Configuration Note

AudioCodes One Voice for Microsoft® Skype for Business

CloudBond™ 365

Backup and Restore Functionality

Version 9.5 – Update 4

audiocodes

CLOUDBOND 365

Tomorrow's UC Today

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Notice

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Abbreviations and Terminology

Each abbreviation, unless widely used, is spelled out in full when first used.

Related Documentation

Document Name
Veeam Endpoint Backup User Guide Version 1.1 http://veeampdf.s3.amazonaws.com/guide/veeam_endpoint_backup_1_1_userguide.pdf or https://s3.eu-central-1.amazonaws.com/downloads-audiocodes/CB365Backup/CB365_Backup_Docs.zip
Veeam Backup & Replication User Guide Hyper V Environments Version 9.5 update 4 https://helpcenter.veeam.com/docs/backup/hyperv/overview.html?ver=95u4 or https://s3.eu-central-1.amazonaws.com/downloads-audiocodes/CB365Backup/Docs+for+Veeam+Backup+version+9.5+Update+4.zip

Document Revision Record

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26755	Updated document for Version 9.5 – Update 4.

Documentation Feedback

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1 Introduction

This document describes how to configure and use the CloudBond backup and restore functionality.

The functionality uses two third-party components:

- **Veeam Agent:** A designated tool installed on the host server to back up the host itself, without its virtual machines (i.e., Front End and Edge servers).
- **Veeam Backup and Replication (VBR):** A designated tool installed on the CloudBond host server or on an external server, to back up the CloudBond virtual machines (VM) only.

CloudBond products are divided to two main topologies, and two different hardware types:

- Main Topologies:
  - Standalone configuration
  - Pool-paired branch - Branch Pool Appliance (BPA)
- Hardware:
  - Mediant 800
  - HP Server (host)

Some procedures require a different setup, depending on hardware and topology. If a different setup is required, the correct hardware and topology is noted.

Note: Backup and restore are critical functions. It is important to follow all steps described in the procedures in this document. Do not skip any steps when performing Backup or Restore.

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2 Backup Architecture

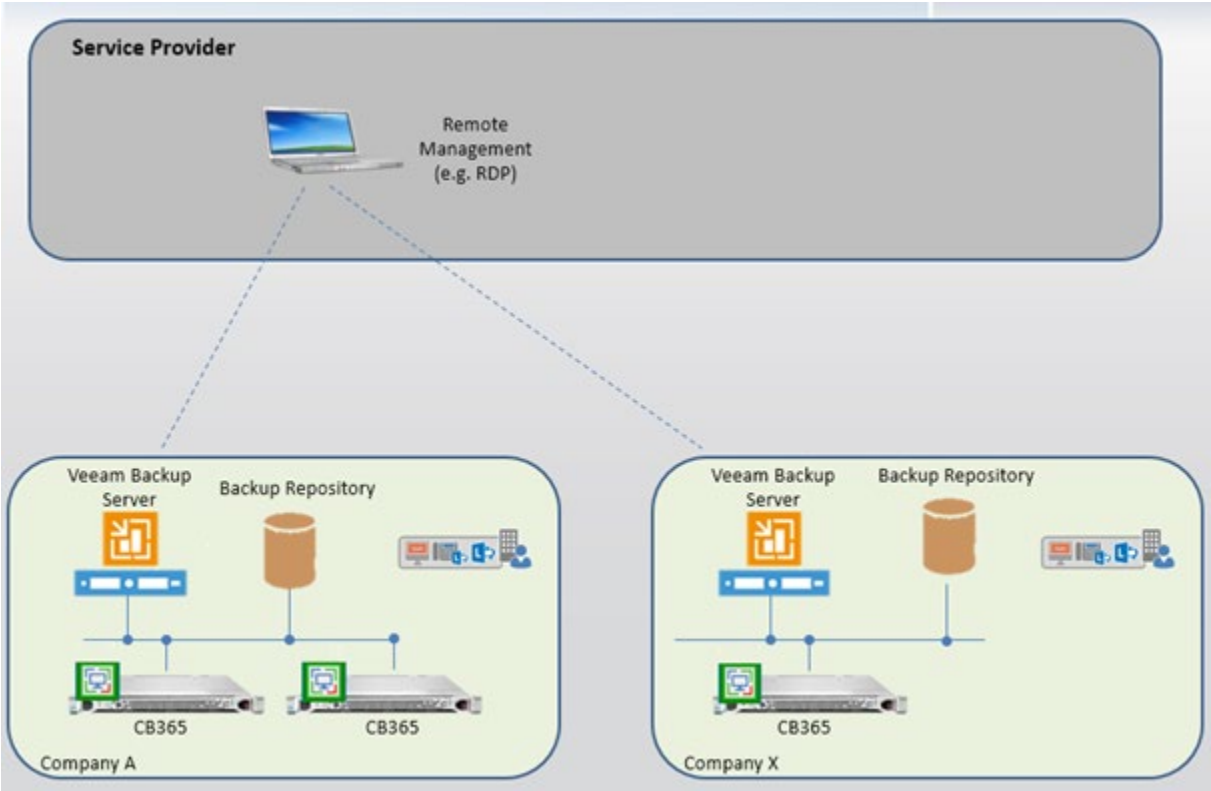
This section describes the different backup architecture options and components which are used for CloudBond 365. Veeam components consist of the following:

- Veeam Agent
- VBR Manager
- Backup Repository

One of the important issues regarding backup and restore procedures is the location of CloudBond 365 – whether it is at the Service Provider or at the customer premises. The backup and restore infrastructure must be on the same local network as the CloudBond 365.

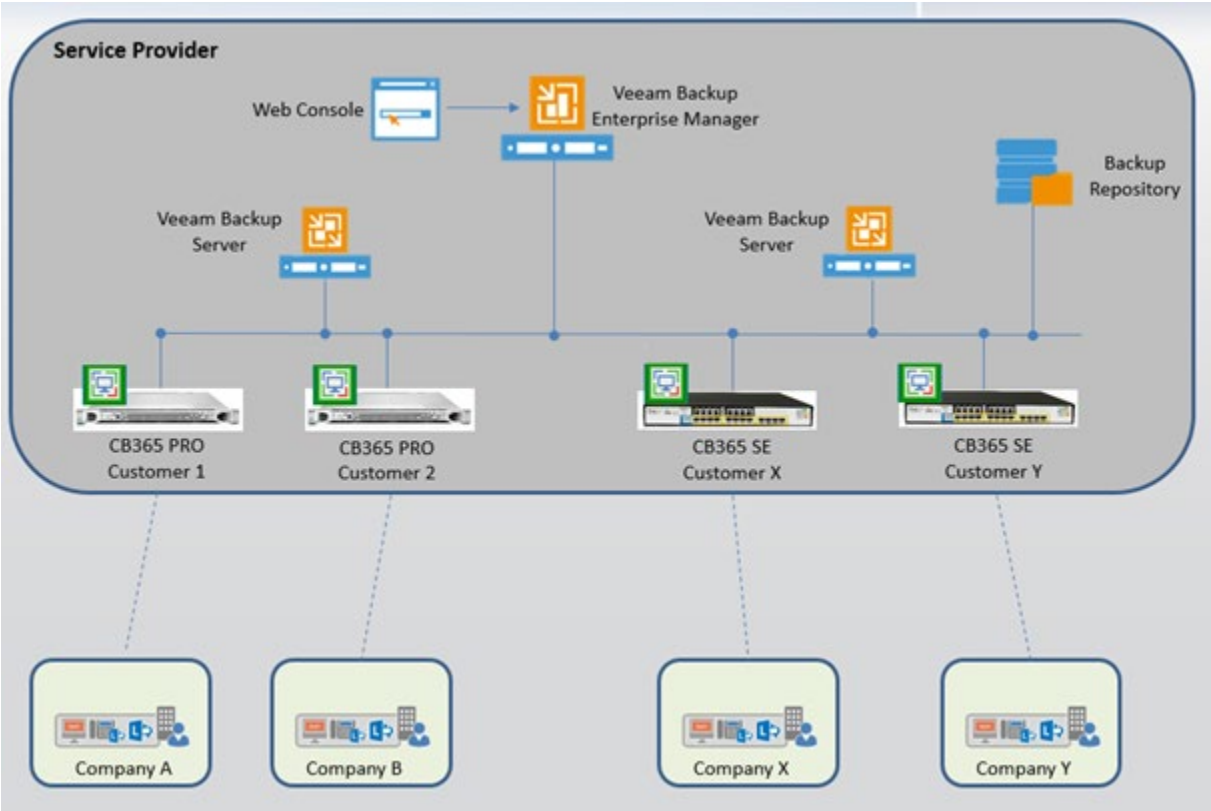
This document does not distinguish between the different locations of the CloudBond 365. The setup is similar for both locations You must design your architecture with the limitation that the backup and restore infrastricture must be on the same LAN as the CloudBond 365 (except for the cloud repository that is always on the cloud).

Figure 2-1: Backup Architecture on Premises



 = Veeam Agent

Figure 2-2: Backup Architecture on Service Provider



 = Veeam Agent

2.1 Using Veeam Products

The following Veeam products are discussed below:

- Veeam Agent
- VBR

2.1.1 Veeam Agent

Veeam Agent software is installed on every CloudBond 365. This software only backs up the Host server. For standalone configurations, the system volume and extra volume/files are also backed up. For BPA topology, there is usually no database for the paired CloudBond 365 server and therefore the system volume and extra volume/files are not backed up.

2.1.2 VBR

VBR is a distributed system. CloudBond uses only part of the available components. The Veeam Backup Server is the VBR management component and can be run on the CloudBond Host or it can be run on external server. If the Backup Repository is external and it is a Windows server, it is recommended to run the VBR Manager so that it can back up several CloudBond systems on the same branch.

2.2 Using VBR Components

The following describes how to use VBR components.

2.2.1 VBR Manager

The VBR manager can be run on the CloudBond 365 host or on an external server. The external server can run the backup repository and the VBR Manager. To run the VBR Manager on an external server, refer to the server requirements in the *Veeam Backup & Replication User Guide* under **Planning and Preparation** > **Requirements** > **System Requirements** > **Veeam Backup Server**.

2.2.2 Backup Repository

The Backup Repository can be external. There are several types of Backup Repositories which are supported and can be used:

- Microsoft Windows server with local or directly attached storage
- Linux server with local, directly attached storage or mounted NFS
- Common Internet File System (CIFS)

For more information, refer to the *Veeam Backup & Replication User Guide* under **Overview** > **Solution Architecture** > **Components** > **Backup Repository**.

Note: The repository can be a local disk connected to CloudBond 365. However, this document does not describe this topology in details.

2.2.2.1 Backup Repository Size

The following lists backup repository size requirements per CloudBond 365 type:

- **Standard Box Edition:** 150 GB
- **Standard Plus Box Edition:** 200 GB
- **Pro Box Edition:** 300 GB
- **Enterprise Box Edition:** 300 GB

Note: It is not intended for the Backup tool to back up the CloudBond 365 SBC. To back up the CloudBond 365 SBC, it is recommended to manually backup the SBC Settings INI files and VM. The VM can also be found on the CloudBond 365 USB. For more information, refer to the Saving Configuration sub-section of the *AudioCodes SBC User's Manual*.

2.3 Firewall

There are several ports used between the CloudBond 365 server and the Veeam components that must be open if the Firewall is used on the network. Refer to the list of ports requirements in the *Veeam Endpoint Backup User Guide* under **System Requirements** > **Used Ports**.

3 Installing Veeam Agent and VBR

This section describes how to install and configure Veeam Agent and VBR.
Version 9.5 - Update 4 backup and setup files can be downloaded from:

- https://s3.eu-central-1.amazonaws.com/downloads-audiocodes/CB365Backup/Version+9.5/VeeamBackup%26Replication_9.5.4.2615.Update4.iso
- https://s3.eu-central-1.amazonaws.com/downloads-audiocodes/CB365Backup/Version+9.5/VeeamAgentWindows_3.0.0.748.zip

When selecting this hyperlink, the following files appear in the WinZip window:

- Veeam Agent for Windows 3.0.0.748.zip
- VeeamBackup&Replication_9.5.4.2615.Update4.iso

3.1 Installing Veeam Agent on the Host Server

Note: This document is applicable to Veeam Agent version **3.0.0.748**.

The Veeam Agent should be installed on the host server. If you already have the current version 3.0.0.748 installed, skip this procedure.

If you have an older version, install the new one and follow the upgrade instructions. This requires two re-boots.

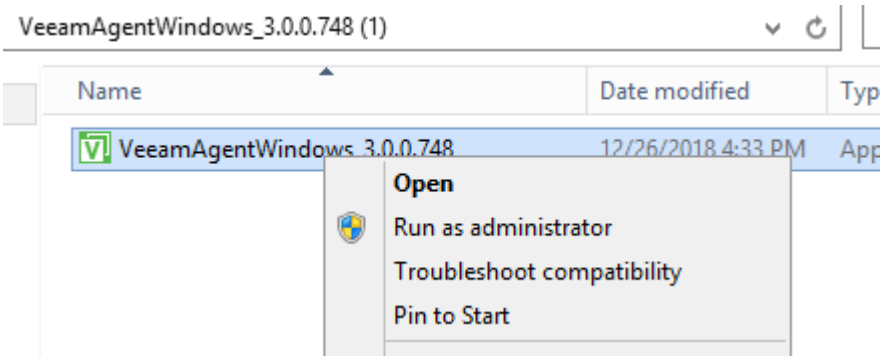
To confirm that Veeam Agent has been installed, search for Veeam Endpoint backup on the **Start** window.

To confirm which version is installed on your system, open **Veeam Endpoint Backup** and navigate to the **Update** menu.

➢ **To install Veeam Agent on the host server:**

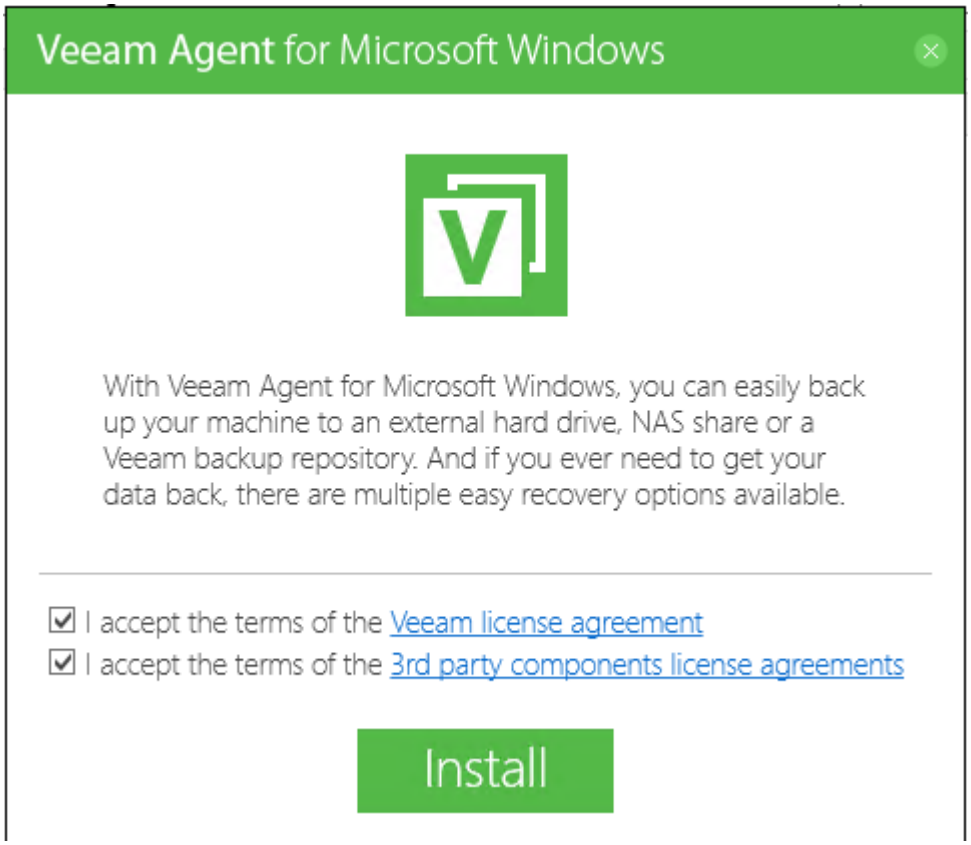
1. Unzip *VeeamAgentWindows_3.0.0.748.zip* file
2. Run the *VeeamAgentWindows_3.0.0.748.exe* file.

Figure 3-1: WinZip Security Warning



3. When the following screen appears, select the 'I accept…' checkboxes.

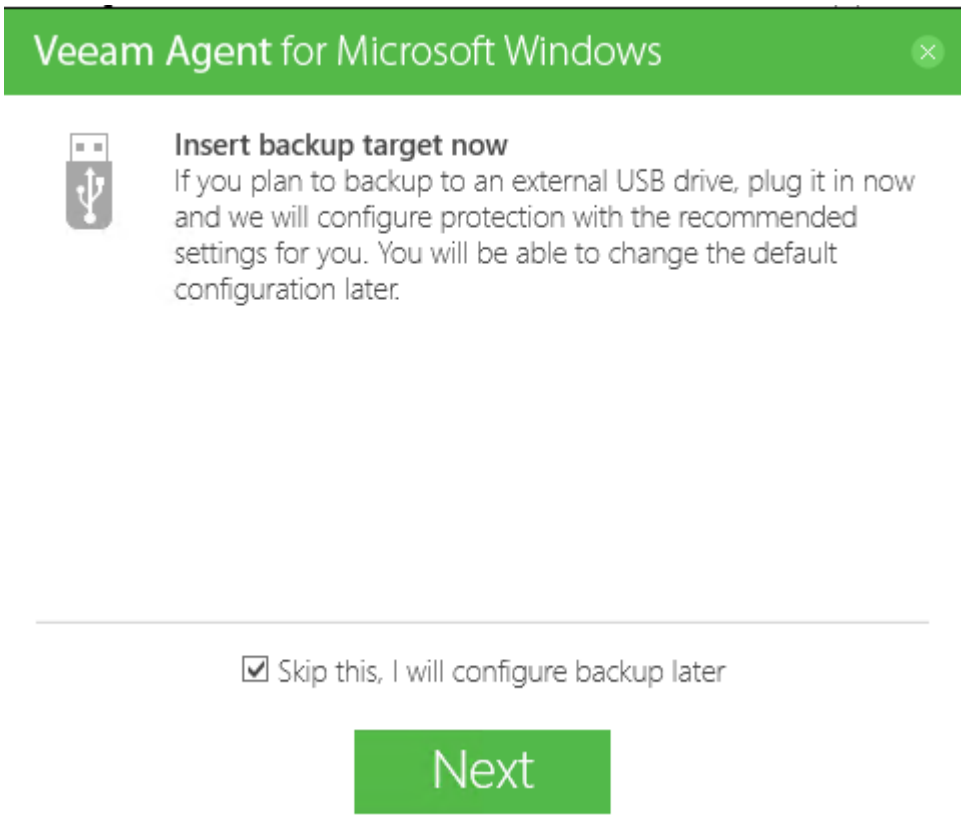
Figure 3-2: Veeam Endpoint Backup



4. Click **Install**.

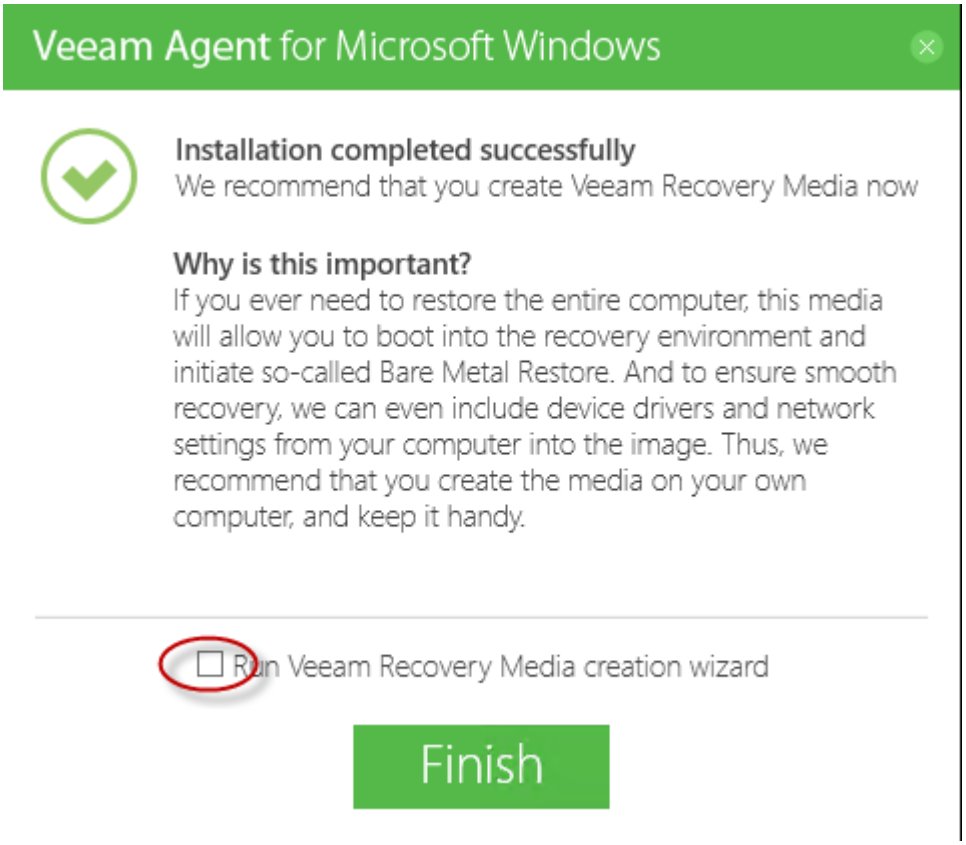
5. Select the 'Skip this, I will…' checkbox.

Figure 3-3: Veeam Endpoint Backup - Next



6. Click **Next**.
7. Clear the 'Run Veeam Advanced Recovery creation wizard' check box.
8. Click **Finish**.

Figure 3-4: Veeam Endpoint Backup - Finish

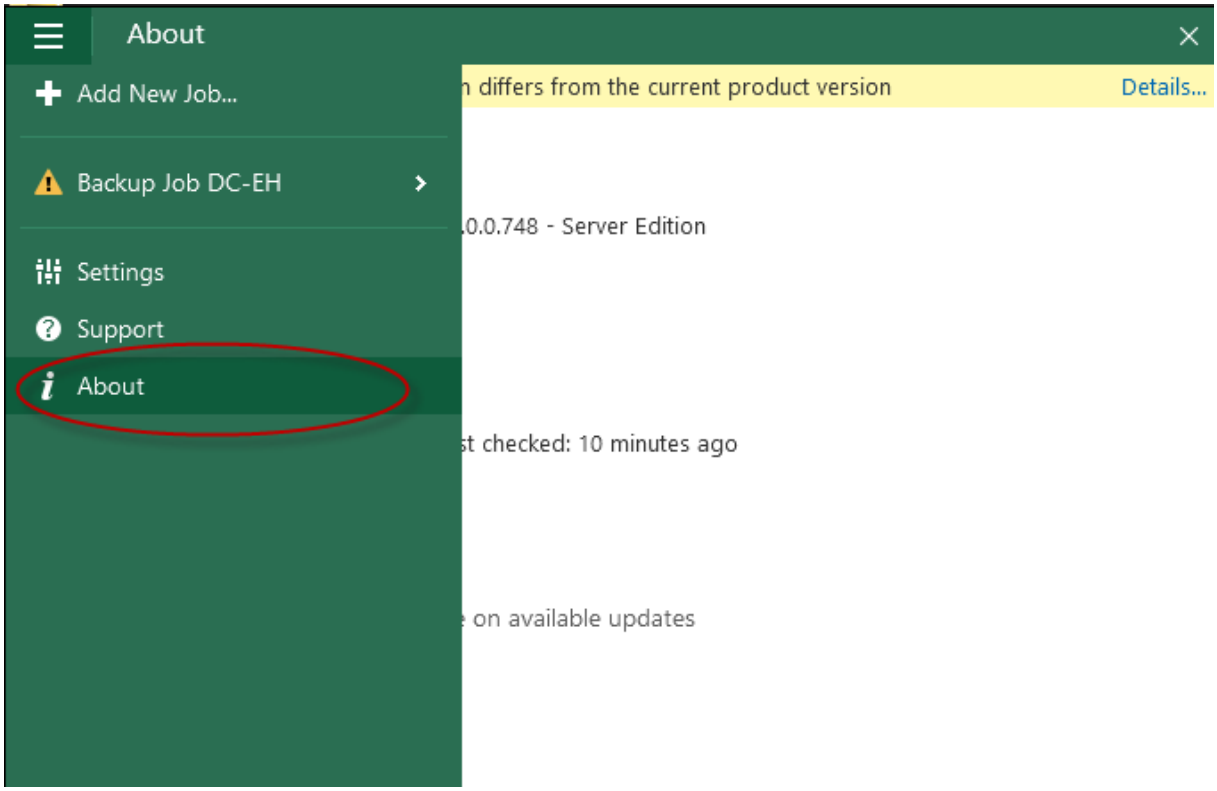


9. If the old version (2.0.x) was initially installed for Veeam Agent, a **Reboot** is required.

3.2 Installing the license for Veeam Agent

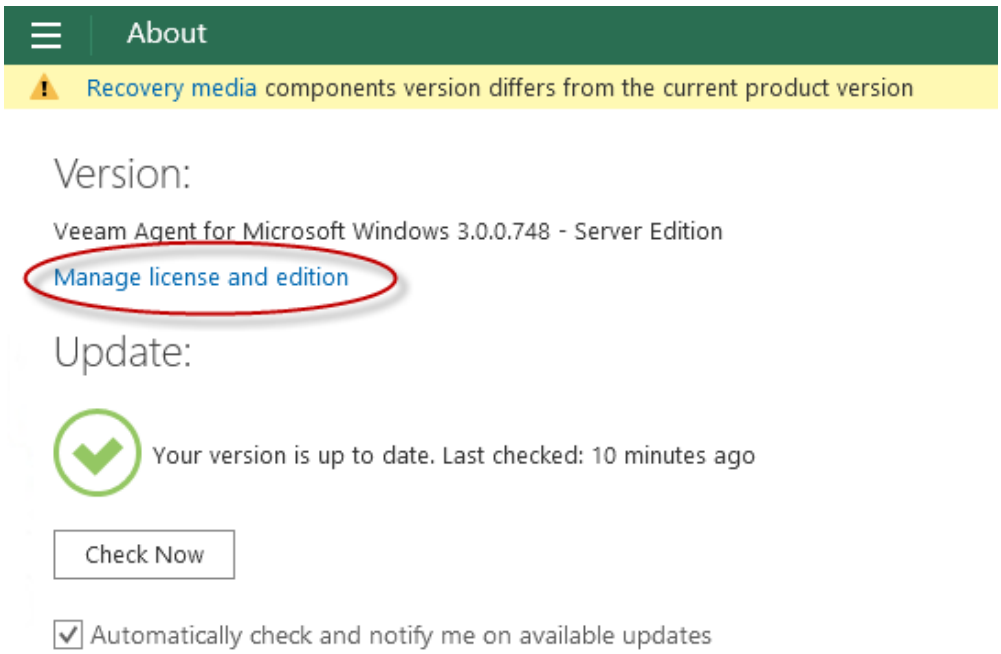
1. Select the About screen.

Figure 3-5: About screen



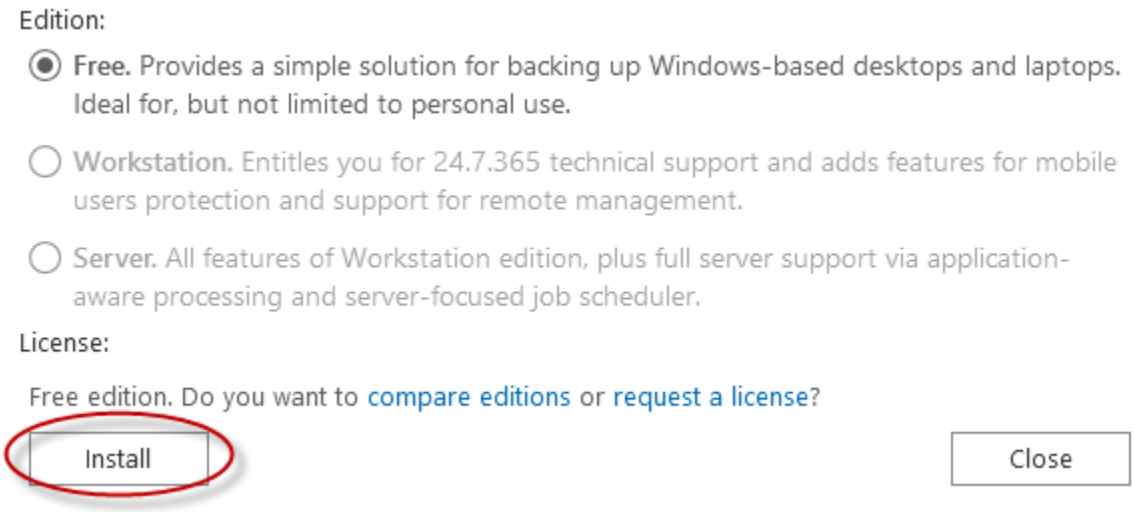
2. Click **Manage license and edition**.

Figure 3-6: Manage License and Edition



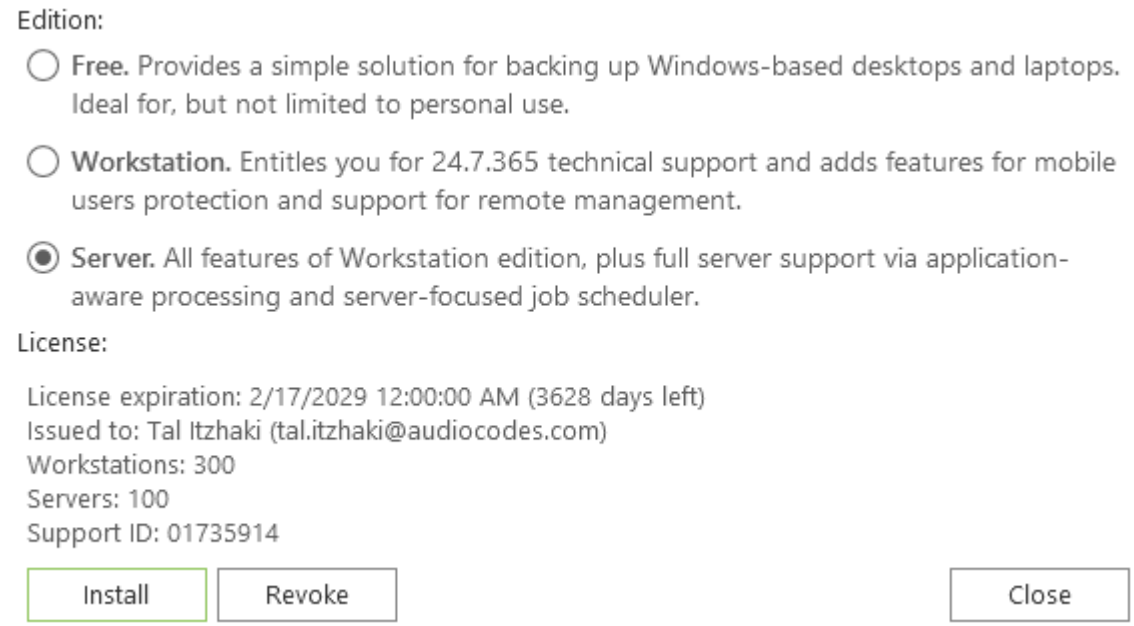
3. Click **Install,** and then navigate to the *.lic file* you received from AudioCodes.

Figure 3-7: Manage License and Edition - Install



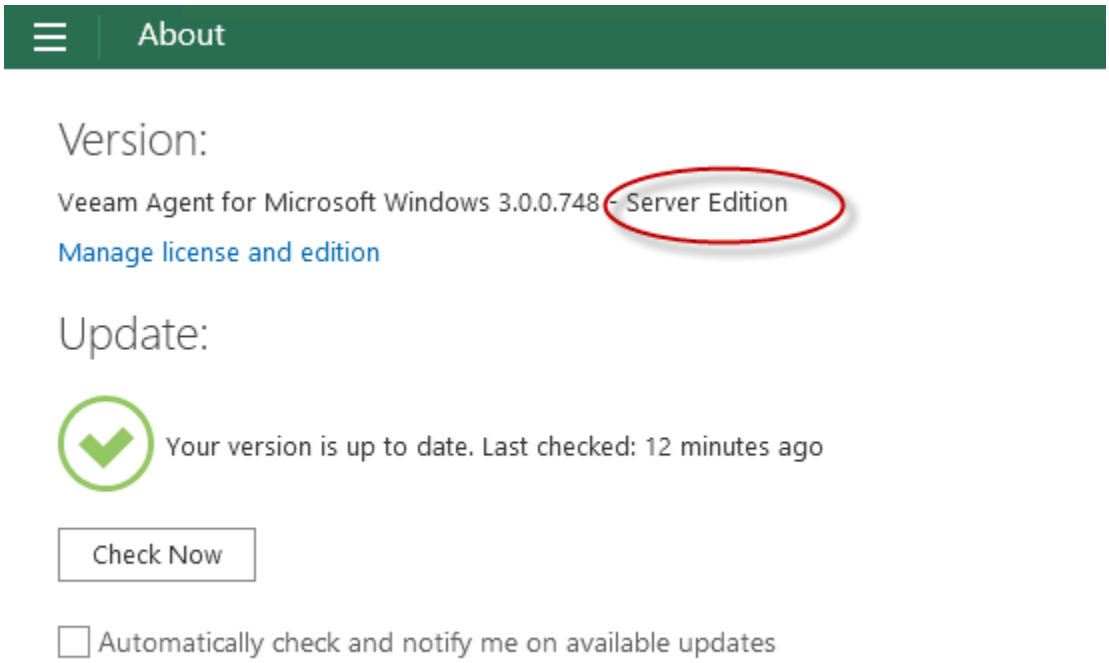
4. When this step has finished, click **Close.**

Figure 3-8: Manage License and Edition - Close



5. Verify that the license was installed.

Figure 3-9: Verification - About



3.3 Installing VBR

The VBR can be installed on every CloudBond 365 Host or on the recommended external server (the same server that can be used as the backup repository).

Before you begin the installation process, check the following prerequisites:

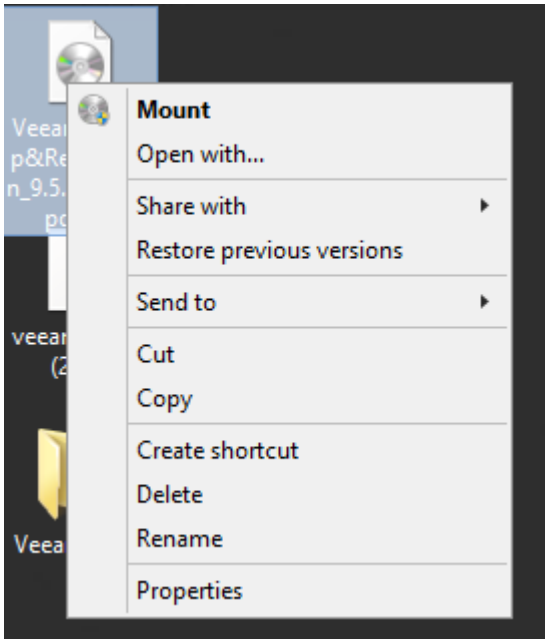
- The computer on which you plan to install Veeam Backup & Replication must meet the system requirements. Refer to the server requirements in the *Veeam Backup & Replication User Guide* under **Planning and Preparation** > **Requirements** > **System Requirements** > **Veeam Backup Server**.
- Communication between components requires a number of ports to be open. Refer to the **Requirements** > **Used Ports** section in the *Veeam Endpoint Backup User Guide*.

Note: The VBR installation requires a server restart.

➢ **To install the VBR:**

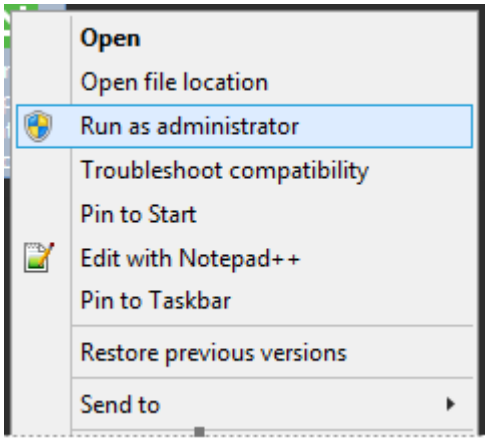
1. Right-click the *VeeamBackup&Replication_9.5.4.2615.Update4.iso*, and then from the menu, select **Mount**.

Figure 3-10: Menu Options - Mount



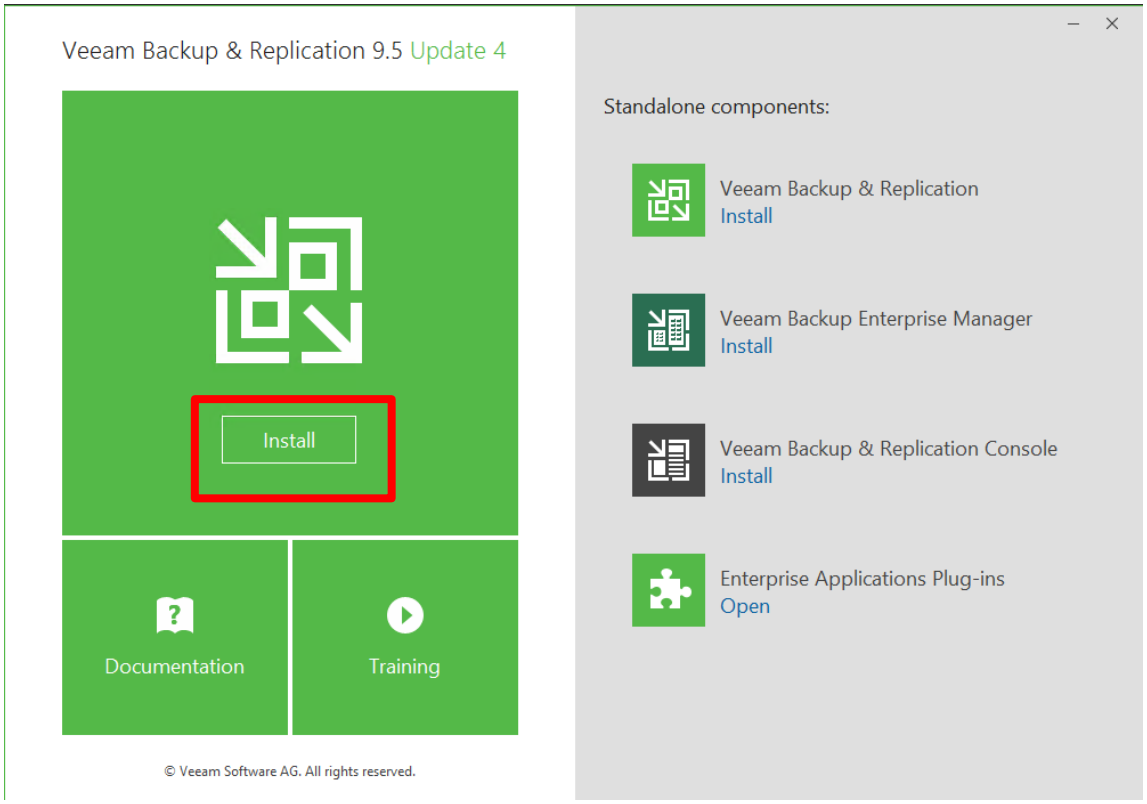
2. In the 'Veeam Backup & Replication 9.5' Setup file, select **Run as administrator**.

Figure 3-11: Run as Administrator



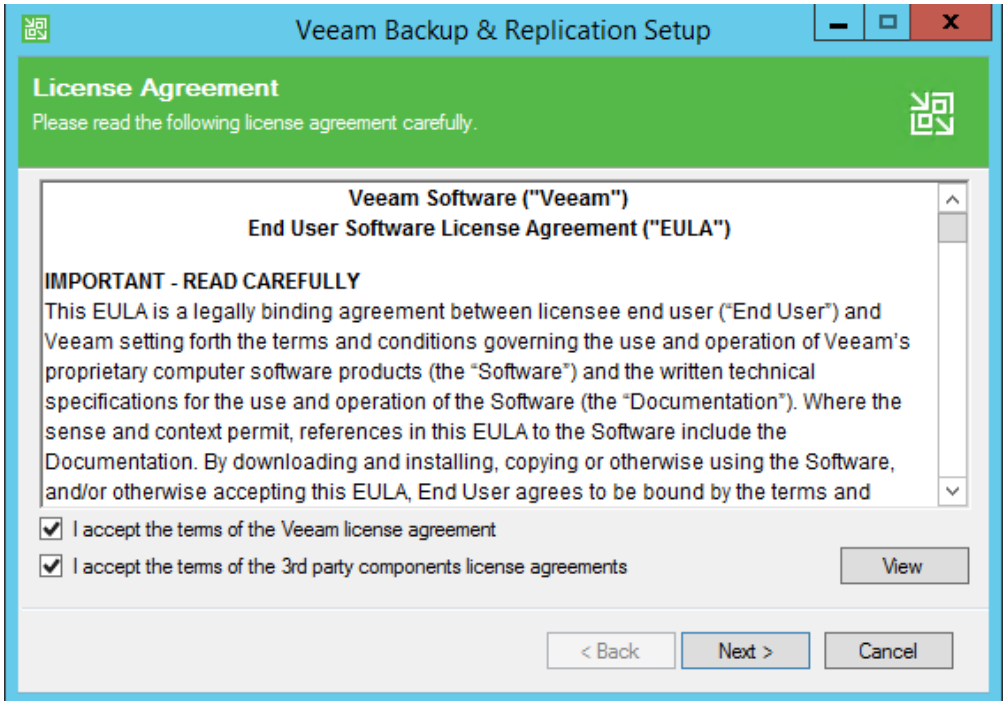
3. On the **Welcome** step of the wizard, click **Install** to start the installation.

Figure 3-12: Welcome



4. Read the license agreement and then accept the terms for both the Veeam License Agreement and the 3rd party components license agreements.
5. Click **Next**.

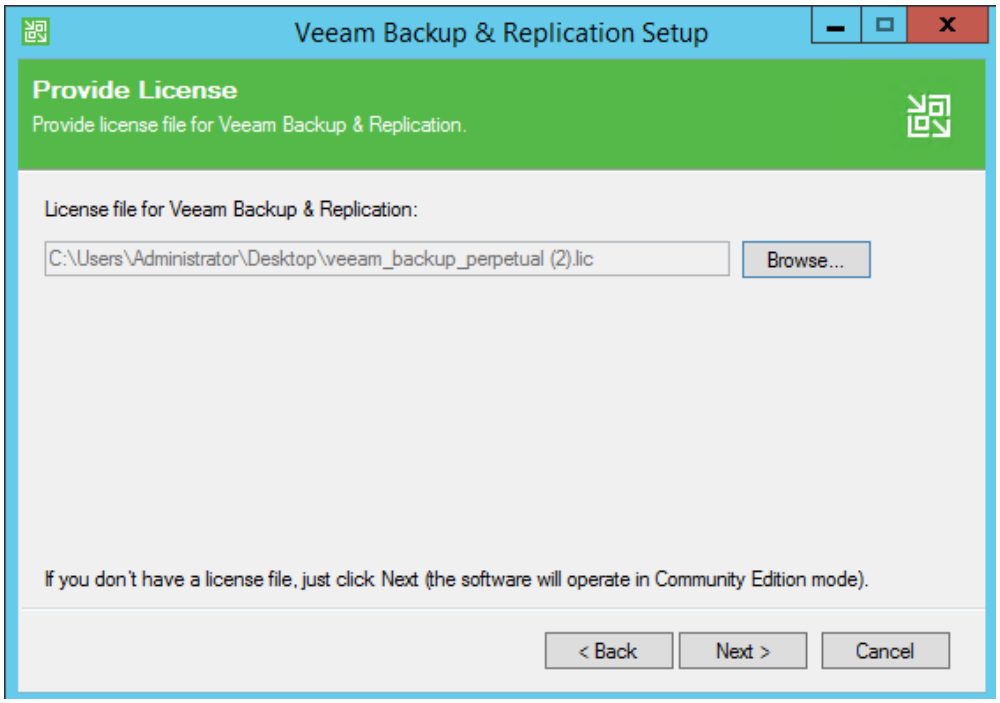
Figure 3-13: Veeam Backup and Replication Setup



Note: You must have a valid trial license or full paid license for Veeam Backup & Replication.

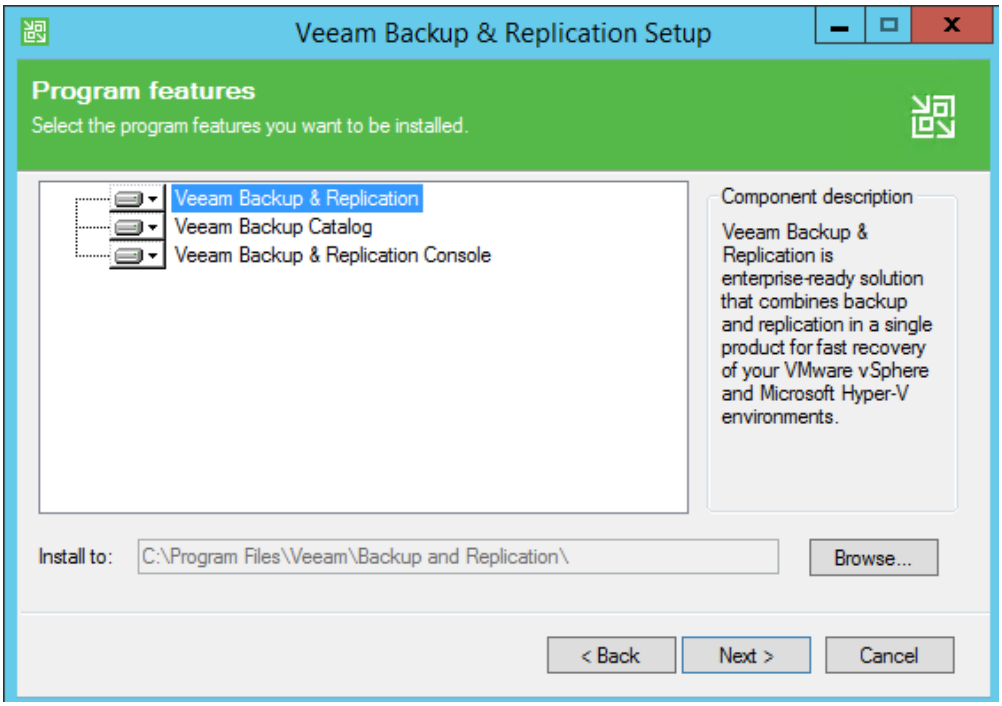
6. If you have the full license, click on **Browse** to locate it, and then click **Next**.

Figure 3-14: Provide License



7. Select the three features to be installed (as shown in the figure below), and then click **Next**.

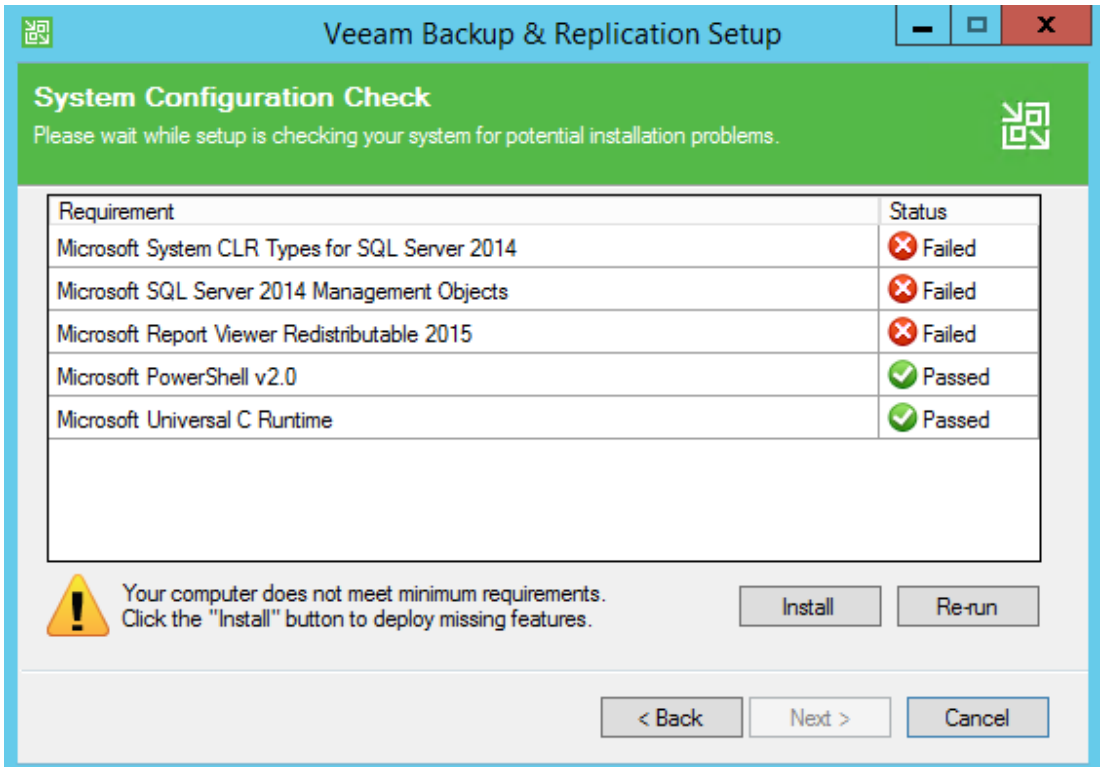
Figure 3-15: Program Features



The setup checks your system for potential installation problems.

8. Click **install**.

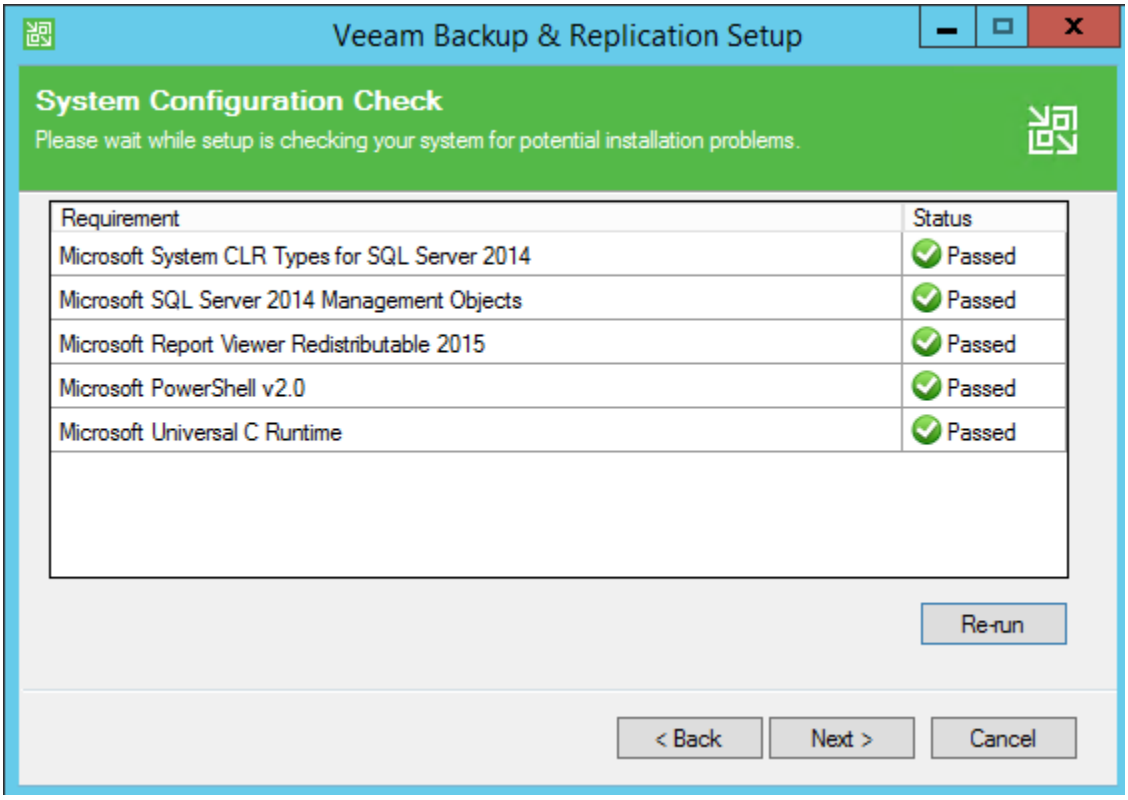
Figure 3-16: System Configuration Check



The missing components are installed.

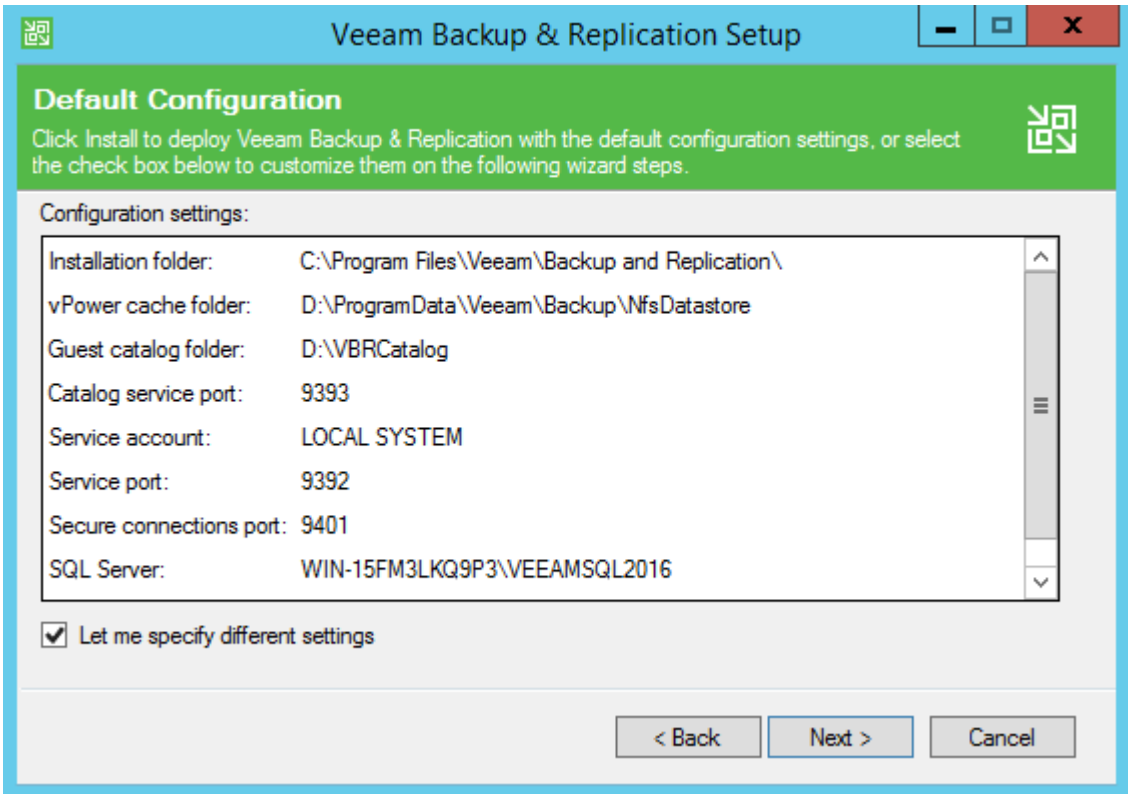
9. Click **Next**.

Figure 3-17: System Configuration Check



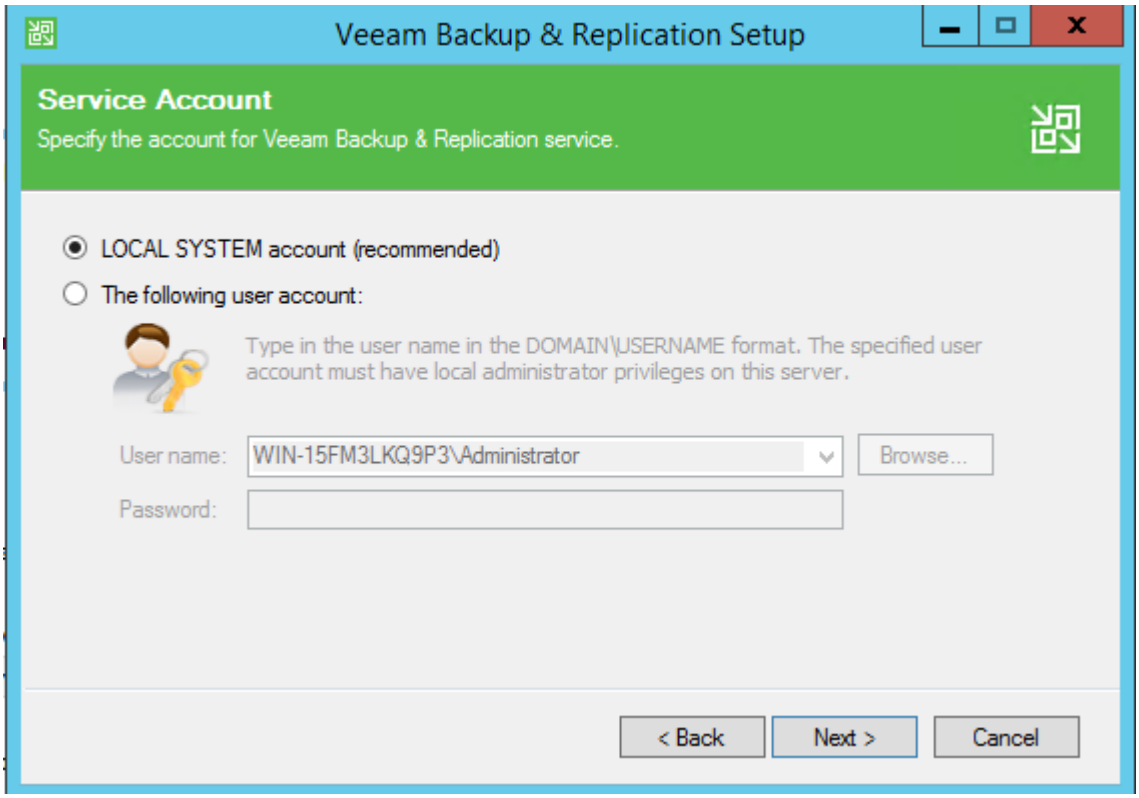
10. Select the 'Let me specify different settings' check box, and then click **Next**.

Figure 3-18: Default Configuration



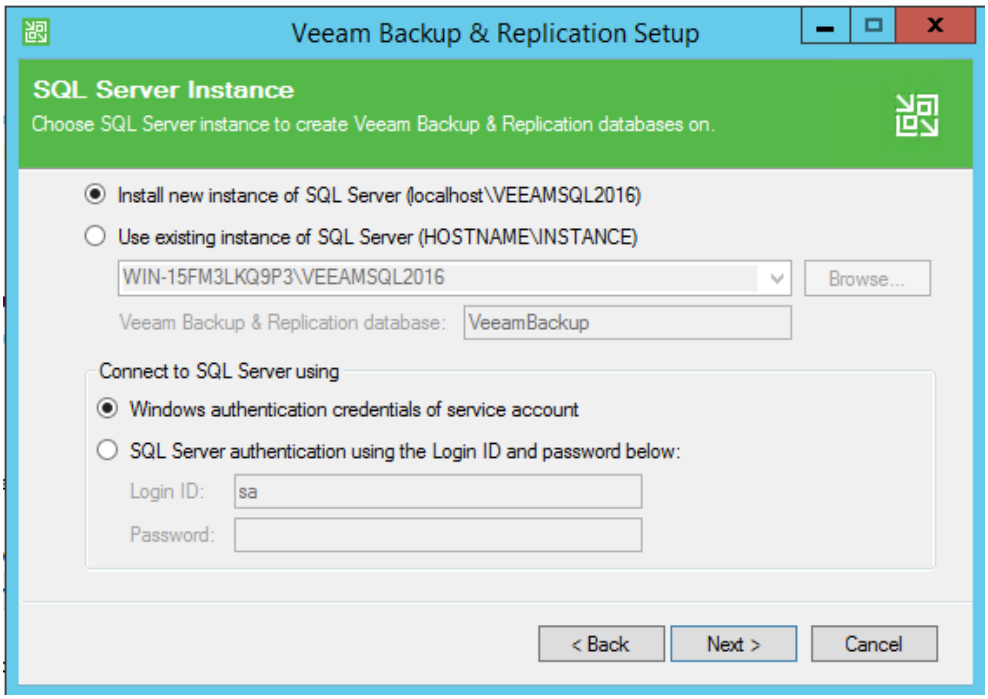
11. Click the **Local System account** option, and then click **Next**.

Figure 3-19: Service Account



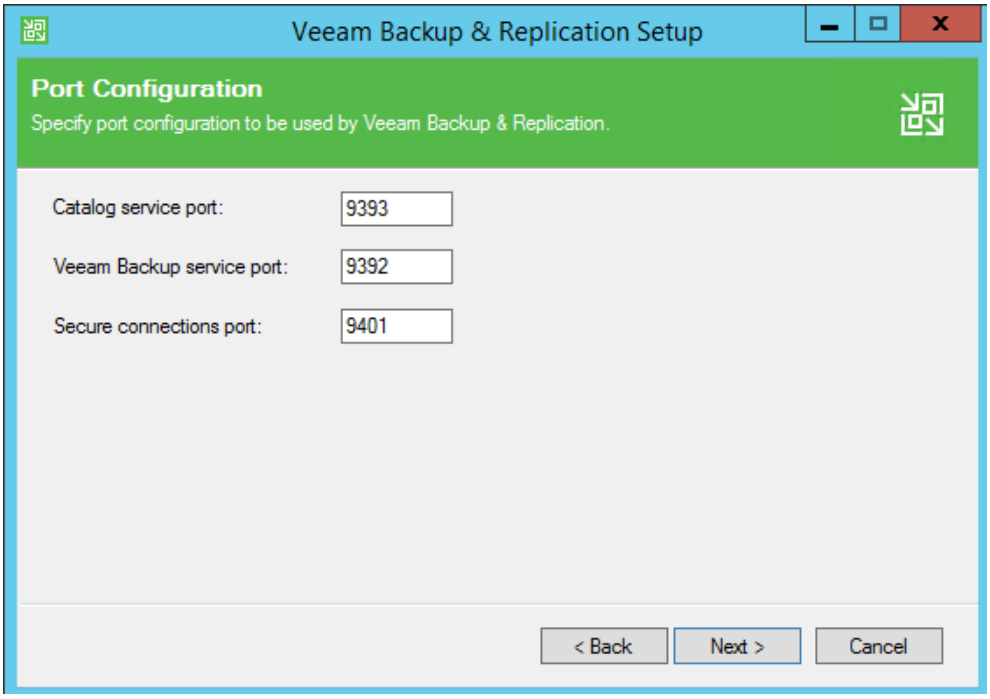
12. Select the default settings, and then click **Next**.

Figure 3-20: SQL Server Instance



13. Select the default settings, and then click **Next.**

Figure 3-21: Port Configuration

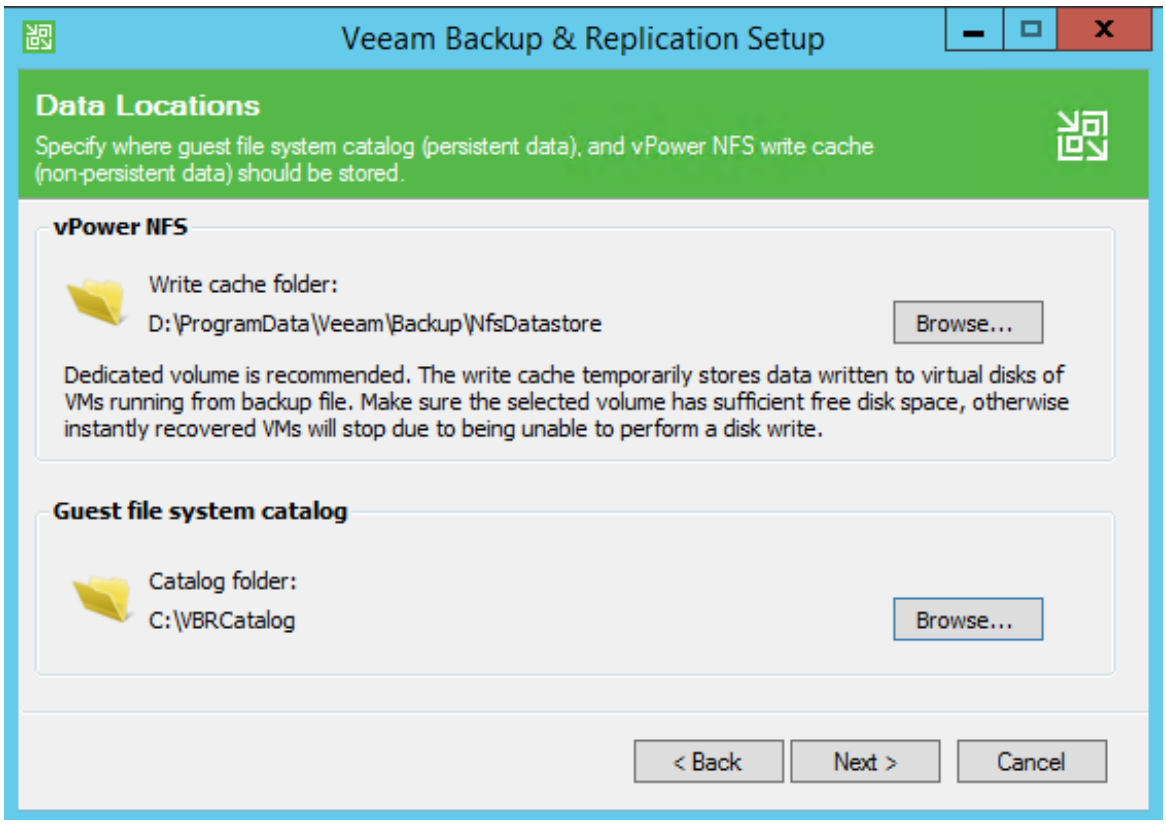


14. For the 'Catalog folder', click **Browse** to select "C:\VBRCatalog".

Note: You first need to create this folder.

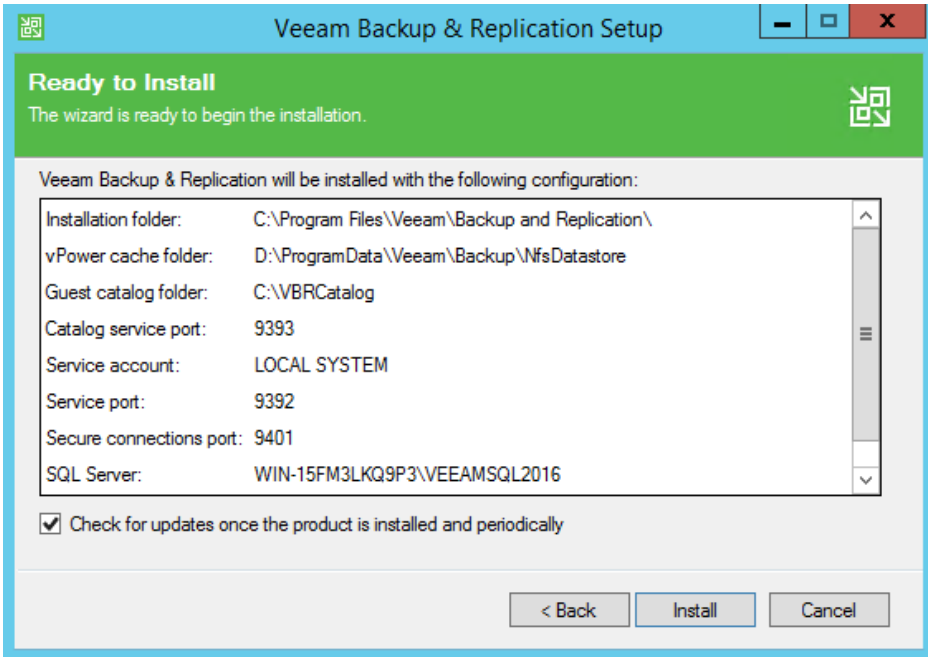
15. Click **Next**.

Figure 3-22: Data Locations



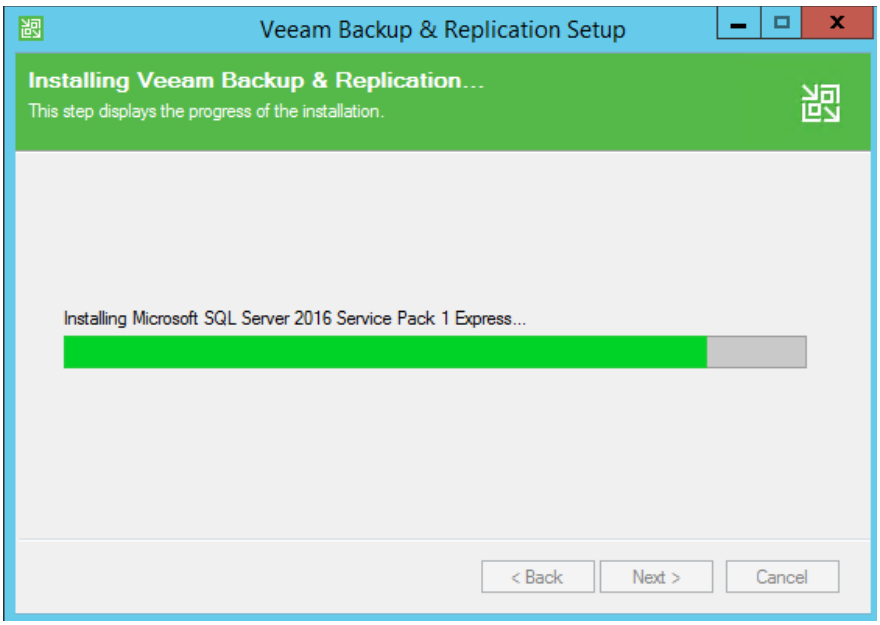
16. Click **Install**.

Figure 3-23: Ready to Install



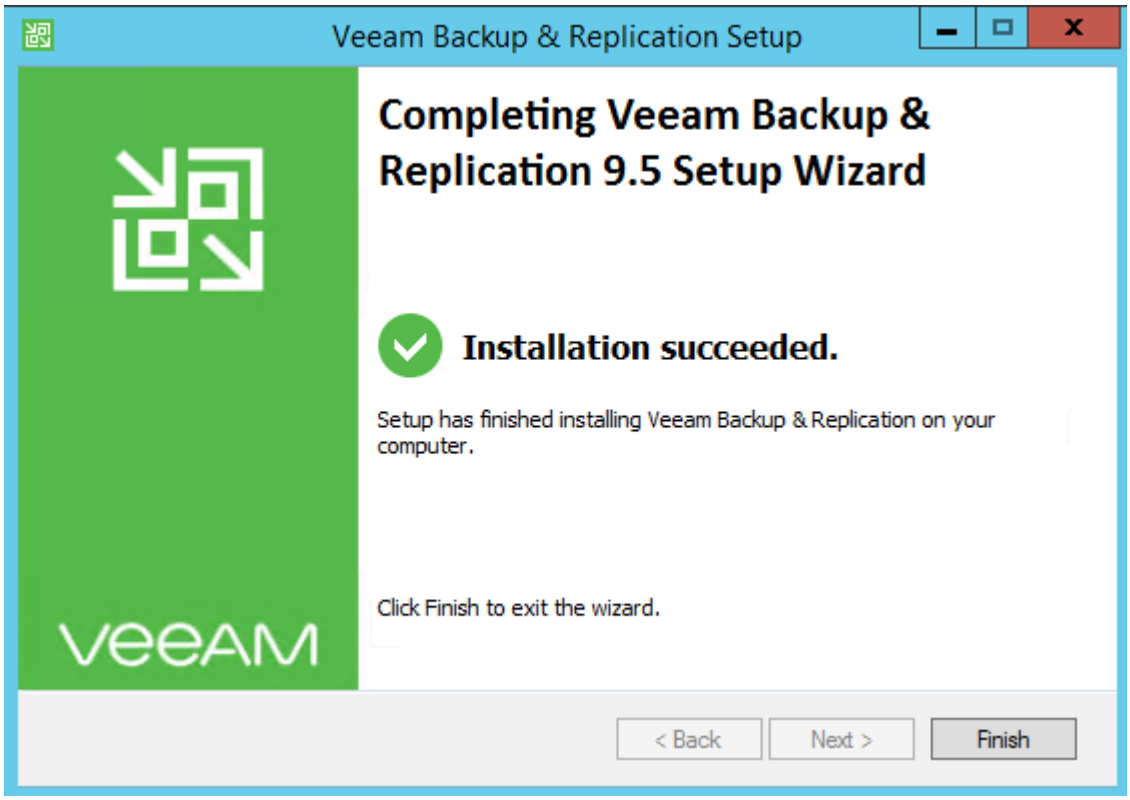
The installation process begins.

Figure 3-24: Installing Veeam Backup & Replication



17. Click **Finish**, and then close the above screen.

Figure 3-25: Completing Veeam Backup and Replication Wizard



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4 Configuring License and Credentials

The following procedure describes how to configure the license and credentials.

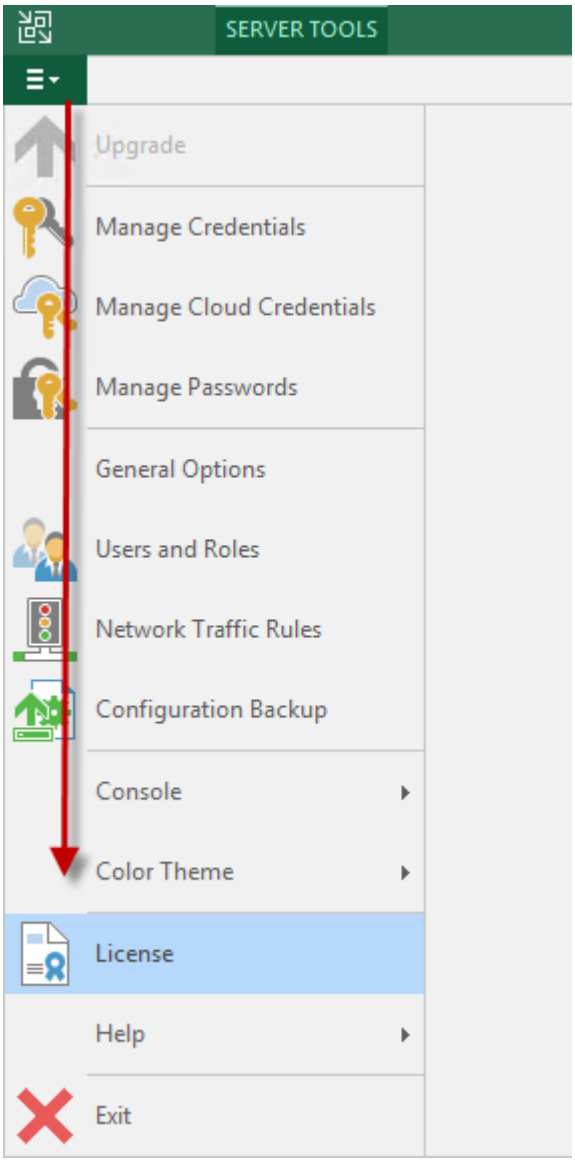
4.1 Installing the License

If the license was not supplied during the Installation step, you must install a license.

➢ **To install the license:**

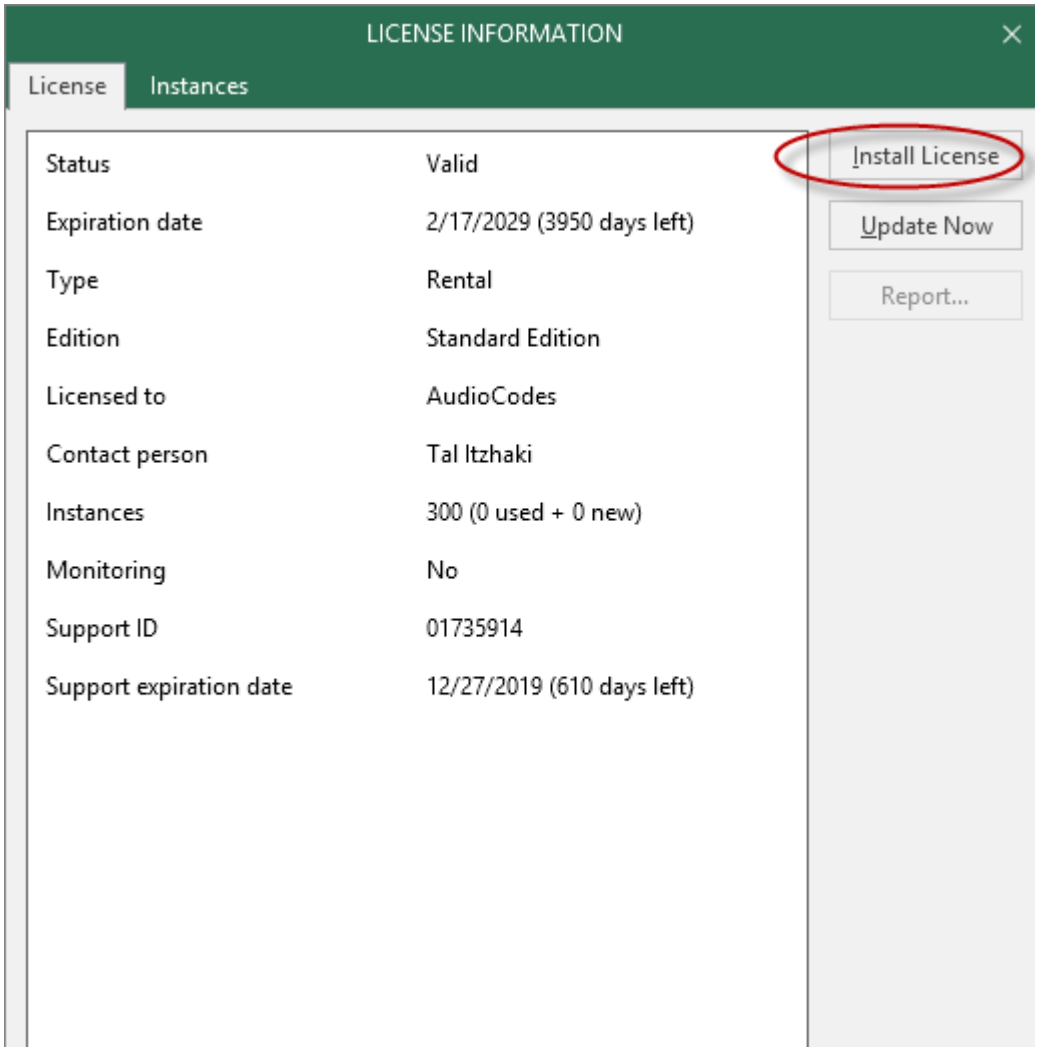
1. Open the VBR Console from the desktop by double-clicking the Veeam Backup menu icon.
2. Open the **Help** menu and navigate to the **License** sub-menu.

Figure 4-1: Help – License Menu



3. From the **License** menu click **Install License,** and then select the license file.

Figure 4-2: License Information



4.2 Assigning VBR Console Credentials and VBR Roles

The account used to start the VBR console must have the Local Administrator permissions on the Veeam backup server.

You can assign one of the following roles to users or groups of users:

- Veeam Backup & Replication
- Veeam Restore Operator
- Veeam Backup Viewer
- Veeam Backup Operator
- Veeam Backup Administrator

A role assigned to the user defines the user activity scope and what operations in Veeam Backup & Replication the user can perform. Role security settings affect the following operations:

- Starting and stopping jobs
- Performing restore operations

By default, during installation the Veeam Backup Administrator role is assigned to users in the Local Administrators group. If you change the default settings, make sure that you assign the Veeam Backup Administrator role to the necessary user account. Changing the role is done through the Users and Roles menu option accessible from the main menu.

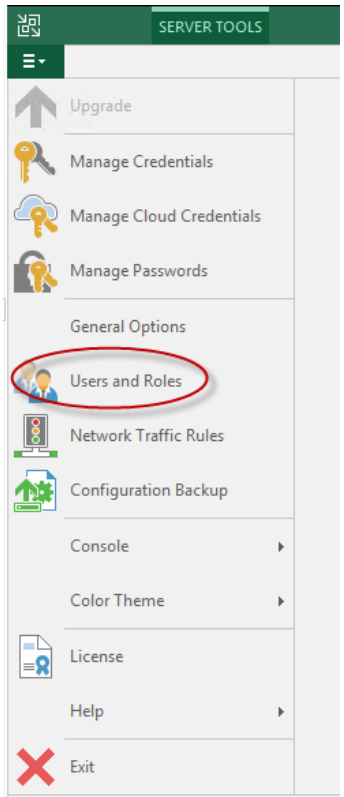
By default, the Local Administrators group is defined as the Veeam Backup Administrator.

You can confirm this by following this procedure.

➢ **To confirm the Veeam Backup Administrator:**

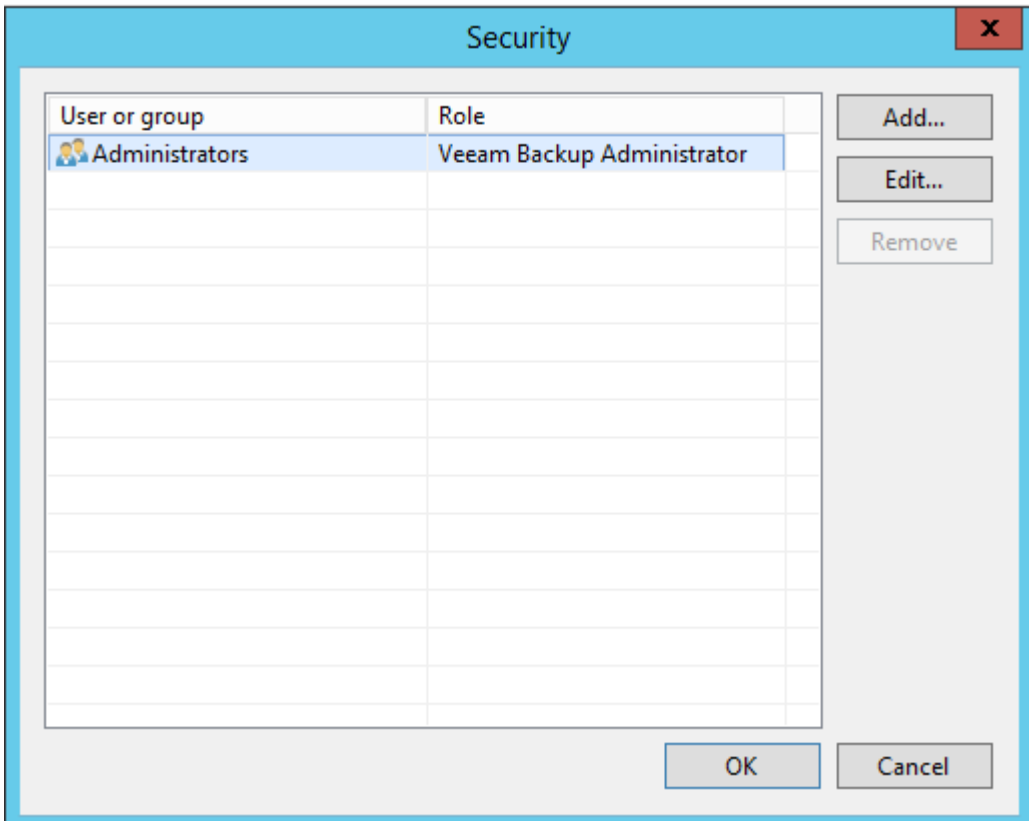
1. From the VBR main console screen, click the **Menu** icon (in the top-left corner of the screen); the following menu options appear:

Figure 4-3: Users and Roles



2. Select **Users and Roles**; the following screen appears.

Figure 4-4: Security



Note: On the Mediant 800, where the host is the Domain Controller (DC), this is the CloudBond 365 domain Administrator group and not the local server Administrator group.

3. Select the User or Group, and then click **Edit**.
4. Confirm that the role is correct, and then click **OK**.

4.2.1 Adding a User and Role for Veeam Agent

You need to add a user for the Veeam Agent and assign a role to it.

Notes:

- Every CloudBond 365 must have a different user (with a different user name) for the Veeam Agent because the name of the user is part of the directory path on the backup file system. Add a user that has local Administrator credentials e.g., CloudBondVEB1.
- If you have several CloudBond 365 devices that use the same backup repository, even if they are standalone, you must allocate different user names for the Veeam Agent.

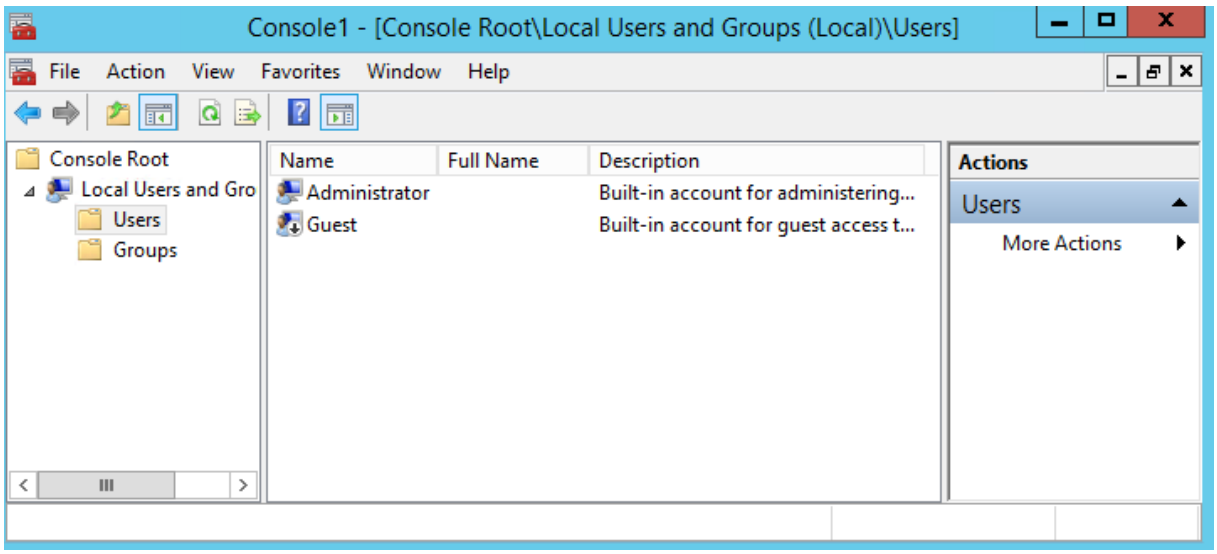
4.2.1.1 For CloudBond 365 Pro Box / Enterprise Box Editions (or VBR on External Server)

The following procedure describes how to add a new user for CloudBond 365 Pro Box / Enterprise Box Editions.

➢ **To add a new user for CloudBond 365 Pro Box / Enterprise Box Editions:**

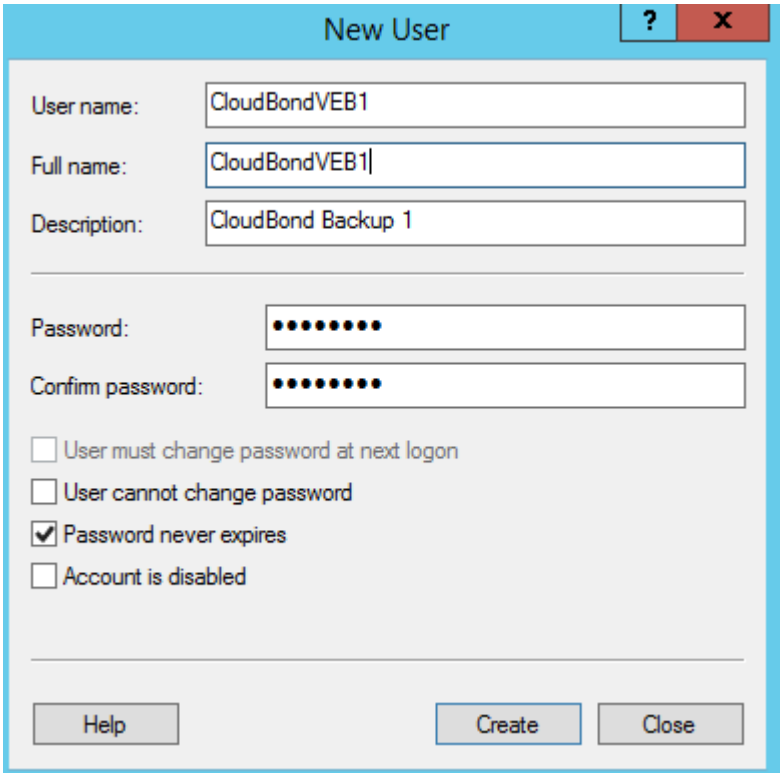
1. Create the user as a local Administrator that belongs to the Local Server Administrators group.
2. Open the Local User and Groups using Microsoft Management Console (MMC).

Figure 4-5: Local User and Groups



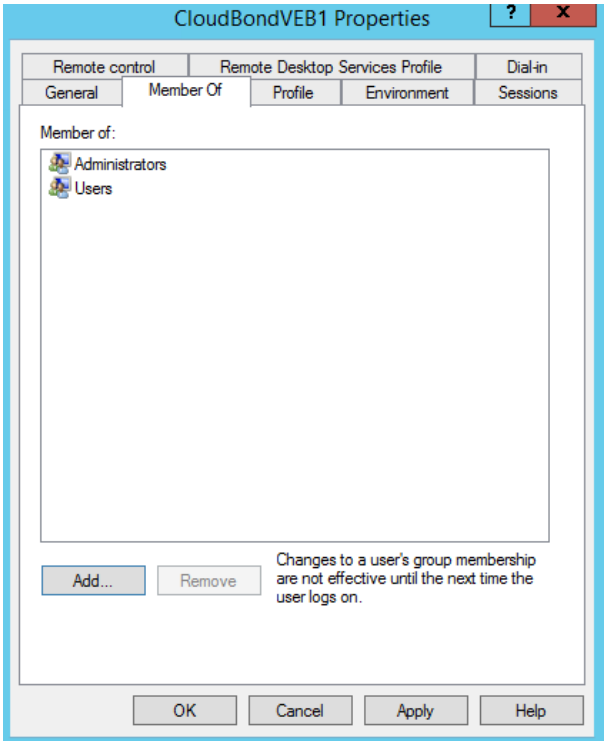
3. Enter the new user details on the New User screen.
4. Click **Create**.

Figure 4-6: Creating a New User



5. On the CloudBondVEB1 Properties screen, click the **Member of** tab.
6. Add the new user to the Local Administrators Group, and then click **Add**.
7. Click **OK**.

Figure 4-7: Adding to Administrators



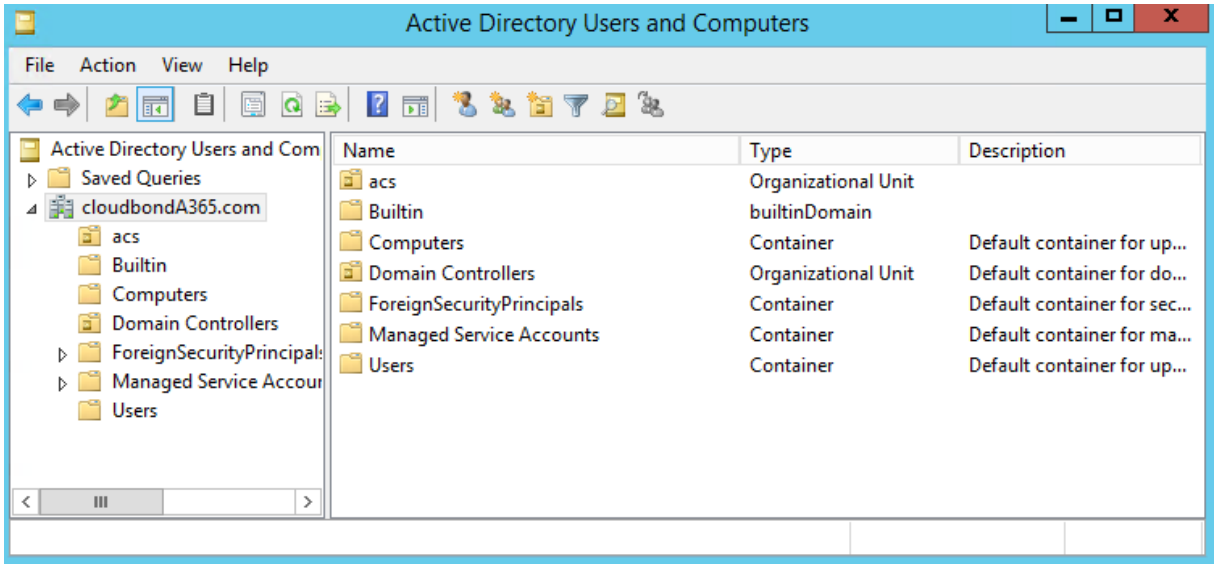
4.2.1.2 For CloudBond 365 Standard Box Edition

The following procedure describes how to add a new user for CloudBond 365 Standard Box Edition.

➢ **To add a new user for CloudBond 365 Standard Box Edition:**

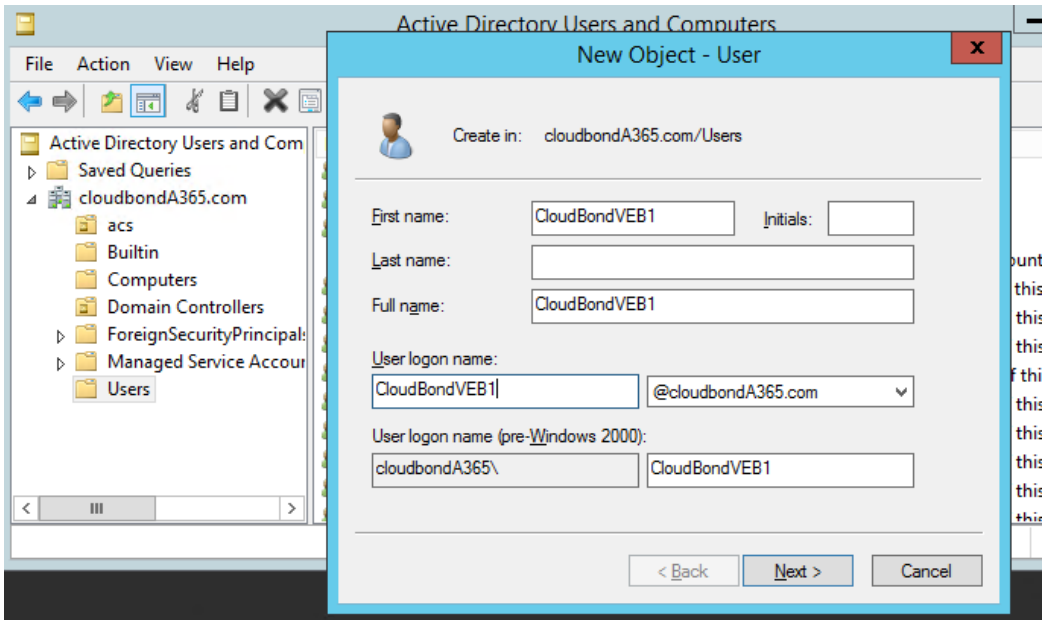
1. Create the new user on the CloudBond 365 domain which belongs to the CloudBond 365 domain Administrators group.
2. Open the **Active Directory User and Computers** tool.

Figure 4-8: Active Directory Users and Computers



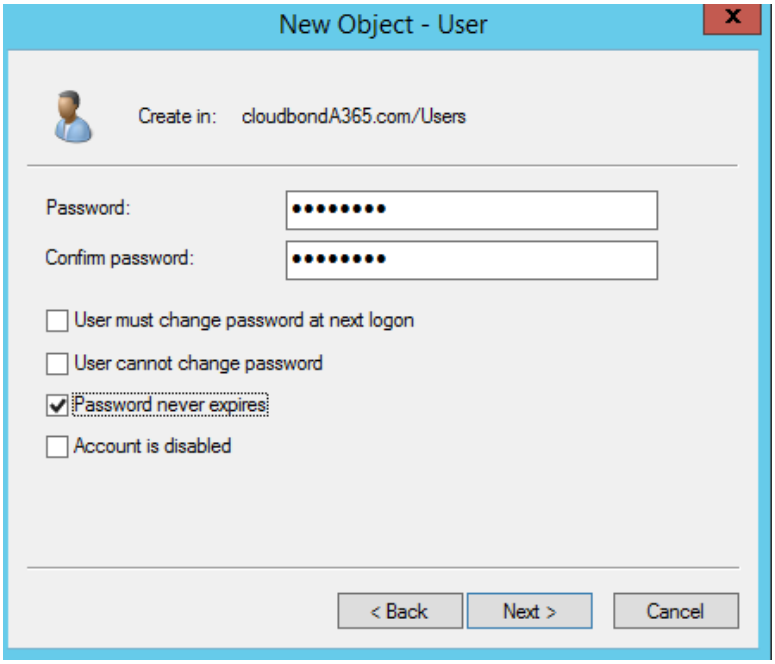
3. Select the **Users** folder and create a new user.
4. On the New Object – User screen, enter the name details, and then click **Next**.

Figure 4-9: New Object – Name Details



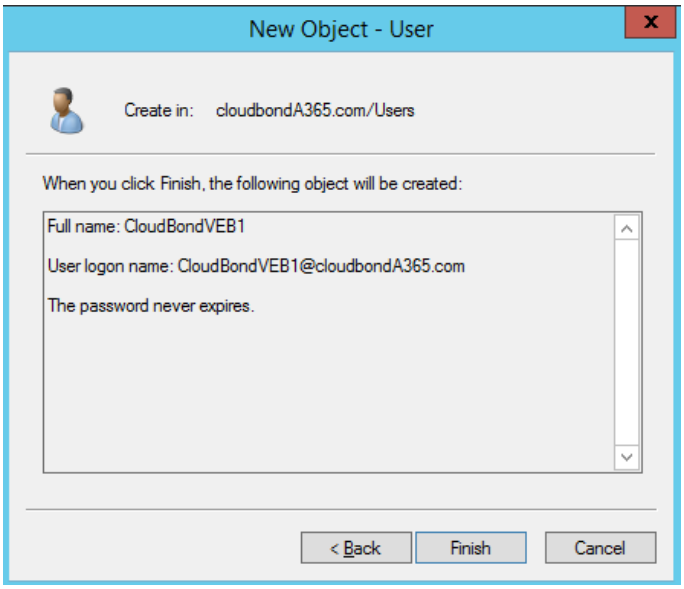
5. Enter the password credentials, and then click **Next**.

Figure 4-10: New Object – Password Details



6. Click **Next**.

Figure 4-11: New Object – Finish



7. Click **Finish**.

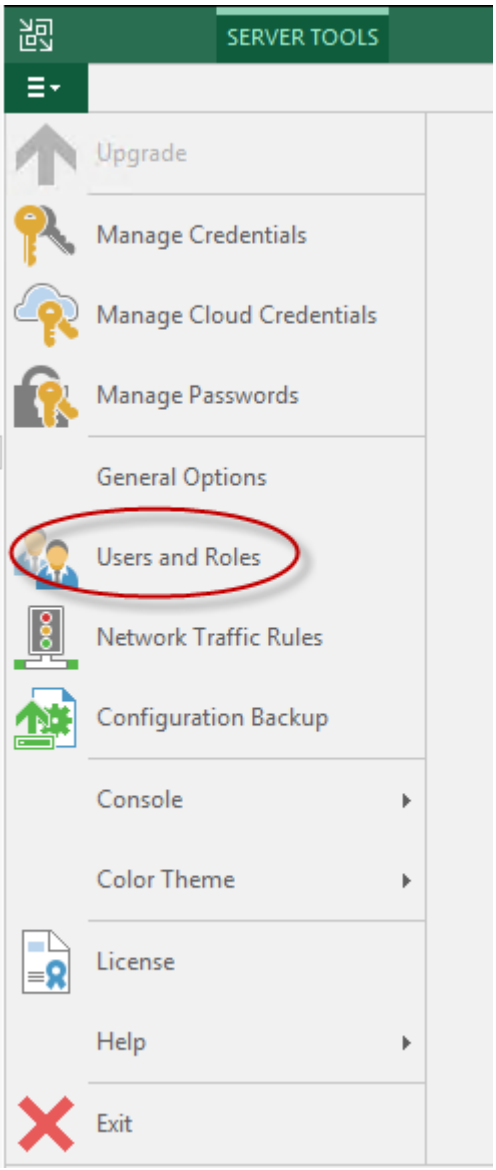
4.2.2 Assigning a Role for the Veeam Agent User

The following procedure below describes how to assign a role for the Veeam Agent user.

➢ **To assign a role for the Veeam Agent user:**

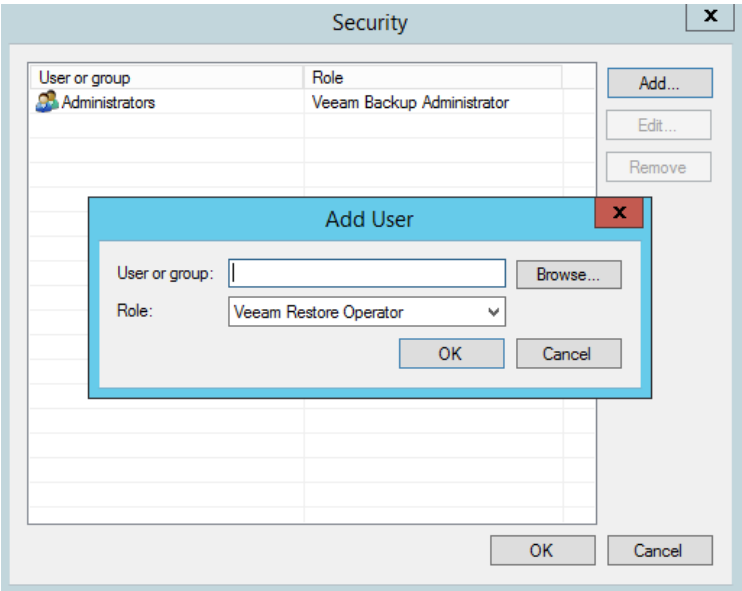
1. From the VBR main console screen, click the **Menu** icon (in the top-left corner of the screen); the following menu options appear:

Figure 4-12: Users and Roles



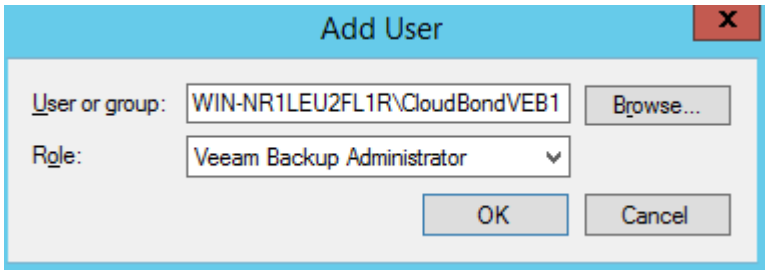
2. Select **Users and Roles**; the following screen appears.

Figure 4-13: Security



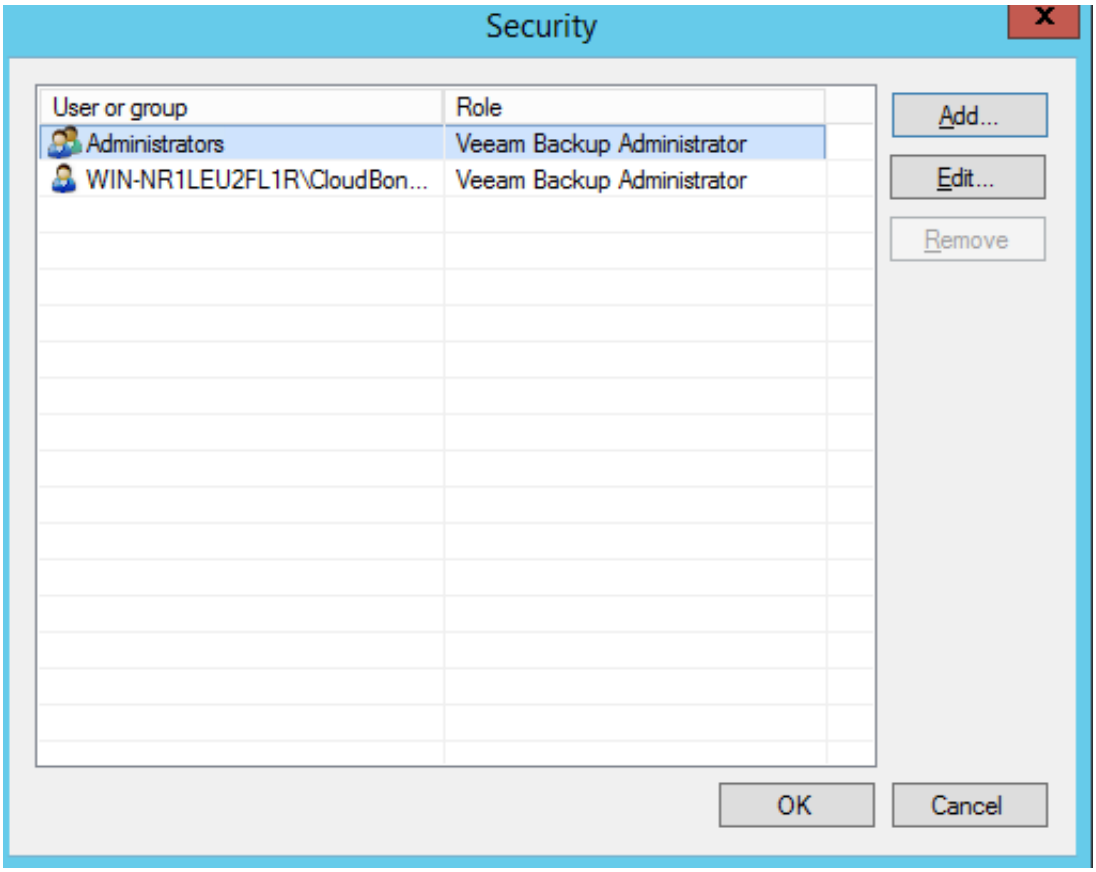
3. Click **Add**.
4. In the 'user or group' field, enter the user that was created before for the Veeam Agent or use **Browse** to select it.
5. From the 'Role' drop-down list, select **Veeam Backup Administrator**.

Figure 4-14: Add User



6. Click **OK**; the new role has been added.

Figure 4-15: Security – with Added Role



7. Click **OK**.

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5 Backing up the Repository

The following procedures describe how to setup the backup repository.

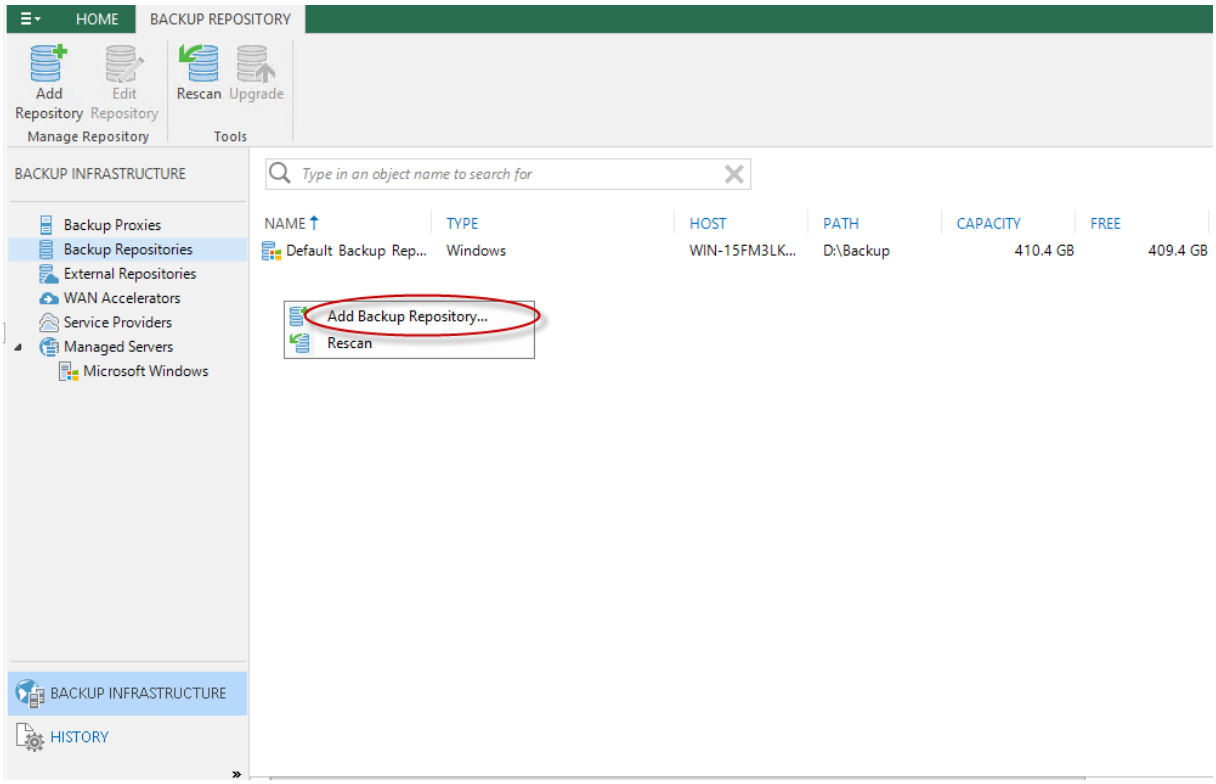
5.1 Adding Backup Repository

The following procedure describes how to add a backup repository in VBR.

➢ **To add a backup repository:**

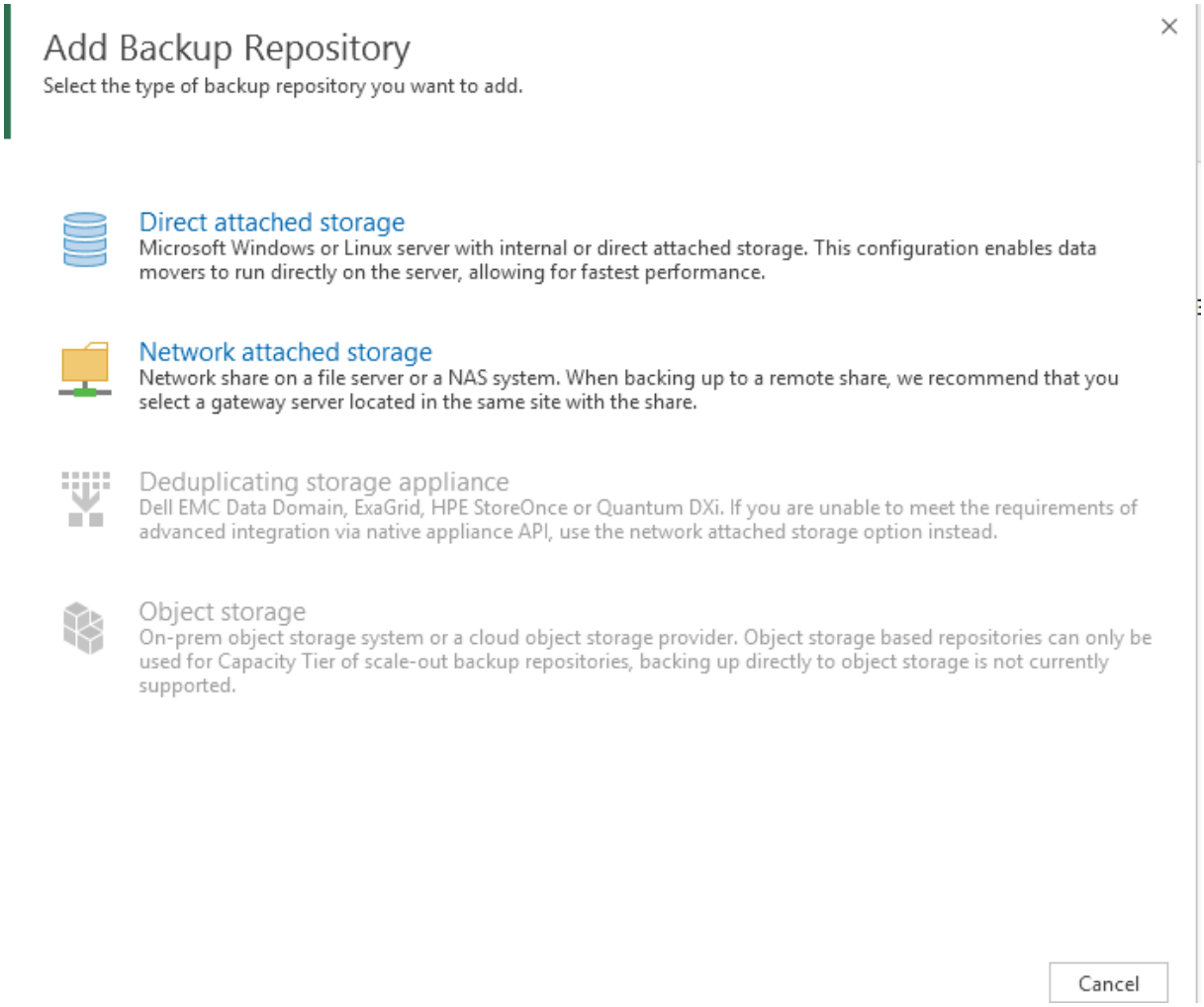
1. Open the VBR main console screen.
2. From the menu options on the left-side of the screen, select **Backup Infrastructure** and navigate to **Backup Repositories**.
3. Right-click on the repository and then, select **Add Backup Repository**.

Figure 5-1: VBR Backup Repository



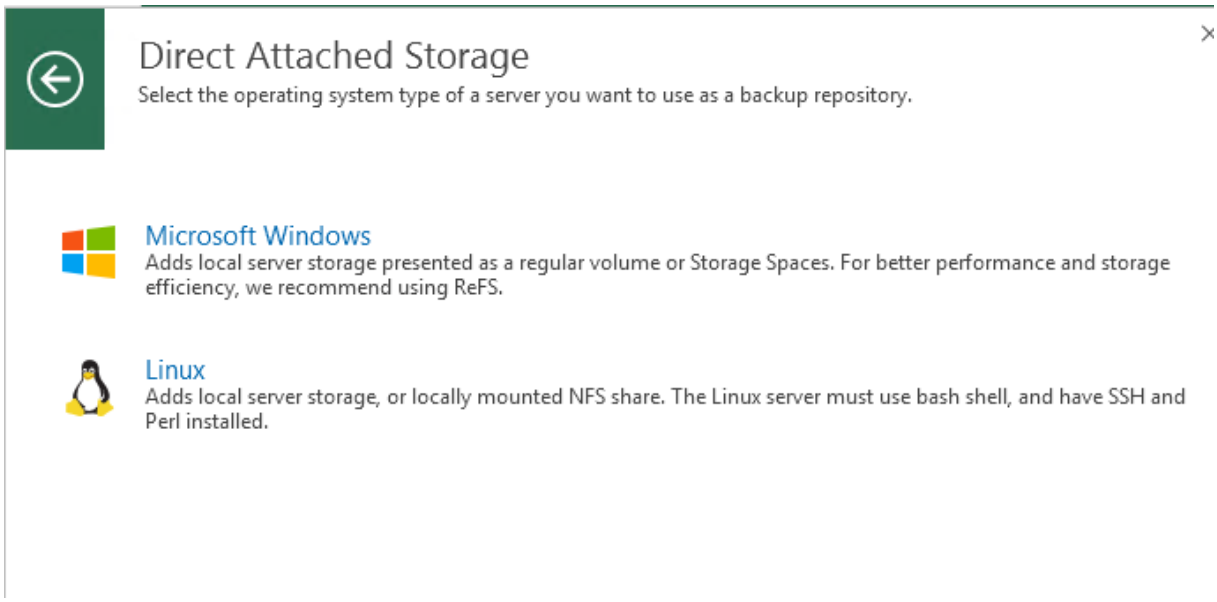
4. Select the type of backup repository you wish to add. (in this example it would be **Direct attached storage**).

Figure 5-2: Add Backup Repository



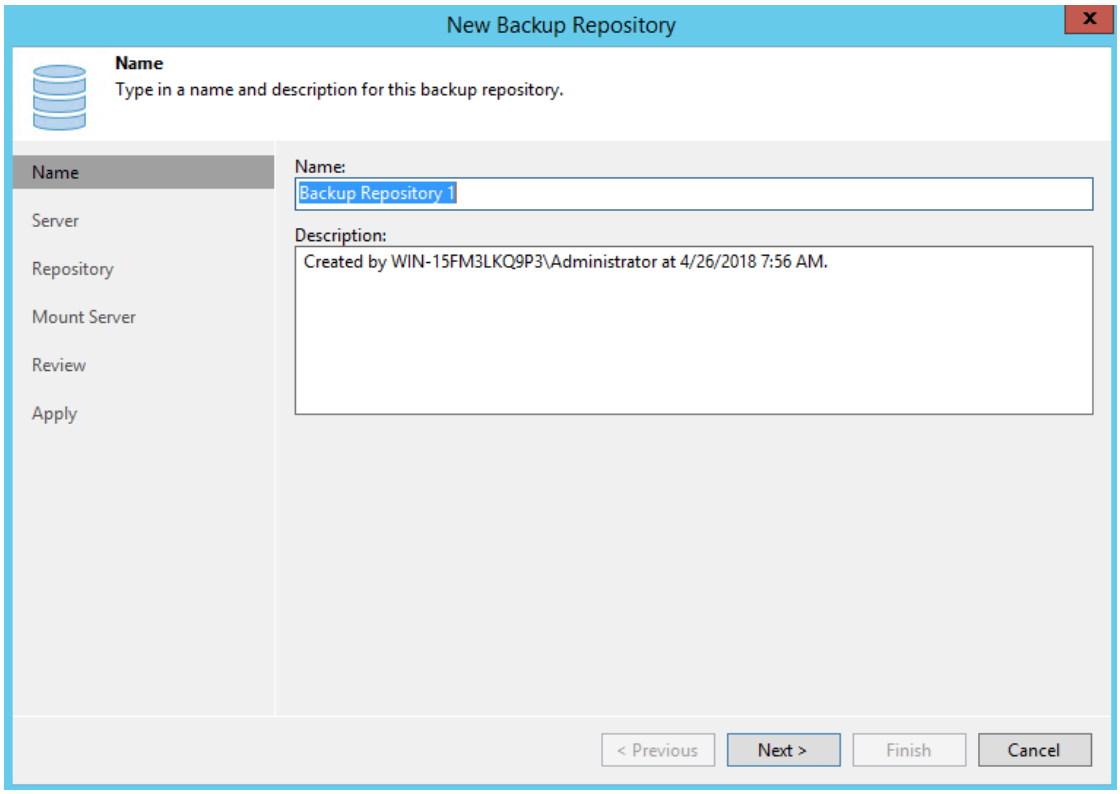
5. Select the Operating System type. (Microsoft Windows).

Figure 5-3: Direct Attached Storage



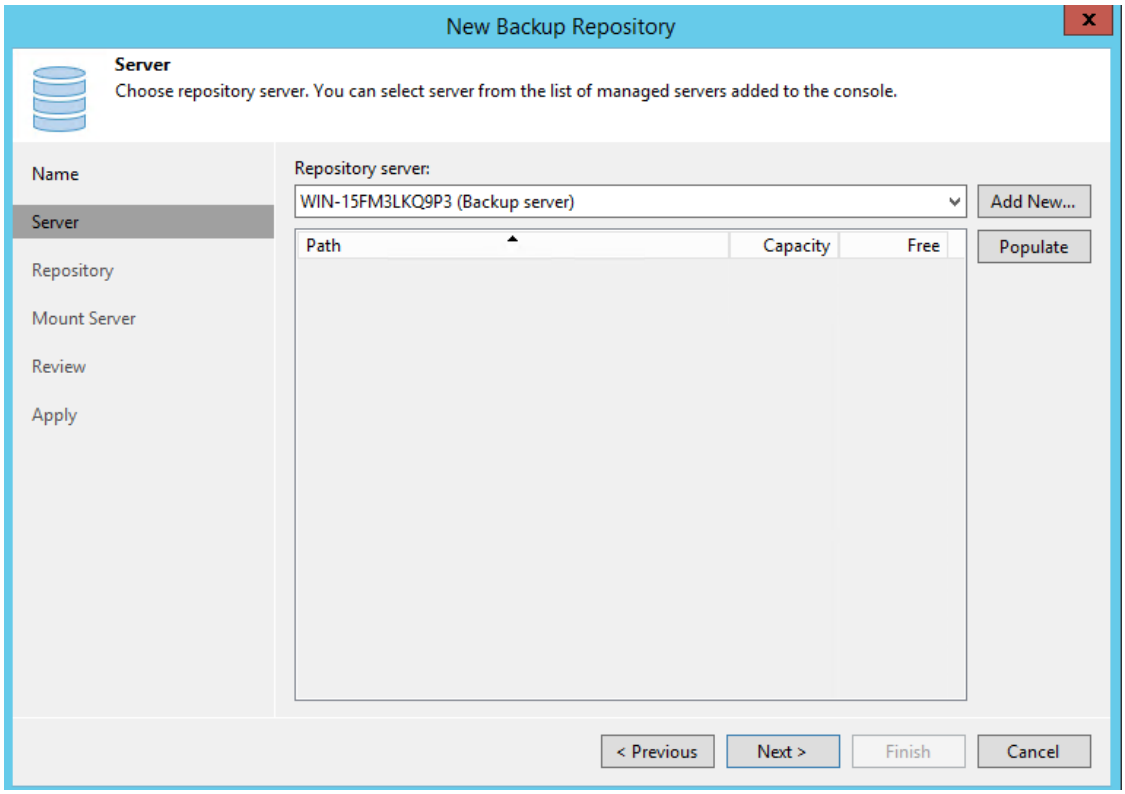
6. On the New Backup Repository screen, enter the **Name** and **Description** of the repository, and then click **Next**.

Figure 5-4: New Backup Repository - Name



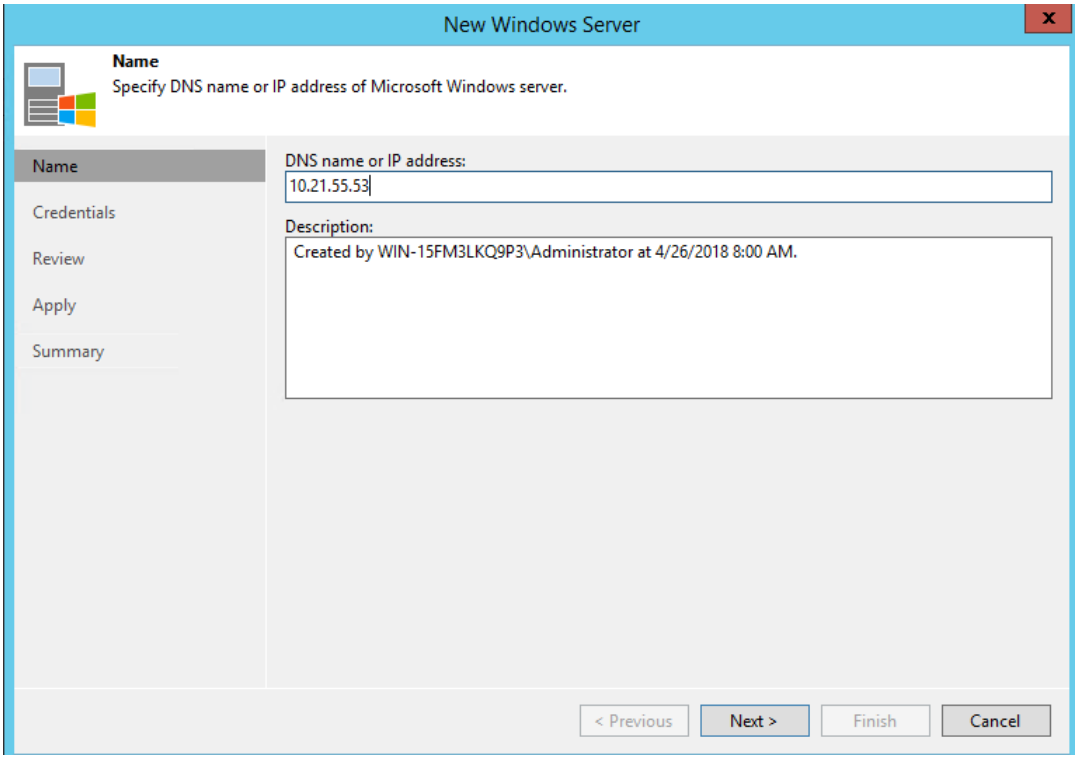
7. On the New Backup Repository - Server screen, click **Add New**.

Figure 5-5: New Backup Repository - Server



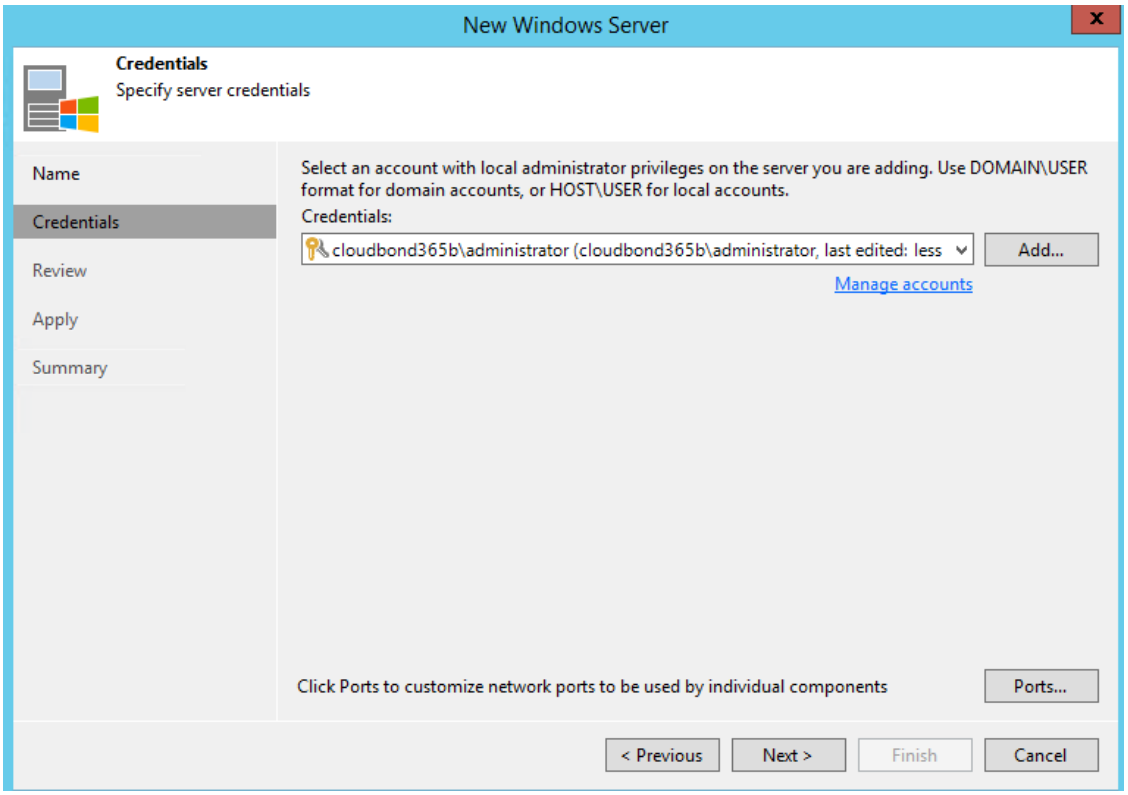
8. In the 'DNS name or IP address' field, enter the IP address/DNS Name, and then click **Next**.

Figure 5-6: New Windows Server



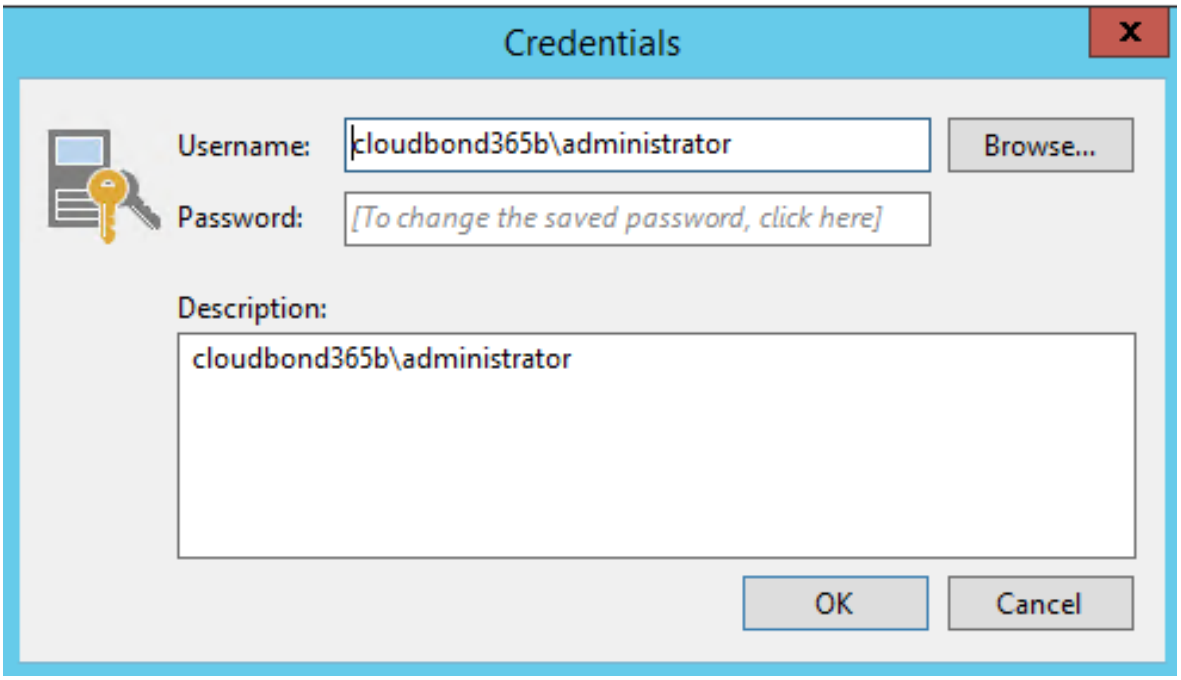
9. Select the Repository Credentials (which must be a local Administrator on the Repository) and then click **Next**.
10. If you do not have the credentials and you wish to add the credentials, click **Add**.

Figure 5-7: New Windows Server - Credentials



11. Enter the **Username** and **Password**, and then click **OK**.

Figure 5-8: Credentials

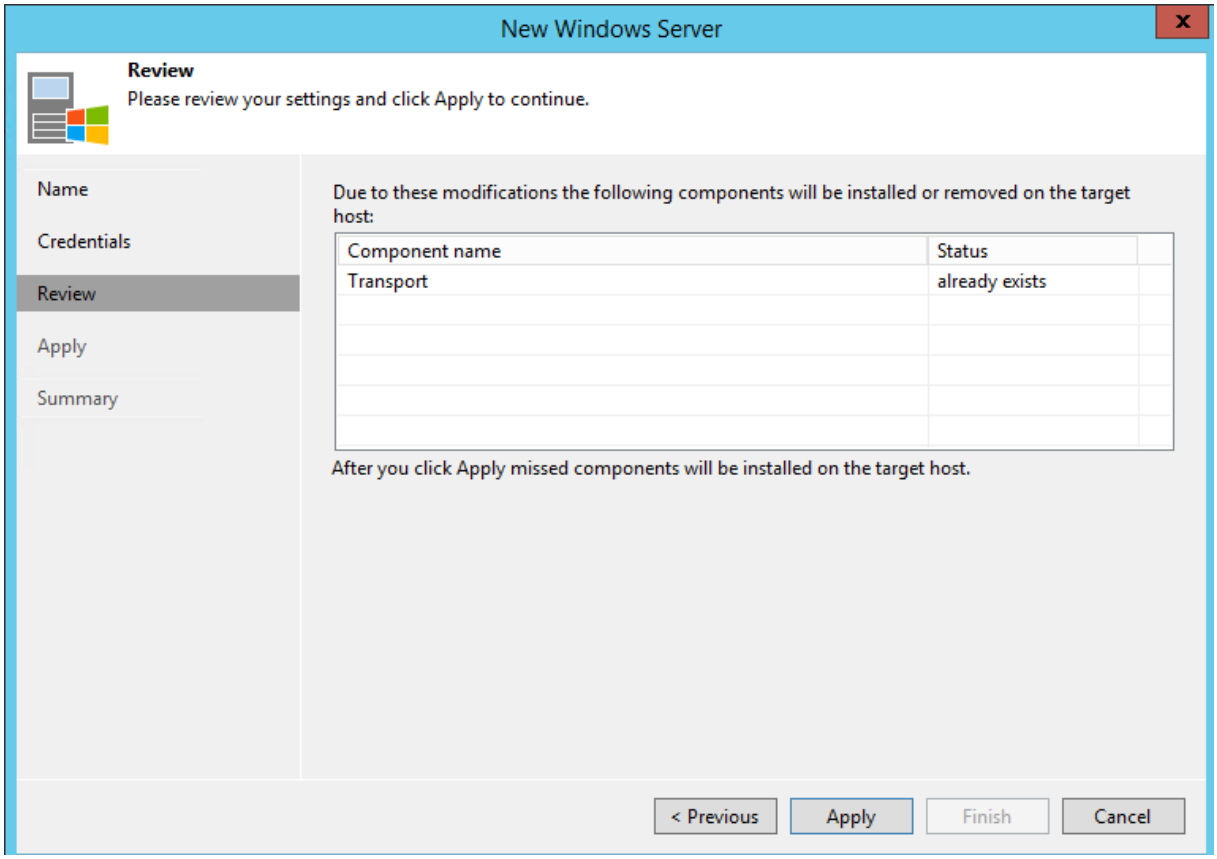


12. The Repository server is analyzed to see if you need to install the agent. You are informed which agents are going to be installed on the Repository.

Note: The required ports must be open between the VBR server and the Repository server.

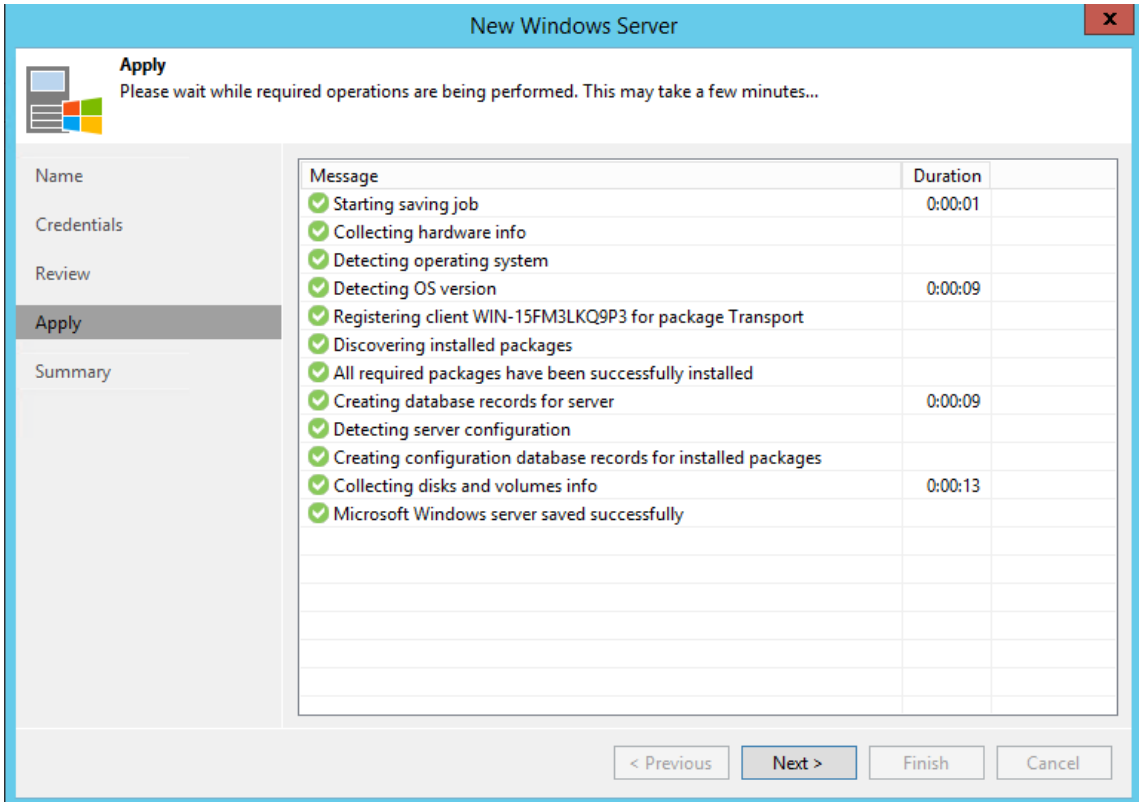
13. Click **Next**.

Figure 5-9: New Windows Server - Review



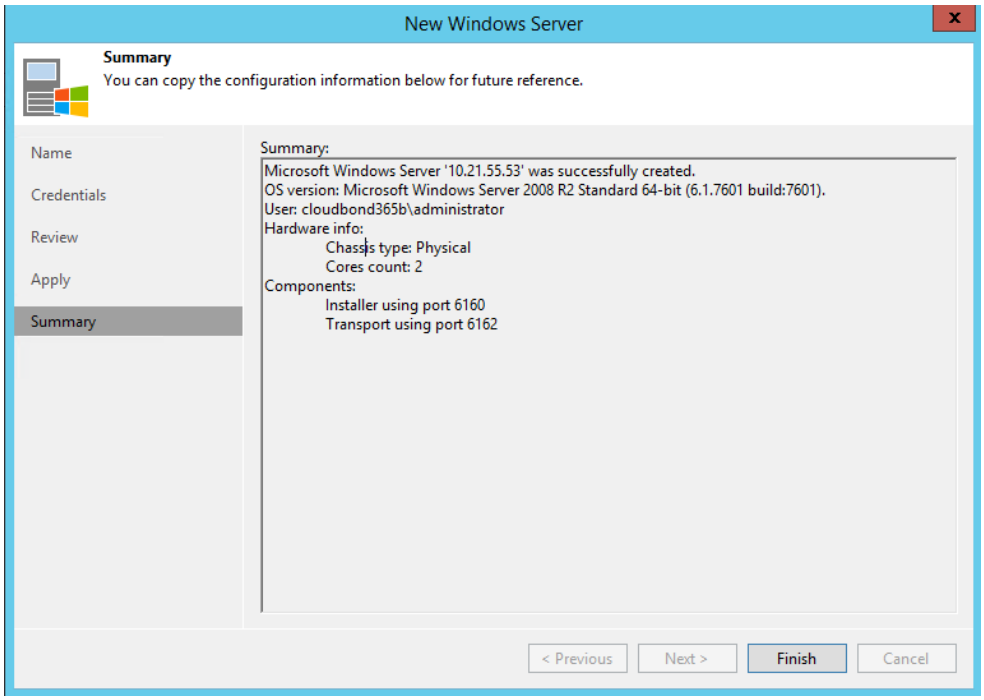
14. Please wait while the required operations are being performed. When the installation has completed, click **Next**

Figure 5-10: New Windows Server - Apply



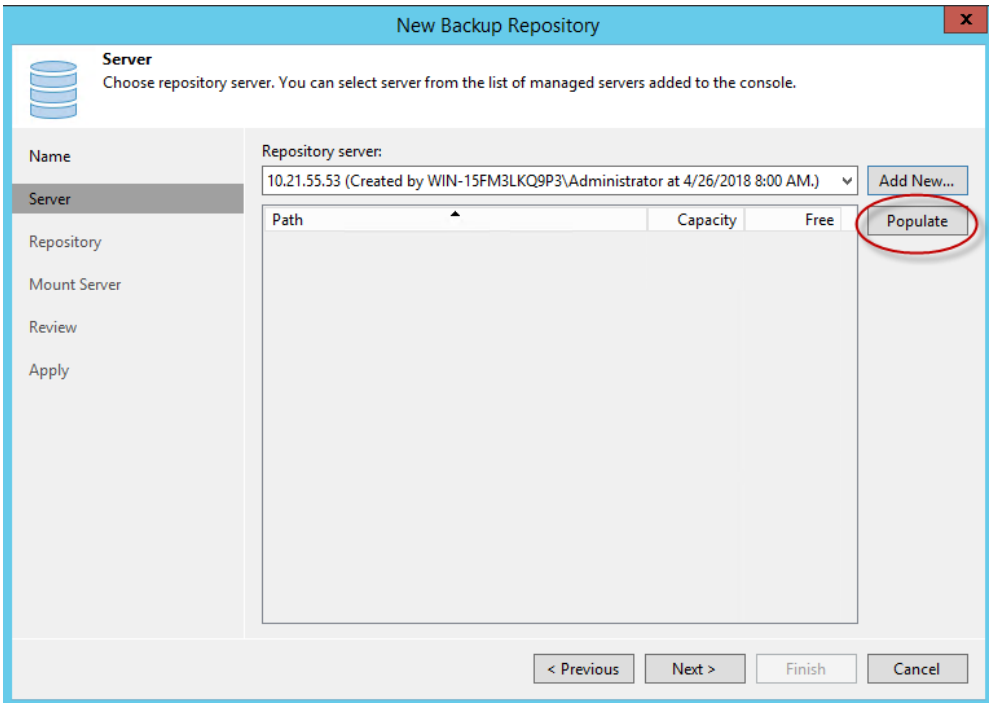
15. Click **Finish**.

Figure 5-11: New Windows Server - Summary



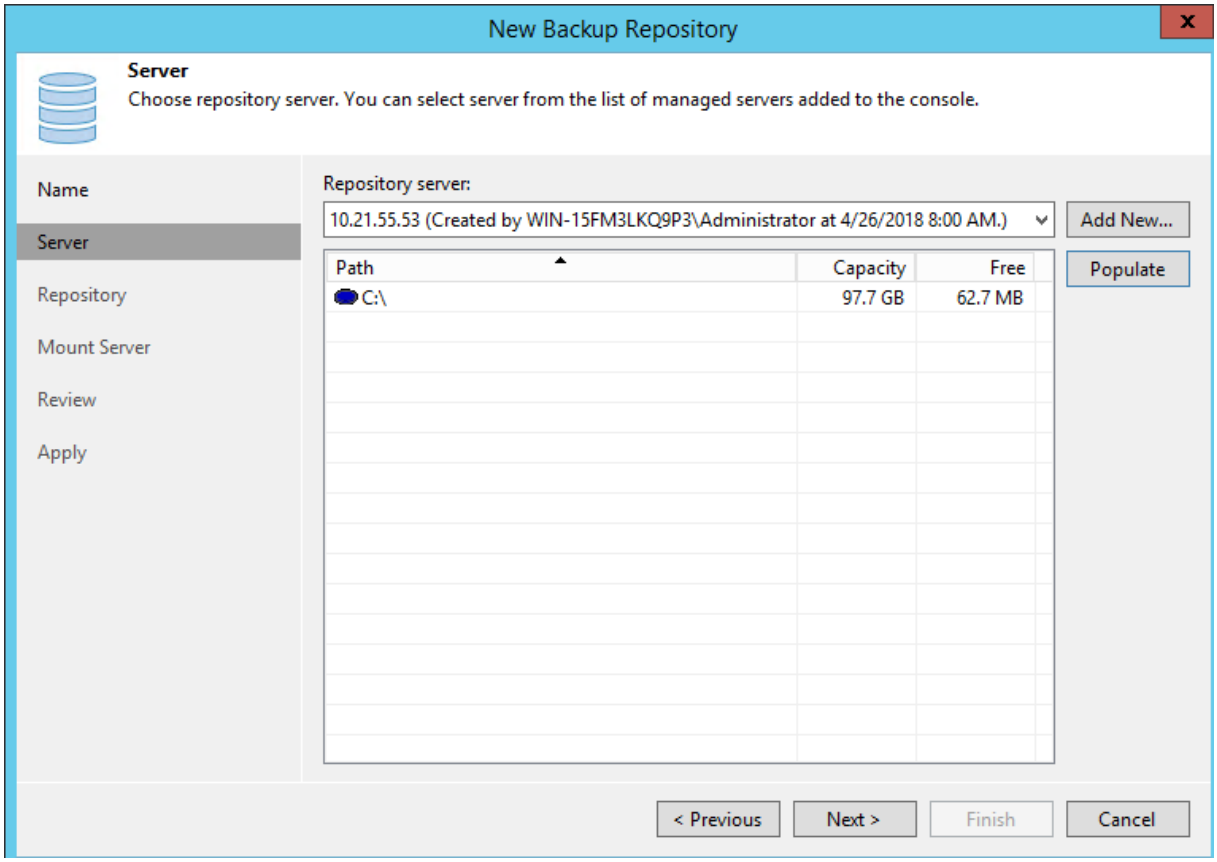
16. Click **Populate** to select the volume for the repository, and then click **Next**.

Figure 5-12: New Backup Repository - Server



17. In the 'Path to folder' field, select the path to be used as the root for the repository.

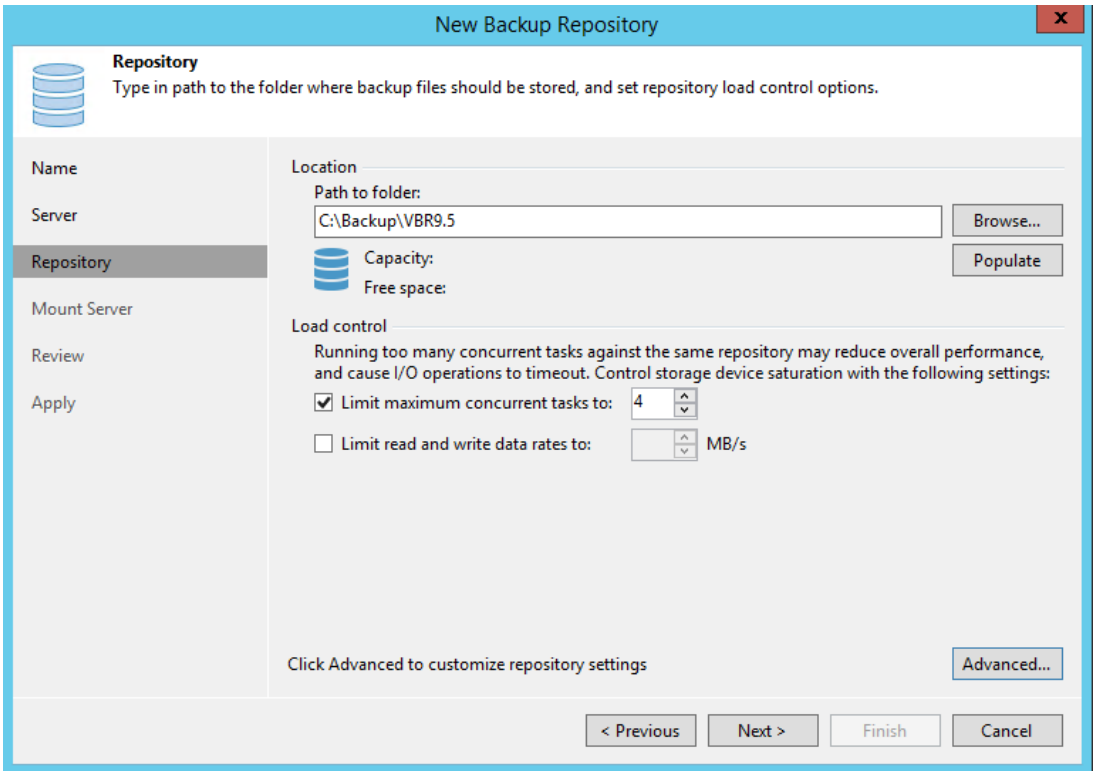
Figure 5-13: New Backup Repository – Server C:\ Path



18. Click **Populate** to see available free space.
19. You can limit the number of concurrent tasks to the Repository, depending on the hardware resources, or limit the data rate, if needed. If you are running the repository on the CloudBond 365, you need to limit concurrent tasks to 1.

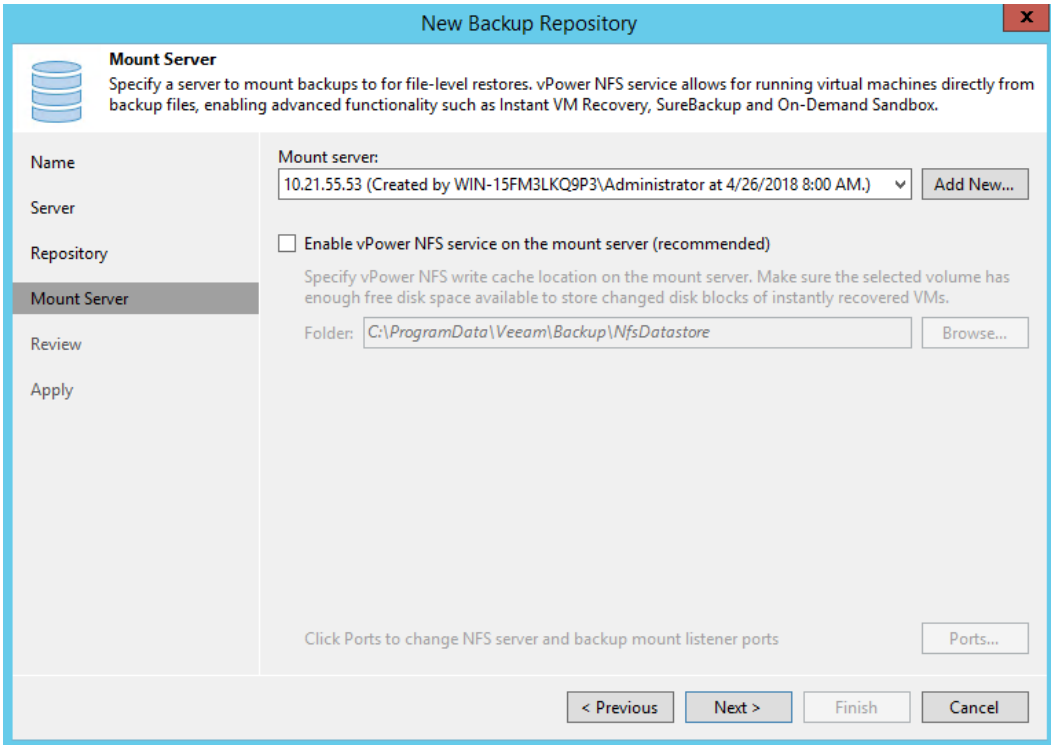
20. Click **Next**.

Figure 5-14: New Backup Repository - Repository



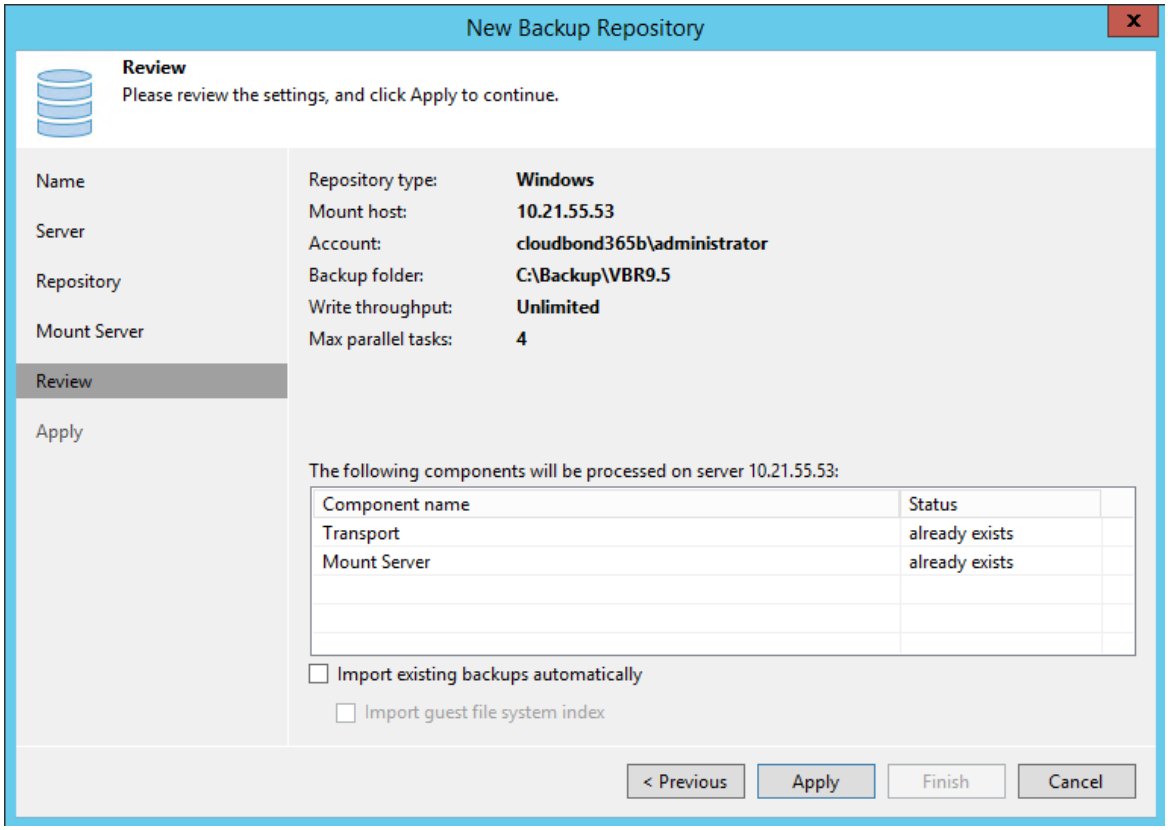
21. Clear the 'Enable vPower NFS server' check box to disable vPower NFS.
22. Click **Next**.

Figure 5-15: New Backup Repository - vPowerNFS



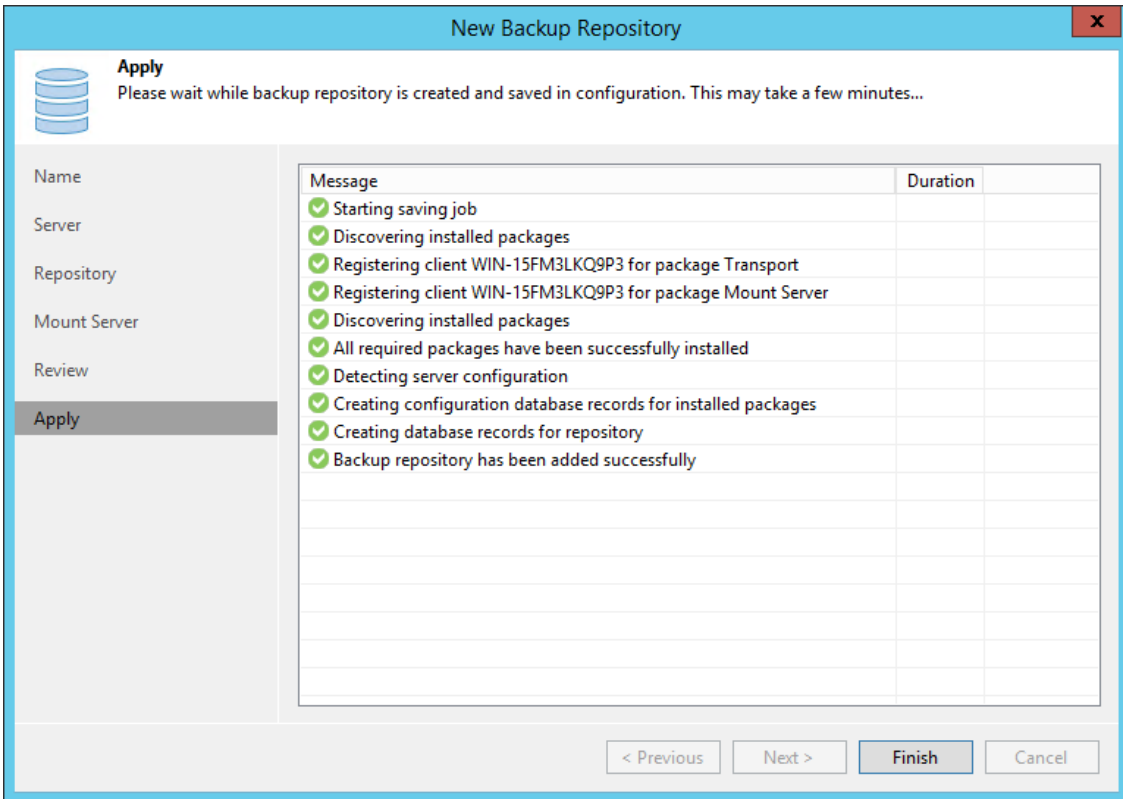
23. Click **Apply**.

Figure 5-16: New Backup Repository - Review



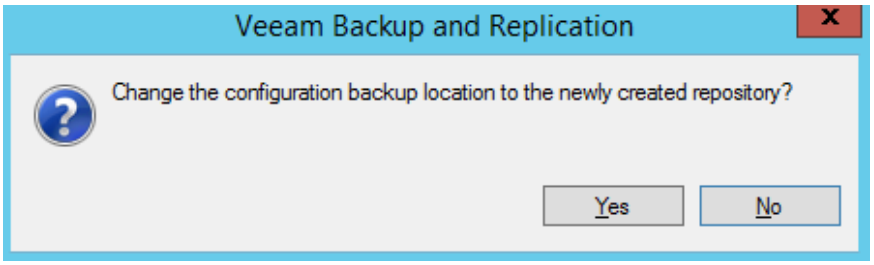
24. Click **Finish**.

Figure 5-17: New Backup Repository - Apply



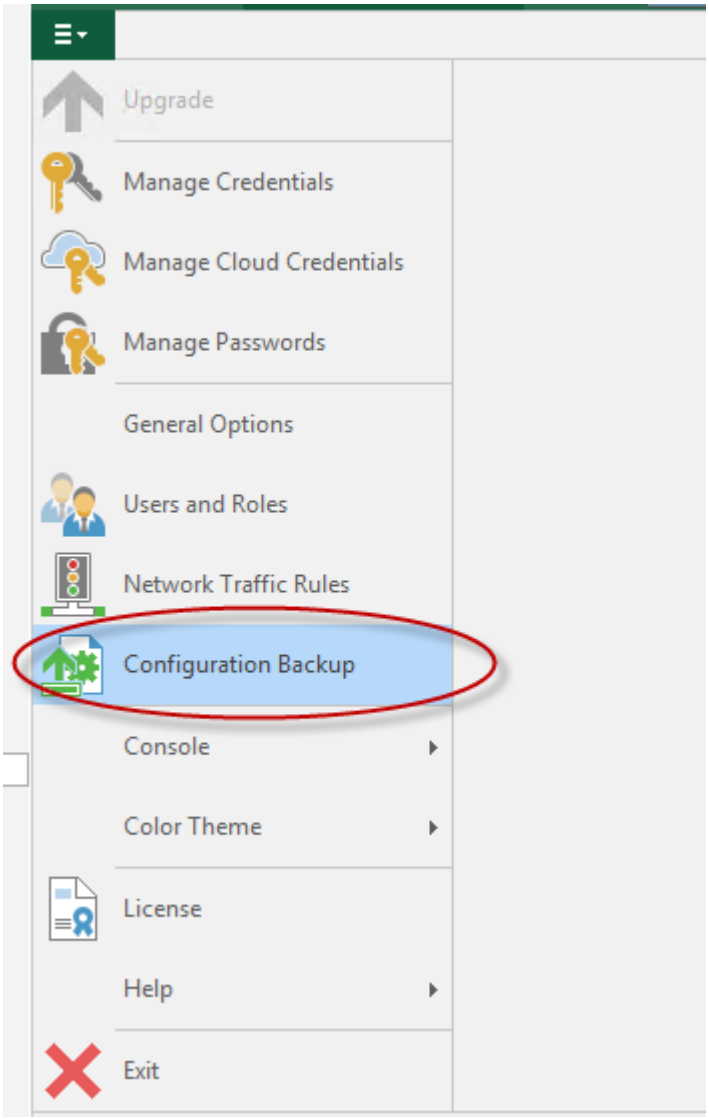
25. Set the new Repository as the default for configuration backup, and then click **Yes**.

Figure 5-18: VBR – Change Backup Location



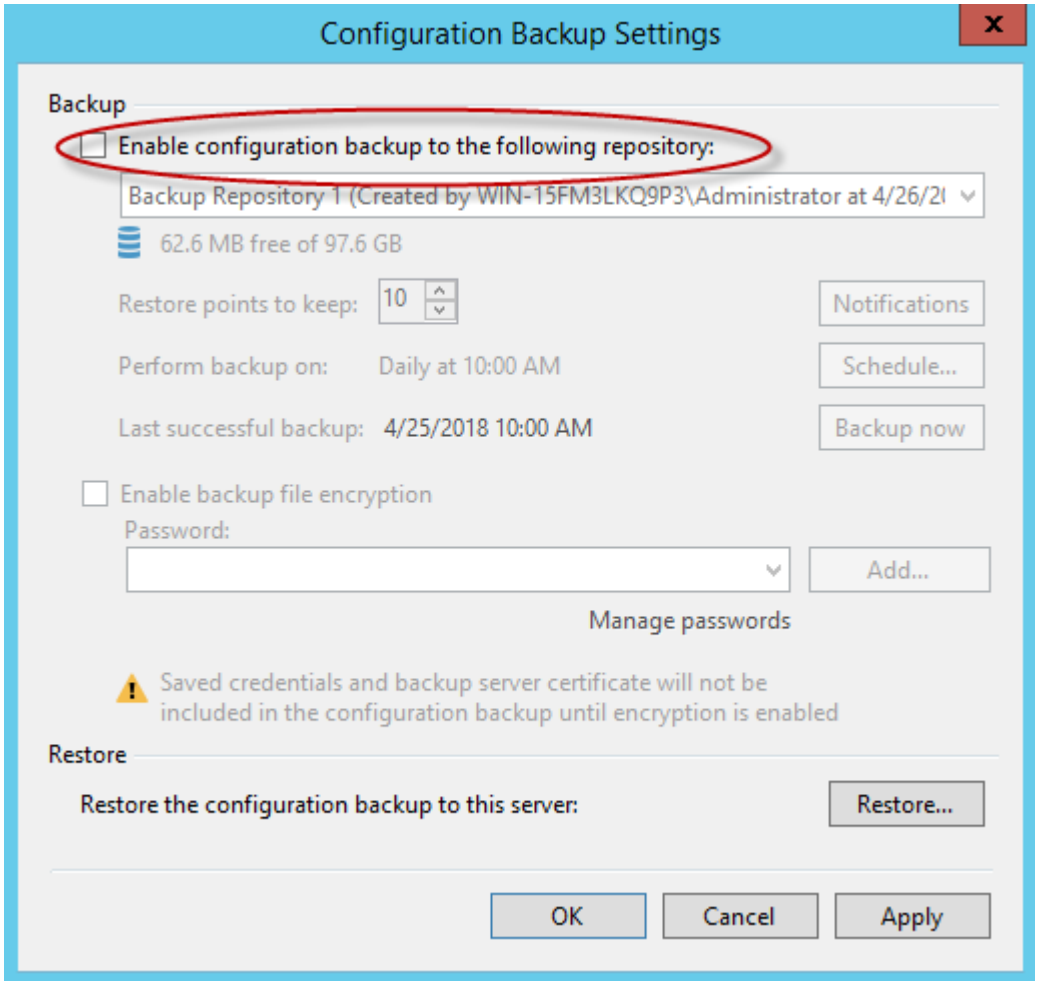
26. If the VBR is installed on the CloudBond 365, disable the configuration backup by doing the following:
    a. From the VBR main console screen, click the Menu icon (in the top-left corner of the screen).
    b. Select the **Configuration Backup** menu.

Figure 5-19: Configuration Backup



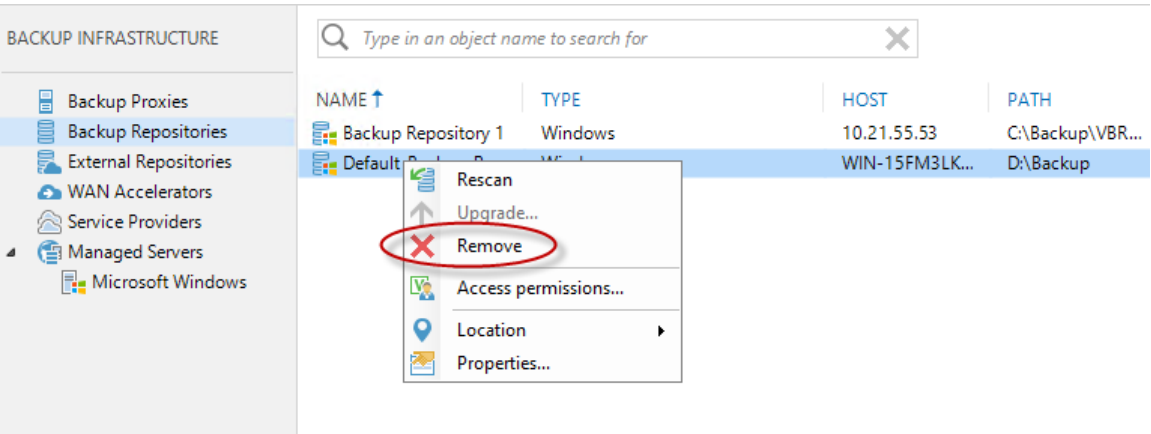
c. Clear the 'Enable configuration backup to the following repository' check-box.

Figure 5-20: Configuration Backup Settings



27. Delete the old Default repository by right-clicking it as shown in the screen below.
28. Select **Remove**.

Figure 5-21: Removing Old Repository



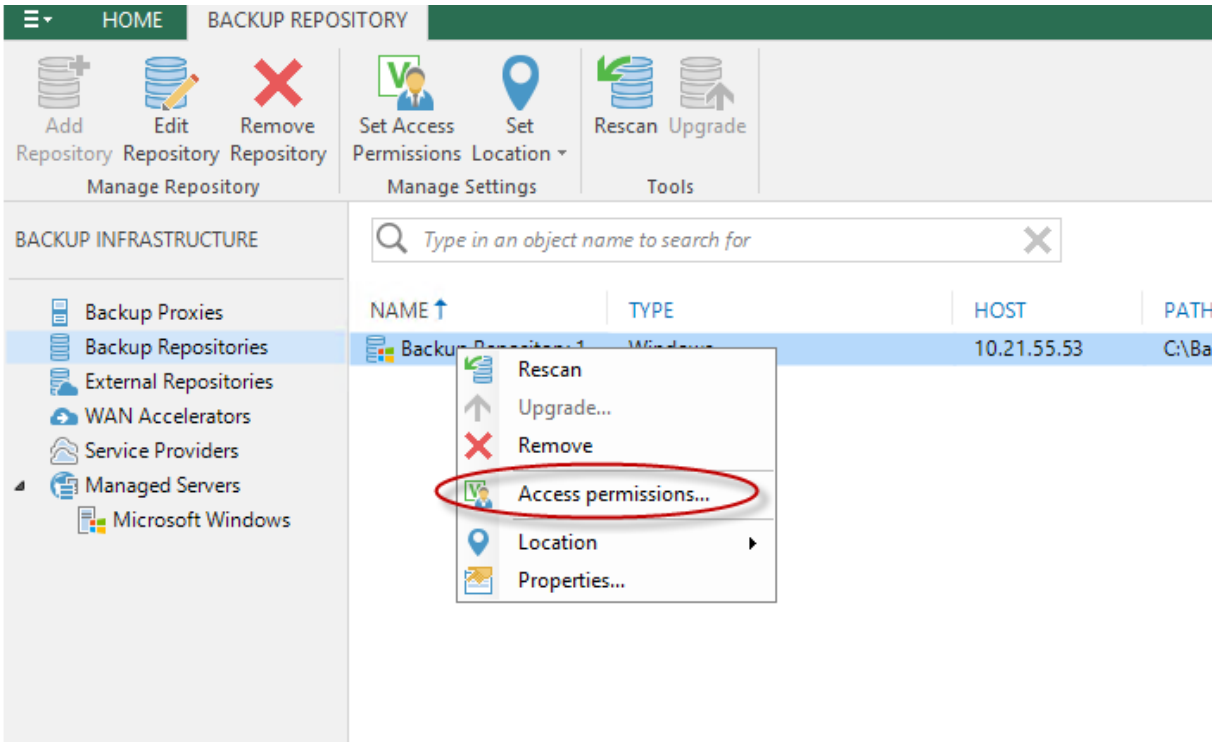
5.2 Configure Backup Repository Permissions

The following procedure describes how to configure Backup Repository permissions.

➢ **To configure Backup Repository permissions.**

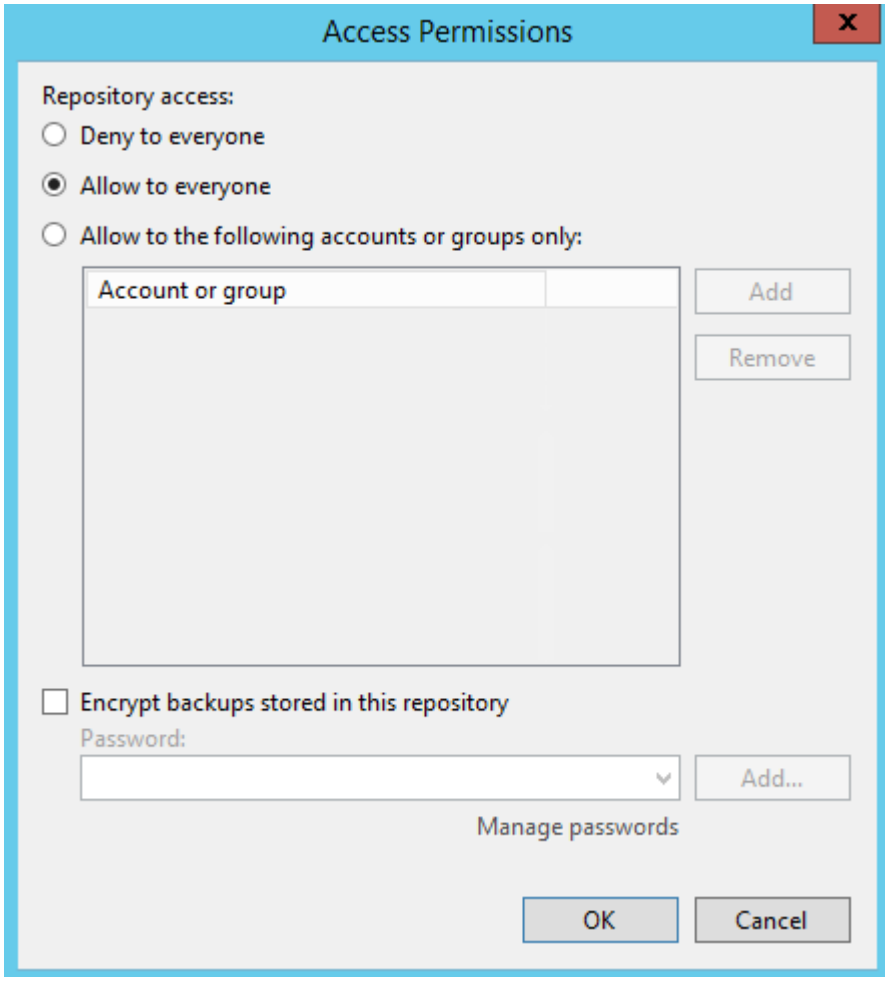
1. Open the VBR main console screen.
2. Press **Ctrl** and right-click on the External Repository that was previously added.
3. Select **Permissions**.

Figure 5-22: Backup Infrastructure



By default, the Repository is blocked for everyone. However, you can change the permissions to allow access to everyone as shown in the example below. Alternatively, you can define which users or groups can have access. For more information, refer to the *Veeam Endpoint Backup User Guide*.

Figure 5-23: Endpoint Backup Permissions



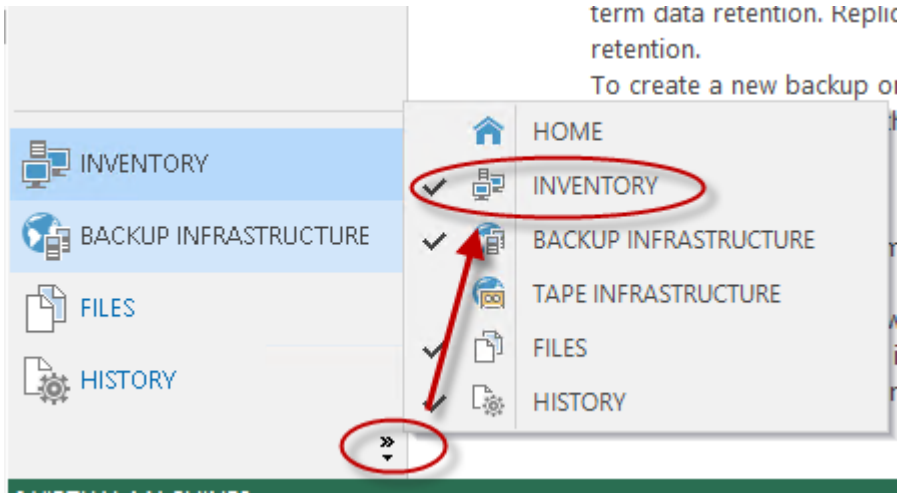
4. Select the 'Encrypt backup stored in this repository' check-box to define that all the data on the repository should be encrypted. If you want to do this, you need to define a password for the encryption. For more information, refer to the *Veeam Endpoint Backup User Guide Version*.
5. Click **OK**.

6 Adding CloudBond 365 Hyper-V to VBR

The following procedure describes how to add CloudBond 365 Hyper-V to VBR.

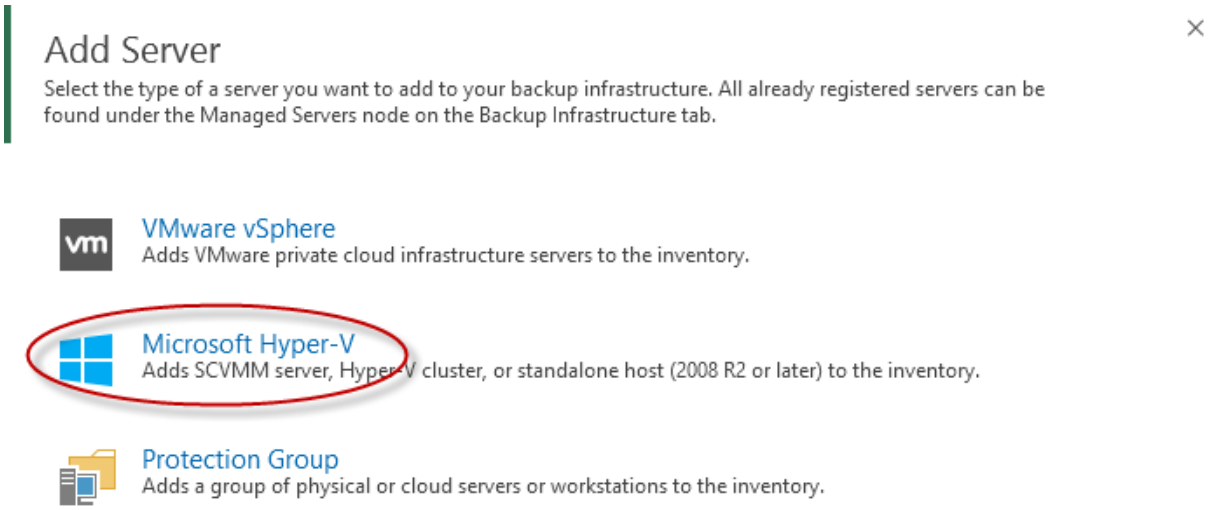
➢ **To add CloudBond 365 Hyper-V to VBR:**

1. Add the **INVENTORY** option to the left pane through the drop down menu at the bottom left screen:



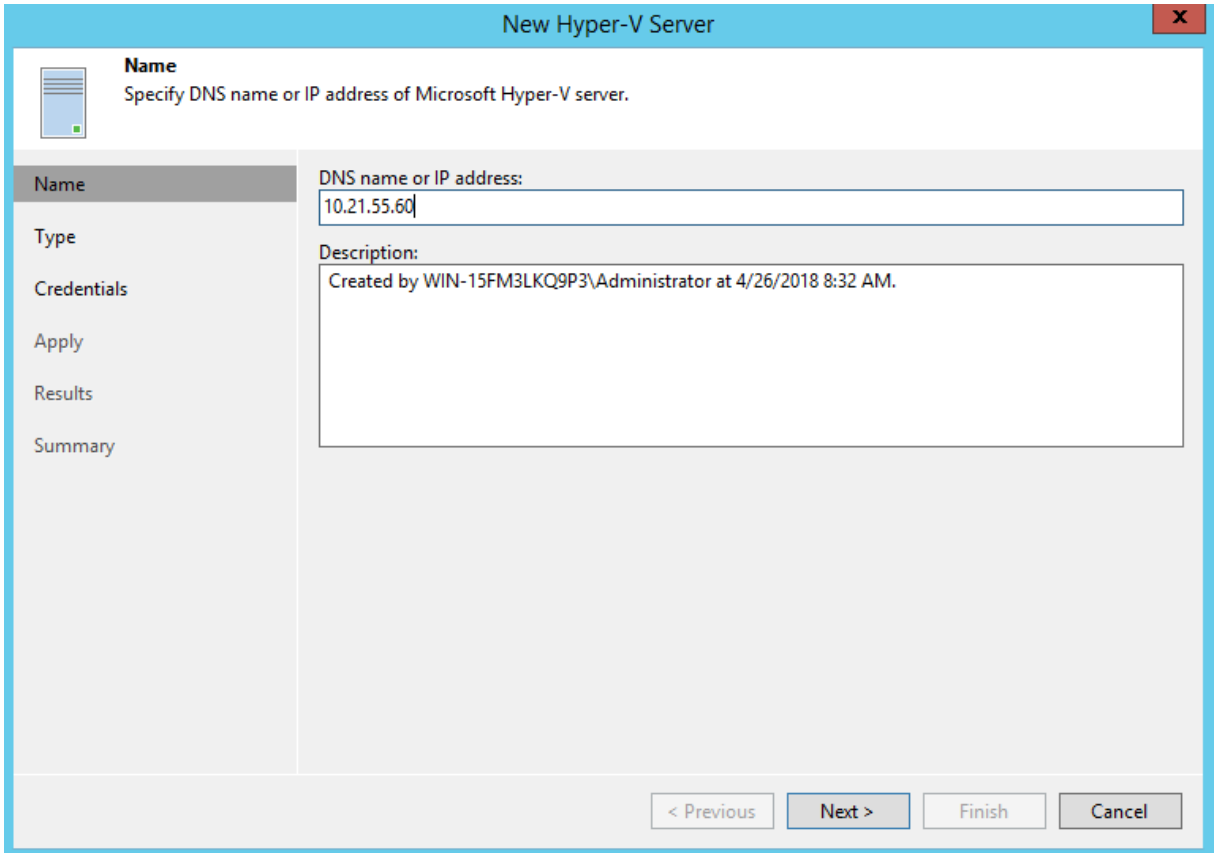
2. From the **INVENTORY** main console screen, select **Virtual Infrastructure**.
3. Select **Add Server**.
4. Select **Microsoft Hyper-V**.

Figure 6-1: Add Server



5. In the 'DNS name or IP address' field, enter the CloudBond 365 Host IP address.
6. In the 'Description' field add a description of the new Hyper-V server.

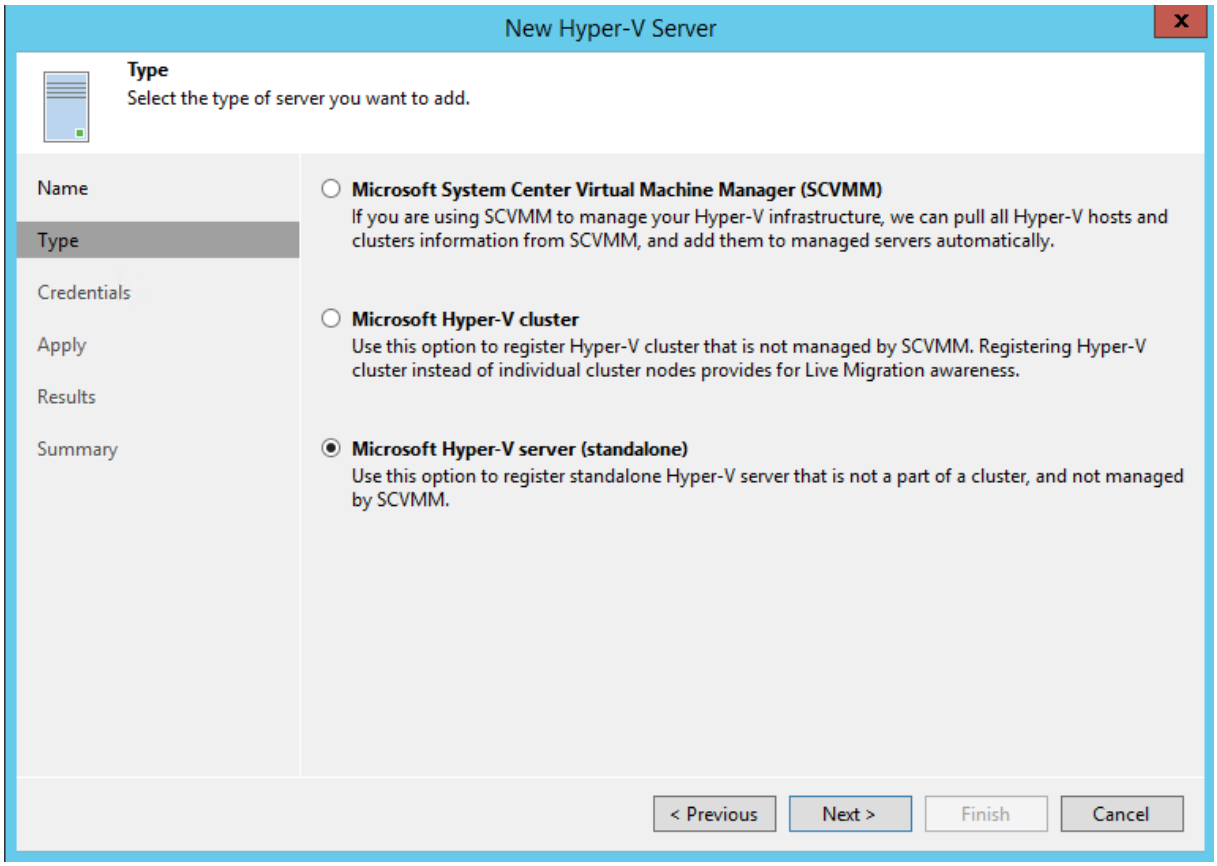
Figure 6-2: New Hyper-V Server



7. Click **Next**.

8. Click the **Microsoft Hyper-V Server (standalone)** option, and then click **Next**.

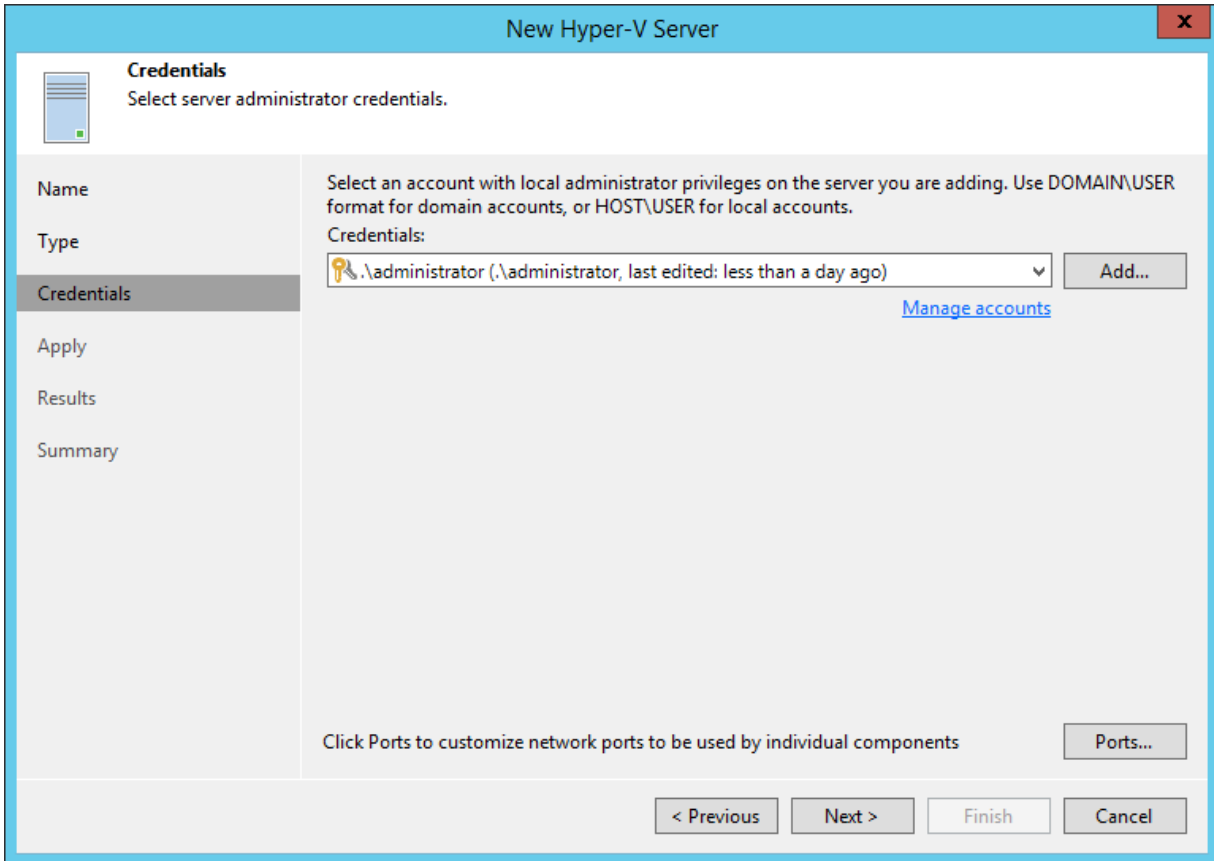
Figure 6-3: New Hyper-V Server - Type



9. You must have local Administrator credentials on the server.

10. From the 'Credentials' drop-down list, select an existing or add credentials to access the Hyper-V host.

Figure 6-4: New Hyper-V Server - Credentials



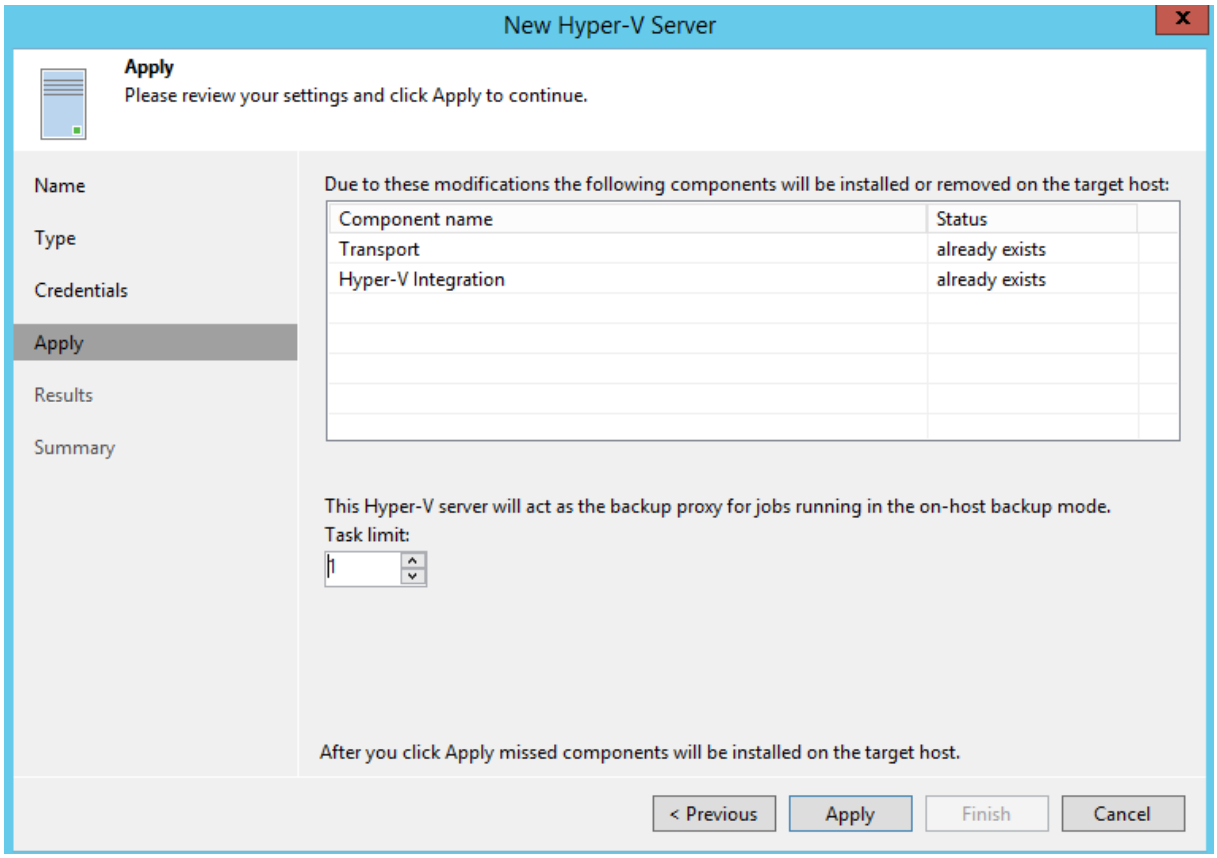
Notes:

- If CloudBond 365 is backed up, the host can be a Domain Controller. If so, use a User which belongs to the Domain Administrators (e.g., CloudBond 365/Administrator).
- If the HyperV host is not a Domain Controller, use the following format for the user name: <computer Name>\<user>

11. On the Credentials screen, click **OK,** and then click **Next**. The VBR examines the Target server, which can take several minutes.

12. In the 'task limit' field, select **1,** and then click **Next**.

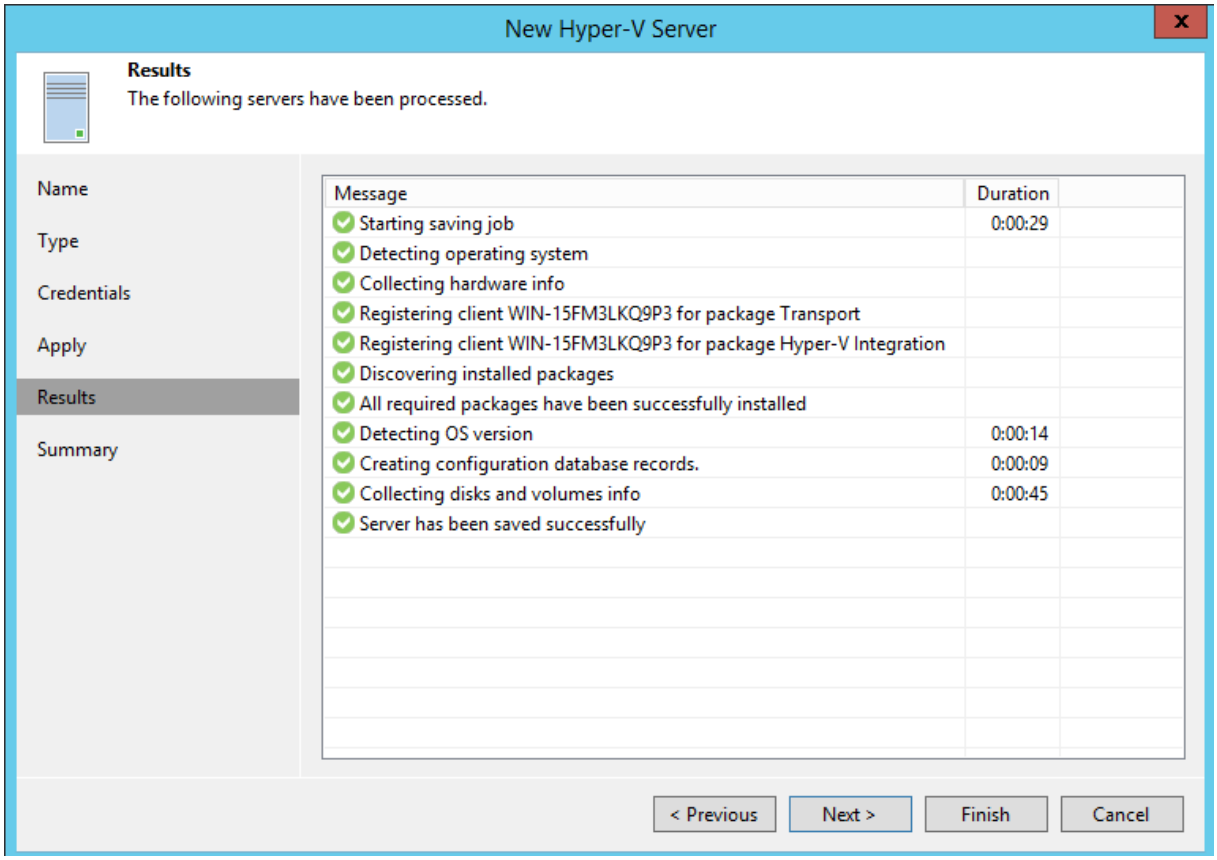
Figure 6-5: New Hyper-V Server - Apply



13. The missing components are installed on the CloudBond 365. This takes several minutes.

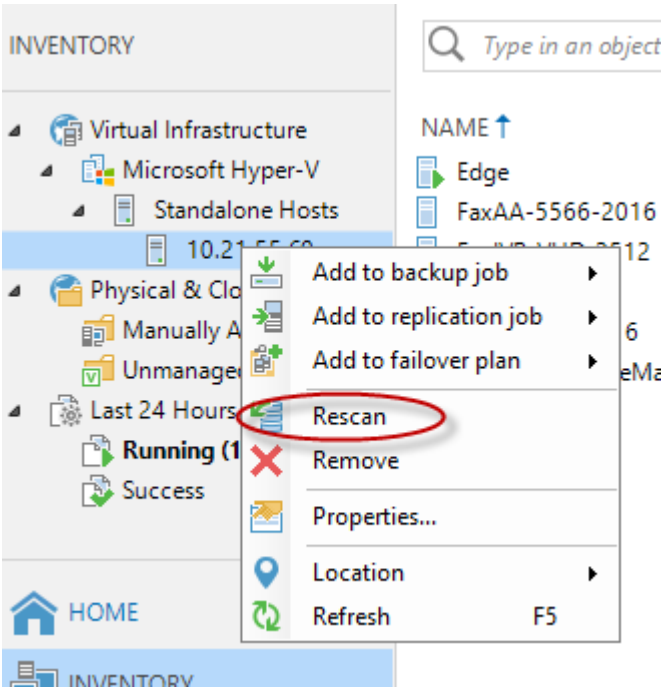
14. On the Results screen, click **Next**.

Figure 6-6: New Hyper-V Server - Results



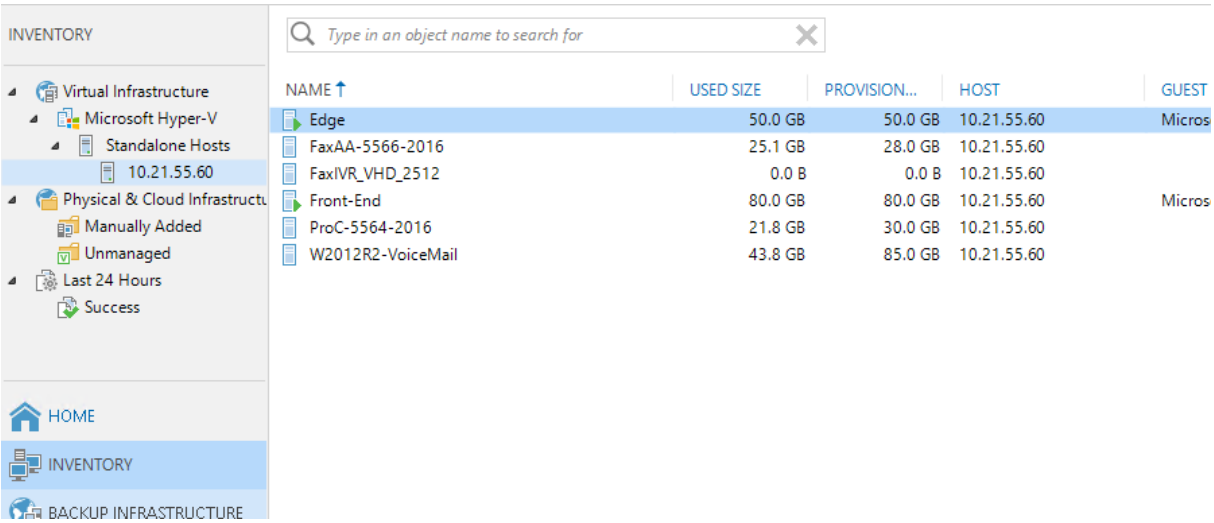
15. On the Summary screen, click **Finish**.
16. In case that the virtual servers does not appear on the screen, click to **Rescan**.

Figure 6-7: Rescan



17. The VBR informs you which Windows updates are missing and need to be installed.
18. The Microsoft Hyper-V server with its Virtual Machines appears on the screen.

Figure 6-8: Microsoft Hyper-V Server



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7 Configuring Backup Jobs

The following procedures describe how to configure backup jobs.

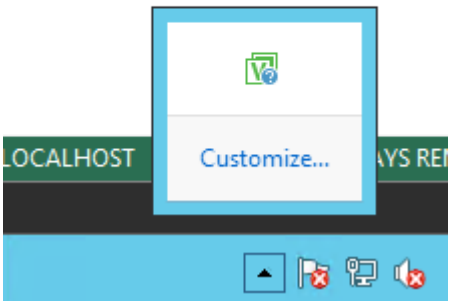
7.1 Configuring Veeam Agent Host Backup

The following procedure describes how to configure the backup for the host server.

➢ **To configure the backup for the host server:**

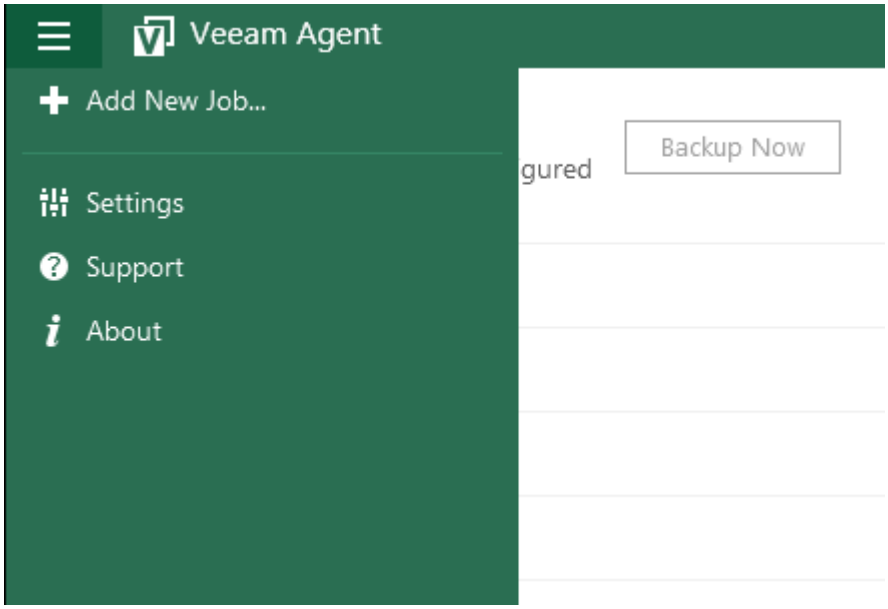
1. From the Notifications Area icons, double-click on the Veeam Agent.

Figure 7-1: Notifications Area Icons



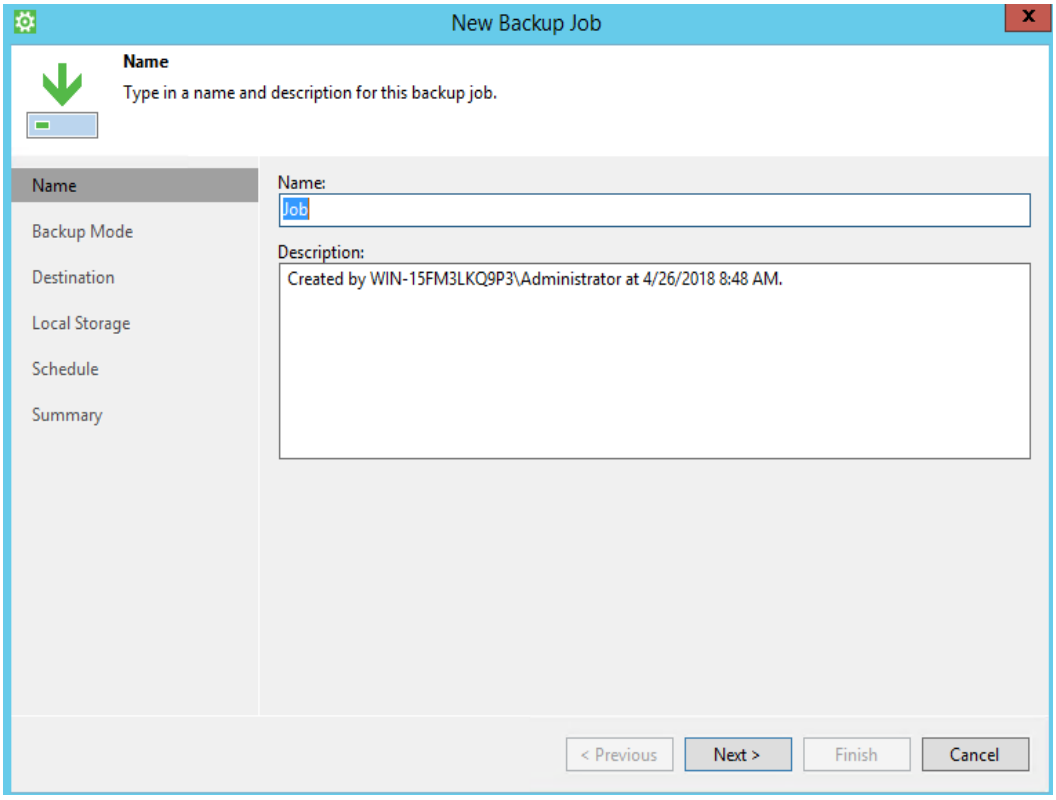
2. Click **Add New Job**.

Figure 7-2: Configure Backup



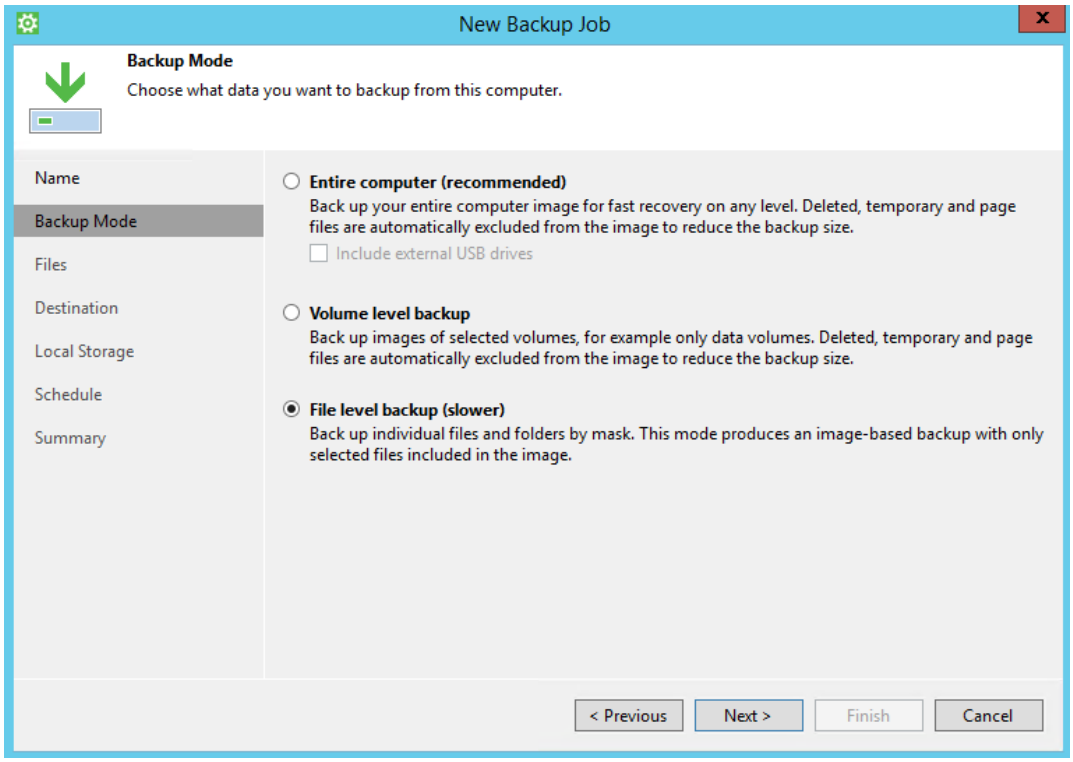
3. In the 'Name' field, enter a name.

Figure 7-3: New Backup Job



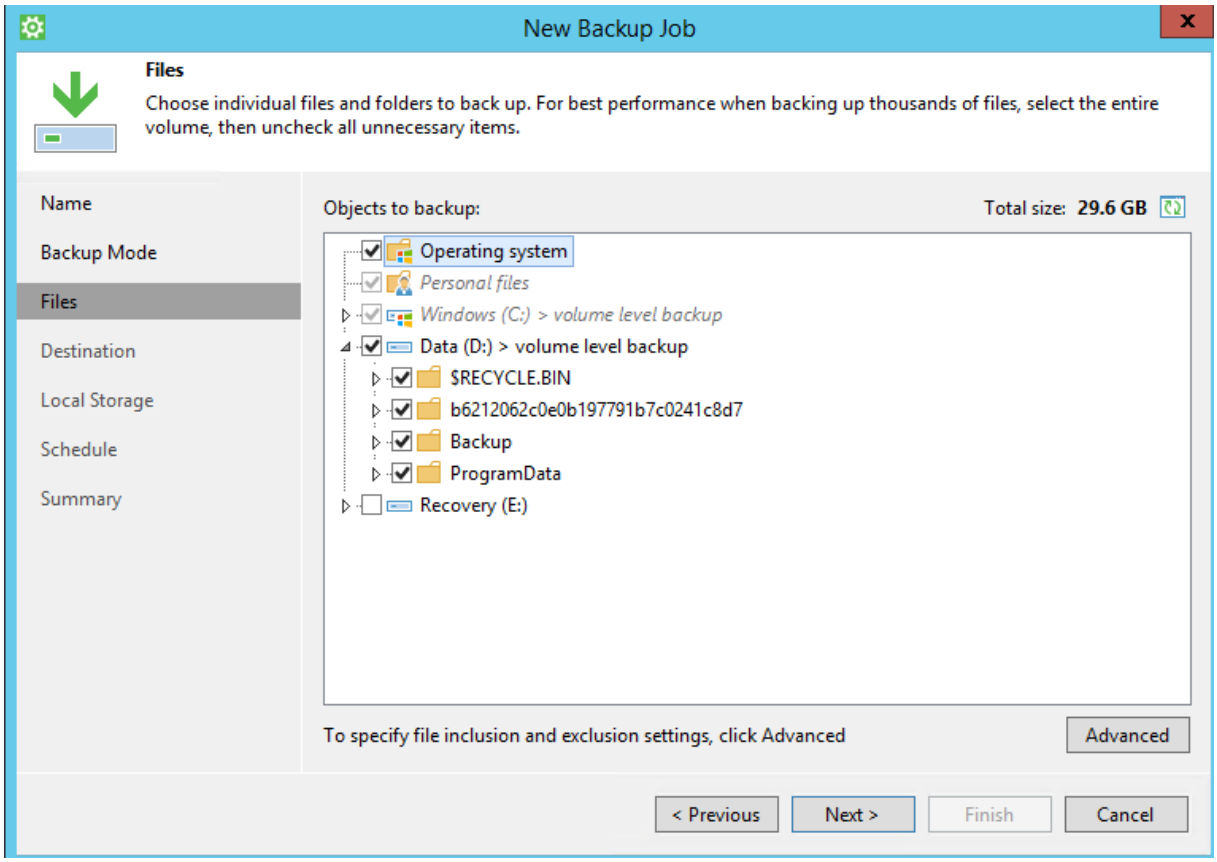
4. Click the **File level backup (slower) mode** option, and then click **Next**.

Figure 7-4: Configure Backup



5. Select the 'Operating system' check box (automatically checks Volume C and personal files),
6. Select 'Volume D'.
7. The Backup Agent tool recognizes the Hyper-V folder and doesn't display its subfolders.
8. Click **Next**.

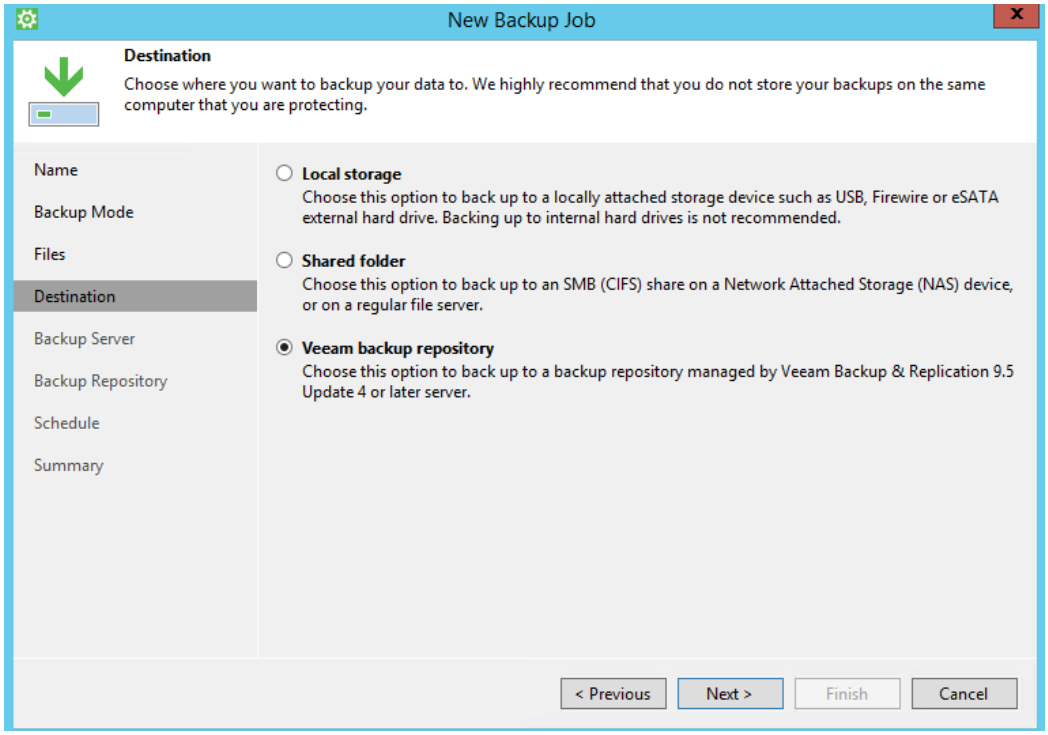
Figure 7-5: Configure Backup - Files



Note: Volume E: is used only when installing the CloudBond 365. All its information exists on the CloudBond 365 USB. If you want to back it up, select the Volume E check box as well.

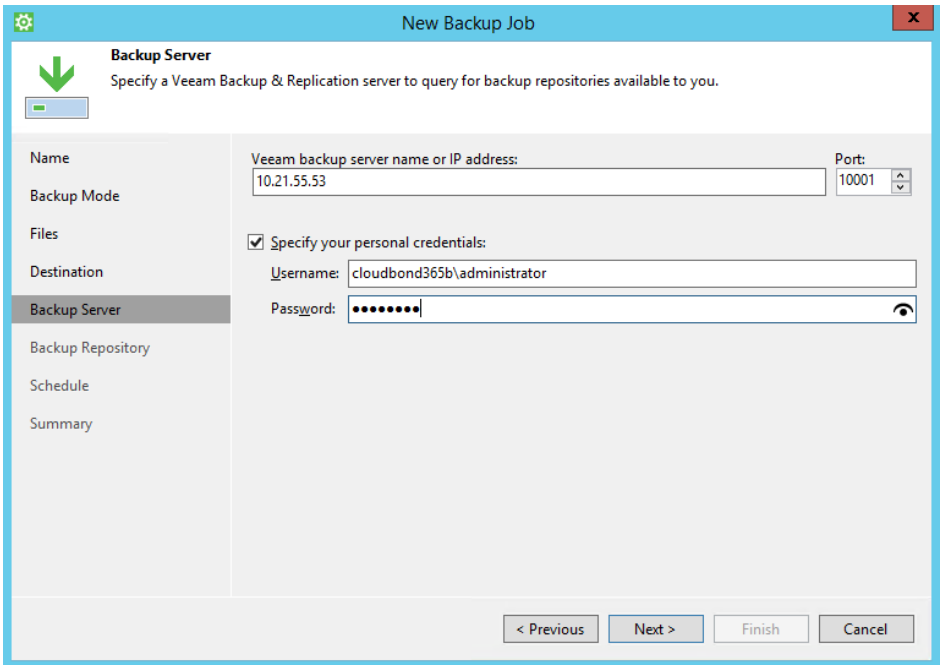
9. Select the **Veeam Backup & Replication repository** option as the Destination (alternatively, select '**Local Storage**' if you wish to keep the backup on external HDD), and then click **Next.**

Figure 7-6: Configure Backup - Destination



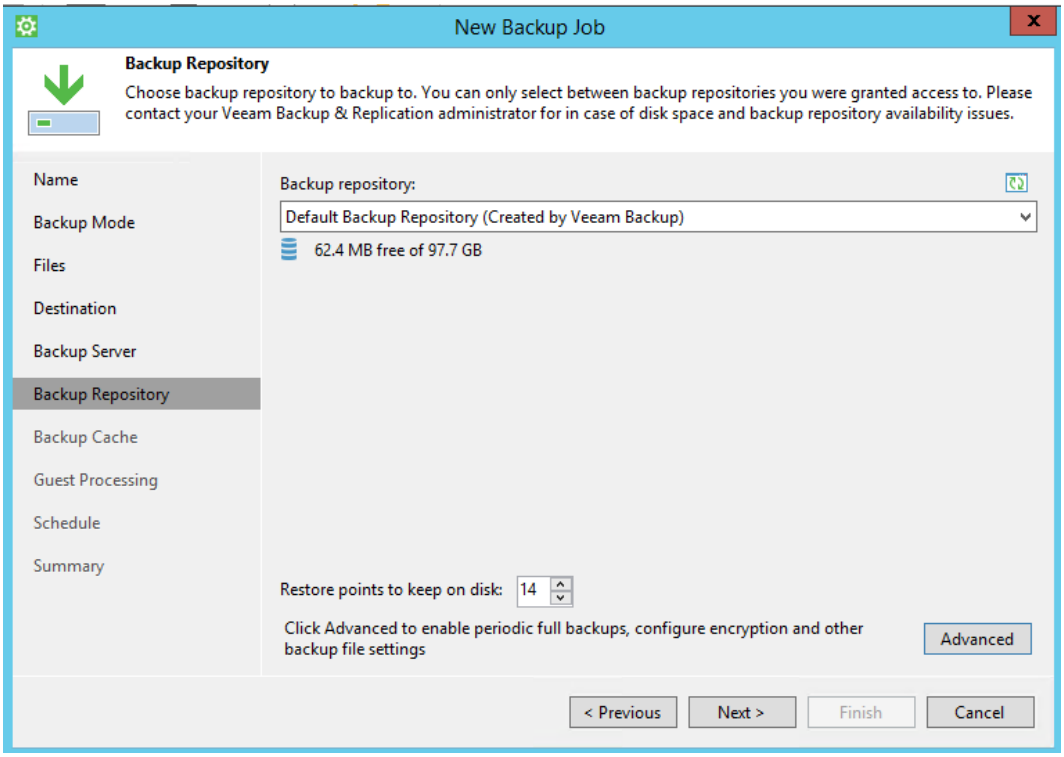
10. On the Backup Server screen, enter the VBR IP address that runs on the CloudBond 365 host or on the external one (if you selected to run it on an external server).
11. Enter the Veeam Agent credentials that you defined in Section 4.2.1, and then click **Next**.

Figure 7-7: Configure Backup – Backup Server



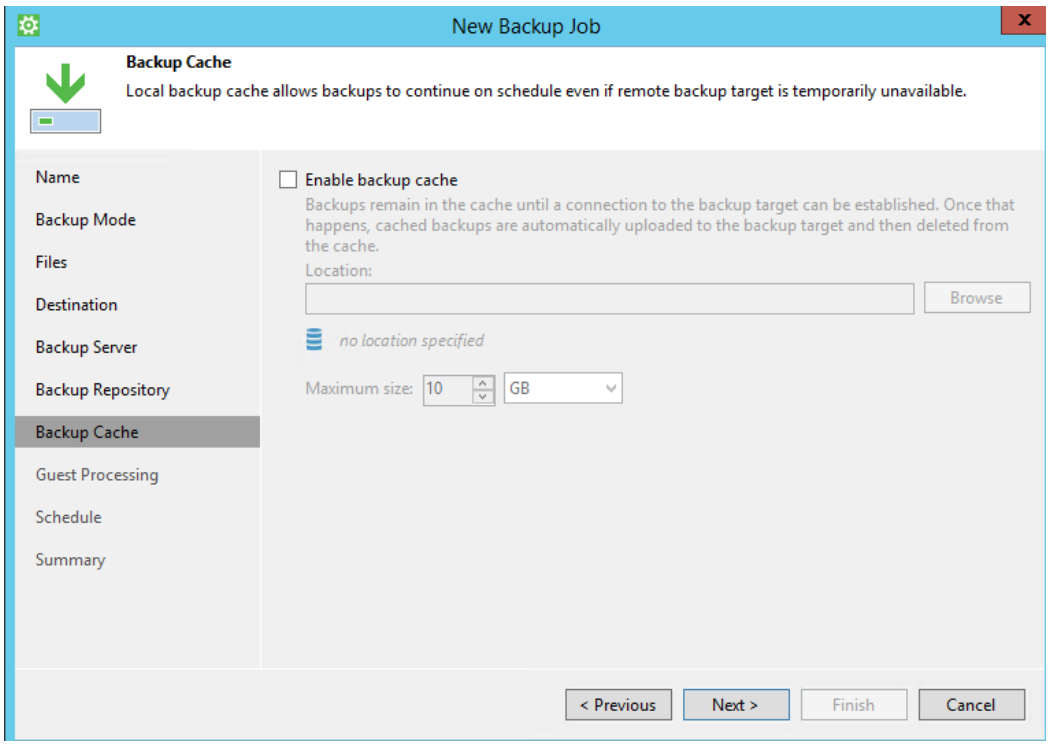
12. Select the Backup Repository from the drop-down list.
13. In the 'backups to retain' field, select how many backups should be retained, and then click **Next.**

Figure 7-8: Configure Backup – Backup Repository



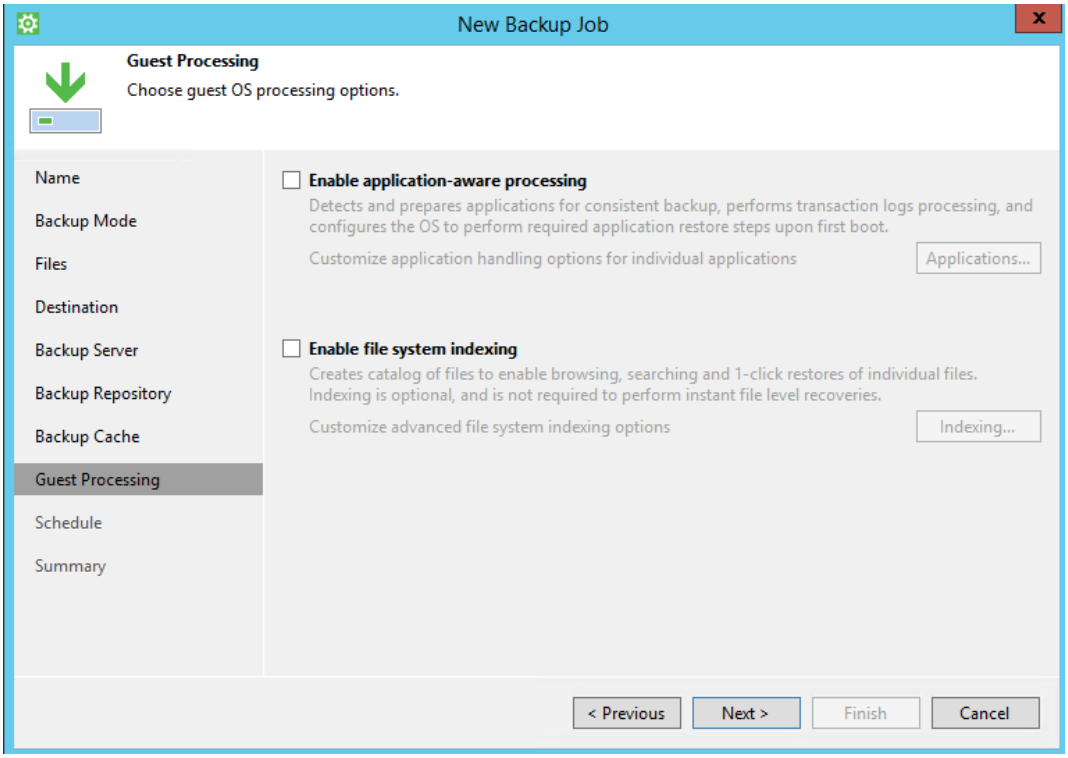
14. Click **Next.**

Figure 7-9: Backup Cache



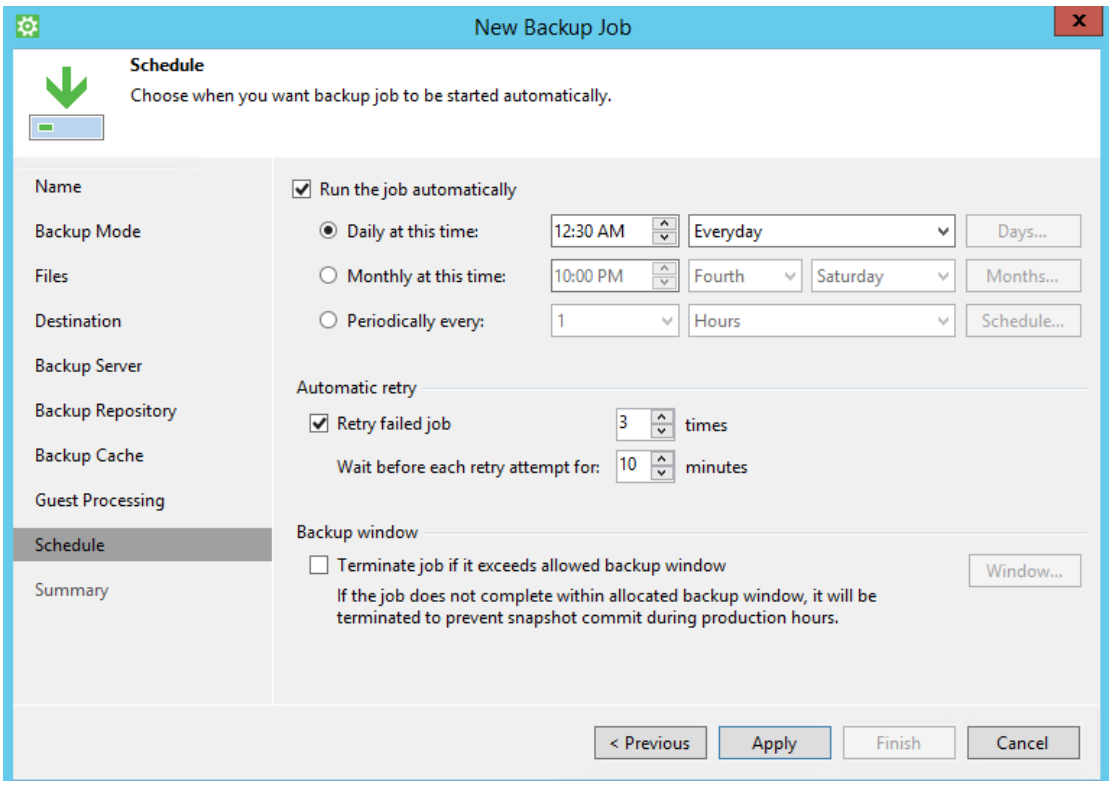
15. Click **Next**.

Figure 7-10: Guest Processing

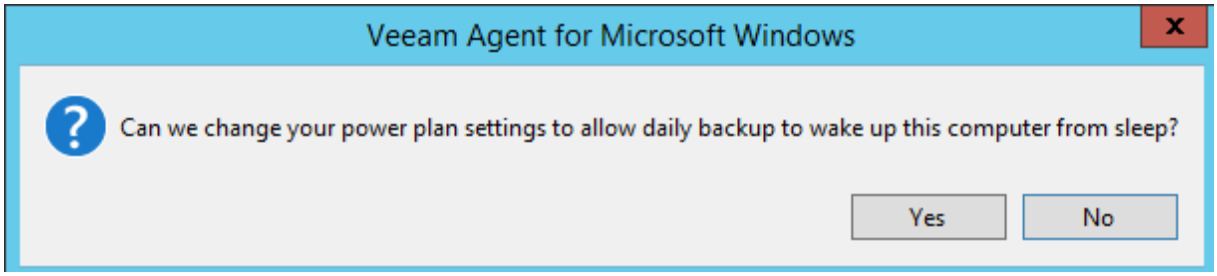


16. Set the time to perform the backup. (The preferred time is at night when the system is less loaded.)
17. Click **Next**.

Figure 7-11: Configure Backup – Schedule

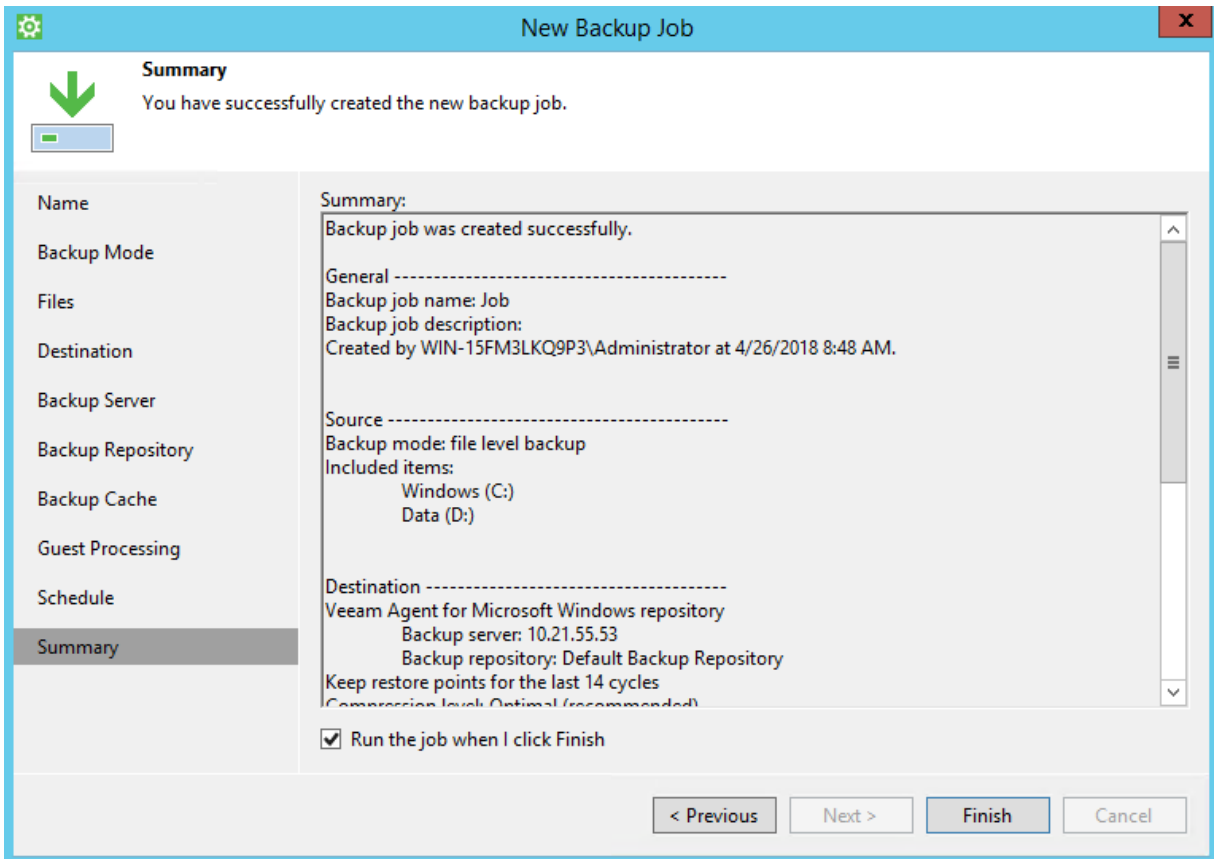


18. Approve to change your Power plan, in case it is scheduled to Sleep at midnight.



19. You can check the 'Run the job when I click Finish' check box, to perform a full backup now. This is recommended so you can check that the backup is correctly set.
20. Click **Finish**.

Figure 7-12: Configure Backup – Summary



21. If you selected to perform a backup now, you can monitor the backup from:
    - Veeam Agent Control Panel: Navigate to Start > Control Panel.

Figure 7-13: Monitoring Backup with Veeam Agent Control Panel

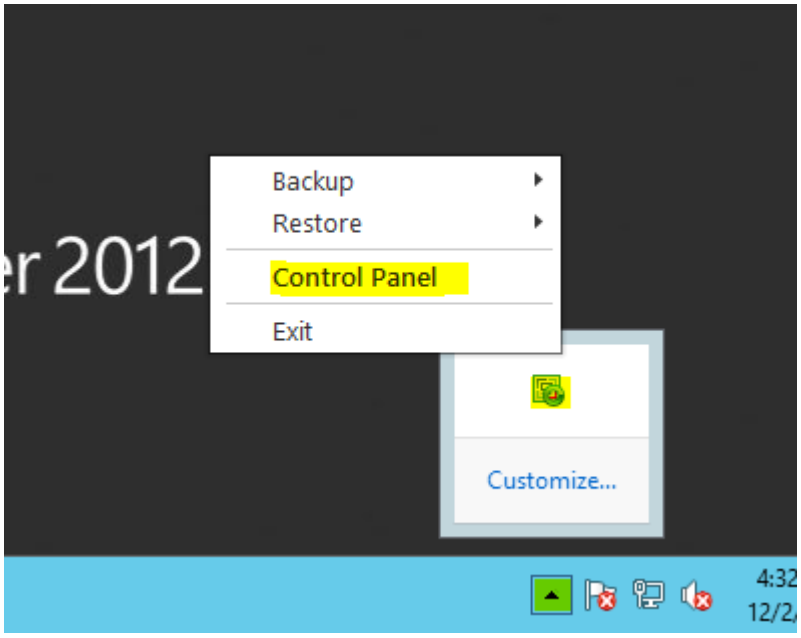


Figure 7-14: Monitoring Backup with Veeam Agent Control Panel - Status

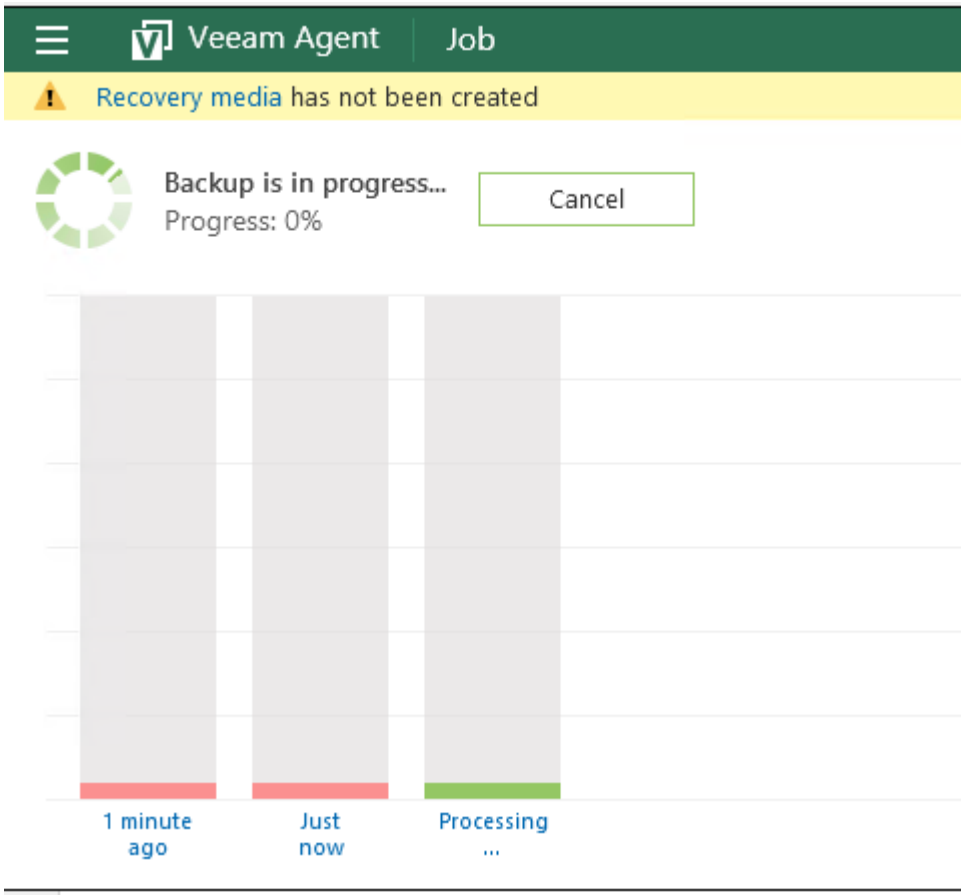
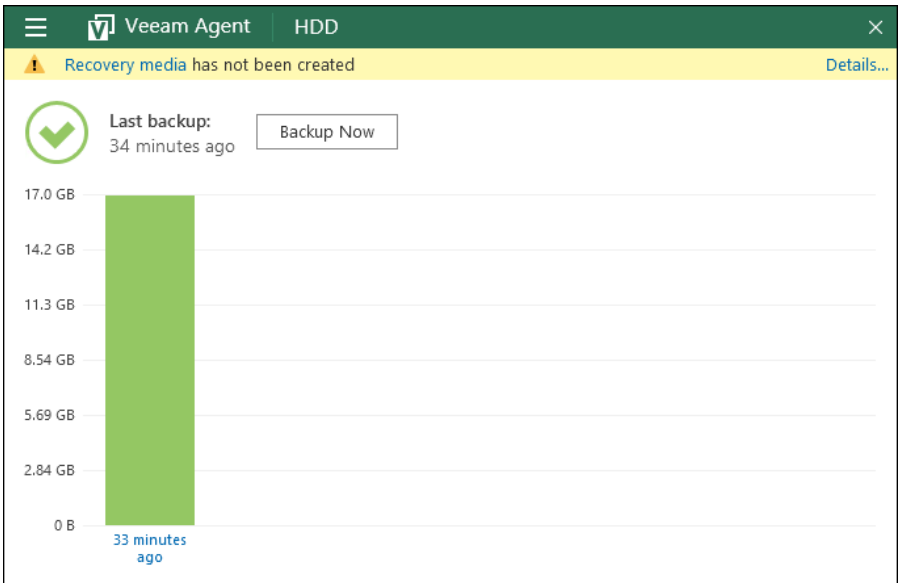
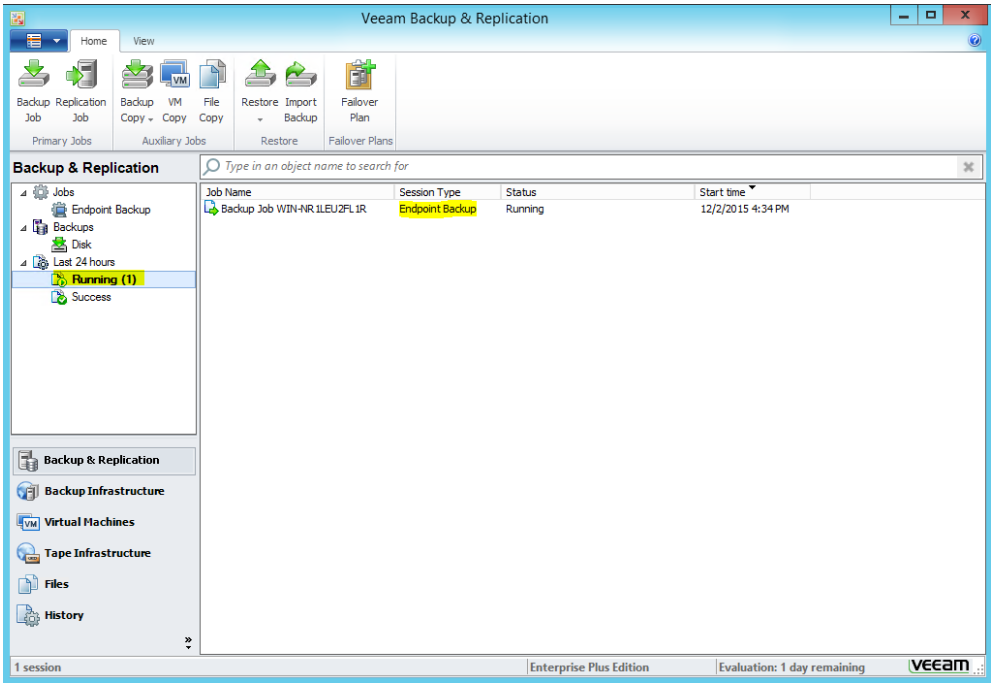


Figure 7-15: Last Backup



- **VBR Jobs:** Click **Running** to view display.

Figure 7-16: Monitoring Backup with VBR Jobs



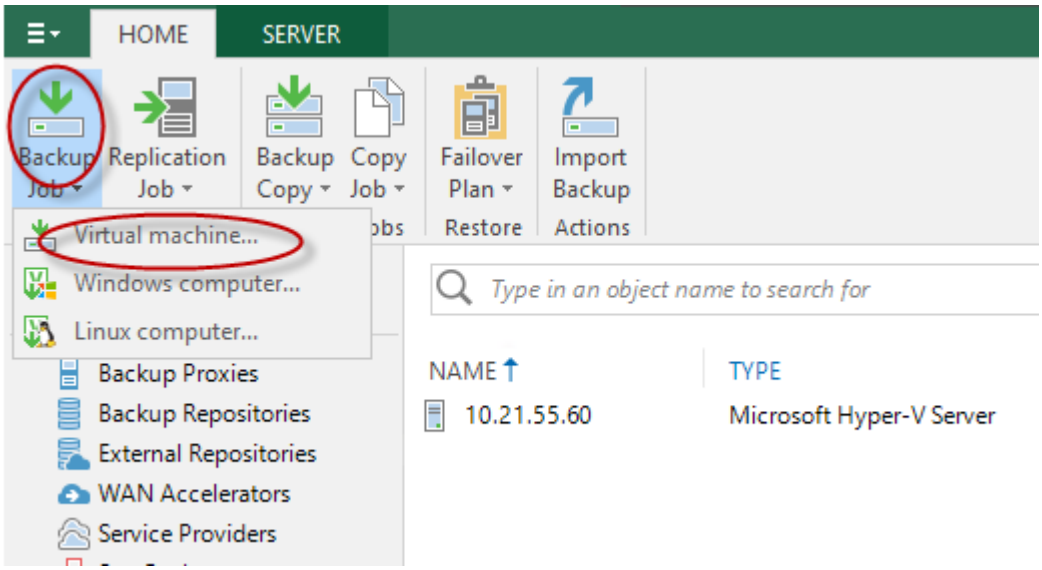
7.2 Configuring VBR VMs Backup

The following procedure describes how to configure the VBR backup for the VMs.

➢ **To set the backup for the Virtual Machines on the CloudBond 365 server:**

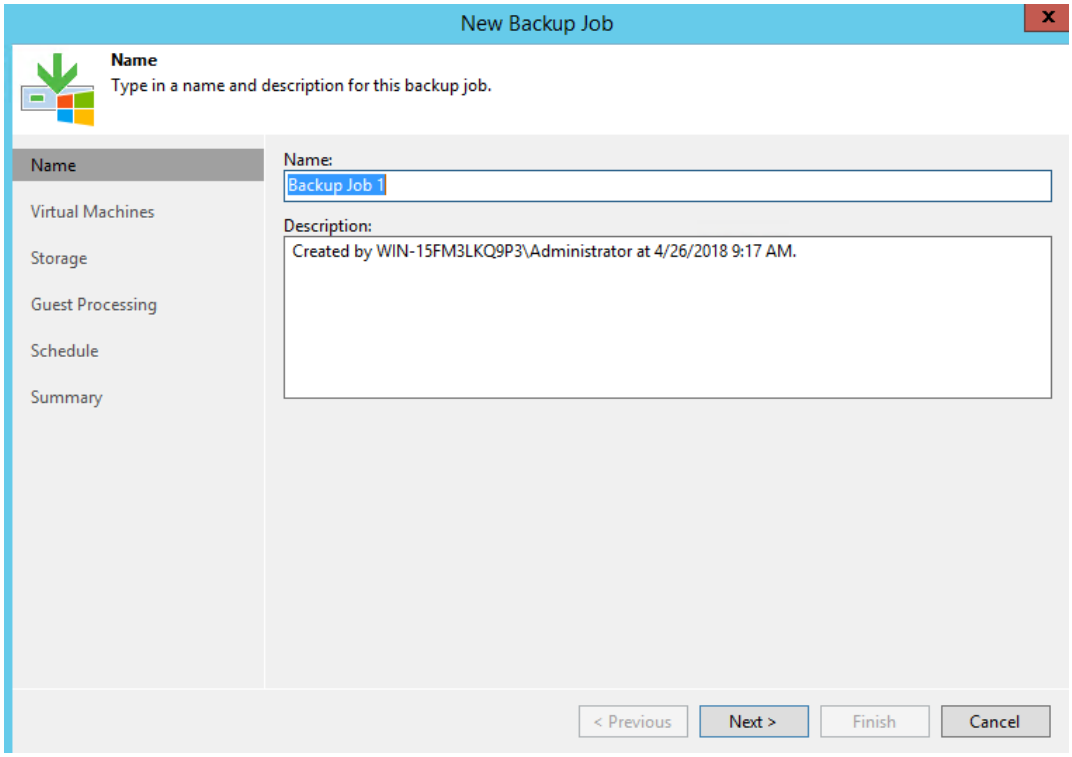
1. Run Veeam Backup and Replication (VBR).
2. Create a backup job from the **Home** menu or by right-clicking the **Backup Job** window.

Figure 7-17: VBR Jobs - Backup



3. Enter the name and description and then click **Next**.

Figure 7-18: New Backup Job

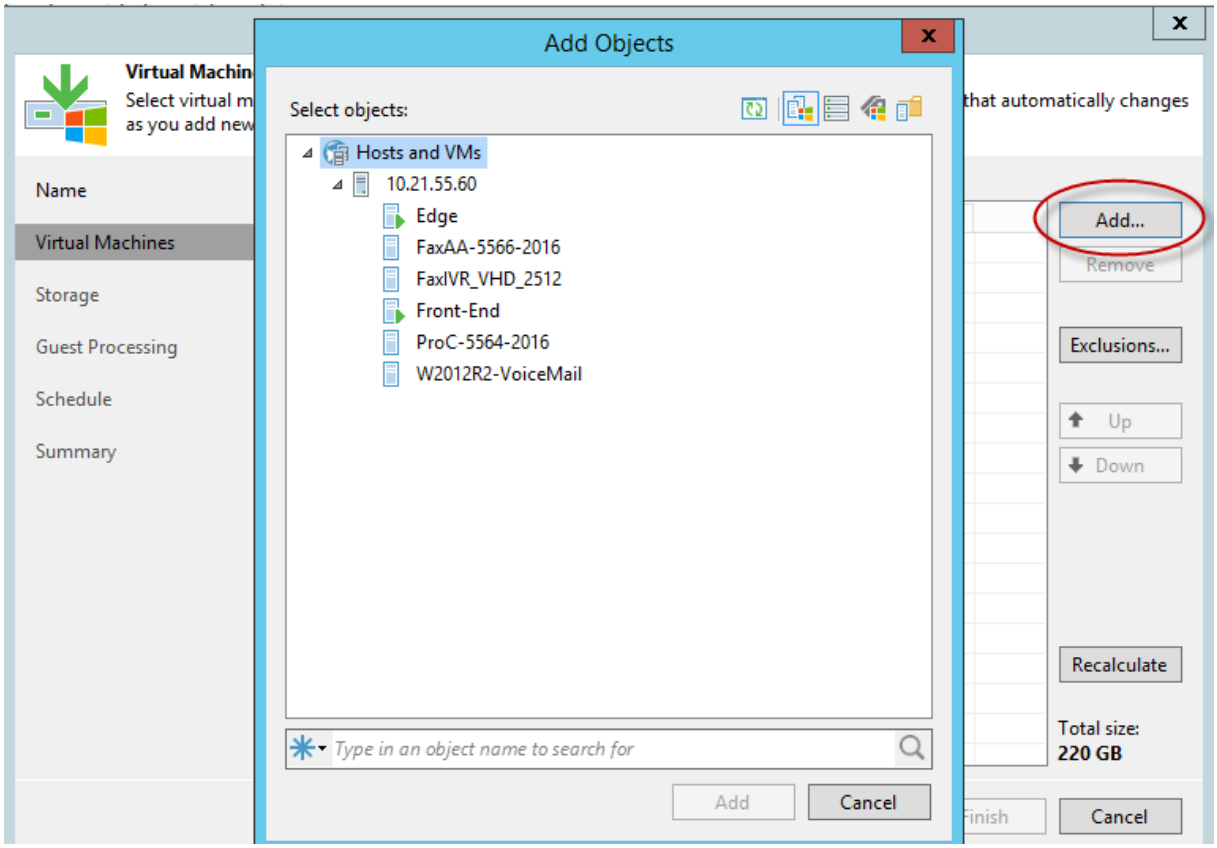


4. Select **Add** to add VMs to the job.
5. Select all the VMs **except the SBC**. The VMs list is according to the CloudBond 365 model and setup that was selected. The number of VMs that are allowed to be backed up is calculated according to your license.

> **Note:** To back up the SBC, it is recommended to manually back up the SBC Settings INI file. For more information, refer to the Saving Configuration sub-section of the *AudioCodes SBC User's Manual*.

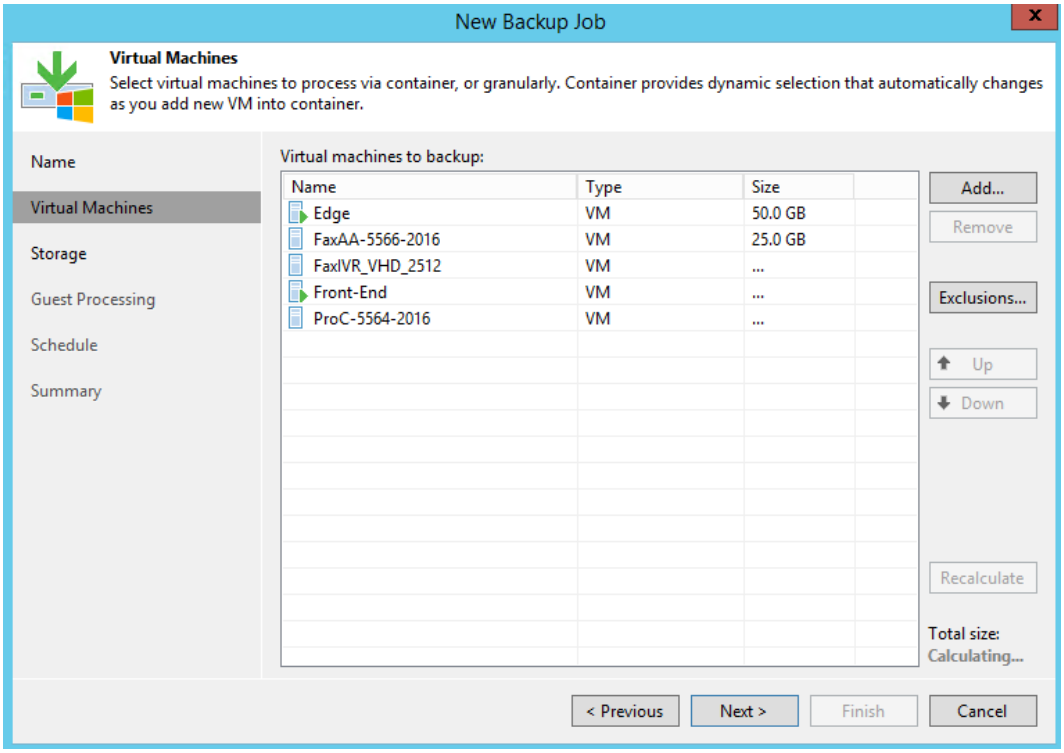
6. Click **Add**.

Figure 7-19: Add Objects



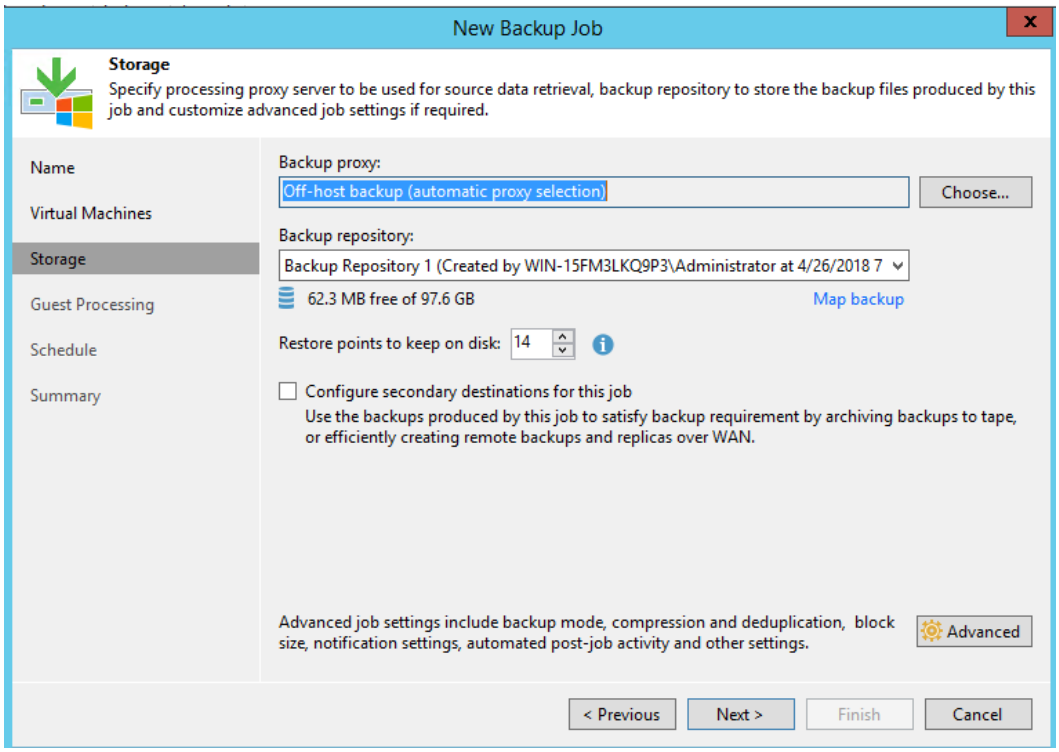
7. Click **Next**.

Figure 7-20: New Backup Job – Virtual Machines



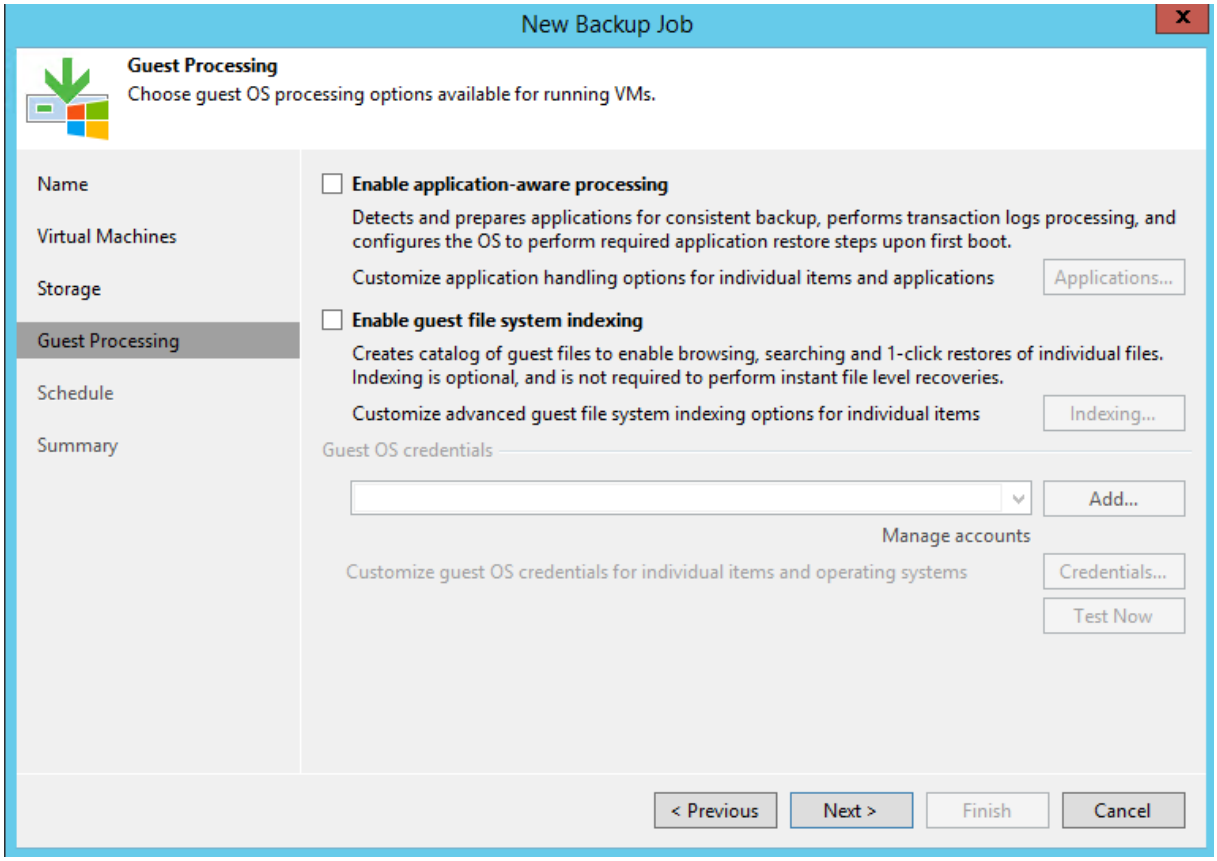
8. Confirm that the correct repository has been selected and that the number of restore points to keep is correct.
9. Click **Next**.

Figure 7-21: New Backup Job – Storage



10. Click **Next**.

Figure 7-22: New Backup Job – Guest Processing



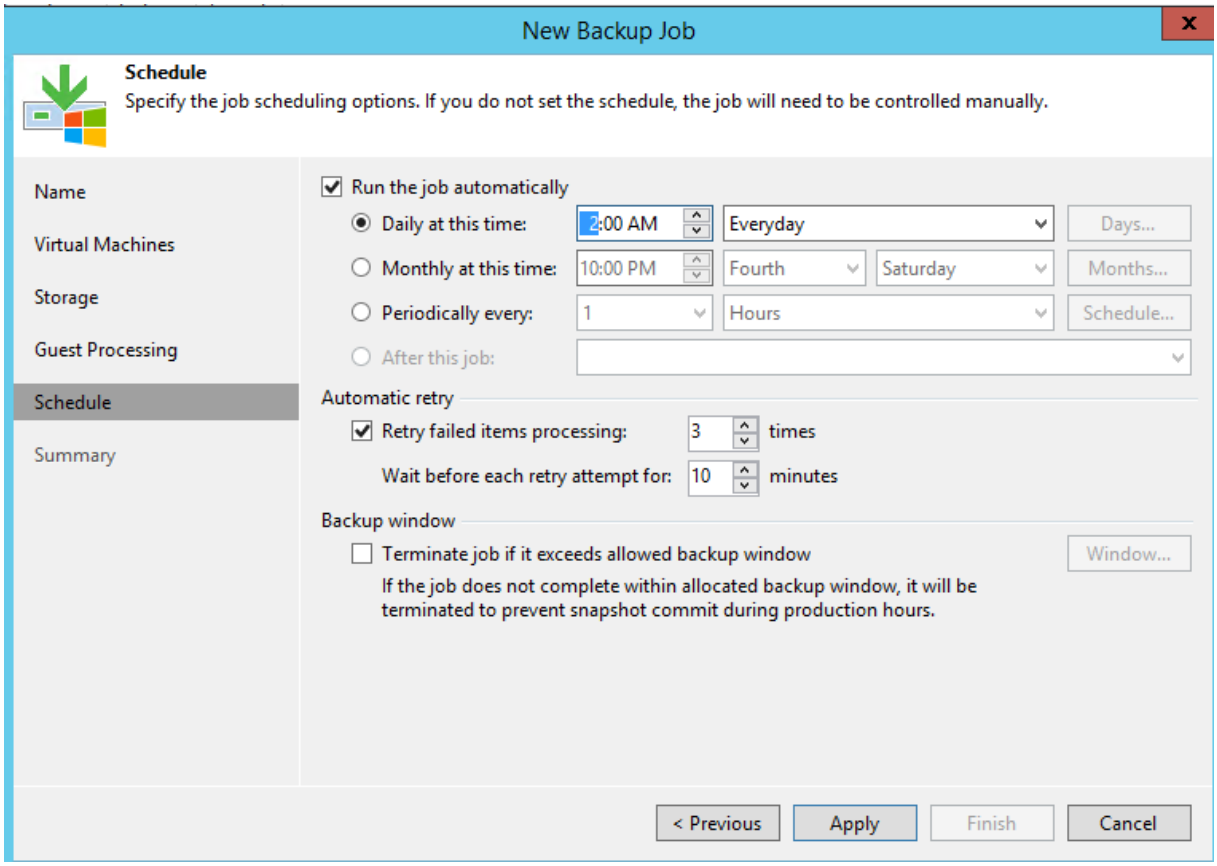
11. Select the 'Backup window' check box to terminate the job if it exceeds the allowed backup window.

Note: If the job does not complete within the allocated backup window, it is terminated to prevent a snapshot commit during production hours.

12. Define the schedule for the job and click **Create**.

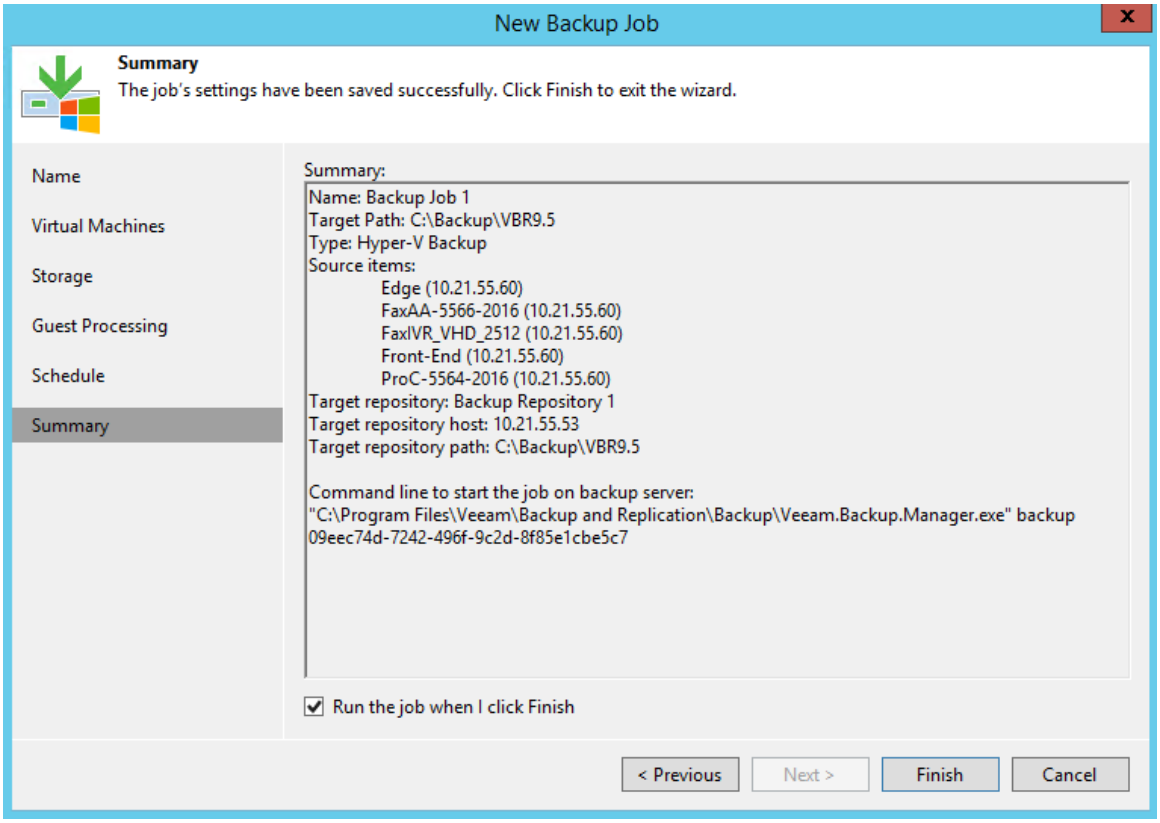
Note: It is recommended to schedule this backup job at least 60 minutes later than the Veeam Agent backup scheduled time.

Figure 7-23: New Backup Job – Schedule



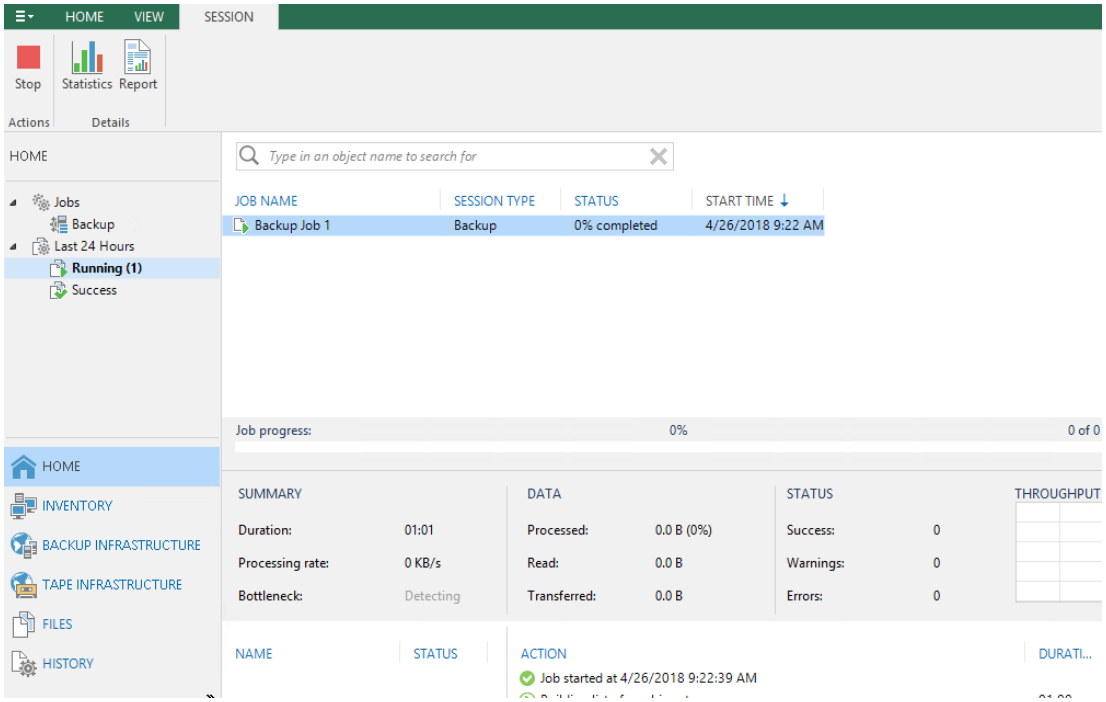
13. Click **Finish**.
14. It is recommended to select the 'Run the job when I click Finish' check box, so that you can run the job immediately to test the backup.

Figure 7-24: New Backup Job – Summary



15. You can monitor the job using the VBR.

Figure 7-25: VBR - Monitoring



7.3 Monitoring Backup

You can monitor the backup process using either:

- Email
- SNMP

The setup is done using the VBR: Refer to *Veeam Backup & Replication User Guide.* You can receive notification on the status of backup jobs and on system parameters.

7.4 Using the 3-2-1 Backup Rule

In making back up files, use the 3-2-1 rule:

- Have at least **three copies of your data**.
- Store the copies on **two different media**.
- Keep **one backup copy offsite**.

The above procedure provides the ability to create one local backup. Creating another two copies and one offsite is not described in this document. The VBR tool can be used for creating extra jobs to copy the backup to another place and to store the backup offsite using the Veeam cloud. For more information, contact AudioCodes.

7.5 Backing up the SBC

The SBC (software and hardware SBC) can be backed up by saving its *ini* files. For more information on how to save the *ini* files, refer to the *SBC User Manual*.

For Pro Box and Enterprise Box editions, where software SBC is used, you must restore the SBC VM first and then configure it with the *ini* files. We recommend you export the SBC VM after setting it to the C: drive, so that the Veeam Agent will back it up.

8 Keeping Information after Defining the Backup

A restore can be done years after you defined the backup. It is recommended to enter the following information per CloudBond 365, so it will be available if needed for recovery.

- **Location of the recovered USB:** It is recommended to update the USB using your server as explained in Appendix on page 113 to keep your system drivers.
- **Architecture used:** Note what architecture is used for VBR on the CloudBond 365 or on an external server. Either the repository is external or on the CloudBond (attached USB Disk)
- **Password used:** Note the password used if you encrypt the backup.
- **CloudBond 365 topology:** (with Domain Controller or without).
- **D: and E: drive/files:** If you backed up D: and E: drives, you will need to restore them.
- **IP address:** Note the IP address of the Repository server.
- **Network Settings:** Note the network settings, IP address and which virtual network is associated with a physical network card.
- **Username and Password of the Repository server:**
- **Username and Password of the Veeam Agent:** (for every CloudBond 365 it is a different user)
- **The full network path of the Veeam Agent backup**
- Network setup for all Network interfaces – Host and VM
- Hyper-V Virtual Network switch configuration

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9 Restoring a CloudBond 365 Backup

The Restore procedure is for a full system restore and not one virtual machine, even though that the Backup system supports it. When restoring to different hardware, a new license may be required (CB365 version 7.2 will not need a new license, older version will require new license). The basic system functionality works without the new license. If you change your hardware and you use old version, you need a new license for CloudBond 365 SysAdmin, because the license is based on the device's hardware IDs.

Note: Please contact AudioCodes to obtain this license.

Before you begin the restore process, check that the date and time on the CloudBond 365 server BIOS are correct.

Note: The Restore procedure is divided into several Restore tasks. It is recommended that when restoring, the same Restore date for all tasks is used.

9.1 Booting the CloudBond 365

The following procedures describe two different ways of how to boot the CloudBond 365:

- From Veeam Recovery Media USB
- Remotely from .iso using HP iLO

9.1.1 Booting CloudBond 365 from Veeam Recovery Media USB

The following procedure below describes how to boot the CloudBond 365 from a Veeam Recovery Media USB.

➢ **To boot the CloudBond 365 from a Veeam Recovery Media USB:**

1. Plug the Veeam Recovery Media USB into the CloudBond 365.

Notes:

- The Veeam Recovery Media USB comes with the CloudBond 365. If you don't have the Veeam Recovery Media USB, see Appendix A on page 139 for instructions on how to create it.
- If the Veeam software was updated on your server, it is recommended to update the USB. See Appendix A on page 139 for more information.
- The Veeam Recovery Media USB is a different USB than the CloudBond 365 Recovery USB. The CloudBond Recovery USB is used for a clean system re-install using the CloudBond 365 Installation wizard.

2. Start the server and boot from the USB:
   - **On CloudBond Standard and Standard+ Editions:** From the BIOS, select **Save and Exit Menu** and select to boot from USB.
   - **On CloudBond 365 Pro Box and Enterprise Box Editions:** While booting, click F11. Select Option 3 to boot once from the USB

9.1.2 Booting CloudBond 365 Remotely from *.iso* using HP iLO

The recovery can be performed remotely using HP Integrity Integrated Lights-Out (iLO) management for CloudBond 365 Pro Ent (HP server). You need to boot the CloudBond 365 from an *iso* file, instead of a USB.

The *.iso* file can be downloaded from:

https://s3.eu-central-1.amazonaws.com/downloads-audiocodes/CB365Backup/Version+9.5/VeeamRecoveryMedia.iso

Another option is to put the USB with the *.iso* file and set the iLO to boot from the *.iso* on the USB. This *.iso* file can be prepared the same way as preparing the USB in Appendix A, but you need to select the *.iso* boot type.

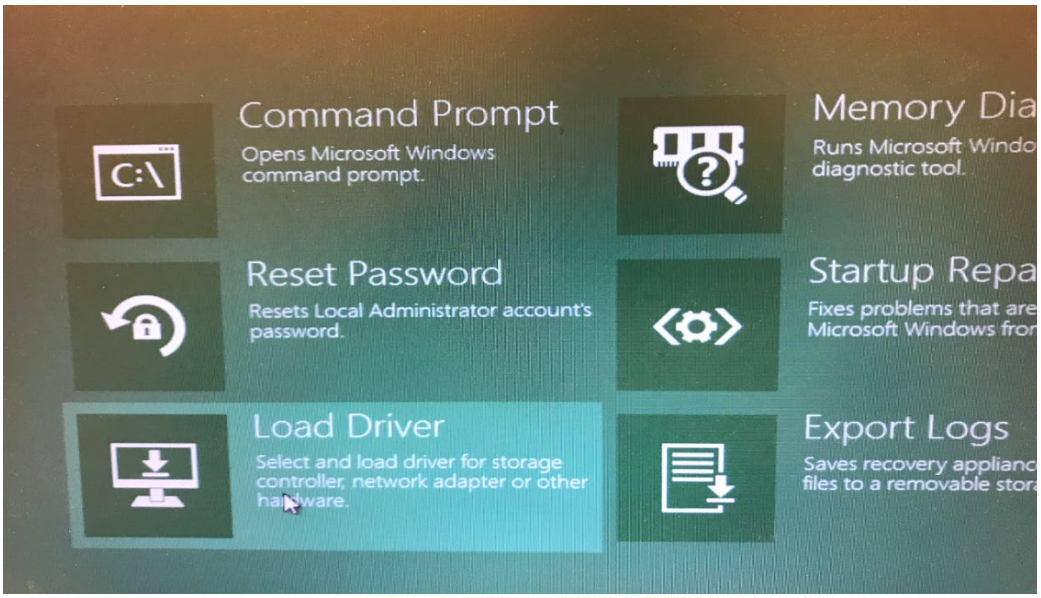
9.2 Restoring Volume C: Using Veeam Agent

The procedure below describes how to restore Volume C using the Veeam Agent.

➢ **To restore Volume C: using Veeam Agent:**

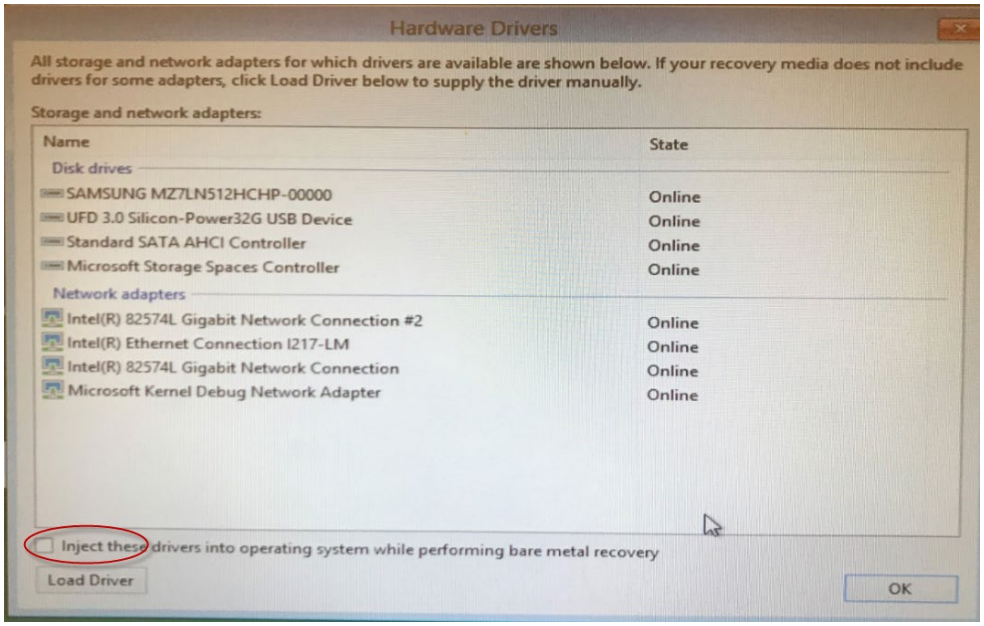
1. Boot the system using either a USB or *.iso* file.
2. From the main menu, select **Tools,** and then select the **Load Driver** menu option.

Figure 9-1: Hardware Drivers



3. Clear the 'Inject these drivers…' check box, and click **OK**.

Figure 9-2: Storage and Network Adapters

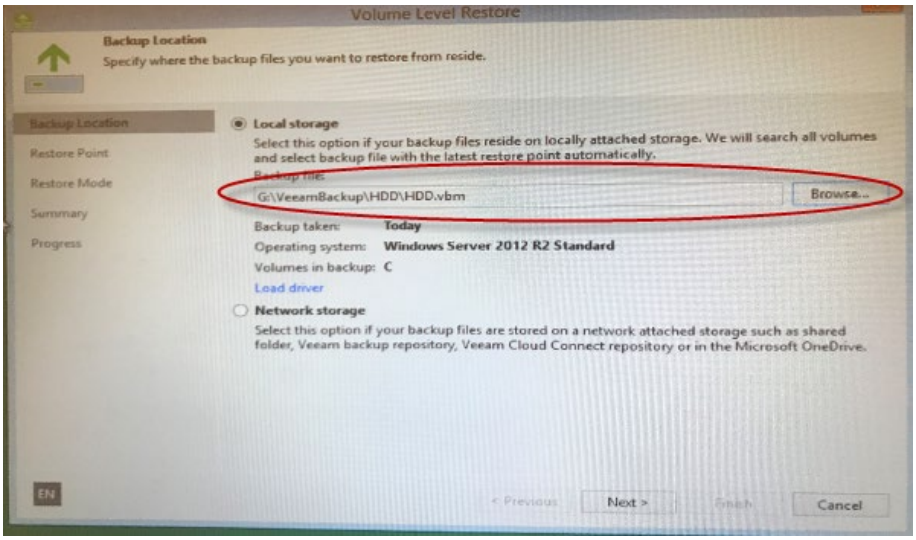


4. Return to the main screen.
5. On the Veeam Endpoint Recovery screen, select the **Bare Metal Recovery** option.

Figure 9-3: Veeam Endpoint Recovery – Bare Metal Option

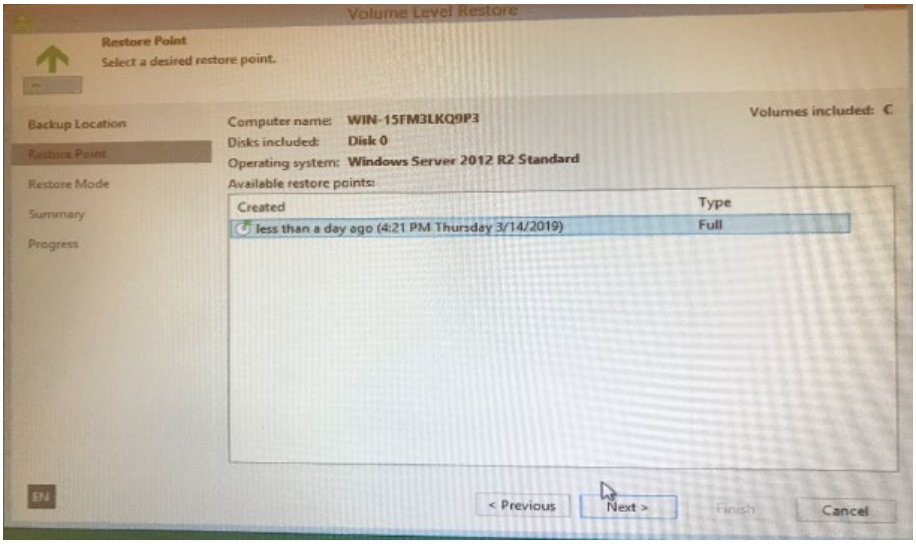
6. Click the **Local storage** option to restore from a backup copy which was kept on an external HDD, and then click **Browse** to point to the backup file.

Figure 9-4: Backup Location



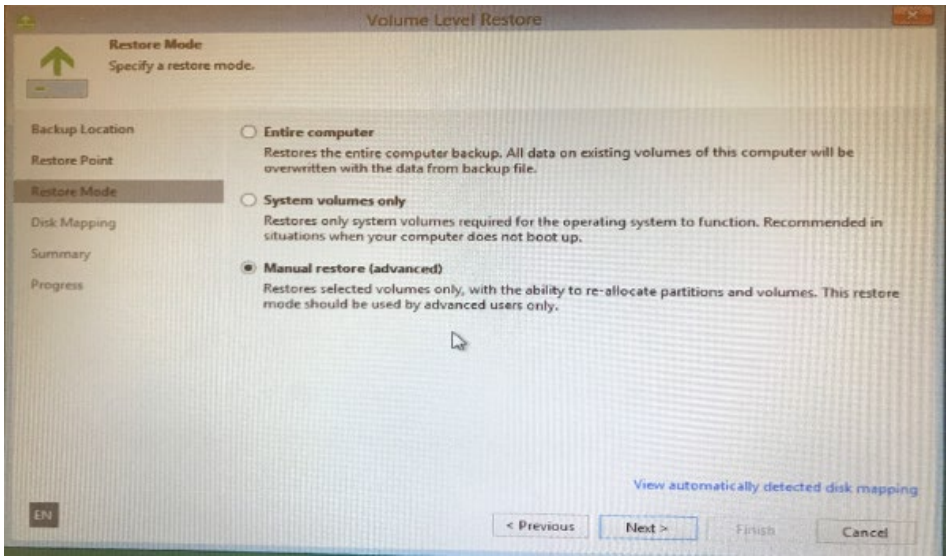
7. Point to the relevant restore point with the date you wish to restore from (it will use the full backup file and the delta from the specific date).

Figure 9-5: Backup Location



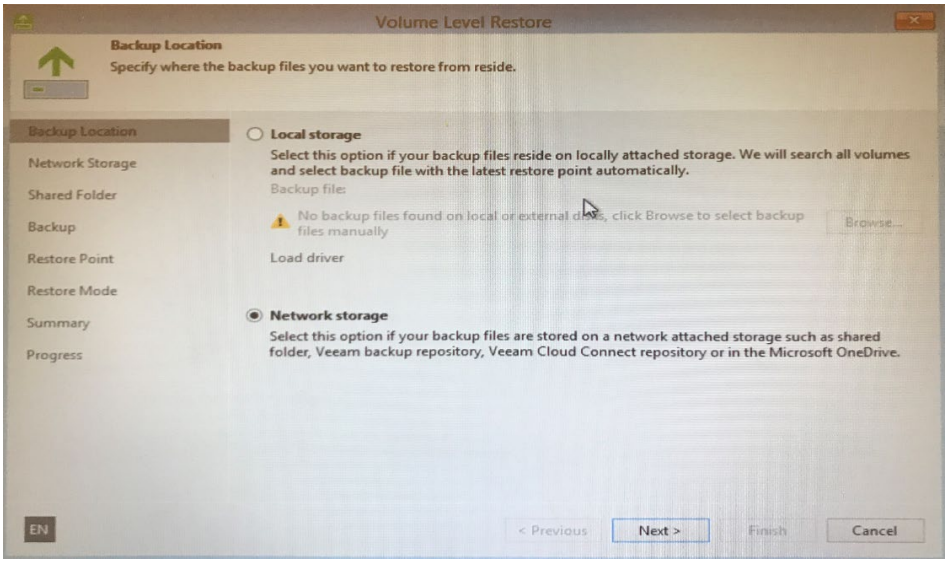
8. Select the **Manual restore** option.

Figure 9-6: Manual Restore



9. You can map volumes that you want to restore from the backup to disks on the target computer. To map volumes:
   a. Select the check box of the volume that you want to restore from the backup.
   b. By default, Veeam Agent restores all volumes to their initial location. To map the restored volume to another computer disk, click **Customize disk mapping** on the bottom of the wizard.
   c. In the **Disk Mapping** window, specify which volumes must be restored.
   d. Right-click the target disk on the left side of the screen, and then select the necessary disk layout.
      - **Apply Backup Layout:** Select this option if you want to apply the settings that were used on your computer when you performed the backup.
      - **Apply Disk Layout:** Select this option if you want to apply the current disk settings of another disk.
      - **Erase -** Select this option if you want to discard the current disk settings.
10. Click the **Network storage** option, to restore from the Backup Repository that resides on the network.

Figure 9-7: Veeam Endpoint Recovery – Backup Location

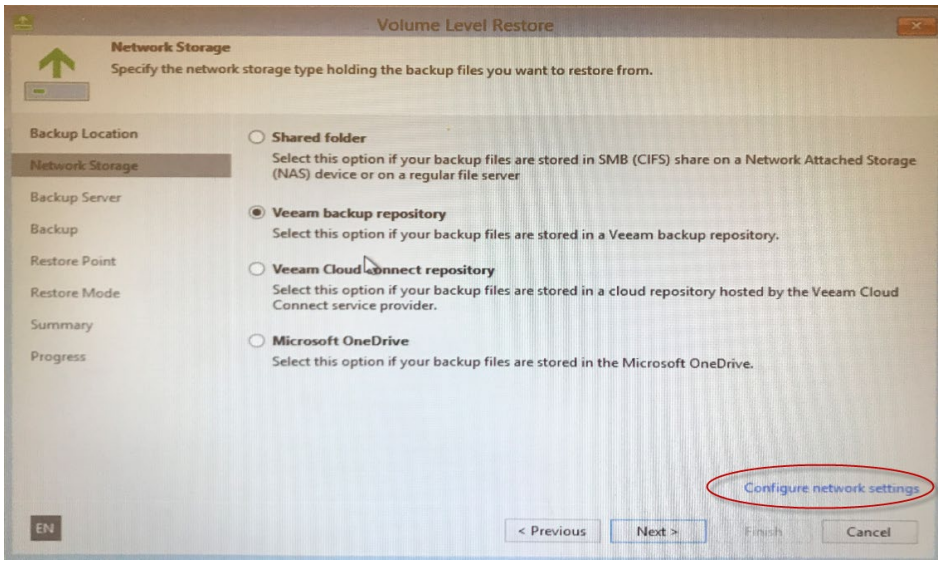


Notes:

- It is possible to perform a restore by using the **Local Storage** (USB Disk) option. To do so, copy the appropriate directory from the backup repository to the USB Disk. Connect it to the CloudBond 365, and then select **Local Storage** on the Backup Location screen.
- If the backup topology is connecting the local USB disk to the CloudBond 365, select the Local storage option (Shared folder option) and browse to the relevant directory to select the *vbm* file. In this case, the steps below are not relevant.

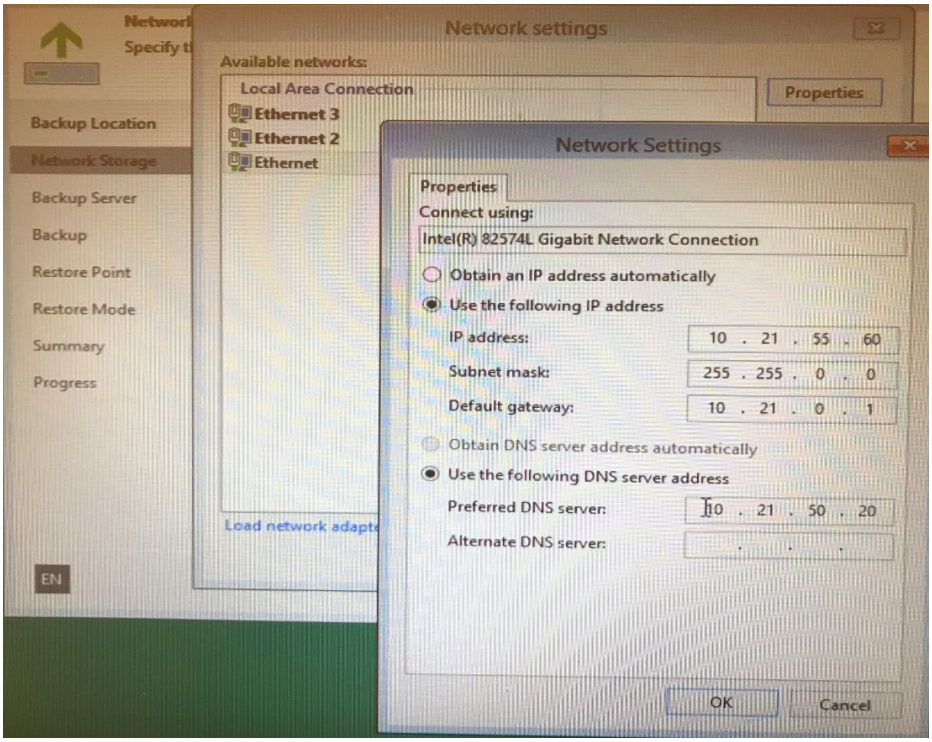
11. Set the IP address for the recovery session by selecting **Configure Network Settings**.

Figure 9-8: Network Storage



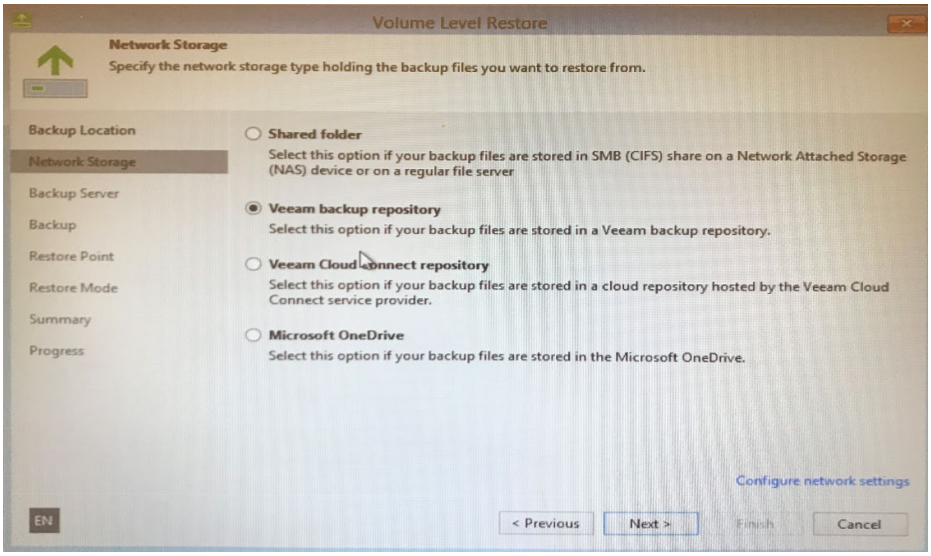
12. On the Network Settings screen, select the correct network adapter with the valid IP address, and then click **OK**.

Figure 9-9: Network Settings



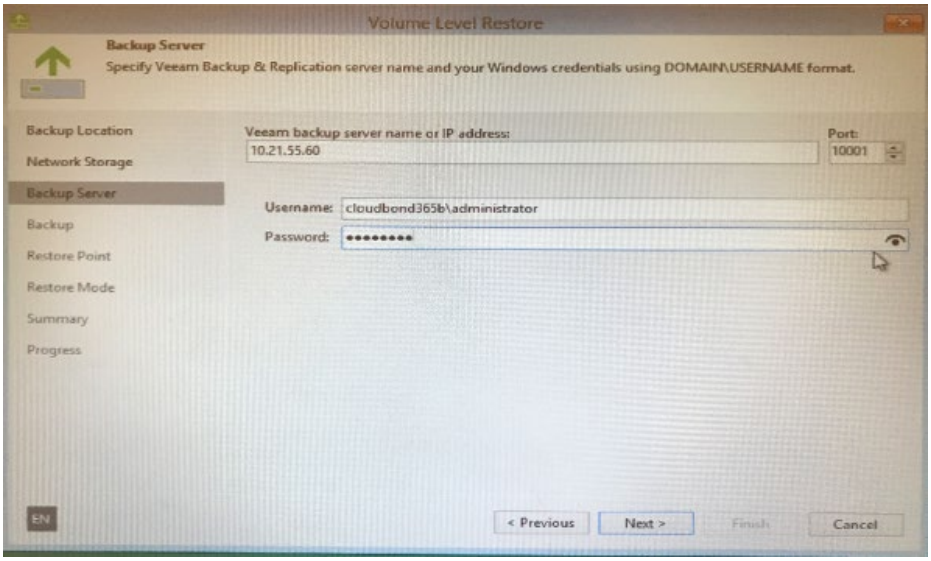
13. On the Network Storage screen:
    - If the VBR is running on a CloudBond 365 host, click the **Shared folder** because the VBR cannot be accessed.
    - If the VBR is running on an external server, click the **Veeam backup repository** option.
14. Click **Next**.
15. The **Veeam backup repository** option is selected.

Figure 9-10: Veeam Endpoint Recovery – Network Storage



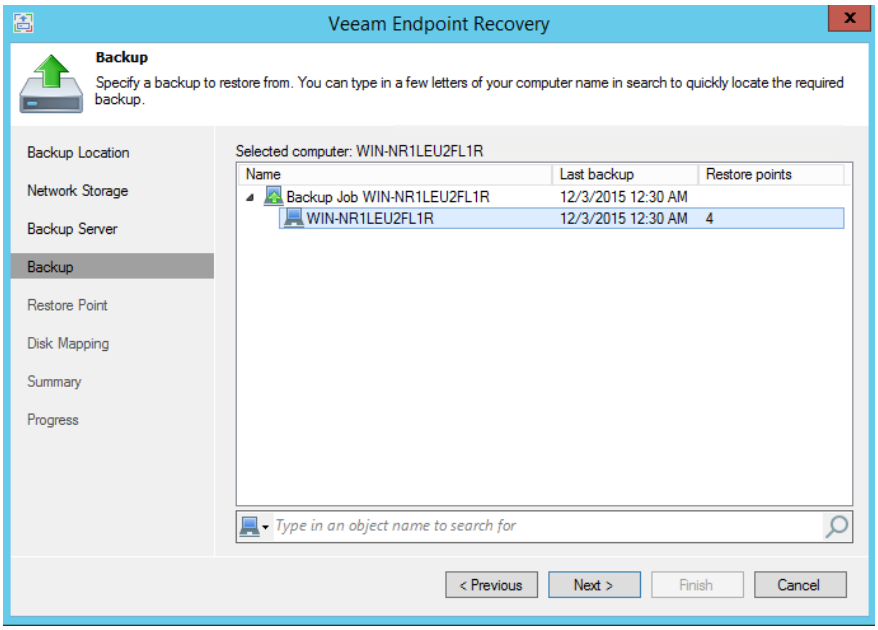
16. Provide the Veeam Agent credentials that you defined when you configured the backup, and then click **Next**.

Figure 9-11: Veeam Endpoint Recovery – Backup Server



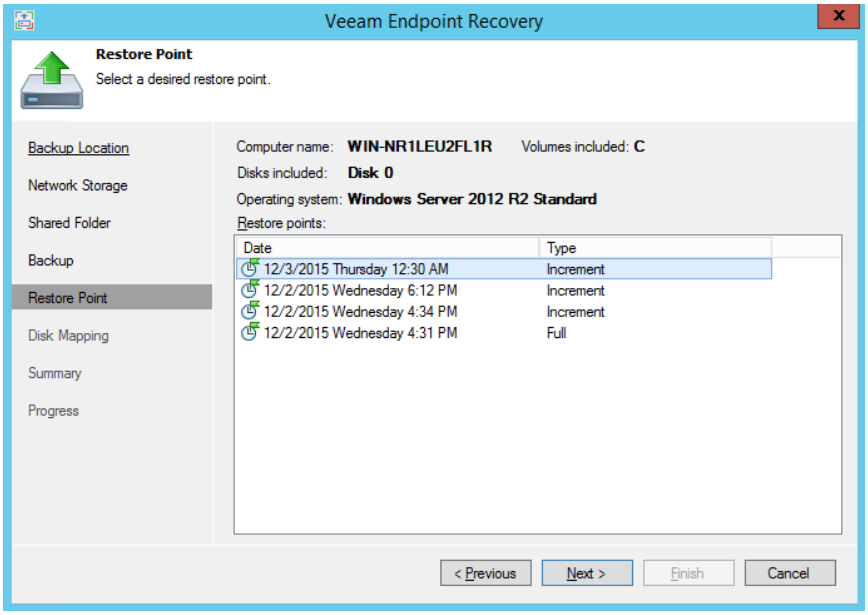
17. You need to provide the full path to the Veeam Agent backup that is on the repository server. The name of the directory of the Veeam Agent backup is a combination of the *server name* and the Veeam Agent *user name*. Browse to the backup repository using another server to see what the full path name is.
18. Select the backup server to recover from, and then click **Next**.

Figure 9-12: Veeam Endpoint Recovery – Backup



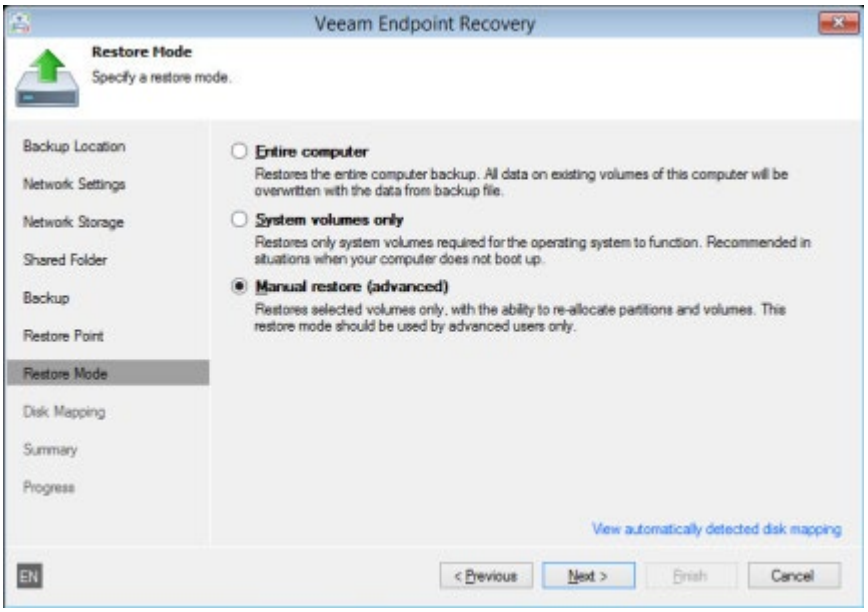
19. From the Restore Point screen, select the appropriate restore point, and then click **Next**.

Figure 9-13: Veeam Endpoint Recovery – Restore Point



20. Select the **Manual restore (advanced)** option, to choose what computer volumes you want to restore and manually allocate disk space on the restored volumes, and then click **Next**. (To view the current disk allocations settings on your computer, click **View automatically detected disk mapping** on the bottom of the screen. Delete unwanted volumes on that screen.)

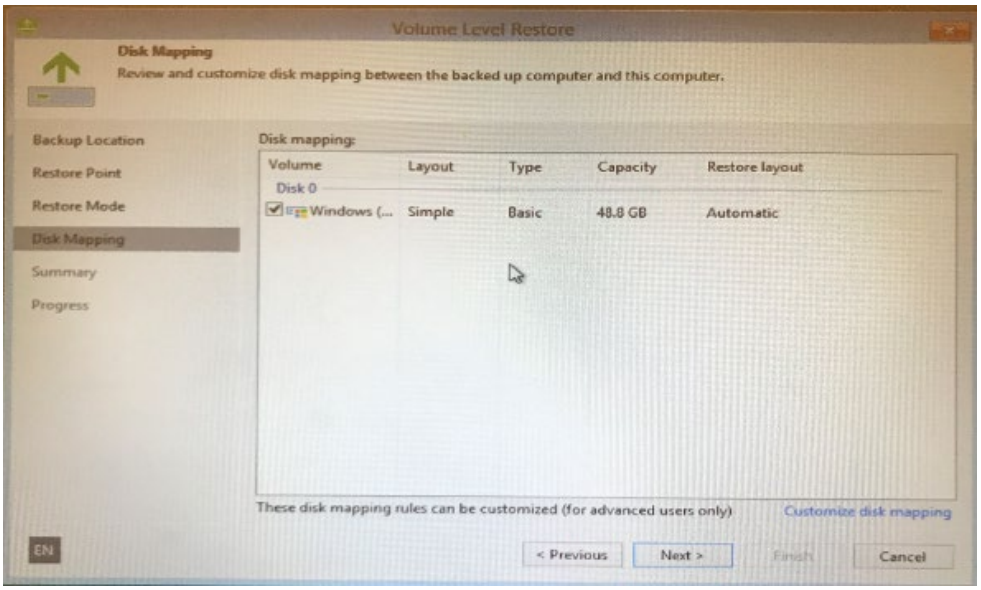
Figure 9-14: Veeam Endpoint Recovery – Restore Mode



21. You can map volumes that you want to restore from the backup, to disks on the target computer. To map volumes:
    a. Select the check box of the volume that you want to restore from the backup.
    b. By default, Veeam Agent restores all volumes to their initial location. To map the restored volume to another computer disk, at the bottom of the wizard click **Customize disk mapping**. In the **Disk Mapping** window, specify which volumes must be restored:
    c. Right-click the target disk on the left side of the screen and select the necessary disk layout.

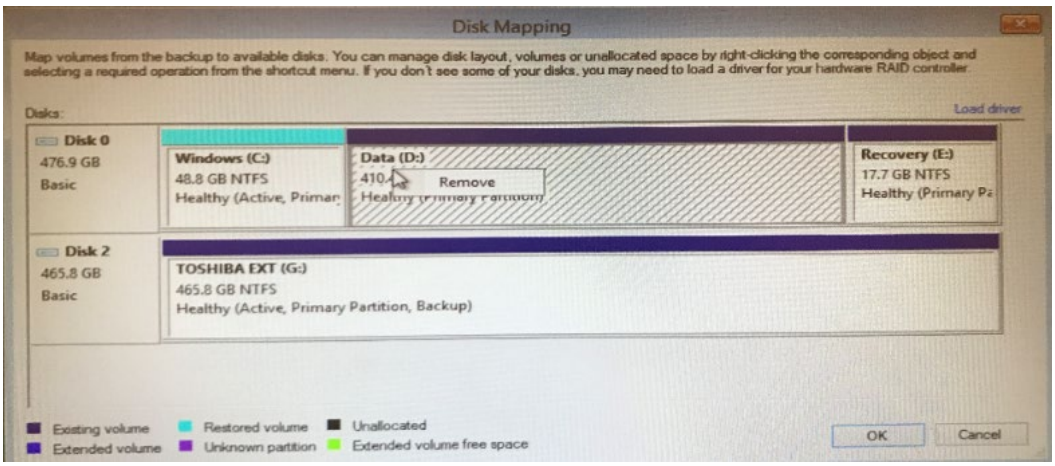
- **Apply Backup Layout:** Select this option if you want to apply to the disk, the settings that were used on your computer when you performed the backup.
- **Apply Disk Layout:** Select this option if you want to apply to the current disk settings of another disk.
- **Erase -** Select this option if you want to discard the current disk settings.

Figure 9-15: Disk Mapping



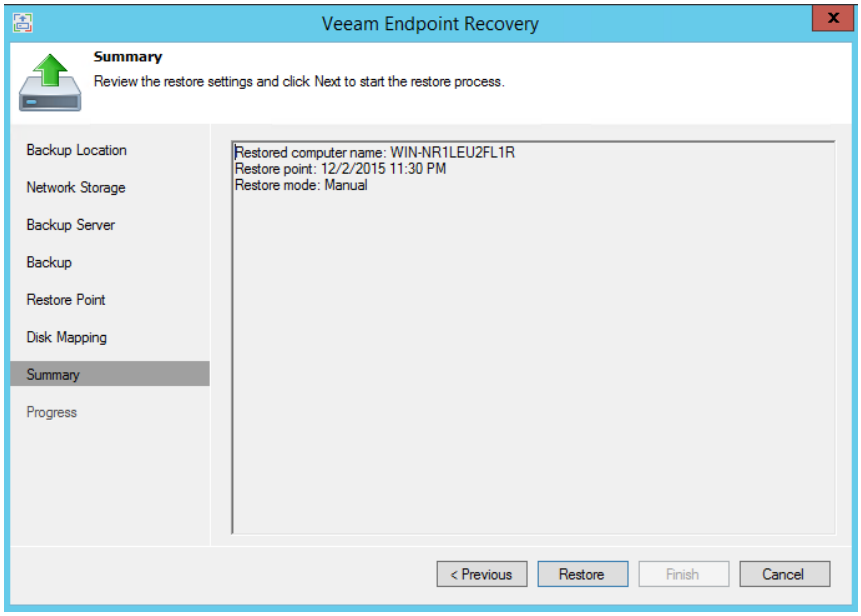
22. On the Disk Mapping screen, click **OK**, and then **Next**.

Figure 9-16: Veeam Endpoint Recovery – Disk Mapping



23. On the Veeam Endpoint Recovery – Summary screen, click **Restore** to start the recovery.
24. When the Restore process ends, re-start the server.

Figure 9-17: Veeam Endpoint Recovery – Summary



9.3 Performing Post-Restore – Exiting Domain Controller Safe Mode

If the host is a Domain Controller, log in with Safe boot mode. If the host is not a Domain Controller, skip this procedure.

After performing a full Virtual Machine restore, the Domain Controller computer boots up in what appears to be Safe mode. When the Domain Controller boots for the first time, it is actually in Active Directory Services Restore mode as you are booting from a backup file. However it should automatically re-boot.

➢ **To exit the Domain Controller in Safe mode:**

1. Log in with the Directory Services Restore mode account (typically.*administrator*).
2. Open a command prompt and run the following:

```
bcdedit /set safeboot dsrepair
bcdedit /deletevalue safeboot
shutdown -t 01 -r
```

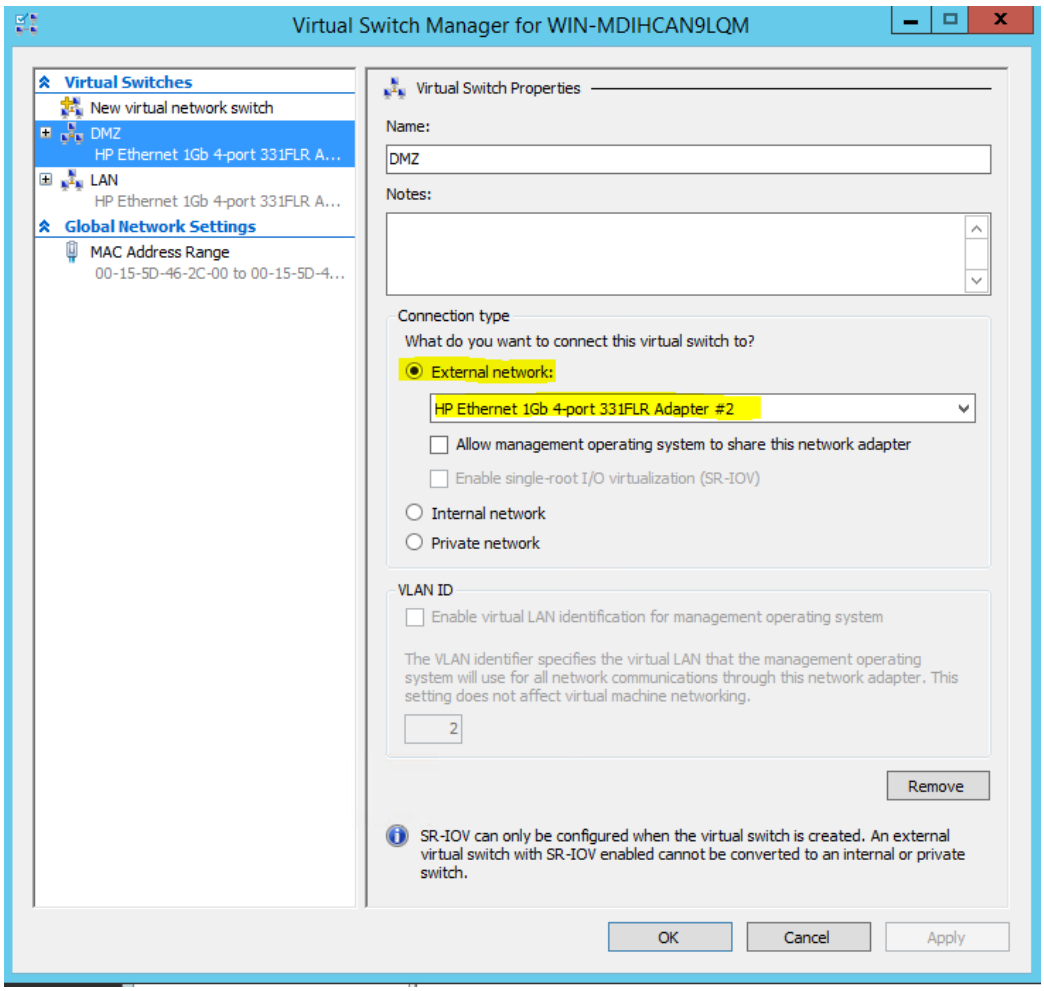
3. CloudBond 365 should then re-boot in Normal mode.
4. Log in to the Domain Controller as the Domain Administrator
5. For more information, refer to the Microsoft Knowledge Base article in http://technet.microsoft.com/en-us/library/cc816897(WS.10).aspx.

9.4 Validating Network Settings

You need to confirm that **all** network cards are valid and have the correct IP addresses. (You can only check the host network and not the VM in this step). Compare it to the information you saved when you defined the backup (See Section 8 on page 81).

Validate that the Hyper-V virtual network switch is set correctly. Every virtual network is connected to a real physical card. Compare it to the information you saved when you defined the backup.

Figure 9-18: Virtual Switch Manager



- If the Network cards are not functioning correctly, see the Troubleshooting section in Appendix C 5on page 117.

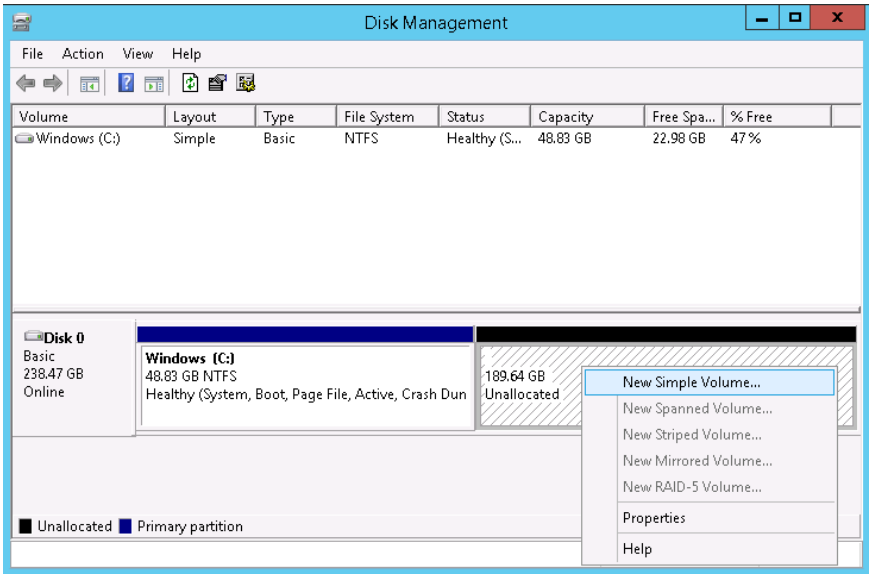
9.5 Preparing Volume D: for Restoring VMs from the VBR

The following procedure describes how to prepare Volume D: for restoring the VMs from the VBR, as described in Section 9.8 on page 102.

➢ **To prepare Volume D: for restoring the VMs from the VBR:**

1. Log in to the host in **Normal** mode.
2. Open the Disk Management screen and create Volume D:, if it does not exist. Volume D: should use all the free disk size, depending on the CloudBond 365 type.

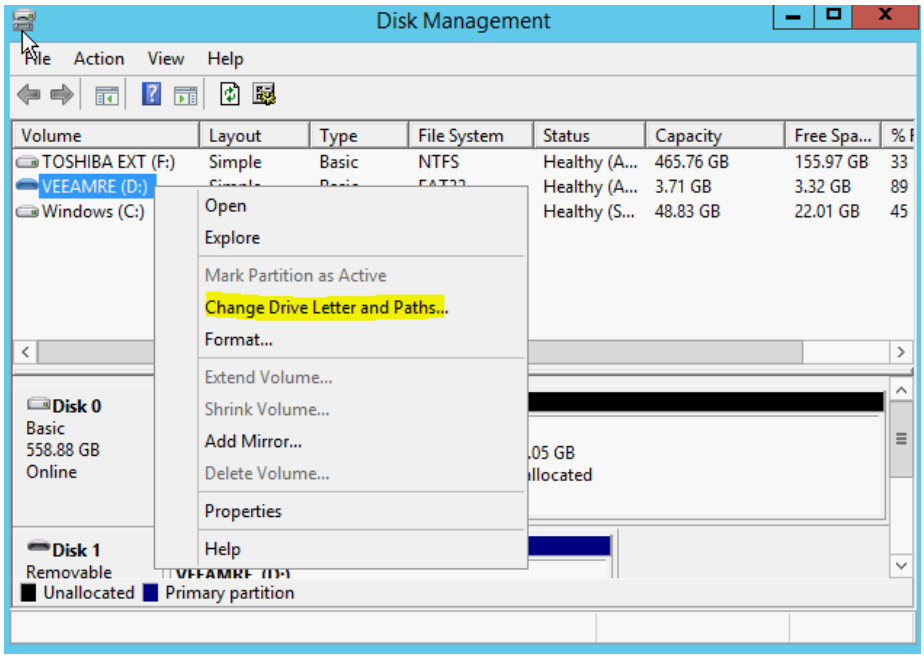
Figure 9-19: Disk Management



Notes:

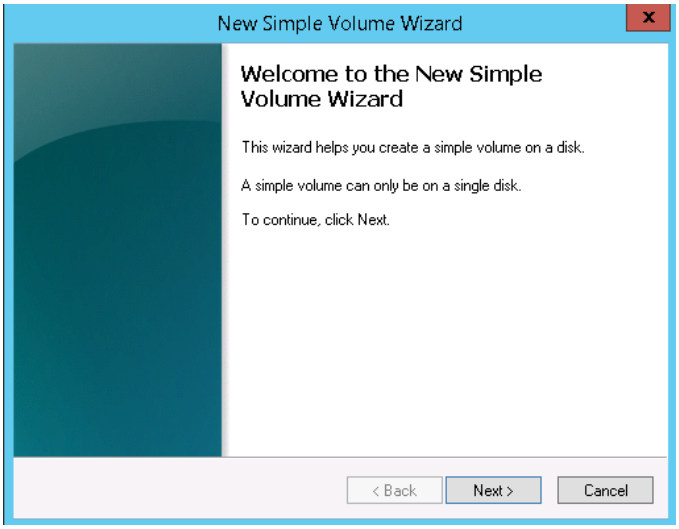
- If the D: drive is already assigned to USB storage, change the drive letter to something else before you continue.
- If you wish to also restore Volume E:, make sure you have 32 GB of available disk space.

Figure 9-20: Disk Management – Change Drive Letter and Paths



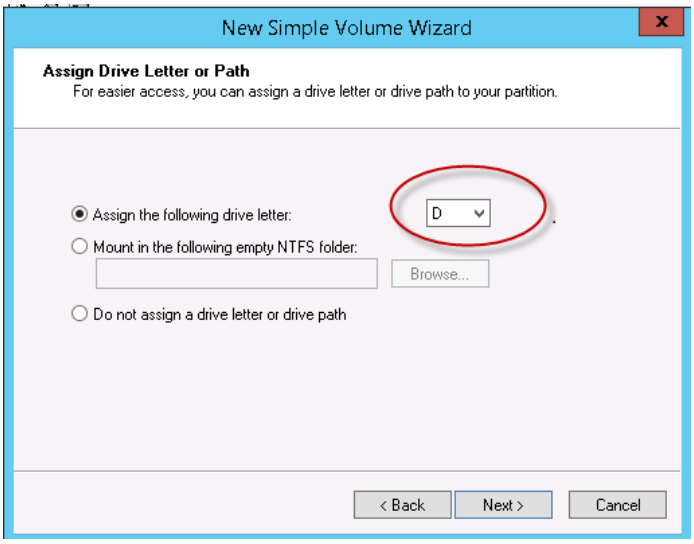
3. Right-click on the disk.
4. Select **New Simple Volume**; the Welcome New Simple Volume Wizard appears.
5. Click **Next**.

Figure 9-21: New Simple Volume Wizard - Welcome



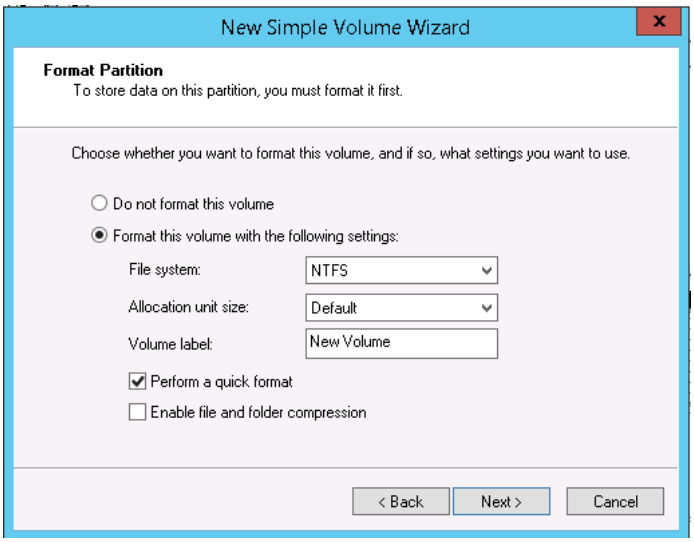
6. Click the **Assign the following drive letter** option.
7. From the drop-down list, select the drive letter, and then click **Next**.

Figure 9-22: New Simple Volume Wizard – Assign Drive Letter or Path



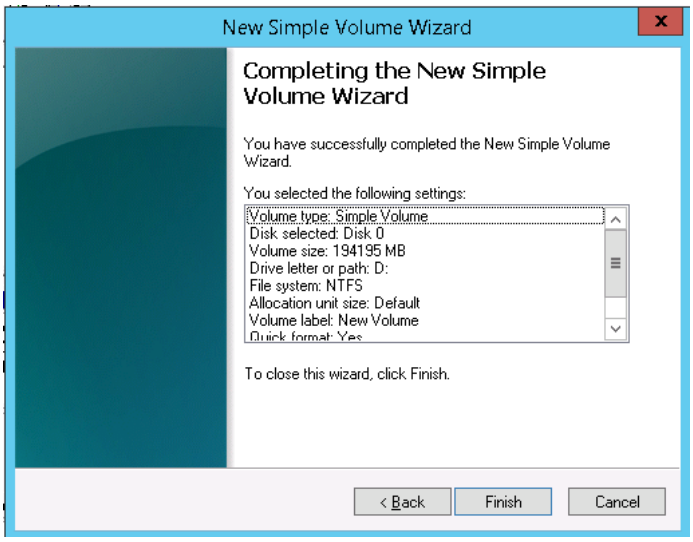
8. Click the **Format this volume with the following settings** option.
9. Enter the appropriate values as shown in the screen below, and then click **Next**.

Figure 9-23: New Simple Volume Wizard – Format Partition



10. Click **Finish**.

Figure 9-24: New Simple Volume Wizard – Finish



9.6 Updating Host Virtual NIC MAC Address After Restore

When CloudBond 365 is working correctly, its vEthernet (VLAN) NIC interface receives one of the physical MAC addresses of the server and uses it. After a Restore, the vEthernet NIC interface receives a unique MAC address, which needs to be updated. After a Restore, the MAC addresses appear as follows:

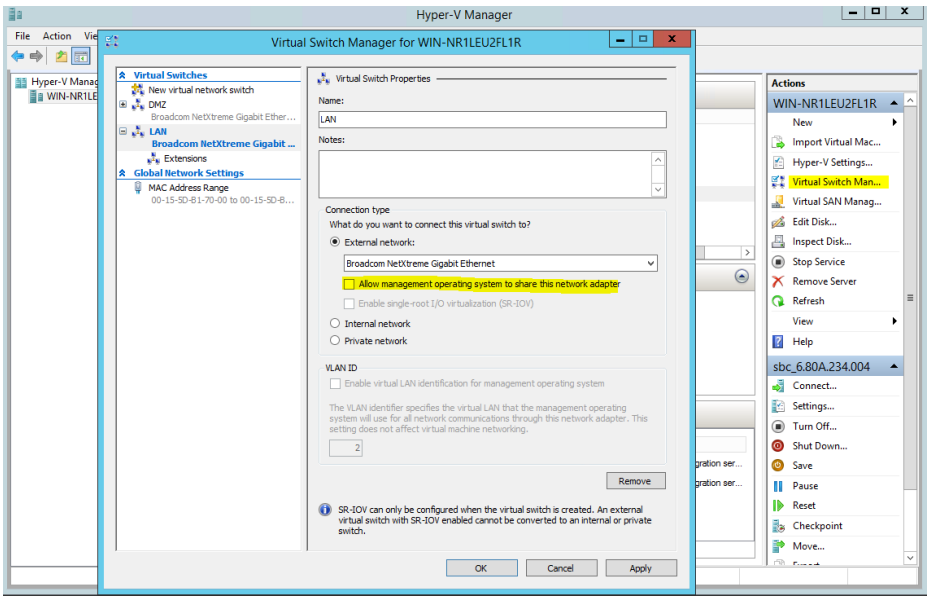
Figure 9-25: MAC Addresses After Restore

```
Name                    InterfaceDescription                    ifIndex Status       MacAddress             LinkSpeed
----                    --------------------                    ------- ------       ----------             ---------
vEthernet (LAN)         Hyper-V Virtual Ethernet Adapter #2          19 Up           00-90-FB-50-9B-D9        10 Gbps
Ethernet 3              Intel(R) 82574L Gigabit Network Co...#2      14 Disconnected 00-90-8F-5F-03-C2         0 bps
Ethernet 2              Intel(R) 82579LM Gigabit Network Con...      13 Up           00-90-FB-4F-AA-2B       100 Mbps
Ethernet                Intel(R) 82574L Gigabit Network Conn...      12 Disconnected 00-90-8F-5F-03-C3         0 bps
```

➢ To update the Host Virtual NIC MAC Address After Restore

1. Open the **Hyper-V Manager**.
2. Navigate to the Virtual Switch Manager.
3. Under **Connection type**, clear the 'Allow management operating system to share this network adapter' check box, and then click **Apply**.

Figure 9-26: Hyper-V Manager



4. Click **OK.**
5. After the update, the MAC address should look like **00-90-FB-50-9B-D9**.

Figure 9-27: MAC Addresses After Update

```
PS C:\Users\Administrator> Get-NetAdapter

Name                    InterfaceDescription                    ifIndex Status       MacAddress             LinkSpeed
----                    --------------------                    ------- ------       ----------             ---------
vEthernet (LAN)         Hyper-V Virtual Ethernet Adapter #2          22 Up           00-90-FB-50-9B-D9        10 Gbps
Ethernet 3              Intel(R) 82574L Gigabit Network Co...#2      14 Disconnected 00-90-8F-5F-03-B4         0 bps
Ethernet                Intel(R) 82579LM Gigabit Network Con...      12 Up           00-90-FB-50-9B-D9       100 Mbps
Ethernet 2              Intel(R) 82574L Gigabit Network Conn...      13 Disconnected 00-90-8F-5F-03-B5         0 bps
```

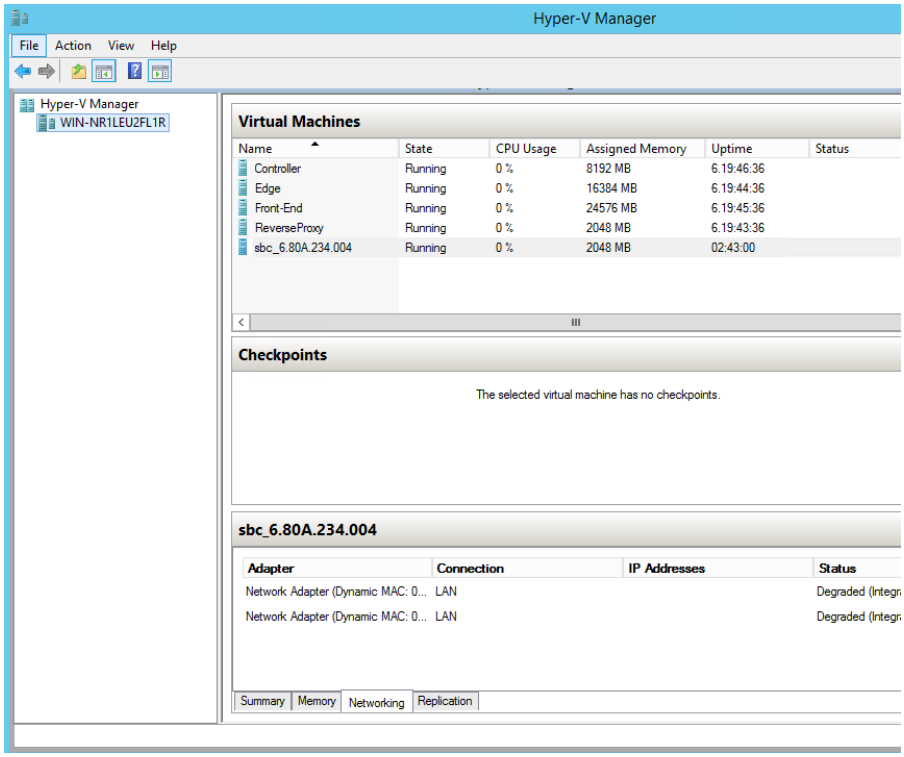
9.7 Clearing Old Virtual Machine Data

The procedure below describes how to clear old Virtual Machine (VM) data.

➢ **To clear old Virtual Machine data:**

1. Open the Hyper-V Manager.
2. From the Hyper-V main page, delete all the VMs including checkpoints.

Figure 9-28: Hyper-V Manager – Virtual Machines



3. You need a clean Hyper-V Manager without any VMs before restoring the VMs.

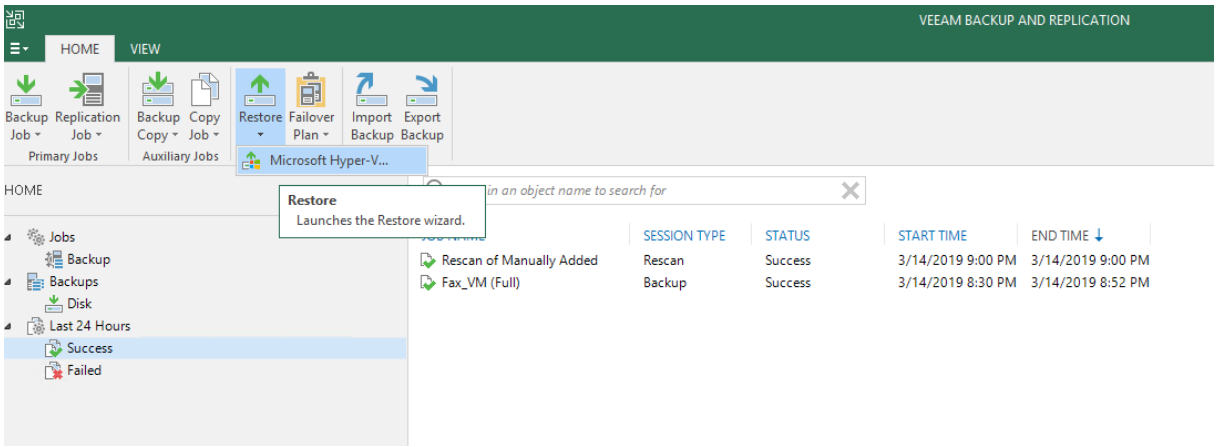
9.8 Restoring all VMs from the VBR

The procedure below describes how to restore all VMs from the VBR.

➢ **To restore all VMs from the VBR:**

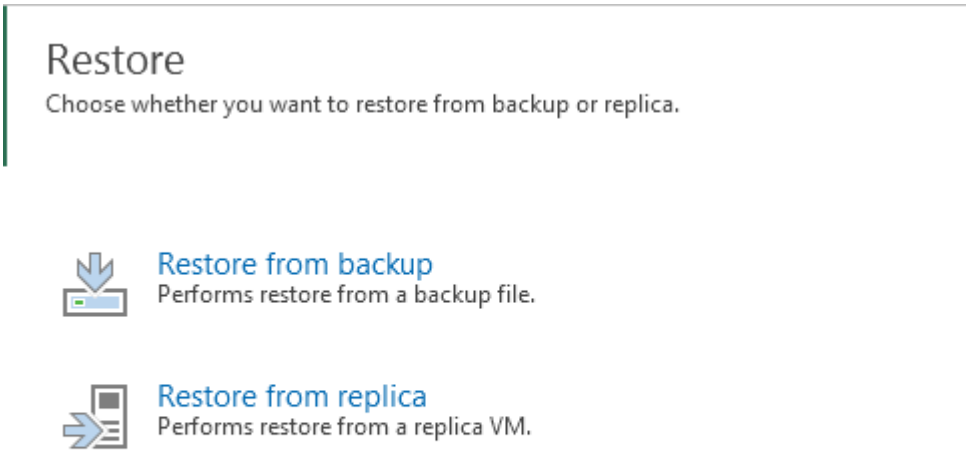
1. Open the VBR console.
2. Launch the Restore wizard (**Home** tab > **Restore** menu > **Microsoft Hyper-V**).

Figure 9-29: VBR – Hyper-V



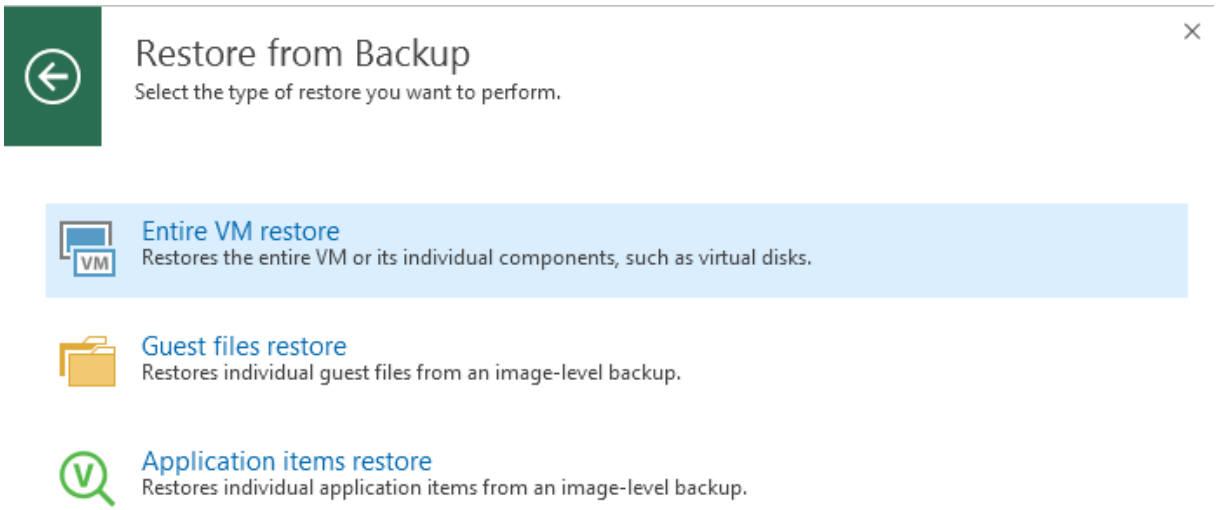
3. Select **Restore from backup** and then click the **Entire VM** option.
4. Click **Next**.

Figure 9-30: Hyper-V – Restore Type



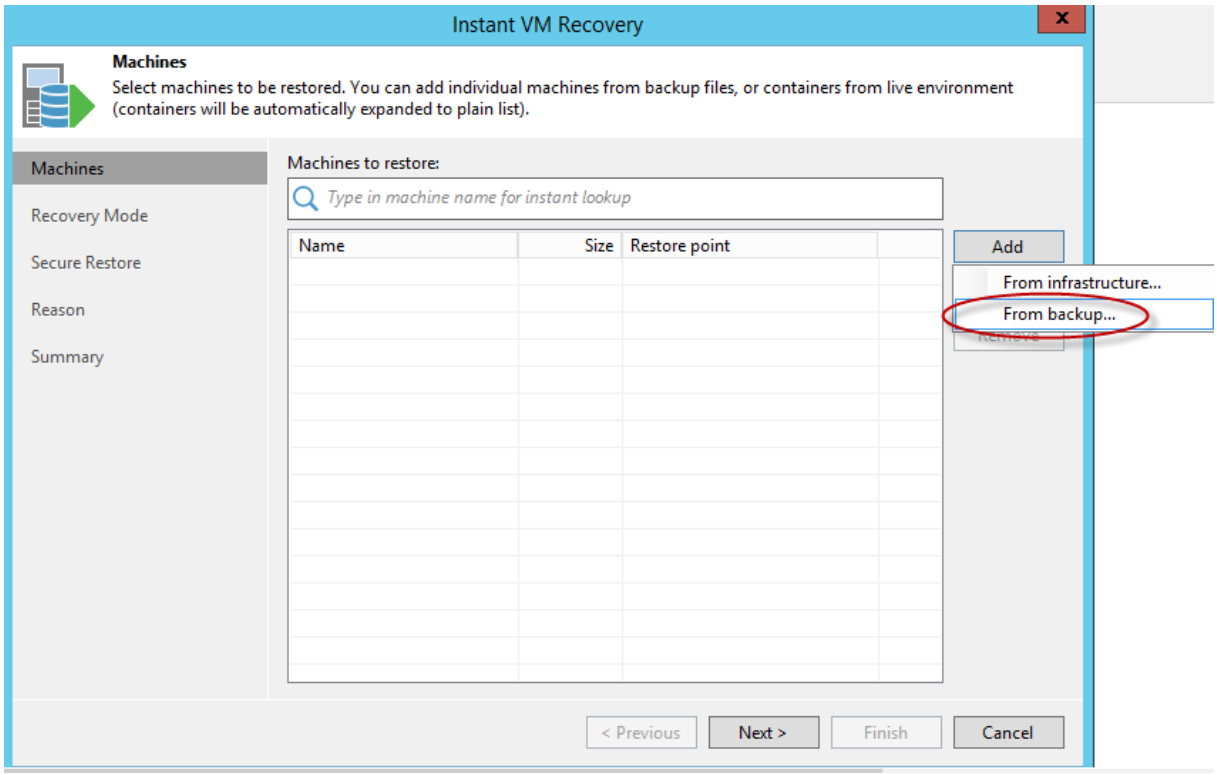
5. Select Entire VM Restore.

Figure 9-31: Restore from Backup



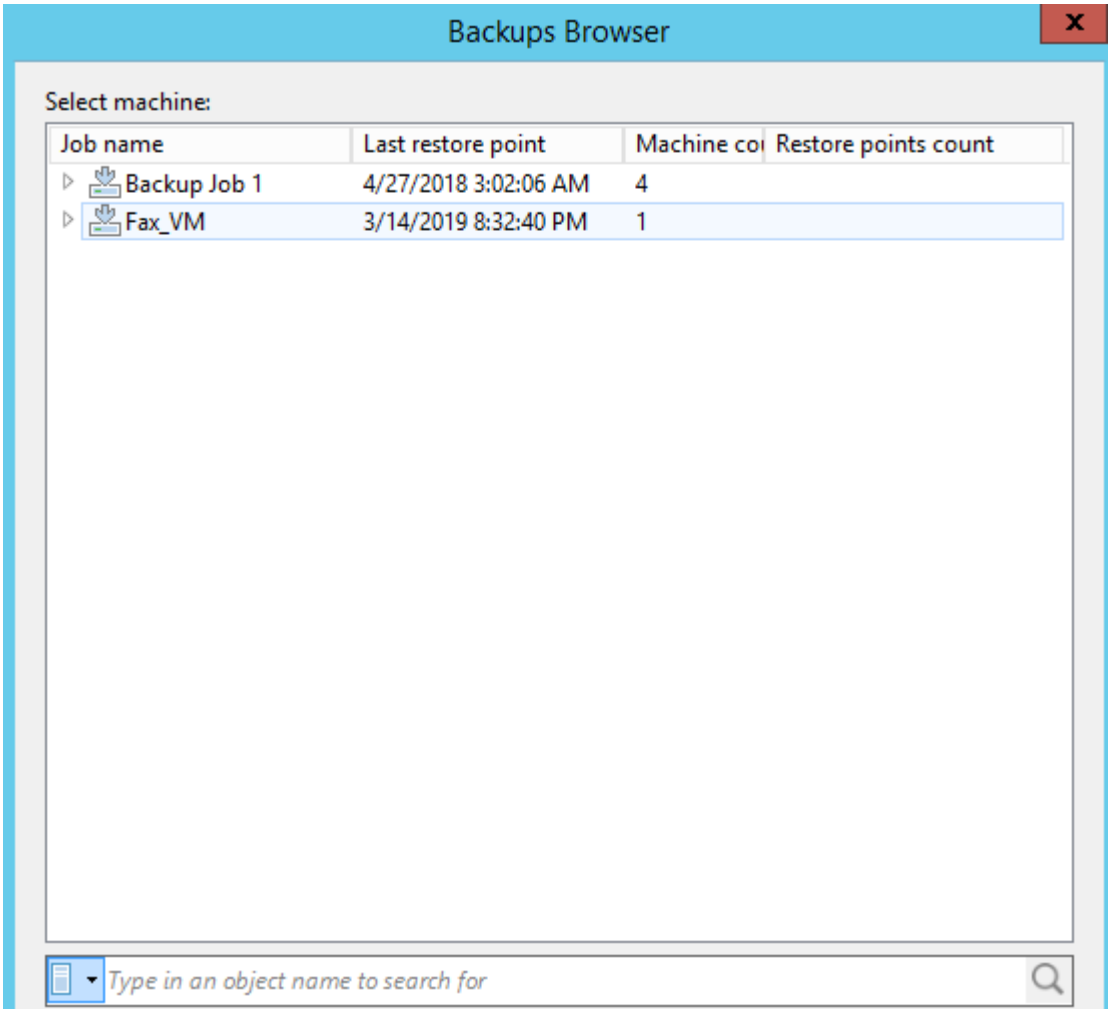
6. Click **Add**, and then select the **From backup** option.
7. Click **Next**.

Figure 9-32: Full VM Restore Wizard – Virtual Machines



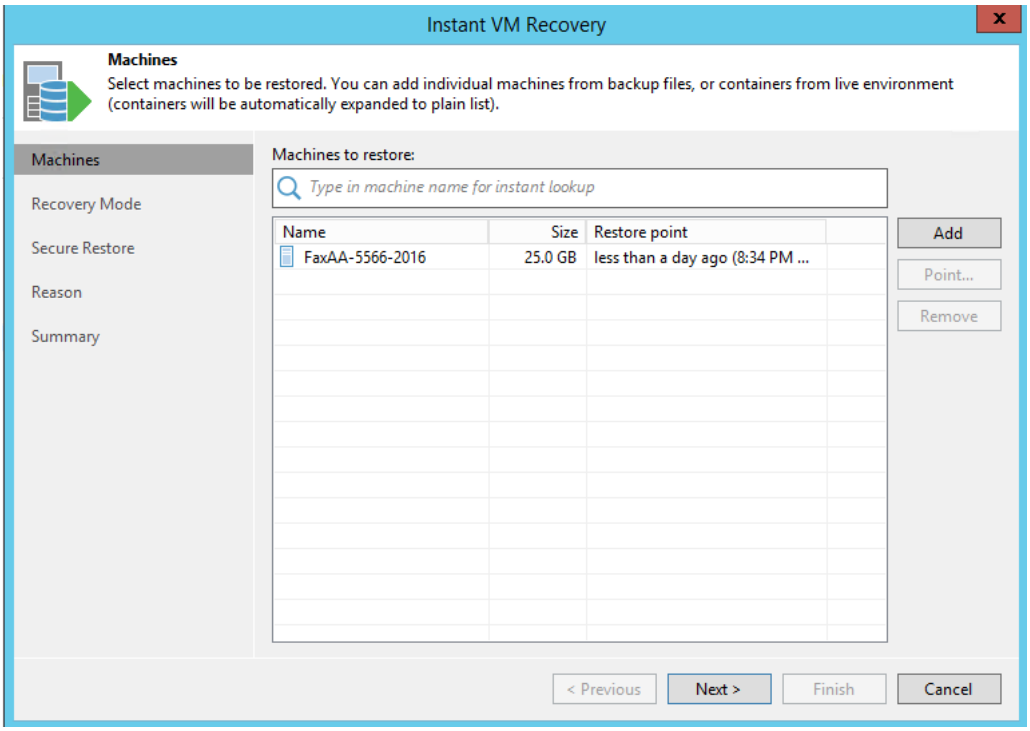
8. Select the server you wish to restore (e.g., Fax_VM), and then click **Add**.

Figure 9-33: Backup Browser



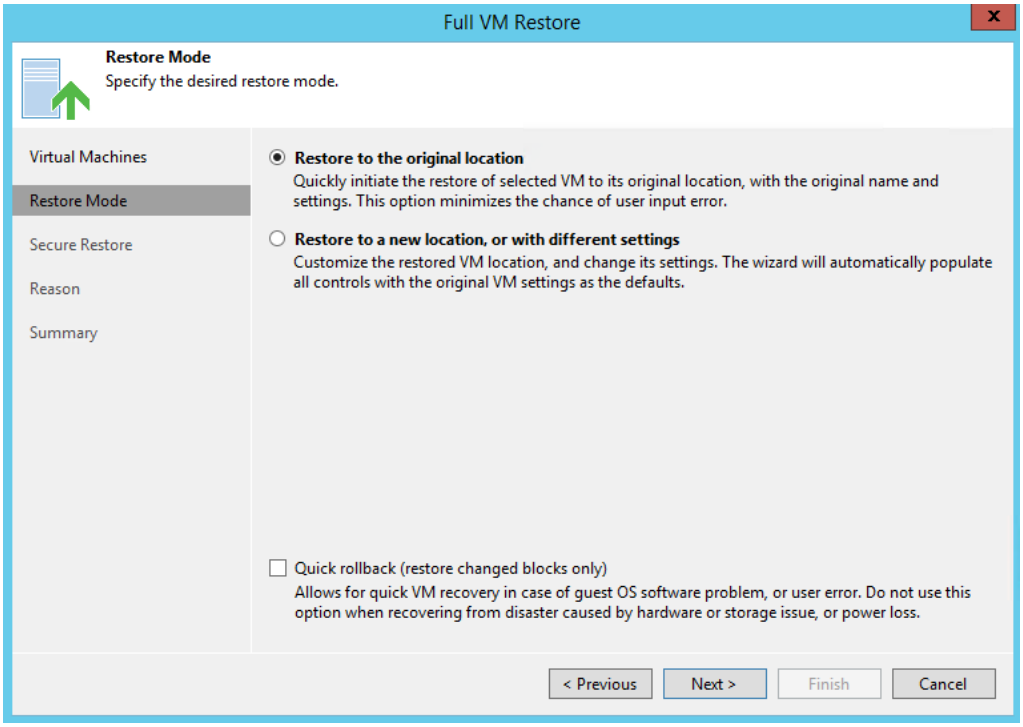
9. Click **Next**.

Figure 9-34: Full VM Restore Wizard – Virtual Machines



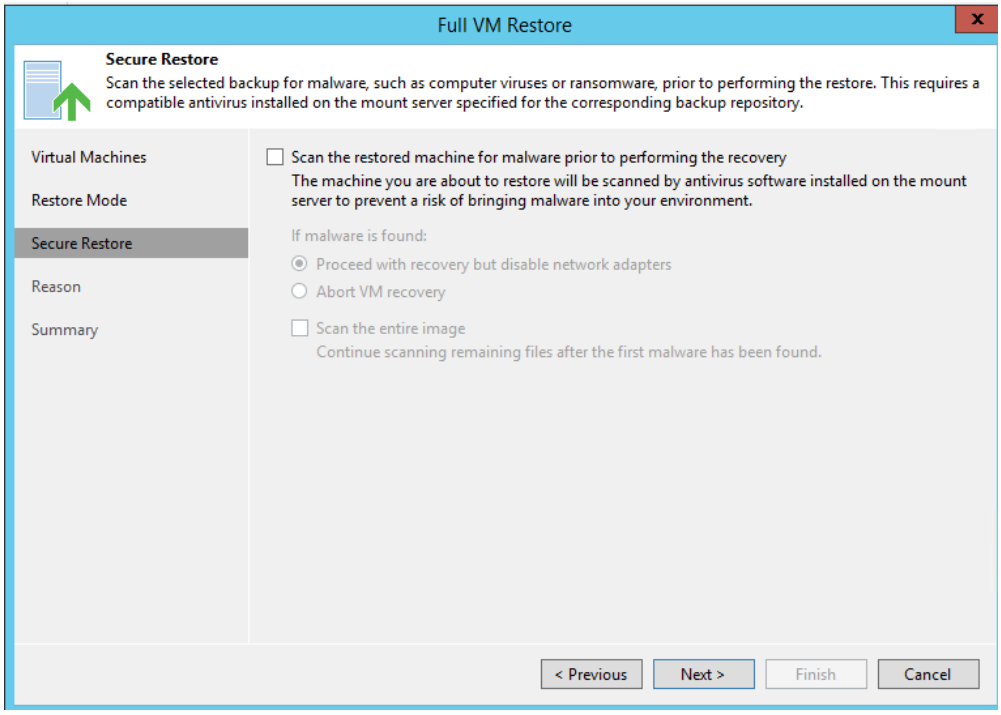
10. Click the **Restore to the original location** option, and then click **Next**.

Figure 9-35: Full VM Restore Wizard – Restore Mode



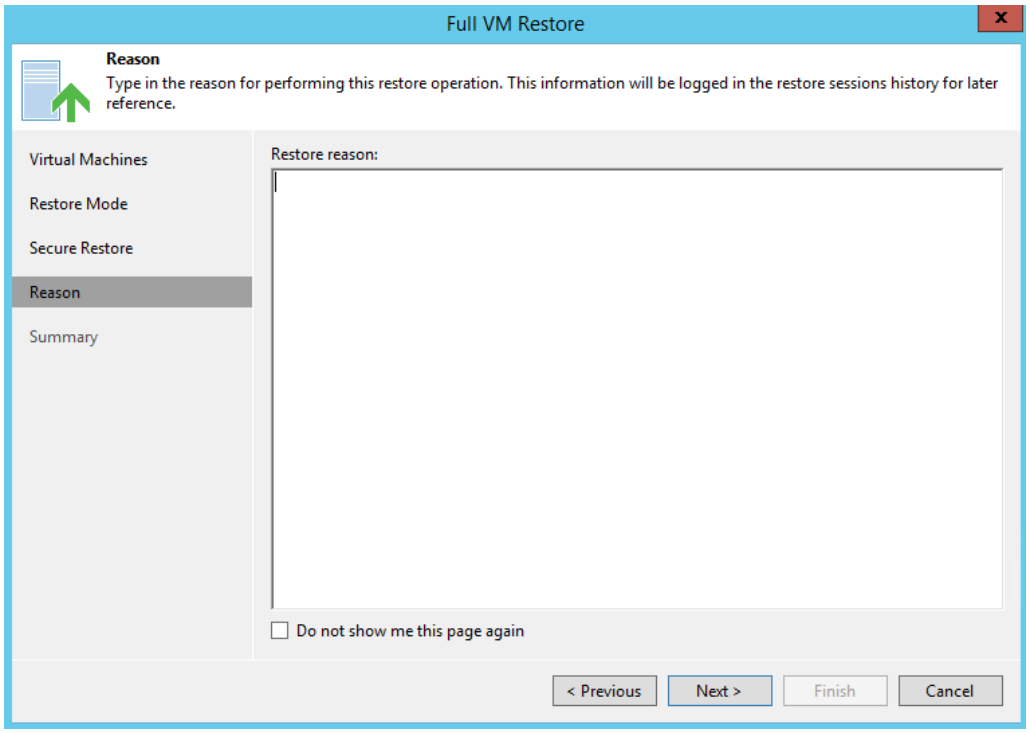
11. Click **Next** to skip the Secure Restore.

Figure 9-36: Secure Restore



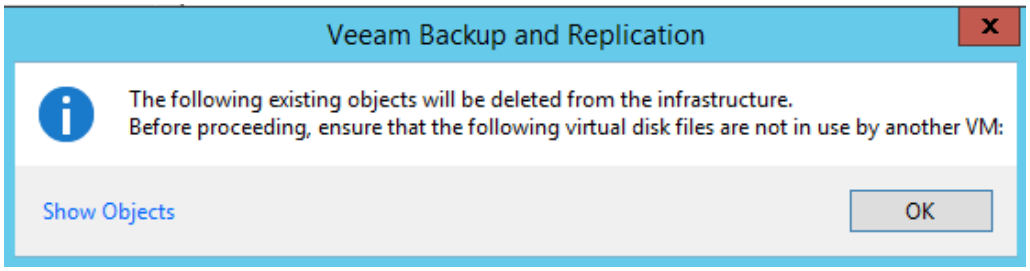
12. Add the **Restore reason**, and then click **Next**.

Figure 9-37: Full VM Restore Wizard – Reason



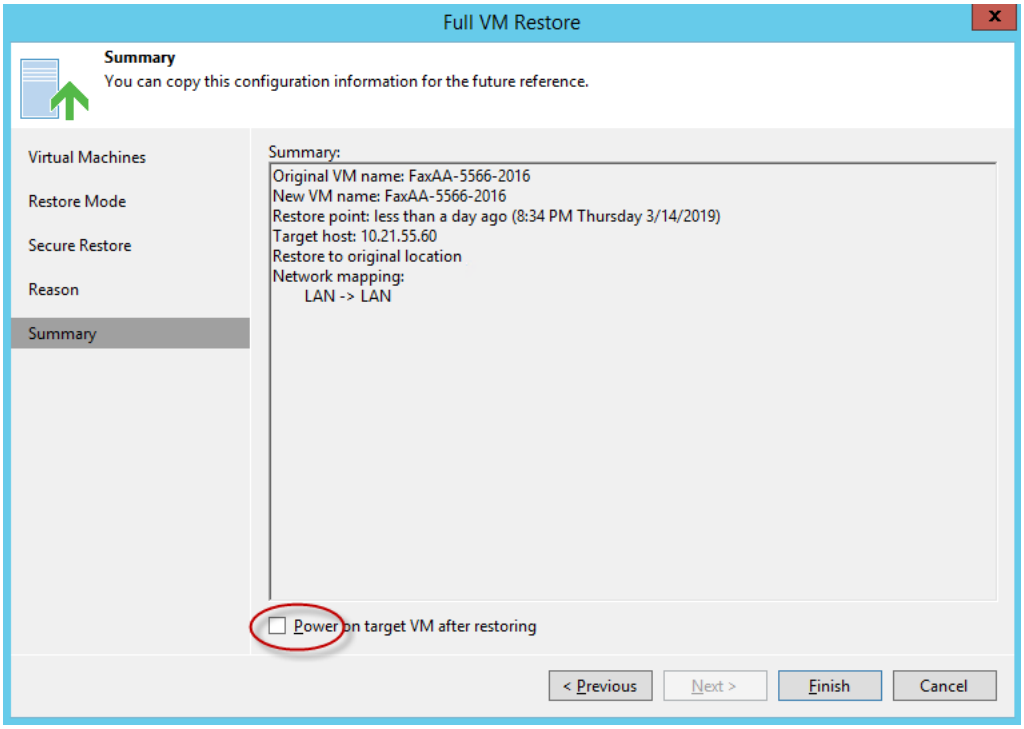
13. Approve to delete the object from the infrastructure.

Figure 9-38: Veeam Backup Replication



14. Make sure the 'Power on VM after restoring' check box is cleared.

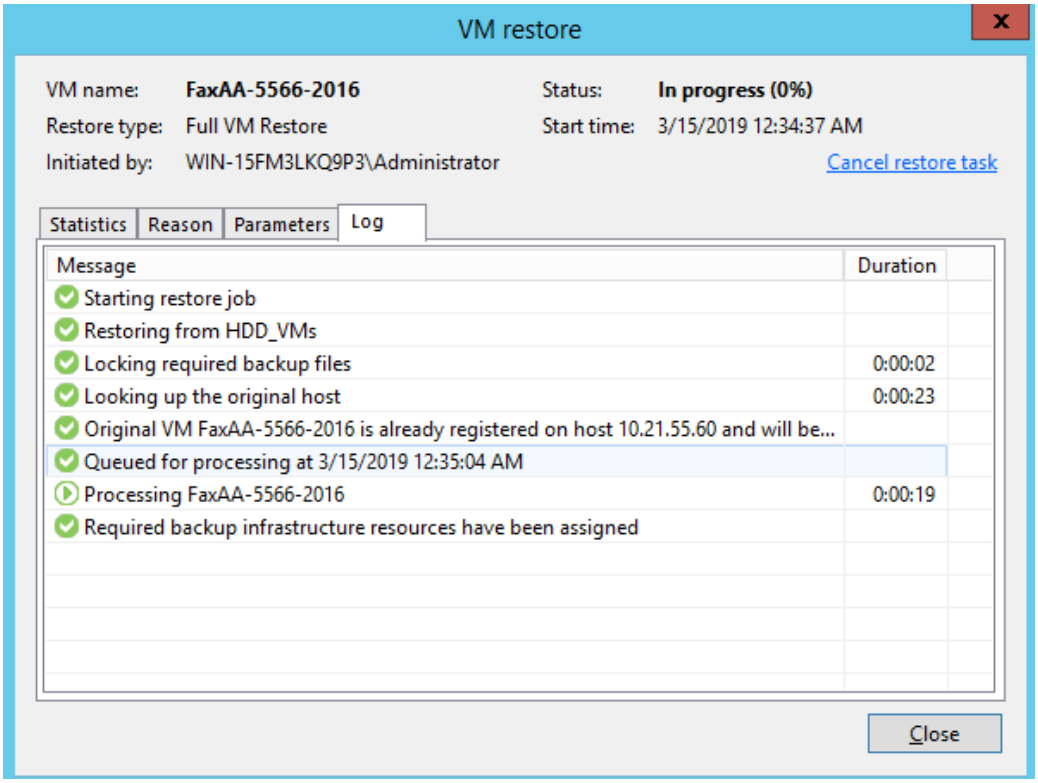
Figure 9-39: Full VM Restore - Summary



15. Click **Finish**, and then wait for the Restore process to end.

16. On the VM Restore screen, click **Close**.

Figure 9-40: VM Restore



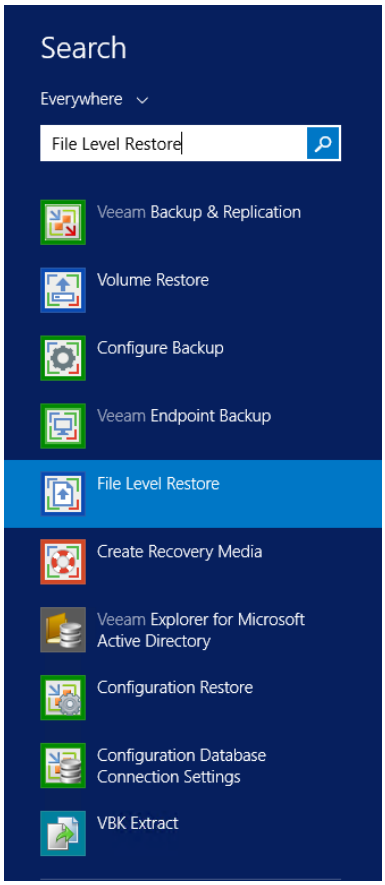
9.9 Restoring D: and E: Drives and Files

If the D: and E: drives were backed up, you need to restore them.

➢ **To restore D: and E: Drives and files:**

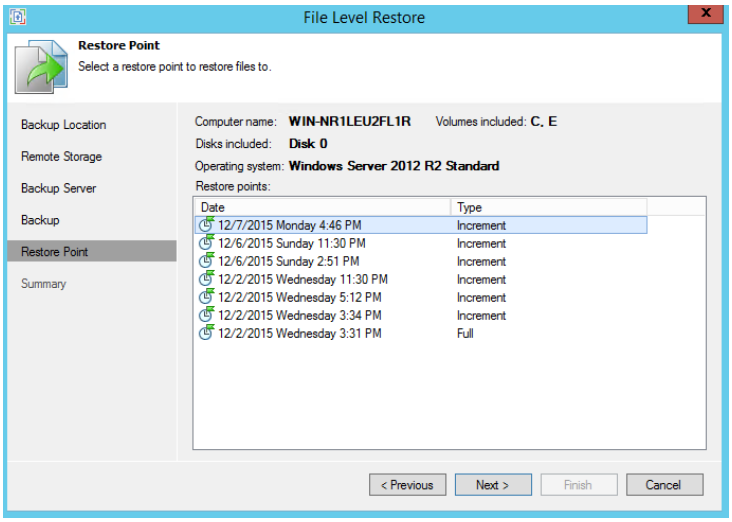
1. From the Veeam main screen, run the **File Level Restore** menu option.

Figure 9-41: File Level Restore



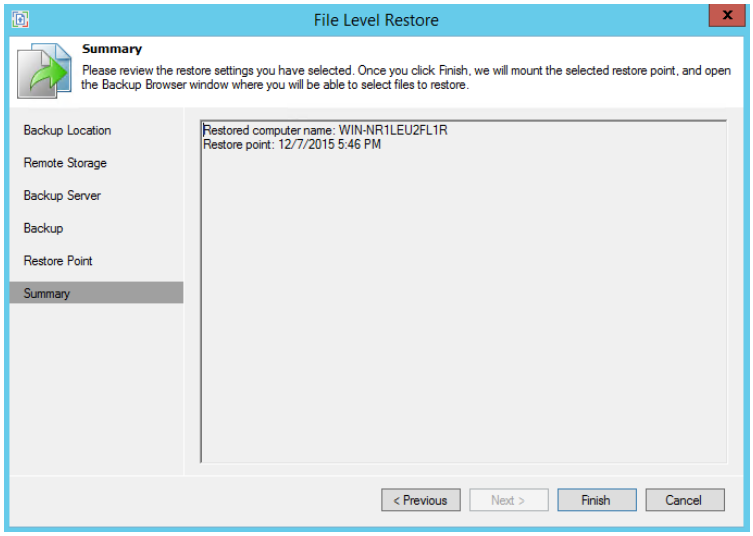
2. Select the restore point, and then click **Next**.

Figure 9-42: File Level Restore – Restore Point



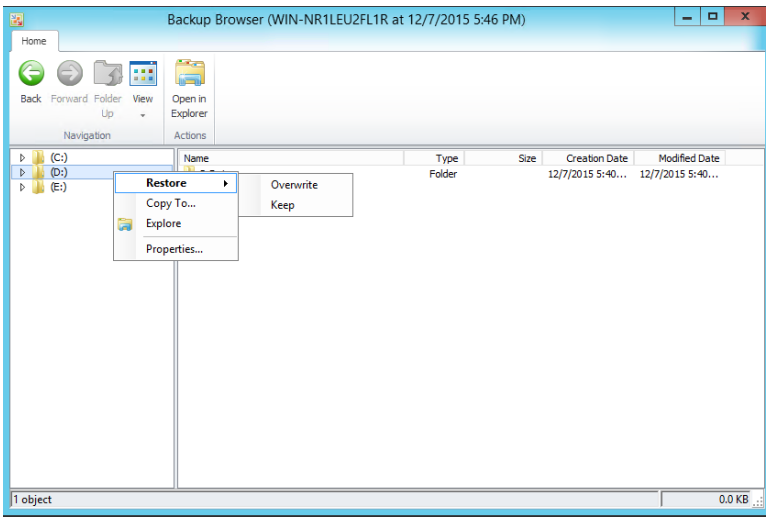
3. Click **Finish**.

Figure 9-43: File Level Restore - Summary



4. On the Backup Browser, select the drive you wish to restore.
5. Right-click the appropriate drive.
6. Select **Restore** > **Overwrite**.

Figure 9-44: Backup Browser



9.10 Starting the Virtual Domain Controller

If the Domain Controller is a Virtual Machine, it automatically starts in **Safe** mode. If it does not, skip this procedure.

When the Domain Controller boots for the first time, it is actually in Active Directory Services Restore mode as you are booting from a backup file. However it should automatically re-boot.

➢ **To Start the Virtual Domain Controller:**

1. Log in with the Directory services restore mode account (typically .\administrator)
2. Open the command prompt and run the following:

```
bcdedit /set safeboot dsrepair
bcdedit /deletevalue safeboot
```

3. Re-boot the virtual Domain Controller. It should re-boot in Normal mode.
4. Log in to the Domain Controller with the domain administrator.
5. For more information, refer to the Microsoft Knowledge Base Article below for further details http://technet.microsoft.com/en-us/library/cc816897(WS.10).aspx.

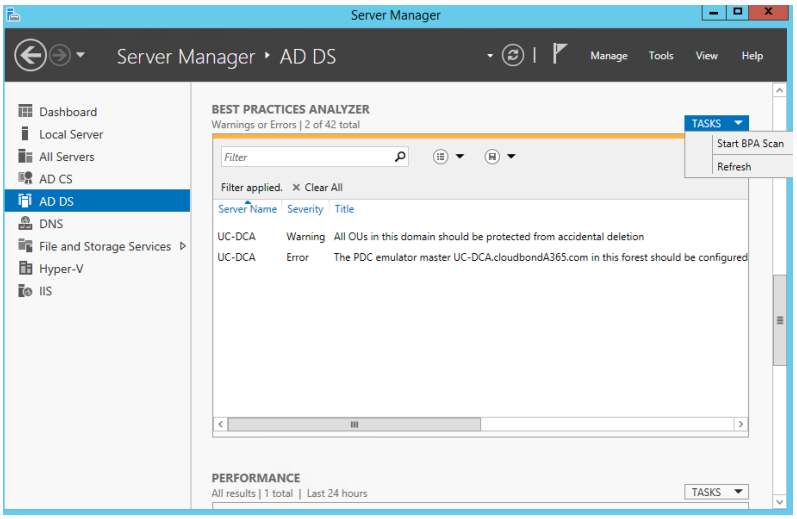
9.11 Restarting the CloudBond 365 Server and Testing the Restore

The procedure below describes the tests the need to perform to validate the restoreLog in and perform the following tests to confirm successful restore. These tests must be done to check that the restore process successfully completed.

➢ **To confirm that the restore process was successful:**

1. Restart the CloudBond 365 server.
2. If the Virtual Machine belongs to the domain, log in to every Virtual Machine as the Domain Administrator. If not, log in as the local Administrator. If a Trust error message appears, reset the computer account using the Active directory.
3. Check that all services are running.
4. Confirm that the date and time are correct and if necessary update them..
5. Check that the Windows License has been activated. If not activate it according to the instructions on the sticker.
6. Log in to SysAdmin and confirm that SysAdmin is working.
7. From the Server Manager, select the **AD DS** menu option.
8. From the 'TASKS' drop-down list, run the Best Practices Analyzer by selecting **Start BPA Scan**. Confirm that there are no errors which are as a result of the recovery.

Figure 9-45: Server Manager



9. From the command line, run the **dcdiag** command on the Domain Controller. All tests should pass (ignore if the MSDFS test fails).
10. One day after the Restore process has completed, confirm that the backup process still works automatically.
11. For BPA / Pool Pairing, run **repadmin /showreps** from the command line and then confirm that the DC was replicated.
12. If the system was installed in Resource Forest mode, confirm that the trust with the company forest is valid.
13. Confirm that the VBR Job has been enabled. If not, re-scan the repository (right-click the repository – and select Re-scan) when finishing enabling the job.
14. Run the backup job and confirm that you are able to backup.
15. One day after the restore, confirm that the backup is still working automatically for the Veeam Agent.
16. Validate that all VMs don't have Checkpoints – in case they have need to delete it.

A Creating the Veeam Recovery Media USB

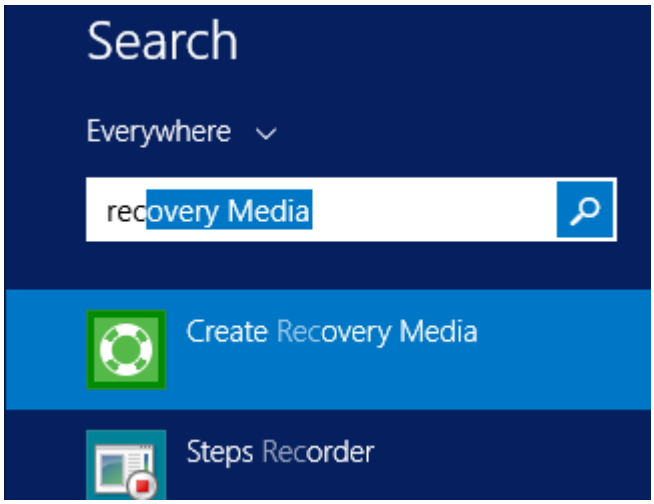
It is recommended to update the Restore Recovery USB that you get with the system, according to the following procedure. It keeps several settings which are relevant for your server (Drivers/IP). The USB minimum required size 4 GB.

This appendix describes how to create a Veeam Recovery Media USB.

➢ **To create a Veeam Recovery Media USB:**

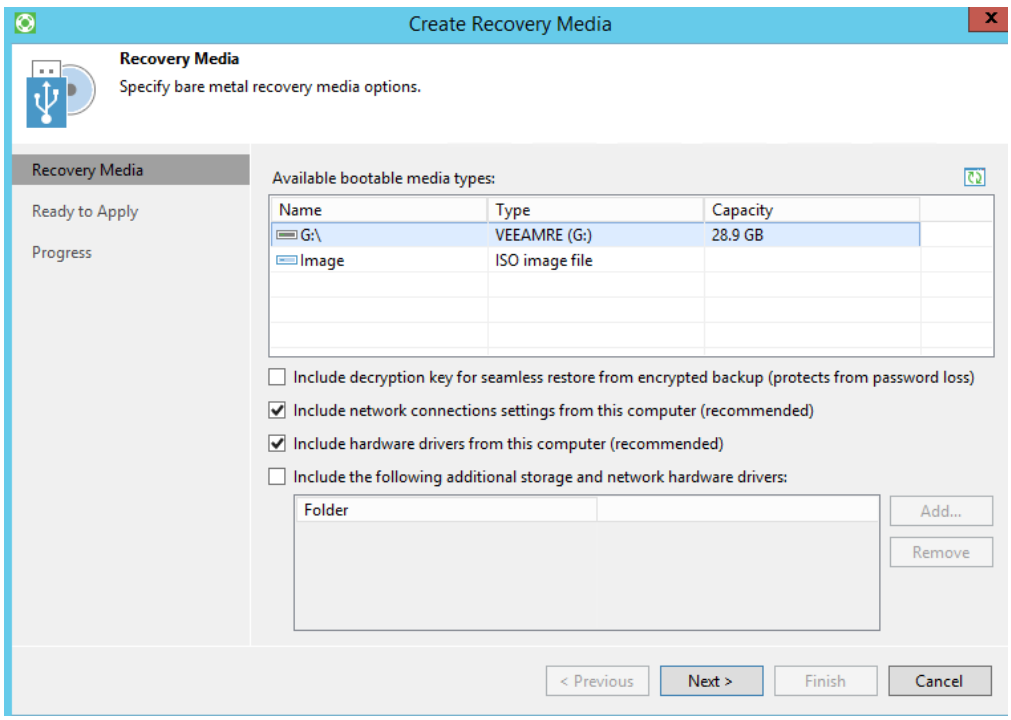
1. Insert the USB in to the CloudBond 365 device.
2. From the Start menu, run the Veeam Create Recovery Media.

Figure A-1: Create Recovery Media



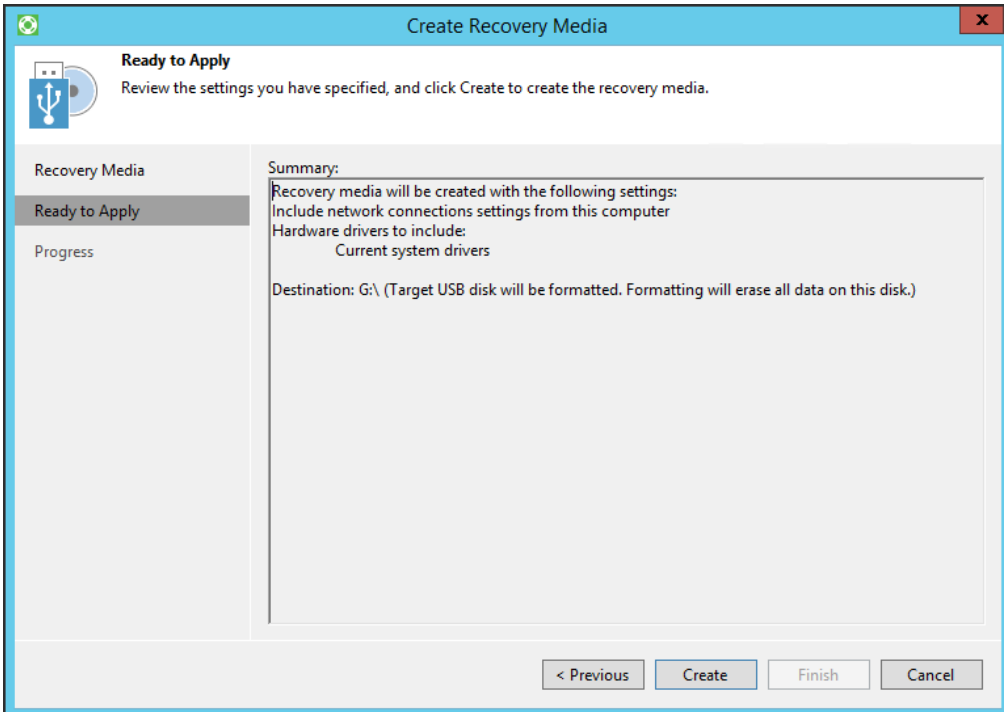
3. On the Recovery Media screen, select the USB drive.

Figure A-2: Create Recovery Media – Recovery Media



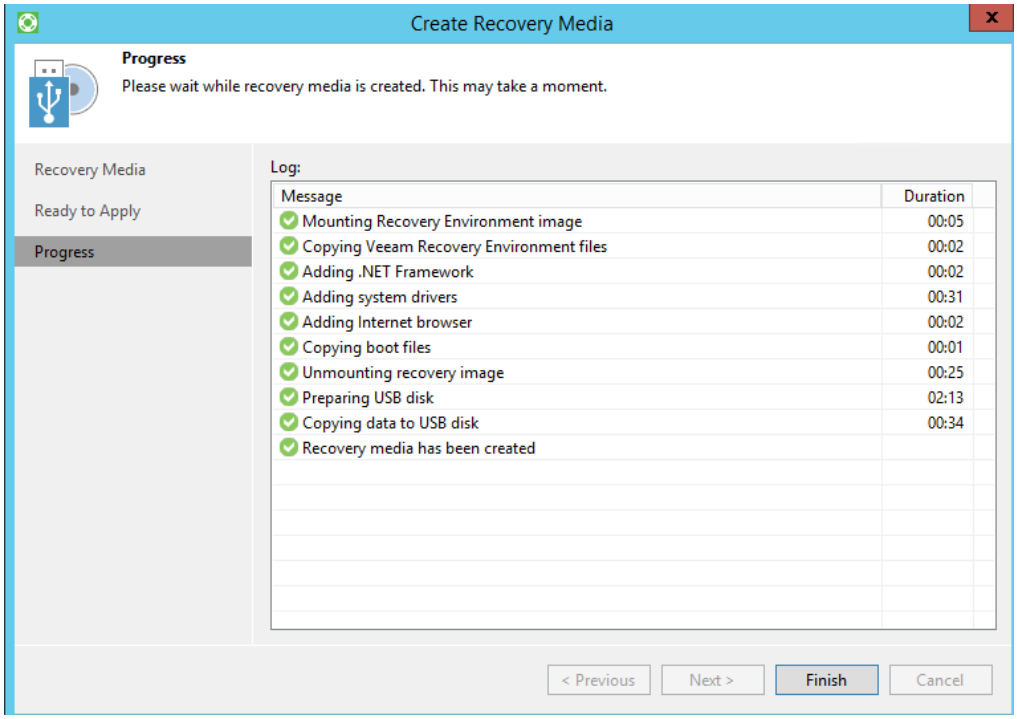
4. Click **Next** until the Progress step is displayed.
5. Approve the prompt to **Proceed**.
6. Click **Create** to make the recovery media.

Figure A-3: Create Recovery Media – Recovery Media



7. When the process has completed, click **Finish**.

Figure A-4: Create Recovery Media – Progress



8. Remove the USB from the device.

B Preparing for Veeam's Software Installation on CloudBond 365 Server

The following must be done before installing Veeam's software on the CloudBond 365 server.

Note: Installing backup may require a server restart.

Before installing Veeam's Software on CloudBond 365 Server, do the following:

1. Decide which backup architecture is required according to the available options.
2. Confirm that all servers are working (up and running).
3. To install Veeam software, you must use the Remote Desktop Connection to the CloudBond 365 and to the Backup server (VBR).
4. Download the software on the VBR server.
5. CloudBond 365 may require Windows updates to support the backup.

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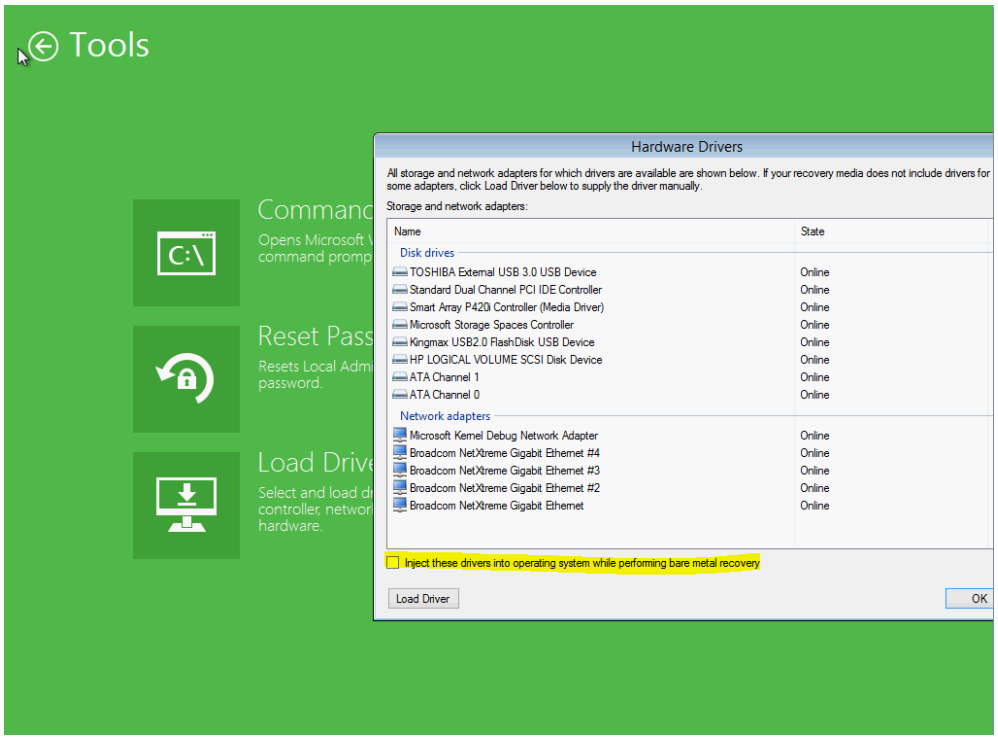
C Troubleshooting

The following provides information to assist you in troubleshooting issues.

C.1 Restoring Host Server using Veeam Agent if no or some Network Cards are Available

Make sure that when you are restoring the Host server using Veeam Agent, you first clear the 'Inject these drivers…' checkbox. If you didn't do this, perform the restore procedure again correctly.

Figure C-1: Hardware Drivers – Clear Check Box



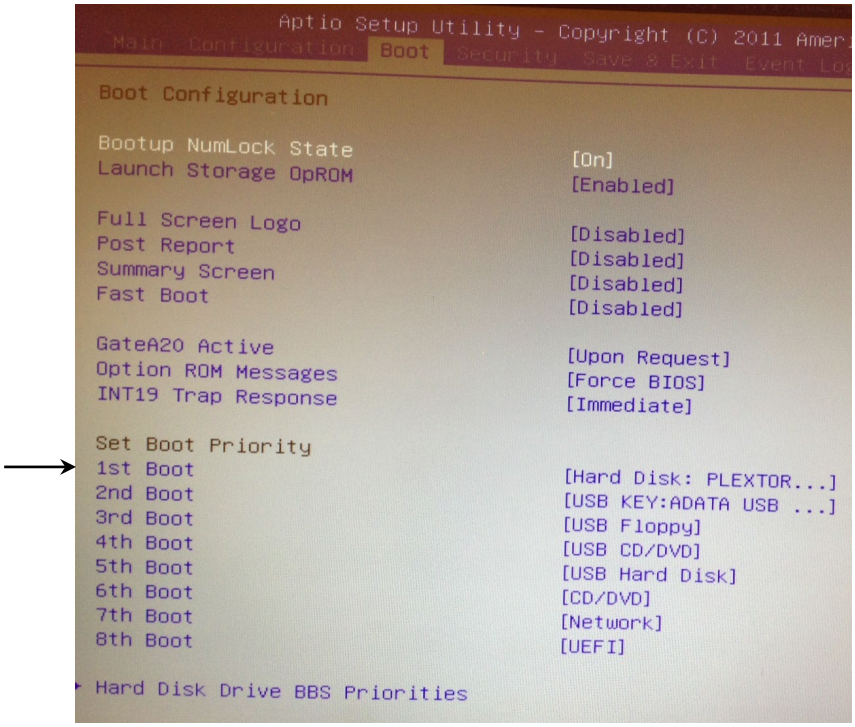
➢ **To restore the Host Server using Veeam Agent if no or some network cards are available:**

1. Open the device manager and enable the 'Shown hidden device' option from the **View** menu.
2. Delete all the network cards which are marked with an error flag.
3. From **Action** menu select the **Scan** option.
4. Ensure that all networks are available now.
5. Restart the server.
6. Define the HyperV virtual switch again, using the same names as was done previously (e.g., LAN and DMZ).

C.2 No Boot Device Error – Setting Boot Priority

If a USB (Key or Disk) is connected to the server, confirm that the boot order in the BIOS is correct and that the hard disk is set as the first priority, as shown in the figure below.

Figure C-2: Hardware Drivers – Setting Boot Priority



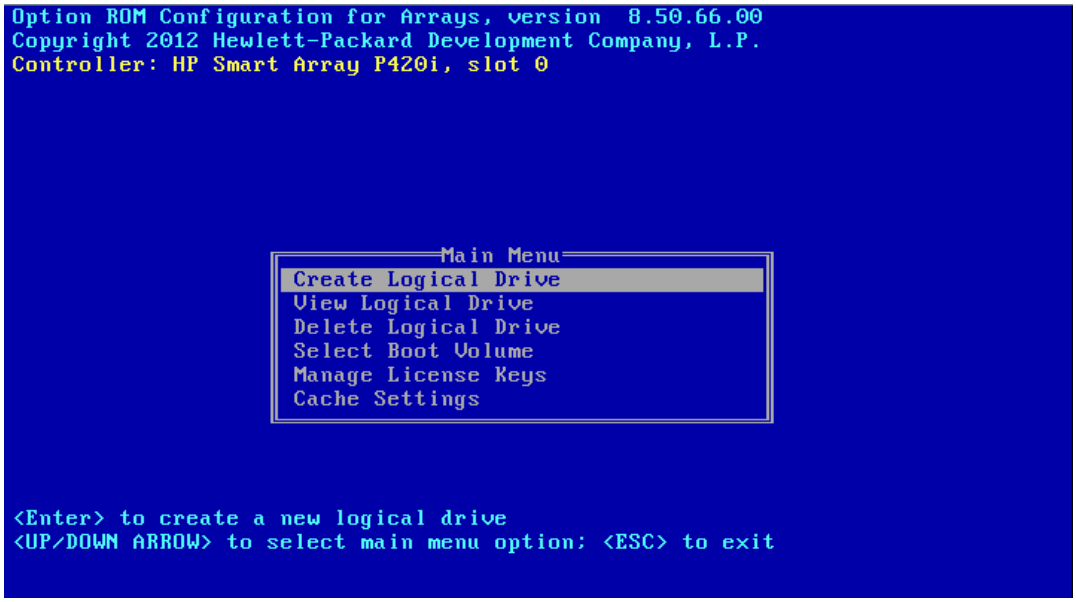
C.3 No Boot Device Error - How to Define Logical Drive and Selecting Boot Volume

This section is relevant only for CloudBond 365 Pro Box and Enterprise Box editions.

➢ **To define the logical drive and select the boot volume:**

- Re-boot the CloudBond 365 server, and then press **F8**; the following screen appears:

Figure C-3: Defining a Logical Drive



From this menu you can:

- View a logical drive. For the Pro Box edition, the name of the drive should be **RAID 1**. For the Enterprise Box edition it should be **RAID 5**.
- Delete the current logical Drive
- Create a logical drive
- Select the boot volume

If the RAID setup is incorrect, delete the current one and define the correct one. If you see a Boot Error message, select the boot volume as the logical drive that attaches to the server.

International Headquarters
1 Hayarden Street,
Airport City
Lod 7019900, Israel
Tel: +972-3-976-4000
Fax: +972-3-976-4040

AudioCodes Inc.
200 Cottontail Lane
Suite A101E
Somerset NJ 08873
Tel: +1-732-469-0880
Fax: +1-732-469-2298

Contact us: https://www.audiocodes.com/corporate/offices-worldwide
Website: https://www.audiocodes.com/

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