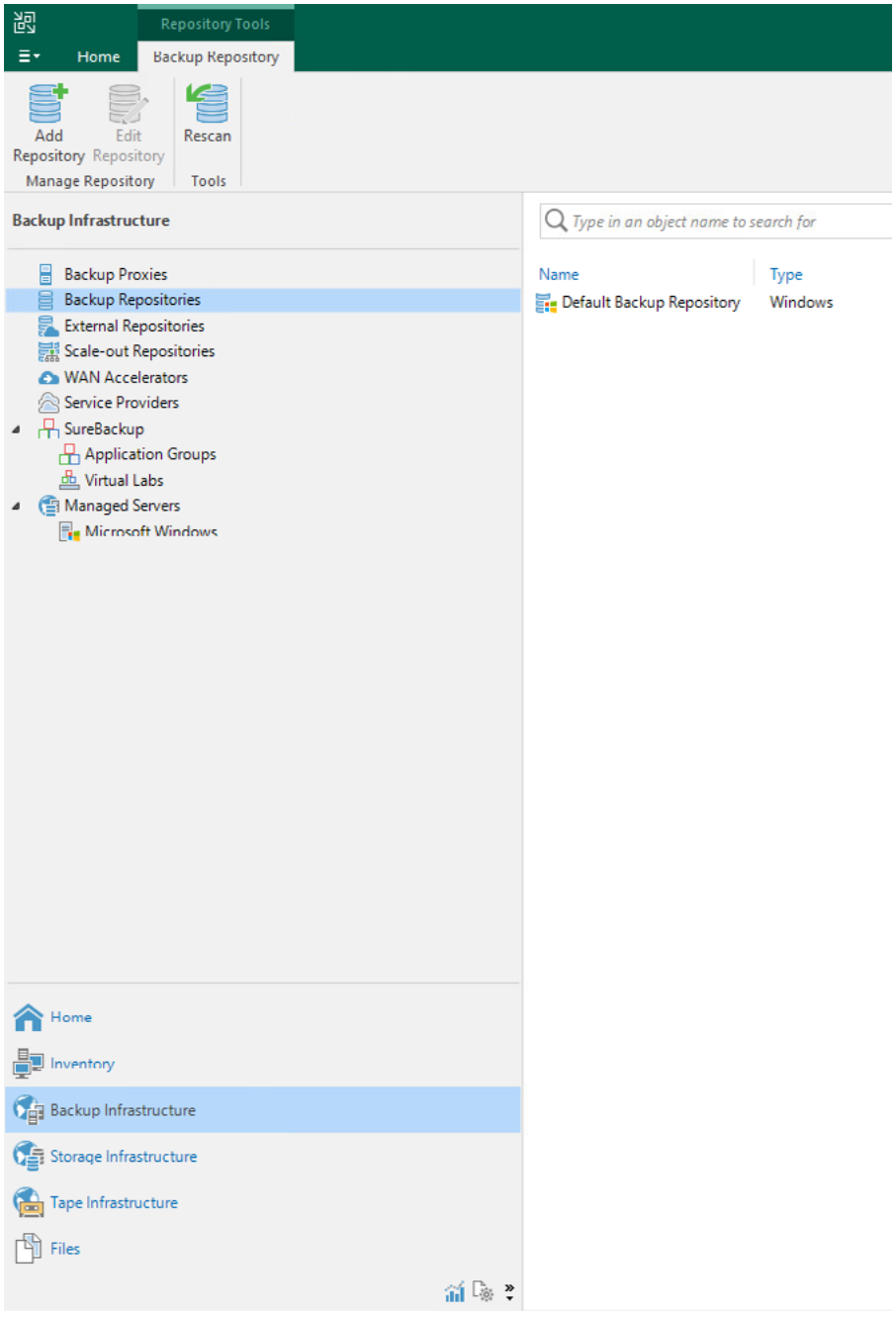
- Proceed to the machine with Veeam Backup & Replication.

5. CONFIGURING A BACKUP REPOSITORY IN VEEAM (WINDOWS)

5.1. CONFIGURING BACKUP REPOSITORY

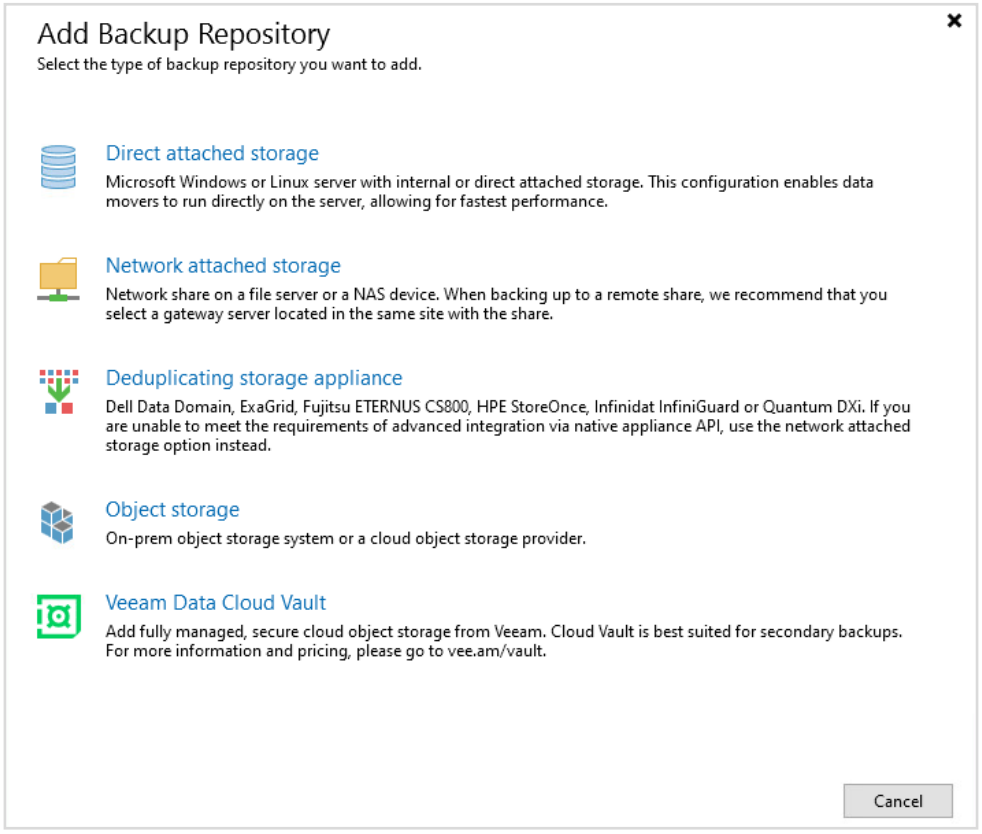
Step 1: Open Backup Repositories Section

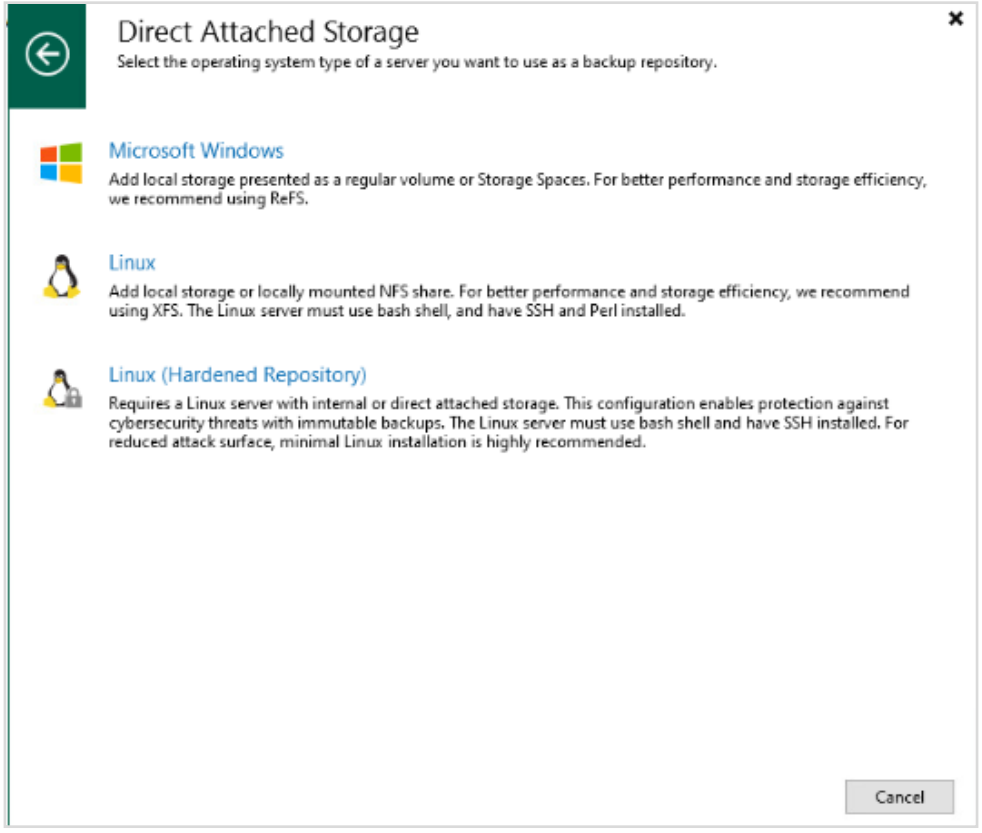
- In Veeam, go to: “Backup Infrastructure” → ”Backup Repositories” → “Add Backup Repository”.



Step 2: Choose Repository Type

- Choose: “Direct Attached Storage” → “Linux (Hardened Repository)”.

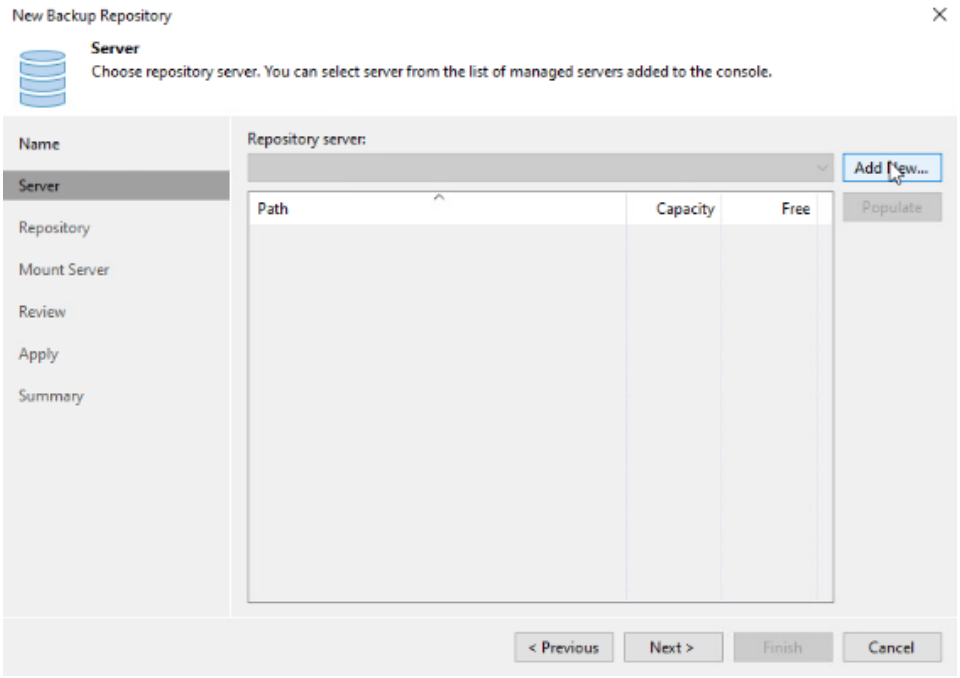

Add Backup Repository
Select the type of backup repository you want to add.
Direct attached storage
Microsoft Windows or Linux server with internal or direct attached storage. This configuration enables data movers to run directly on the server, allowing for fastest performance.
Network attached storage
Network share on a file server or a NAS device. When backing up to a remote share, we recommend that you select a gateway server located in the same site with the share.
Deduplicating storage appliance
Dell Data Domain, ExaGrid, Fujitsu ETERNUS CS800, HPE StoreOnce, Infinidat InfiniGuard or Quantum DXi. If you are unable to meet the requirements of advanced integration via native appliance API, use the network attached storage option instead.
Object storage
On-prem object storage system or a cloud object storage provider.
Veeam Data Cloud Vault
Add fully managed, secure cloud object storage from Veeam. Cloud Vault is best suited for secondary backups. For more information and pricing, please go to vee.am/vault.
Cancel


Direct Attached Storage
Select the operating system type of a server you want to use as a backup repository.
Microsoft Windows
Add local storage presented as a regular volume or Storage Spaces. For better performance and storage efficiency, we recommend using ReFS.
Linux
Add local storage or locally mounted NFS share. For better performance and storage efficiency, we recommend using XFS. The Linux server must use bash shell, and have SSH and Perl installed.
Linux (Hardened Repository)
Requires a Linux server with internal or direct attached storage. This configuration enables protection against cybersecurity threats with immutable backups. The Linux server must use bash shell and have SSH installed. For reduced attack surface, minimal Linux installation is highly recommended.
Cancel

Change the name of the new backup repository and description for better management in the future. Then, proceed with the process by clicking "Next".

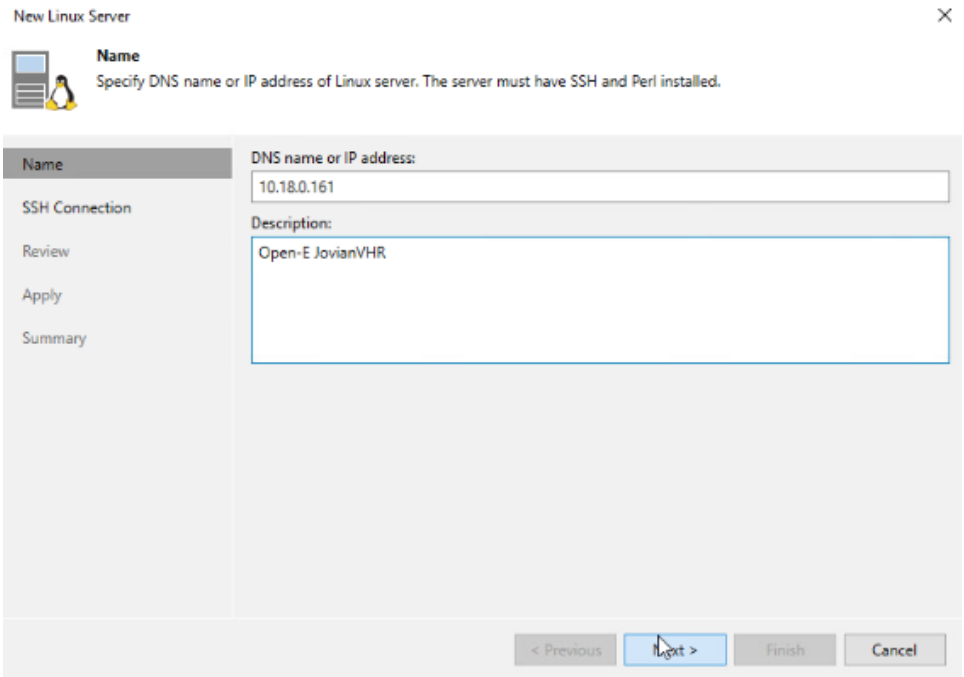
Step 3: Add Linux Server

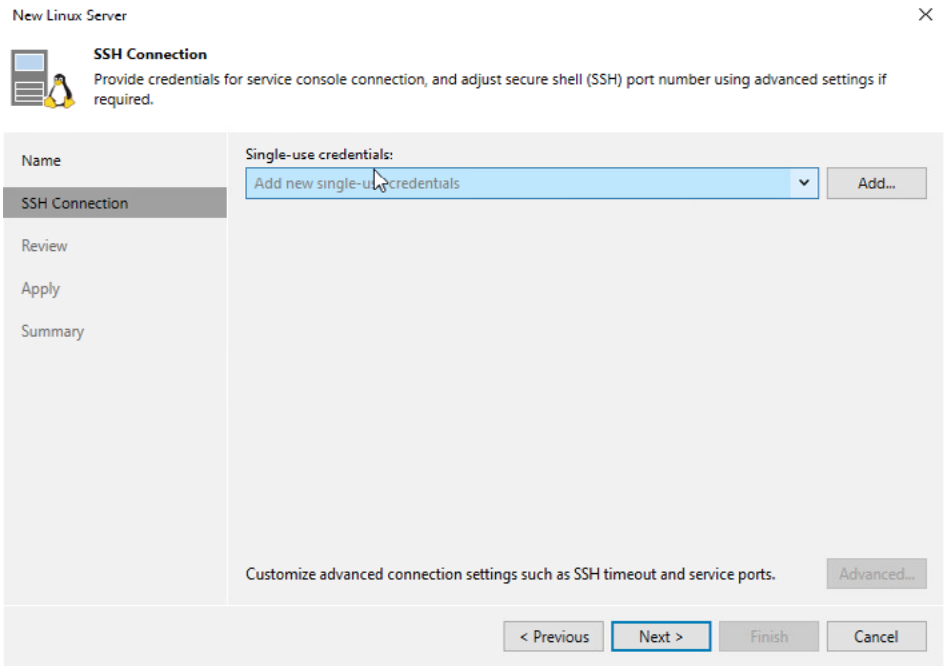
- Click "Add New".

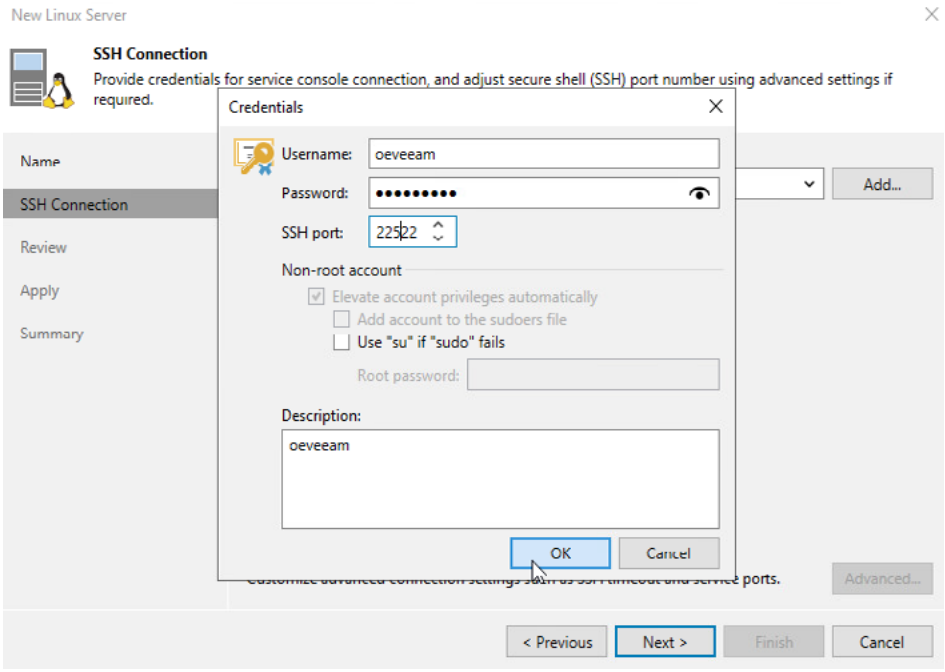


Enter:

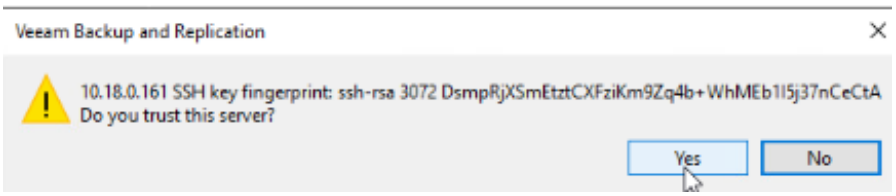
- IP address (from Open-E JovianVHR),
- SSH credentials.



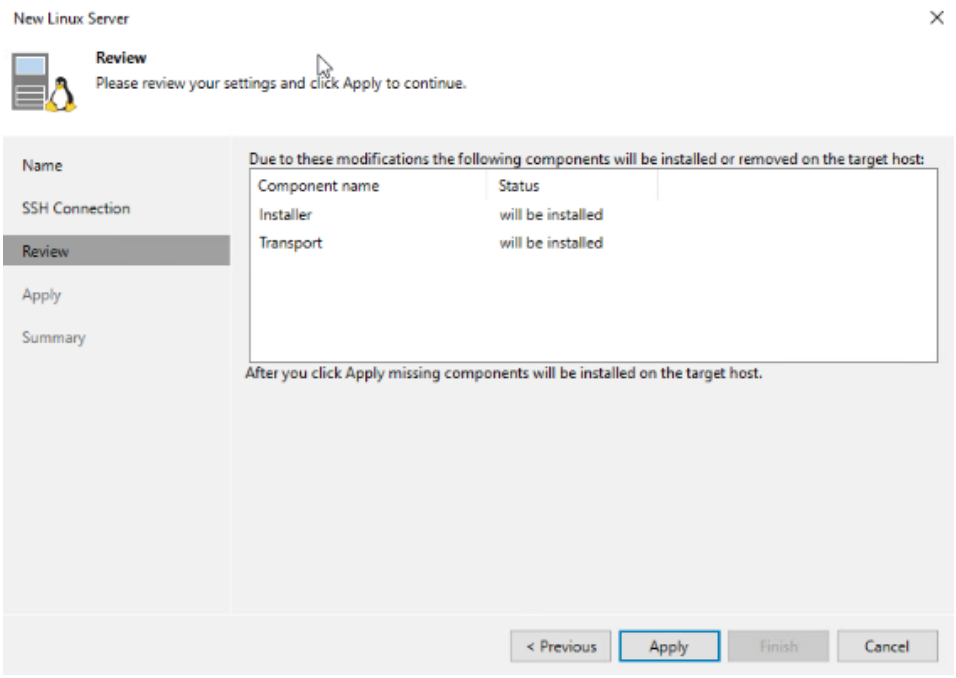


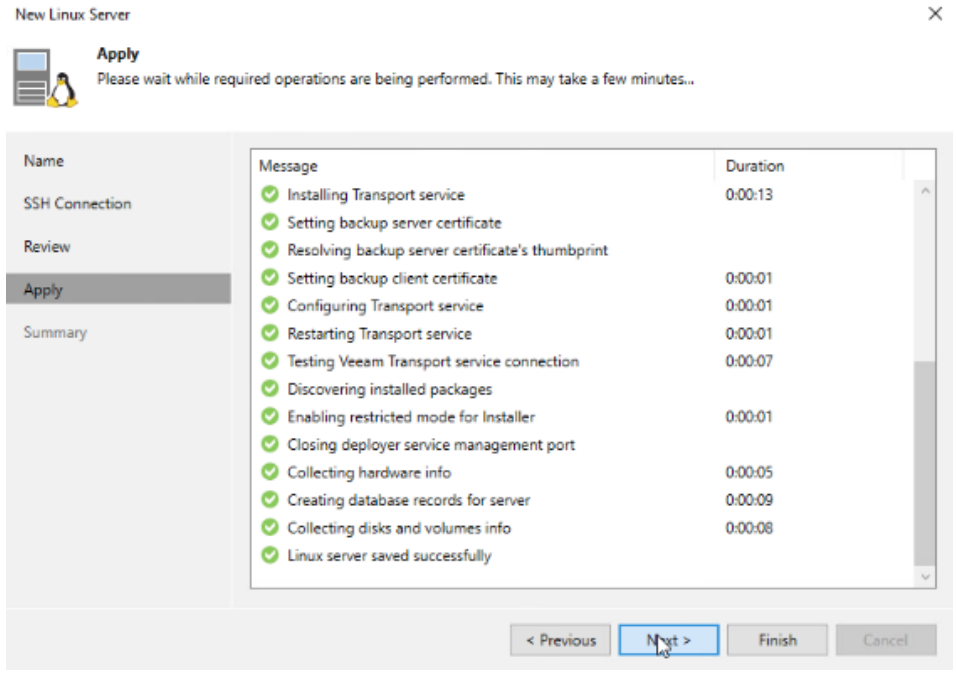


- Confirm you trust the server when prompted.



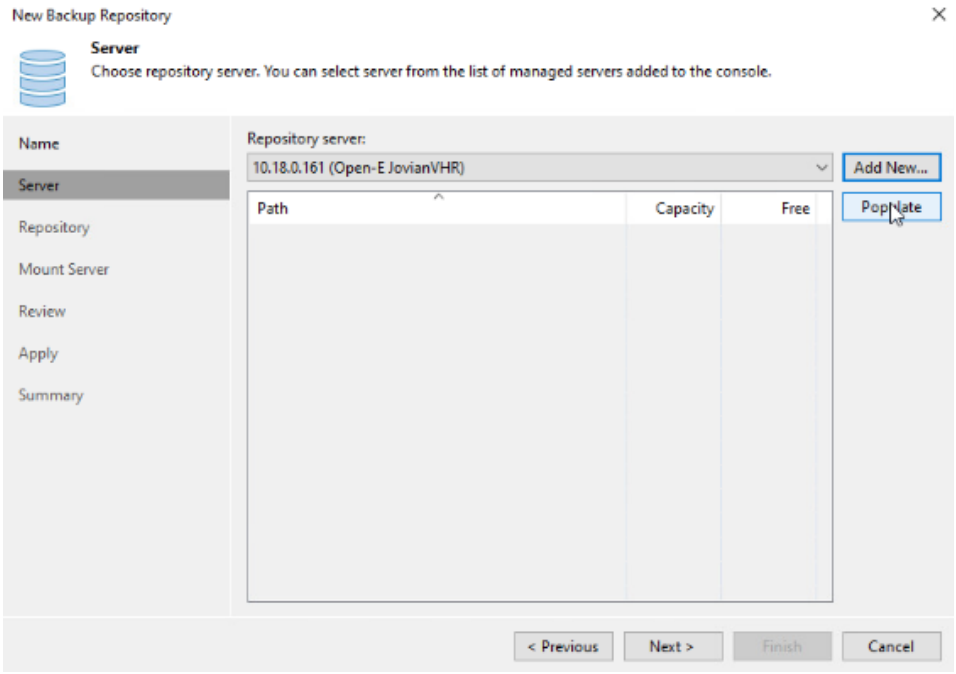
- Click “Apply” and wait for the process to complete.



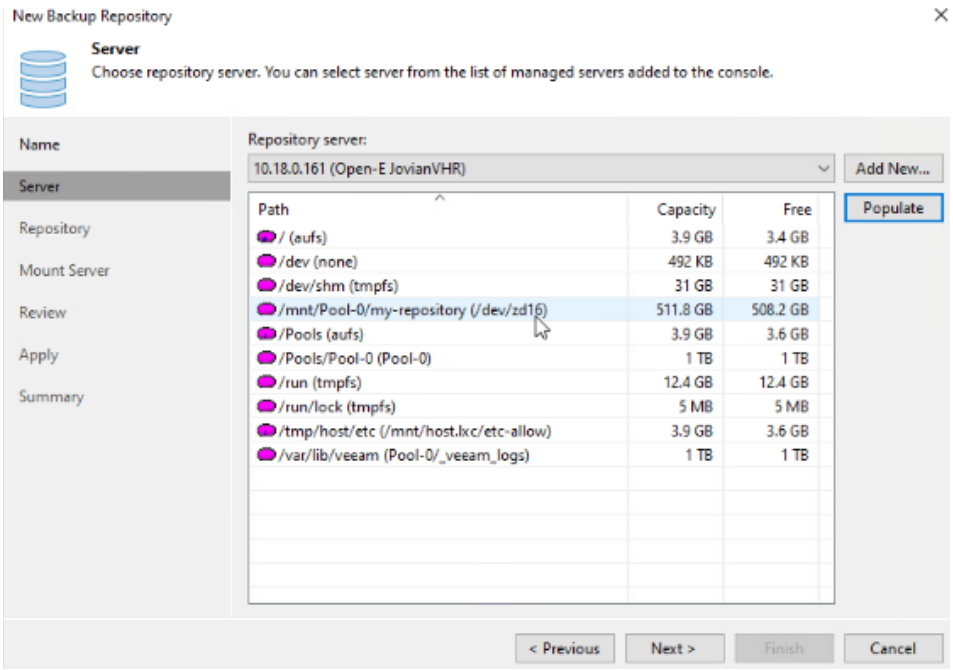


Step 4: Select Backup Directory

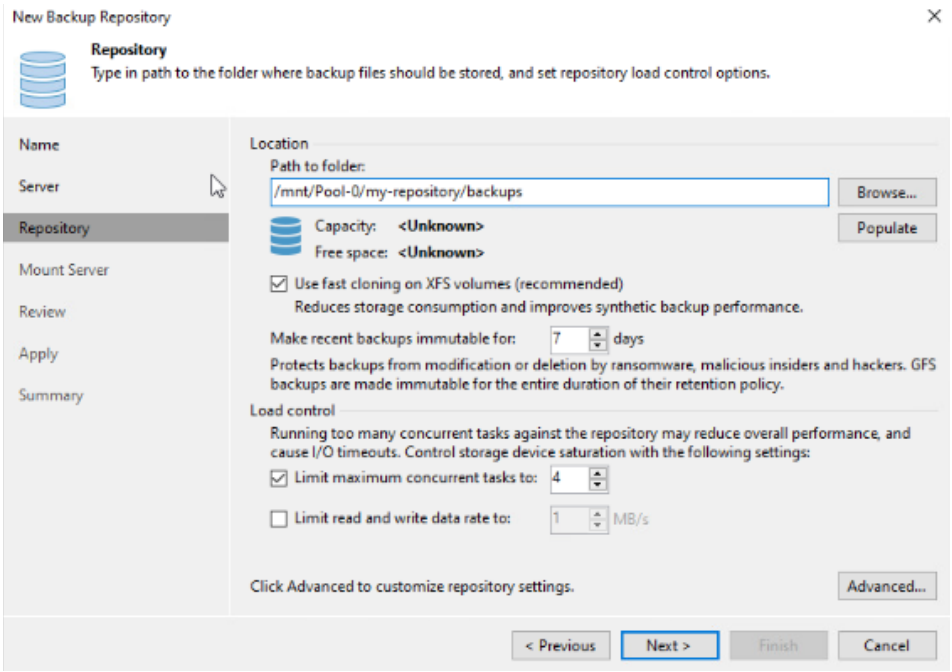
- Populate the server’s storage list.



- Select the directory /mnt/Pool-0/my-repository and click “Next”.



- Make sure that the “Use fast cloning on XFS volumes” option is checked, and click “Next”.



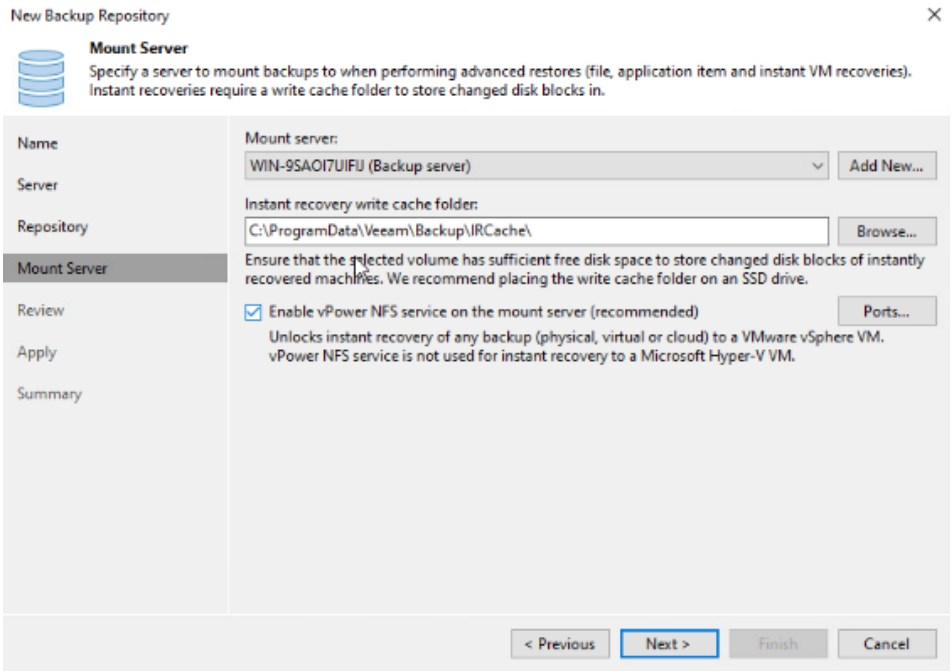
5.2. CONFIGURING THE MOUNT SERVER

The Mount Server enables:

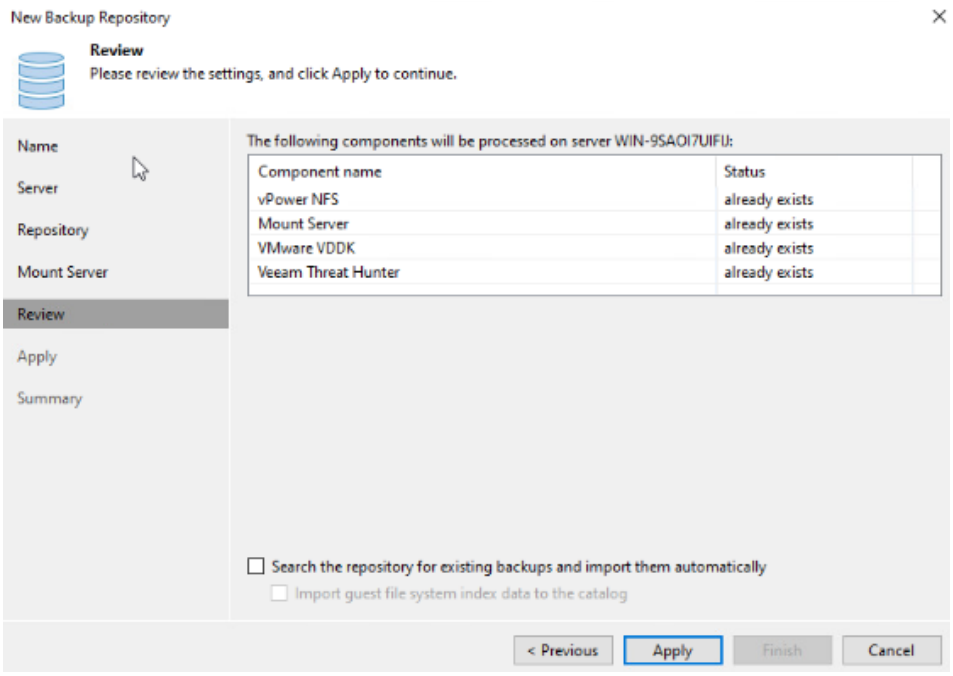
- File-level restore
- Application item restore (SQL, Exchange, etc.)
- Instant VM Recovery

Unless specified otherwise, the Veeam Backup & Replication server acts as the mount server.

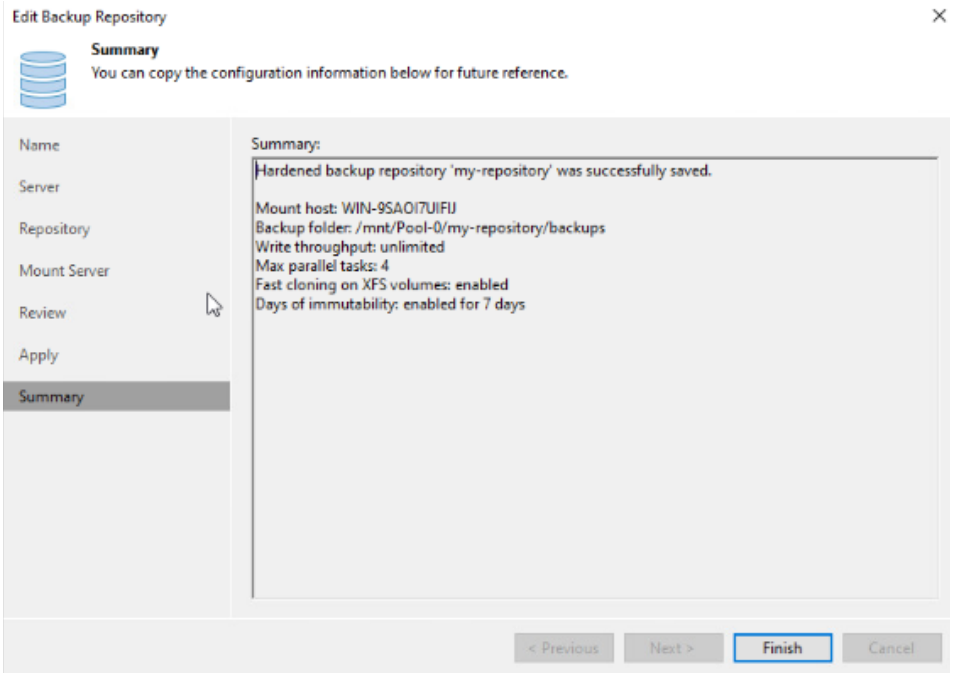
- This is a basic Mount Server configuration. If it is right for you, click “Next”.



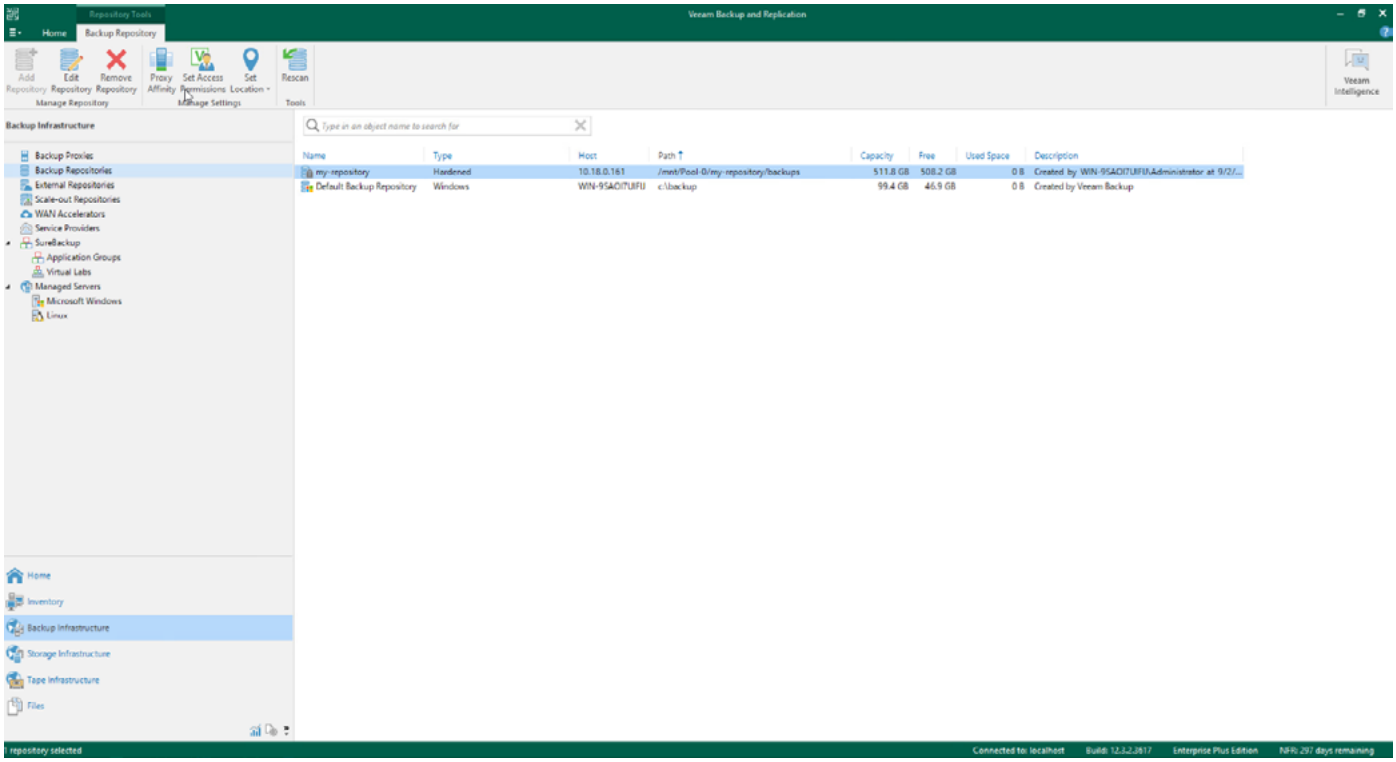
- Check the “Review” tab and click “Apply”.



- Check the “Summary” tab, then click “Finish”.

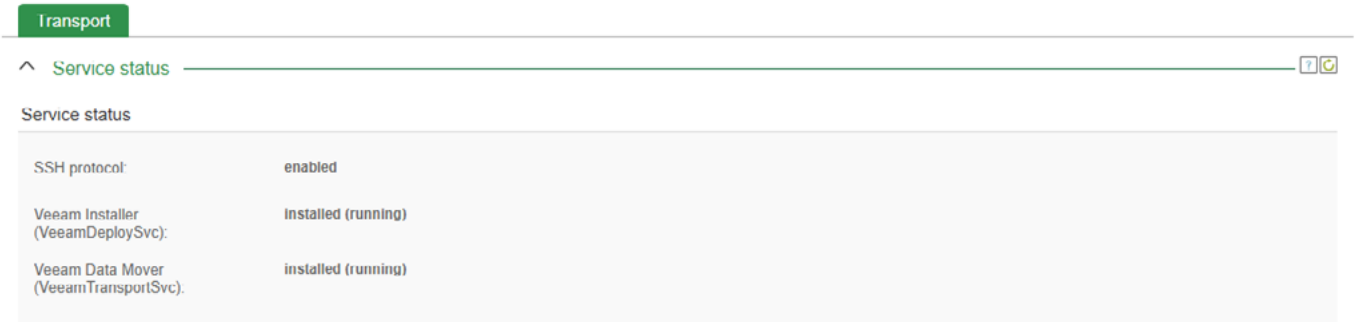


- You can see your hardened repository here.

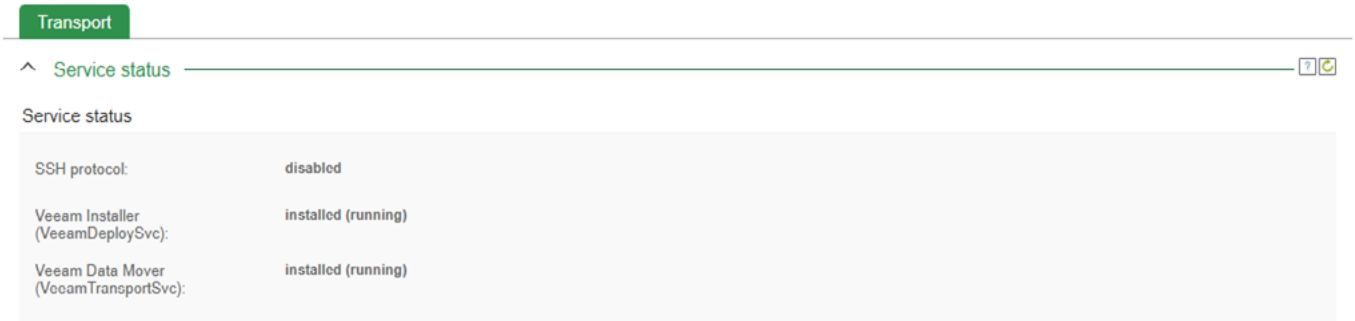


5.3. FINALIZING CONFIGURATION

- On the Open-E JovianVHR server, proceed to the “Backup Server Connection” tab. Confirm Veeam services are installed and running.



Security Tip: Disable SSH after completing the setup in Veeam.

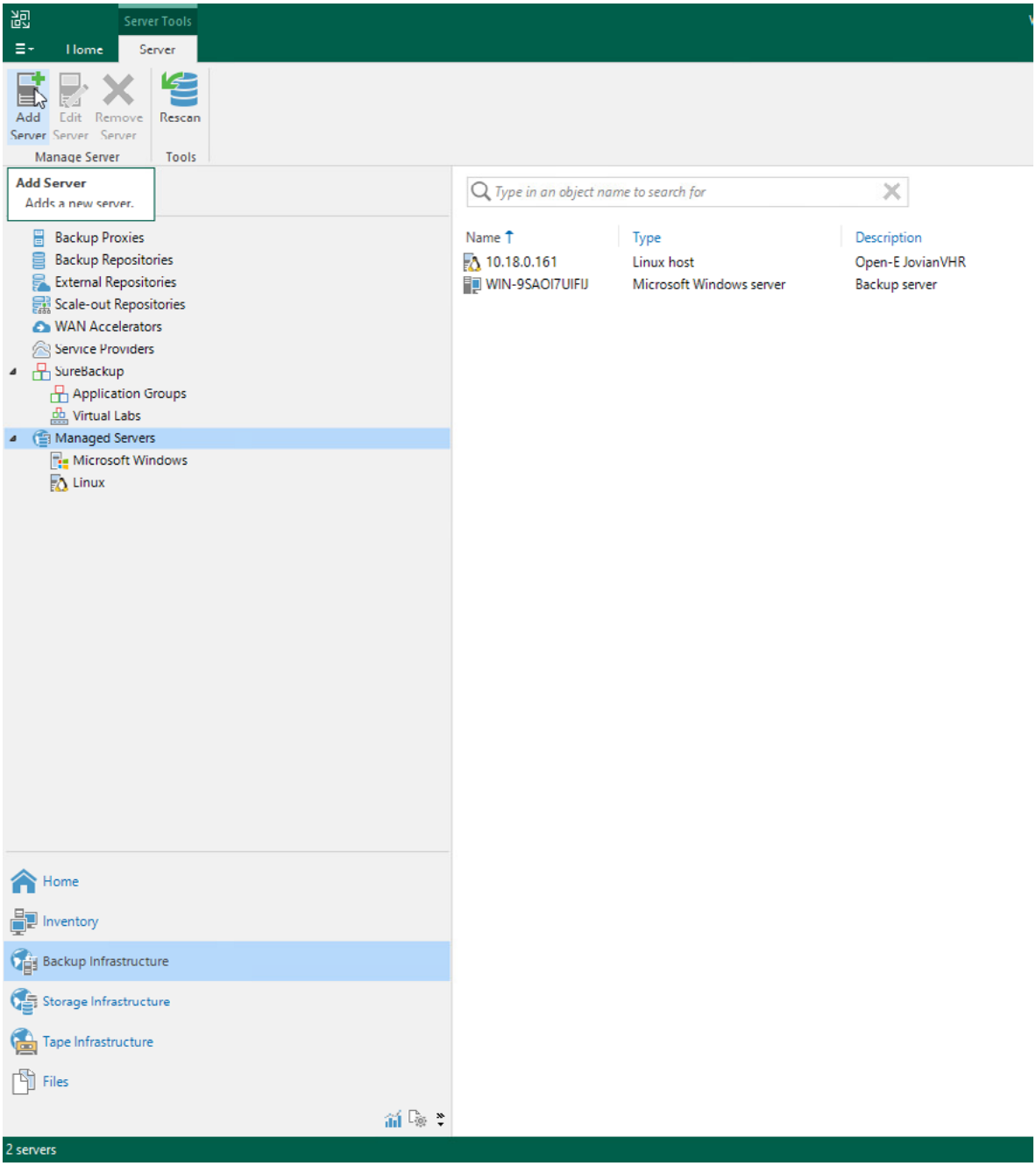


Done! Your Hardened Backup Repository and Mount Server are ready to start protecting workloads with Veeam.

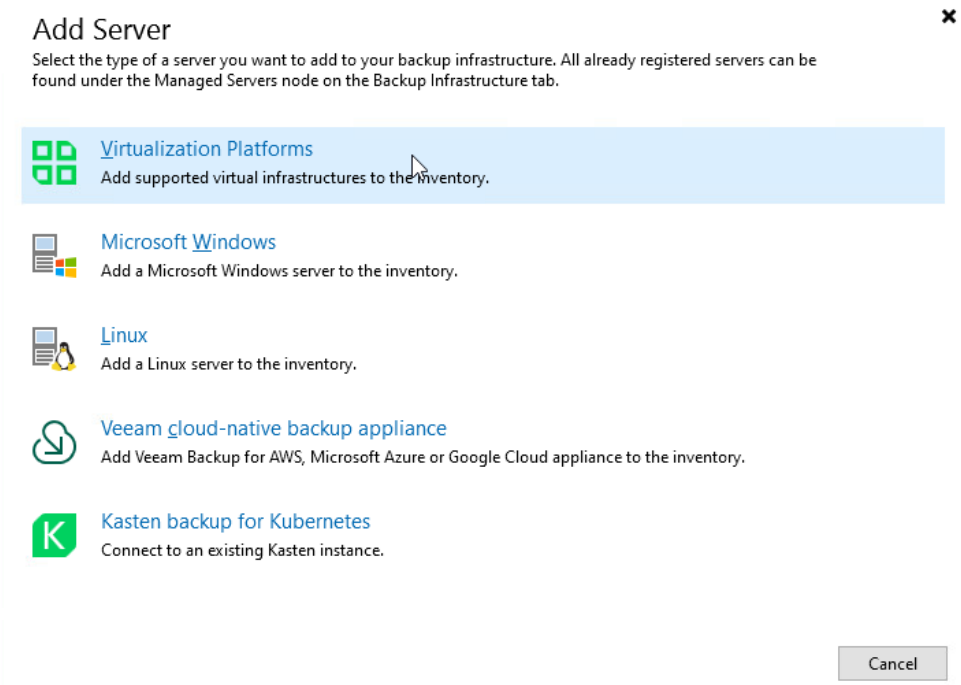
6. CONFIGURE YOUR FIRST BACKUP

6.1. ADDING THE SERVER TO THE VEEAM INFRASTRUCTURE

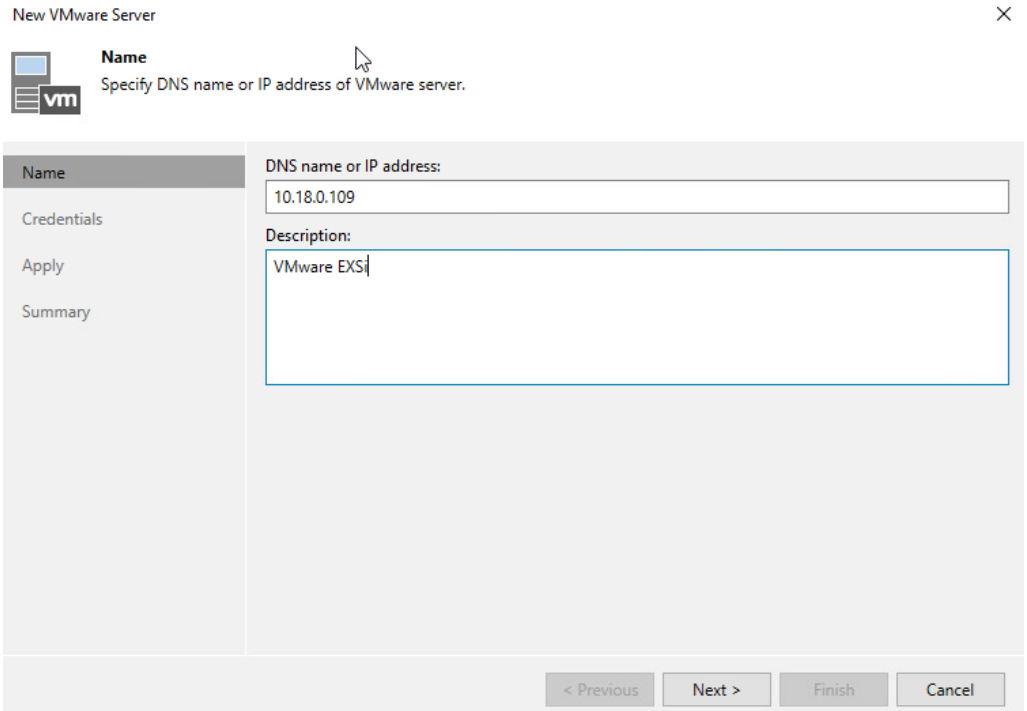
To configure your first backup in Veeam, you need to add a server to the Veeam infrastructure. To do this, navigate to “Backup Infrastructure” in the menu, then choose “Manage Servers”. At the top, you will see the “Add server” button.



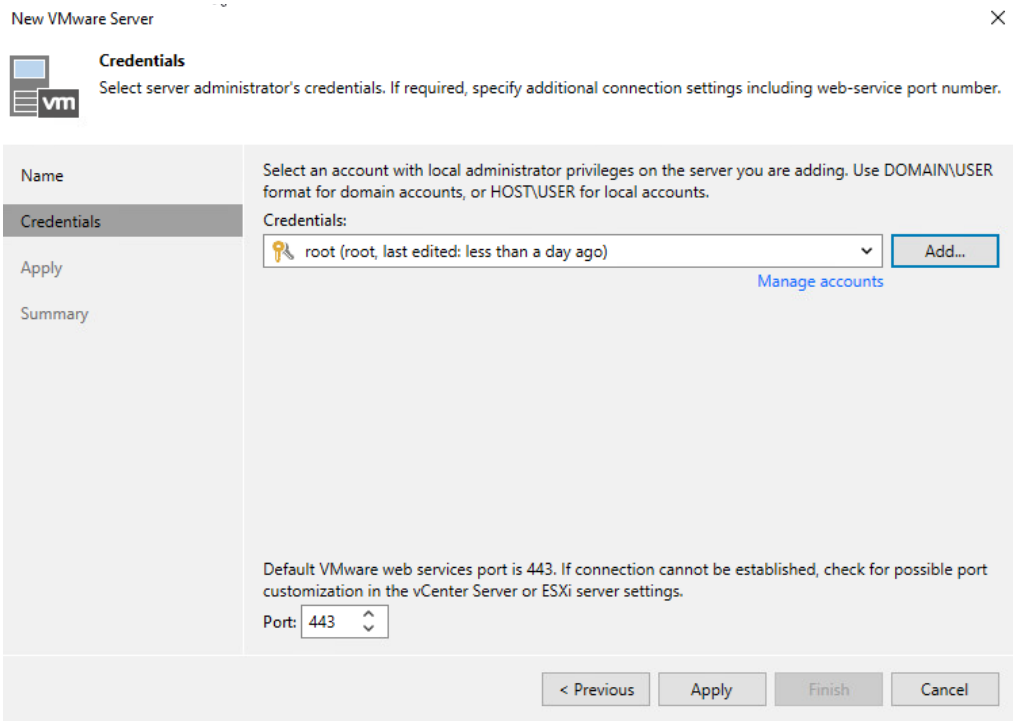
- After pressing the “Add Server” button, select the type of server you want to add to your backup infrastructure.



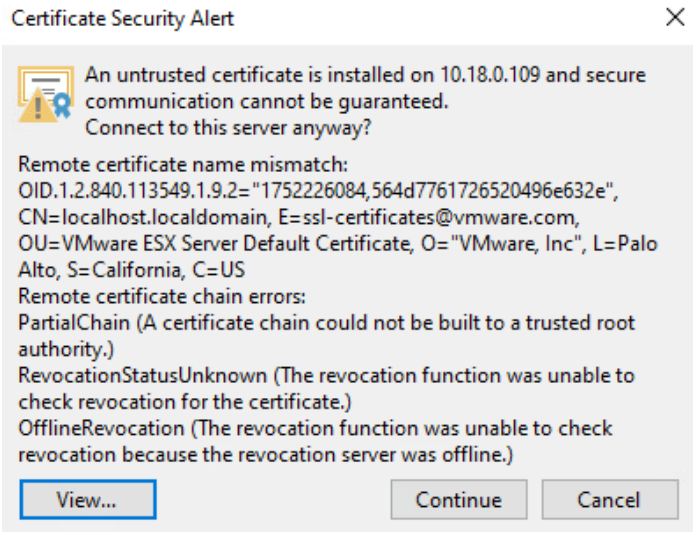
- For this document, we are going to back up our Virtual Machine from VMware, so click “Virtualization Platforms”.
- Choose “Virtualization Platforms” → “VMware vSpheres” →” vSphere” (EXSi also)
- Type your DNS name or IP address, change the description for easier management, then click the “Next” button.



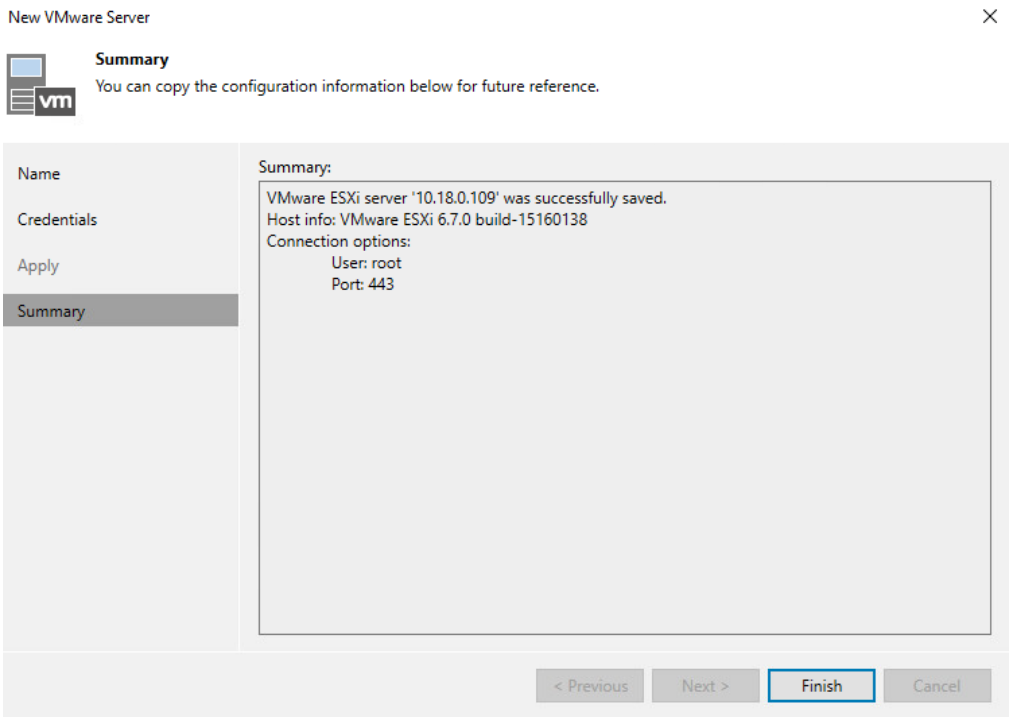
- In the next step, add credentials for a VMware administrator. Then click “Apply”.



- Click “Continue” on Certificate Security Alert if this message emerges.

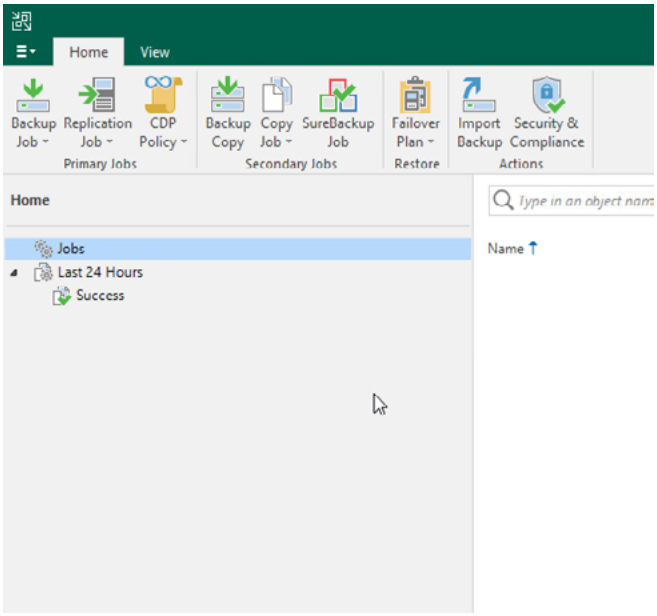


- Now, you have successfully added your VMware to the backup infrastructure in Veeam.
- Proceed with the “Finish” button.

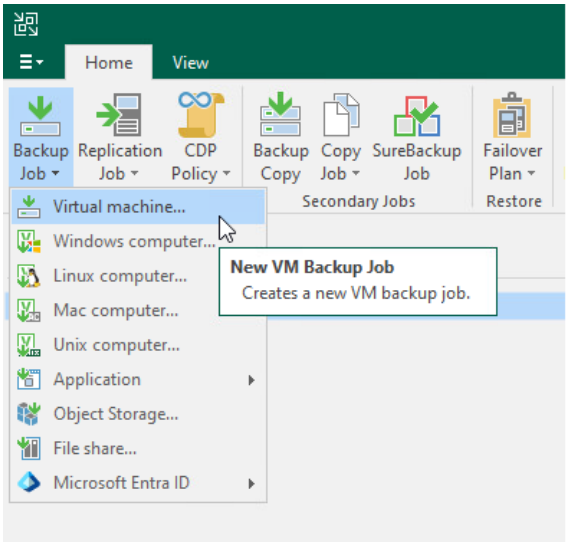


6.2. CREATING A BACKUP JOB

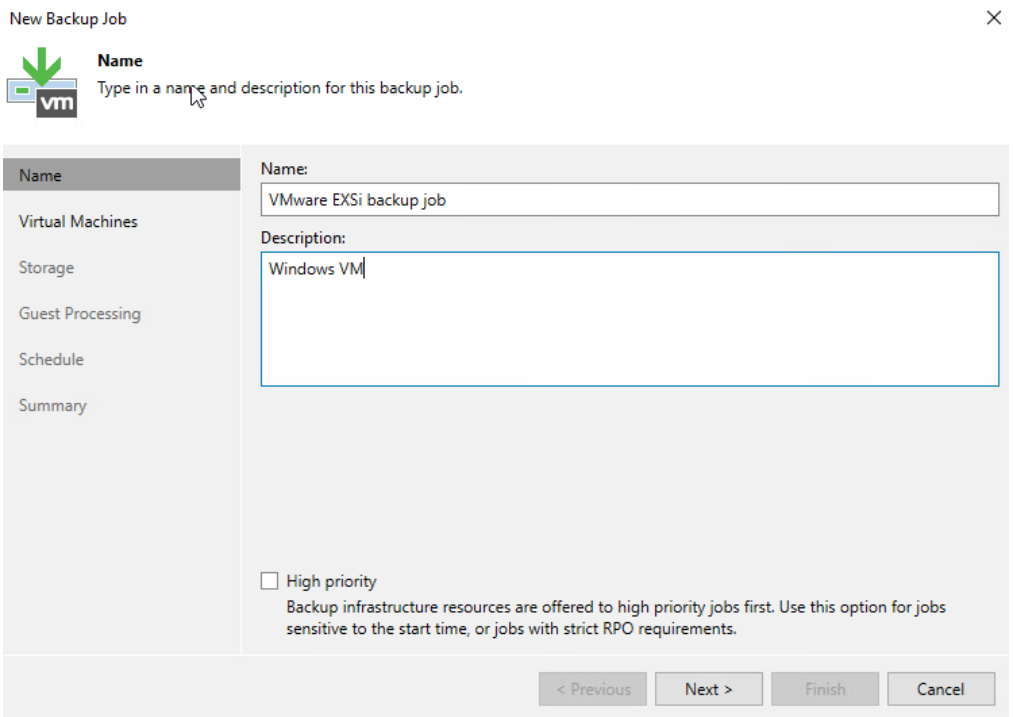
- In the next step, we should create a backup job. To do this, navigate to “Home” in the left panel menu in Veeam.



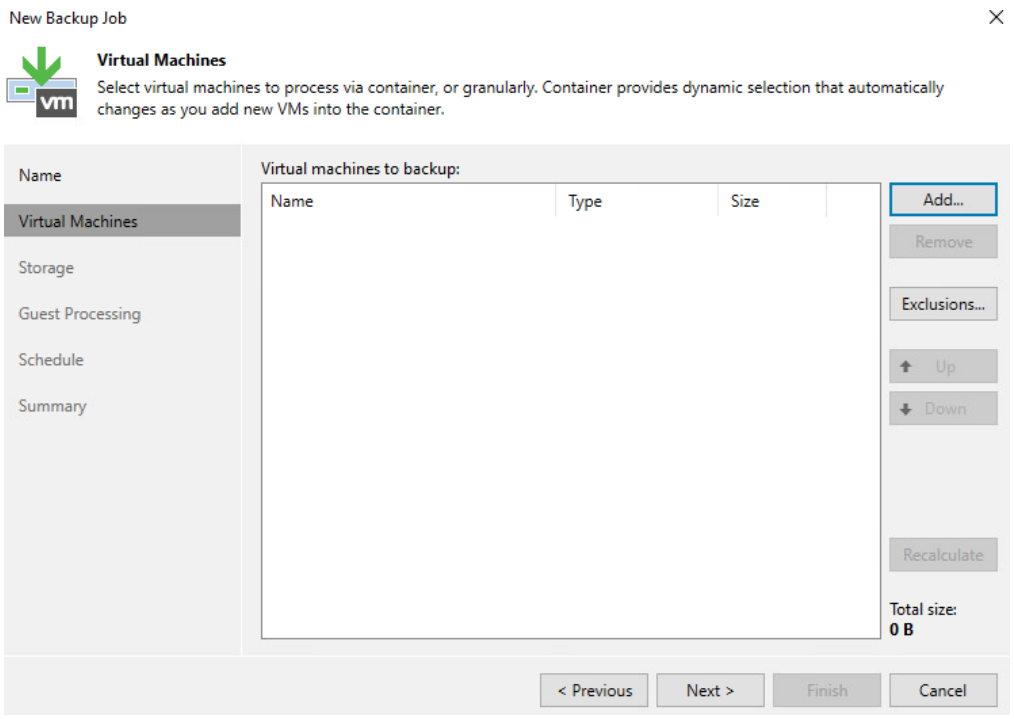
- At the top menu, choose “Backup Job” -> “Virtual machine”.



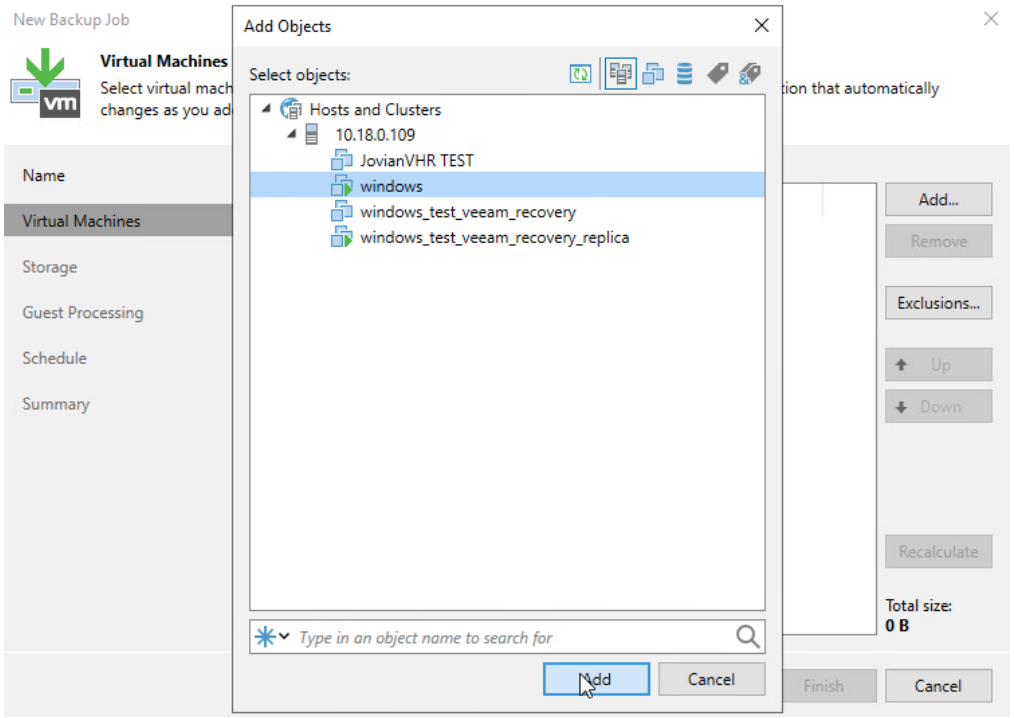
- Provide the name for the backup job and description to make it easier to manage. Then click “Next”.



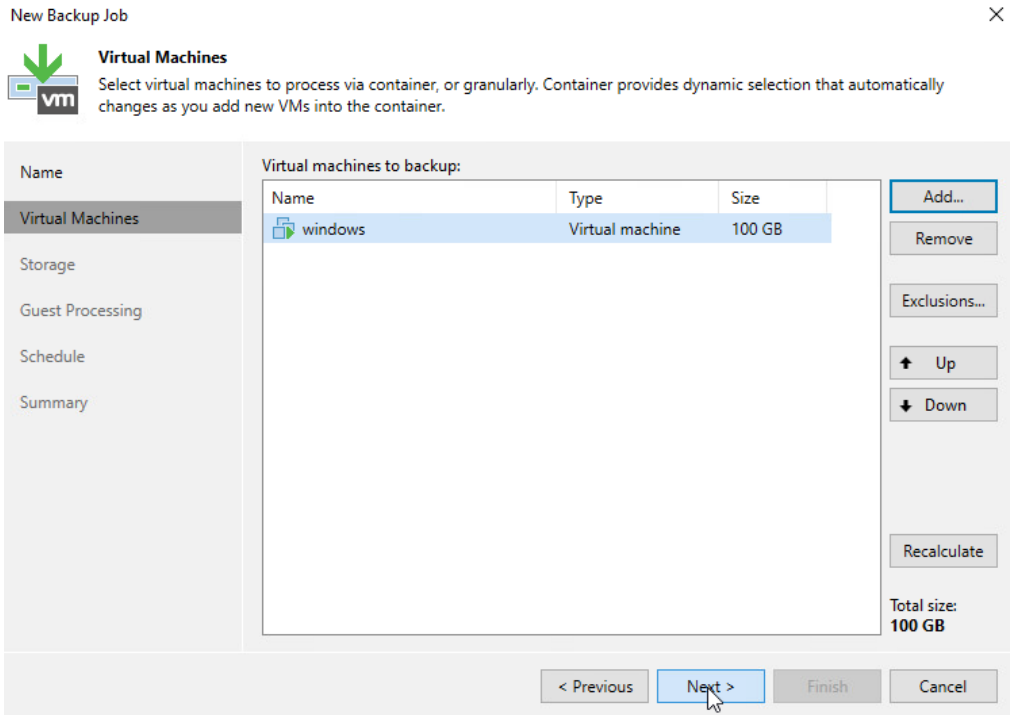
- After clicking “Next”, we have to add what we want to back up from the VMware server previously added. You can back up the whole node or a specific VM. Click “Add”.



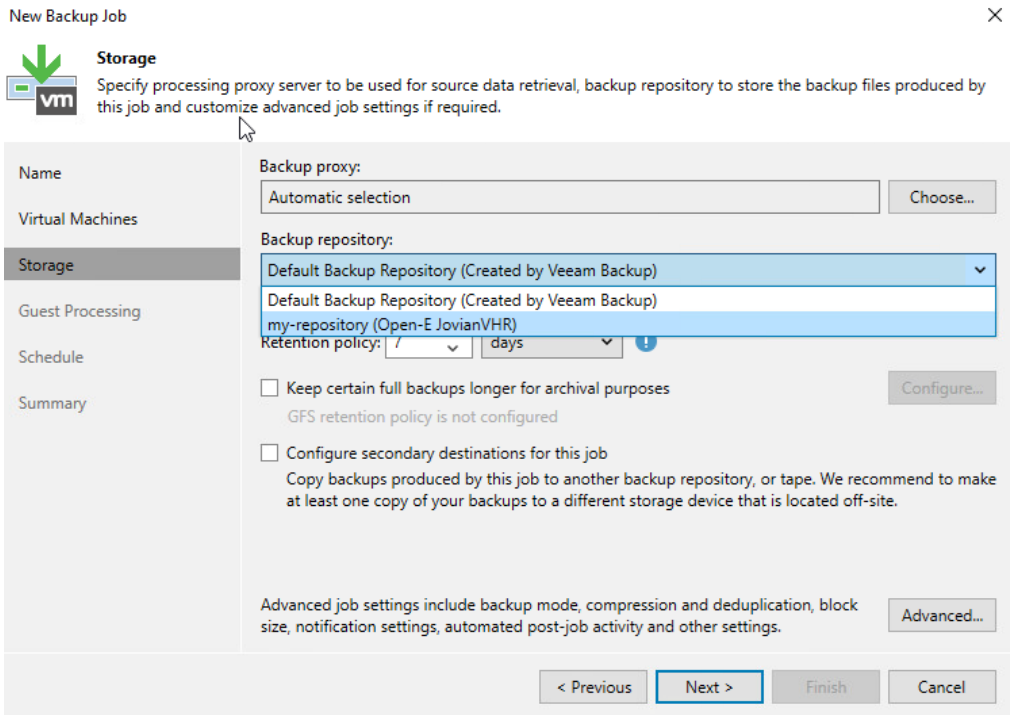
- Now, click on VM or Node and click “Add”.



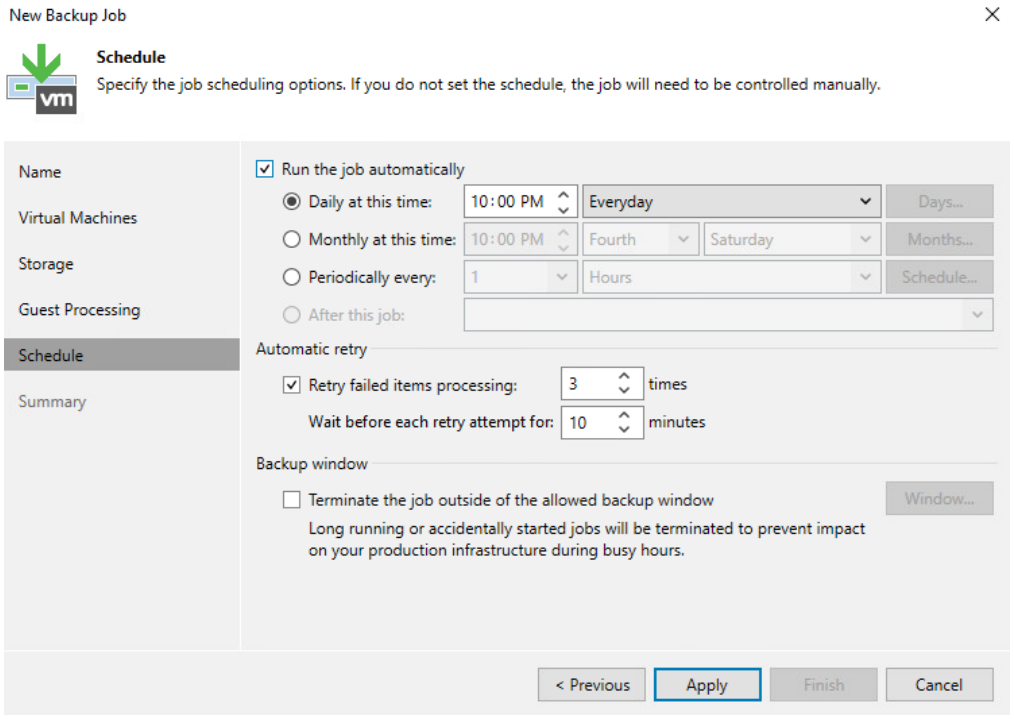
- After choosing a Virtual Machine or EXSi host, press “Next”.



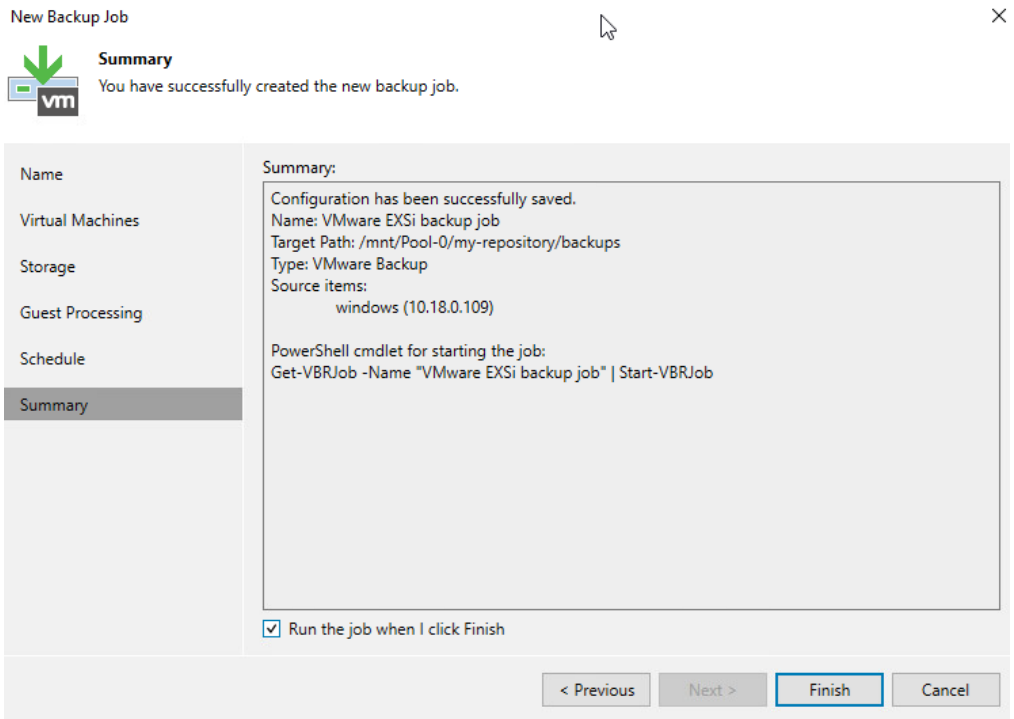
- As a next step, change the backup repository from the default to the one added from Open-E JovianVHR and click “Next”.



- After choosing the right repository for your backups, proceed to “Schedule” and set the backup plan. After configuring the schedule, click “Apply”.



- Check the summary and click “Finish”.

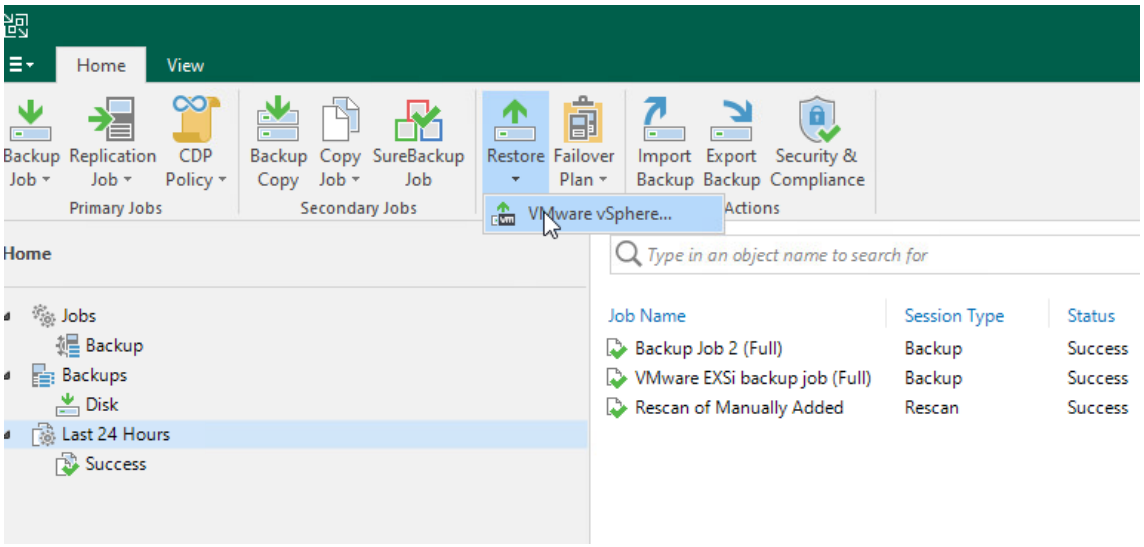


7. RESTORE

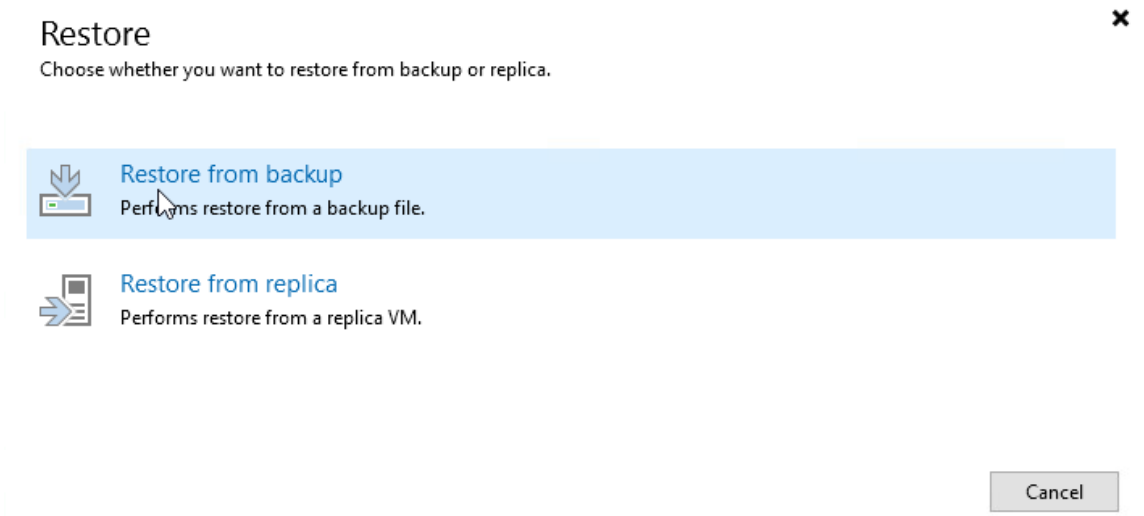
After the last backup job ended with a successful status, we can restore our VMs now.

7.1. STARTING THE RESTORATION PROCESS

To do this, proceed to the left menu. Choose “Home” → “Top Menu” → “Restore”.

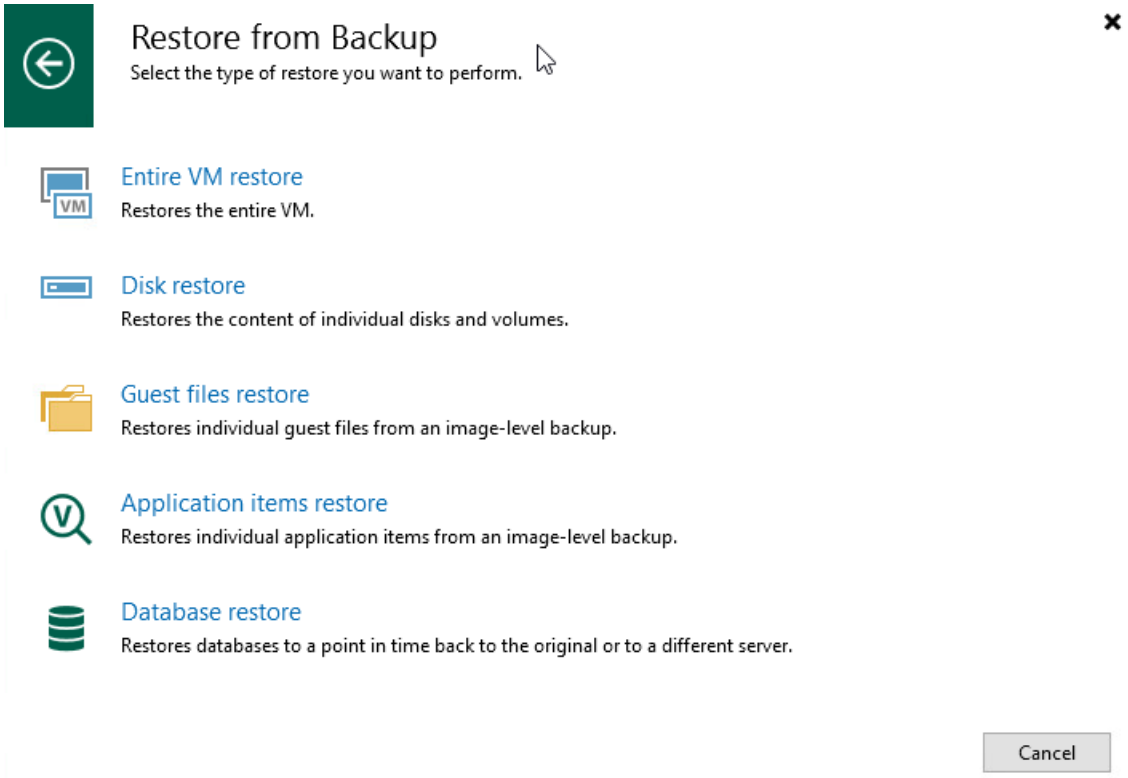


- Go to “Restore” → “VMware vSphere”, choose “Restore from backup”

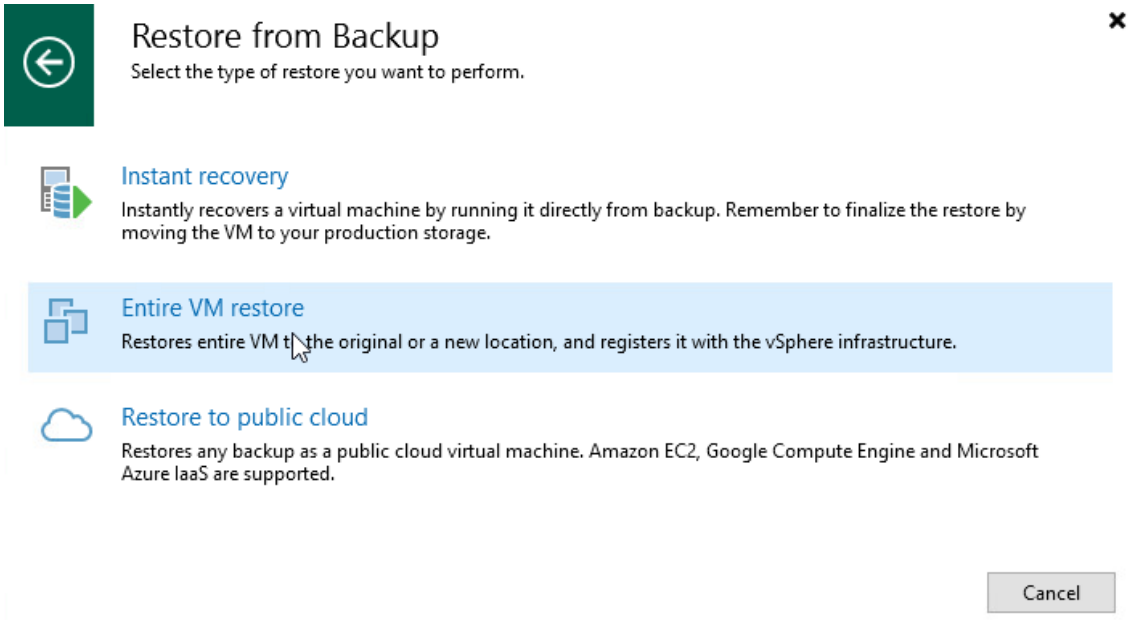


7.2. SELECTING THE TYPE OF RESTORATION

- In the next step, select the type of restore you want to perform. In our case, the “Entire VM restore”, so select the following option:

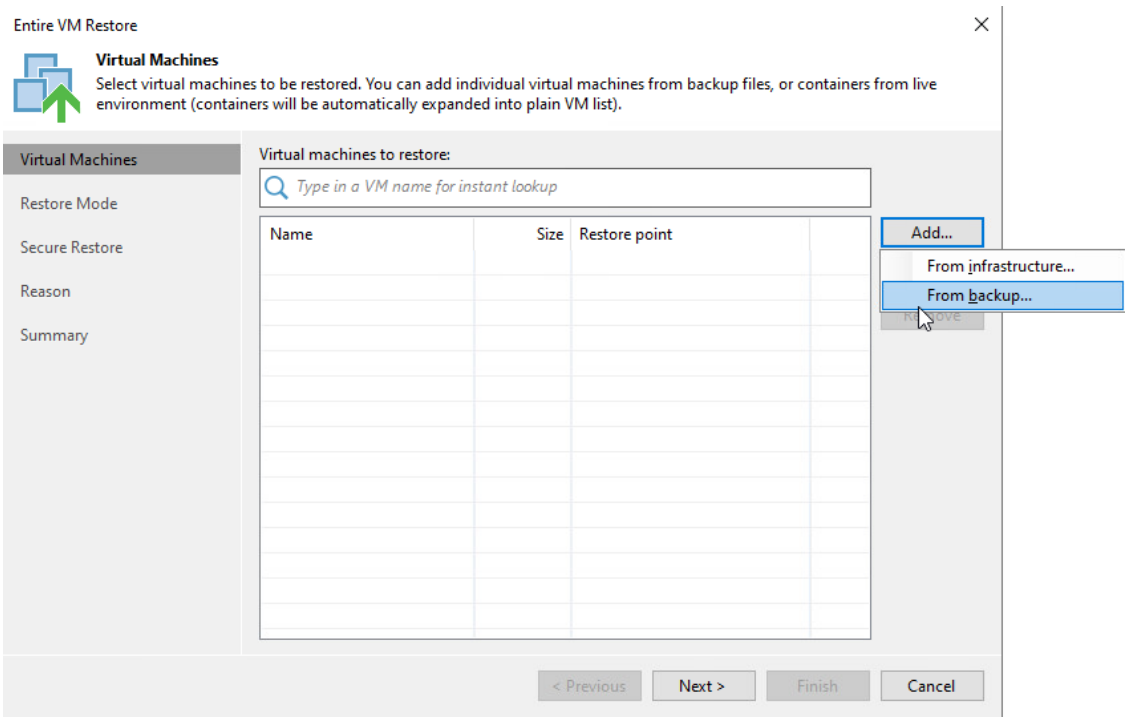


- On the next screen, choose “Entire VM restore”.

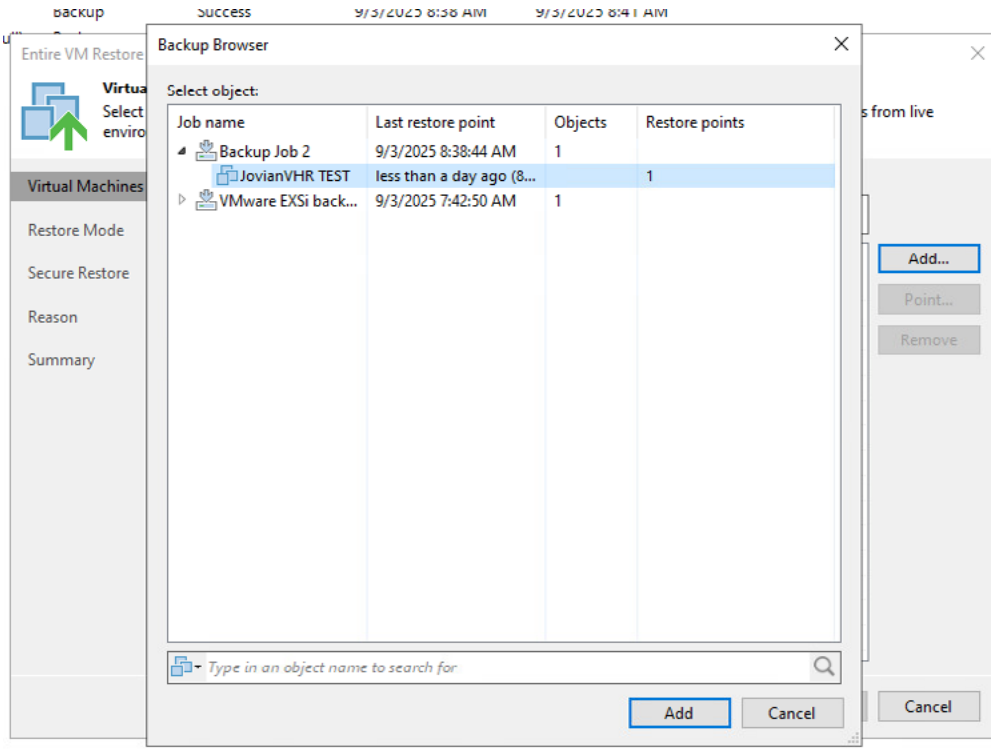


7.3. CHOOSING VM OR NODE FOR RESTORATION

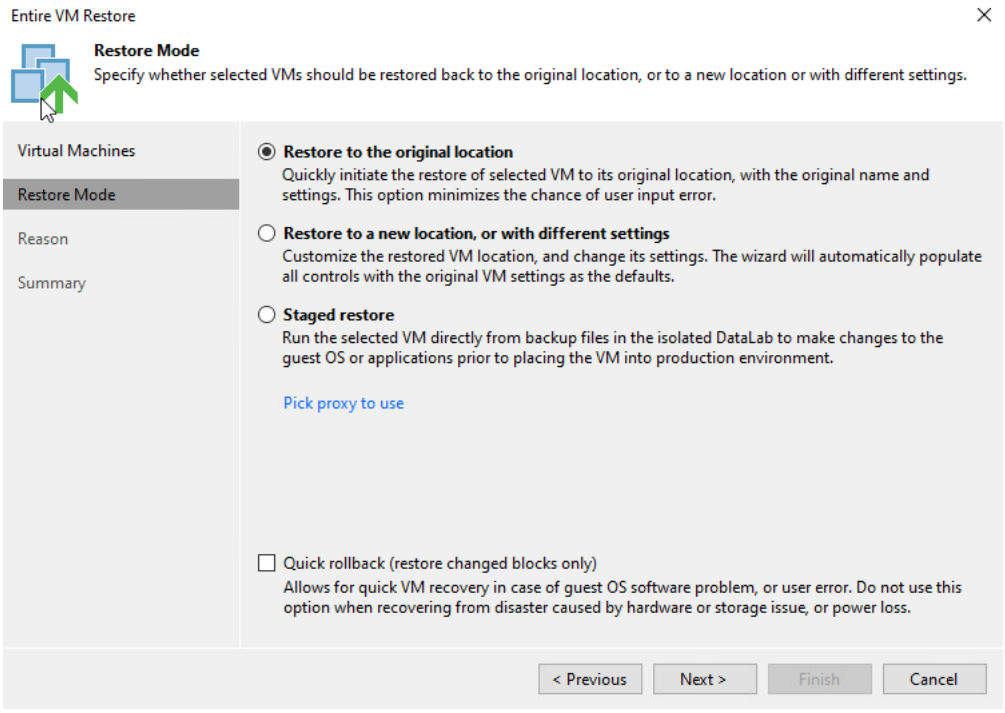
- Press “Add” → “From backup” to select virtual machines to be restored.



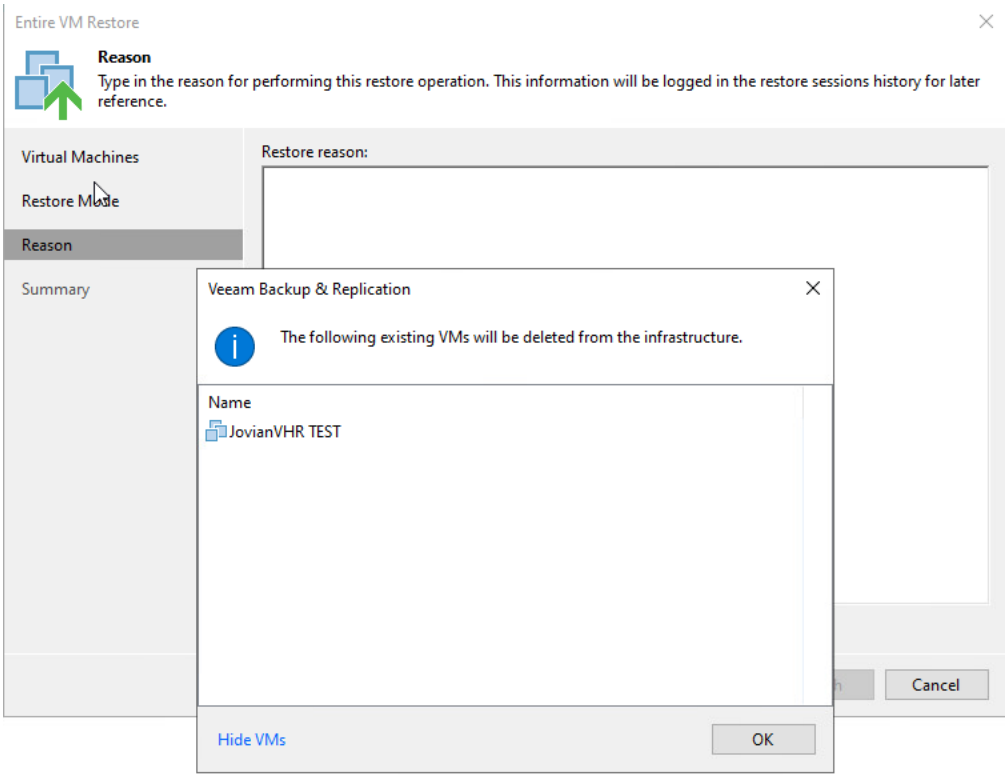
- Next, choose the backup job and the VM that needs to be restored, then click “Add”.



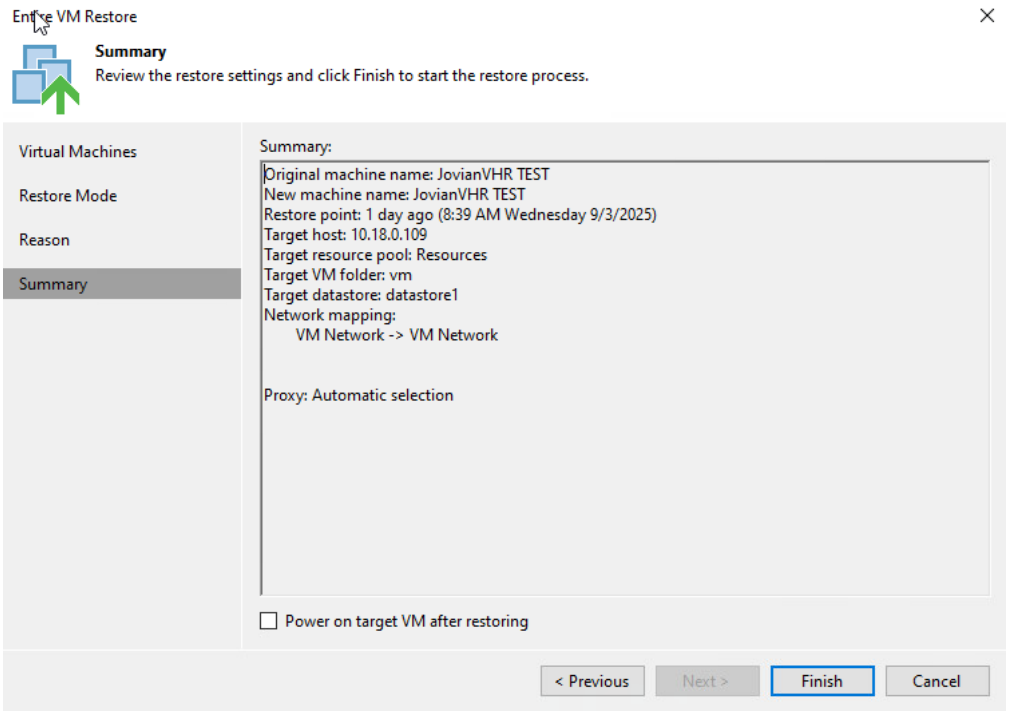
- Choose “Restore Mode” and proceed with the restoration process by clicking “Next”.



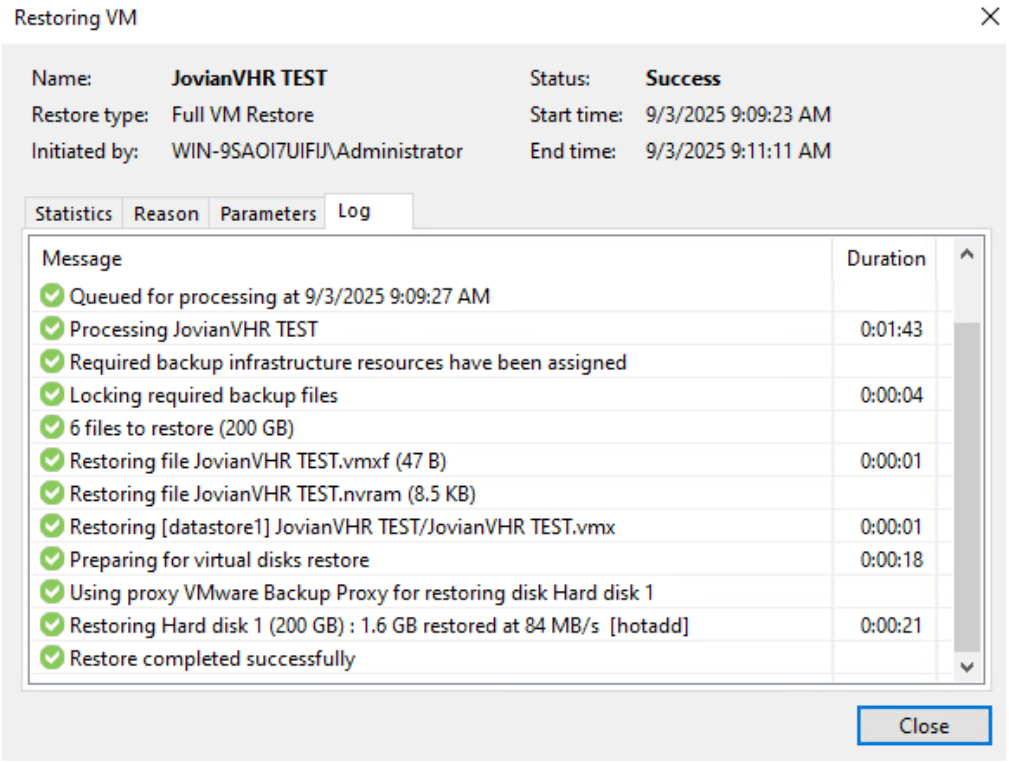
- If your Virtual Machine still exists in your EXSi infrastructure, Veeam needs to delete it. Press “OK”.



DONE! After pressing “Finish”, Veeam proceeds with the restoration process.



- Virtual Machine restored successfully. Click “Close”.



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