

# Table of Contents

<b>Azure Administrator Interview Questions &amp; Answers .....</b>	<b>1</b>
Release History .....	1
About Dot Net Tricks .....	2
Dot Net Tricks Courses .....	2
Dot Net Tricks Live Training .....	3
Dot Net Tricks eBooks .....	3
Technical Recruiting .....	4
Dedication.....	5
Introduction.....	6
About the Author.....	7
How to Contact Us.....	8
<b>Virtual Machines .....</b>	<b>16</b>
Q1.     What is Azure Virtual Machine? .....	16
Q2.     You have a fresh subscription and you need to deploy the 5 VMs. What are the steps you will follow to deploy the VMs with high availability and the Premium Disks? .....	16
Q3.     In your organization, there are a couple of VMs with Web Apps. When a couple of the VMs restarted then IP addresses of VMs got changed, how do you make sure that this will not happen again?.....	18
Q4.     You have a couple of Linux and Windows VMs and you need to enable the Azure Hybrid benefit model from the portal, so how you can achieve?.....	19
Q5.     You have received an email from your company security team that a couple of VMs are exposed to the internet, how to prevent that public access without interruption of any service? .....	20
Q6.     You have a couple of VMs of 4 Core and 16GB. You need to upgrade VMs to 8 Core and 32 GB Ram since they are not performing well. So, what are the steps you will take? .....	20
Q7.     You have a couple of Virtual Machines in Azure and you need to enable some kinds of monitoring which will help you to diagnose the issues. How to enable it?.....	21
Q8.     You have received a couple of alerts that your Azure VMs resources health is critical. How you can check the health? .....	21
Q9.     How to add a couple of Disk in VMs of 4 TB and how you will make sure that it can be done from the portal without interruptions. .....	22
Q10.    You have a couple of web servers which are communicating to DB servers. Suddenly, DB team told that they are unable to communicate to Web servers. How to fix the issue and get the connection logs, so that you can ignore the future interruption in services?.....	22

Q11. You have a couple of VMs running in Azure environments and you need to enable the Availability set, how to do that? .....	23
Q12. Is it possible to enable the NSG in Vnet since you don't want to enable it on VMs level?.....	23
Q13. What is NSG and How can you create the NSG?.....	23
Q14. How to Add to NSG in Subnets as per customers' requirements?.....	24
Q15. Is it possible to host the VM in another region and connect to a different region?.....	24
Q16. You have a customer and he complains about the passwords is not working on his production VMs, how you are going to solve the issue? .....	24
Q17. One of your clients escalated that his VM has been rebooted without intimating to him and you need to know logs who has rebooted the VM, how can get the details.....	25
Q18. What is the availability set?.....	25
Q19. Your client wants to create the Availability set which needs to use to your database servers as per requirements. How you will process further?.....	26
Q20. Your customer is agreed to have Azure environments, but he is looking to reduce the cost of the VMs, what are the option you will suggest and why?.....	27
Q21. Your clients have environments of Hyper-V V1 and all the disk supports Vhdx and they have almost all the Operating systems link windows, Linux etc. but they want to go with customer image of windows, what is your first approach to upload the image or disk to Azure? .....	27
<b>Azure PowerShell and CLI .....</b>	<b>28</b>
Q1. In your organization, you have some client who doesn't want to give the subscription access, but they have given the PowerShell access, how you create the Storage account using PowerShell? .....	28
Q2. You have only PowerShell access and now you need configure the Vnet use the PowerShell commands what is the command or parameter you will use for the same? .....	28
Q3. What is the CLI command you will use to get the Resources group and VMs list? .....	28
Q4. You want to add the 128 GB additional disk and your customer don't want to allow the access of azure portal. How do you add using Azure CLI command lets?.....	28
Q5. You want to add the 128 GB additional disk and your customer don't want to allow the access of azure portal. How do you add using Azure CLI commands? .....	29
Q6. How to get the list of azure VMs using the PowerShell? .....	29
Q7. What is the PowerShell command lets you will use for VMs operations like start and stop etc.?.....	29
Q8. How to tag the resources using a command? .....	29
Q9. Your customer wants to check the size of the VMs available in the East US region, what is the command line you will use for the same?.....	30
Q10. Your customer wants to create the VNets using PowerShell command lets in the East US region, what is the command line you will use? .....	30

Q11.	How to configure peering between vnet1 & Vnet2 using PowerShell command lines? .....	30
Q12.	How to create the storage accounts using the azure PowerShell command lets? .....	31
Q13.	How to get the VMs output using the azure PowerShell command lets? .....	31
Q14.	How to clean up the resource group using the Azure PowerShell command?.....	31
Q15.	How to get the site recovery Vault details using Azure PowerShell command? .....	32
Q16.	How to get the site recovery Vault details using Azure PowerShell command lets?.....	32
	<b>Azure Storage .....</b>	<b>33</b>
Q1.	You have some SQL DBs which you want to migrate to Azure VMs, which types of storage account you will use? .....	33
Q2.	What is the difference between Premium Storage Account and Standard Storage Account?.....	33
Q3.	What are Storage Accounts Types?.....	33
Q4.	In your organization, you have some client who doesn't want to give the subscription access, but they have given the PowerShell access, how you create the Storage account using PowerShell? .....	33
Q5.	What is Storage solution you will suggest to the customer and how many types of storage accounts Replications are available? .....	34
Q6.	You have joined as Cloud Administrator and in of the client meeting client asked, you have 100 TB of Data and you need some storage solution to minimize the cost, what is your approach? .....	34
Q7.	You have a couple of SQL Database with 20 TB data, you are planning to migrate to Azure VMs and you need to find out some storage account and VMs instance which will support up to 20 TB Data with high performance? .....	35
Q8.	Azure Files Servers Work on which port and Protocol? .....	35
Q9.	Your customer has migrated all the disk to Azure but now he is not able to find the option to attach a few of the disk to Azure VMs, how you are going to solve the Issue? .....	35
Q10.	The customer has requirements that he is planning to move his Data to Azure file share and Data Size is 6 TB. What the solution you can provide?.....	36
Q11.	What will be largest disk size you will attach to VM? .....	36
Q12.	What is the difference between Managed Disk and Unmanaged Disk?.....	36
Q13.	How to Create the File Share for the customer as they need to have file share in Azure cloud? .....	37
Q14.	Clients want to secure the Storage Accounts and they should not communicate outside of the world, what is the solution you will provide?.....	37
Q15.	You have a specific customer and they want to use the Azure Blobs and wants to use the upload and download the data on a daily basis what is the tool you will use for that? .....	38
Q16.	What is blob storage accounts and Table Storage Accounts?.....	39
Q17.	What file Share? .....	40

Q18. Your customer wants to take the backup of the Blob storage accounts, please provide the solution? .....	40
Q19. You have some On-Premises File server and you want to migrate them to Azure, what are the tools you will use to migrate the files to Azure? .....	40
Q20. One of your engineers has created the VM with Standard Disk but later customer wants to be migrated to Premium Disk, how you can fix this issue? .....	40
Q21. The customer has requirements to add the blob storage accounts to Azure VMs, please confirm Is it possible if yes, how you can archive this? .....	41
Q22. What is the life of a soft delete object and how to use? .....	41
Q23. You have a customer that needs to export the Managed disks, as you are aware that managed disk managed by the MS, please provide a solution for the same.....	42
Q24. Your customer has created a file share, but he was unable to connect to file share, what is the process you will follow to fix this?.....	42
Q25. Your customers want to take the file share backup as their Data is critical. What approach you will use to fix the issue?.....	43
Q26. You have a couple of General purpose V1 Accounts and our customer wants to upgrade to General Purpose V2 Accounts. How you can fix this issue? .....	44
Q27. In initial days a customer has chosen the Replication is LRS (Locally redundant Storage) now he wants to migrate to Ra-GRS (Read Only Geo Redundant Storage), How you can fix the issue? .....	45
Q28. Your client wants to get an alert when someone tries to attempt to access or exploit storage account? How you can implement to meet the Audit expectations of your client organization? .....	46
Q29. You are unable to connect to File servers from outside the network. What tool you will need to find out which ports are blocked?.....	47
Q30. You have a VM with private IP and a hosted web application at port 80. What steps you will follow to enable the web application access publicly? .....	47
<b>Azure Networking .....</b>	<b>49</b>
Q1. What is Site to Site VPN?.....	49
Q2. What is Express Route? .....	49
Q3. What is Point to Site VPN connection? .....	50
Q4. What is a multisite connection?.....	51
Q5. What is Vnet peering? .....	51
Q6. You want to use your DNS server; how can you use the same in Azure and where you can update the same? 52	52
Q7. What is Address Space?.....	52
Q8. What are subnets? .....	53

Q9. A customer has Prod, Dev and Test environments. How to implement a solution that each environment can't connect to each other?.....	53
Q10. You have On-premises environments and you need to connect to Azure What are the tools you will use to connect On-premises to Azure?.....	53
Q11. Are application Gateway supports the Static public IP Address?.....	54
Q12. You have a couple of Azure VMs which are in an availability set and your customer wants to enable the load balancing mechanism, please provide a solution for this? .....	54
Q13. You have only PowerShell access and now you need configure the Vnet use the PowerShell commands what is the command or parameter you will use for the same? .....	54
Q14. What are the tools you will use to create the Vnets?.....	54
Q15. Is there any restriction to use the IP address in subnets? .....	54
Q16. You have a few customers where they want to create the largest and smallest subnets due to some internal requirements, What's your suggestion?.....	54
Q17. The customer wants to define the own custom routing in azure Vnets and subnets, what's the solution you have? .....	55
Q18. Please provide the steps you will take to configure the Site to site VPN Connection? .....	55
Q19. What is the difference between a policy-based (static-routing) and route-based gateway?.....	55
Q20. Your customer has configured the policy-based routing but due to the issue, he wants to change to route based configuration in Azure VPN, how you can deliver the solution? .....	56
Q21. How to configure the static public IP address VPN gateway?.....	56
Q22. Can you assign the IP address to Azure VMs, virtual NIC card? .....	56
Q23. What is Traffic Manager? .....	56
Q24. How you can configure the endpoints in Azure Traffic manager? .....	56
Q25. What are the routing methods used by Traffic Manager? .....	57
Q26. What is the application gateway? .....	57
Q27. What are the benefits of Application gateway?.....	57
Q28. What is the difference between Azure load balancer and Application gateway? .....	58
Q29. What protocols are supported by Application gateway?.....	58
Q30. Please specify the Azure Load Balancer? .....	58
Q31. What is Azure DNS? .....	59
Q32. What is Network Security Group (NSG)?.....	59
Q33. Can you ping your default routes and do trcrt for diagnose connectivity? Please confirm if this is possible?.....	59

Q34. Can you add multiple subnets in Vnets? .....	59
Q35. VNet peering connection is in the Disconnected state, what will be the problem?.....	59
Q36. Your customer wants to reserve the IP address for our DMZ environments in azure Vnets, how can you achieve the same?.....	59
Q37. If you want to restrict the PaaS services, then what are the services which can be restricted or secured by Vnet in Azure? .....	60
<b>Azure Active Directory .....</b>	<b>61</b>
Q1. What is Azure Active Directory?.....	61
Q2. What are the benefits of Azure AD?.....	61
Q3. How to sync the On-Premise AD to Azure AD? .....	61
Q4. What are the requirements to configure the Azure AD connect? .....	61
Q5. What is the protocol supports by the Azure AD for Authentication? .....	62
Q6. What is the difference between the global administrator and services administrator roles? .....	62
Q7. What are the tools you will use to check the Azure AD connect health? .....	62
Q8. You have bought the 50 E5-Enterprise Mobility + Security licenses, how can you assign to the user in Azure AD? .....	62
Q9. The customer wants to enable the multifactor -authentication, how you can enable the same?.....	63
Q10. What are the RBAC roles in Azure? .....	64
Q11. The customer wants to register the Apps, how you can process?.....	64
Q12. What is Azure Conditional Access? .....	65
Q13. One of your customers has an issue on azure ad connect sync and he wants to resync the Azure AD, how you can process? .....	65
<b>Backup and Site Recovery .....</b>	<b>66</b>
Q1. What is Azure Backup and what are the benefits of Azure Backup? .....	66
Q2. How to create the Backup Vault.....	66
Q3. How to configure the Azure VM backup? .....	67
Q4. The customer wants to enable the backup of azure Webs services, how you can enable the backup for the same? .....	67
Q5. How to configure the Azure SQL DB backup retention? .....	68
Q6. Can you take a backup of SQL DB of Azure VMs if yes, then how to enable the SQL DB backup? .....	69
Q7. Clients want to know the status of the Azure Jobs of last one week, how you can process the same? 69	69
Q8. How to configure the Azure Backup reports? .....	70

Q9. Most of your client's backup is getting failed and they are not getting alerts, you want to make sure that alerts have been configured, how you can process the same? .....	71
Q10. What are the backup Jobs? .....	72
Q11. The customer wants to retain the data of more than 50 years, please confirm if this possible or not, IF yes how you can achieve the same? .....	72
Q12. How to restore the VM?.....	72
Q13. Is it possible to restore the disk only from azure backup?.....	73
Q14. The customer wants to take the backup of their VMs 3 times in a day, how you can configure? .....	75
Q15. What is Site recovery and what is the use of it? .....	75
Q16. How to migrate the on-premises Machines to Azure? .....	75
Q17. What is the prerequisite to migrate Hyper-V VMs to Azure? .....	77
Q18. What is the use of Process, Configuration and master server? .....	80
Q19. What is the use of mobility agents in azure site recovery?.....	80
Q20. What is the difference between test failover and Failover?.....	80
Q21. What is the commit in Azure? .....	81
Q22. What is the RTO and RPO in Azure DR?.....	81
Q23. Your customer has Windows Server 2003 in on-premise and he wants to migrate as it is, please provide the solution? .....	81
References .....	82

# 1

# Virtual Machines

## Q1. What is Azure Virtual Machine?

**Ans.** Azure Virtual Machines are on-demand computing resources or virtual machines offering of Microsoft Azure. We can typically use a VM as a service when required and shut down the system when not in use. The Azure Virtual Machines are listed under Infrastructure as a service (IaaS) category in Azure. With Azure Virtual Machines we get more control over the environment to customize the development environment or hosting.

## Q2. You have a fresh subscription and you need to deploy the 5 VMs. What are the steps you will follow to deploy the VMs with high availability and the Premium Disks?

**Ans.** You need to follow the following steps to deploy the VM.

- Click on the All services
- Search for VMs.
- Click on the VM OS version which needs to choose like 2016, Linux etc.
- Click on the Create.
- We will select the subscription and Resources Group under Basics Tab.
- Then Select the Virtual machine name, region, Image, Size of the VMs, User ID and Password.
- Then you will select the Availability set and create the New Availability set.
- In Disk Tab we will select the OS Disk as Premium Disk.
- In Networking Tab select, we will create the NSG and select the respected port like 3389 or as per requirement, you should add the inbound Rule and Outbound Rules.
- In Management, you will enable the Monitoring, Diagnostic logs Auto shutdown settings.
- If you want to add an extension and tag, then select the respected Tabs. Then click on the Review and Create.

## Create a virtual machine

**⚠️** Changing Basic options may reset selections you have made. Review all options prior to creating the virtual machine.

**Basics**   **Disks**   **Networking**   **Management**   **Guest config**   **Tags**   **Review + create**

Create a virtual machine that runs Linux or Windows. Select an image from Azure marketplace or use your own customized image. Complete the Basics tab then Review + create to provision a virtual machine with default parameters or review each tab for full customization. Looking for classic VMs? [Create VM from Azure Marketplace](#)

**PROJECT DETAILS**

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

\* Subscription **MSDN Platforms**  
└─ \* Resource group **asd** [Create new](#)

**INSTANCE DETAILS**

\* Virtual machine name **Azure4you**  
\* Region **South Central US**  
Availability options **No infrastructure redundancy required**  
\* Image **Ubuntu Server 18.04 LTS** [Browse all images and disks](#)  
\* Size **Standard D2s v3**  
2 vcpus, 8 GB memory [Change size](#)

**ADMINISTRATOR ACCOUNT**

Authentication type **Password**   SSH public key  
\* Username **azure4you**  
\* Password **\*\*\*\*\***  
\* Confirm password **\*\*\*\*\***  
Login with Azure Active Directory (Preview) **Off**  On  Off

**INBOUND PORT RULES**

Select which virtual machine network ports are accessible from the public internet. You can specify more limited or granular network access on the Networking tab.

\* Public inbound ports **None**   Allow selected ports  
Select inbound ports [Select one or more ports](#)

**Info** All traffic from the internet will be blocked by default. You will be able to change inbound port rules in the VM > Networking page.

**Review + create**   **Previous**   **Next : Disks >**

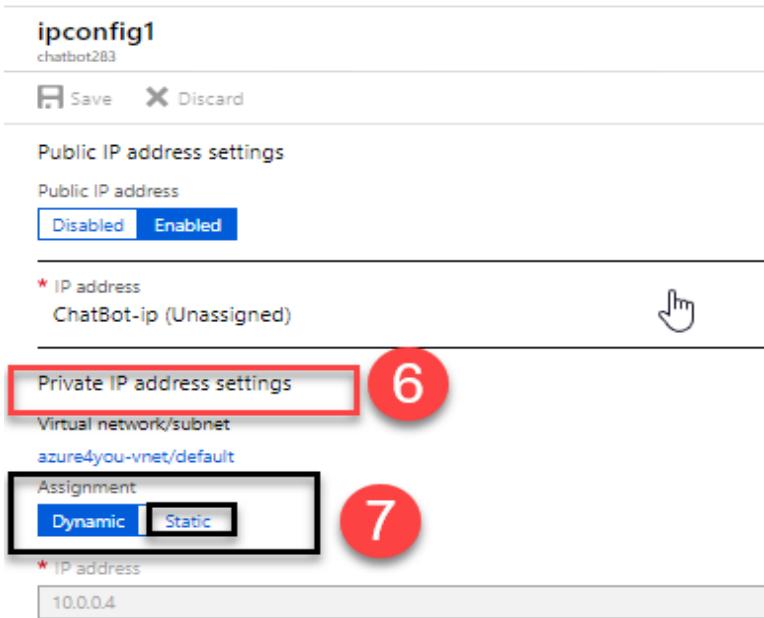
**Q3.** In your organization, there are a couple of VMs with Web Apps. When a couple of the VMs restarted then IP addresses of VMs got changed, how do you make sure that this will not happen again?

**Ans.** This issue arises when all VMs have dynamic IP address configuration. So, when the VMs rebooted because of maintenance or any other reason then this causes the IP address changes issue.

You should follow the below steps to fix this issue.

- Click on the Networking Tab and select the NIC Card.
- Select the IP configuration tab under settings.
- Click on the Ipconfig tab in right Side.
- Under Private settings change the IP Address Dynamic to Static.

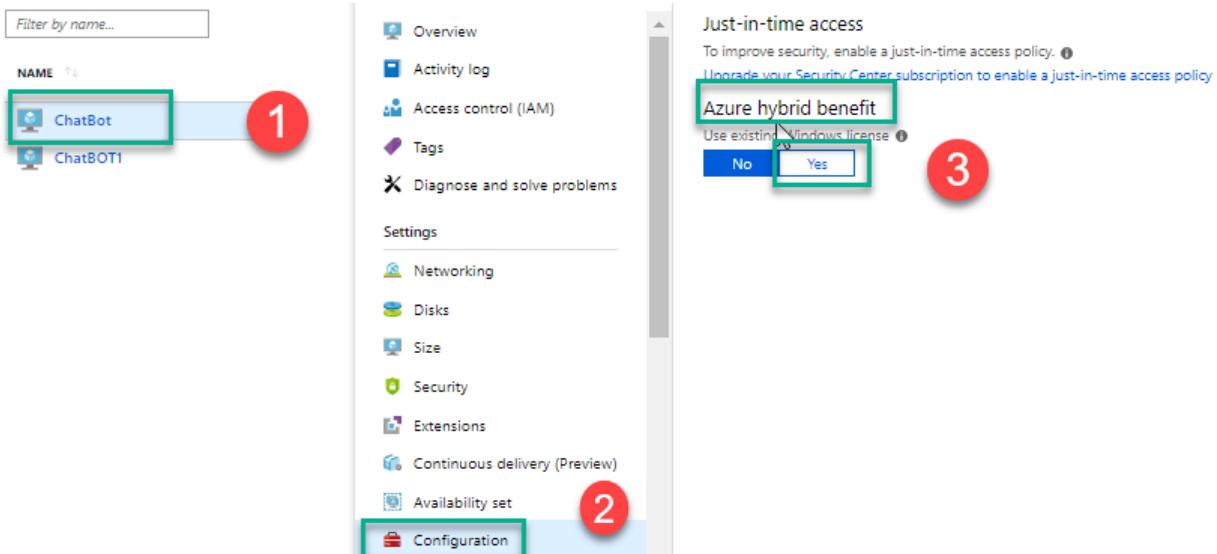
NAME	IP VERSION	TYPE	PRIVATE IP ADDRESS
ipconfig1	IPv4	Primary	10.0.0.4 (Dynamic)



#### Q4. You have a couple of Linux and Windows VMs and you need to enable the Azure Hybrid benefit model from the portal, so how you can achieve?

**Ans.** For Windows VMs it's possible but for Linux VMs Hybrid benefits model will not work. For windows, you should follow the following steps.

- Click on the VMs.
- Select the Configuration Tab
- Select the Azure Hybrid Benefits
- Click yes.



**Q5.** You have received an email from your company security team that a couple of VMs are exposed to the internet, how to prevent that public access without interruption of any service?

**Ans.** In that case, you need to create the NSG and associate your VMs if there is no NSG. Now, block the port 80/443 and allow only specific ports of azure which will fix the issue.

- Click on the VMs
- Click on the networking tab
- Click on the NSG
- Then create the Outbound deny rule for the internet.

The screenshot shows the Azure portal interface for managing a virtual machine named 'ChatBot'. Step 1 shows the list of VMs with 'ChatBot' selected. Step 2 shows the 'Networking' tab selected. Step 3 highlights the 'Destination' field in the 'Add outbound security rule' dialog, which is set to 'Service Tag' and 'Internet'. Step 4 highlights the 'Action' dropdown in the same dialog, which is set to 'Deny'.

**Q6.** You have a couple of VMs of 4 Core and 16GB. You need to upgrade VMs to 8 Core and 32 GB Ram since they are not performing well. So, what are the steps you will take?

**Ans.** You will go to specific VMs and perform the below steps.

- First, take approval from the Application Owner for downtime because it will automatically reboot the VM.
- Go to each VM and Click on the Size.
- Select the VM instance Size of 8 core 32 GB Ram VMs.
- Once you will select the specific Size, it will automatically start upgrading the instance.

- After that, you need to verify all the setting of the VMs and handover to application Owner if activity completed successfully.

**Virtual machines** < X > ChatBot - Size

ChatBot - Size  
Virtual machine

Search (Ctrl+ /) Restore default filters

Overview Activity log Access control (IAM) Tags Diagnose and solve problems Settings Networking Disks Size

Showing 167 VM sizes. Subscription: MSDN Platforms Region: South Central US Current size: Standard\_DS1\_v2

VM SIZE	OFFERING	FAMILY	VCPUS	RAM (GB)	DATA DISKS	MAX IOPS	TEMPO...	PREMI...	COST/...
B8ms	Standard	General pu...	8	32	16	4320	64 GB	Yes	3,205.70
D1	Standard	General pu...	1	3.5	4	4x500	50 GB	No	3,204.77
D1_v2	Standard	General pu...	1	3.5	4	4x500	50 GB	No	3,147.24
D11	Standard	Memory o...	2	14	8	8x500	100 GB	No	8,605.73
D11_v2	Standard	Memory o...	2	14	8	8x500	100 GB	No	8,163.15

**Q7.** You have a couple of Virtual Machines in Azure and you need to enable some kinds of monitoring which will help you to diagnose the issues. How to enable it?

**Ans.** Microsoft recently released the Diagnostics logs which help you to monitor the services and sent the alerts to log analytics for monitoring and you can restore the logs as per your need and it can be restored up to 1 year.

To enable the logs, you need to follow the below steps.

- Click on the VM and then under Monitoring Tab click on the Diagnostics settings.
- Then select the storage account to store the logs.
- This log will provide the OS level diagnostics and IIS, SQL etc. logs to understand the issue.

**Virtual machines** < X > ChatBOT1 - Diagnostics settings

ChatBOT1 - Diagnostics settings  
Virtual machine

Search (Ctrl+ /) Save Discard

The diagnostics settings can't be updated when the virtual machine isn't running.

Monitoring

- Insights (preview)
- Alerts
- Metrics
- Diagnostics settings**
- Advisor recommendations
- Logs (preview)
- Connection monitor

Overview Performance counters Logs Crash dumps Sinks Agent

Azure Monitoring collects host-level metrics – like CPU utilization, disk and network usage – for all virtual machines without any additional software. For more insight into this virtual machine, you can collect guest-level metrics, logs, and other diagnostic data using the Azure Diagnostics agent. You can also send diagnostic data to other services like Application Insights. Learn more

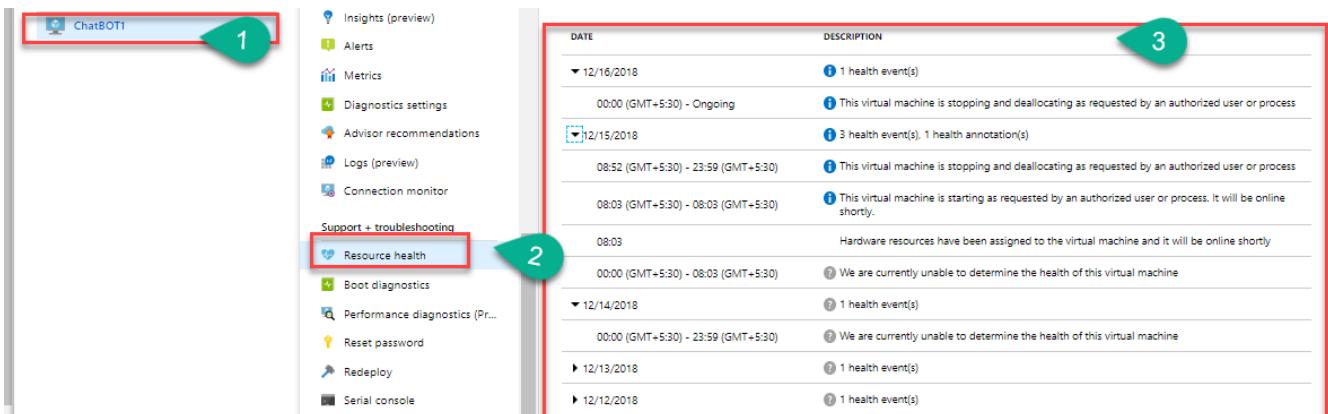
To get started now, click the button below:

Enable guest-level monitoring

Already know what you're doing? You can customize the diagnostic data you want to collect by visiting each of the tabs above. You can add or remove data types to collect at any time.

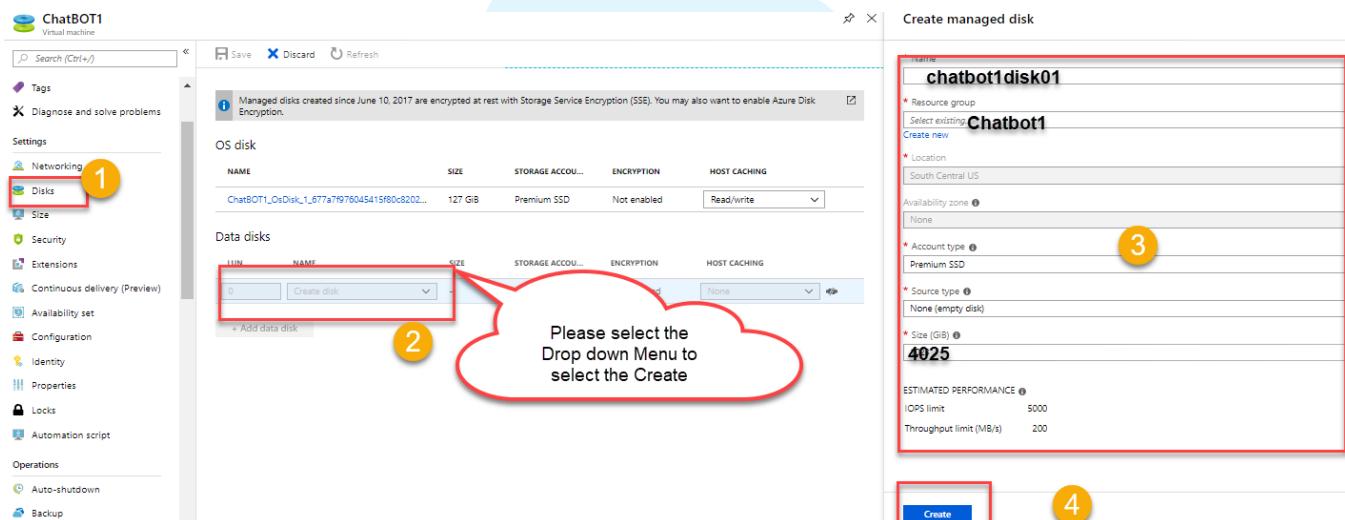
**Q8.** You have received a couple of alerts that your Azure VMs resources health is critical. How you can check the health?

**Ans.** Well, in that case, you need to check the resource health under the support + Troubleshooting Tab and click on the Resource health, it will show you the last 30 days result of your resources.



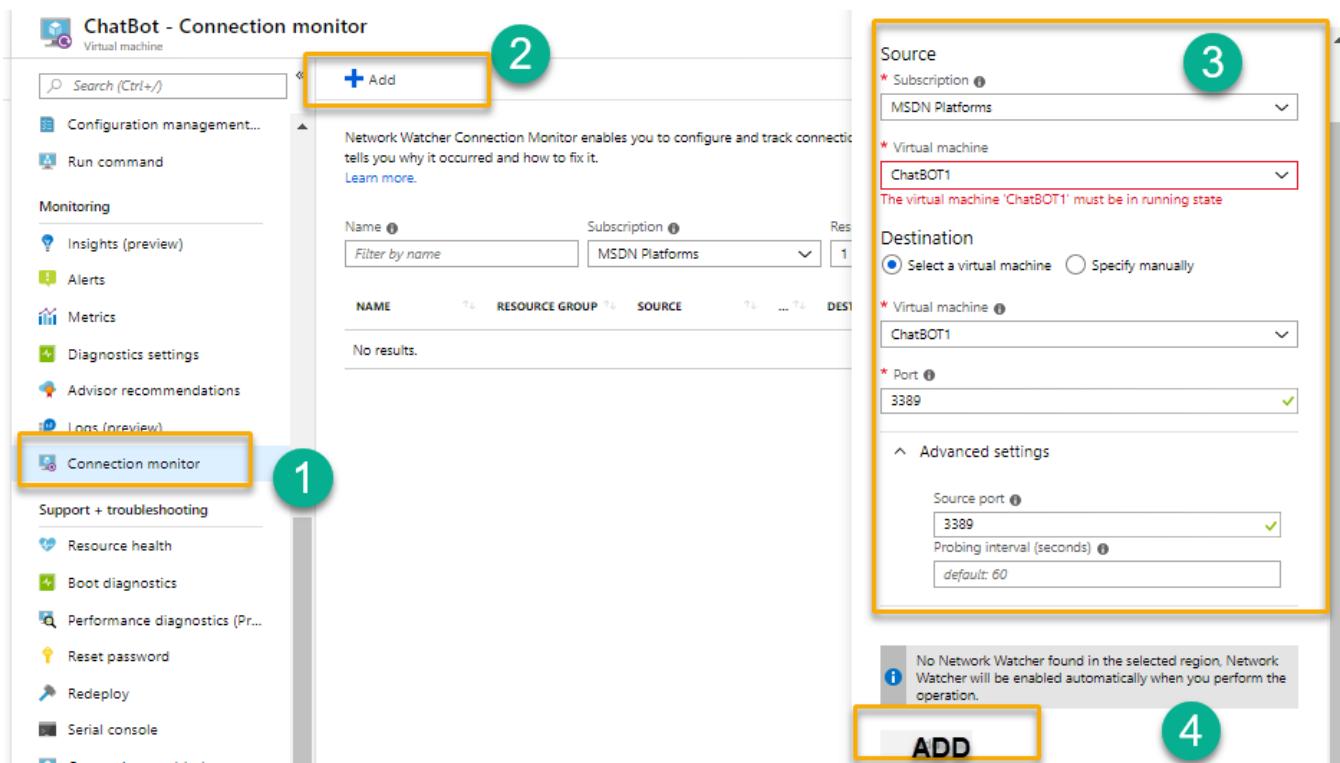
## Q9. How to add a couple of Disk in VMs of 4 TB and how you will make sure that it can be done from the portal without interruptions.

**Ans.** So, you need click in the VM and under settings select the disk then you need to click on the Add disk, Select Option click on create then provide the Name of the disk, Resource Group, locations etc. and then click on create.



## Q10. You have a couple of web servers which are communicating to DB servers. Suddenly, DB team told that they are unable to communicate to Web servers. How to fix the issue and get the connection logs, so that you can ignore the future interruption in services?

**Ans.** In this scenario, you need to use the Network Watcher tools and it's available in azure under settings connection monitoring and add the servers.



**Q11.** You have a couple of VMs running in Azure environments and you need to enable the Availability set, how to do that?

**Ans.** No. It's not possible to enable the AV set in running systems there is a limitation to it, if you want to enable the same then you need to recreate the VMs and Add the Availability set to it.

**Q12.** Is it possible to enable the NSG in Vnet since you don't want to enable it on VMs level?

**Ans.** It's not possible to enable the NSG in Vnets but certainly, you can associate with Subnets which will help you to reduce the manageability of your NSG.

**Q13.** What is NSG and How can you create the NSG?

**Ans.** NSG is nothing but its services will help you to allow or deny the specific port to communicate to your services within subscription or outside of the subscription. It has inbound and outbound rules.

Inbound Rule: It defines the traffic coming from the internet to VMs or specific services or VMs.

Outbound Rules: It defines the traffic going to the internet from your VMs or specific services or VMs.

You need to follow steps to create the NSG and Associate to VMs.

- In All Services Search the NSG.
- Provide the Name, Location and Resource Group
- Click on the NSG and create the NSG.

The screenshot shows the Azure portal interface for creating a Network Security Group (NSG). On the left, there's a search bar with 'Network security group' highlighted (1). Below it, a table lists various network security groups, with one named 'Network security group' selected (2). On the right, a detailed view of the NSG is shown, including its definition as a virtual firewall (3). At the bottom right of this view, there's a 'Create' button (4) and an 'Automation options' link.

## Q14. How to Add to NSG in Subnets as per customers' requirements?

- Click on the Vents, Select the Requested subnets.
- Then select the NSG tab and add the NSG to subnets,

This screenshot shows the Azure portal interface for managing subnets within a virtual network. On the left, under 'Virtual networks', a list includes 'azure4you-vnet' (2). In the main pane, 'Subnets' is selected (3). A specific subnet named 'default' is highlighted (4). On the right, the 'Network security group' tab is selected (5), showing the 'NSG' ChatBot-nsg (6) assigned to the subnet.

## Q15. Is it possible to host the VM in another region and connect to a different region?

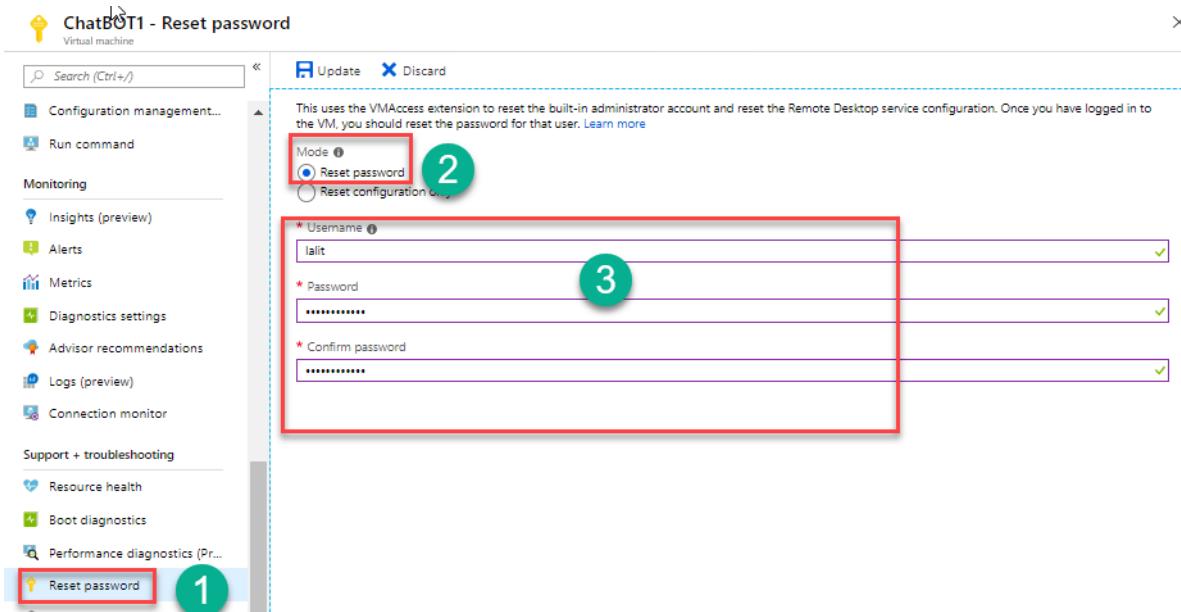
**Ans.** Yes, you need to setup the interconnectivity while creation the V-net (Virtual Network) to V-net (Virtual Network) connection between both the regions.

## Q16. You have a customer and he complains about the passwords is not working on his production VMs, how you are going to solve the issue?

**Ans.** In that case, you need to reset the password from the Portal.

- Select the VM and under that, you will select the Reset password.

- Then provide the Username and Password.



**Q17.** One of your clients escalated that his VM has been rebooted without intimating to him and you need to know logs who has rebooted the VM, how can get the details.

**Ans.** In that case, Activity logs will help, as any activity happens in VMs through the portal, you will get a log alerts store in the activity logs, so you will go to activity logs and found that who has rebooted the VM and can share with clients after manager approval.

OPERATION NAME	STATUS	TIME	TIME STAMP	SUBSCRIPTION	EVENT INITIATED BY
Start Virtual Machine	Succeeded	18 min ago	Sun Dec 16 2...	MSDN Platforms	lalit01
Start Virtual Machine	Started	20 min ago	Sun Dec 16 2...	MSDN Platforms	lalit01
Start Virtual Machine	Started	20 min ago	Sun Dec 16 2...	MSDN Platforms	lalit01
Start Virtual Machine	Accepted	20 min ago	Sun Dec 16 2...	MSDN Platforms	lalit01
Start Virtual Machine	Accepted	20 min ago	Sun Dec 16 2...	MSDN Platforms	lalit01
Start Virtual Machine	Succeeded	18 min ago	Sun Dec 16 2...	MSDN Platforms	lalit01
Resolved	Resolved	19 min ago	Sun Dec 16 2...	MSDN Platforms	
Updated	Updated	20 min ago	Sun Dec 16 2...	MSDN Platforms	
Health Event Resolved	Resolved	19 min ago	Sun Dec 16 2...	MSDN Platforms	
Updated	Updated	20 min ago	Sun Dec 16 2...	MSDN Platforms	
Health Event Updated	Updated	20 min ago	Sun Dec 16 2...	MSDN Platforms	

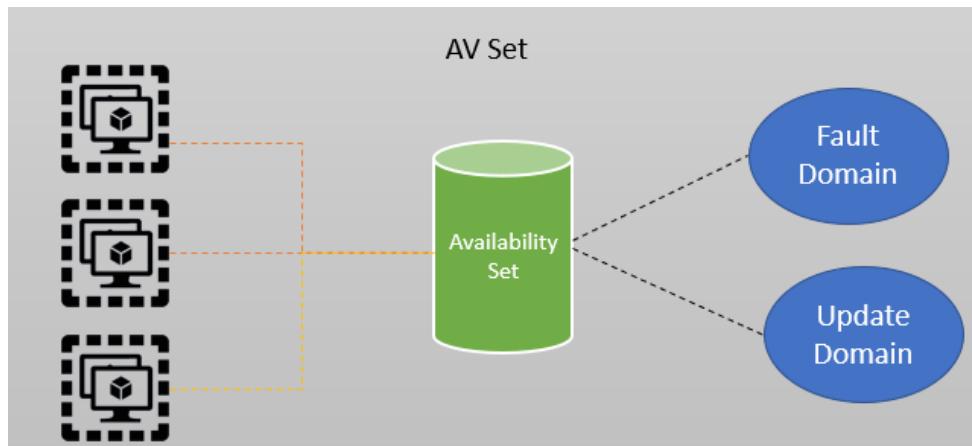
**Q18.** What is the availability set?

**Ans.** Availability sets are the services which will help your VMs to prevent from MS azure datacenters outage.

In the Availability set, you will find the Fault domain and update domain.

**Fault Domain:** It will help in case of a power outage or any network interruption in Azure Datacenters.

**Update Domain:** It will help to make sure any 1 VMs will reboot at a time if there are any patches applied by MS as per their regular patches scheduled.



## Q19. Your client wants to create the Availability set which needs to use to your database servers as per requirements. How you will process further?

- Click on all services
- Then select the Availability set or search the Availability set
- Provided the Name, resource Group Location etc.
- Select the Fault domain/ Update Domain
- Click on Create

Home > New > Availability Set > Create availability set

New

1

Availability Set

Azure Marketplace See all Popular

Get started Recently created Compute Networking Storage Web Mobile Containers Databases Analytics AI + Machine Learning Internet of Things Integration Security Identity Developer Tools Management Tools Software as a Service (SaaS)

Windows Server 2016 VM Quickstart tutorial Ubuntu Server 18.04 VM Learn more Web App Quickstart tutorial SQL Database Quickstart tutorial Serverless Function App Quickstart tutorial Cosmos DB Quickstart tutorial Kubernetes Service Quickstart tutorial DevOps Project Quickstart tutorial

Availability Set Microsoft

An availability set is a group of virtual machines that are deployed across fault domains and update domains. Availability sets make sure that your application is not affected by single points of failure, like the network switch or the power unit of a rack of servers.

Save for later

PUBLISHER Microsoft USEFUL LINKS Documentation

2

Create

3

Name: Azure4you

Subscription: MSDN Platforms

Resource group:

Location: South Central US

Fault domains: 2

Update domains: 5

Use managed disks: No (Classic), Yes (Aligned)

4

Create Automation options

**Q20.** Your customer is agreed to have Azure environments, but he is looking to reduce the cost of the VMs, what are the option you will suggest and why?

**Ans.** You will have suggested to bring your custom image and use the Hybrid use benefits to reduce the costs because if the customer has their own license, you can enable the hybrid use benefits which will help customer to reduce the cost up 40 % of per VM/month.

**Q21.** Your clients have environments of Hyper-V V1 and all the disk supports Vhdx and they have almost all the Operating systems link windows, Linux etc. but they want to go with customer image of windows, what is your first approach to upload the image or disk to Azure?

**Ans.** In that case, you need to help your customer to take the backup and convert the VHDX disk to VHD as MS doesn't support VHDX format. Hence, you need to convert the VHDX to VHD format and then you will update the disk using Az copy or other tools.

```
Convert-VHD -Path c:\azure\VM1.vhd -DestinationPath c:\Azurelatest\VM2.vhdx
```

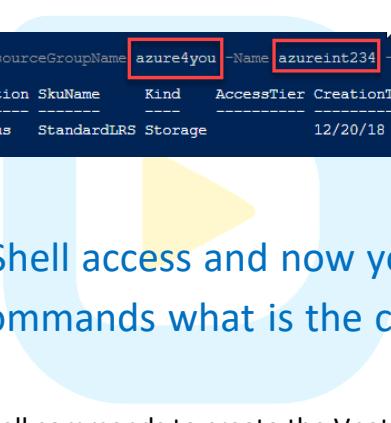


# 2

## Azure PowerShell and CLI

- Q1. In your organization, you have some client who doesn't want to give the subscription access, but they have given the PowerShell access, how you create the Storage account using PowerShell?

Ans. `New-AzureRmStorageAccount -ResourceGroupName azure4you -Name azureint234 -SkuName Standard_LRS -Location 'East Us'`



StorageAccountName	ResourceGroupName	Location	SkuName	Kind	AccessTier	CreationTime	ProvisioningState	EnableHttpsTrafficOnly
azureint234	azure4you	eastus	StandardLRS	Storage		12/20/18 8:55:20 AM	Succeeded	False

- Q2. You have only PowerShell access and now you need configure the Vnet use the PowerShell commands what is the command or parameter you will use for the same?

Ans. You can use the below PowerShell commands to create the Vnets.

```
$subnet = New-AzureRMVirtualNetworkSubnetConfig –Name "Subnet1" –AddressPrefix "10.1.0.0/16"
```

```
New-AzureRMVirtualNetwork –Name "psNet" –ResourceGroupName "Networking" –Location EastUS –AddressPrefix "10.0.0.0/8" –Subnet $subnet"
```

- Q3. What is the CLI command you will use to get the Resources group and VMs list?

Ans. Use the "az vm list CLI" command lets to get the list of VMs which we are currently using. You can use "az group list [--subscription]" command to get the list of Azure resources group.

- Q4. You want to add the 128 GB additional disk and your customer don't want to allow the access of azure portal. How do you add using Azure CLI command lets?

Ans. You should use the below command for the same.

```
az vm disk attach --resource-group "Azure4you" --vm-name "Azure4you.com" --disk myDataDisk --size-gb 128 --new
```

**Q5. You want to add the 128 GB additional disk and your customer don't want to allow the access of azure portal. How do you add using Azure CLI commands?**

**Ans.** For adding the new disk in Azure VMs, you need to know Azure VM name, Resource Group, Disk size then use the below command to add the additional disk to Azure VMs.

```
az vm create \
--resource-group myResourceGroupDisk \
--name myVM \
--image UbuntuLTS \
--size Standard_DS2_v2 \
--generate-ssh-keys \
--data-disk-sizes-gb 128 128
```

**Q6. How to get the list of azure VMs using the PowerShell?**

**Ans** You can use the *Get-AzVM* command line to get the all the VMs in Azure subscription.

**Q7. What is the PowerShell command lets you will use for VMs operations like start and stop etc.?**

Start a VM	Start-AzVM -ResourceGroupName \$Azure4you -Name \$VM1
Stop a VM	Stop-AzVM -ResourceGroupName \$ Azure4you -Name \$VM2
Restart a running VM	Restart-AzVM -ResourceGroupName \$ Azure4you -Name \$VM3
Delete a VM	Remove-AzVM -ResourceGroupName \$ Azure4you -Name \$VM4

**Q8. How to tag the resources using a command?**

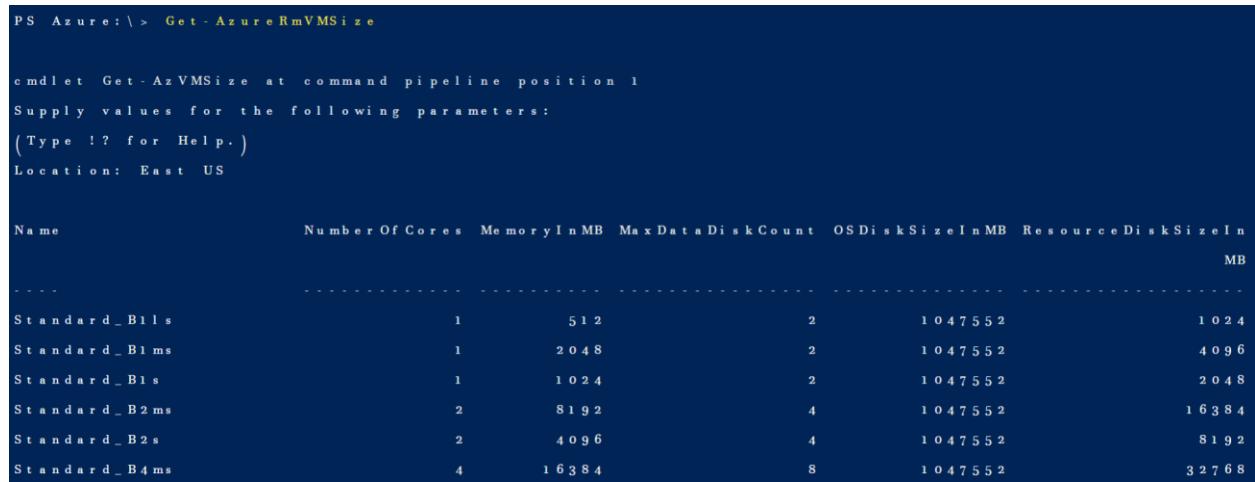
**Ans** You should use the below command lets to tag the resources.

```
Set-AzureRmResourceGroup -Name "Azure4you.com" -Tag @{Department="IT"}
```

## Q9. Your customer wants to check the size of the VMs available in the East US region, what is the command line you will use for the same?

**Ans** You will use the below command let's get the VMs Size.

Get-AzureRmVMSize and you will provide the azure Region: "East US"



The screenshot shows the PowerShell command `Get-AzureRmVMSize` being run. It prompts for the location, which is set to "East US". The output displays a table of VM sizes with columns: Name, Number Of Cores, Memory In MB, Max Data Disk Count, OSDiskSizeInMB, and ResourceDiskSizeInMB. The data is as follows:

Name	Number Of Cores	Memory In MB	Max Data Disk Count	OSDiskSizeInMB	ResourceDiskSizeInMB
Standard_B1s	1	512	2	1047552	1024
Standard_B1ms	1	2048	2	1047552	4096
Standard_B1s	1	1024	2	1047552	2048
Standard_B2ms	2	8192	4	1047552	16384
Standard_B2s	2	4096	4	1047552	8192
Standard_B4ms	4	16384	8	1047552	32768

## Q10. Your customer wants to create the VNets using PowerShell command lets in the East US region, what is the command line you will use?

**Ans** You should use the below command let's create the Vnet.

```
# Variables for common values
$rgName='Azure4you'
$location='eastus'

# Create a resource group.
New-AzResourceGroup -Name $rgName -Location $location

# Create virtual network 1.
$vnet1 = New-AzVirtualNetwork -ResourceGroupName $rgName -Name 'Vnet1' -AddressPrefix '10.1.0.0/16' -Location $location
```

## Q11. How to configure peering between vnet1 & Vnet2 using PowerShell command lines?

**Ans.** You should use the below command let's peer the VNets.

```
# Peer VNet1 to VNet2.
```

```
Add-AzVirtualNetworkPeering -Name 'connectVnet1ToVnet2' -VirtualNetwork $vnet1 -RemoteVirtualNetworkId $vnet2.Id
```

# Peer VNet2 to VNet1.

```
Add-AzVirtualNetworkPeering -Name 'connectVnet2ToVnet1' -VirtualNetwork $vnet2 -RemoteVirtualNetworkId $vnet1.Id
```

## Q12. How to create the storage accounts using the azure PowerShell command lets?

**Ans.** You should use the below command let's.

```
Get-AzLocation | select Location  
$location = "eastus"  
  
# Create a new resource group.  
$resourceGroup = "azure4you"  
  
New-AzResourceGroup -Name $resourceGroup -Location $location  
  
# Set the name of the storage account and the SKU name.  
$storageAccountName = "azure4you324"  
$skuName = "Standard_LRS"  
  
# Create the storage account.  
$storageAccount = New-AzStorageAccount -ResourceGroupName $resourceGroup `  
-Name $storageAccountName `  
-Location $location `  
-SkuName $skuName  
  
# Retrieve the context.  
$ctx = $storageAccount.Context
```



## Q13. How to get the VMs output using the azure PowerShell command lets?

**Ans.** You should use the below command let's.

```
# Get details of the virtual machine  
$VM = get-azurermvm -ResourceGroupName "Securitycenterdemo" -Name "securitydemo1"  
Write-Output $VM
```

## Q14. How to clean up the resource group using the Azure PowerShell command?

**Ans** You should use the below command.

```
Remove-AzResourceGroup -Name azure4you -Force
```

## Q15. How to get the site recovery Vault details using Azure PowerShell command?

**Ans** You should use the below command.

```
Get-AzRecoveryServicesVault
```

```
Name          : Azure4you
ID           : /subscriptions/3422445
Type         : Microsoft.RecoveryServices/vaults
Location     : WestUS
ResourceGroupName : rg-ag-rg
SubscriptionId   : fsdf-3423da-fs234324-abc
Properties      : Microsoft.Azure.Commands.RecoveryServices.ARSVaultProperties
```

## Q16. How to get the site recovery Vault details using Azure PowerShell command lets?

**Ans** You should use the below command.

```
Get-AzureRmTag
```

```
PS Azur e:\ > Get-AzureRmTag

          Name          Count
          ----          ---
          ms-resource-usage    1
          Adaptive application 2

Azur e: /
PS Azur e:\ >
```

# 3

# Azure Storage

**Q1. You have some SQL DBs which you want to migrate to Azure VMs, which types of storage account you will use?**

**Ans.** In this case, you should use the Premium storage account which will help you to provide the more IOPS (up to 7500 IOPS) and 1 TB Disk.

**Q2. What is the difference between Premium Storage Account and Standard Storage Account?**

**Ans.** Premium Storage Accounts are backed by SSD Disk which provided the resilience and better performance where standard Storage Accounts are backed by HDD (magnetic Disk) and Provides the maximum IOPS up to 500.

**Q3. What are Storage Accounts Types?**

➤ **General Purpose Storage Accounts which has below Services.**

1. Blob Storage
  2. File Storage
  3. Table Storage
  4. Queue Storage
- **Blob Storage Accounts**
1. Blob services which have two Tiers: Hot and Cool Tiers.

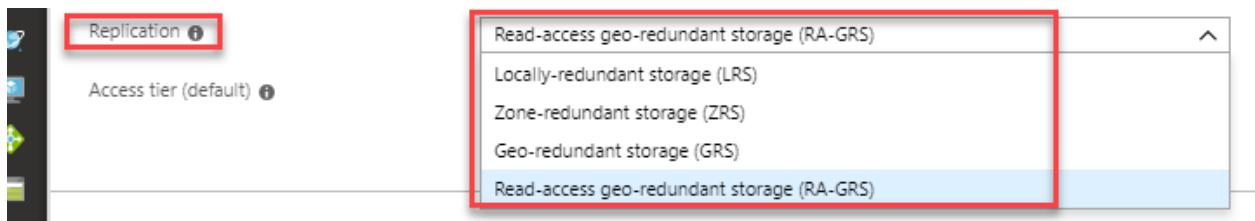
**Q4. In your organization, you have some client who doesn't want to give the subscription access, but they have given the PowerShell access, how you create the Storage account using PowerShell?**

**Ans.** New-AzureRmStorageAccount -ResourceGroupName azure4you -Name azureint234 -SkuName Standard\_LRS -Location 'East Us'

StorageAccountName	ResourceGroupName	Location	SkuName	Kind	AccessTier	CreationTime	ProvisioningState	EnableHttpsTrafficOnly
azureint234	azure4you	eastus	StandardLRS	Storage		12/20/18 8:55:20 AM	Succeeded	False

## Q5. What is Storage solution you will suggest to the customer and how many types of storage accounts Replications are available?

- **Locally redundant storage (LRS):** In this Replication, data is replicated three times within a single facility in a single region
- **Geo-redundant Storage**
  - **Geo-redundant storage (GRS):** Data will be replicated 3 times in the primary region and replicated 3 times in secondary region hundreds of miles Away.
  - **Read-Only Geo-redundant storage (GRS)** Data will be replicated 3 times in the primary region and replicated 3 times in secondary region hundreds of miles Away and **Provides the read Only Access to your Data.**
- **Zone-redundant storage (ZRS):** In this scenario, Data is replicated 3 times to a single region or across 2 regions.



## Q6. You have joined as Cloud Administrator and one of the client meeting client asked, you have 100 TB of Data and you need some storage solution to minimize the cost, what is your approach?

**Ans.** In that case, you will suggest customer put the Data in Blob storage accounts under Cool tier which will have a minimum cost to the customer.

\* Storage account name: azure4you123

\* Location: East US

Performance: Standard (selected)

Account kind: BlobStorage

Replication: Locally-redundant storage (LRS)

Access tier (default): Cool (selected)

Accounts with the selected kind, replication and performance type only support block and append blobs. Page blobs, file shares, tables, and queues will not be available.

**Q7.** You have a couple of SQL Database with 20 TB data, you are planning to migrate to Azure VMs and you need to find out some storage account and VMs instance which will support up to 20 TB Data with high performance?

**Ans.** You should suggest to go with premium storage accounts which provided the up 80K IOPS per storage accounts and use the SSD disk in Azure VMs with Size of E16-8s\_V3(8Core,128GBRam +32Data Disk).

VM SIZE	OFFERING	FAMILY	VCPUS	RAM (G...)	DATA DISK	MAX IOPS	TEMPORARY STOR...	PREMIUM DISK SU...	COST/MONTH (EST...)
E16-8s_v3	Standard	Memory optimized	8	128	32	25600	256 GB	Yes	₹52,322.65

The screenshot shows the Azure Storage Account creation interface. It includes fields for Storage account name (azure4you123), Location (East US), Performance (Premium selected), Account kind (StorageV2 selected), and Replication (Locally-redundant storage (LRS) selected). A note at the bottom states: "Accounts with the selected kind, replication and performance type only support page blobs. Block blobs, append blobs, file shares, tables, and queues will not be available." Three purple circles with numbers 1, 2, and 3 point to the Premium performance setting, the StorageV2 account kind, and the LRS replication type respectively.

**Q8.** Azure Files Servers Work on which port and Protocol?

**Ans.** Azure File server work on 445 port and SMB 3.0 Protocol.

**Q9.** Your customer has migrated all the disk to Azure but now he is not able to find the option to attach a few of the disk to Azure VMs, how you are going to solve the Issue?

**Ans.** You should suggest your customer add the disk using the below Steps.

- Select the VM that he wants to add the disk
- Select the disk option under settings
- Click on Add Disk
- Provide the Name, Resource Group etc.
- Under Name option, Select the Disk and Click on Save
- The disk will be added to VM.
- Once the Disk will be added to VMs then log in to VM
- Go to run Command
- Run the command Diskmgmt.msc
- Activate the Disk inside the VM.

Home > Virtual machines > VMs123 - Disks

## VMs123 - Disks

Virtual machine

Search (Ctrl+ /) Save Discard Refresh

- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Settings** (1)
- Networking
- Disks** (2)
- Size
- Security
- Extensions
- Continuous delivery (Preview)
- Availability set
- Configuration

**OS disk**

NAME	SIZE	STORAGE ACCOUNT T...
VMs123_OsDisk_1_4013e64d63424887a461d61cb7b81fa0	127 GiB	Premium SSD

**Data disks**

LUN	NAME	SIZE	STORAGE ACCOUNT ...
0	The value should not be empty.		

Create disk

Disks in resource group 'Azure4you'  
diskonpremi  
size: 1023 GiB, account type: Standard SSD

All disks

diskonpremi  
size: 1023 GiB, account type: Standard SSD, resource group: AZURE4YOU

**Q10.** The customer has requirements that he is planning to move his Data to Azure file share and Data Size is 6 TB. What the solution you can provide?

**Ans.** Azure File share can support up to 5TB Data, So I would request customer to have 2 file shares up 2.5TB and store the data in both file share.

azure4you - Files Storage account

Search (Ctrl+ /) Events Storage Explorer (preview) Settings

+ File share (2)

Storage account: azure4you

File share

\* Name (3)

Quota must be between 1 and 5120 GiB.  
Quota: 6025

Create Discard

**Q11.** What will be largest disk size you will attach to VM?

**Ans.** Largest Disk Size can be up to 4 TB supported by Azure VMs.

**Q12.** What is the difference between Managed Disk and Unmanaged Disk?

**Managed Disk:** In Managed disk storage accounts creation/Management done on the backend. It will help you on the scalability of storage accounts and backed by Standard/premium Tires.

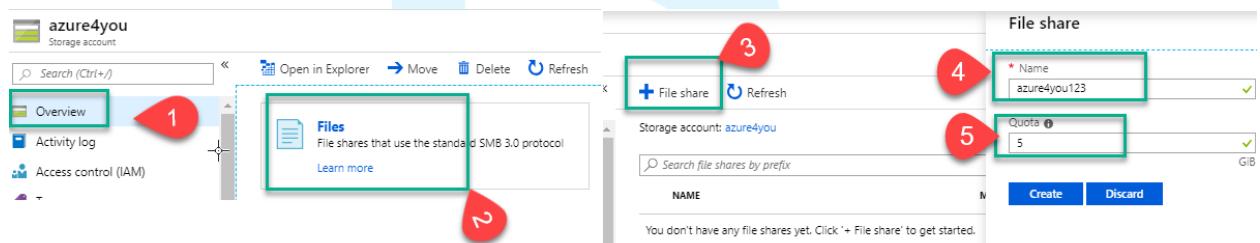
**Unmanaged Disk:** Unmanaged disk are the disk which you will create the storage accounts. Create the disk and Managed by you and you need to make sure you can't exceed the Storage limit up 20K IOPS while adding many disks which may throttled the VMs performance.



### Q13. How to Create the File Share for the customer as they need to have file share in Azure cloud?

**Ans.** To create the file share, you need a General Purpose - storage accounts and under the storage accounts, you should follow the below steps.

- Click on the Files.
- Under Files File Share
- Provide the Name and Quota
- Click on Create



### Q14. Clients want to secure the Storage Accounts and they should not communicate outside of the world, what is the solution you will provide?

**Ans.** If the customer wants to secure the storage accounts then you need to configure the Azure Firewalls and integrated with Vnet's, Allow the Specific IP address to communicate to storage accounts which will help customer to secure the Storage Accounts, for that you will follow the below steps.

- Select the Storage accounts you need to apply the Firewall Rules.
- Under Settings tab Click on the Firewalls and Virtual networks
- Select on the Selected Networks
- Click on Add Existing network and select the Virtual network.
- Under that Select the Subnets
- Click on enables.

For Allowing the Specific IP Address

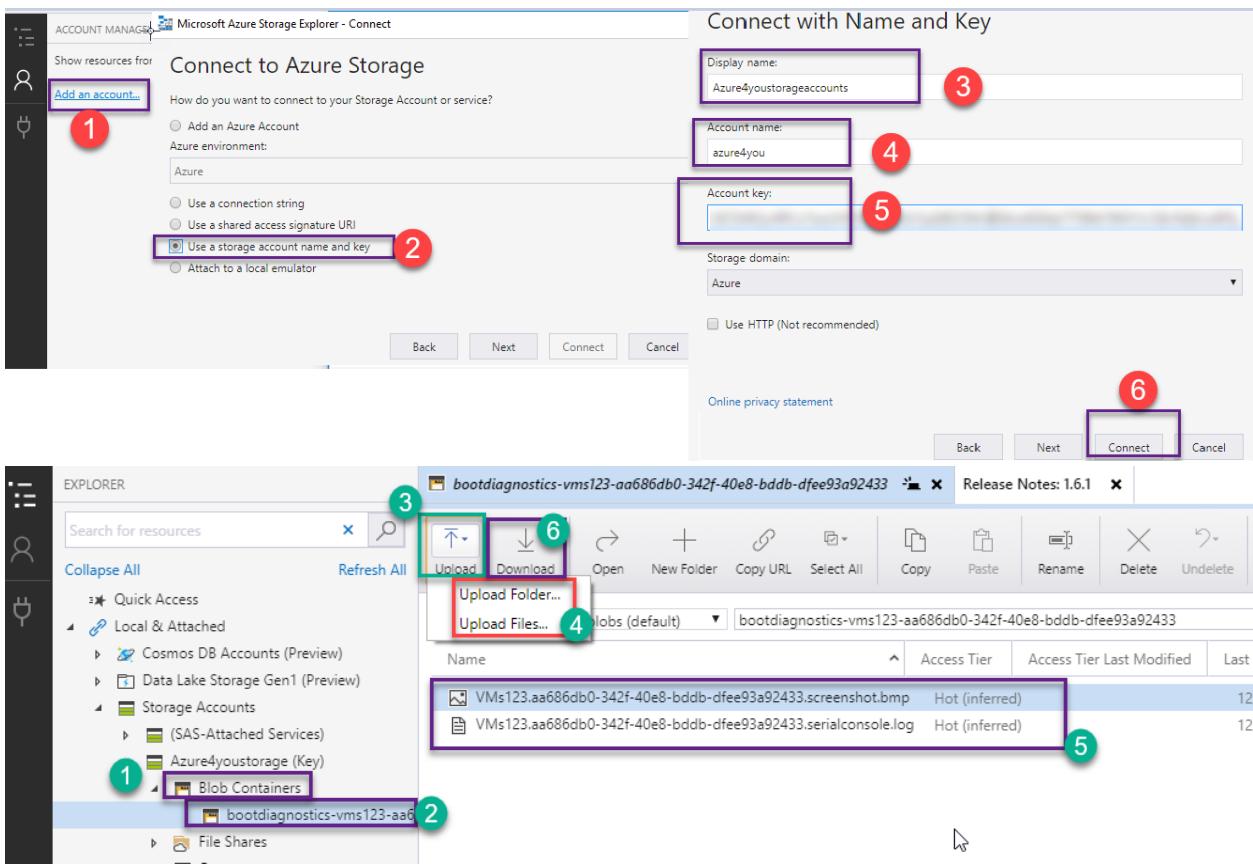
- Select the Storage accounts you need to apply the Firewall Rules.
- Under Settings tab Click on the Firewalls and Virtual networks

- Select on the Selected Networks
- Select the Firewalls.
- In Address Space Range you can add the specific IP address.

**Q15.** You have a specific customer and they want to use the Azure Blobs and wants to use the upload and download the data on a daily basis what is the tool you will use for that?

**Ans.** In that case, you should use the Azure storage Explorer which will help to connect to storage accounts and can use the data to upload and download, apart from that they can also use the AZ-copy command utility to transfer the data.

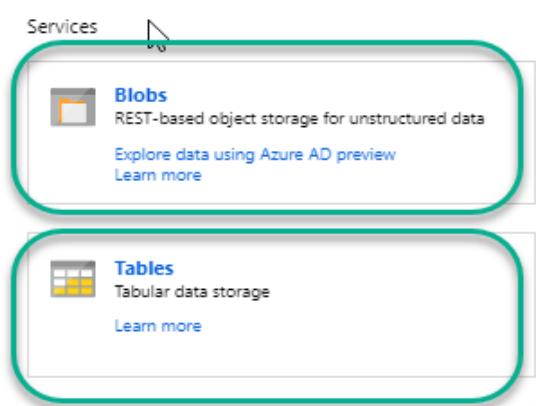
- You will connect the storage account using the Storage account name and Key
- Select the storage accounts
- Under that Blob storage accounts.
- In Right side, pane selects the upload or download the storage Accounts Files and Folders.



## Q16. What is blob storage accounts and Table Storage Accounts?

**Ans. Blob Storage Accounts:** Blob Storage Accounts are used for unstructured data like Movies, Pics, Txt or and archival data.

**Table Storage Accounts:** Table storage accounts are used to Structured data, Like cosmos DB data or schema-less Data for faster processing.



## Q17. What file Share?

**Ans.** The file share is used like you on-premise File servers that you can Map the network derive, Azure File share work on SMB 3.0 Protocol and 445 Ports number. Which you can utilize to keep up 5 TB data in one File share.

## Q18. Your customer wants to take the backup of the Blob storage accounts, please provide the solution?

**Ans.** In that case, you will help customer to take the Snapshot of the Azure storage accounts as currently, that is only the option to take the backup of Storage accounts.

- Select Storage accounts.
- Click on the blob storage accounts
- Select the Files
- Click on the Create Snapshot.

NAME	MODIFIED	ACCESS TIER	BLOB TYPE	SIZE	LEASE STATE
VMs123.aa686db0-342f-40e8-bddb-dfee93a92433.scr...	12/22/2018, 12:22:33 AM	Hot (Inferred)	Page blob	600.5 KB	Available
VMs123.aa686db0-342f-40e8-bddb-dfee93a92433.seri...	12/20/2018, 11:43:32 PM	Hot (Inferred)	Page blob	3 KiB	Available

## Q19. You have some On-Premises File server and you want to migrate them to Azure, what are the tools you will use to migrate the files to Azure?

**Ans.** The following tool can be used for migration:

- Azcopy Command line utility
- PowerShell for VHD or Files and Folder Migration
- Storage Explorer

## Q20. One of your engineers has created the VM with Standard Disk but later customer wants to be migrated to Premium Disk, how you can fix this Issue?

**Ans.** In this scenario, there would be some downtime to convert the Standard disk to Premium Disk, As Disk are attached to VMs, hence it's required downtime to fix the issue.

- Click on the search Button and search the disk by Name
- Select the Required Disk
- Click on the Configuration
- In account, Type Select the Premium Disk
- Click on Save, it will automatically convert the disk to Premium disk.

Home > diskonpremi - Configuration

### diskonpremi - Configuration

**Save** **Discard**

Search (Ctrl+ /) 4

Account type 1

- Standard HDD
- Premium SSD 3
- Standard SSD
- Standard HDD

ESTIMATED PERFORMANCE

IOPS limit	500
Throughput limit (MB/s)	60

Overview

Activity log

Access control (IAM)

Tags

Settings

Configuration 2

Disk Export

Locks

Automation script

Support + troubleshooting

New support request

**Q21.** The customer has requirements to add the blob storage accounts to Azure VMs, please confirm Is it possible if yes, how you can archive this?

**Ans.** Yes, it's Possible to only Add the Specific VHD files available in the blob storage but can't add the specific Blob storage accounts in Azure VMs.

**Q22.** What is the life of a soft delete object and how to use?

**Ans.** Soft delete in Azure storage accounts are used to retain your data for a specific time after deletion of Storage account data and you can configure the time 1 day to 356 Days based on your Soft Delete configuration policy.

azure4you - Soft delete

**Save** **Discard**

When turned on, soft delete enables you to save and recover your blob data in many cases where blobs or blob snapshots are deleted. This protection extends to blobs that are deleted as the result of overwrites. [Learn more](#)

Soft delete

Enabled 3

Retention policies

Retain for 4

365 days

Static website

Properties

Locks

Automation script

Blob service

Blobs

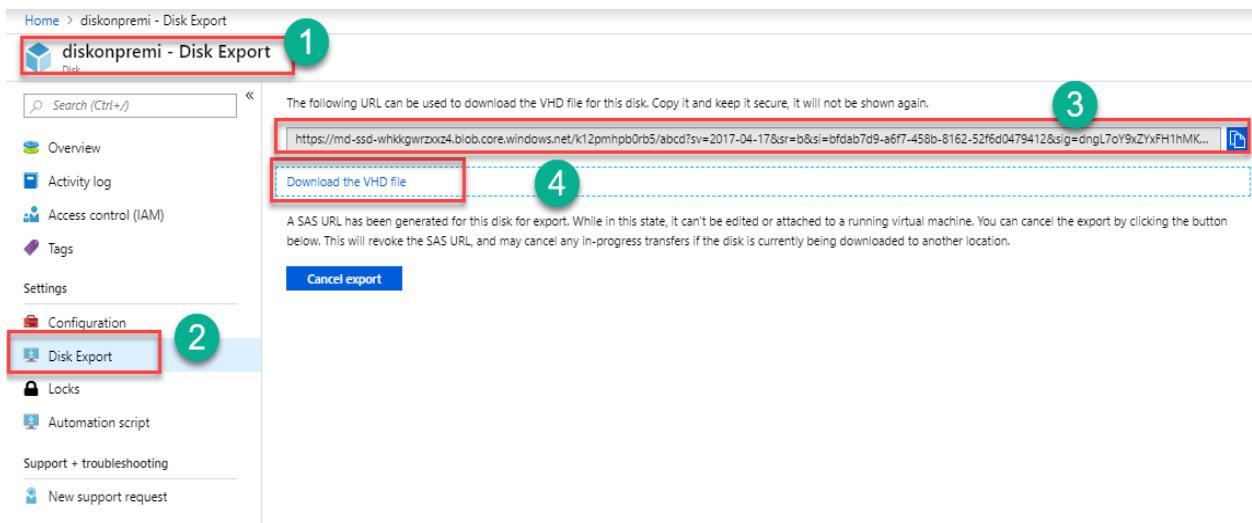
Custom domain

Soft delete 2

**Q23.** You have a customer that needs to export the Managed disks, as you are aware that managed disk managed by the MS, please provide a solution for the same.

**Ans.** In this scenario, you should follow the below Steps.

- Click on the Disk
- Select the Disk Export under Settings Tab
- Click on the URL or Click on the Download VHD files.
- Now you will be able to export the Disk.



**Q24.** Your customer has created a file share, but he was unable to connect to file share, what is the process you will follow to fix this?

**Ans.** You need to follow the following steps:

- Click on the File share
- Select the File share
- Click on the overview and click on connect on Right Side
- Select the Drive Letter
- Copy the PowerShell command or NT command for CMD command line.
- Run that command to connect the File server.

The screenshot shows the Azure Storage Accounts interface for a file share named 'azure4you123'. A red box highlights the 'Overview' tab (1). A green circle with '2' highlights the 'Connect' button. A green circle with '3' highlights the 'Connecting from Windows' section. A red box highlights the 'Drive letter' dropdown set to 'Z'. A green circle with '4' highlights the PowerShell command block. A green circle with '5' highlights the Command Prompt command block.

**Use for Powershell**

```
$acctKey = ConvertTo-SecureString -String "GET72MEQyvRPCvc7ouIVt7O6JE9meDCVlpQ9ZVSWnSJSSkwsKG0ApY7T59dH78WYYw1Qh/tMj6vwzEF5pnMcQ=="
$cred = New-Object System.Management.Automation.PSCredential("azure4you", $acctKey)
$netUse = "net use Z: \\azur4you.file.core.windows.net\azur4you123\ /u:AZURE\azur4you
$netUse
```

**Use for Command Prompt**

```
net use Z: \\azur4you.file.core.windows.net\azur4you123\ /u:AZURE\azur4you
$netUse
```

## Q25. Your customers want to take the file share backup as their Data is critical. What approach you will use to fix the issue?

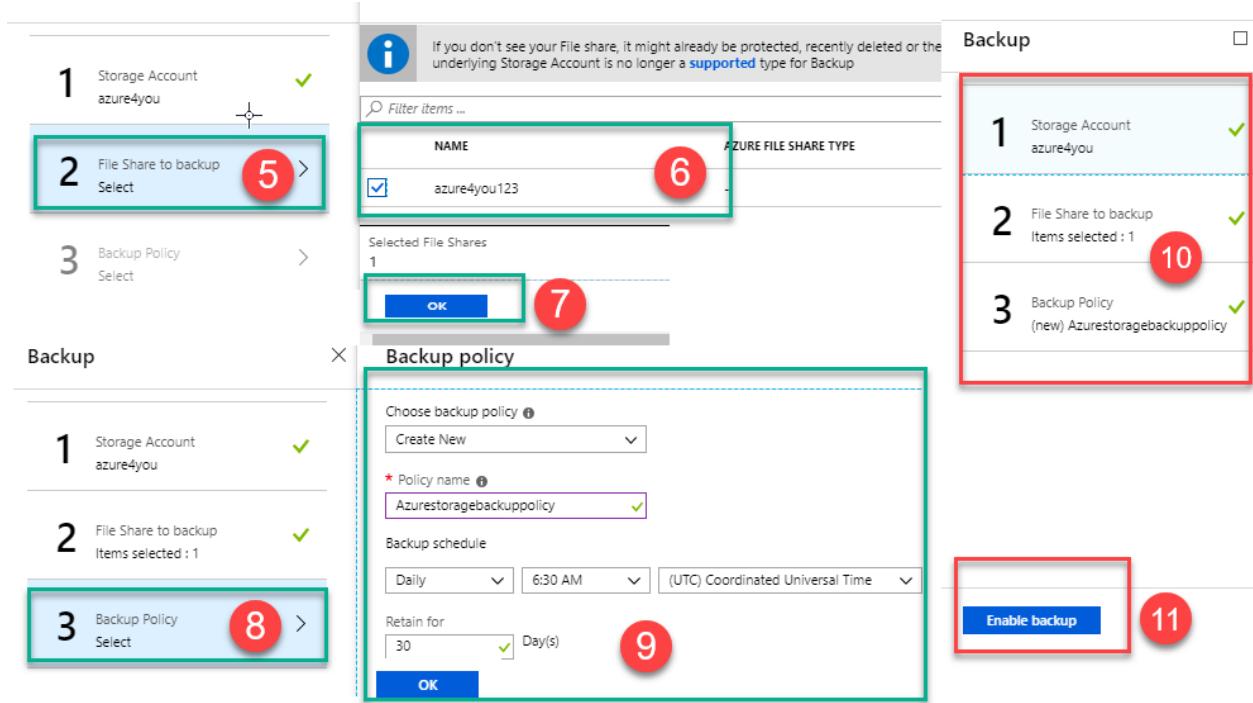
**Ans.** In this case, Site recovery supports the Azure file share backup and you should follow the below steps.

- Select the Site Recovery Vault
- Click on Add backup
- Select the Workload Running is Azure
- Select the Azure Backup type is Azure Fileserver (Preview)
- It will discover the Storage account, Select the storage accounts and click ok.

The screenshot shows the 'Configure Backup' wizard. Step 1: 'Where is your workload running?' (Azure) and 'What do you want to backup?' (Azure FileShare (Preview)) are highlighted with a red box (1). Step 2: 'Storage Account Select' is highlighted with a green circle (2). Step 3: 'File Share to backup Select' and 'Backup Policy Select' are shown. On the right, the 'Select Storage Account' pane shows two storage accounts: 'azure4you' (selected) and 'azureint234', both under 'Azure4you' resource group. A green circle (3) highlights 'azure4you'. A red box (4) highlights the status bar message 'Registering Storage Account with Recovery Services Vault. This might take a minute.' and the progress bar 'Validating...'.

- Under that Select the Azure File Share
- Select the Backup Policy
- Provide the Name of backup policy and modify the Retention/backup time as per your customer requirements.
- Once all the Steps are verified the click on the create the enable the backup.

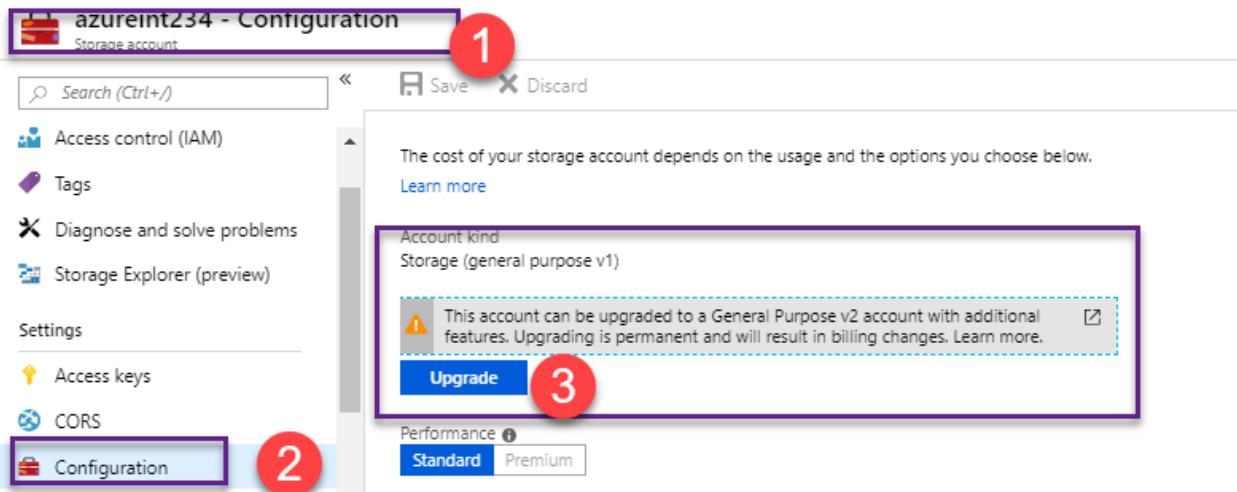
- Once the backup is enabled you will be able to take the Backup of file servers.



**Q26.** You have a couple of General purpose V1 Accounts and our customer wants to upgrade to General Purpose V2 Accounts. How you can fix this issue?

**Ans.** Yes, you can migrate to General Purpose V1 to V2 but not V2 V1.

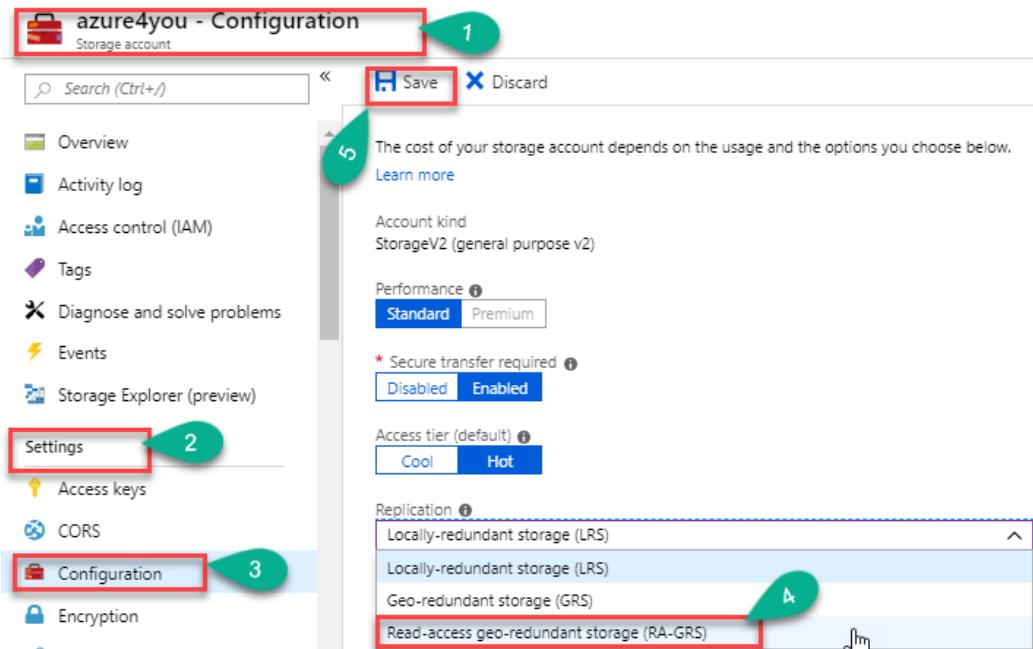
- Select the Storage Accounts.
- Click on settings
- Click on Configuration
- Click on Upgrade
- It will upgrade the Storage account V1 to 2 without any downtime.
- Upgradation will take some time based on your storage accounts data.



**Q27.** In initial days a customer has chosen the Replication is LRS (Locally redundant Storage) now he wants to migrate to Ra-GRS (Read Only Geo Redundant Storage), How you can fix the issue?

**Ans.** Yes, certainly you can do that by following steps.

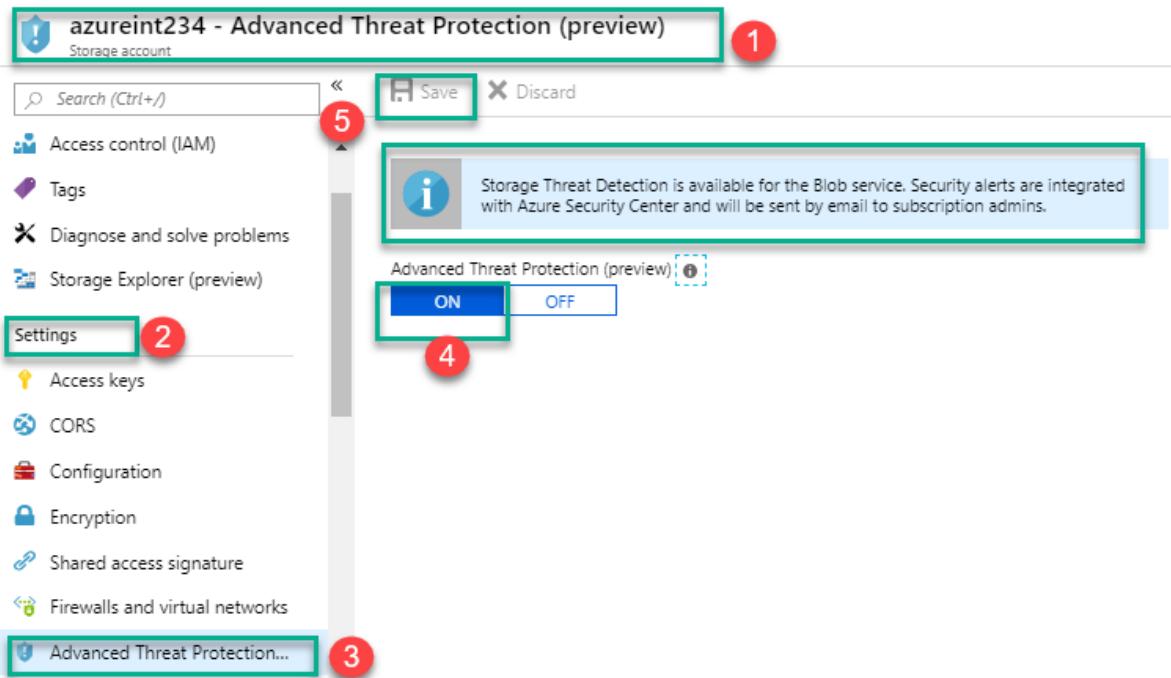
- Select the Storage Account.
- Click on settings
- Click on Configuration
- Under Replications, Select the RA-GRS
- Click on the Save button.
- Then it will take some time based on your storage accounts data.



**Q28.** Your client wants to get an alert when someone tries to attempt to access or exploit storage account? How you can implement to meet the Audit expectations of your client organization?

**Ans.** Yes, you can help the customer using the below steps.

- Select the Storage Accounts.
- Click on settings
- Click on Advance Thread Protections.
- Click on Save



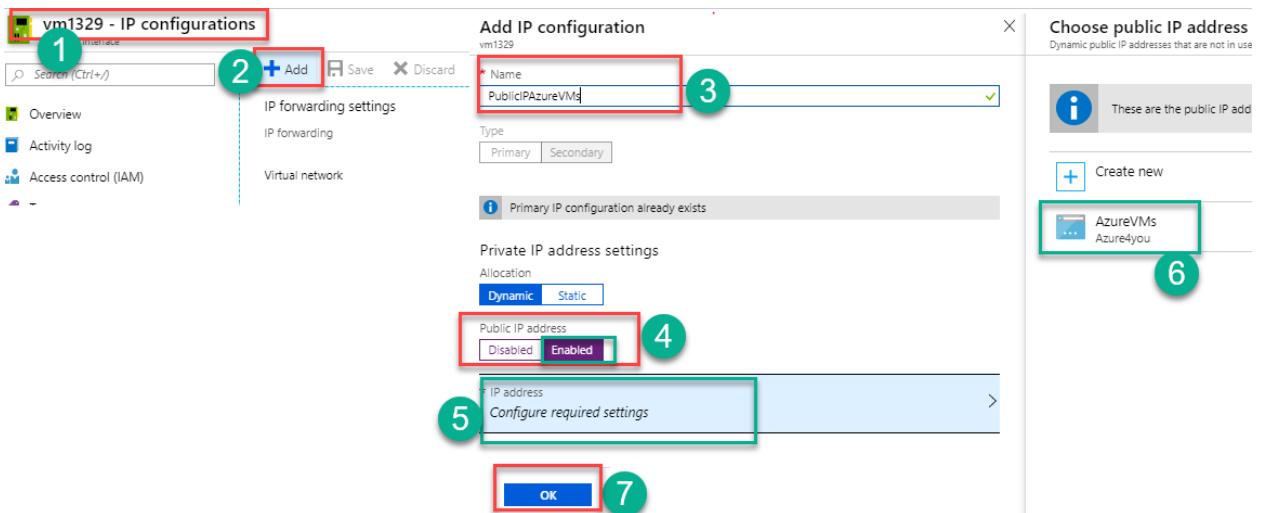
**Q29.** You are unable to connect to File servers from outside the network.  
What tool you will need to find out which ports are blocked?

**Ans.** You should use the **Portquery** tool which will help you to identify the ports which have been blocked and can give you the data to show to the network team.

You can download the Port Query tool from <https://www.microsoft.com/en-in/download/details.aspx?id=24009>

**Q30.** You have a VM with private IP and a hosted web application at port 80.  
What steps you will follow to enable the web application access publicly?

**Ans.** In that case, you need to add the Public IP address to Azure VMs NIC card which will then enable your hosted web application to connect to the public internet or you can use the Azure Load Balancer or Application gateway for the same.

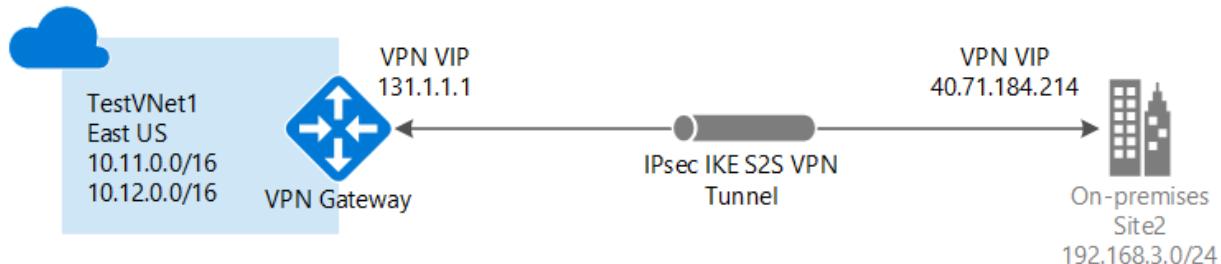


# 4

# Azure Networking

## Q1. What is Site to Site VPN?

**Ans.** Azure Site to Site VPN will help you to connect to On-Premises Network to Azure Virtual Network Over an IPsec/IKE (IKEV1/IKEV2) VPN tunnel. Basically, this connection required a VPN device which public facing IP Address assigned to it.

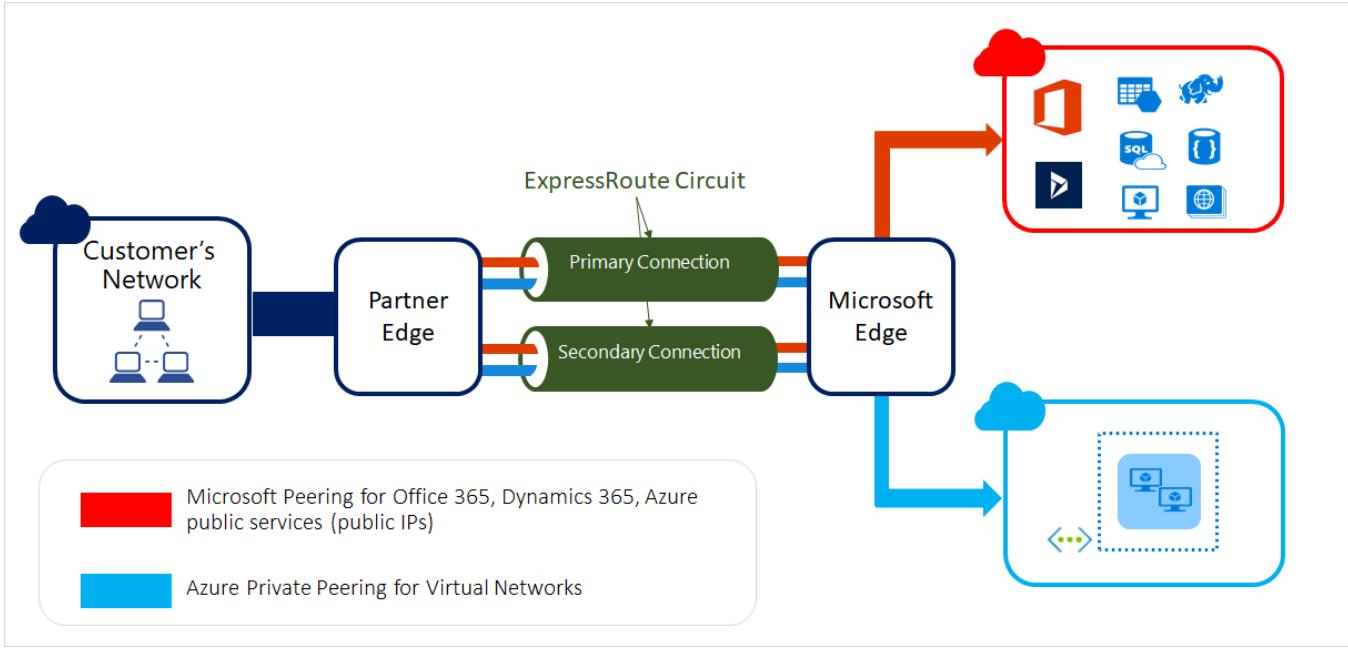


*Image Source: <https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-howto-site-to-site-classic-portal>*

## Q2. What is Express Route?

**Ans.** Express route is a connection which expends your On-Premises Datacenter to MS Azure Cloud using private connection which is provided by your connectivity Providers.

Basically, in other words, it's dedicated line from your datacenter to Azure Datacenter using your ISP connection which is more secure than other connectivity methods.

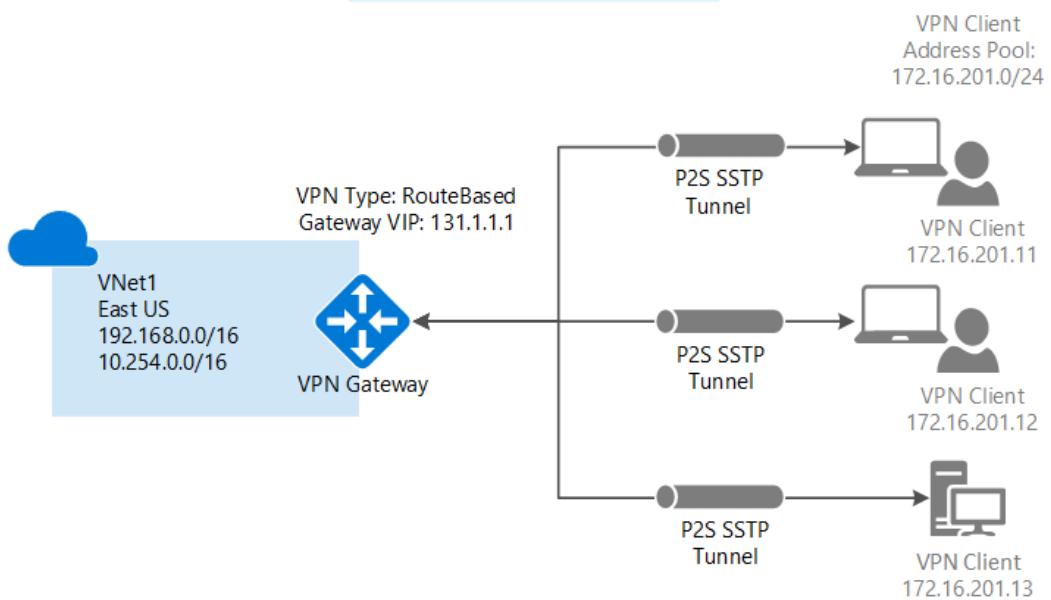


*Image Source: <https://docs.microsoft.com/en-us/azure/expressroute/expressroute-introduction>*

### Q3. What is Point to Site VPN connection?

**Ans.** Point to Site VPN gateway is using to create a secure connection from Azure Virtual network to Individual client's machines to connect to Azure Resources.

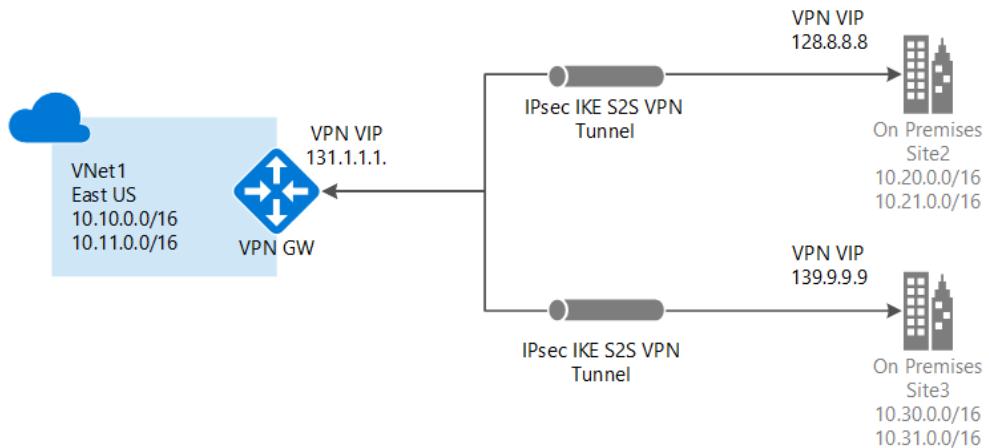
Basically, in other words, It's VPN connection like Cisco, Juniper etc. VPN client which used to connect Laptop from Office network.



*Image Source: <https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-howto-point-to-site-classic-azure-portal>*

#### Q4. What is a multisite connection?

**Ans.** Multisite VPN is used to connect to multiple On-Premises sites using a single VPN gateway Tunnel. If you want to connect to your data center and 5 or more other location, you can use the multisite connectivity for the same.



*Image Source: <https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-multi-site>*

#### Q5. What is Vnet peering?

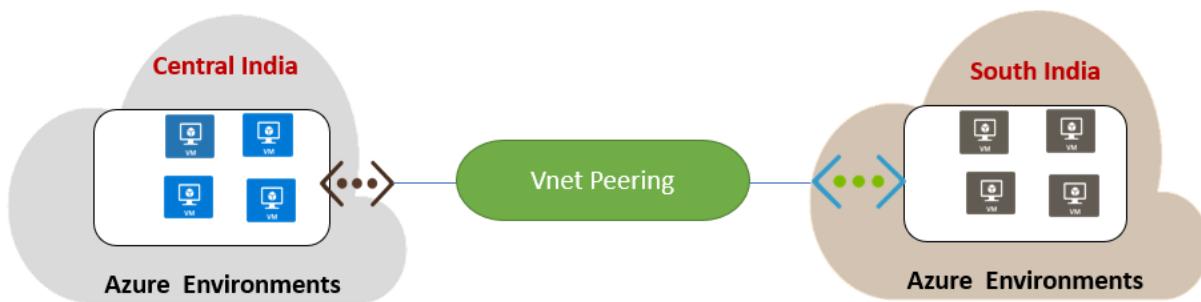
**Ans.** Vnet Peering is used to connect to 2 Virtual networks within the same region or different region.

**Vnet Peering:** Peering within the same Region is called Vnet peering.

**Global Vnet Peering:** Peering within the different Region is called Vnet peering.

**Benefits:**

- It will provide low Latency and High Bandwidth between the resources.
- It's Private connection between the 2 Vnets.
- You can transfer the data Across subscription, Different deployment models & Across Regions.
- It does not require any downtime.



## Q6. You want to use your DNS server; how can you use the same in Azure and where you can update the same?

Ans. In that case, you should try to add the custom DNS server under Vnets Property by following steps.

- Click on the Vnets.
- Select the specific Vnet you want to apply the Custom DNS to be used.
- Under Settings Click on the DNS and Provide the IP Address of DNS server
- Click on Save.

The screenshot shows the Azure portal interface for managing a virtual network named 'azure453-vnet'. The 'DNS servers' section is highlighted with a red box and numbered 1. A sub-menu is open with 'Settings' highlighted and numbered 2. The 'Custom' radio button is selected and highlighted with a red box and numbered 4. The IP address '192.168.1.0' is entered into the input field next to it. The 'Save' button at the top right is highlighted with a red box and numbered 5. Other options like 'Default (Azure-provided)' and 'Add DNS server' are also visible.

## Q7. What is Address Space?

Ans. Address space is a range of the IP address which is assigned to Vnets and Forms address space you can create the multiple subnets.

In other words, It's your IP address range of your virtual network within Same Vnet.

Note: You can add multiple Address space if required.

The screenshot shows the 'Address space' configuration for a virtual network. The address range is set to 10.0.0.0/24. A green box highlights the address range input field.

## Q8. What are subnets?

**Ans.** Subnets are the Range of IP address which can automatically be assigned to your services like VMs etc.

You can create multiple subnets as per your customer or company requirements.

The screenshot shows the 'Subnets' configuration for the virtual network. A new subnet named 'default' is listed with the address range 10.0.0.0/24. Three numbered callouts point to: 1) the 'Subnets' link in the left sidebar, 2) the 'Subnet' button in the top bar, and 3) the newly created 'default' subnet in the list.

NAME	ADDRESS RANGE	AVAILABLE ADDRESSES	SECURITY GROUP
default	10.0.0.0/24	250	-

## Q9. A customer has Prod, Dev and Test environments. How to implement a solution that each environment can't connect to each other?

**Ans.** In that case, you can separate the environments while creating the different subnets for Prod, Dev, Test environments and apply the NSG on each subnet with specific deny rule which will not allow connecting to those environments.

## Q10. You have On-premises environments and you need to connect to Azure What are the tools you will use to connect On-premises to Azure?

**Ans.** For that, you can use the **Azure Site to Site connection** or **Express route services** to connect to on-premise to Azure Datacenters based on the customer requirements. You can suggest both the options.

## Q11. Are application Gateway supports the Static public IP Address?

Ans. Yes, the Application Gateway **v2 SKU** does support static public IP addresses. The v1 SKU supports static internal IPs.

## Q12. You have a couple of Azure VMs which are in an availability set and your customer wants to enable the load balancing mechanism, please provide a solution for this?

Ans. In that case, you can help the customer while providing the Azure Load Balancers mechanism because Azure Load balancers support the availability group load balancing mechanism.

## Q13. You have only PowerShell access and now you need configure the Vnet use the PowerShell commands what is the command or parameter you will use for the same?

Ans. You can use the below PowerShell commands to create the Vnets.

```
$subnet = New-AzureRMVirtualNetworkSubnetConfig -Name "Subnet1" -AddressPrefix "10.1.0.0/16"
```

```
New-AzureRMVirtualNetwork -Name "psNet" -ResourceGroupName "Networking" -Location EastUS -  
AddressPrefix "10.0.0.0/8" -Subnet $subnet"
```

## Q14. What are the tools you will use to create the Vnets?

Ans. You can use the below tools to configure the Azure Vnets.

- Azure portal
- PowerShell
- Azure CLI

## Q15. Is there any restriction to use the IP address in subnets?

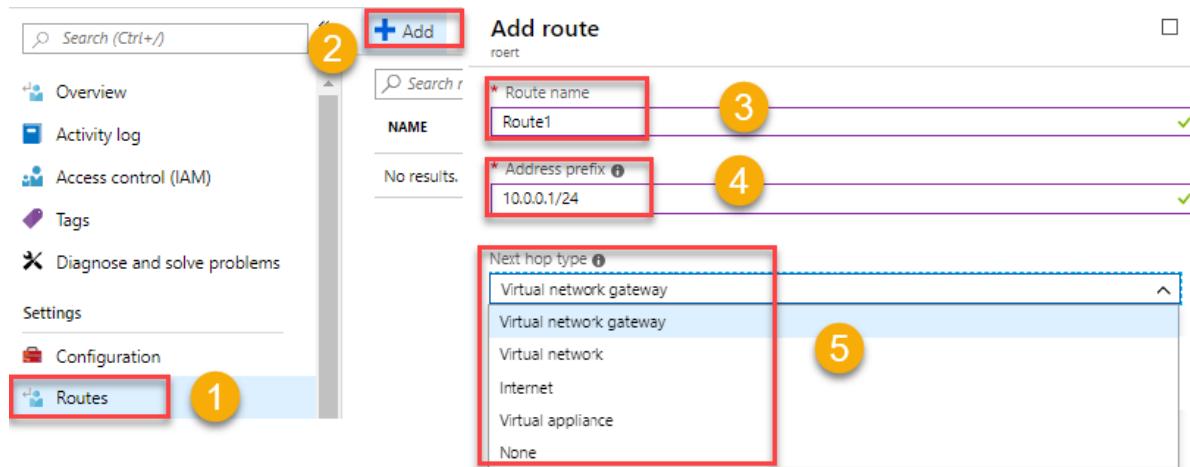
Ans. Yes, Azure reserves some IP addresses within each subnet. first and last IP addresses of each subnet are reserved for protocol conformance, along with the **x.x.x.1-x.x.x.3** addresses of each subnet, which are used for Azure services.

## Q16. You have a few customers where they want to create the largest and smallest subnets due to some internal requirements, What's your suggestion?

Ans. Yes, your customer can create those subnets which X.X.X.X/29 is the smallest one which can have up to 8 IP address and largest one X.X.X.X/8 which will have up to 1,67,77,216 IP address.

**Q17.** The customer wants to define the own custom routing in azure Vnets and subnets, what's the solution you have?

**Ans.** Customer can use the Route table to define the custom route table and can route the traffic as per their requirements.



**Q18.** Please provide the steps you will take to configure the Site to site VPN Connection?

**Ans.** For configuration the Site 2 site VPN we will take below steps.

- Create a Virtual network.
- Specify the DNS server IP address in Vnet.
- Create the Subnet gateway.
- Create the VPN Gateway
- Then Create the local network gateway
- Then Configure the local or On-Premise VPN device.
- Finally, Create the VPN connection for connectivity of On-Premise to Azure.
- In last, Verify the connectivity of VPN connection while Ping or telnet to Azure VMs or services.

**Q19.** What is the difference between a policy-based (static-routing) and route-based gateway?

**Ans.** **Policy-based gateways** are not using the routing table to decide where to send the traffic, but It uses the Specific policy to decide to send the traffic from the VPN tunnel or not.

**Route based gateway** connection where route table entries decide to route the traffic from VPN tunnel or not.

It has many benefits over Policy based routing.

- You can use for load balancing
- Multicast routing, etc

**Q20.** Your customer has configured the policy-based routing but due to the issue, he wants to change to route based configuration in Azure VPN, how you can deliver the solution?

**Ans.** Basically, the customer can't change them or update their routing method directly as that is not supported by MS Azure. He must create the New connection use the method to route based on the new connection.

- First, you need to delete the Route based connection.
- Delete the Gateway
- Then you will recreate the connection using Azure Portal, CLI or PowerShell.

**Q21.** How to configure the static public IP address VPN gateway?

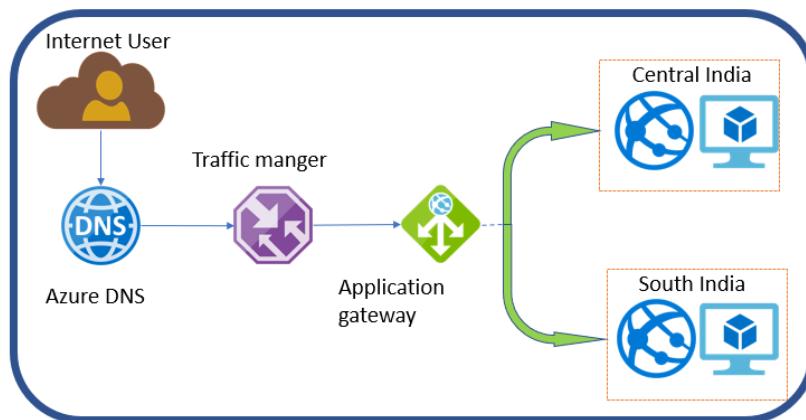
**Ans.** Basically, it's not supported by Microsoft and when you create the VPN gateway at that time dynamic IP address will automatically configure and that will change only when you will delete or recreate the VPN gateway.

**Q22.** Can you assign the IP address to Azure VMs, virtual NIC card?

**Ans.** Yes, you can configure but it's not recommended by MS Azure.

**Q23.** What is Traffic Manager?

**Ans.** The azure traffic manager is the DNS based traffic load balancing mechanism which routes the traffic across the Azure services or a different region.



**Q24.** How you can configure the endpoints in Azure Traffic manager?

**Ans.** You can configure the 3 types of endpoints base on customer requirements.

- **Azure Endpoints:** Azure endpoints are used to azure services.
- **External Endpoints:** This endpoint is used for external services which are not hosted in Azure and can use for IPV4/V6.
- **Nested Endpoints:** It's used to create more flexible routing to support larger and complex environments.

## Q25. What are the routing methods used by Traffic Manager?

Ans. Following are the Routing method used by Traffic Manager.

**Priority:** If you want to send the traffic to your primary endpoint and provide you with the backup if the primary endpoint has some issue, then you can use the Priority routing method.

**Weighted:** This can we use only when you want to route the traffic across a set of endpoints according to weights.

**Performance:** Performance methods will help you to route the traffic to closed endpoints in geographical locations to avoid low network latency.

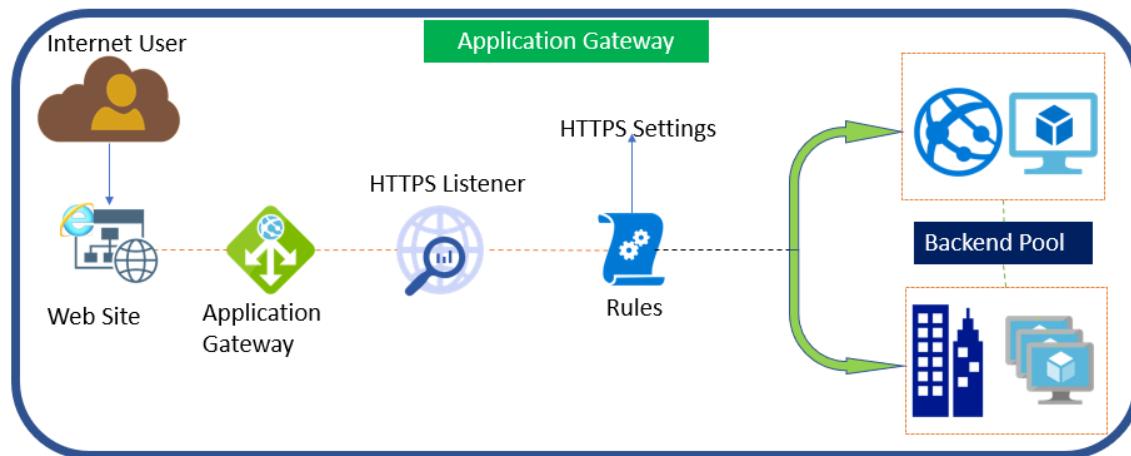
**Geographic:** Based on your geographic location it will send the traffic using their DNS query.

**Multivalue:** This can have IPv4/IPv6 addresses as endpoints. When a query is received for this profile, all healthy endpoints are returned.

**Subnet:** Subnet traffic-routing method to map sets of end-user IP address ranges to a specific endpoint within a Traffic Manager profile. When a request is received, the endpoint returned will be the one mapped for that request's source IP address.

## Q26. What is the application gateway?

Ans. An azure Application gateway is web-based load balancing mechanism offering layer 7 load balancing capabilities for your application and which can route the traffic based on the source IP address and ports. You can route the traffic based on incoming URL [xyz.com/Image](http://xyz.com/Image) or [xyz.com/Videos](http://xyz.com/Videos).



## Q27. What are the benefits of Application gateway?

Ans. Below are the benefits of the Application gateway.

- Application gateway Features
- Web application firewall
- **HTTP load balancing**
- **Cookie-based session affinity**

- Secure Sockets Layer (SSL) offload
- End to End SSL
- URL-based content routing
- Multi-site hosting
- Web socket support
- Health monitoring
- Request redirect
- Advanced Diagnostics
- Rewrite HTTP headers

## Q28. What is the difference between Azure load balancer and Application gateway?

**Ans.** Application gateway work on layer7 load balancer which works only on Web traffic like HTTP/HTTPS/WebSocket's. It supports the SSL termination, cookie-based session affinity, and round robin for load balancing traffic.

Azure Load Balancer is layer 4 load balancer which supports incoming internet traffic to your VMs and can forward the traffic to specific ports using NAT Rules.

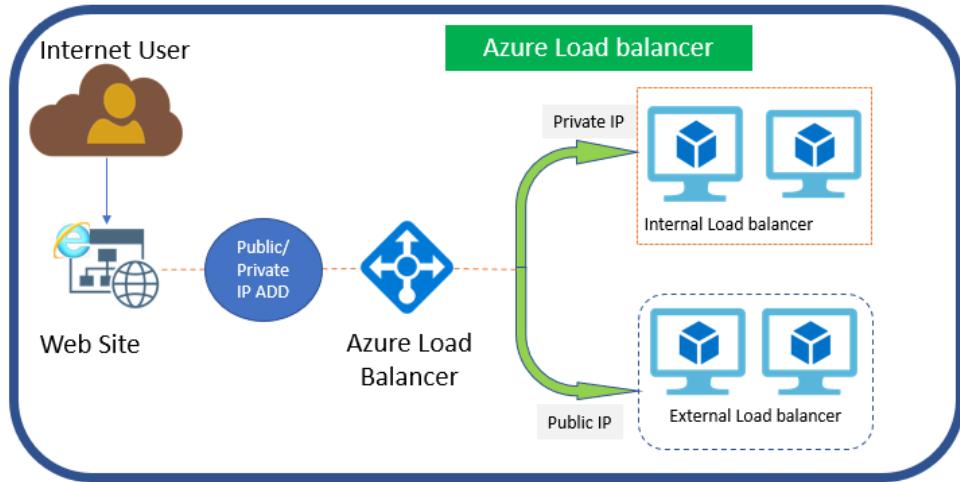
## Q29. What protocols are supported by Application gateway?

**Ans.** It supports the HTTP, HTTPS, HTTP/2, and WebSocket

## Q30. Please specify the Azure Load Balancer?

**Ans.** The Azure Load balancer is used to scale up your application and create high availability and it provides low latency and high throughput. There are two types of the load balancer.

- Internal Load Balancer: Which used to internal sites or company specific sites.
- Public Load Balancer: Which used to configure for external or public web sites configuration.



## Q31. What is Azure DNS?

**Ans.** Azure DNS is hosting services which provide the name resolution using the Azure infrastructure. It's SaaS services, you don't require a VM to deploy the DNS. In a few clicks, you can create the DNS.

## Q32. What is Network Security Group (NSG)?

**Ans.** Azure NSG will help you to protect your Azure VMs or services based on the allow or deny traffic in NSG inbound and outbound rules.

**Inbound:** The traffic received by your VMs from the Internet.

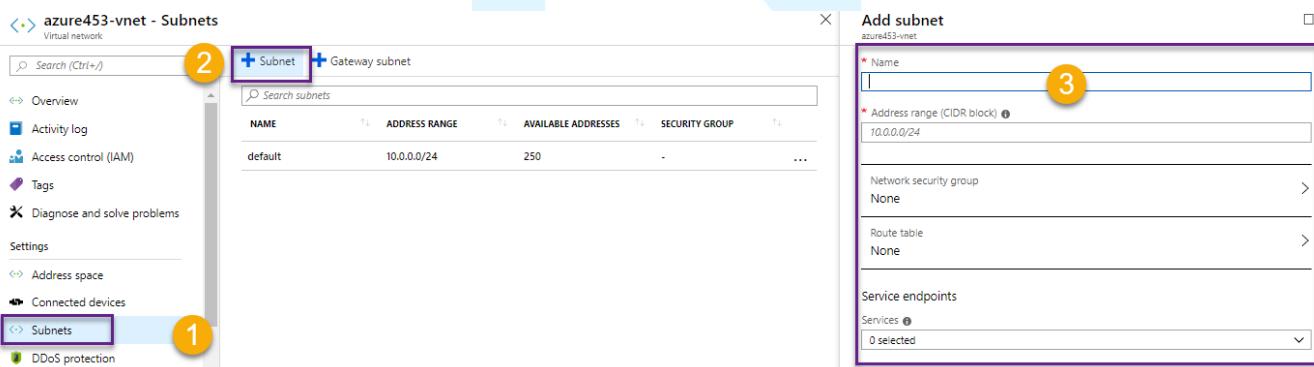
**Outbound:** The traffic which sends the traffic from your VMs to the Internet

## Q33. Can you ping your default routes and do trcert for diagnose connectivity? Please confirm if this is possible?

**Ans.** It's not possible because of their limitation from Azure End.

## Q34. Can you add multiple subnets in Vnets?

**Ans.** Yes, you can add the multiple subnets in Vnets based on your requirements.



## Q35. VNet peering connection is in the Disconnected state, what will be the problem?

**Ans.** Vnet Peering disconnection only happens when one of the Vnet Peering links has been deleted or not created as it's required Bi-directional connections.

## Q36. Your customer wants to reserve the IP address for our DMZ environments in azure Vnets, how can you achieve the same?

**Ans.** You can't reserve the IP address because all the IP address assigned by the Azure DHCP if the IP is available it's must-have assigned but you can change the IP address later for that VMs.

**Q37. If you want to restrict the PaaS services, then what are the services which can be restricted or secured by Vnet in Azure?**

**Ans.** Below are the services which you can implement the Azure Vnet integration and secure the environments.

- Azure Storage
- Azure SQL Database
- Azure SQL Data Warehouse
- Azure Database for PostgreSQL server
- Azure Database for MySQL server
- Azure Cosmos DB
- Azure Key Vault
- Azure Service Bus & Azure Event Hubs Azure AD



# 5

# Azure Active Directory

## Q1. What is Azure Active Directory?

**Ans.** Azure AD is cloud-based identity and access management services which will help to access the Azure resources like Azure subscription, Other Application. You can integrate Azure AD to O365, SharePoint Online etc.

## Q2. What are the benefits of Azure AD?

**Ans.** Following are the benefits of Azure AD:

- Create the Users and Groups in Azure AD.
- Don't require on-premises infrastructure to install the AD it's SaaS services.
- You can manage Azure AD centralized and enable for Internal/External application.
- User can reset the password online which will help the user to reset the password without login to the corporate network.
- Enable to SSO which will help users to log to their services using Single Credentials.
- You can use multifactor authentication and self-service password reset for the users.
- You can monitor the AD connect health.
- You can Integrate the On-Premise AD to Azure AD to sync the users.

## Q3. How to sync the On-Premise AD to Azure AD?

**Ans.** Use the Azure AD connect to sync the On-Premise AD to Azure AD.

## Q4. What are the requirements to configure the Azure AD connect?

**Ans.** Please find the below Prerequisite:

- Azure AD Accounts with Global Administrator.
- Add and Verify the Domain Accounts in Azure AD.
- Enterprise Administrator Accounts required to Access the data to on-premise AD.
- Use IDfix tool to identify the duplicates/Formatting problems in On-Premises Azure AD.
- On-Premise AD Schema version and forest function level should be 2003 and above.
- DC used for Azure AD will be writeable because RODC roles are not supported by Azure AD.
- Azure AD connect will be installed in 2008 and above server.
- Password synchronization will be work on Server 2008R2 servers and above if you are planning to configure the same.

- .Net 4.5.1 and PowerShell 3.0 should be installed.

## Q5. What is the protocol supports by the Azure AD for Authentication?

Ans. Azure AD supports the below Protocol for Azure AD authentication.

- **OAuth 2.0:** It enables the authorize access to web applications and web APIs in Azure AD.
- **OpenID Connect:** It's is identity layer which built-in top of the OAuth2.0 which use the access token mechanism to access the resources.
- **SAML:** It provides the single sign-on access to your application. It's required Identify provider and service provider to exchange the information.

## Q6. What is the difference between the global administrator and services administrator roles?

Ans. The differences between the global administrator and service administrator are given below:

**Global Administrator** has all the rights of administrator by default who log in to subscription can be global administrator, but you can transfer the role as well.

**Services Administrator** You can manage the subscription like Add new subscription or cancel subscription including the billing of subscription.

## Q7. What are the tools you will use to check the Azure AD connect health?

Ans. You should use the Azure AD connect health tool for the same.

## Q8. You have bought the 50 E5-Enterprise Mobility + Security licenses, how can you assign to the user in Azure AD?

Ans. You should follow the below Steps:

- Click on the Azure AD
- Select the license under the manage tab.
- Click on the Product.
- Select the Licences Enterprise Mobility + Security licenses-E5
- Licenses User
- Click on Assign and select the user. Assigned the license.

The screenshot shows the Azure portal interface for managing licenses. On the left sidebar, 'Azure Active Directory' is selected (1). Under 'Licenses', 'Licenses - Overview' is selected (2). In the main pane, 'Overview' is selected (3). A callout highlights 'Purchased 1 product' (4). The product 'Enterprise Mobility + Security E5' is selected (5). In the 'General' section, 'Licensed users' is selected (6). A callout highlights the 'Assign license' button (7) and the 'Users and groups' dropdown (8), which shows '1 user selected'.

## Q9. The customer wants to enable the multifactor authentication, how you can enable the same?

**Ans.** You should enable the multifactor authentication as per below guideline.

- Click on Azure Active Directory.
- Under Security tab click on MFA.
- Under get started click on Configuration.
- Select: Allow users to create app passwords to sign in to non-browser apps
- verification options: Methods available to users.
  - Call to phone\*
  - Text message to phone\*
  - Notification through the mobile app\*
  - Verification code from mobile app or hardware token

The screenshot shows the Azure portal interface for Multi-Factor Authentication. On the left sidebar, 'Azure Active Directory' is selected (1). Under 'Security', 'MFA' is selected (2). In the main pane, 'Getting started' is selected (3). A callout highlights the 'Configure' button (4). The 'Configure' section shows 'Additional cloud-based MFA settings' (5).

## multi-factor authentication

users service settings

app passwords [\(learn more\)](#)

- Allow users to create app passwords to sign in to non-browser apps
- Do not allow users to create app passwords to sign in to non-browser apps

trusted ips [\(learn more\)](#)

- Skip multi-factor authentication for requests from federated users on my intranet
- Skip multi-factor authentication for requests from following range of IP address subnets

verification options [\(learn more\)](#)

Methods available to users:

- Call to phone\*
- Text message to phone\*
- Notification through mobile app\*
- Verification code from mobile app or hardware token

\*The phone authentication service for Azure Multi-Factor Authentication is provided by Microsoft Corporation or its affiliates. By enabling phone call, text message or mobile app notification, the user's phone number or device information may be transferred, processed and/or stored in any country where Microsoft, its affiliates or service providers maintain facilities so that Microsoft can provide the phone authentication service.

## Q10. What are the RBAC roles in Azure?

**Ans.** It's Role-based access control where you can manage your subscription based on role access or in another way it will help you to limit access. It has 3 types of access.

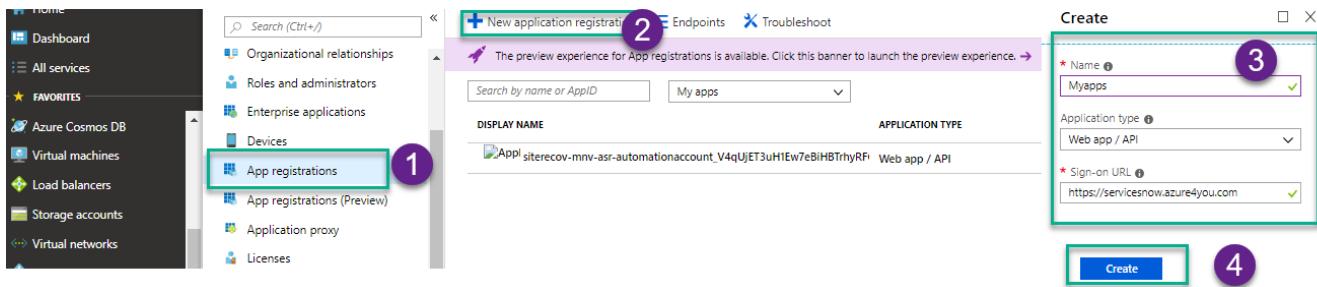
- Owner: Has all the access to resources and can provide the rights to users.
- Contributor: Create and manage the Resources but can't provide the rights.
- Reader: Manage users' access to resources.

## Q11. The customer wants to register the Apps, how you can process?

**Ans.** You should follow the below steps.

- Click on the Azure AD.
- Select the App Registration.
- Click on the New Application Registration
- Click on the Create and provide the Details.

- Click on create.



## Q12. What is Azure Conditional Access?

**Ans.** Azure Conditional Access will help you to manage your cloud security and implement automated access control decisions for accessing your cloud apps that are based on conditions.

Reference: <https://docs.microsoft.com/en-us/azure/active-directory/conditional-access/overview>

## Q13. One of your customers has an issue on azure ad connect sync and he wants to resync the Azure AD, how you can process?

**Ans.** You should use the Azure ad PowerShell command lets to sync manually. You should run the below commands to fix the issue.

For a Delta Sync (Used in most situations):

Start-ADSyncSyncCycle -PolicyType Delta

For a Full Sync (only used on few scenarios):

Start-ADSyncSyncCycle -PolicyType Initial

# 6

# Backup and Site Recovery

## Q1. What is Azure Backup and what are the benefits of Azure Backup?

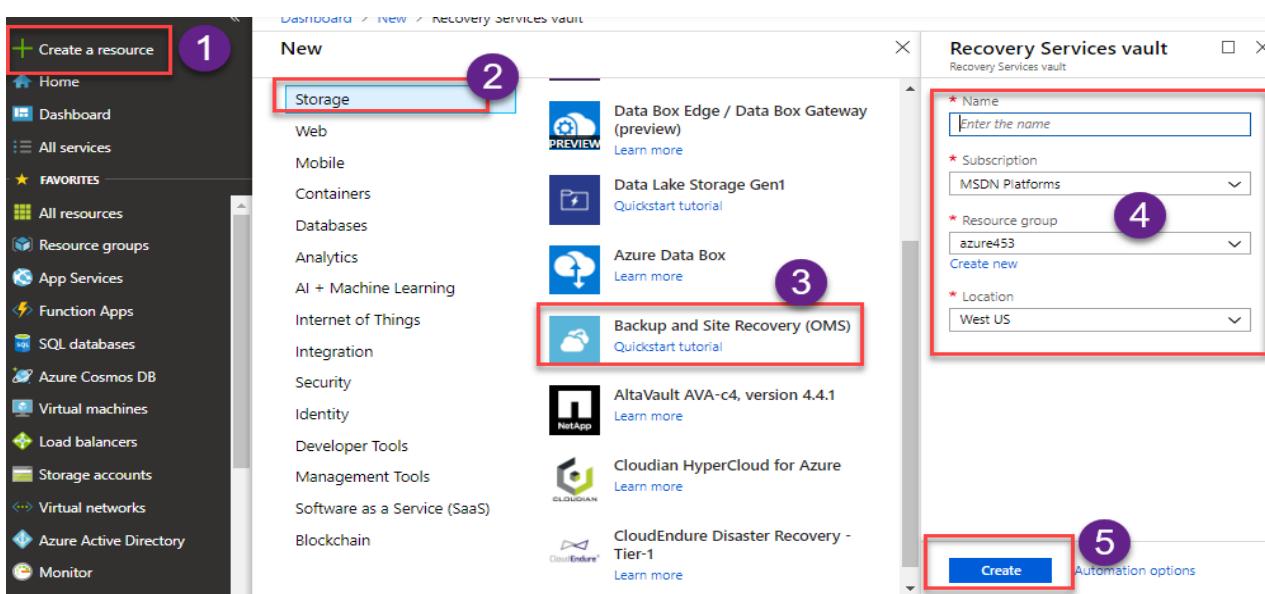
**Ans.** Azure Backup is a cloud-based solution which will help you to take the backup of the Azure VM, PaaS SQLDB, file service, web apps etc.

- It provides a hybrid solution to take the backup.
- Storage will be managed automatically using Azure storage accounts and it doesn't require any local storage like on-premises.
- You can transfer the unlimited data and this data stored in encrypted format in Azure storage accounts.

## Q2. How to create the Backup Vault.

**Ans.** Follow the following steps.

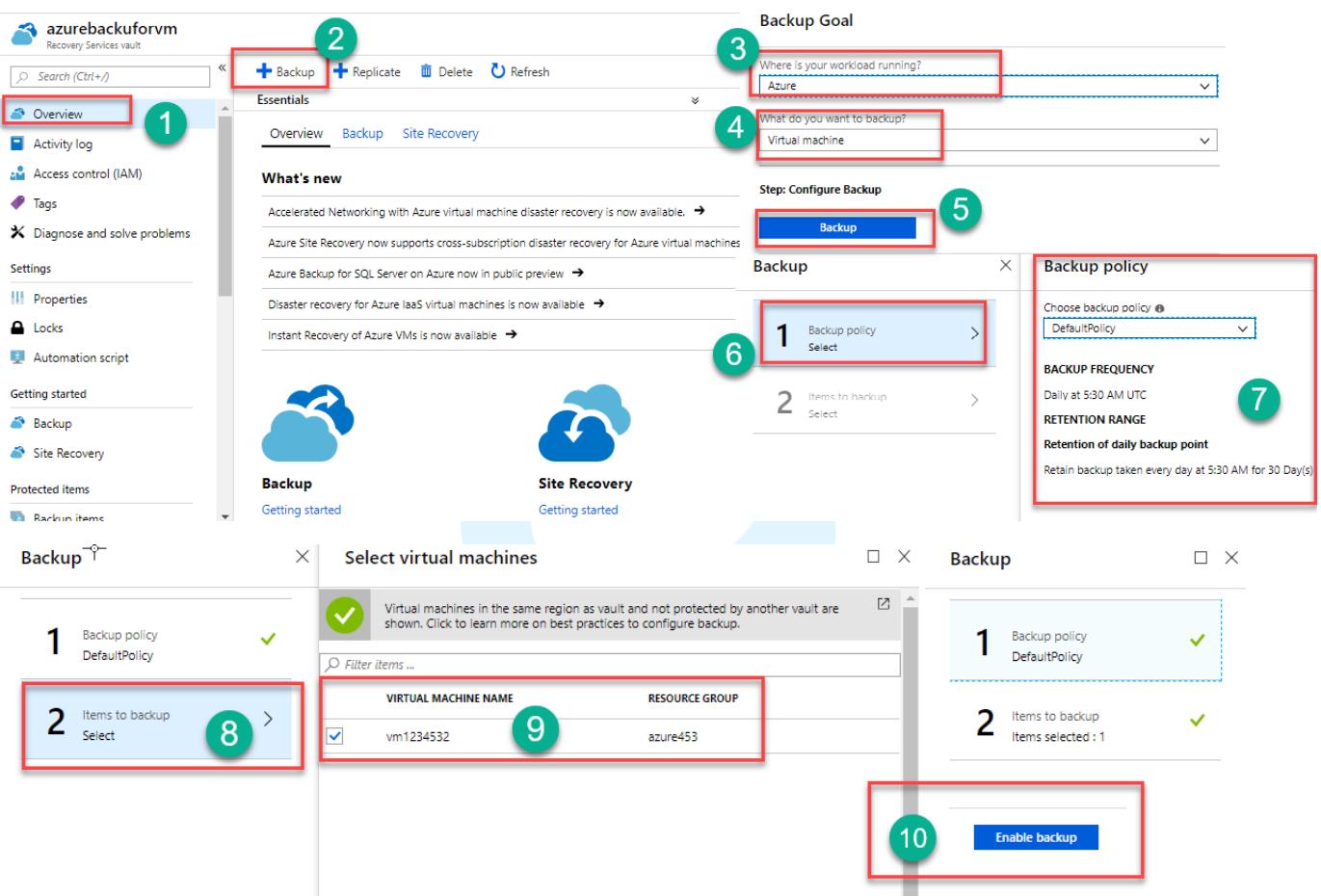
- Click on the Create a Resources and Select the Storage
- Under Storage select the Backup and Recovery Vault
- Click on the backup + Icon.
- Provide the details
- Click on create.



### Q3. How to configure the Azure VM backup?

Ans. If you want to configure the Azure Data backup then you can follow the below steps.

- Click on all services and search the Recovery Vault and create the recovery Vault.
- Click on the backup + icon.
- Select the Environments as Azure.
- Select the Virtual Machine
- Create the Backup Policy.
- Select the VM and Click on the enable, after some time backup will be enabled.



### Q4. The customer wants to enable the backup of azure Webs services, how you can enable the backup for the same?

Ans. You should follow the below steps to configure the backup of Azure App services.

- Click on App services
- Select the WebApps you want to configure the backup.
- Select the Storage Accounts and under that select the container.
- Turn on the Scheduled Backup

- Select the Backup frequency
- Click on Save and after some time your app services backup will be enabled.

The screenshot shows the Azure portal interface for configuring backups. On the left sidebar, 'App Services' is selected (Step 1). Under 'App Services', 'Backups' is selected (Step 2). At the top right, the 'Configure' button is highlighted (Step 3). In the main content area, the 'Backup Storage' section is highlighted (Step 4), showing the selection of a storage account. The 'Backup Schedule' section is also highlighted (Step 5), showing the 'Scheduled backup' switch turned 'On'. The 'Retention (Days)' field is highlighted (Step 6) and set to 30.

## Q5. How to configure the Azure SQL DB backup retention?

**Ans.** You should follow the below steps on this.

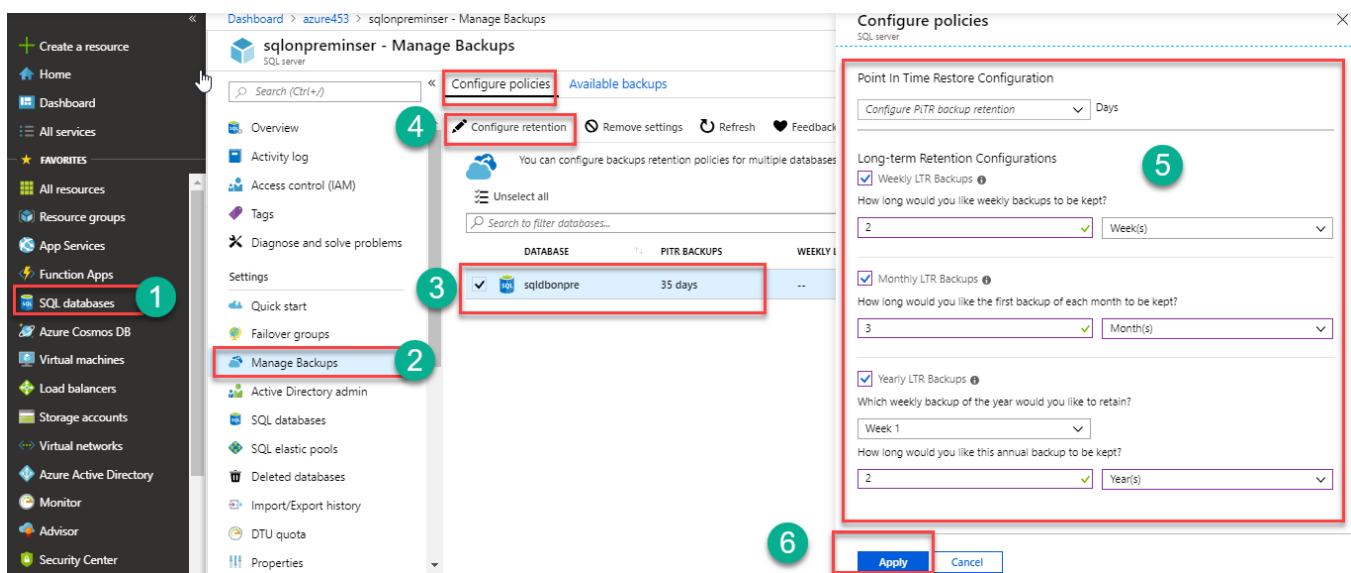
- Select the SQL DB
- Under setting click on Manage Backup
- Select the DB and Click on the Configuration retention.
- Set the Retention and save the configuration.

The screenshot shows the Azure portal interface for managing SQL database backups. On the left sidebar, 'SQL databases' is selected (Step 1). Under 'SQL databases', 'Manage Backups' is selected (Step 2). The 'sqlidbopnpre' database is selected for configuration (Step 3). The 'Configure policies' button is highlighted (Step 4). The configuration dialog shows the 'Point in Time Restore Configuration' and 'Long-term Retention Configurations' sections. The 'Weekly LTR Backups' checkbox is checked, and the 'Week(s)' dropdown is set to 2. The 'Monthly LTR Backups' checkbox is checked, and the 'Month(s)' dropdown is set to 3. The 'Yearly LTR Backups' checkbox is checked, and the 'Year(s)' dropdown is set to 2. The 'Apply' button is highlighted (Step 6).

## Q6. Can you take a backup of SQL DB of Azure VMs if yes, then how to enable the SQL DB backup?

**Ans.** By default, SQL DB backup will be done by MS Azure team and retain up to 1 week but if you want to configure and retain for more than 5 years and 10 years for that we will follow the below steps.

- Click on SQL DB & Select the DB.
- Click on the Manage Backups
- Click on Configuration Policy.
- Change the configuration policy as per your requirements.
- Click on Save.



## Q7. Clients want to know the status of the Azure Jobs of last one week, how you can process the same?

**Ans.** You should go to recovery Vault and under monitoring setting, you should select the backup jobs. Here, you can see the 7 or 30-days jobs and can collect the data and provide to customers.

WORKLOAD NAME	OPERATION	STATUS	TYPE	START TIME	DURATION
vm1234532	Backup	Completed	Azure virtual machine	1/19/2019, 10:33:40 AM	01:15:17

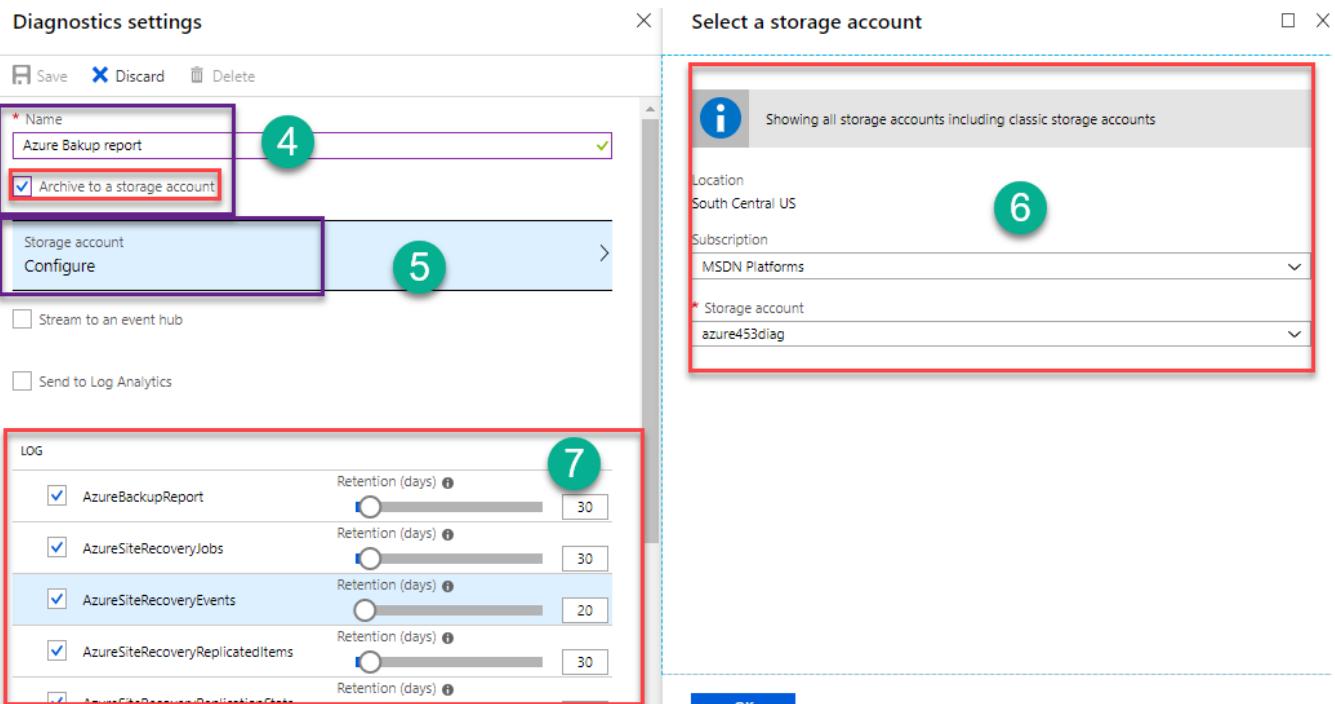
## Q8. How to configure the Azure Backup reports?

Ans. You can configure the backup report by using the below steps.

- Select the Site Recovery Vault.
- Click on the Backup report under Manage tab.
- Click on the Diagnostic setting.
- Enable diagnostic settings.
- Provide the Name of the report.
- Enable the archival in a storage account and add the storage account.
- Set the limit of the Storage archival to 1 to 365 Days based on your organization limit.
- Add the report to PowerBI after 48 Hrs.
- You will be able to see the report in power BI.

For more Details: <https://azure4you.com/2018/07/13/azure-backup-reports/>

The screenshot shows the Azure portal interface for a 'BackuptoVM - Backup Reports' Recovery Services vault. The left sidebar has a 'Backup Reports' section highlighted with a red box and a red number '1'. The main content area is titled 'Backup Reports (Preview)' and contains instructions for using Power BI. Step 1, 'Add Diagnostics Setting', is described with a link to 'Diagnostics Settings' (highlighted with a red box and red number '2'). Step 2, 'Sign in to Power BI and connect to Azure Backup Content Pack', is described with a link to 'Learn more' (highlighted with a red box and red number '3')).



**Q9.** Most of your client's backup is getting failed and they are not getting alerts, you want to make sure that alerts have been configured, how you can process the same?

**Ans.** Following the pic. To do it.

The image shows the 'Backup to VM - Backup Alerts' blade in the Azure portal.

**Left sidebar:** Shows 'Backup to VM - Backup Alerts' under 'Monitoring'.

**Main area:**

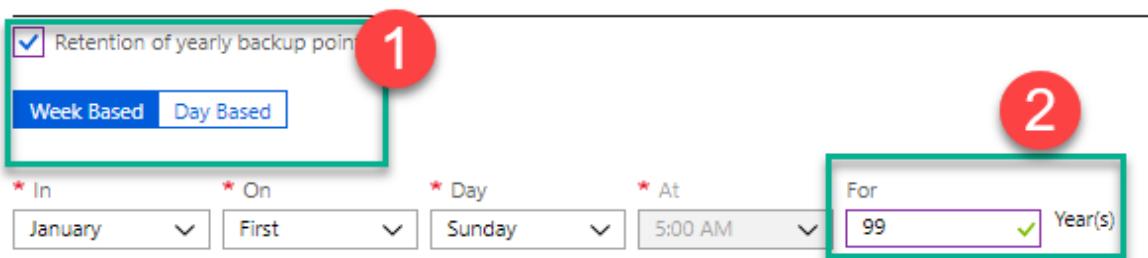
- Step 1:** Shows the 'Backup Alerts' link highlighted.
- Step 2:** Shows the 'Configure notifications' button highlighted.
- Step 3:** Shows the 'Email notifications' section with 'On' selected.
- Step 4:** Shows the 'Recipients (Email)' input field containing 'Irawat@outlook.com'.
- Step 5:** Shows the 'Notify' section with 'Per Alert' and 'Hourly Digest' options, and 'Severity' checkboxes for 'Critical', 'Warning', and 'Information'.

## Q10. What are the backup Jobs?

**Ans.** The backup Jobs are nothing but a job which will monitor your backup status. Backup Jobs the status alert for your backup like Critical or warning alerts if they got failed or there is an issue.

## Q11. The customer wants to retain the data of more than 50 years, please confirm if this possible or not, IF yes how you can achieve the same?

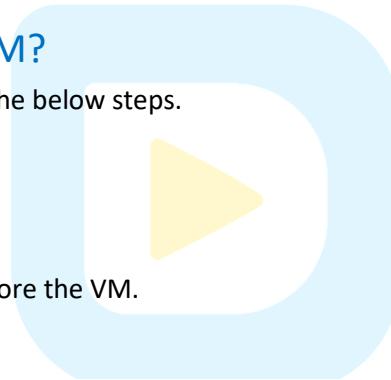
**Ans.** Yes, that possible to have more than 50 years of data backup, MS Azure Supports Max up to 99 years of backup in Azure, you can configure it from Azure backup policy.



## Q12. How to restore the VM?

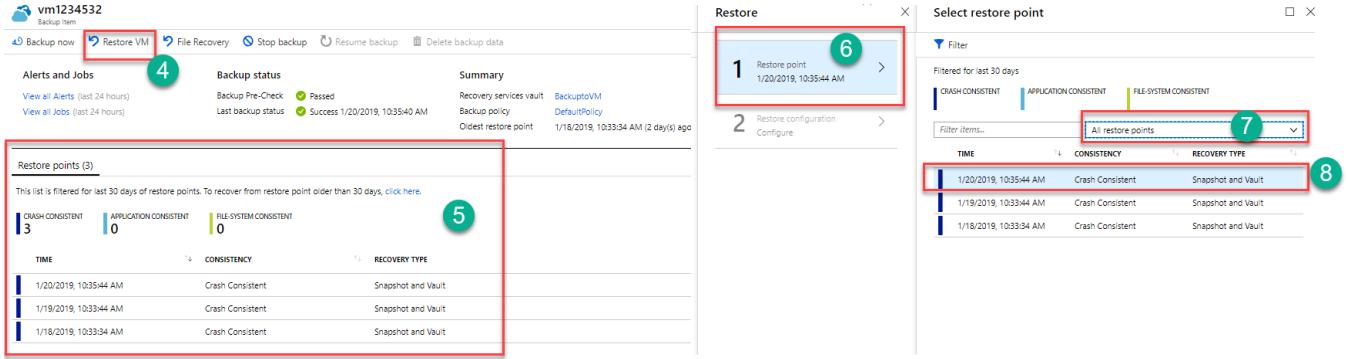
**Ans.** You can restore the VM using the below steps.

- Go recovery Vault.
- Select the Backup Item.
- Select the Azure VM Machines.
- Select the VM you want to restore the VM.



The screenshot shows the 'Backup Items' section of the Azure Recovery Services vault. A red circle '1' highlights the 'Backup items' option in the navigation menu. A red circle '2' highlights the 'Azure Virtual Machine' row in the main table, which has a count of 1. A red circle '3' highlights the details of the selected VM backup item in the right panel, showing 'NAME: vm1234532', 'RESOURCE GROUP: azure453', and 'BACKUP PRE-CHECK: Passed'.

- Click on the Restore the VM.
- Click on the Restore Point.
- From the Drop-down menu, you can select the Latest recovery point.



- Click on the Restoration configuration
- Select the new VMs Creation.
- You will be able to restore the VM.

**Restore configuration**

1 Restore point  
1/20/2019, 10:35:44 AM

2 Restore configuration  
Configure

10 Create new

11 Azurevm2

Restore Type

- Create virtual machine
- \* Virtual machine name: Azurevm2
- \* Resource group: azure453
- \* Virtual network: azure453-vnet (azure453)
- \* Subnet: default
- \* Storage Account: Select an option

### Q13. Is it possible to restore the disk only from azure backup?

**Ans.** You can restore the VMs using the below steps.

- Go recovery Vault.
- Select the Backup Item.

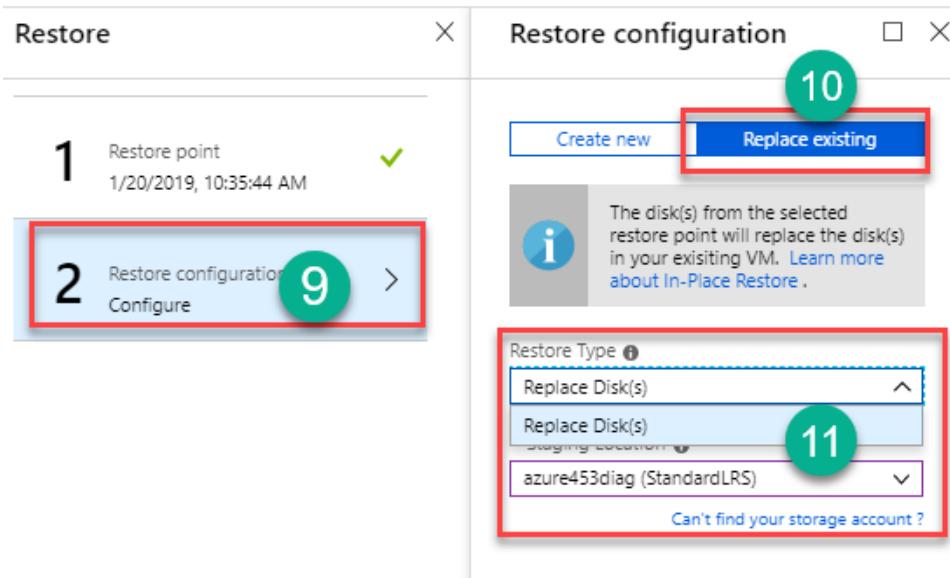
- Select the Azure VMs Machines.
- Select the VM you want to restore the VM.

The screenshot shows the 'Backup Items' section of the Azure portal. On the left, under 'Protected items', 'Backup items' is selected (marked with a green circle 1). In the center, a table lists backup management types: 'Azure Virtual Machine' (count 1), 'SQL in Azure VM' (0), 'Azure Storage (Azure Files)' (0), 'DPM' (0), 'Azure Backup Server' (0), and 'Azure Backup Agent' (0). The 'Azure Virtual Machine' row is highlighted with a yellow box and a green circle 2. On the right, a modal window titled 'Backup Items (Azure Virtual Machine)' shows a single item named 'vm1234532' from 'resource group azure453', with a status of 'Passed' (green checkmark) and a green circle 3.

- Click on the Restore the VMs.
- Click on the Restore Point.
- From the Drop down menu, you can select the Latest recovery point.

The screenshot shows the 'vm1234532' VM details page. At the top, there's a 'Restore VM' button (marked with a green circle 4). Below it, the 'Alerts and Jobs' section shows 'Backup Pre-Check' as 'Passed'. The 'Summary' section shows the 'Recovery services vault' as 'BackuptoVM' and the 'Backup policy' as 'DefaultPolicy'. The 'Restore points (3)' section (marked with a red box and green circle 5) lists three restore points: '1/20/2019, 10:35:44 AM' (Crash Consistent), '1/19/2019, 10:33:44 AM' (Crash Consistent), and '1/18/2019, 10:33:34 AM' (Crash Consistent). To the right, a 'Select restore point' modal window (marked with green circles 6 and 7) shows a list of restore points. The 'All restore points' dropdown is selected (green circle 7). The list includes '1/20/2019, 10:35:44 AM' (Crash Consistent, Snapshot and Vault), '1/19/2019, 10:33:44 AM' (Crash Consistent, Snapshot and Vault), and '1/18/2019, 10:33:34 AM' (Crash Consistent, Snapshot and Vault). A green circle 8 points to the bottom right corner of the modal.

- Click on the Restoration configuration
- Select the Replace Existing.
- Select the replace Disk and select the storage Accounts.
- You will be able to restore the VMs while recovering the disk.



**Q14.** The customer wants to take the backup of their VMs 3 times in a day, how you can configure?

**Ans.** As per MS Azure, it's not possible because one backup policy can be attached to one VMs and you can schedule a one-time backup in Azure.

**Q15.** What is Site recovery and what is the use of it?

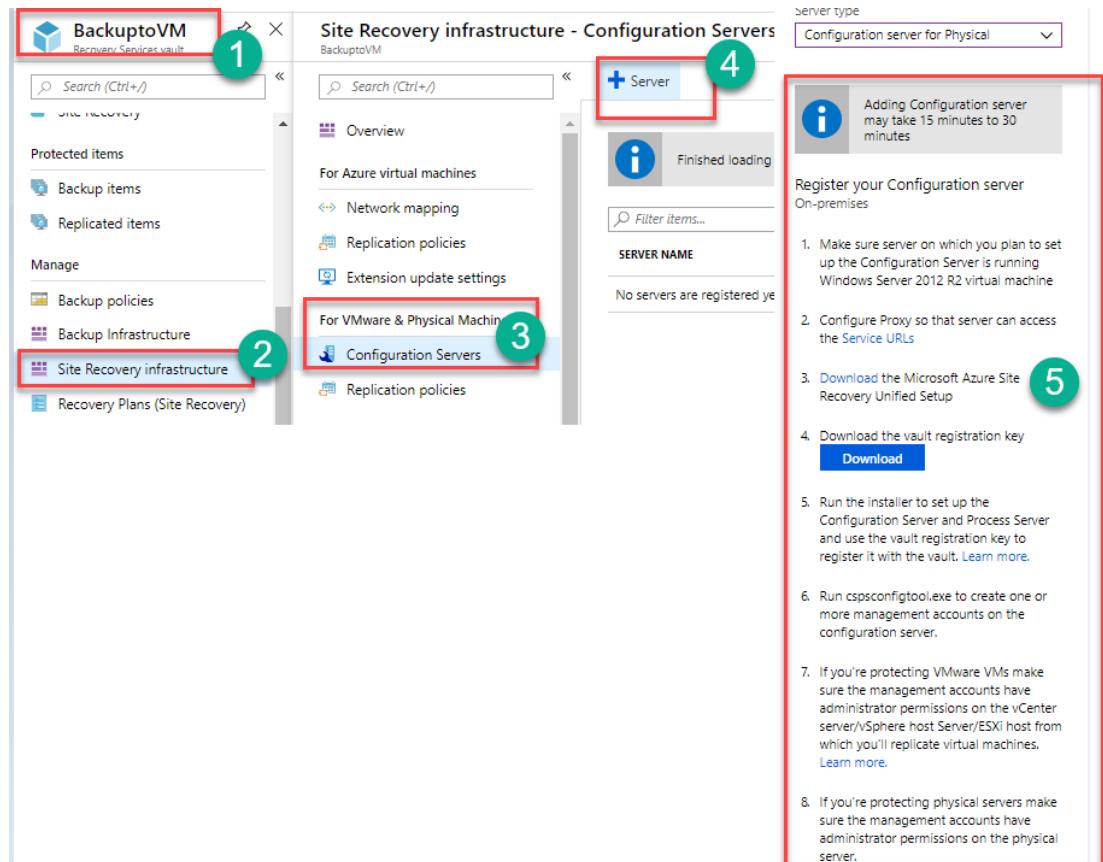
**Ans.** Azure site recovery is used for business continuity and disaster recovery (BCDR) and migration of your on-premises workloads to Azure. Which will help you to keep your data safe and your apps up and running fine during planned and unplanned outage.

**Q16.** How to migrate the on-premises Machines to Azure?

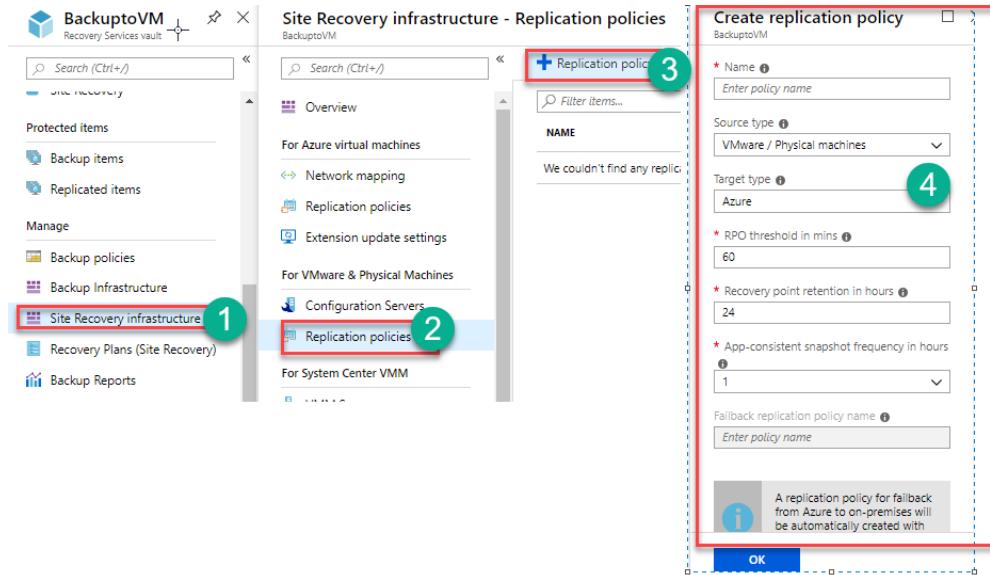
**Ans.** In that case, you need to understand the requirements of on-premise environments like Apps, DB, OS, network etc. You should follow the below steps to migrate the workload to Azure.

- Prerequisite
  - Create the site recovery Vault
  - Enable the below outbound connection in Proxy server to communicate to Azure:  
“\*.blob.core.windows.net, login.microsoftonline.com,  
hypervrecoverymanager.windowsazure.com, \*.servicebus.windows.net”
  - You would require site recovery contributor role access.
  - You would require a Storage account and network (Vnets) to be configured.
- Migration to Azure
  - Create a Recovery Services vault
  - Select a replication goal
  - Set up the source environment
    - Process & Configuration server needs to create with 2012 R2 and above OS.

- While setting up the process server you need Local administrator account to configure to process server config file to discover on-premise host.



- Set up the target environment
  - You need to create storage accounts.
  - You need a local admin credential, Host Name and IP to discover the on-premise host.
- Set up a replication policy
  - You need to create a replication policy.

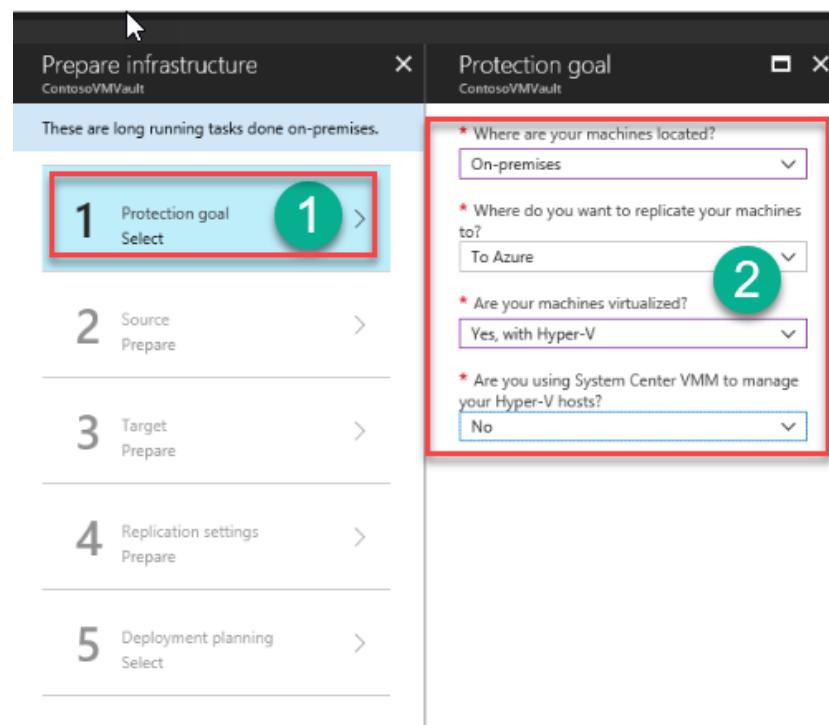


- Enable replication
- Run a test migration
- Migrate to Azure

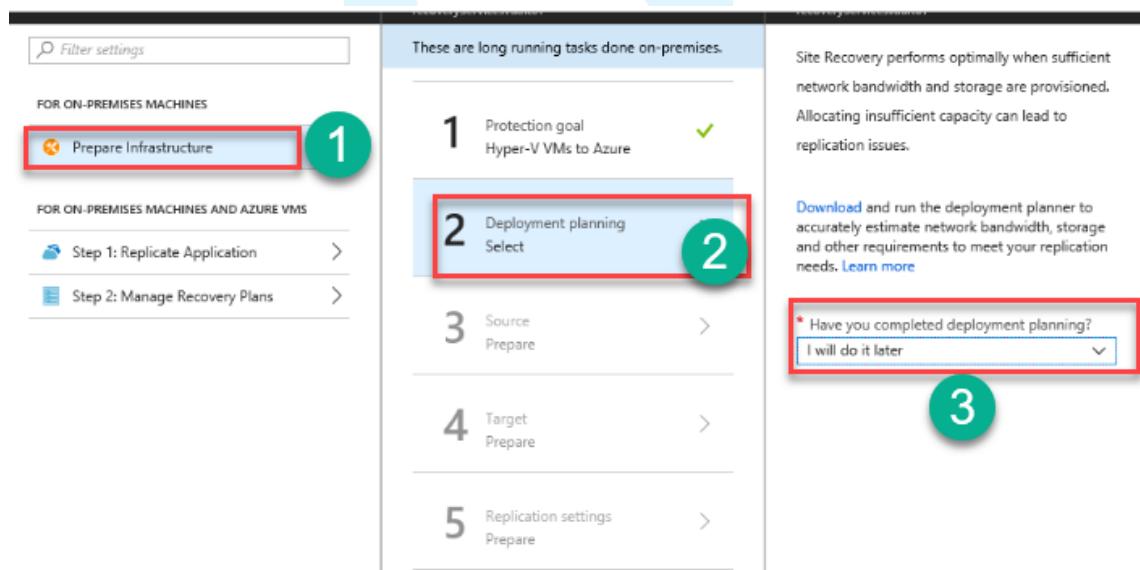
## Q17. What is the prerequisite to migrate Hyper-V VMs to Azure?

**Ans.** You should follow the below steps to migrate the workload to Azure.

- **Prerequisite**
  - Create the site recovery Vault
  - Enable the below outbound connection in Proxy server to communicate to Azure:  
“\*.blob.core.windows.net, login.microsoftonline.com,  
.hypervrecoverymanager.windowsazure.com, \*.servicebus.windows.net”
  - You would require site recovery contributor role access.
  - You would require a Storage account and network (Vnets) to be configured.
- **Hyper-V Migration to Azure**
  - Create a Recovery Services vault
  - Select a replication goal



- Confirm deployment planning



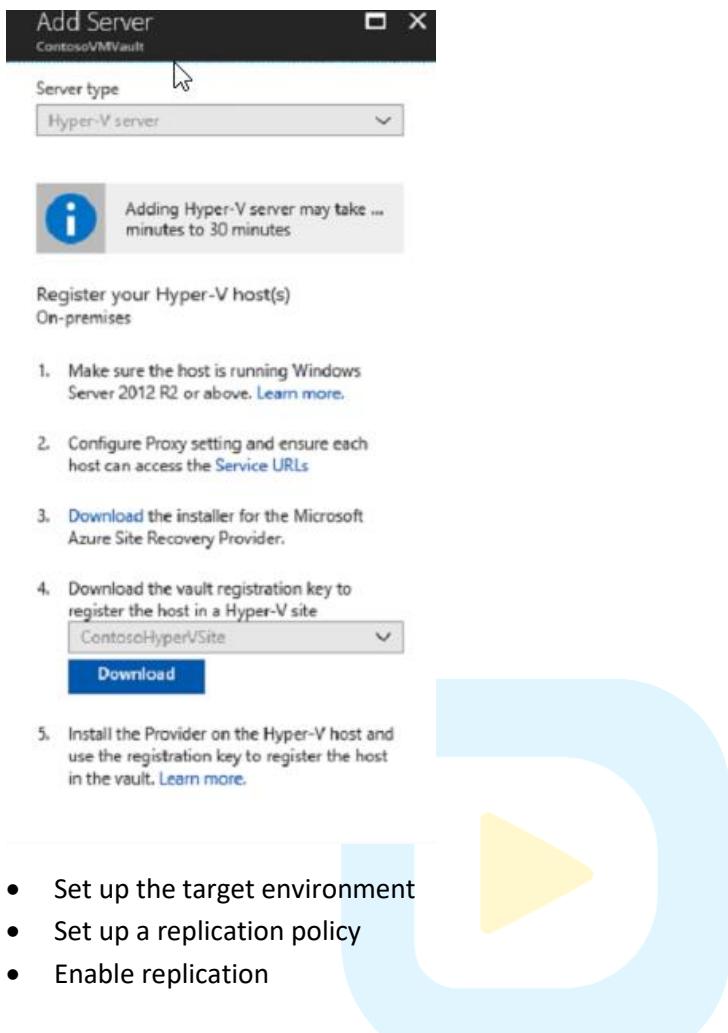
- Set up the source environment

The screenshot shows the Veeam Backup & Replication software interface. On the left, a navigation pane lists five steps: 1. Protection goal (Hyper-V VMs to Azure), 2. Deployment planning (I will do it later), 3. Source (Prepare), 4. Target (Prepare), and 5. Replication settings (Prepare). Step 3 is highlighted with a red box and a green circle containing the number 1. On the right, the 'Step 1: Select Hyper-V site' panel is open, showing a command bar with '+ Hyper-V Site' and '+ Hyper-V Server'. A sub-panel titled 'Step 1: Select Hyper-V site' shows a message '(0 sites found) Click on +Hyper-V Site in the command bar above to add a site.' Below it, a dropdown menu is open with the option 'ContosoHyperVSite' selected, also highlighted with a red box and a green circle containing the number 3.

This screenshot shows the same software interface after some steps have been completed. The protection goal is now marked with a green checkmark. The deployment planning step is also marked with a green checkmark. The 'Source Prepare' step is still highlighted with a red box and a green circle containing the number 1. The 'Hyper-V Site' and 'Hyper-V Server' buttons in the command bar are now highlighted with red boxes and green circles containing the numbers 2 and 3 respectively. The 'Step 1: Select Hyper-V site' panel now shows a message '✓ Step 1: Select Hyper-V site' and a dropdown menu with the selected site 'ContosoHyperVSite'.

Then you can download the Recovery setup and key.



## Q18. What is the use of Process, Configuration and master server?

**Ans.** **Process Server** works as a replication gateway. It compresses, encrypt and sends the data to Azure storage accounts and receives the replication data. It will help us to deploy the mobility agents in Hyper V VMs for auto-discovery of on-premise and Azure VMs.

**Configuration Server** coordinates communications between on-premises and Azure and manages data replication.

**Master Target Server:** Master target server receives failback data

## Q19. What is the use of mobility agents in azure site recovery?

**Ans.** Mobility agents help in connectivity between Machine to process server and help in auto-discovery of VMs in azure recovery vault while setting up the target environments.

## Q20. What is the difference between test failover and Failover?

**Ans.** **Test Failover:** Test Failover is where you will test that all the prerequisite has been met before do the final failover. It will check the prerequisite and create the VM with Test-XYZ name.

**Fail Over:** Failover is final failover once this is done, VM will be created automatically with the latest RPO and you can't reserve the settings.

## Q21. What is the commit in Azure?

**Ans.** Basically, you are committing the failover point in time.

## Q22. What is the RTO and RPO in Azure DR?

**Ans.** RTO is **recovery time object** means how much time ASR will take to recover my servers and whereas RPO is **recovery point object** last backup point or sync data is available in our backup/Recovery Vault.

## Q23. Your customer has Windows Server 2003 in on-premise and he wants to migrate as it is, please provide the solution?

**Ans.** No, you can't migrate as it's not supported by Microsoft and if you need to migrate then you need to upgrade to a higher version and then you can migrate.

