Microsoft

Azure Backup Hands-on lab

-Microsoft Azure

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Version 1.0

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Document Revision

Change Record

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Reviewers

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Gino van Essen	0.1		November 3, 2017

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Introduction

Azure Backup is an simple and reliable cloud integrated backup as a service. In this lab, you will learn how to create an Azure Backup Vault, and then use this vault to backup files and system state from a Windows client device. You will then restore the backup-up files

Estimated time to complete this lab

75 minutes

Objectives

During this lab, you will learn how to get started on Azure with Azure Backup to;

- Set-up your tenant using your Azure Pass.
- Create and manage Resource Groups and Storage Accounts
- Deploy a Recovery Vault
- Create a files backup job
- Create a VM backup job
- Restore items from your Recovery Vault

Prerequisites

- Laptop/computer with Internet browser and WiFi connected
- Microsoft Account without an Azure Subscription

Activity 1: Getting Started

Estimated time to complete this activity

15 minutes

Objectives

In this activity, you will validate the necessary access to perform this lab

- Create your Microsoft account if necessary
- Activate your Azure Pass
- Create your Azure tenant
- Create a Resource Group
- Create a basic Virtual Machine

After verifying your access, you will use the Azure tenant to create a Recovery Vault you can use to store your backups.

Exercise 1: Connect to Azure

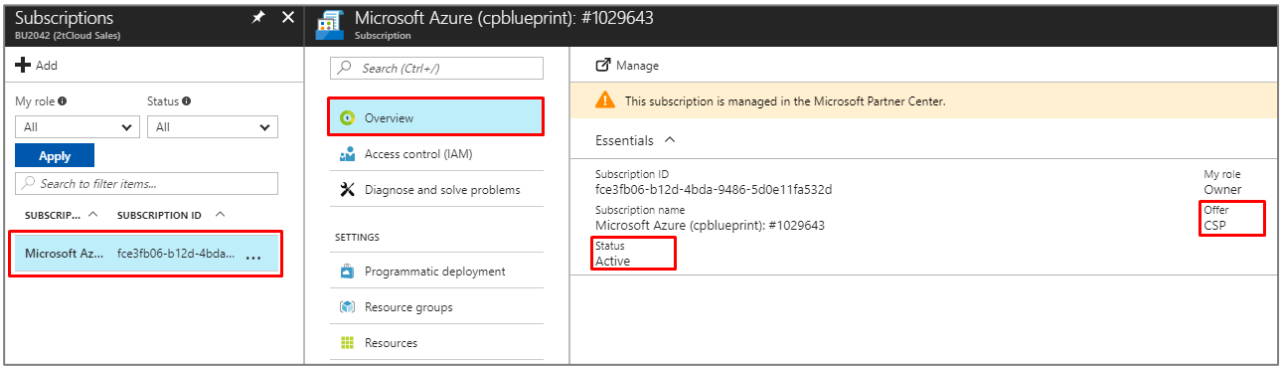
Please make sure you have a Microsoft Account which you hasn't been used before with any Azure Subscription. If you don't have one, please create a new Microsoft Account;

https://account.microsoft.com/

You will receive an Azure pass which can be activated by browsing to the following website and follow instructions;

https://www.microsoftazurepass.com

1. Using your **Microsoft Account**, you can sign in to the **Azure Portal** at; https://portal.azure.com
2. Using the navigation bar on the left, use the **More Services** menu to browse to the **Subscriptions** pane. The **Search** filter on the top will help you to find what you need.
3. From the **Subscriptions** overview, click the active subscription.

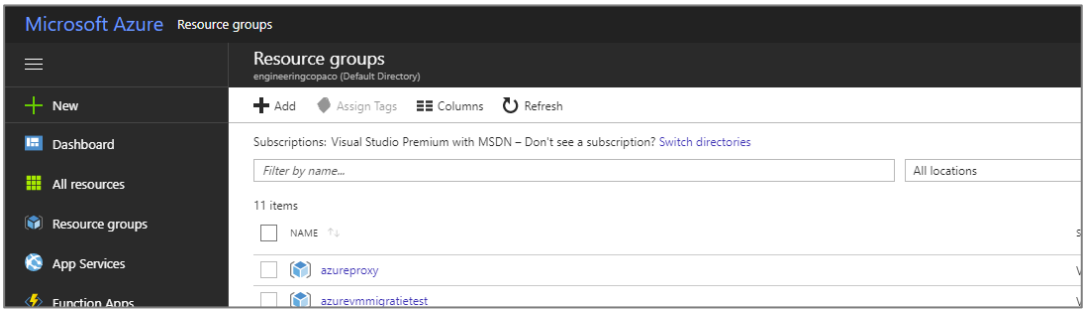


4. In the **Overview** pane, check the **Offer** type for being either Azure Pass, CSP or MSDN.
5. Check the **Status** for being Active.

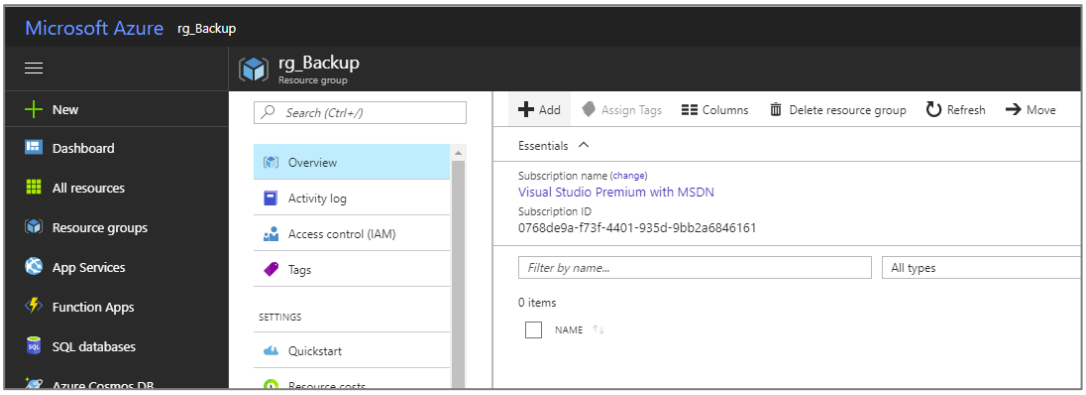
> 📌 We also strongly recommend that you use InPrivate browsing to ensure that you are not automatically logged on with other credentials during the registration / activation process.

Exercise 2: Create a Virtual Machine

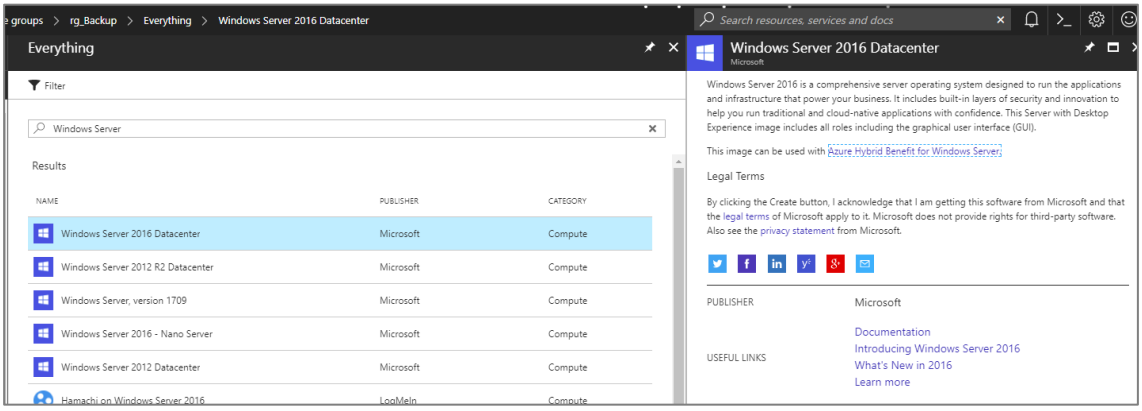
1. Using the **Navigation Pane** on the right, open the **Resource Groups**.



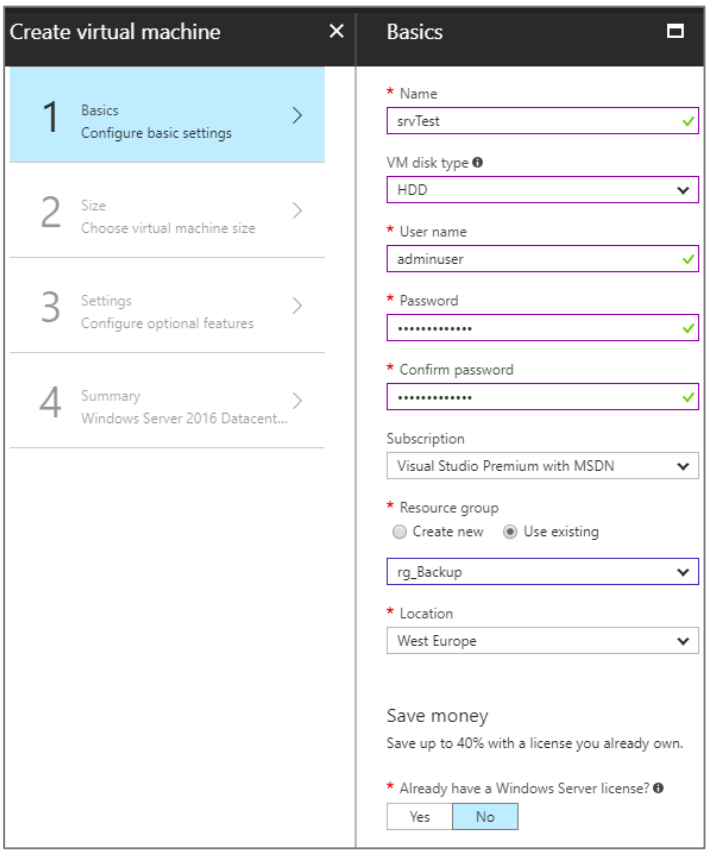
2. Add a new **Resource Group** using your **Azure Pass Subscription** and **West Europe** as the location.
3. After a few moments, the Resource Group is available. By opening it, you'll be presented with the **Overview** pane. From there, click **Add**



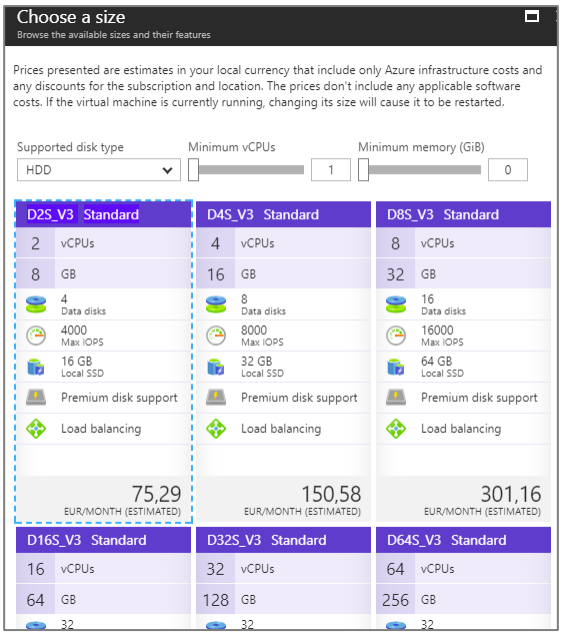
4. From the search box, search for **Windows Server** and select **Windows Server 2016 Datacenter**.



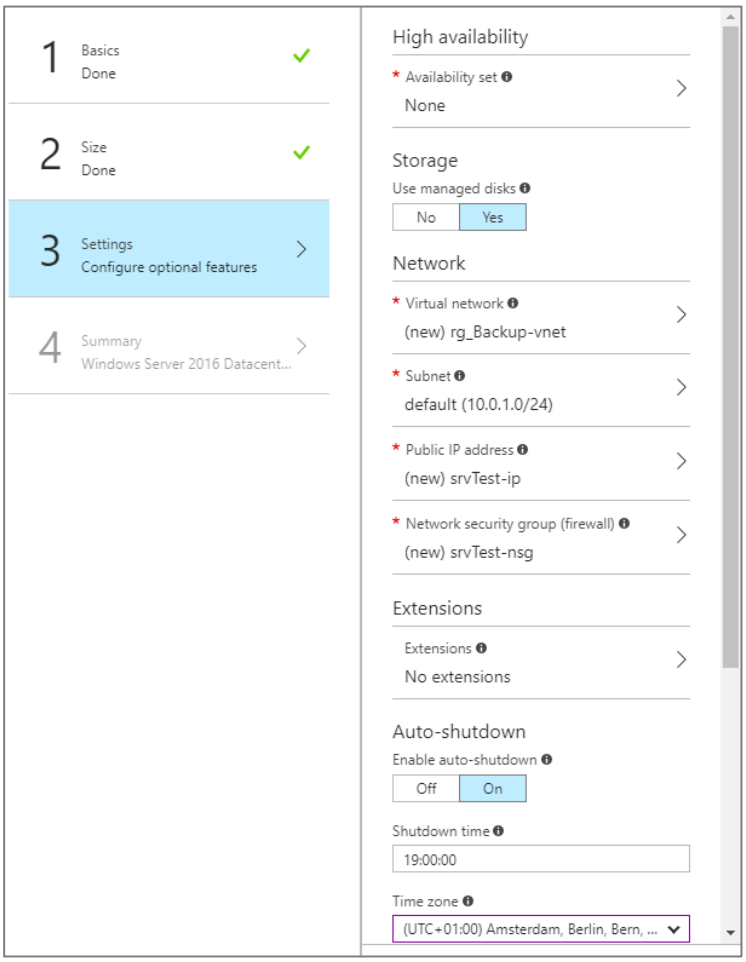
5. Fill in the **Basic** settings. Please make sure you select the **Resource Group** created before.



6. Click OK and as the machine size, select the **D2S_V3 Standard** size.



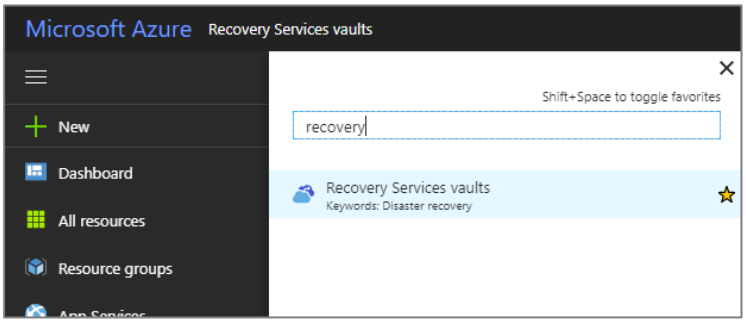
7. You will be asked for optional features, you can leave them default and proceed



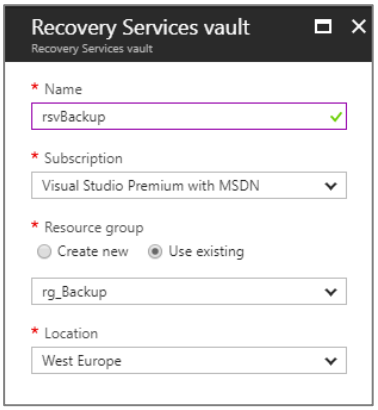
8. Review the summary and **Create** the VM. You can check the status from the **Notifications** in the top bar on the right. We will come back later, when the machine is finished deploying.

Exercise 3: Create a Recovery Vault

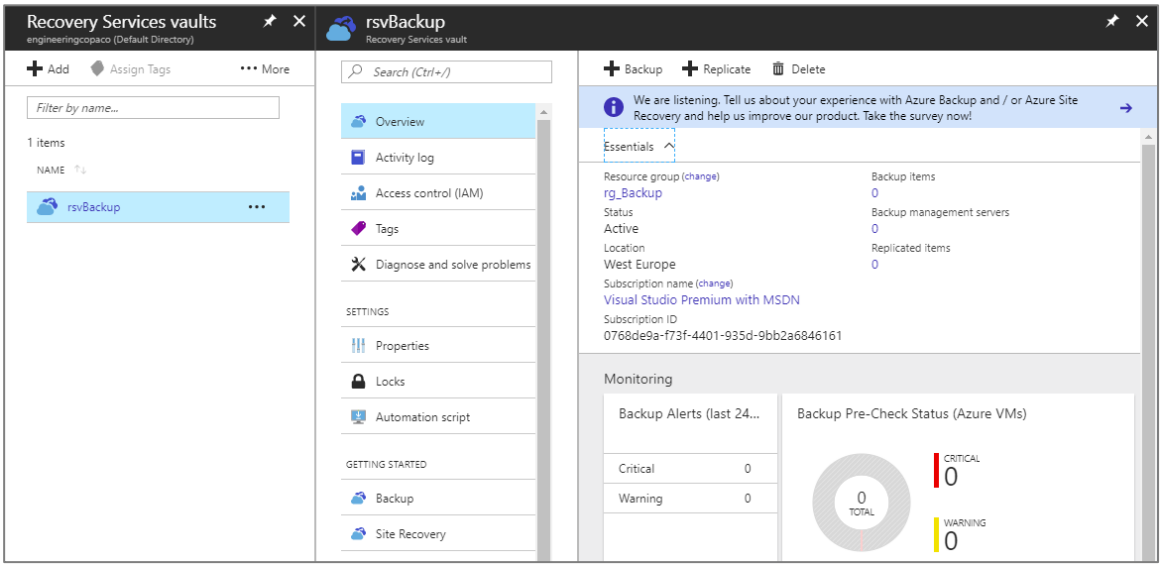
1. From the navigation pane, click **More Services** and search for **Recover**



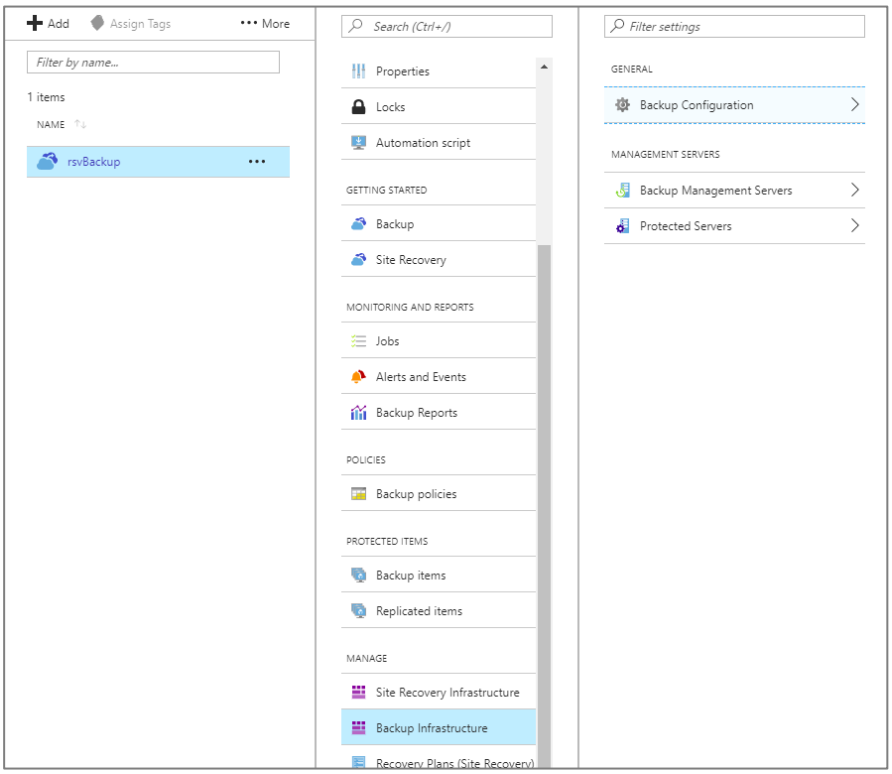
2. [Optional] Click the star to attach the Recovery Services Vault to the navigation pane for quick access
3. Click Create Recovery Services Vault and fill in the parameters. Make sure you select the existing Resource Group we just created.



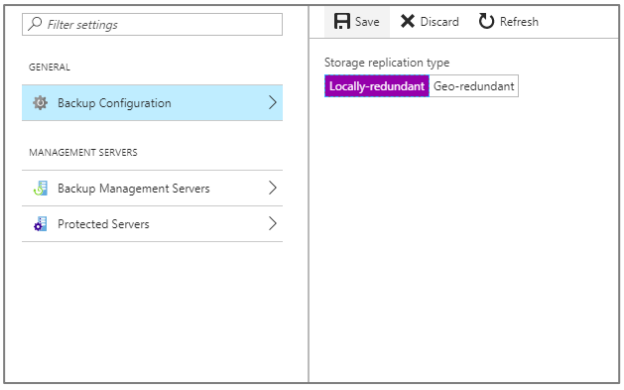
4. Wait for the Vault to get deployed. You can check the status from the **Notifications** in the top bar.
5. Open the **Recovery Services Vault** when it's ready, the **Overview** pane will show a dashboard



6. Using the navigation pane, browse to **Backup Infrastructure** and then **Backup Configuration**.



7. Make sure **Local Redundant Storage (LRS)** is selected. Click **Apply**.



8. You're done, we have created a Recovery Services Vault we can use to store our backups.

Activity 2: Backup & Recovery

Estimated time to complete this activity

60 minutes

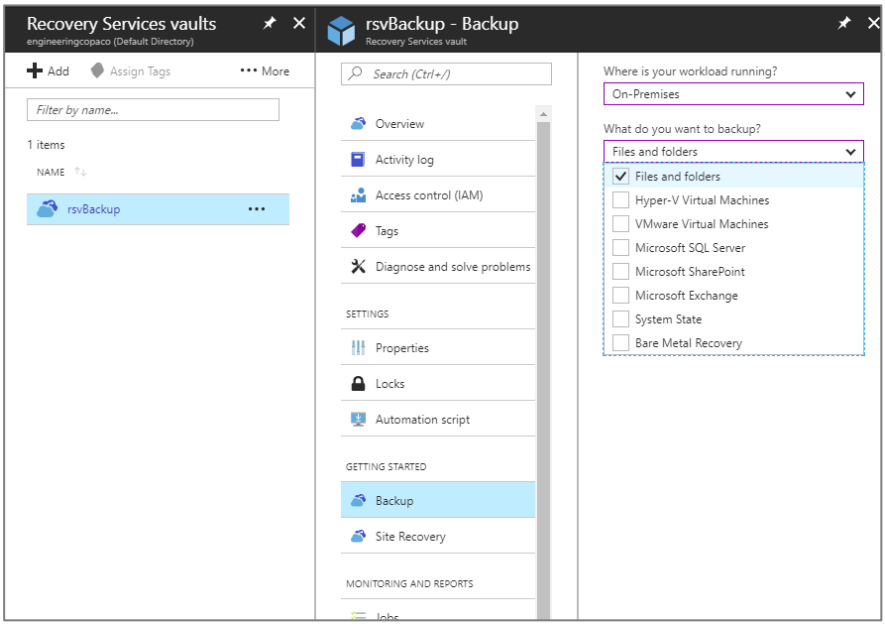
Objectives

In this activity, you will;

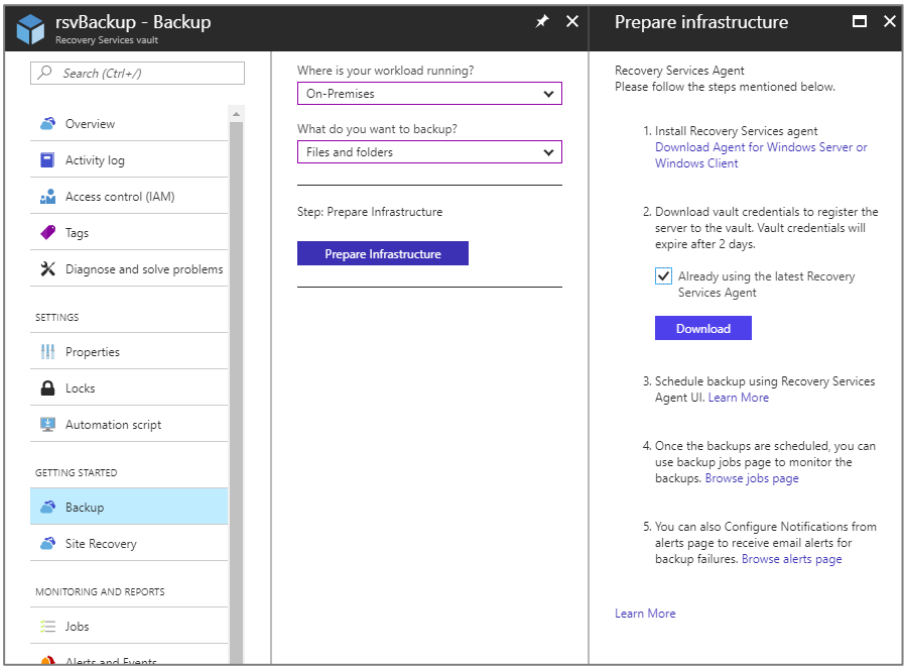
- Create a backup of you files using the Azure Recovery Agent
- Create a backup of your Azure Virtual Machine
- Perform a recovery of your files and folders using the Azure Recovery Agent
- Perform a recovery of your files and folders from your Azure Virtual Machine

Exercise 1: Create a backup of your files

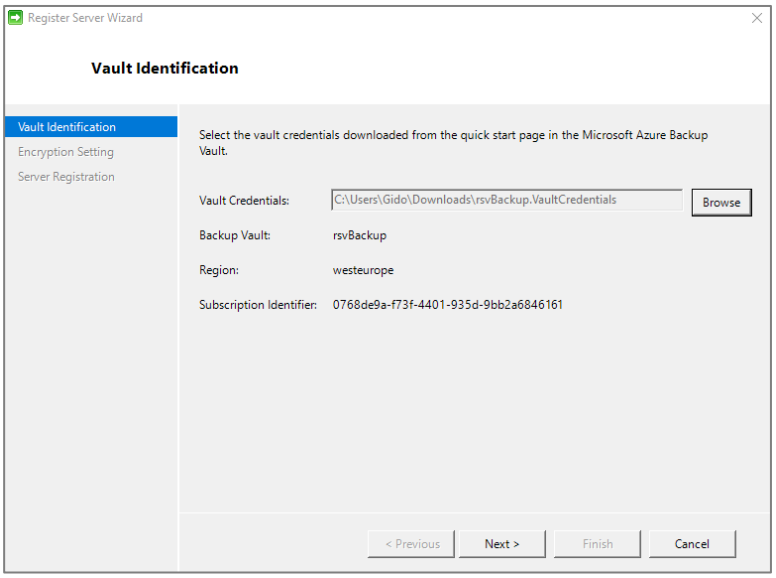
1. From the **Azure Portal**, browse to your **Recovery Services Vault** from the Navigation pane
2. Browse **Backup** from the **Getting Started** submenu
3. Choose **On Premises** as the source of your backup and choose **Files and Folders** as the backup type



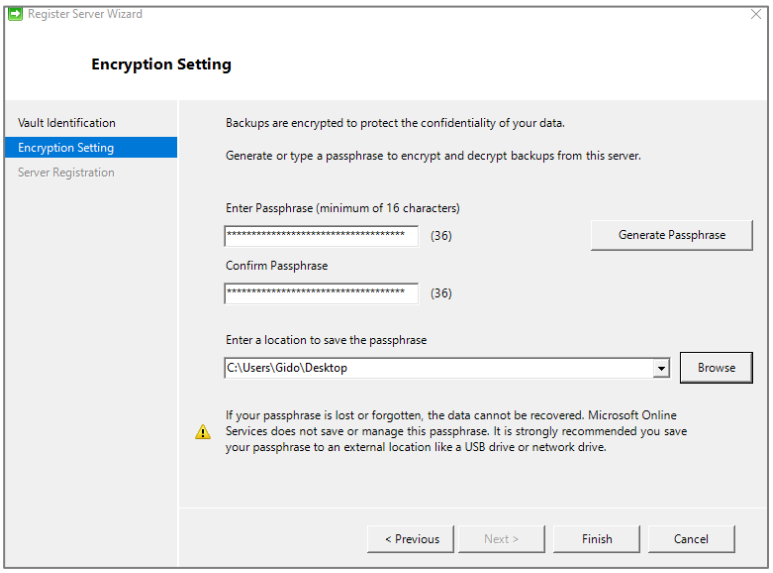
4. Download the **Recovery Services Agent** with the link provided and **enable the checkbox** to confirm you have downloaded the agent.



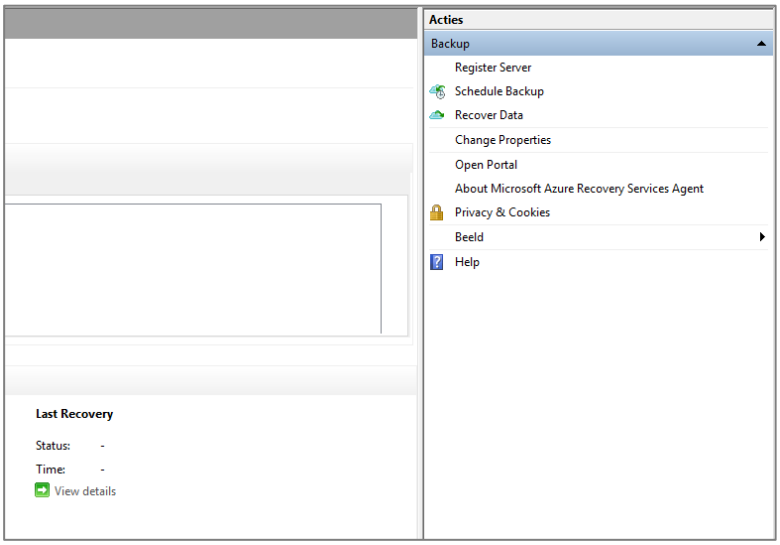
5. The **Download** button will become available, **save the Vault Credentials** to you local computer.
6. When the downloads are ready, **run the installer**. Use the defaults, until you are asked for identification of the Vault. Select the **Vault Credentials** file you downloaded.



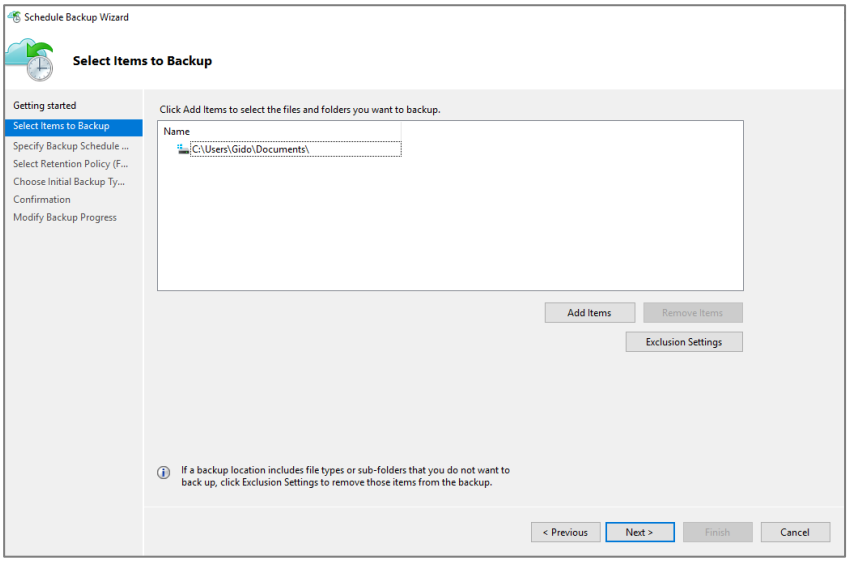
7. **Generate a Passphrase** (or choose one yourself). Save it to your computer.



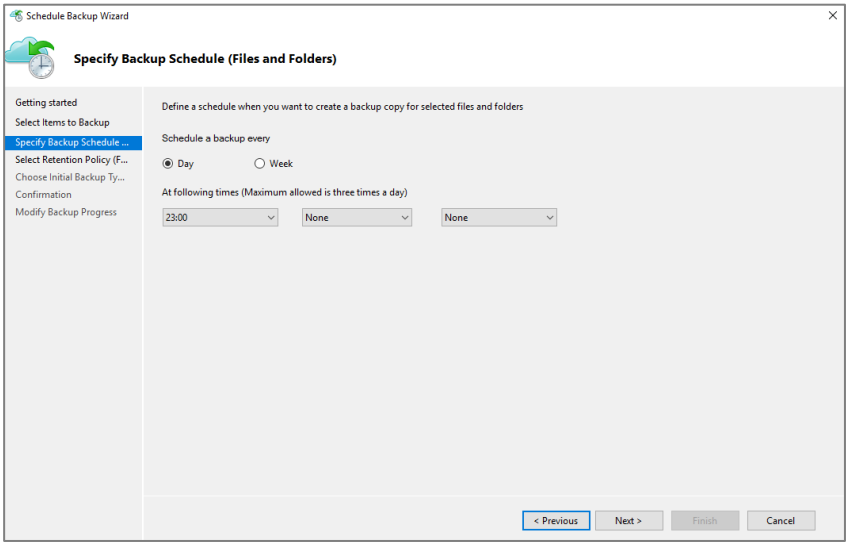
8. Start **Microsoft Azure Backup** from the shortcut on your desktop
9. Schedule a backup from the action pane on the right.



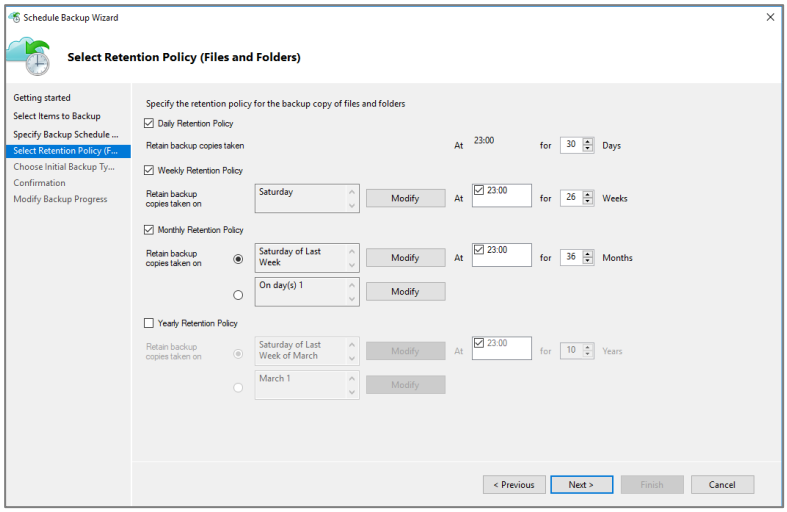
10. **Select** the items you want to backup. Make sure the selection only has a small amount of data, so you don't have to wait.



11. Select how often and when the backup can take place. For instance at **23.00**.



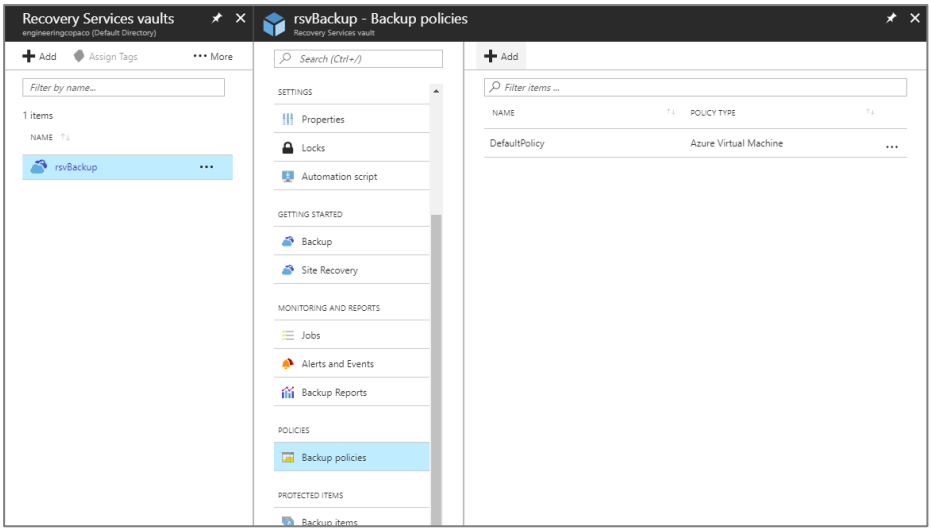
12. Select the desired Retention Policy, for instance
    a. **Daily for 14 days**
    b. **Weekly for 4 weeks**
    c. **Monthly for 6 months**
    d. **No yearly backups**



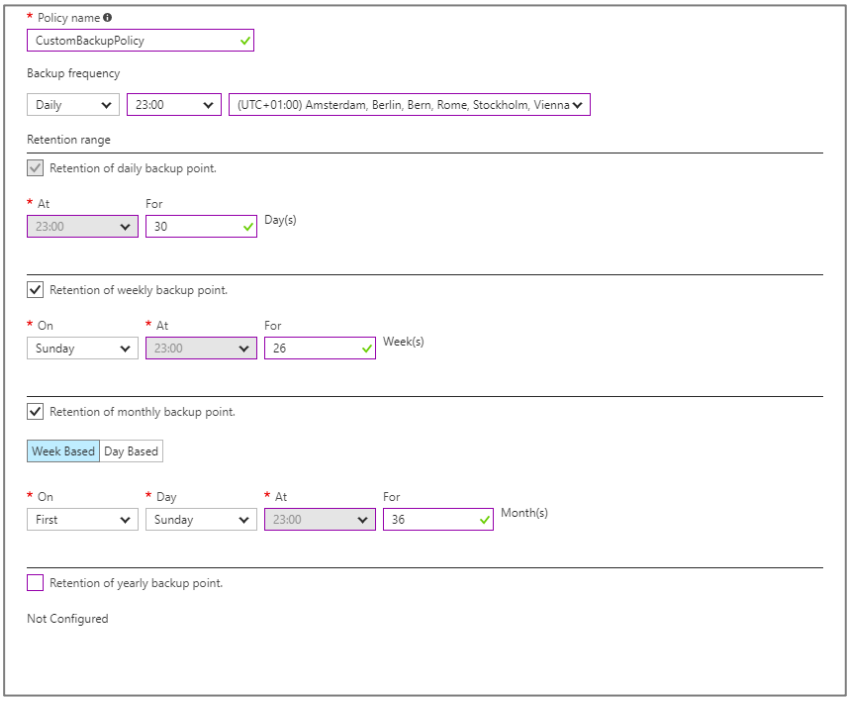
13. On the next screen, you can choose to make adjustments for a offline backup scenario. Accept the defaults for automatic configuration and proceed.
14. **Finish** the wizard and click Backup Now to do an instant backup.
15. As the backup is running, proceed with the next exercise. We will return to the results of this exercise when the job is finished.

Exercise 2: Create a backup of your Virtual Machine

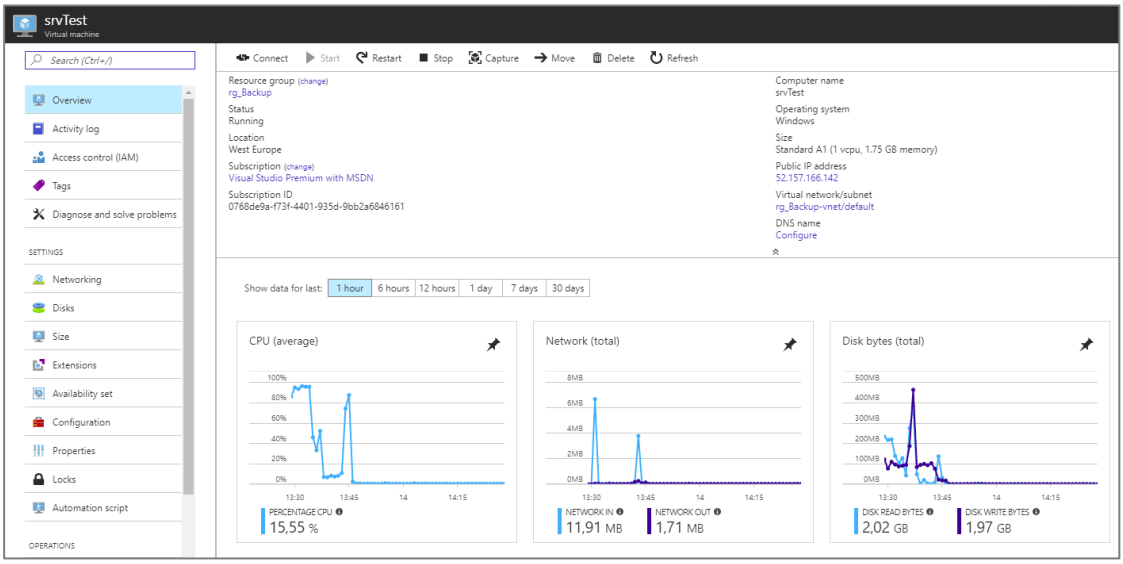
1. Go to the **Azure Portal** and browse to your **Recovery Services Vault**.
2. Open **Backup Policies** from the navigation pane. Add a new **Backup Policy**



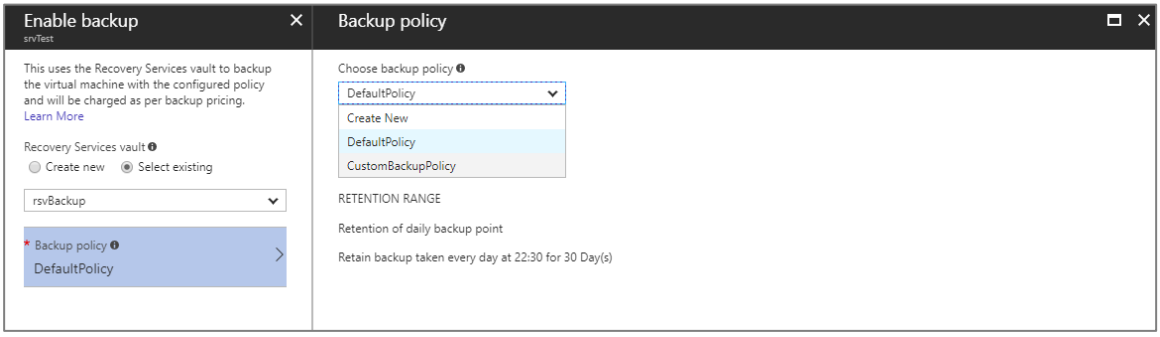
3. Use the following parameters;
    a. Name **CustomBackupPolicy**
    b. Frequency **Daily at 23:00**
    c. Daily retention **30** days
    d. Weekly retention **26** weeks
    e. Monthly retention **36** months
    f. Yearly retention **None**



4. **Create** the policy
5. Browse to the **Resource Group** created before
6. Identify the **Virtual Machine** that was created in the previous exercise and select it to open the details. As you can see, it is running and the overview pane shows you basic insights on the VM.

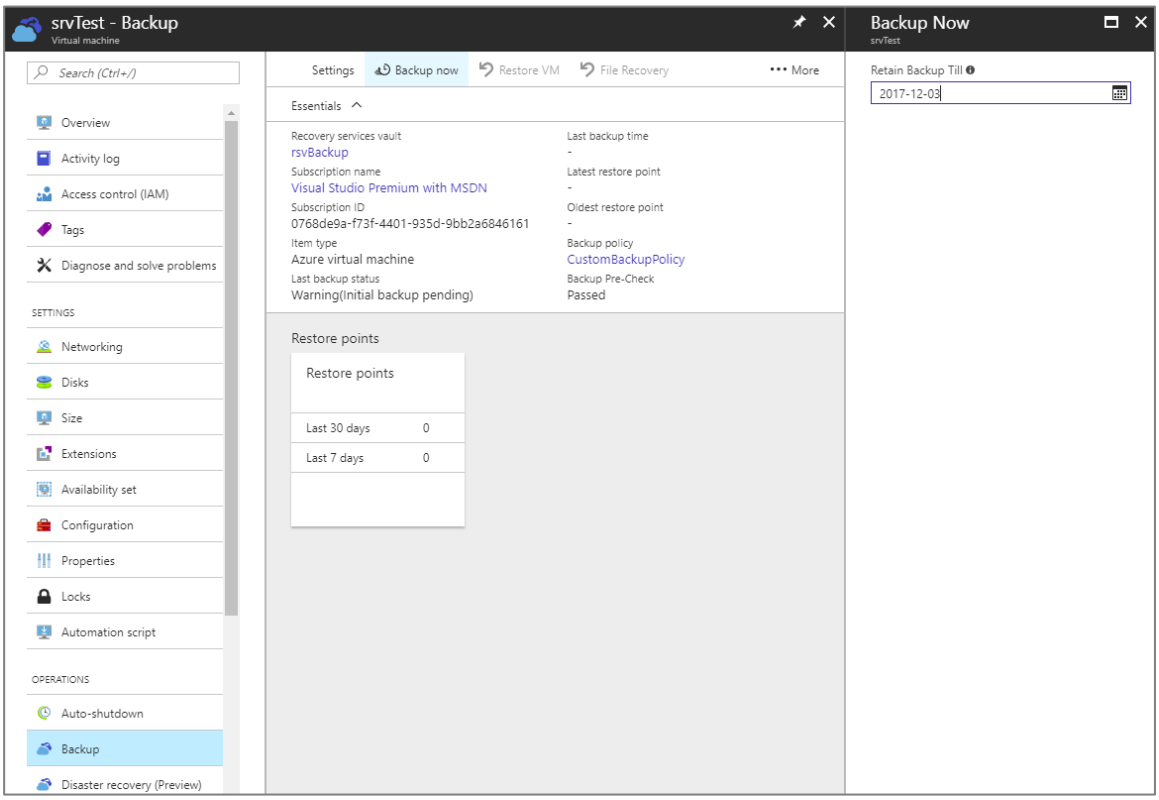


7. Open the **Backup** option from the Navigation pane. Select the correct **Resource Group** and select the customized **Backup Policy**.



8. Click **OK** to create the backup, using the Backup Policy we defined earlier.

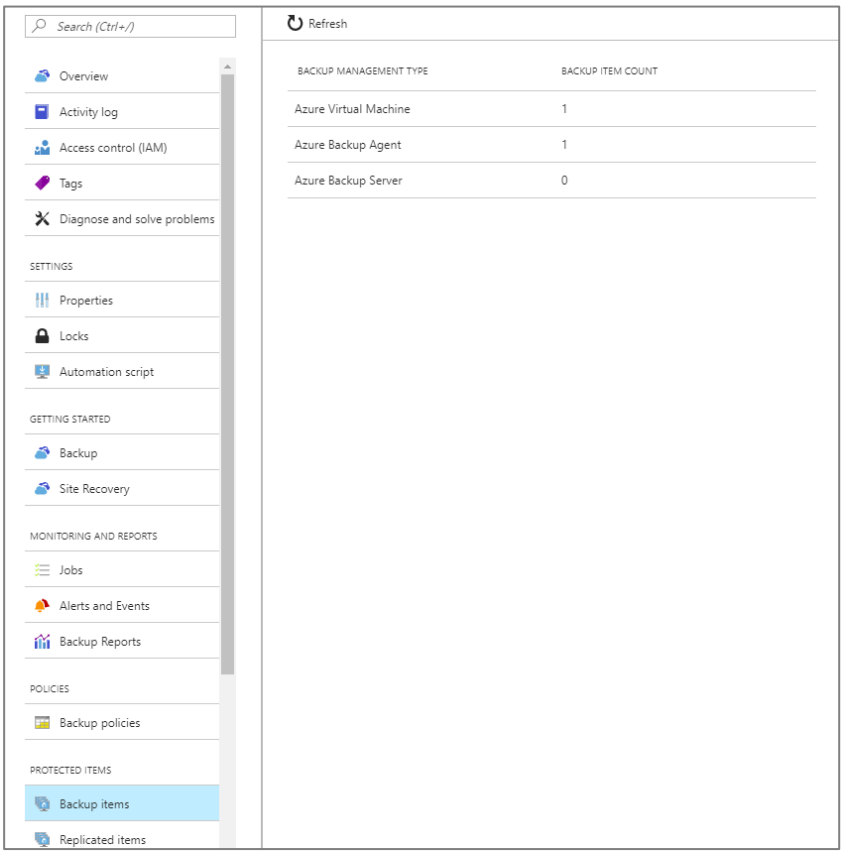
9. Open the Backup pane once again and click **Backup Now**. Select the desired retention and choose **Backup**.



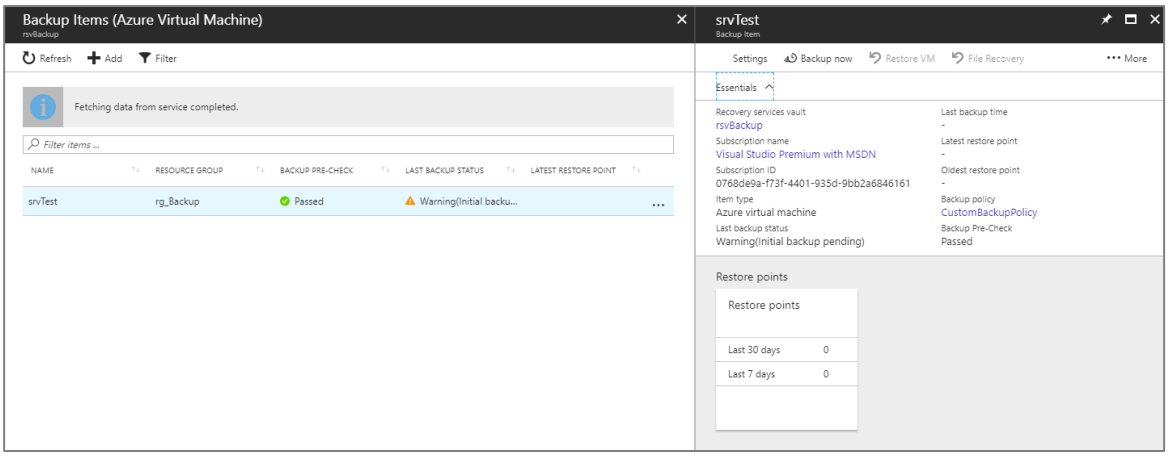
You can verify the job is running from the **Notification** button in the top right of the **Azure Portal**. For detailed information;

1. Open your **Recovery Services Vault**

2. Open **Backup Items** under **Protected Items**. Please note the **Azure Virtual Machine** Count has gone up.



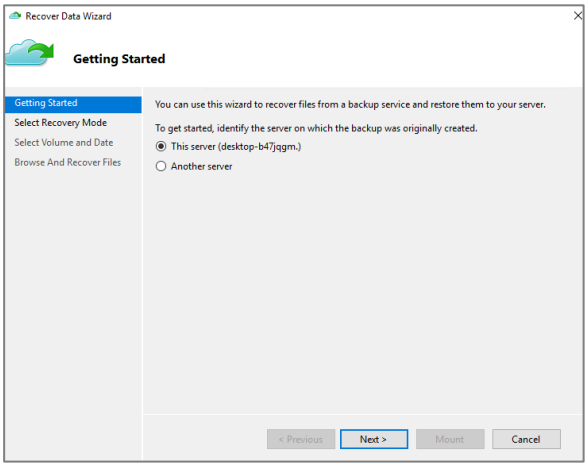
3. Click on it to get detailed information



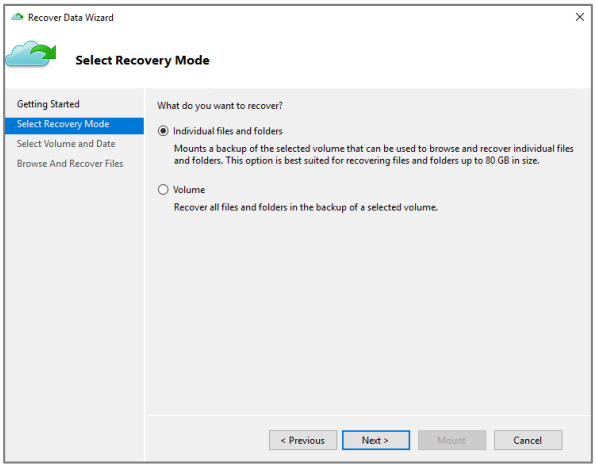
4. Proceed to the next exercise. While the backup of your Virtual Machine is running, we'll check on the backup of your Files and Folders that we started before.

Exercise 2: Perform a recovery of your Files and Folders

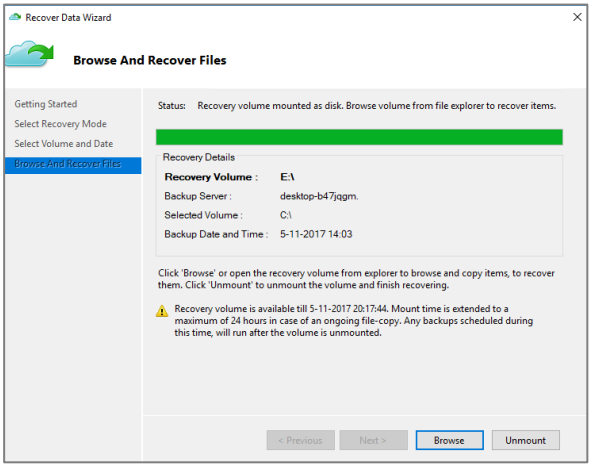
1. Start the **Microsoft Azure Backup** shortcut on your desktop.
2. The **Jobs overview** will show you if your backup job was successful. From the **Action pane** on the right, choose to **Recover Data**.
3. From the **Getting Started wizard**, choose to **Recover from this server**



4. Choose to restore individual **Files and Folders** and select **C:** as the volume



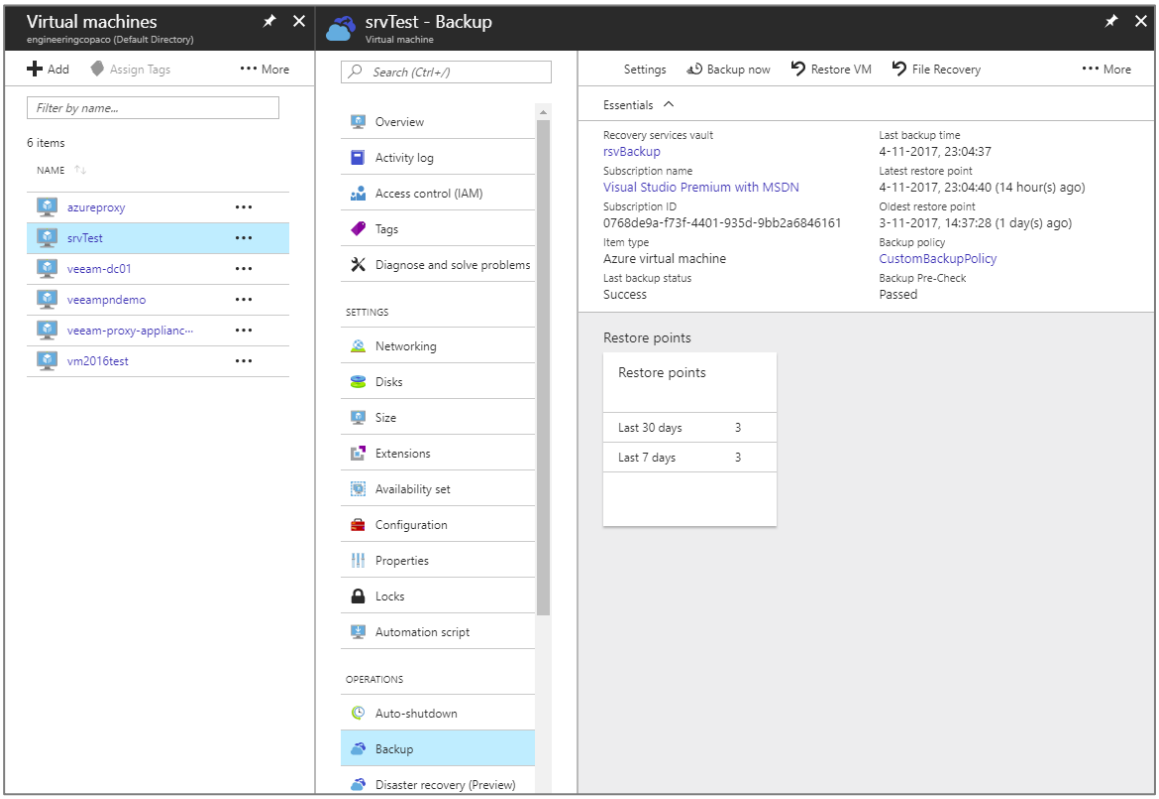
5. From the calendar, **select the restore point** just created. Click **Mount**.



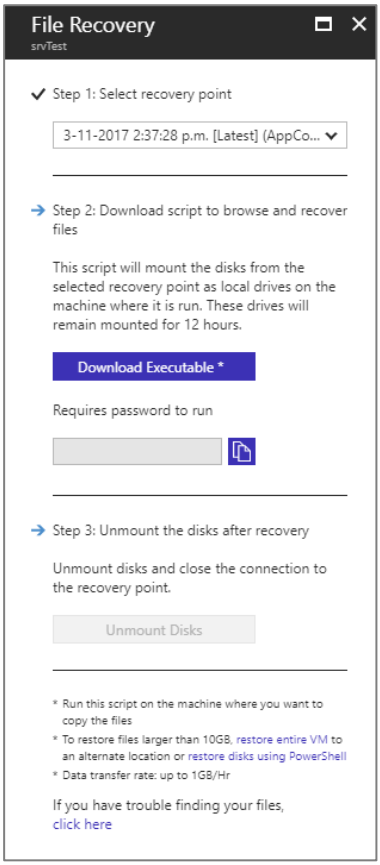
6. When the volume is mounted, you can click **Browse** to recover file by using the copy and paste options from **Windows Explorer**. Try to recover your files.
7. When finished, click **Unmount** from the Recover Data Wizard.

Exercise 3: Perform a recovery of your VM files

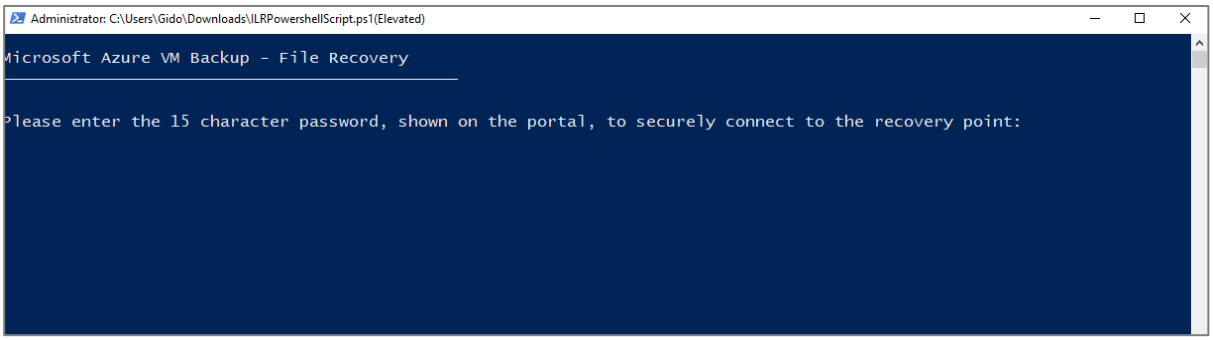
1. From the **Resource Group**, open your Virtual Machine. From there, select **Backup** to see the backup state of this machine. Check the **Last Backup State**, it should now show successful.



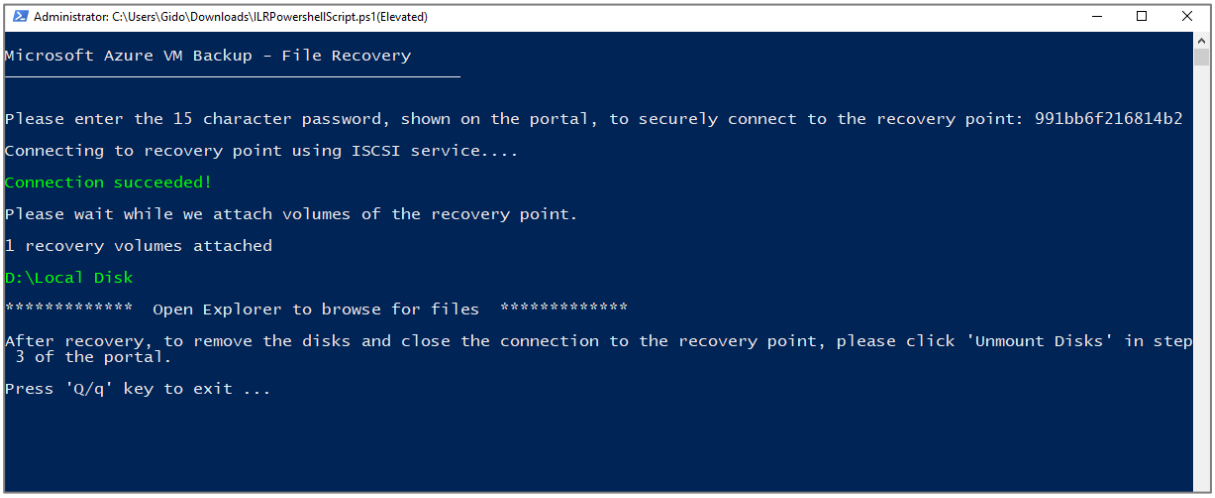
2. Please note it is possible to restore the full VM from here. However, this activity is not included in this lab. Instead, for this exercise, open **File Recovery**.



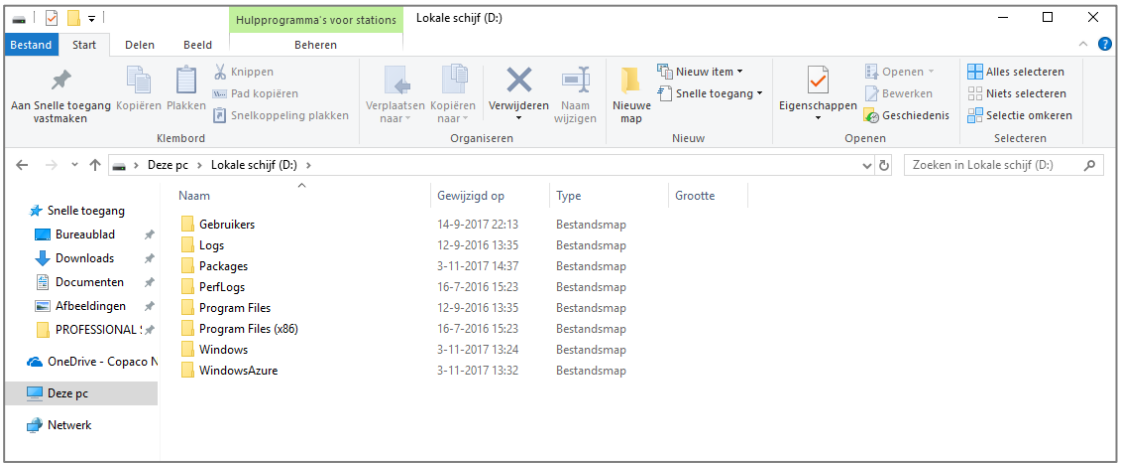
3. Select **Recovery Point** and click **Download Executable**
4. **Copy** the password to clipboard
5. Browse the executable on your local computer. Right click to **Run as Administrator**



6. **Paste** (or type) the password from clipboard when asked. Please wait while the Recovery Point is mounted.



7. From the **Windows Explorer**, the Recovery Point is mounted as a driveletter (D:\)
8. Try to browse the Recovery Point and **copy** some files to your local drive.



9. When done, click **Unmount Disks** from the Azure Portal. After some time, the drivemapping on your local machine will disappear.

Activity 3: Clean-up

Objectives

In this activity, you will;

- Remove the Azure resources created in this lab

The resources we deployed will consume your credit. As they are only there for testing purposes, you can safely remove them. This way, the remaining credit form your Azure Pass can be used for other activities. This activity is optional.

1. From the **Azure Portal**, navigate to your **Resource Group**
2. From the **Overview** pane, click **Delete Resource Group**
3. Make sure you selected the correct Resource Group and confirm this by typing the name when asked.
4. Click to **Delete** to confirm. Check the status from the **Notifications** in the top right of the Azure Portal.