
AZURE HANDS-ON LABS



7 NOVEMBER 2017

COPACO

Hoevenweg 21, 5652 AW Eindhoven

Inhoudsopgave

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Start a Veeam Lab

<https://copaco.learnondemand.net>



[Contact](#)



Login

Username:

Password:

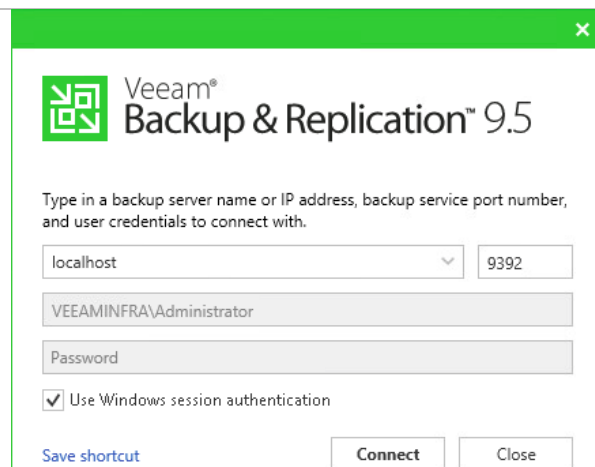
[Trouble logging in?](#)

AzureHOL01	Pa\$\$w0rd
AzureHOL02	
AzureHOL03	
AzureHOL04	
AzureHOL05	
AzureHOL06	
AzureHOL07	
AzureHOL08	
AzureHOL09	
AzureHOL10	
AzureHOL11	
AzureHOL12	
AzureHOL13	

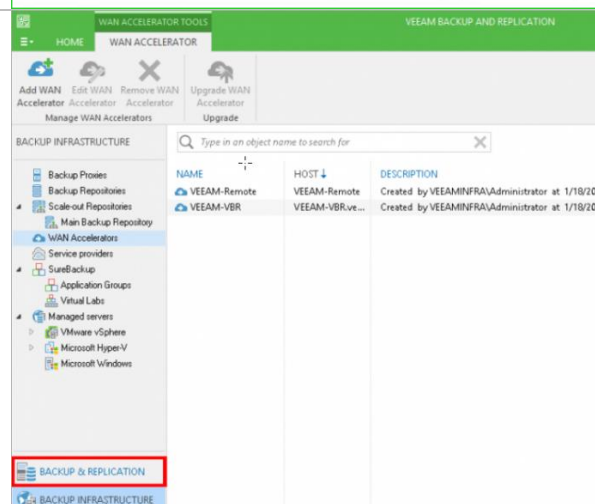
[Launch Lab 5](#)

Exercise 1: Create a Backup job

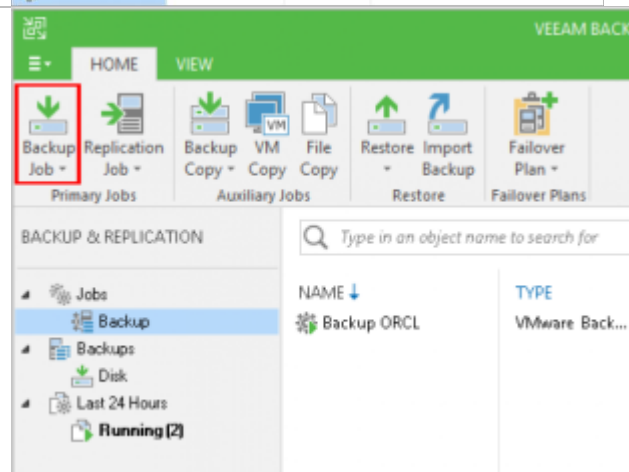
From the desktop, launch Veeam backup & replication. You can log in using Windows session authentication.



Open the **Backup & Replication** view, select Jobs.



In the Backup & Replication view, click the **Backup Job** button on the ribbon



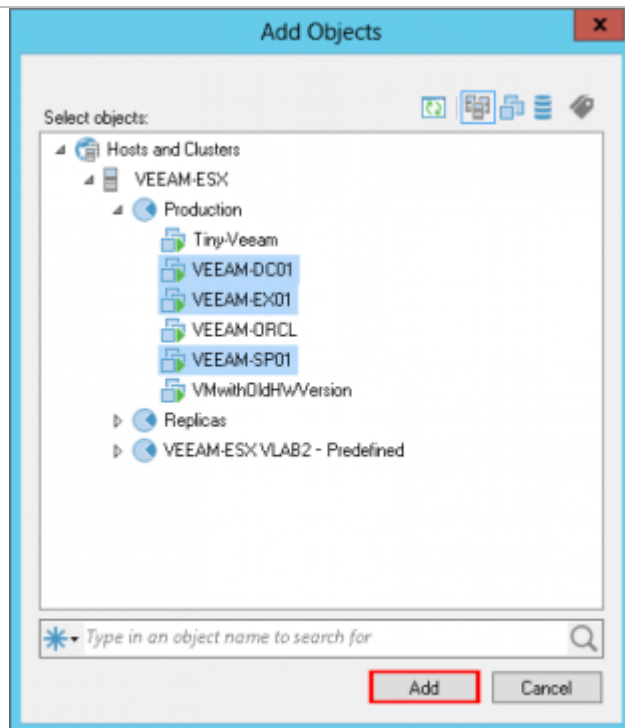
Select VMware from the drop-down list.

At the first step of the wizard, enter a *Backup AD & Exchange & SharePoint* as the Name. Leave the Description initially provided for the job. Click **Next**.

Click **Add...** to browse the VI infrastructure to have a look at the possible selection criteria

Expand **VEEAM-ESX**, Expand the *Production* resource pool and Select **VEEAM-DC01**, **VEEAM-EX01** and **VEEAM-SP01**

Click **Add**.



Leave **Automatic selection** for **Backup proxy**.

Confirm **Main Backup Repository** is selected in the **Backup repository** drop down menu.

Under **Retention policy**, change the Restore points to keep on disk to **2**.

Click Next to proceed to the Guest processing step

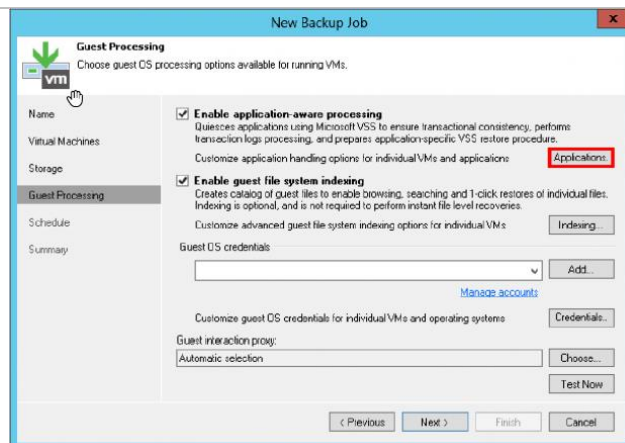
Enable application-aware image processing.

Enable application-aware image processing is used to "freeze" the VMs when the snapshot is created. This leads to the creation of a transactionally consistent backup that ensures successful recovery of VM applications without any data loss.

Click **Enable guest file system indexing** checkbox.

Note: Guest file indexing allows you to search faster for VM guest OS files inside VM backups using Veeam Backup Enterprise Manager.

Click **Applications** to customize application handling options.



To set database transaction log processing, select **VEEAM-SP01** where the SQL server is located

Click **Edit**.

Click the **SQL** tab to specify an SQL-server specific option.

Select **Backup logs periodically**.

By default, the Backup logs every field will be set to **15** minutes. Change **15** to **60**. Leave the **Automatic Selection for Log shipping servers** field intact and click **OK**.

Note: For this setting to take effect, you should ensure that Full or Bulk-logged recovery model is turned on for the required databases on the SQL server VM. If the recovery model is set to Simple, Veeam Backup & Replication does not detect or process SQL server VM's logs. If Full model is enabled but neither the Backup nor Truncate logs option is selected, logs will increase in size and occupy disk space.

The screenshot shows the 'VEEAM-SP01 Processing Settings' dialog box with the 'SQL' tab selected. The 'General' tab is also visible. The 'SQL' tab contains the following options:

- Choose how this job should process Microsoft SQL Server transaction logs:
 - ☐ Truncate logs (prevents logs from growing forever)
 - ☐ Do not truncate logs (requires simple recovery model)
 - ☒ Backup logs periodically (backed up logs are truncated)
- Backup logs every: **60** minutes
- Retain log backups:
 - ☒ Until the corresponding image-level backup is deleted
 - ☐ Keep only last **15** days of log backups
- Log shipping servers:
 - Automatic selection
 - Choose...

The 'OK' button is highlighted with a red box.

Confirm your selection by clicking **OK**

The screenshot shows the 'Application-Aware Processing Options' dialog box. It contains a table with the following data:

Object	VSS	Transaction logs	Exclusions	Scripts
VEEAM DC...	Require success	SQL: Truncate, Exchange Tru...	Disabled	No
VEEAM EX...	Require success	SQL: Truncate, Exchange Tru...	Disabled	No
VEEAM SP...	Require success	SQL: Backup, Exchange Trun...	Disabled	No

The 'OK' button is highlighted with a red box.

Click **Add...** to specify credentials.

Select **Standard account...** in the drop-down list

Specify **VEEAMLAB\Administrator** and **Pa\$\$w0rd** as **Username** and **Password**. Confirm by clicking **OK**.

The screenshot shows the 'Credentials' dialog box. It contains the following fields:

- Username: **VEEAMLAB\Administrator**
- Password: **Pa\$\$w0rd**
- Description: **VEEAMLAB\Administrato**

The 'OK' button is highlighted with a red box.

Click **Test Now** to check if the specified credentials will work.

less than a day ago) Add...

[Manage accounts](#)

for individual VMs and operating systems Credentials..

+ Choose...

Test Now

< Previous Next > Finish Cancel

Wait till the check is done. When the status changes to **Success**, click **Close**.

Guest Credentials Test

VM name	Status	Action	Duration
VEEAM-DC01	Success	Building VMs list	
VEEAM-EX01	Success	VMs count: 3	
VEEAM-SP01	Success	Processing VM: VEEAM-DC01	0:00:29
		Processing VM: VEEAM-EX01	0:00:32
		Processing VM: VEEAM-SP01	0:00:33

Retry Test Close

Click **Next**

Tick the **Run the job automatically** checkbox

New Backup Job

Schedule
Specify the job scheduling options. If you do not set the schedule, the job will need to be controlled manually.

☒ **Run the job automatically**

☐ Only at this time: 10:00 PM Everyday Days

☐ Monthly at this time: 10:00 PM Fourth Saturday Monthly

☐ Periodically every: 1 Hours Schedule

☐ After this job: Backup ORCL (Created by VEEAMNFRA Administrator at 12/8/6)

Automatic retry
☒ Retry failed VMs processing: 3 times
Wait before each retry attempt for: 10 minutes

Backup window
☐ Terminate job if it exceeds allowed backup window
If the job does not complete within allocated backup window, it will be terminated to prevent snapshot corruptions during production hours.

< Previous Save Finish Cancel

Check Run the job automatically and Enable Daily then select your time schedule. Let the job run at 20:00.

New Backup Job

Schedule
Specify the job scheduling options. If you do not set the schedule, the job will need to be controlled manually.

☒ **Run the job automatically**

☒ **Daily at this time:** 10:00 PM Everyday Days

☐ Monthly at this time: 10:00 PM Fourth Saturday Monthly

☐ Periodically every: 1 Hours Schedule

☐ After this job: Backup ORCL (Created by VEEAMNFRA Administrator at 12/8/6)

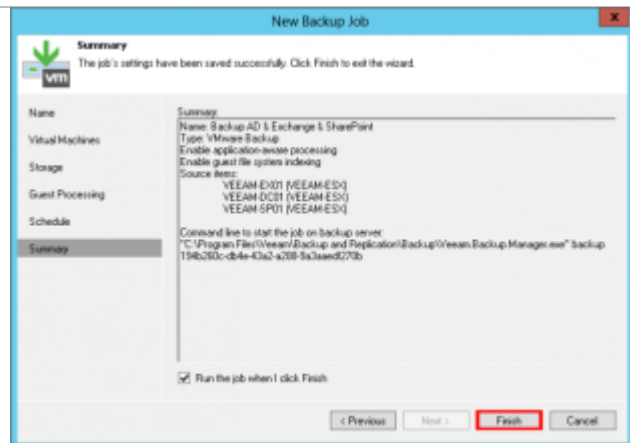
Automatic retry
☒ Retry failed VMs processing: 3 times
Wait before each retry attempt for: 10 minutes

Backup window
☐ Terminate job if it exceeds allowed backup window
If the job does not complete within allocated backup window, it will be terminated to prevent snapshot corruptions during production hours.

< Previous Save Finish Cancel

It is important this job runs now. Make sure **Run the job when I click Finish** is checked.

Click **Finish**



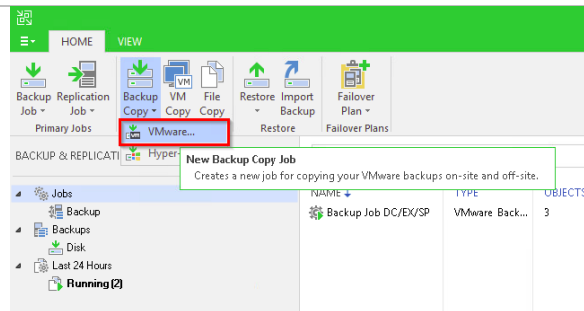
At this point an initial backup will be made.

This backup, we can use to restore application items and perform a **Direct Restore to Azure**

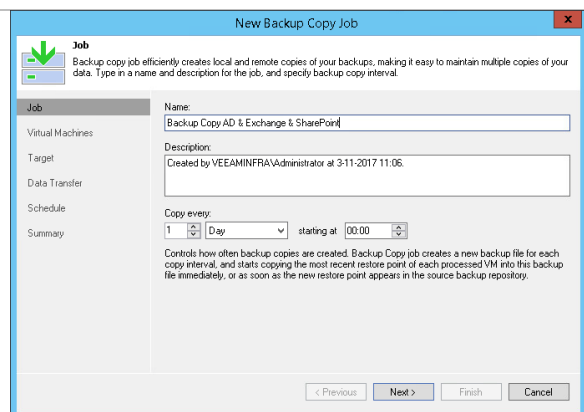
To view how Veeam actually performs the backup, you can take a look at the Running Jobs and double click the Backup Job.

Exercise 2: Create a Backup Copy Job

In the Backup & Replication view, select **Backup Copy** and click **VMware**



At the first step of the wizard, enter **SharePoint** as the Name. Keep the **default** Description and copy interval and click **Next**.

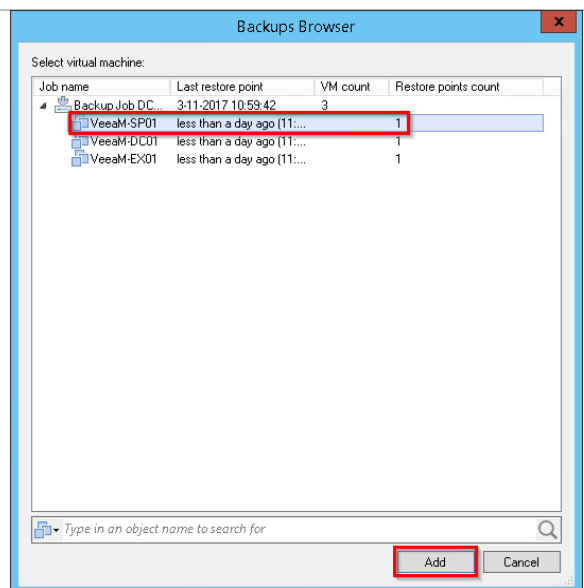


On the **Virtual Machines** page, click **Add...**

Select the **from backups...** option from the drop-down list.

Expand backup job **Backup AD & Exchange & SharePoint**

Choose **Veeam-SP01** and click **Add**

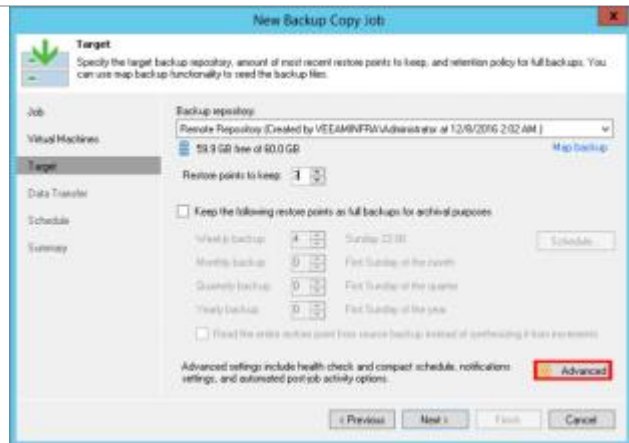


Click **Next**.

Click the **Backup repository** dropdown list.

Choose **Remote Repository**

Set the Restore points to keep: at **3** and click **Advanced**.

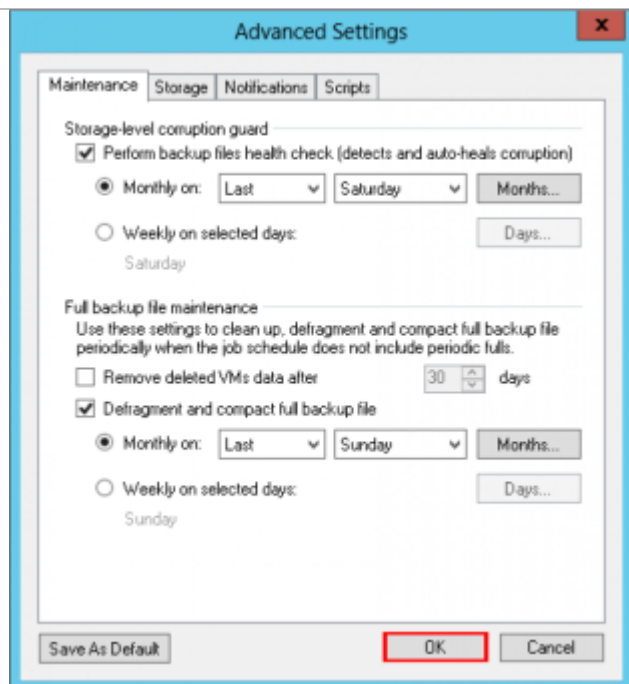


In the **Advanced Settings** dialog, enable the **Health check**.

An automatic health check allows you to avoid a situation when a restore point gets corrupted, making all further increments corrupted, too.

To periodically compact a full backup, select the **Defragment and compact full backup file** check box. The compact option can be enabled only if you have not specified the GFS settings.

Click **OK**



Click **Next**

On the Data Transfer page make sure that the **Direct** method is selected and click **Next**.

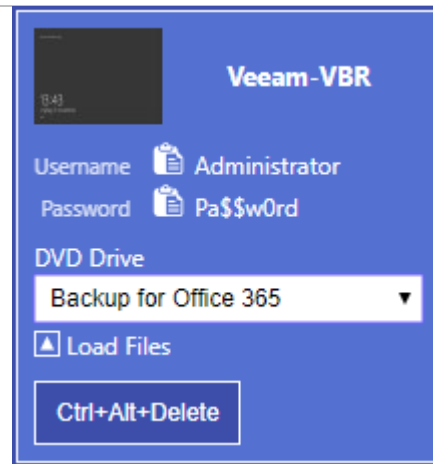
On the **Schedule** page, leave the radio button at **Any time (continuously)** and click **Save**.

On the Summary page, make sure **Enable the job when I click Finish** is checked and click **Finish**.

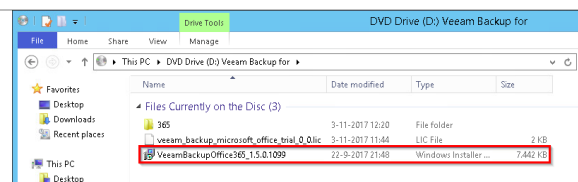
Exercise 3: Veeam Backup from Office 365

From the bar on the right side of the screen. Select **Veeam-VBR**. Then select the drop down list of the DVD drive and select **Backup for Office 365**.

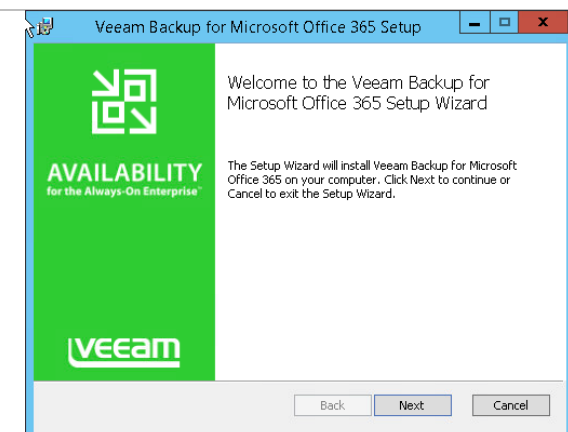
An iso file will be loaded as DVD drive in which the setup and license for Backup for Office 365 are included.



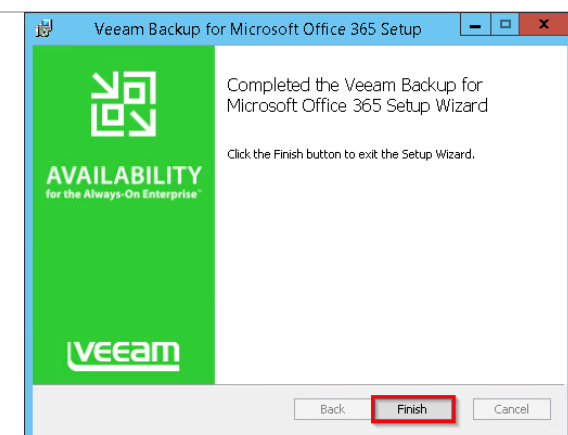
Open de **DVD drive (D:)** and double click **VeeamBackupOffice365_1.5.0.1099**



The installation can easily be done by using the default configuration. **Accept the EULA** and proceed installation by clicking **Next**

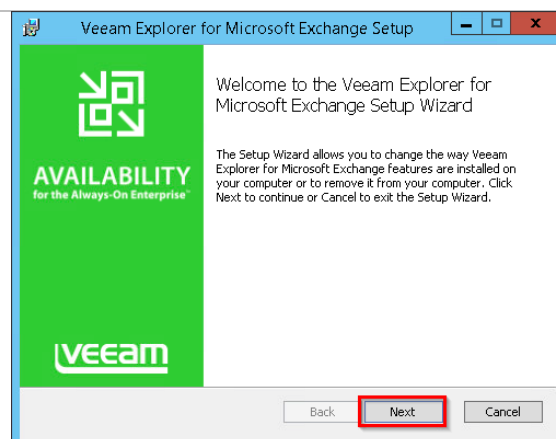


Once the installation is done, press **Finish**



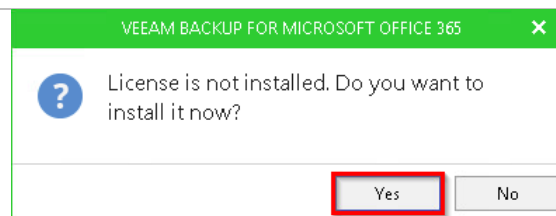
After Veeam Backup for Office 365 is installed, we need to make sure that we can also restore an email.

Open de DVD drive (D:\) and double click **VeeamExplorerExchange_9.6.0.1099** to start the installation. This is a simple next, next, finish installation.

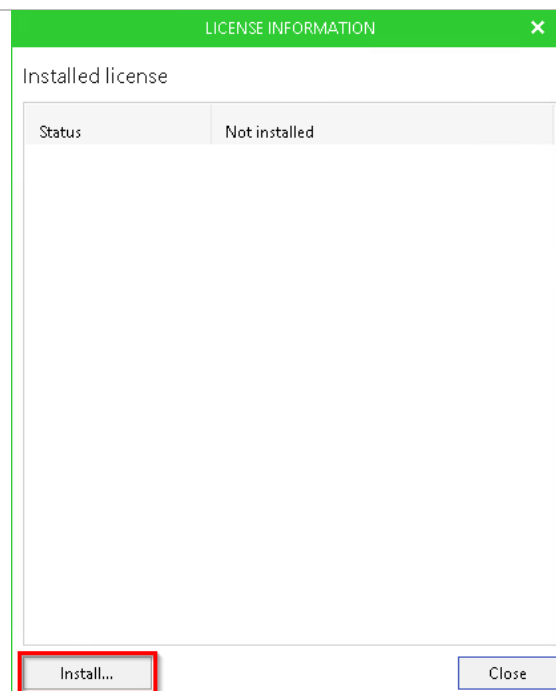


Once the Explorer installation is done, launch **Veeam Backup for Microsoft Office 365** from the Desktop.

When Veeam Backup for Office 365 open, you immediately will be prompted to install a license. Press **Yes** to open The License Information screen.



Press **Install...** and browse to D:\. Select the Veeam Trial License and click **Open**.



Licence information will be loaded. Once you have verified that the license is correct, press **Close**.

Note: You will get a prompt you that the Licence will expire soon. Acknowledge the prompt.

Status	Valid
Expiration date	3-12-2017 (30 days left)
Type	Evaluation
Licensed to	Copaco
Contact person	Bart Pellegrino
Users	250 (0 used)
Support expiration date	3-12-2017 (30 days left)

Install... Close

From the **Organizations** view, click **Add Org**

HOME

Add Org Edit Org Remove Org Backup Explore

Organization Jobs Integration

ORGANIZATIONS NAME ↑

Organizations

Last 24 hours

Make sure that the **Microsoft Office 365** radio button is selected and press **Next**

ADD ORGANIZATION

Organization deployment type

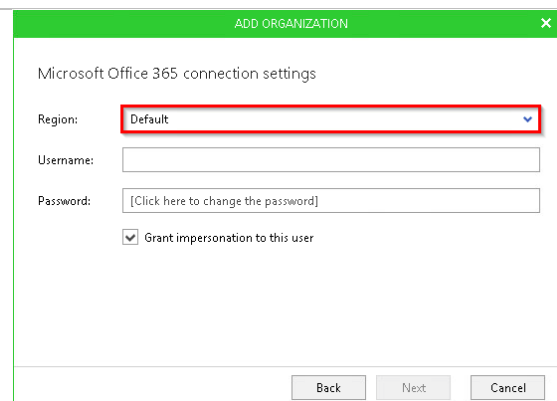
☒ Microsoft Office 365

☐ Hybrid deployment

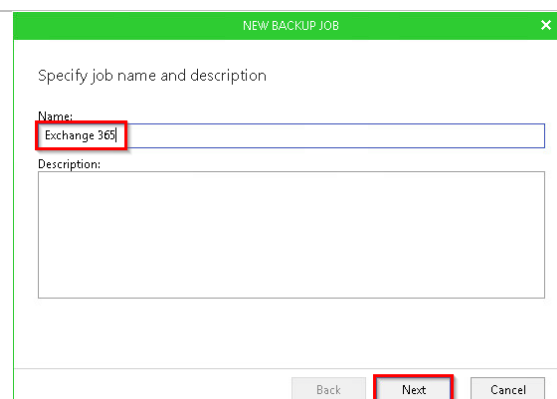
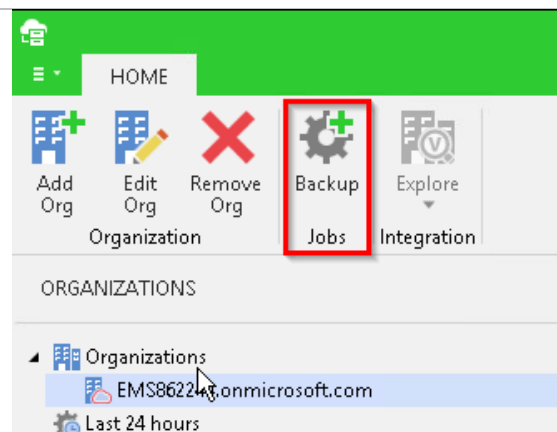
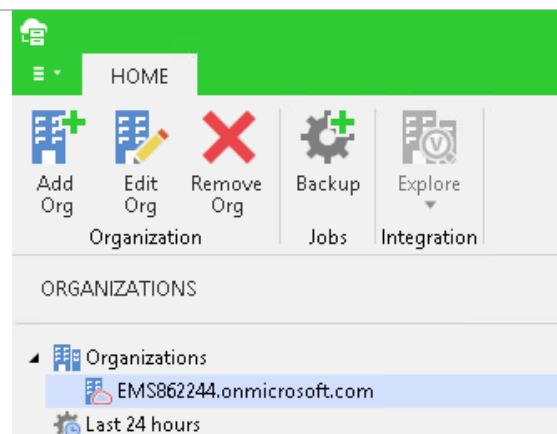
☐ On-premises Microsoft Exchange

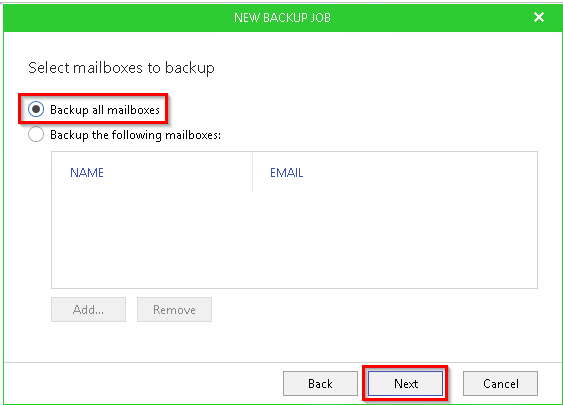
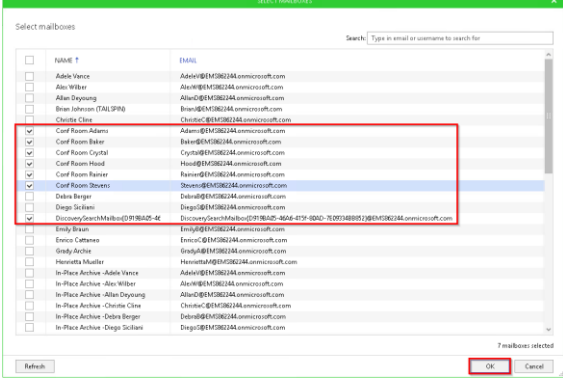
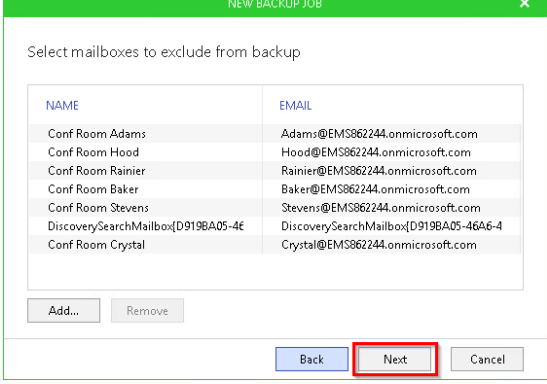
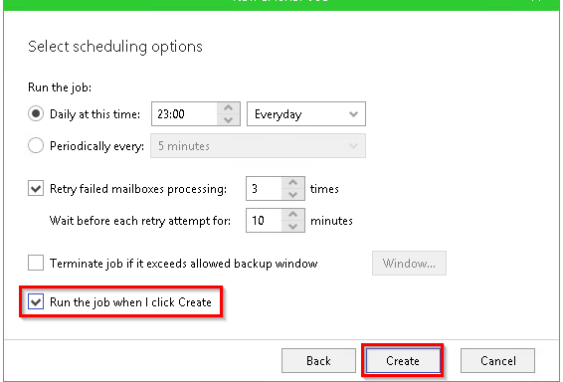
Back Next Cancel

Add connection details of the Office 365 tenant.
Region: **Default**
Username & Password are provided by Copaco



Veeam Backup for Office 365 will finalize the setup by checking the connection and parameters.



	
<p>DiscoverySearchMailbox All Conf Rooms</p>	
	
<p>Click Next</p>	
	

The Backup Job for Exchange 365 will now backup all Mailboxes to the Local Repository.
Do note that Veeam will detect if a User Mailbox has a proper License installed and will give a warning when you backup a User Mailbox without License.

While the Backup runs, feel free to continue to the next Exercise

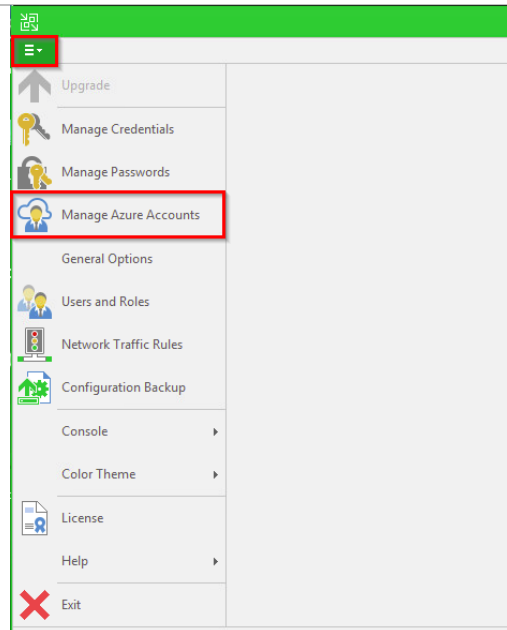
Exercise 4: Prepare Azure

Log into <https://portal.azure.com> using the credentials you have made with the Azure Pass, provided by Copaco.

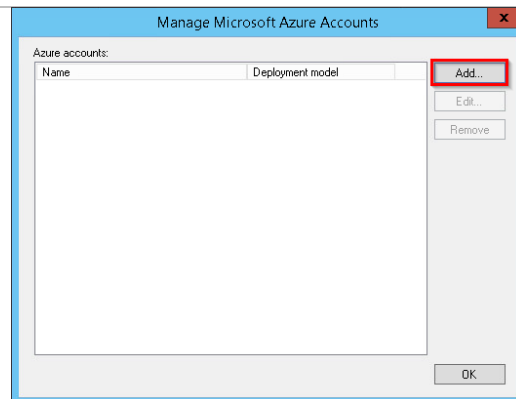
Create a Resource group, storage account and virtual network to use with Veeam.

From the **desktop**, launch Veeam Backup & Recovery

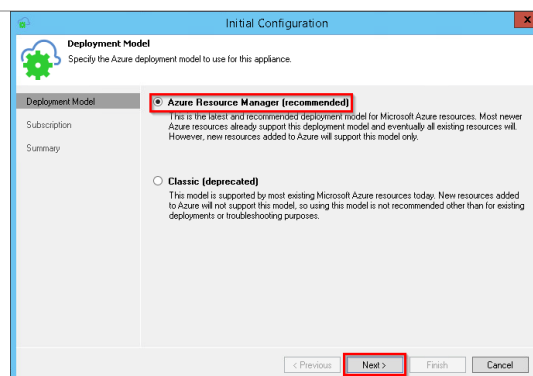
Click on the **Menu** in the **top left** corner

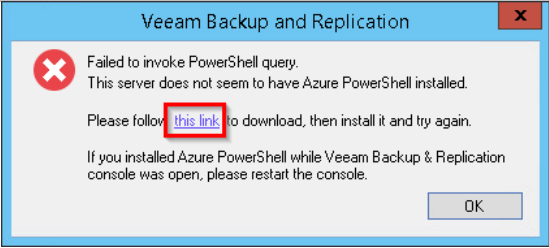
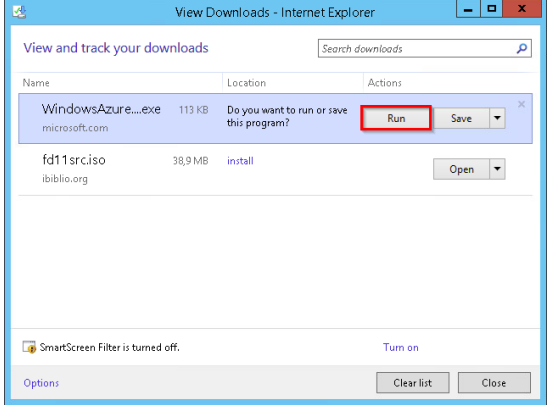
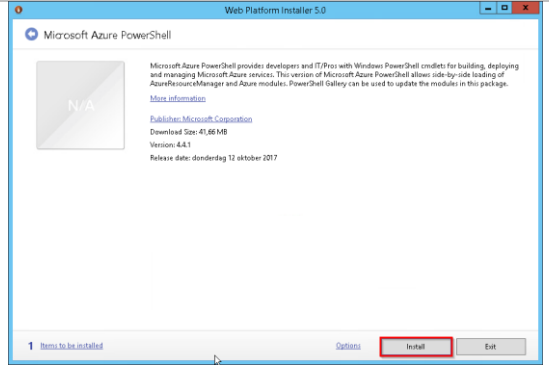
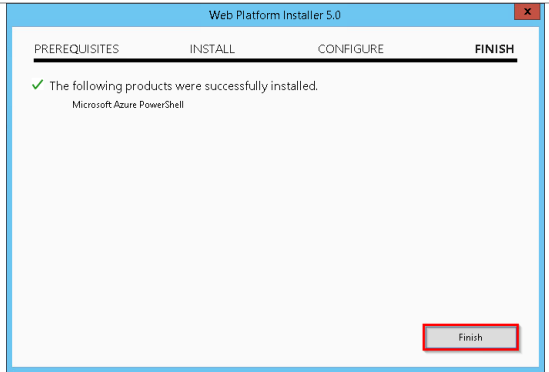


Click **Add...**

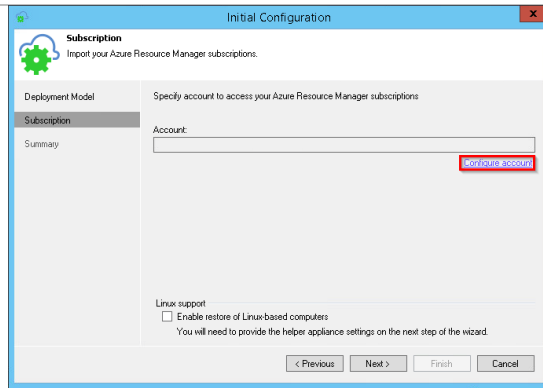


Choose **Resource Manager** and click **Next**



<p>Veeam will now check for the Azure Powershell and will detect is it not installed. Click on the Link provided to download and start the installer</p>	
<p>Click run to start the Installer.</p>	
<p>Web Platform Installer 5.0 Press Next and accept the EULA when prompted.</p>	
<p>Click Finish</p>	
<p>Restart Veeam-VBR console and repeat the first steps</p>	

Configure Account



Enter Azure Subscription Credentials as created earlier today with your Azure Pass provided by Copaco

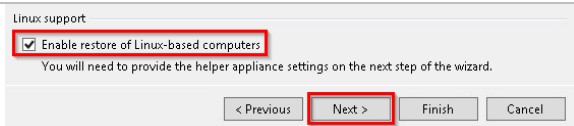
Microsoft Azure

Werk- of schoolaccount of een persoonlijk Microsoft-account

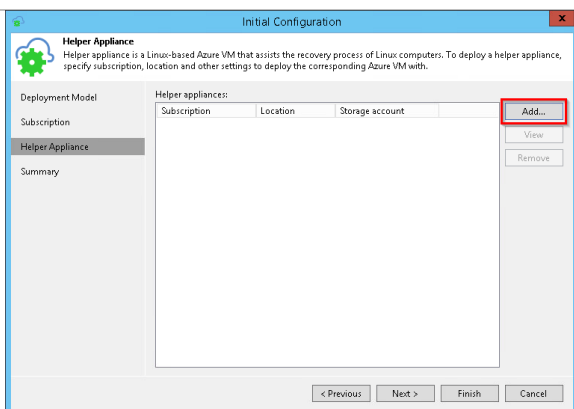
E-mailadres of telefoonnummer

Wachtwoord

To make sure that we can restore Linux VMs enable the option *Enable restore of Linux-based computers* and click **Next**

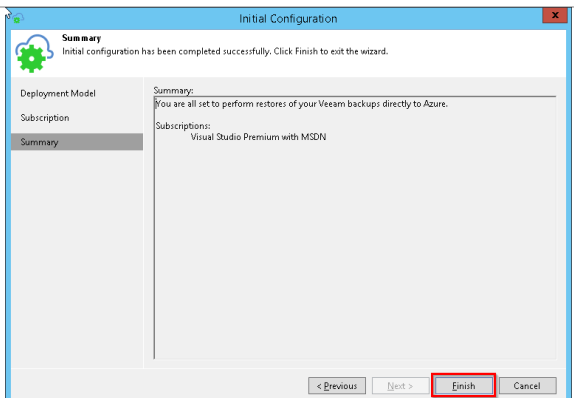


Click **Add...**

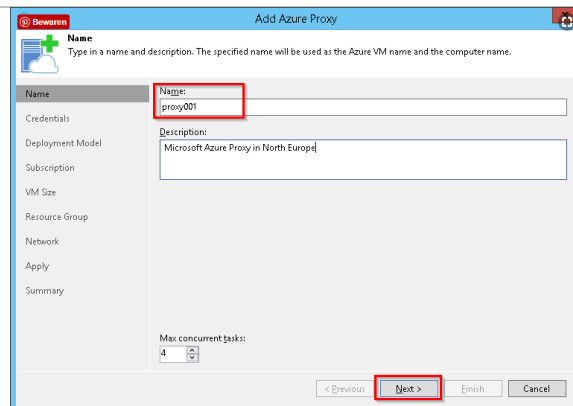
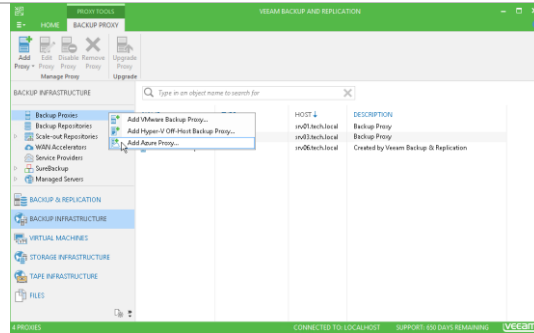


Select your **Subscription**, **storage account** and **Virtual Network** to use with the **Veeam Helper Appliance**

Click Finish

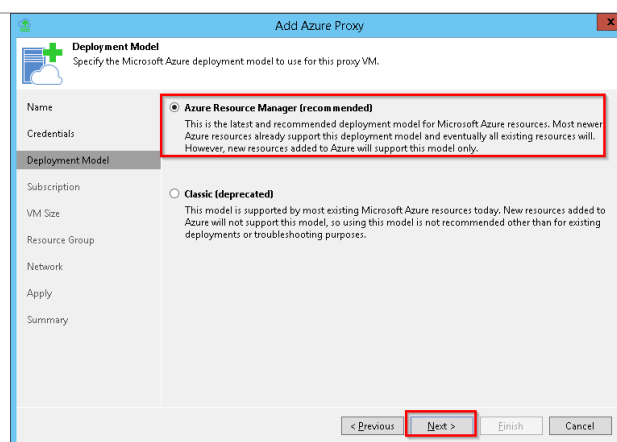
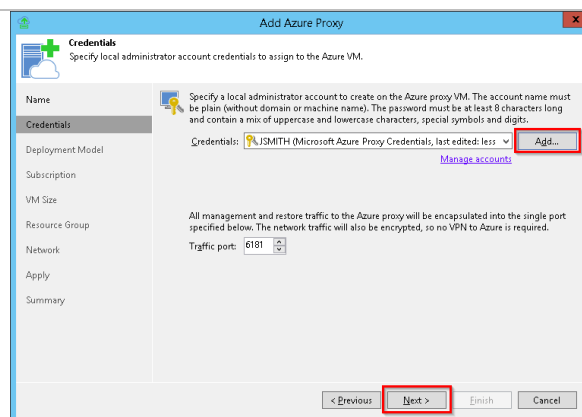


Change to the **Backup Infrastructure View**
Right click on the Backup Proxy and select
Add Azure Proxy ...



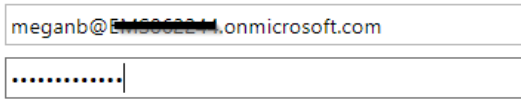
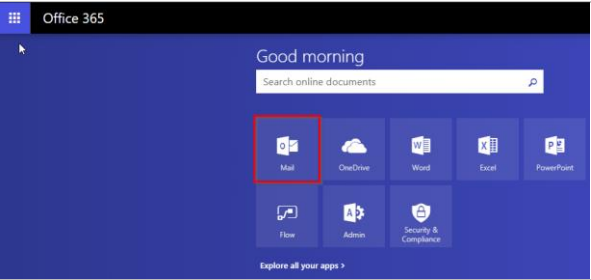
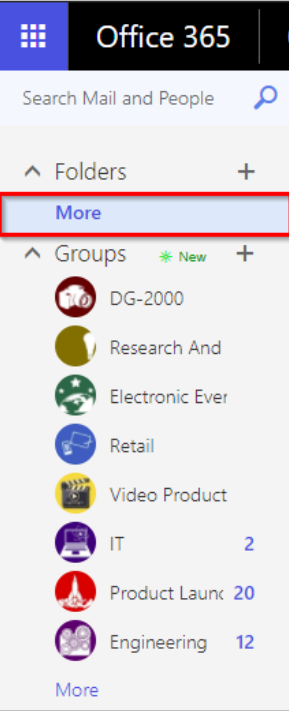
Click **Add...** to Create a **Local administrator account** and **password** for the Azure Proxy

You cannot use reserved names such as 'administrator', 'admin', 'user', 'abc@123', 'P@\$w0rd' and so on as a user name and password of the local administrator account.

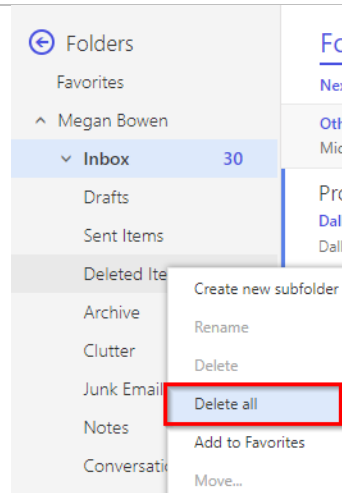


	<div><div>Add Azure Proxy</div><div><div><div><div><div></div><div>Subscription</div></div><div>Specify the Azure subscription to use, and the data center region to create proxy VM in. Be sure to select the same region you are planning to be restoring VMs to.</div></div><div><div>Name</div><div>Credentials</div><div>Deployment Model</div><div>Subscription</div><div>VM Size</div><div>Resource Group</div><div>Network</div><div>Apply</div><div>Summary</div></div><div><div>Subscription:</div><div>Visual Studio Premium with MSDN (John.Smith@tech.com)</div><div>Specify Azure subscription and data center region.</div></div><div><div>Location:</div><div>North Europe</div><div>Choose the Azure data center region.</div></div><div><div>< Previous</div><div>Next ></div><div>Finish</div><div>Cancel</div></div></div></div></div>
	<div><div>Add Azure Proxy</div><div><div><div><div><div></div><div>VM Size</div></div><div>Specify the storage account and disk type</div></div><div><div>Name</div><div>Credentials</div><div>Deployment Model</div><div>Subscription</div><div>VM Size</div><div>Resource Group</div><div>Network</div><div>Apply</div><div>Summary</div></div><div><div>Size:</div><div>Basic_A2 (2 cores, 3.5 GB memory)</div></div><div><div>Cores: 2</div><div>Max disks: 4</div><div>Memory: 3.5 GB</div></div><div><div>Storage account:</div><div>techstorage</div><div>Choose the storage account this Azure VM should be placed in.</div></div><div><div>< Previous</div><div>Next ></div><div>Finish</div><div>Cancel</div></div></div></div></div>
	<div><div>Add Azure Proxy</div><div><div><div><div><div></div><div>Resource Group</div></div><div>Specify the resource group to place the proxy VM into.</div></div><div><div>Name</div><div>Credentials</div><div>Deployment Model</div><div>Subscription</div><div>VM Size</div><div>Resource Group</div><div>Network</div><div>Apply</div><div>Summary</div></div><div><div><div>Place VM into the existing resource group:</div><div></div></div><div><div>Create a new resource group:</div><div><div>Name:</div><div>proxy001</div></div></div></div><div><div>DNS name label: proxy001</div><div>DNS name label for RDP connections. To connect to the machine using Remote Desktop, use the following address in the connection settings:</div><div>proxy001.northeurope.cloudapp.azure.com</div></div><div><div>< Previous</div><div>Next ></div><div>Finish</div><div>Cancel</div></div></div></div></div>

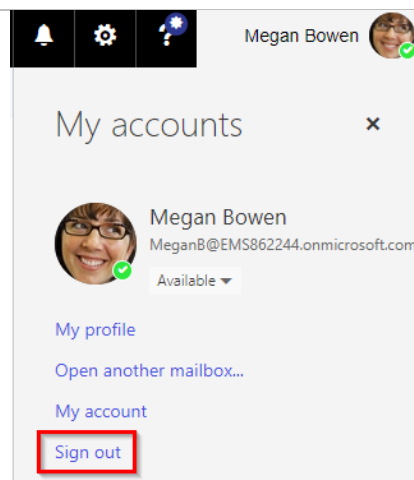
Exercise 5: Delete Information

<p>Open a browser window and open https://portal.office.com. Log into your Office 365 environment with the credentials.</p> <p>Username: MeganB@XXXXX.onmicrosoft.com Password: <i>See Documentation</i></p>	 <p>The image shows the Office 365 login page. It has a text input field for the email address containing 'meganb@XXXXX.onmicrosoft.com' and a password input field with dots. The page has a clean, modern design with a white background.</p>
<p>Click on Mail</p>	 <p>The image shows the Office 365 app launcher. It features a grid of application tiles: Mail, OneDrive, Word, Excel, PowerPoint, Flow, Admin, and Security & Compliance. The 'Mail' tile is highlighted with a red rectangle.</p>
<p>The Outlook Web Application will be opened in your browser. Click on More, this will display the Folder structure.</p>	 <p>The image shows the Outlook Web Application sidebar. It includes a search bar, a 'Folders' section with a '+' icon, and a 'More' link highlighted with a red rectangle. Below these are 'Groups' with various icons and names like 'DG-2000', 'Research And', 'Electronic Ever', 'Retail', 'Video Product', 'IT', 'Product Launch', and 'Engineering', each with a count next to it.</p>

Delete 1 or more random Emails from the **Inbox** and **empty** the **Deleted Items** folder

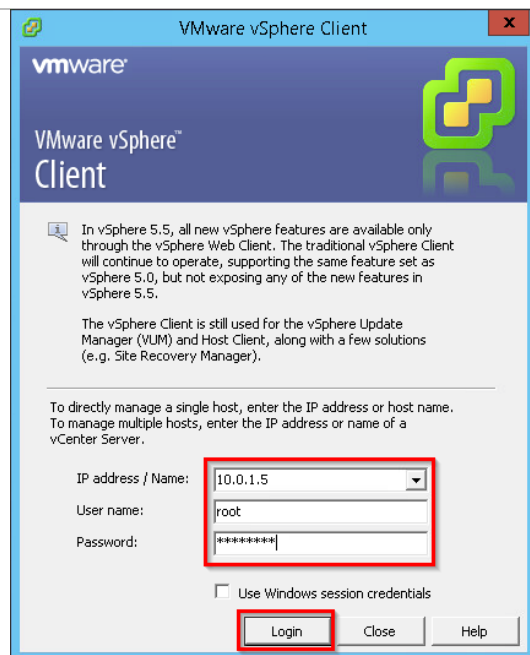


Logout by navigating to the upper right corner, click on **Megan Bowen** and then **Sign out**.

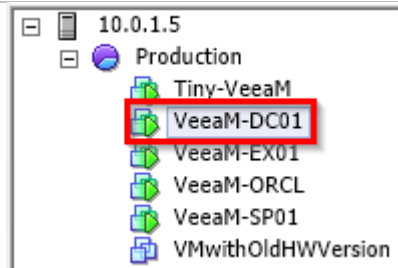


From the **Desktop** launch the **VMware vSphere Client**. Login into the ESXi Host with the following credentials:

IP Adress: **10.0.1.5**
 Username: **root**
 Password: **Pa\$\$w0rd**

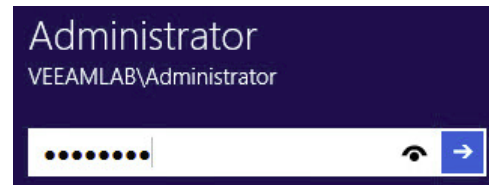


Inside the vSphere Client, expand the **Production** resource pool, select the **Veeam-DC01** and open a console session



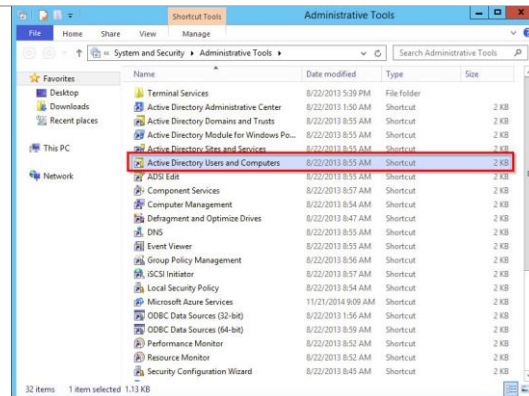
Log into the **Veeam-DC01** with the following credentials:

Username: **veeamlab\administrator**
Password: **Pa\$\$w0rd**

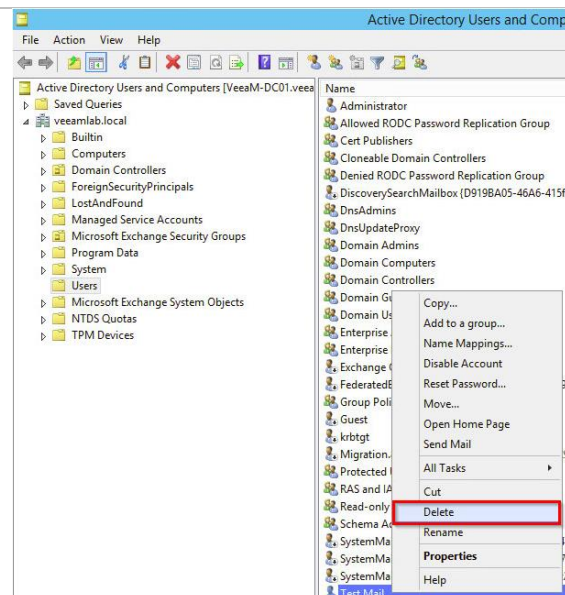


If you get any messages, acknowledge those

Select the **Administrative Tools** from the **Start Menu** and open **Active Directory Users and computers**



From **Active Directory Users and computers** scroll down. Select the user **Test Mail** and **delete** this user

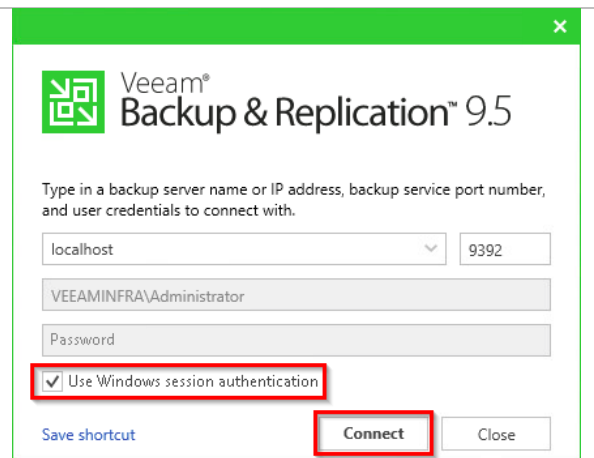


Close the **Active Directory Users and computers** window. The Console session to Veeam-DC01 does not have to be closed.

Exercise 6: Restore

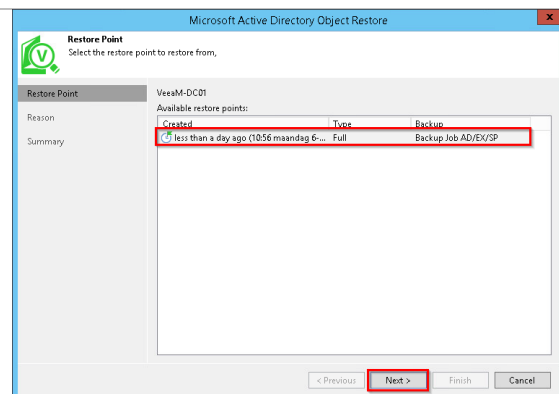
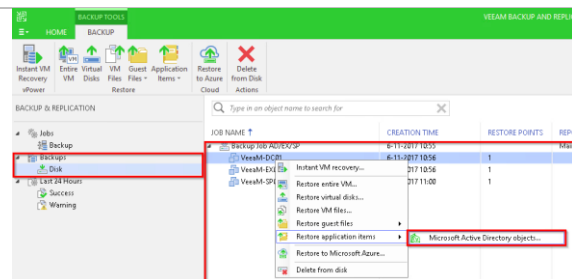
User Account Item restore into AD

From the Desktop launch the **Veeam Backup & Replication Console**. Enable the option to **Use windows session authentication** and click **Connect**.



In the **Backup & Replication** view; expand **Backups** and then expand **Disk**.

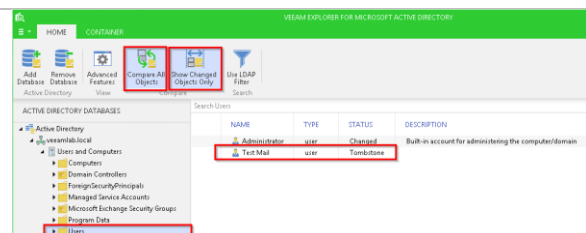
The Backup Jobs which we have in a repository and restore points

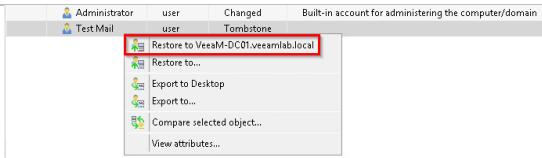
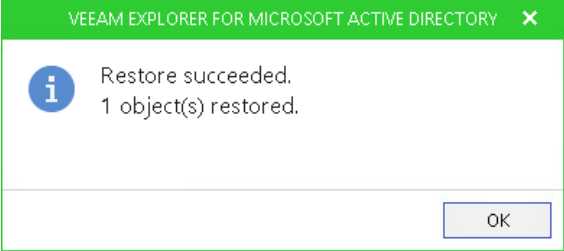


Click **Next**, then **finish**

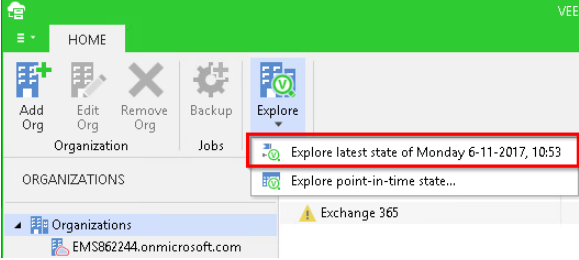
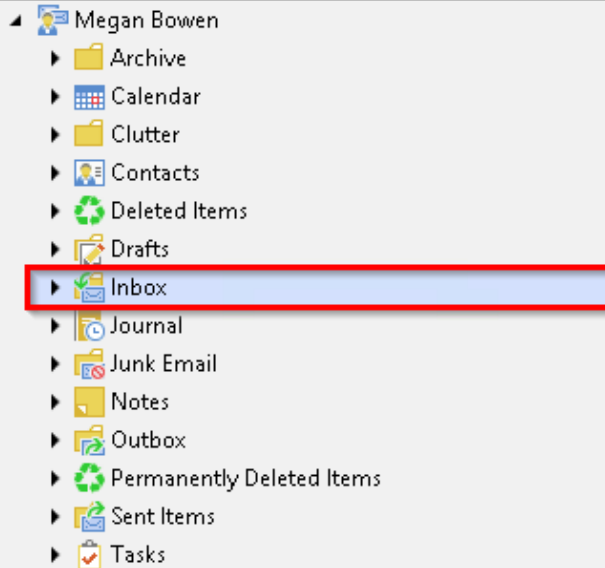
The **Veeam Explorer for Active Directory** will now open the Restore Point and mount the AD Database

In the top **Ribbon** of the **Veeam Explorer for Active Directory** select both **Compare all Objects** and **Show Changed Objects only**. Then browse to the **Users** container within the **Veeamlab.local** Active Directory and select the **Test Mail** user account.

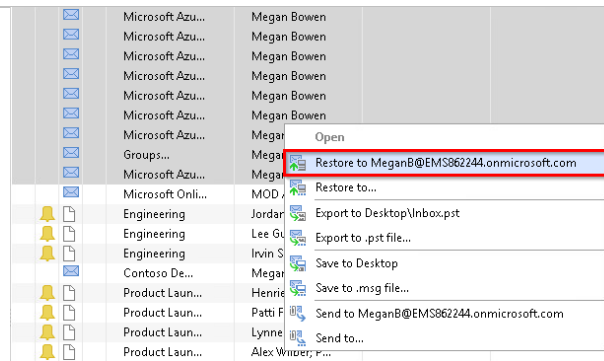


<p>Right click the Test User and select Restore to Veeam-DC01.veeamlab.local</p>	
<p>When the restore is completed successfully, verify the restore inside the Veeam-DC01.</p> <p><i>Verification of the restore can be done using the steps on page 19 and 20 of this manual</i></p>	

Email to Office 365

<p>Launch Veeam Backup for Microsoft Office 365 from the Desktop.</p>	
<p>Click on Explore and then Explore latest state ...</p>	
<p>The backup Mail database will now be mounted.</p>	
<p>Expand the Exchange Datastore and browse to the user Megan Bowen or use search to locate the user. Select Megan Bowen and open her inbox folder.</p>	

Select the email which you would like to restore. Right click and select *Restore to MeganB@XXX.onmicrosoft.com*



Since this is a test environment and we have not set specific right to the Admin Account we are using, we need to enter the username and password of the corresponding user.

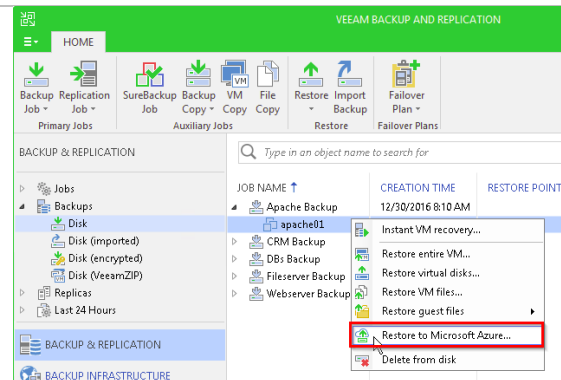
Username: *MeganB@XXX.onmicrosoft.com*
 Password: *b-sivand@5625*

Once the restore is completed, verify the restore by logging into Office 365 as described on page 18 and 19

Notice that only lost emails are restored into Exchange. Emails which are still inside the mailbox will be skipped.

Direct Restore to Azure

Restoring a Virtual Machine into Azure



Here I could create a lot more screenshots and guide you through the restore process of a VM into Azure. To experience the ease of a restoring using **Veeam Backup & Replication** and **Microsoft Azure**