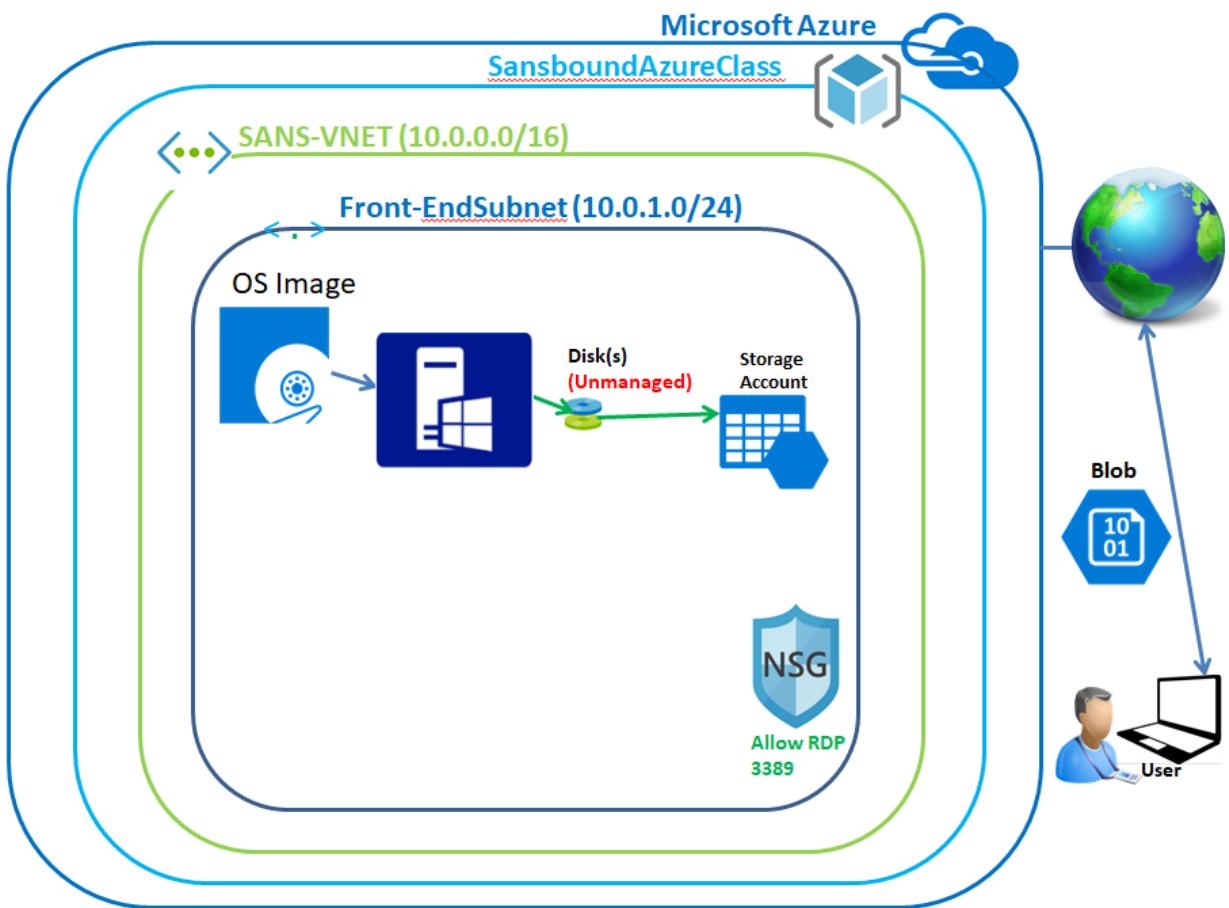
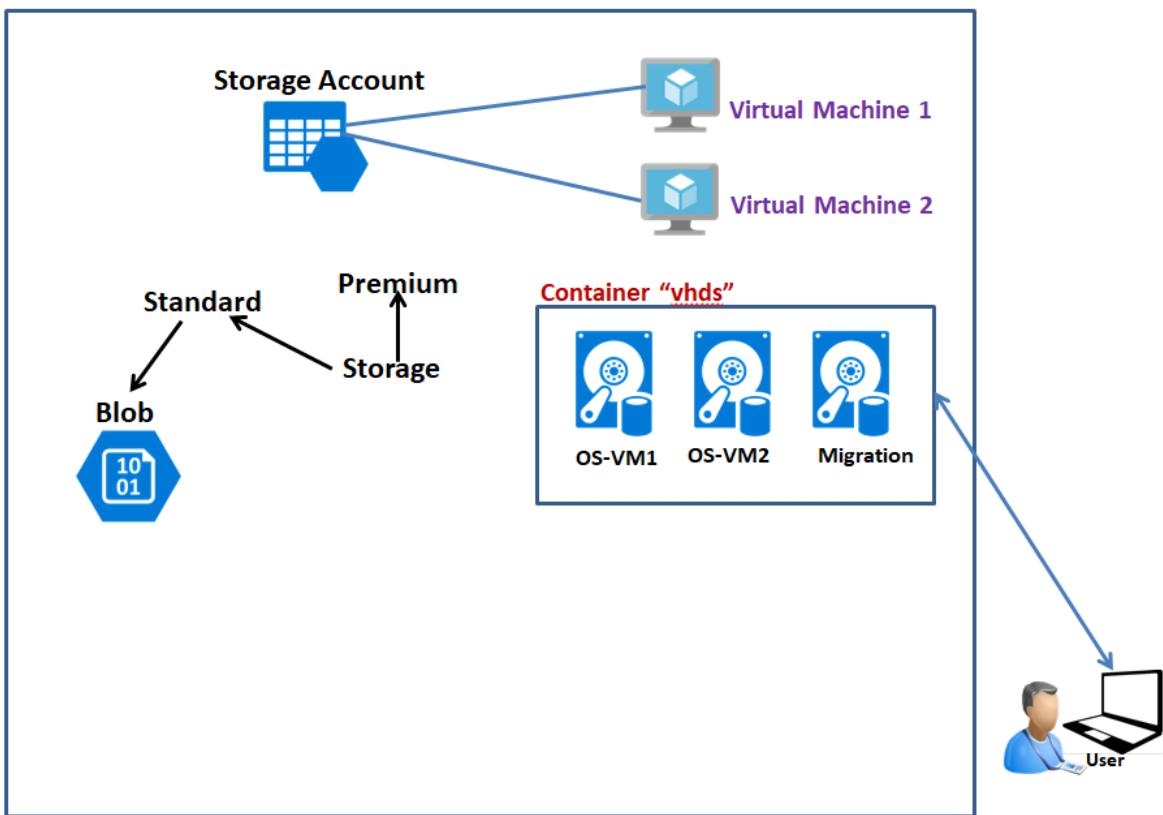


Lab12– Understanding features of unmanaged disks - Azure

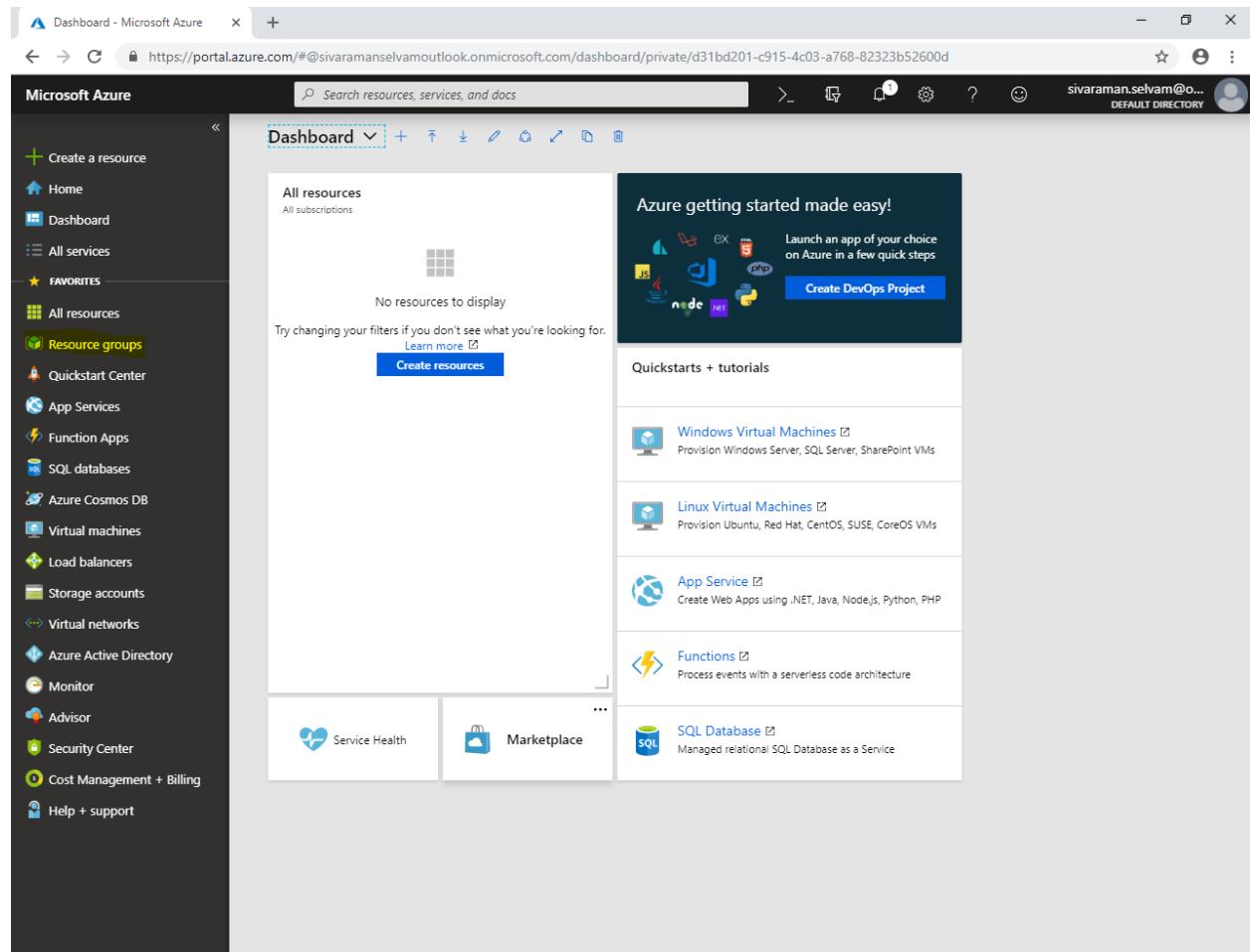
Unmanaged disks

Unmanaged disks are the traditional type of disks that have been used by VMs. With these disks, you create your own storage account and specify that storage account when you create the disk. Make sure you don't put too many disks in the same storage account, because you could exceed the [scalability targets](#) of the storage account (20,000 IOPS, for example), resulting in the VMs being throttled. With unmanaged disks, you have to figure out how to maximize the use of one or more storage accounts to get the best performance out of your VMs.

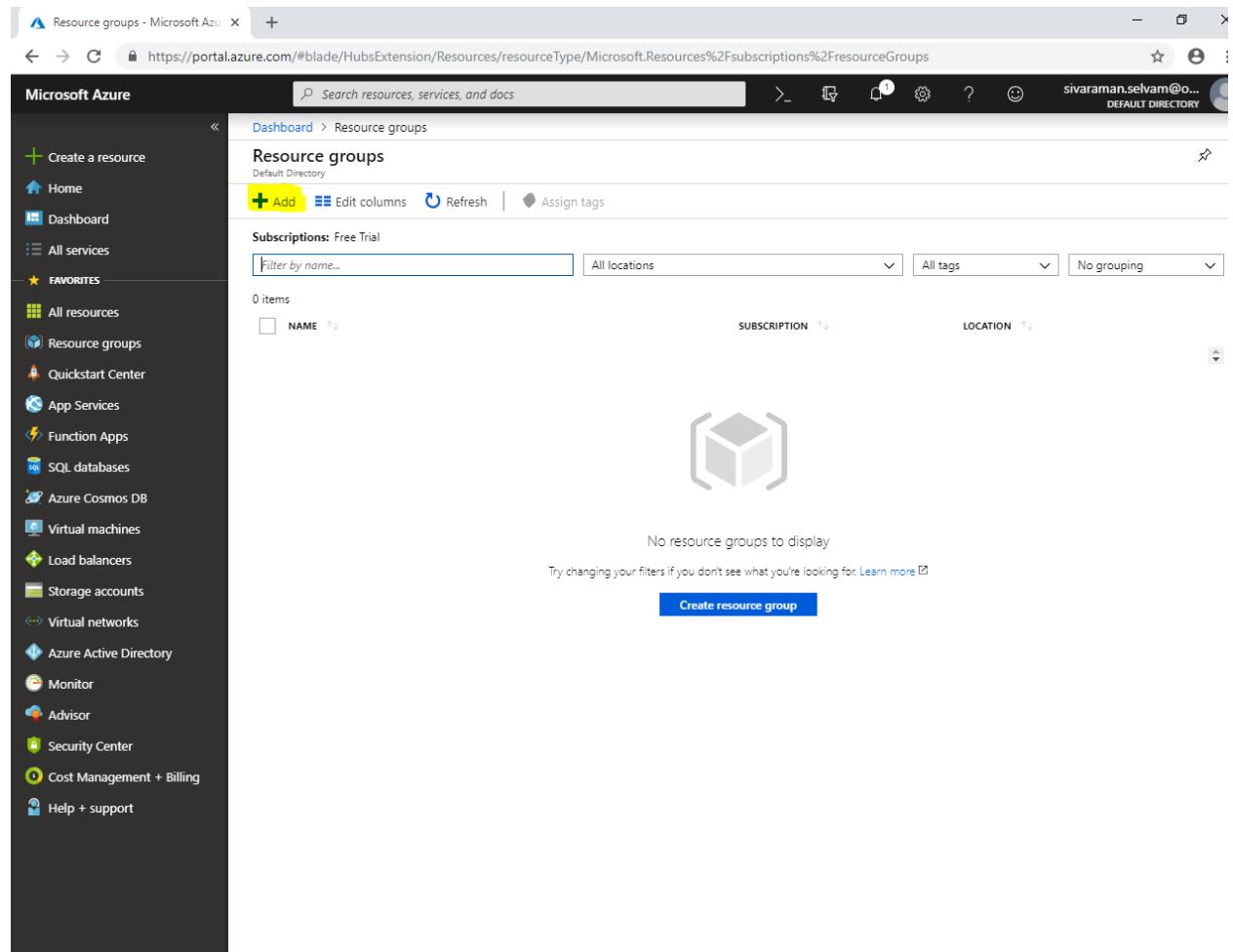
Topology

Back-End of Storage

In Azure portal, click “Resource groups” in left side panel.



Click "Add".

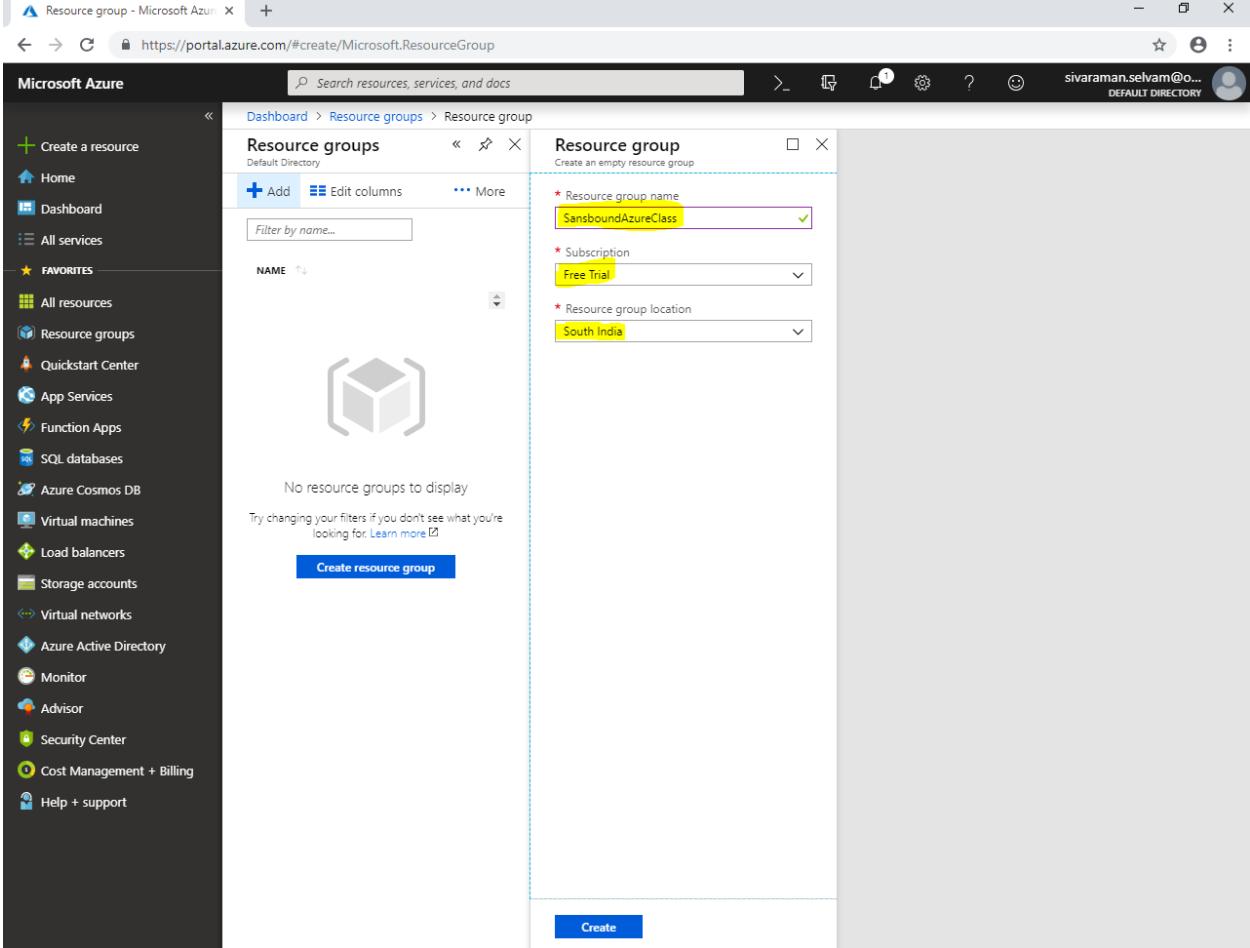


The screenshot shows the Microsoft Azure portal interface. The left sidebar is dark-themed and includes a 'Create a resource' button, 'Home', 'Dashboard', 'All services', and a 'FAVORITES' section with links to 'All resources', 'Resource groups', 'Quickstart Center', 'App Services', 'Function Apps', 'SQL databases', 'Azure Cosmos DB', 'Virtual machines', 'Load balancers', 'Storage accounts', 'Virtual networks', 'Azure Active Directory', 'Monitor', 'Advisor', 'Security Center', 'Cost Management + Billing', and 'Help + support'. The main content area is titled 'Resource groups' under 'Default Directory'. It features a search bar, filter options for 'Subscriptions: Free Trial', 'Filter by name...', 'All locations', 'All tags', and 'No grouping', and a sorting section for 'NAME', 'SUBSCRIPTION', and 'LOCATION'. A large 'Add' button is highlighted with a yellow box. Below the table, there is a message: 'No resource groups to display. Try changing your filters if you don't see what you're looking for. Learn more [?]' and a blue 'Create resource group' button.

While create “Resource group”, type “Resource group name” as “**SansboundAzureClass**”.

Select “Subscription” as “**Free Trial**”.

Select “Resource group location” as “**South India**”.

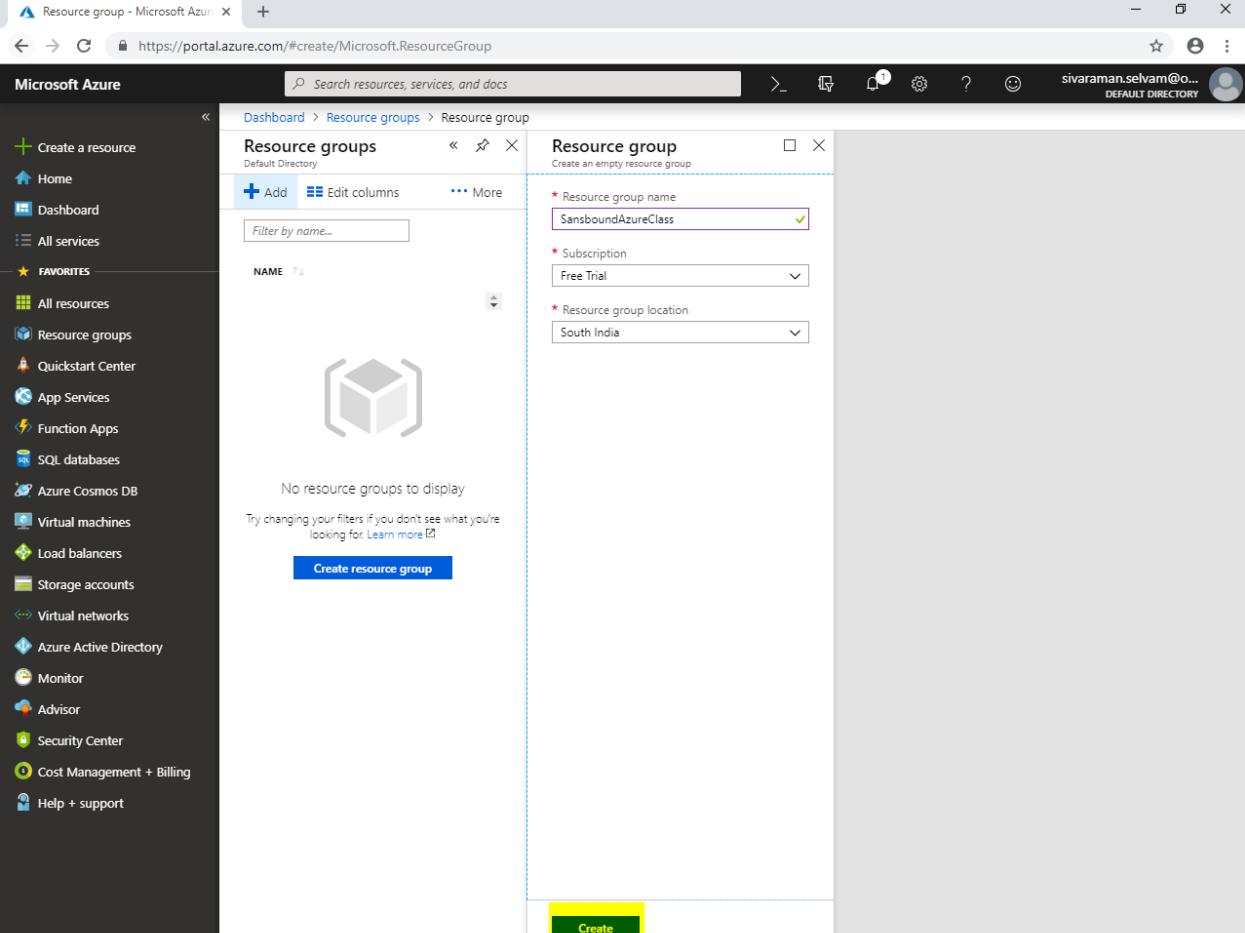


The screenshot shows the Microsoft Azure portal interface for creating a new resource group. The left sidebar contains various service icons under 'All services' and 'FAVORITES'. The main area shows a 'Resource groups' table with one entry ('Resource group') and a 'Create resource group' button. A modal dialog is open for creating a new resource group, with the following fields filled:

- Resource group name: SansboundAzureClass
- Subscription: Free Trial
- Resource group location: South India

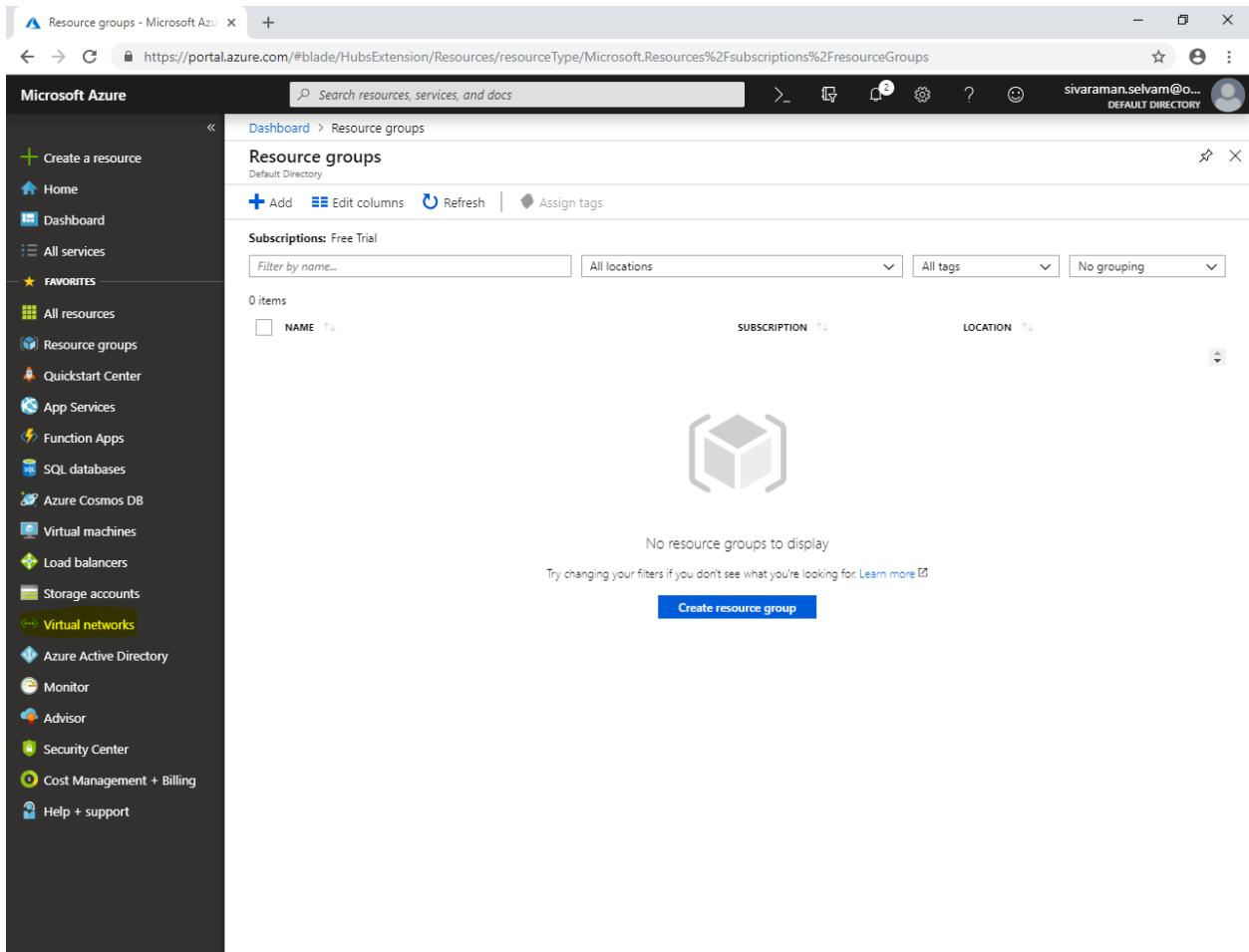
The 'Create' button is located at the bottom right of the dialog.

Click “Create”.



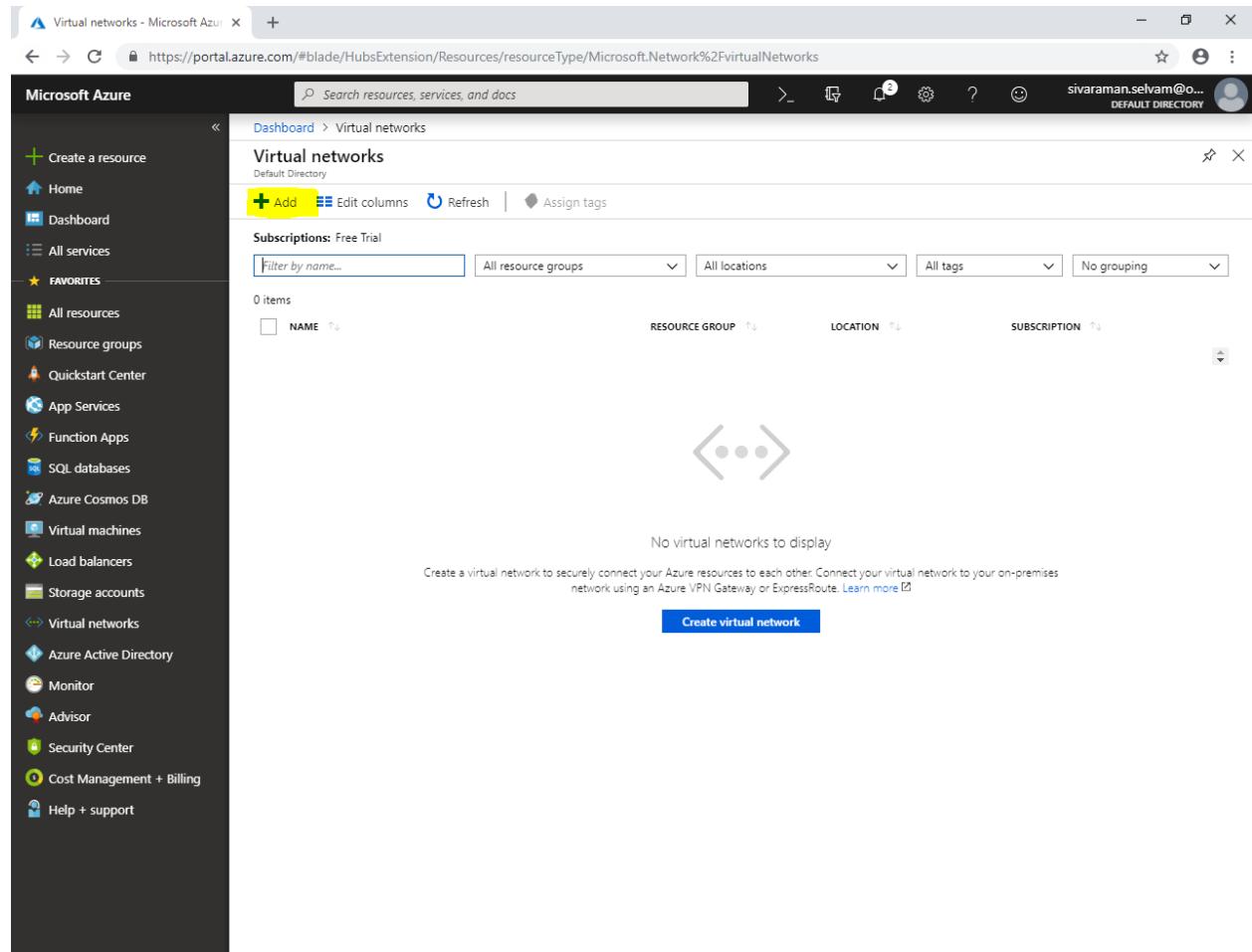
The screenshot shows the Microsoft Azure portal interface for creating a new Resource Group. On the left, the navigation menu is visible with various service icons. The main area shows the 'Resource groups' blade, which includes a search bar and a 'Create resource group' button. A 'Resource group' card is open, prompting for the name 'SansboundAzureClass', subscription 'Free Trial', and location 'South India'. A large yellow rectangular callout highlights the 'Create' button at the bottom right of the card.

Click “Virtual networks” in left side panel.



The screenshot shows the Microsoft Azure portal interface. The left sidebar is dark-themed and lists various services. The 'Virtual networks' option is highlighted with a yellow background, indicating it has been selected. The main content area is titled 'Resource groups' and shows a message 'No resource groups to display'. It includes a 'Create resource group' button and filter options for 'NAME', 'SUBSCRIPTION', and 'LOCATION'.

In “Virtual networks”, click “**Add**”.



The screenshot shows the Microsoft Azure portal interface. The left sidebar is dark-themed and includes a 'Create a resource' button, followed by a list of services: Home, Dashboard, All services, Favorites (with 'Virtual networks' selected), All resources, Resource groups, Quickstart Center, App Services, Function Apps, SQL databases, Azure Cosmos DB, Virtual machines, Load balancers, Storage accounts, and Help + support. The main content area is titled 'Virtual networks' under 'Default Directory'. It features a search bar at the top and a table below with columns: NAME, RESOURCE GROUP, LOCATION, and SUBSCRIPTION. A large 'Create virtual network' button is located at the bottom right of the table area. The URL in the browser is https://portal.azure.com/#blade/HubsExtension/Resources/resourceType/Microsoft.Network%2FVirtualNetworks.

Type “Virtual network name” as “**SANS-VNET**”.

Type “Address range” as **10.0.0.0/16**

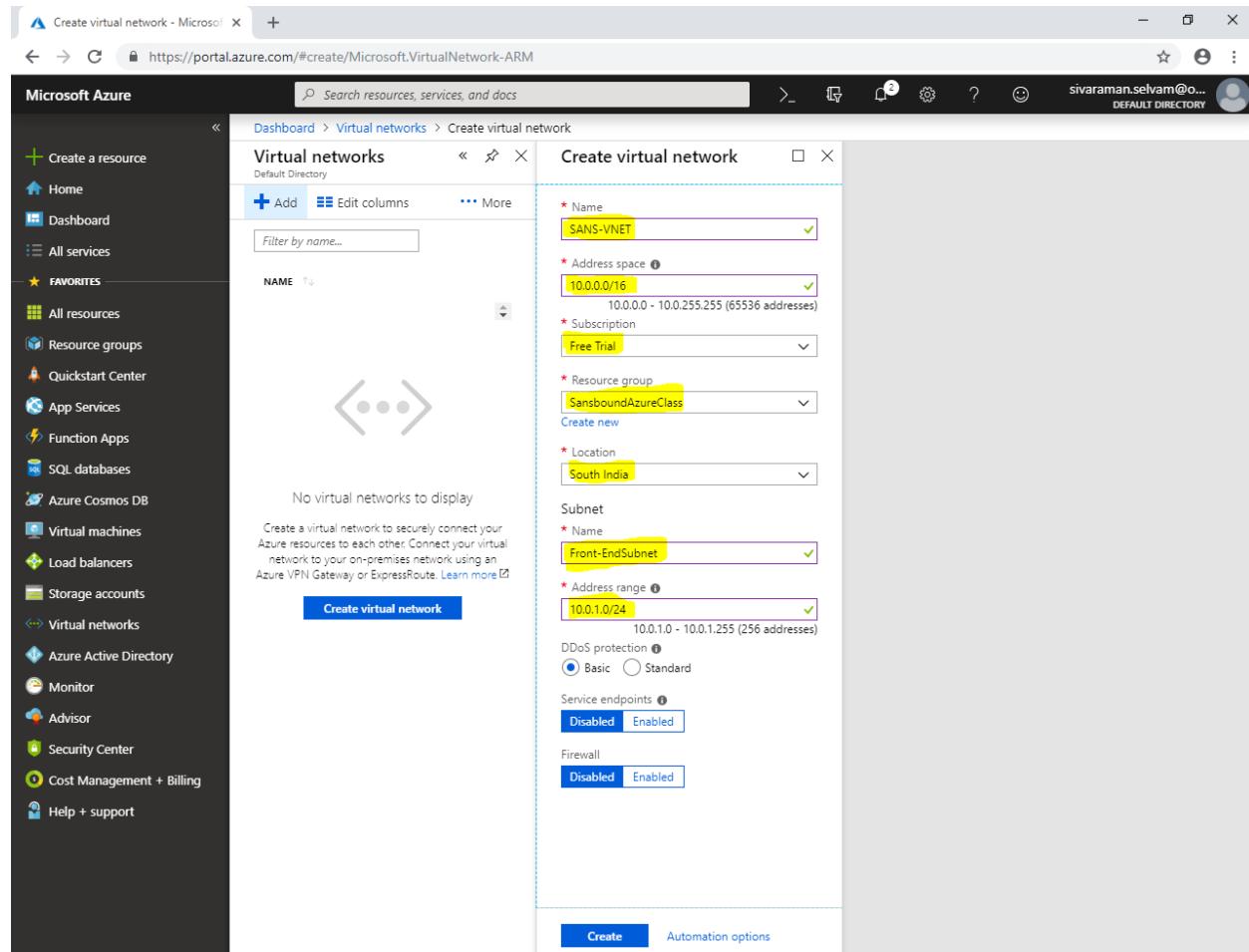
Select “Subscription” as “**Free Trial**”.

Select “Resource Group” as “**SansboundAzureClass**”.

Select “Location” as “**South India**”.

In “Subnet” type “Subnet name” as “**Front-EndSubnet**”

Type “Address range” as **10.0.1.0/24**.

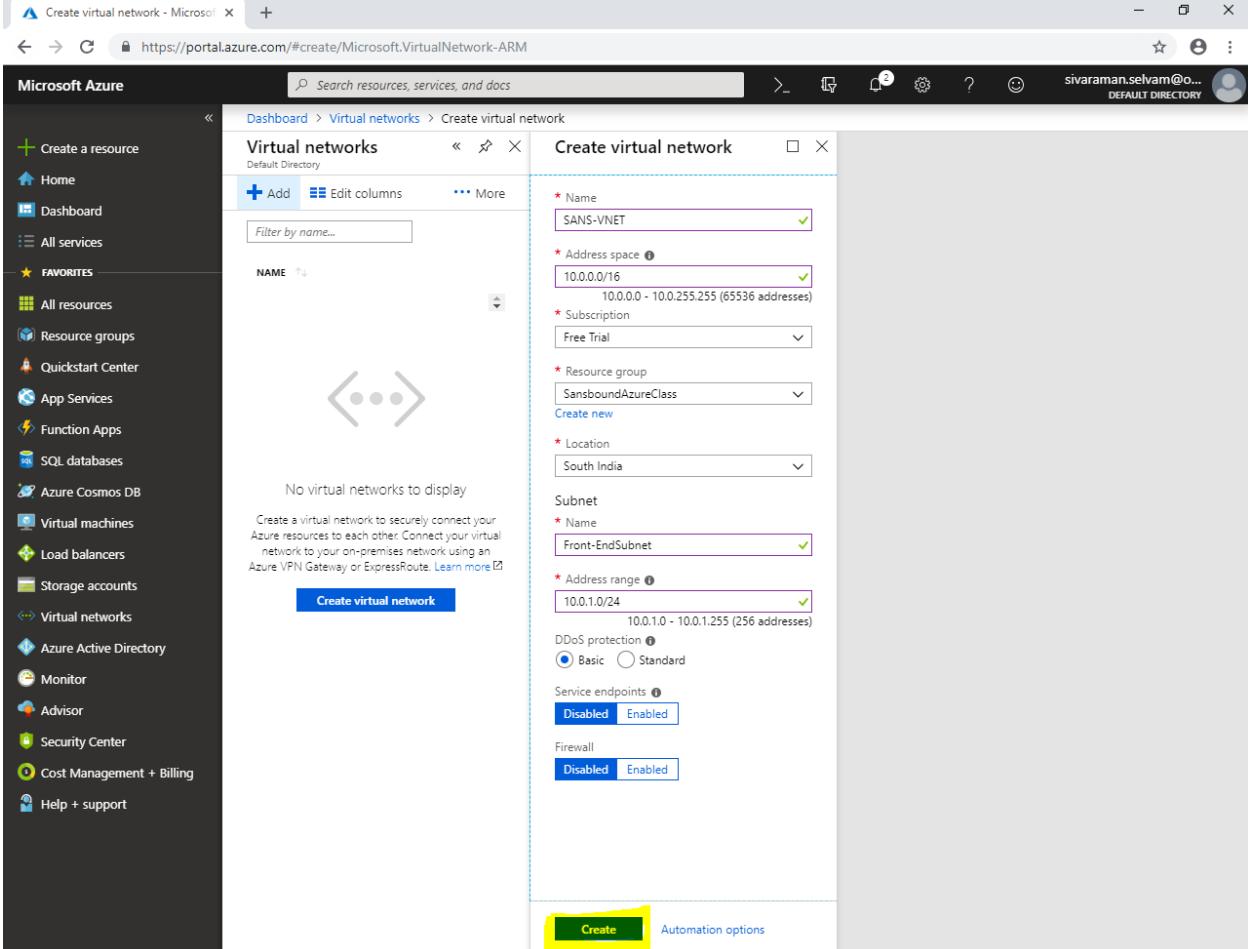


The screenshot shows the Microsoft Azure portal interface for creating a new virtual network. The left sidebar contains navigation links for creating resources, home, dashboard, and various services like App Services, Function Apps, and SQL databases. The main area displays the 'Virtual networks' blade, which lists existing virtual networks and provides a 'Create virtual network' wizard. The 'Create virtual network' dialog is open, prompting for configuration details:

- Name:** SANS-VNET
- Address space:** 10.0.0.0/16 (10.0.0.0 - 10.0.255.255, 65536 addresses)
- Subscription:** Free Trial
- Resource group:** SansboundAzureClass
- Location:** South India
- Subnet:** Front-EndSubnet
- Address range:** 10.0.1.0/24 (10.0.1.0 - 10.0.1.255, 256 addresses)
- DDoS protection:** Basic (radio button selected)
- Service endpoints:** Disabled
- Firewall:** Disabled

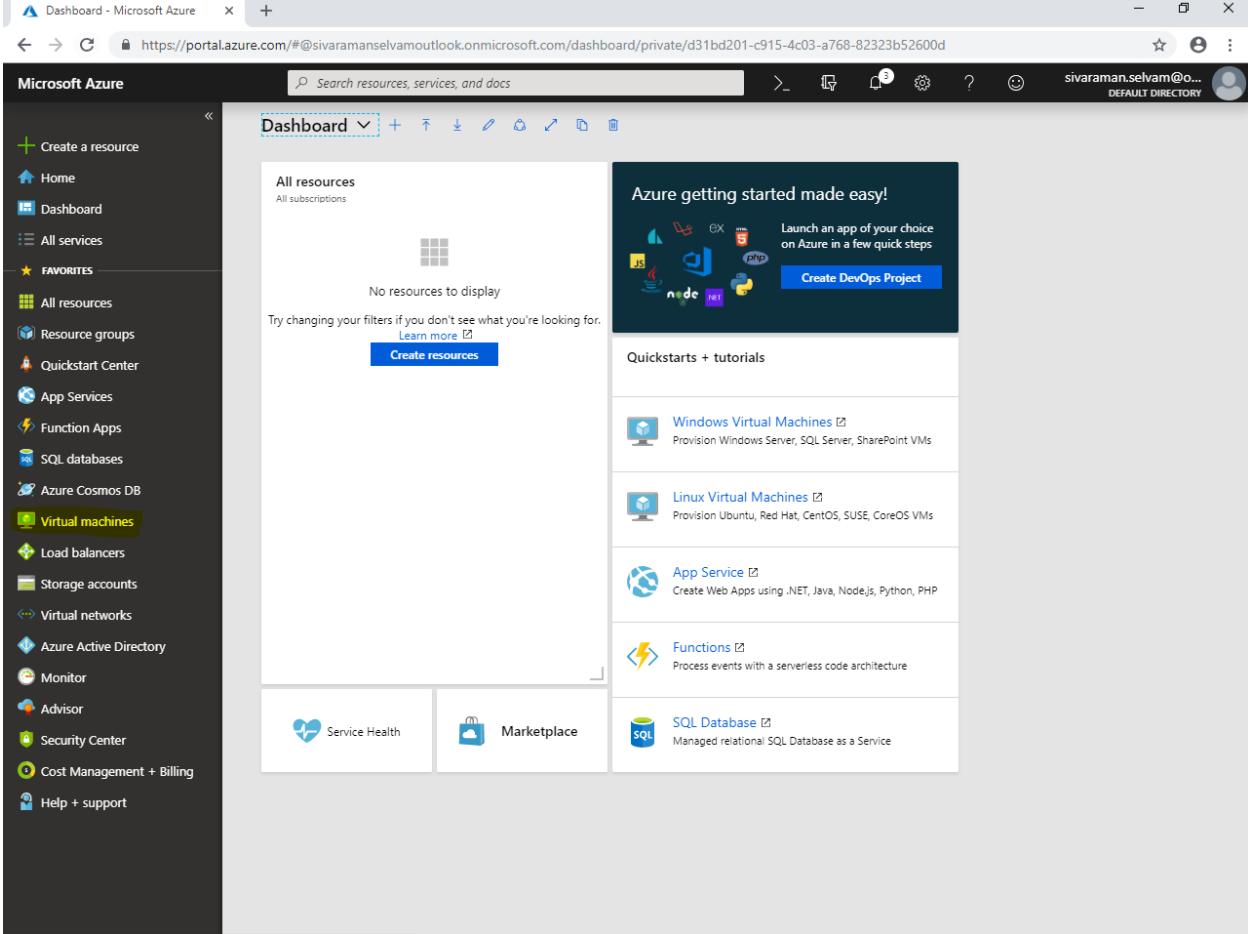
At the bottom of the dialog are 'Create' and 'Automation options' buttons.

Click “Create”.



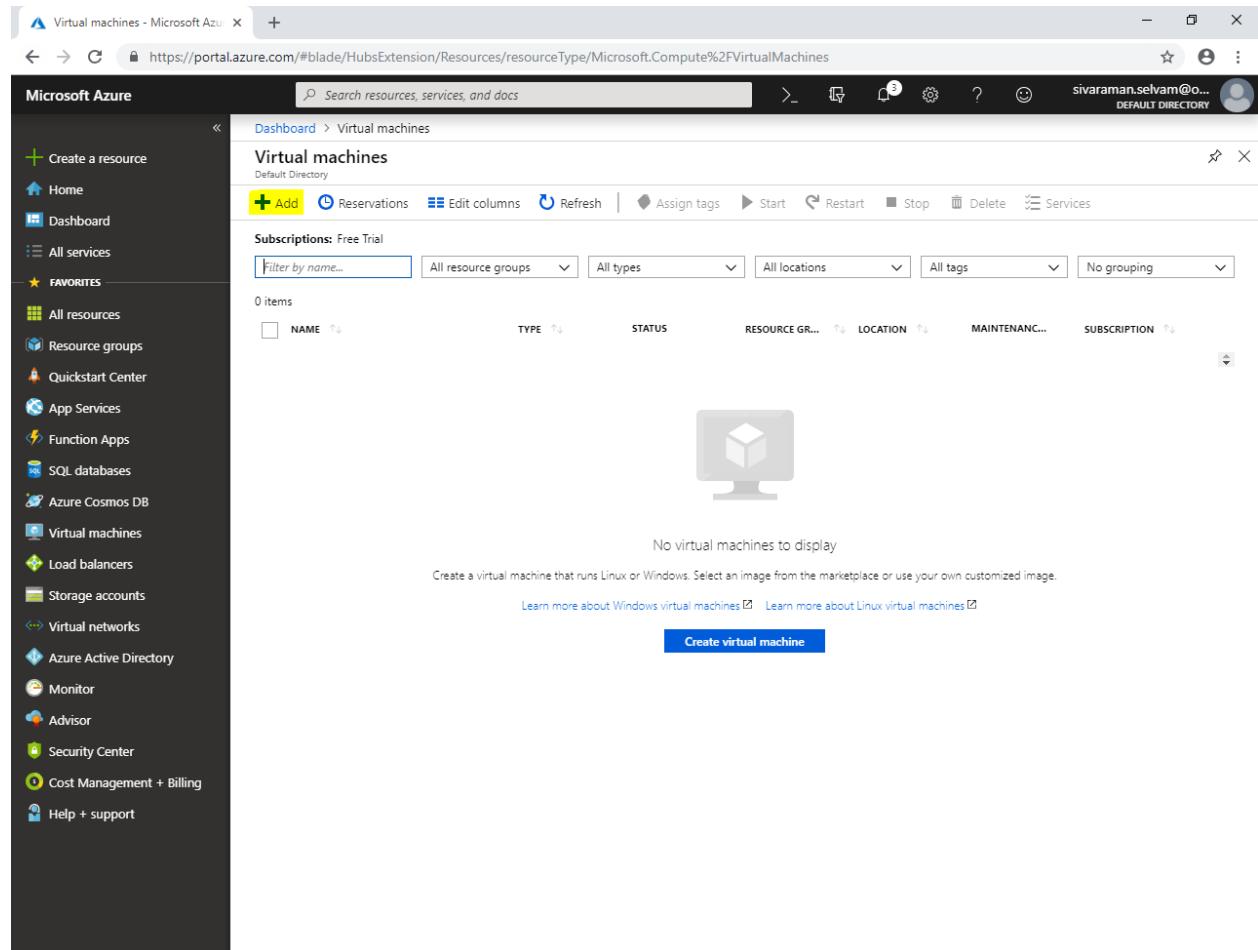
The screenshot shows the Microsoft Azure portal interface for creating a virtual network. The left sidebar contains various service icons, and the main area is titled "Create virtual network". The "Name" field is filled with "SANS-VNET". The "Address space" is set to "10.0.0/16". The "Subscription" is "Free Trial", and the "Resource group" is "SansboundAzureClass". The "Location" is "South India". Under "Subnet", the "Name" is "Front-EndSubnet" and the "Address range" is "10.0.1.0/24". The "DDoS protection" option is set to "Basic". The "Service endpoints" and "Firewall" options are both set to "Enabled". At the bottom left of the form, there is a large green "Create" button, which is highlighted with a yellow box.

Click “Virtual machines”.



The screenshot shows the Microsoft Azure dashboard. On the left, there is a sidebar with various service icons and links. Under the 'FAVORITES' section, the 'Virtual machines' link is highlighted with a yellow background. The main central area displays a 'Dashboard' view with sections for 'All resources' (showing 'No resources to display'), 'Azure getting started made easy!' (with options for Windows and Linux Virtual Machines, App Service, Functions, and SQL Database), and 'Quickstarts + tutorials' (listing Windows Virtual Machines, Linux Virtual Machines, App Service, Functions, and SQL Database). At the bottom of the dashboard, there are 'Service Health' and 'Marketplace' buttons.

Click "Add".



The screenshot shows the Microsoft Azure portal interface for managing virtual machines. The left sidebar contains a navigation menu with various service icons. The main content area is titled 'Virtual machines' under 'Dashboard > Virtual machines'. At the top of this section, there is a toolbar with buttons for '+ Add', 'Reservations', 'Edit columns', 'Refresh', 'Assign tags', 'Start', 'Restart', 'Stop', 'Delete', and 'Services'. Below the toolbar, a search bar says 'Search resources, services, and docs'. A message indicates 'Subscriptions: Free Trial'. The main table header includes columns for NAME, TYPE, STATUS, RESOURCE GR..., LOCATION, MAINTENANC..., and SUBSCRIPTION. A large message in the center states 'No virtual machines to display' with a link to 'Create a virtual machine'.

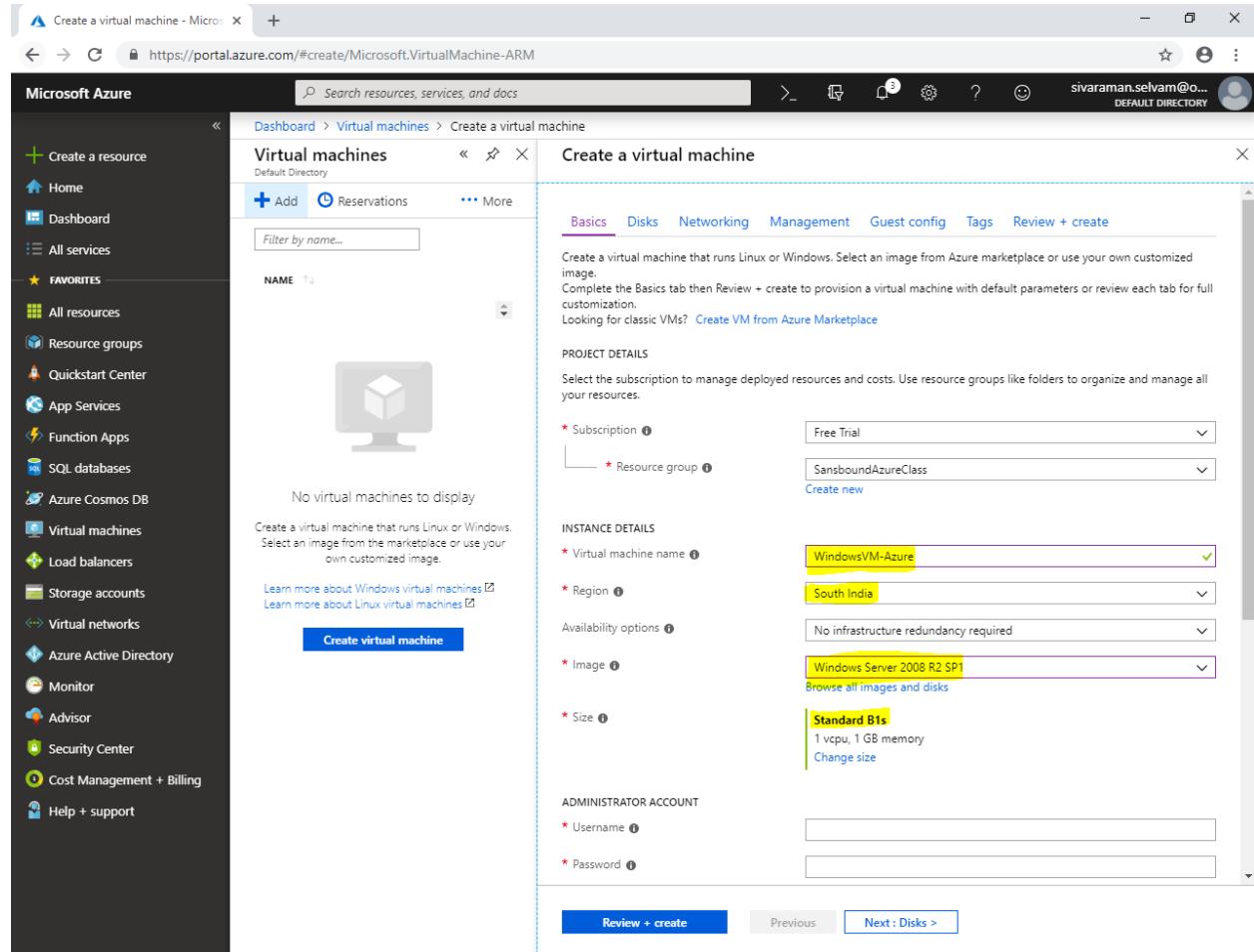
While create a virtual machine,

Type “Virtual machine” name as “WindowsVM-Azure”.

Select “Region” as “South India”.

Select “Image” as “Windows Server 2008 R2”.

Change “VM Size” as “Standard B1s”.

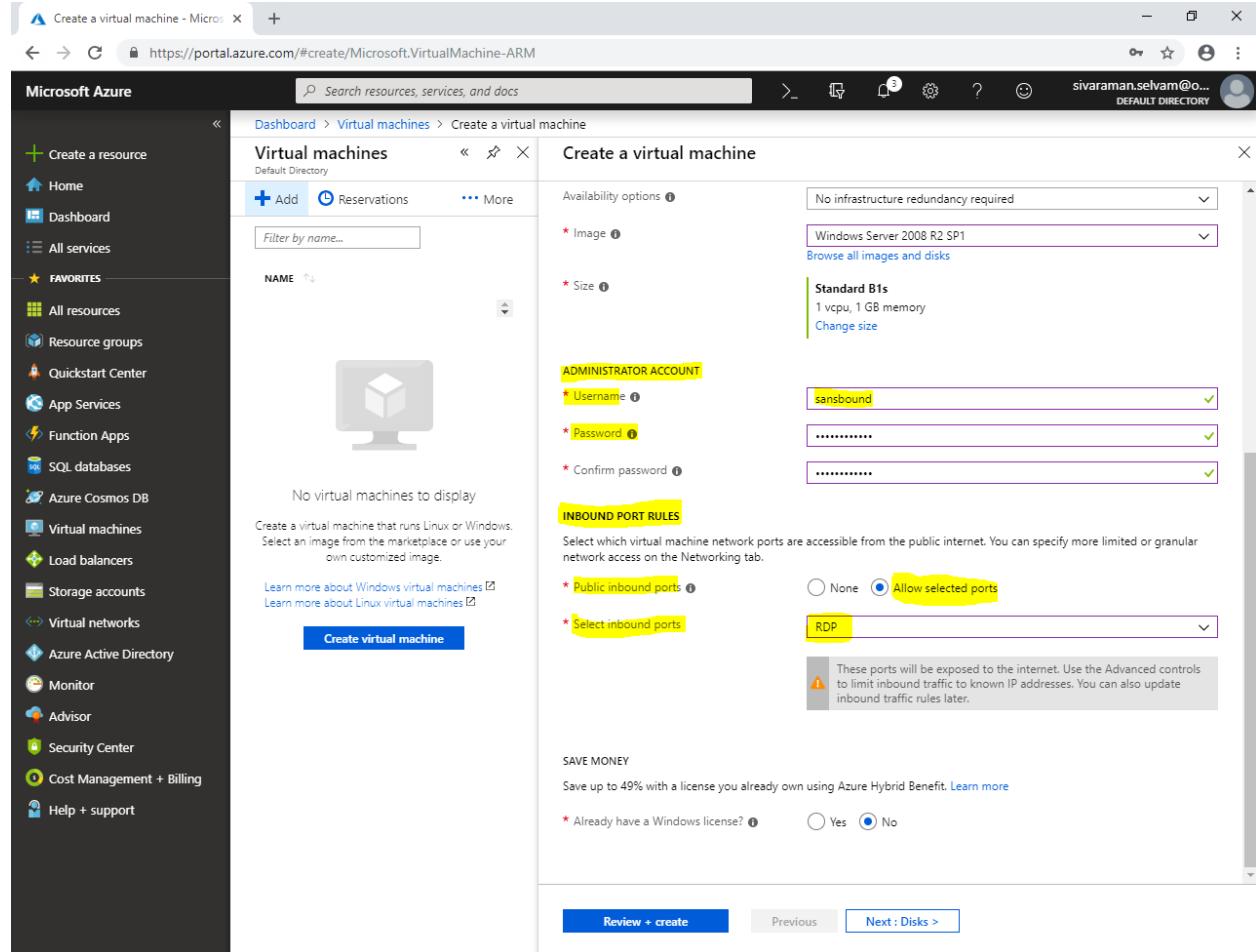


The screenshot shows the Microsoft Azure portal interface for creating a new virtual machine. The left sidebar displays various service options like Home, Dashboard, and Virtual machines. The main area shows a list of existing virtual machines and provides instructions for creating a new one. The 'Create a virtual machine' wizard is open, specifically on the 'Basics' tab. Key configuration details are highlighted:

- Virtual machine name:** WindowsVM-Azure
- Region:** South India
- Image:** Windows Server 2008 R2 SP1
- Size:** Standard B1s (1 vcpu, 1 GB memory)
- Subscription:** Free Trial
- Resource group:** SansboundAzureClass
- Administrator account:** Both Username and Password fields are empty.

In “Administrator Account”

In “Username” type “**sansbound**”, and type password as per your wish.

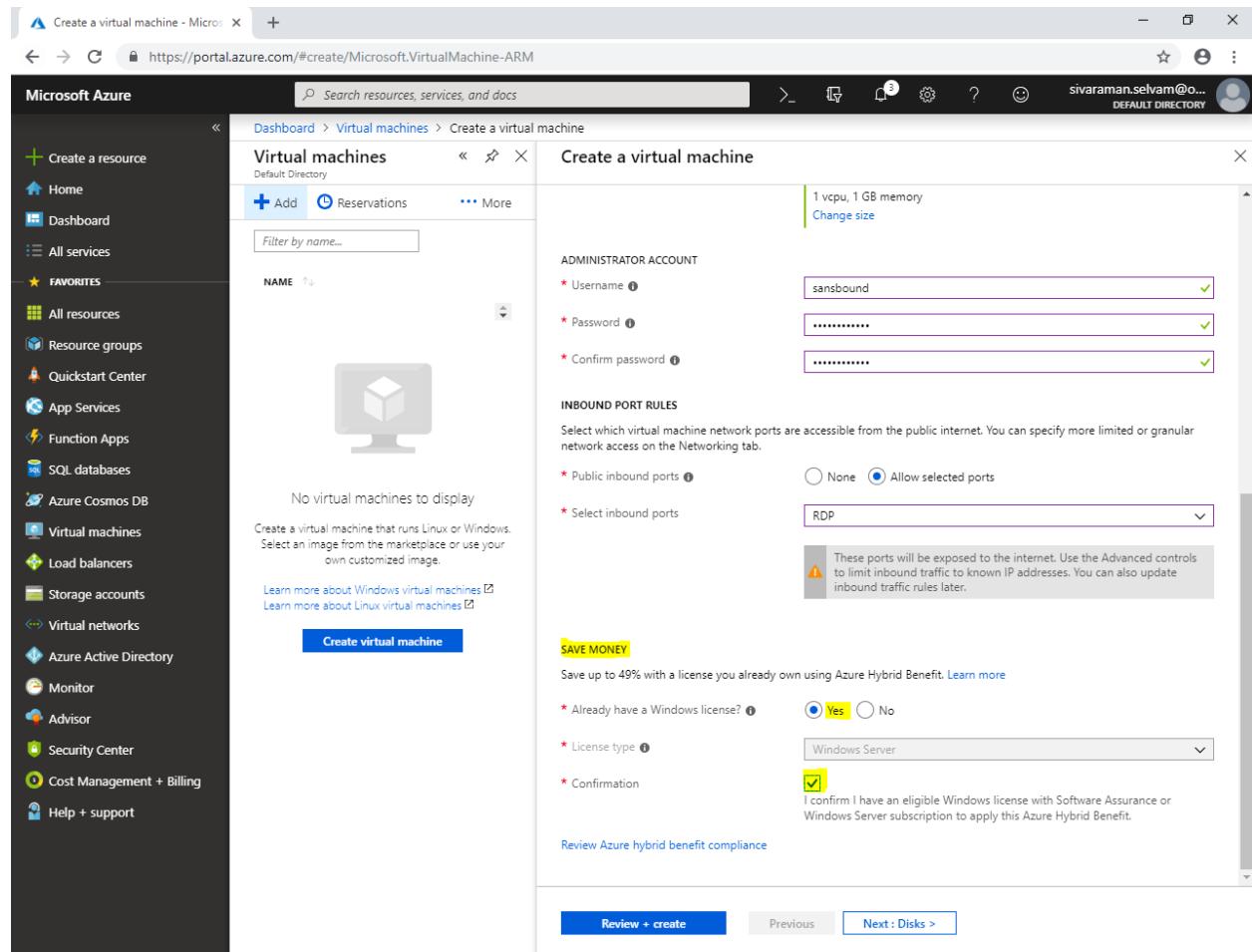


The screenshot shows the Microsoft Azure portal interface for creating a new virtual machine. The left sidebar lists various services like Home, Dashboard, and Virtual machines. The main area is titled 'Create a virtual machine' under 'Virtual machines'. The 'Administrator Account' section is highlighted with yellow boxes. The 'Username' field contains 'sansbound'. The 'Password' field shows three dots. The 'Select inbound ports' dropdown is set to 'RDP'. Other visible settings include 'Image' (Windows Server 2008 R2 SP1), 'Size' (Standard B1s), and 'Inbound Port Rules' (Allow selected ports).

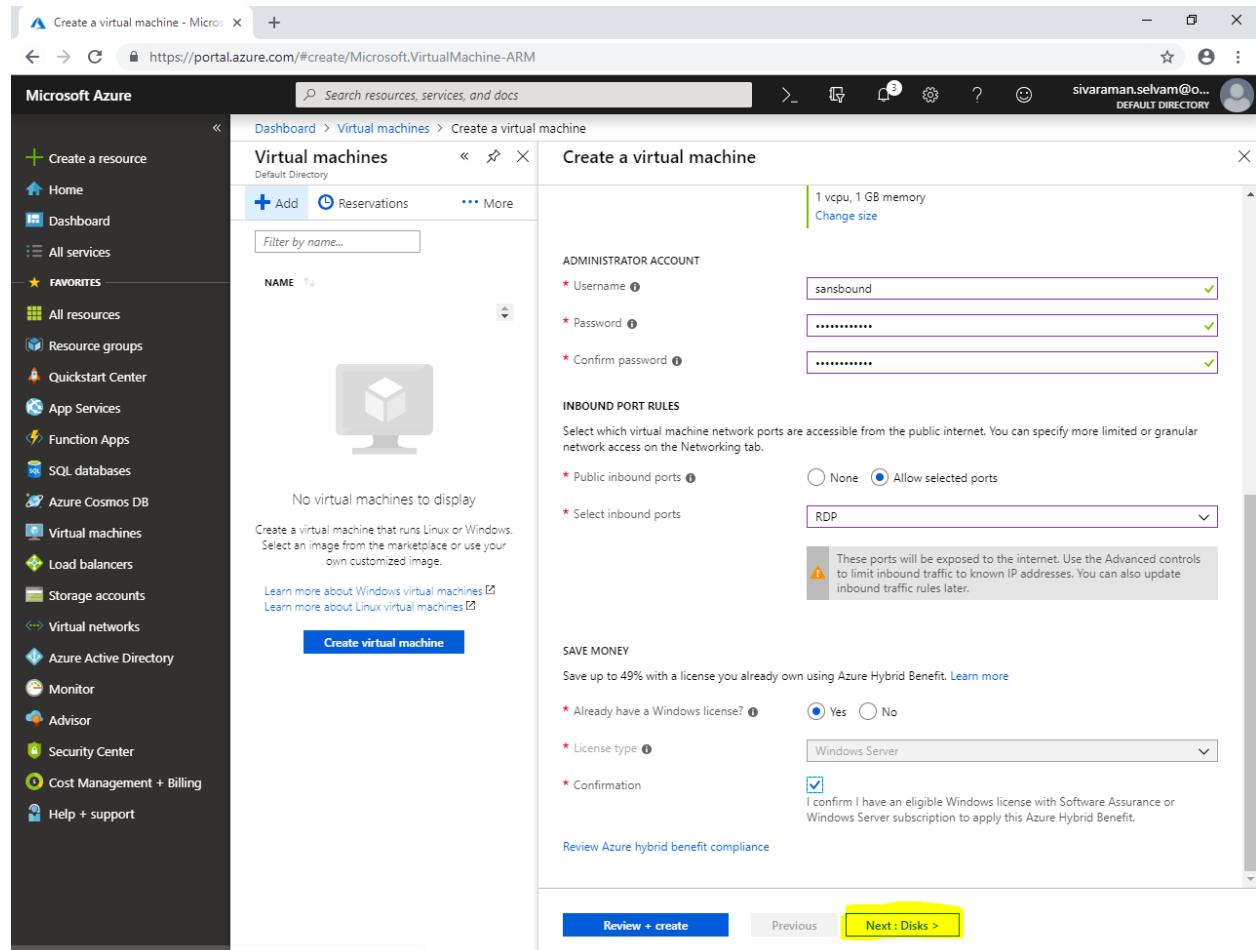
In “Save Money”.

Click “Yes” for Already have a Windows license.

Need to check “Confirmation” box.



Click “Next : Disks >”.



The screenshot shows the Microsoft Azure portal interface for creating a new virtual machine. The left sidebar contains various service links like Home, Dashboard, and Resource groups. The main area is titled 'Create a virtual machine' under 'Virtual machines'. It shows a summary of resources: 1 vcpu, 1 GB memory. The configuration section includes:

- ADMINISTRATOR ACCOUNT:** Username: sansbound, Password: (redacted), Confirm password: (redacted)
- INBOUND PORT RULES:** Public inbound ports: Allow selected ports (RDP selected)
- SAVE MONEY:** Already have a Windows license? Yes (selected), License type: Windows Server, Confirmation checkbox checked (I confirm I have an eligible Windows license with Software Assurance or Windows Server subscription to apply this Azure Hybrid Benefit).

At the bottom, there are 'Review + create' and 'Previous' buttons, and the 'Next : Disks >' button is highlighted with a yellow box.

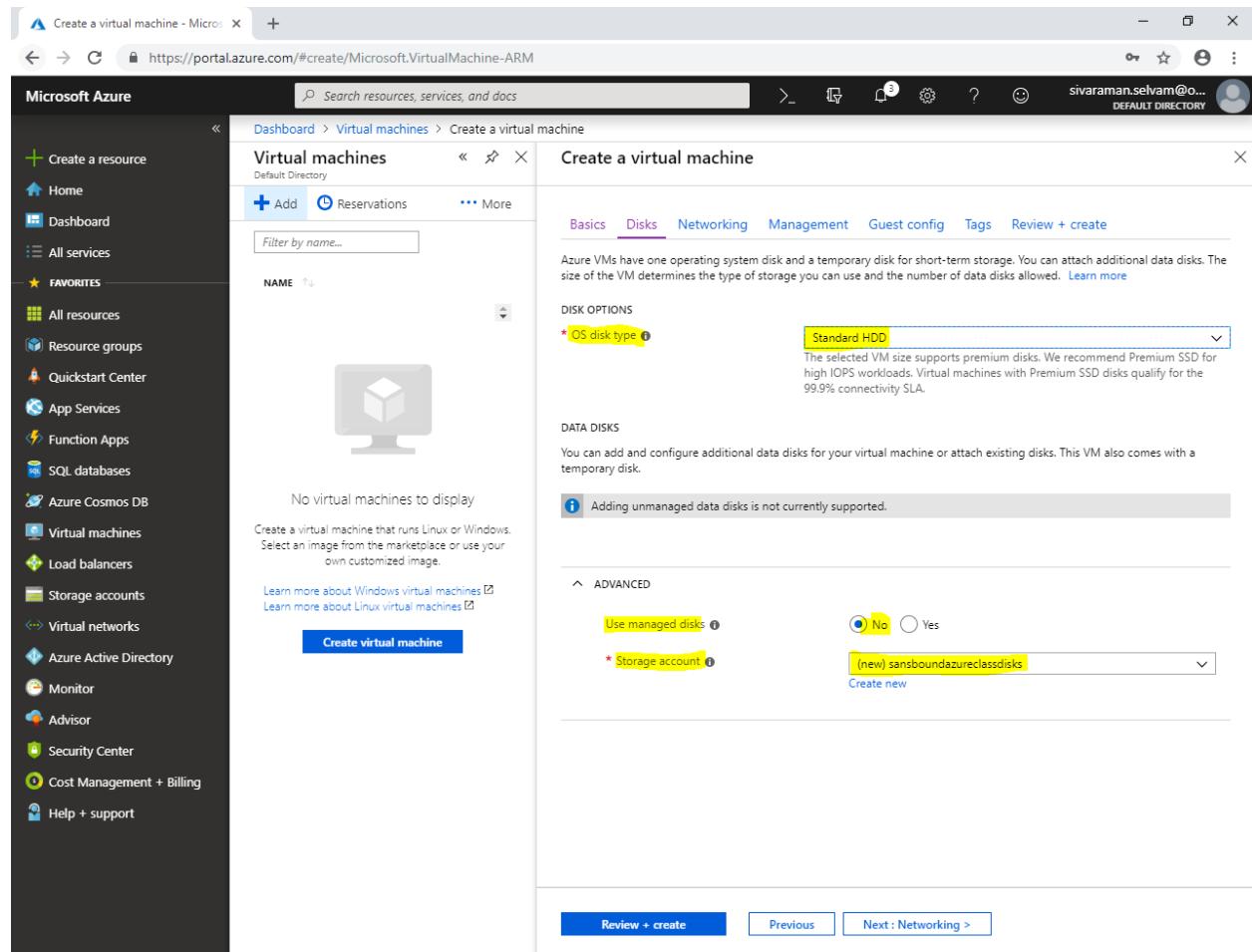
In “Disks”.

Select “OS disk type” as “Standard HDD”.

Expand “Advanced”.

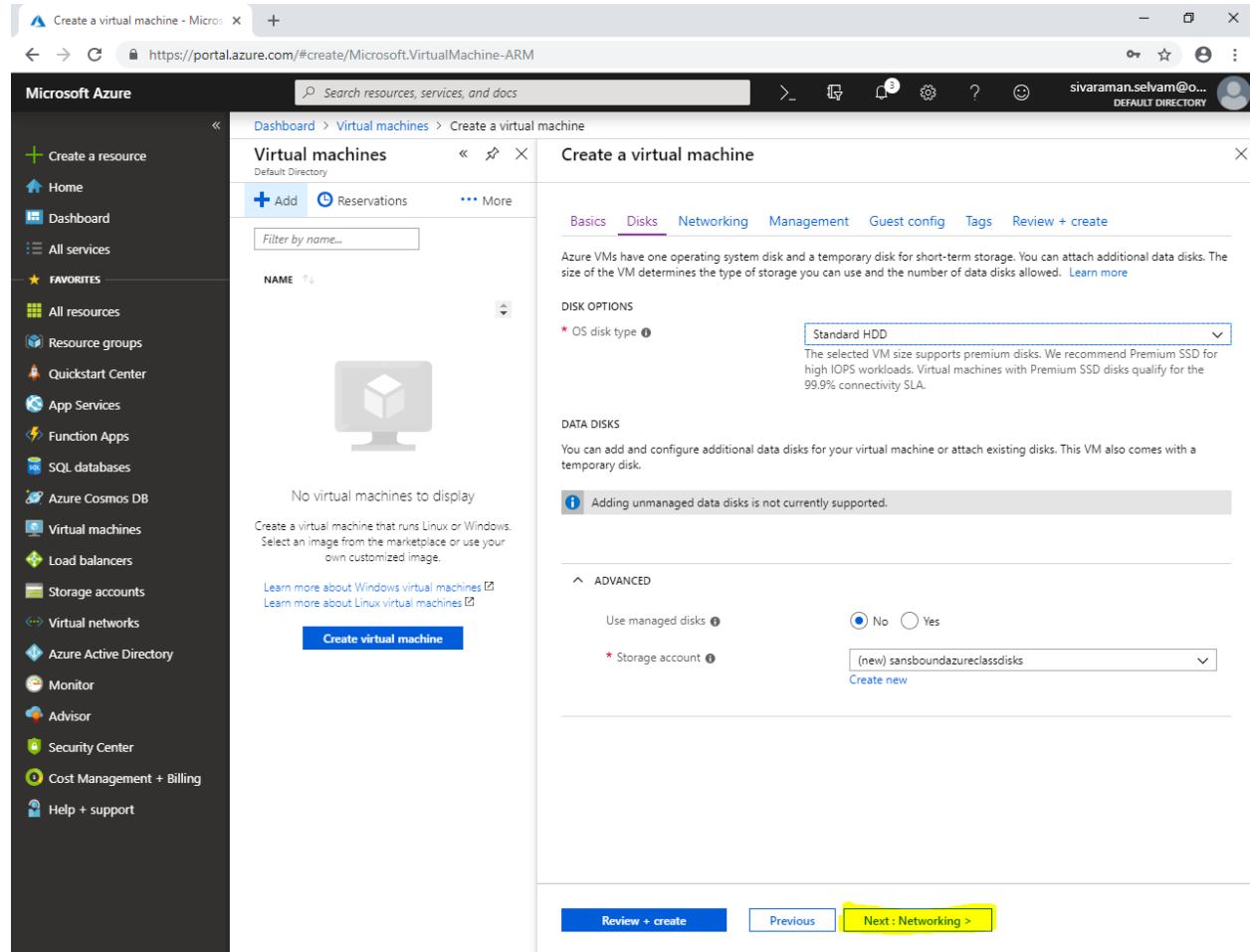
Set Use managed disks as “No”.

Leave Storage account as default.



The screenshot shows the Microsoft Azure portal interface for creating a new virtual machine. The left sidebar contains a navigation menu with various services like Home, Dashboard, All services, and Favorites. The main area is titled 'Create a virtual machine' under 'Virtual machines'. The 'Disks' tab is currently selected. In the 'DISK OPTIONS' section, the 'OS disk type' dropdown is set to 'Standard HDD'. Below it, a note states: 'The selected VM size supports premium disks. We recommend Premium SSD for high IOPS workloads. Virtual machines with Premium SSD disks qualify for the 99.9% connectivity SLA.' In the 'DATA DISKS' section, there is a note: 'Adding unmanaged data disks is not currently supported.' Under the 'ADVANCED' section, the 'Use managed disk:' radio button is selected 'No', and the 'Storage account:' dropdown is set to '(new) sansboundazureclassdisks'. At the bottom, there are buttons for 'Review + create', 'Previous', and 'Next : Networking >'.

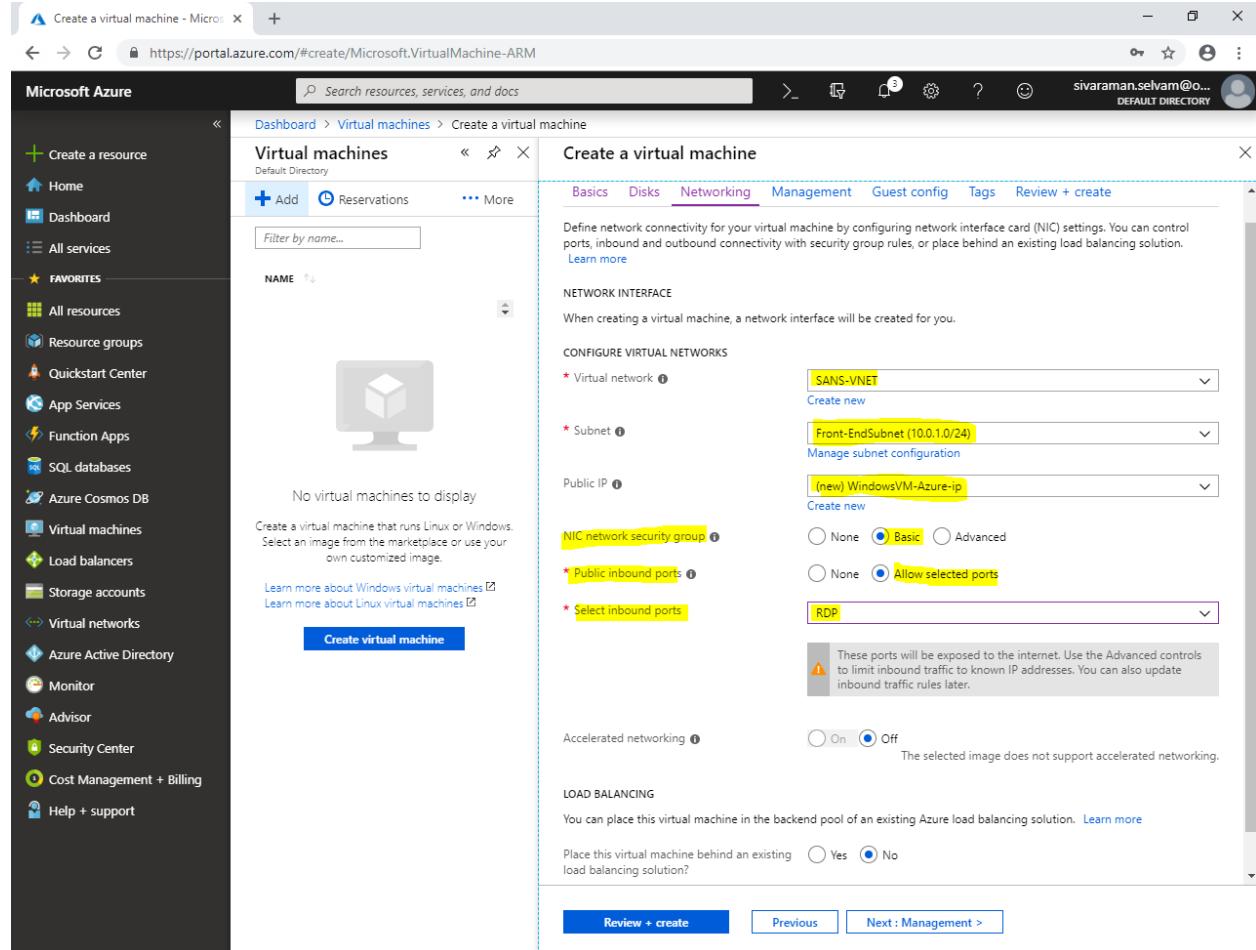
Click “Next : Networking”.



The screenshot shows the Microsoft Azure portal interface for creating a new virtual machine. The left sidebar contains a navigation menu with various services like Home, Dashboard, All services, and Favorites. The main area is titled 'Virtual machines' and shows the 'Create a virtual machine' wizard. The 'Networking' tab is selected. The 'Disk Options' section shows 'Standard HDD' selected for the OS disk type. The 'Data Disks' section notes that adding unmanaged data disks is not currently supported. In the 'Advanced' section, 'Use managed disks' is set to 'No'. A storage account dropdown is shown with '(new) sansboundazureclassdisks' selected. At the bottom, there are buttons for 'Review + create', 'Previous', and 'Next: Networking >' (which is highlighted with a yellow box).

In “Networking”.

Ensure the highlighted options as below.



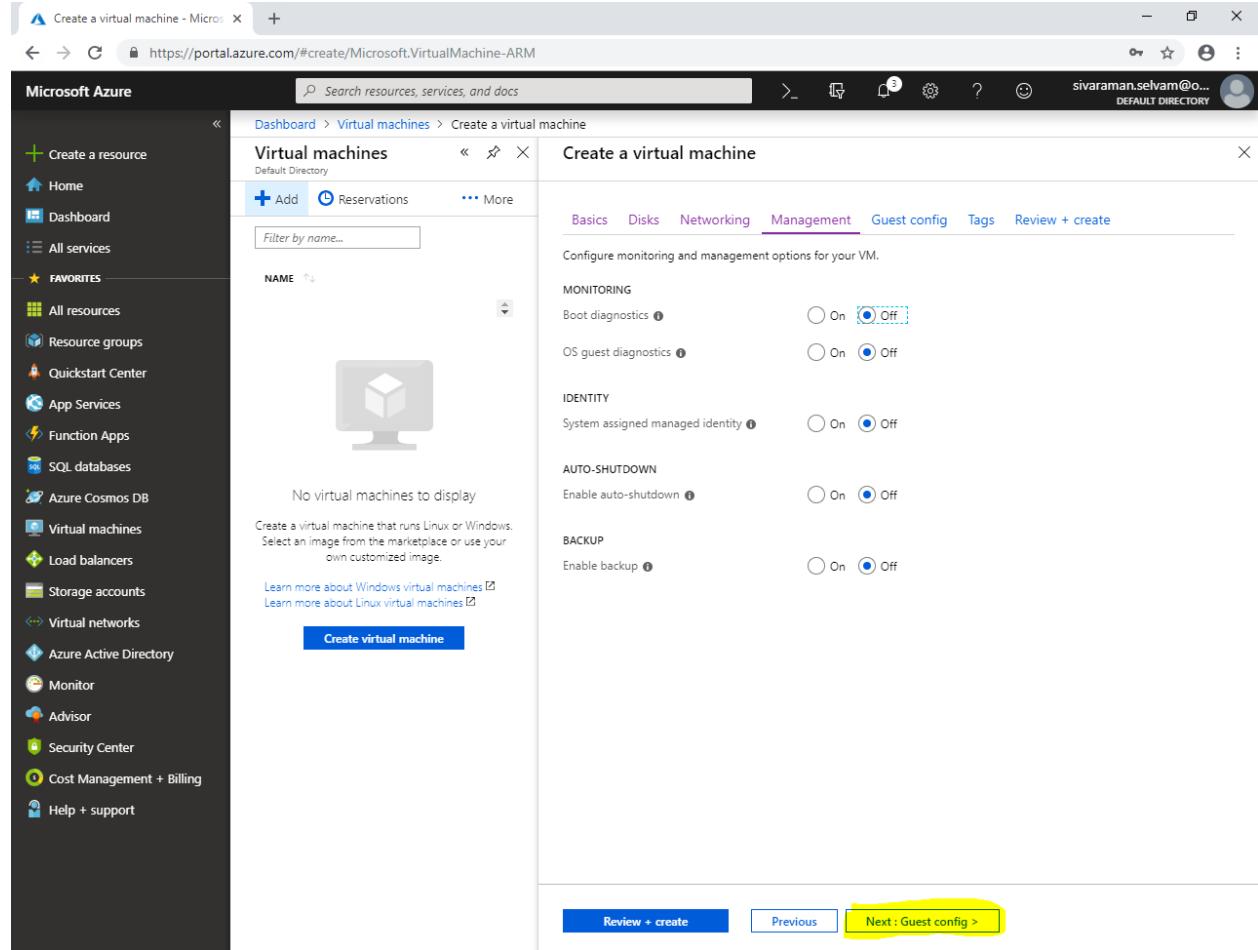
The screenshot shows the 'Create a virtual machine' wizard in the Microsoft Azure portal. The 'Networking' tab is selected. Key configuration settings are highlighted:

- Virtual network:** SANS-VNET (selected)
- Subnet:** Front-EndSubnet (10.0.1.0/24) (selected)
- Public IP:** (new) WindowsVM-Azure-ip (selected)
- NIC network security group:** (highlighted)
- Public inbound ports:** Allow selected ports (selected)
- Select inbound ports:** RDP (selected)
- Accelerated networking:** Off (selected)

The 'Networking' tab also includes a note about exposing ports to the internet and a warning about inbound traffic rules.

In “Management”.

Click “Next : Guest config>”.



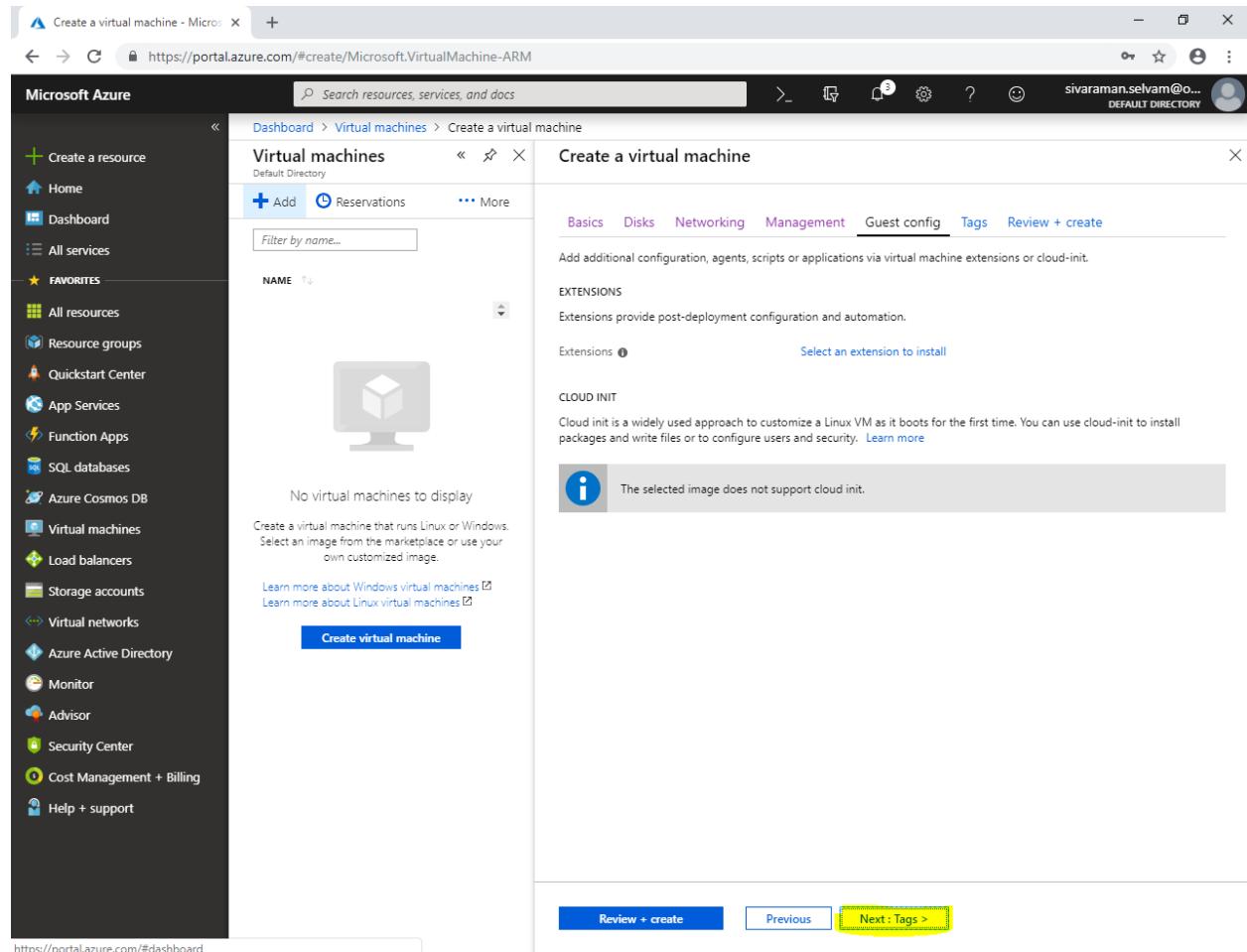
The screenshot shows the Microsoft Azure portal interface for creating a new virtual machine. The left sidebar contains various service icons under 'FAVORITES'. The main area is titled 'Virtual machines' and shows the 'Create a virtual machine' wizard. The current step is 'Guest config'. The configuration options include:

- MONITORING:** Boot diagnostics (radio button off), OS guest diagnostics (radio button on).
- IDENTITY:** System assigned managed identity (radio button off).
- AUTO-SHUTDOWN:** Enable auto-shutdown (radio button off).
- BACKUP:** Enable backup (radio button off).

At the bottom, there are buttons for 'Review + create', 'Previous', and 'Next : Guest config >' (the last one is highlighted with a yellow box).

In “Guest config”.

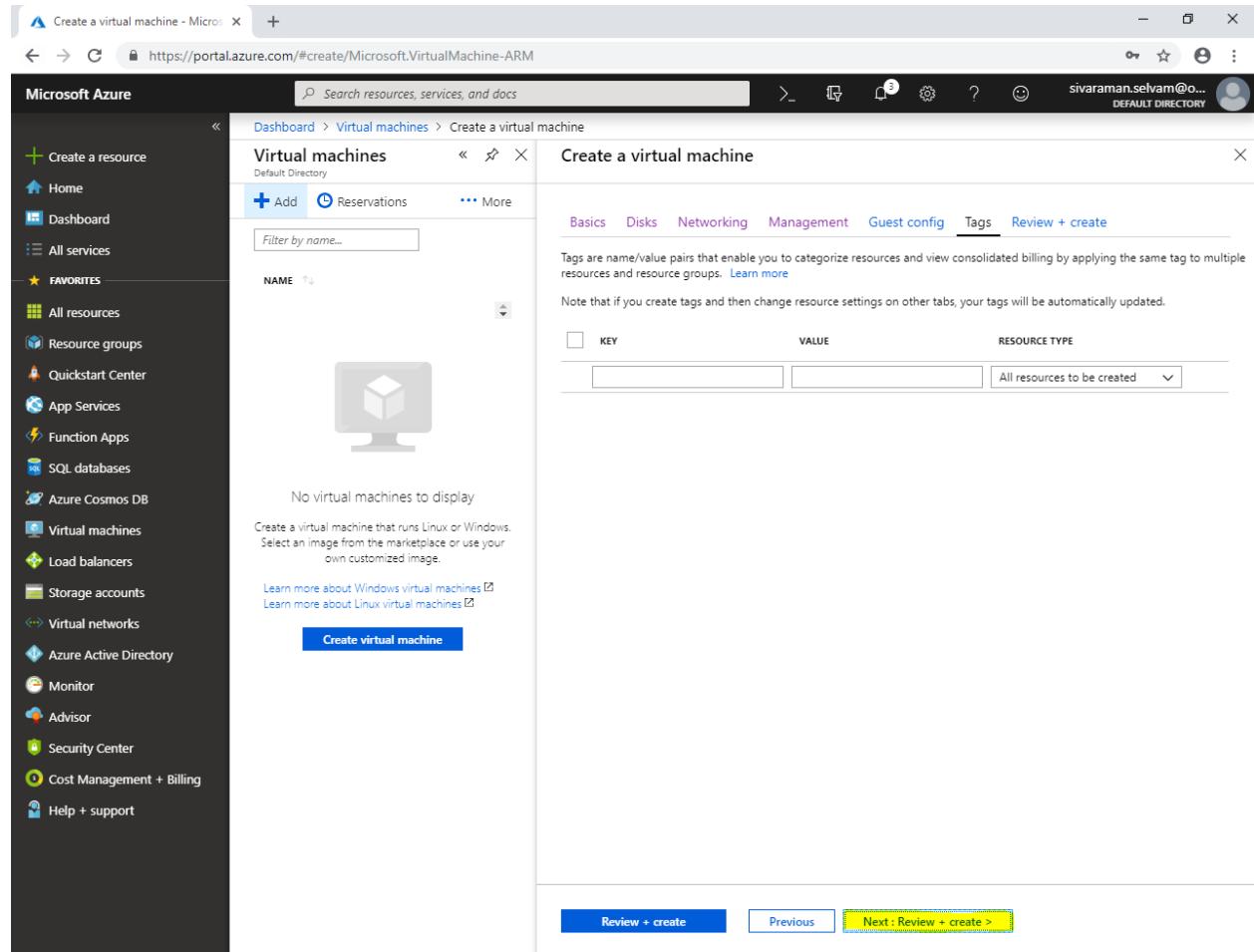
Click “Next : Tags >”.



The screenshot shows the Microsoft Azure portal interface for creating a new virtual machine. The left sidebar contains various service icons under 'FAVORITES'. The main area shows the 'Virtual machines' section with a 'Create a virtual machine' wizard. The 'Guest config' tab is currently selected. A note indicates that additional configuration, agents, scripts or applications can be added via virtual machine extensions or cloud-init. Under 'EXTENSIONS', there is a link to 'Select an extension to install'. Under 'CLOUD INIT', it notes that the selected image does not support cloud init. At the bottom, there are buttons for 'Review + create', 'Previous', and 'Next : Tags >'. The 'Next : Tags >' button is highlighted with a yellow box.

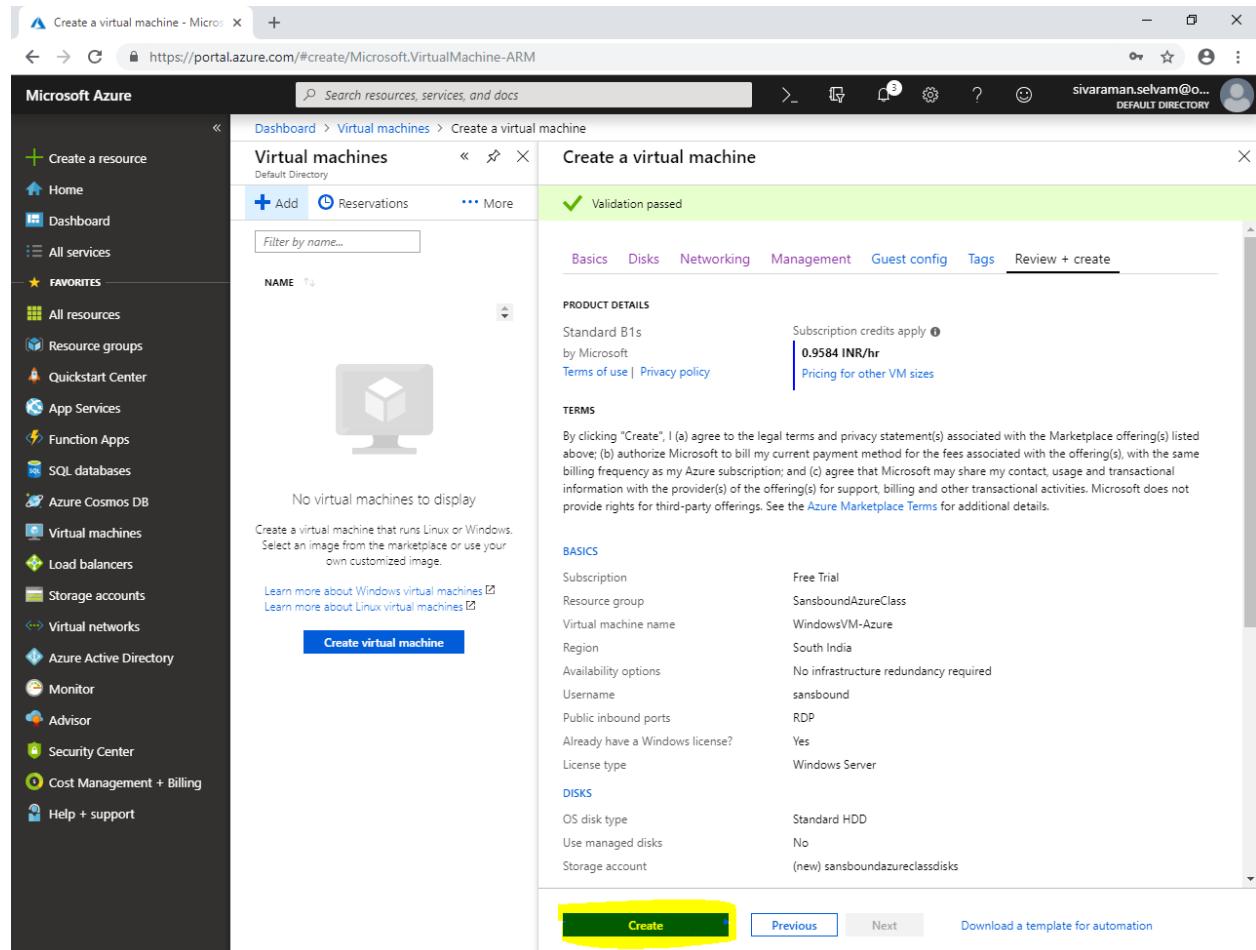
In “Tags”.

Click “Next : Review + create”.



The screenshot shows the Microsoft Azure portal interface for creating a virtual machine. The left sidebar contains a navigation menu with various services like Home, Dashboard, All services, Favorites, Resource groups, Quickstart Center, App Services, Function Apps, SQL databases, Azure Cosmos DB, Virtual machines, Load balancers, Storage accounts, Virtual networks, Azure Active Directory, Monitor, Advisor, Security Center, Cost Management + Billing, and Help + support. The main content area is titled "Create a virtual machine" and shows the "Virtual machines" section. A table under the "Tags" tab lists one tag: "KEY" is empty, "VALUE" is "All resources to be created", and "RESOURCE TYPE" is "All resources to be created". At the bottom, there are buttons for "Review + create", "Previous", and "Next : Review + create >".

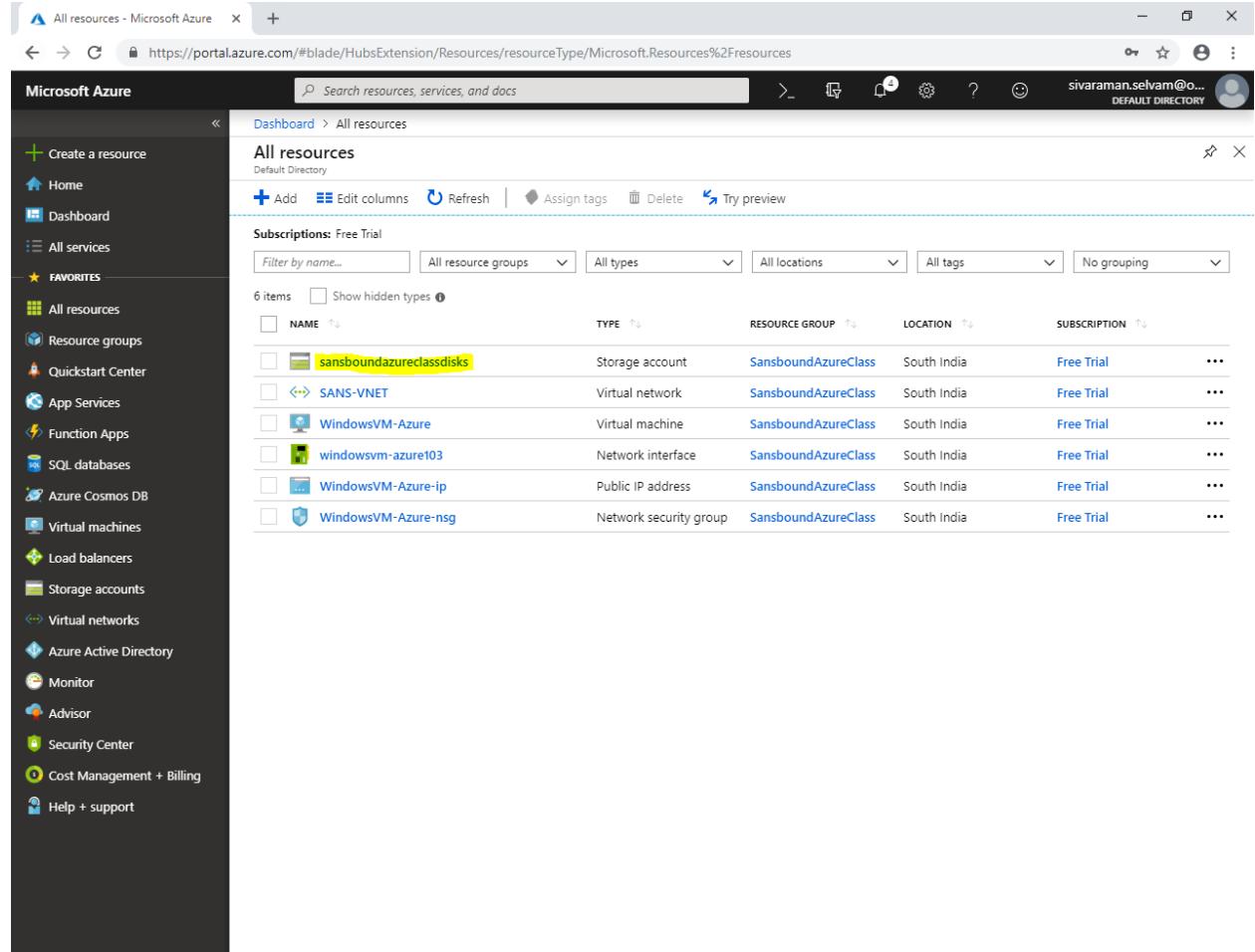
Click “Create”.



The screenshot shows the Microsoft Azure portal interface for creating a new virtual machine. The left sidebar contains various service links like Home, Dashboard, and Resource groups. The main area is titled 'Create a virtual machine' under 'Virtual machines'. A green banner at the top right says 'Validation passed'. Below it, tabs for Basics, Disks, Networking, Management, Guest config, Tags, and Review + create are visible. The 'Basics' tab is selected. Under 'PRODUCT DETAILS', it shows a Standard B1s VM size, a price of 0.9584 INR/hr, and links for Terms of use and Privacy policy. The 'TERMS' section contains legal text about agreeing to terms and conditions. The 'BASICS' section includes fields for Subscription (Free Trial), Resource group (SansboundAzureClass), Virtual machine name (WindowsVM-Azure), Region (South India), Availability options (No infrastructure redundancy required), Username (sansbound), Public inbound ports (RDP), Already have a Windows license? (Yes), and License type (Windows Server). The 'DISKS' section shows OS disk type (Standard HDD), Use managed disks (No), and Storage account ((new) sansboundazureclassdisks). At the bottom, a large yellow box highlights the 'Create' button, which is also highlighted with a yellow glow in the screenshot. Other buttons include 'Previous', 'Next', and 'Download a template for automation'.

In “All resources”.

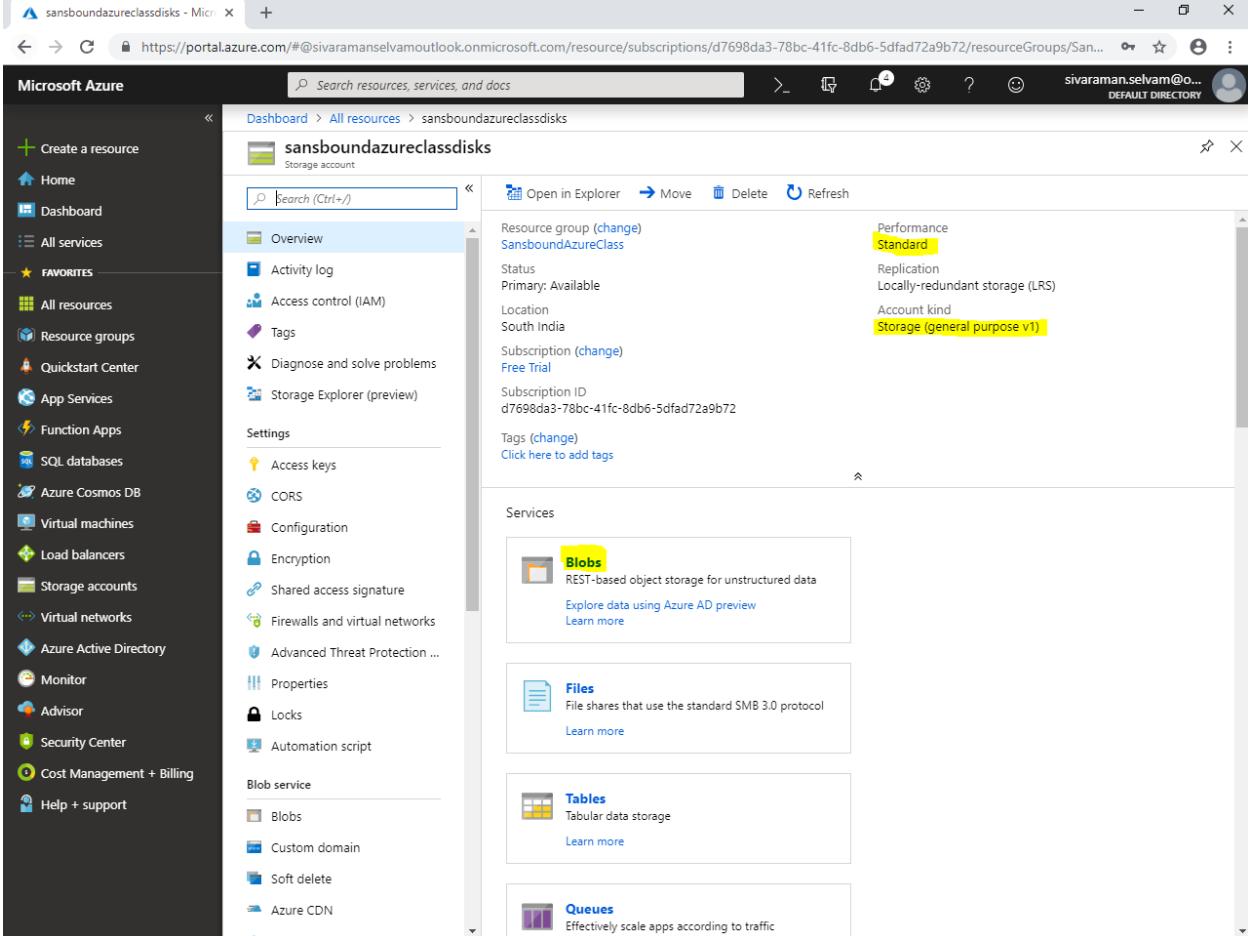
Click “sansboundazureclassdisks”.



The screenshot shows the Microsoft Azure portal's "All resources" blade. The left sidebar has a "FAVORITES" section with items like Home, Dashboard, All services, and All resources. The main area shows a table of resources with columns: NAME, TYPE, RESOURCE GROUP, LOCATION, and SUBSCRIPTION. One row, "sansboundazureclassdisks", is highlighted with a yellow box. The table data is as follows:

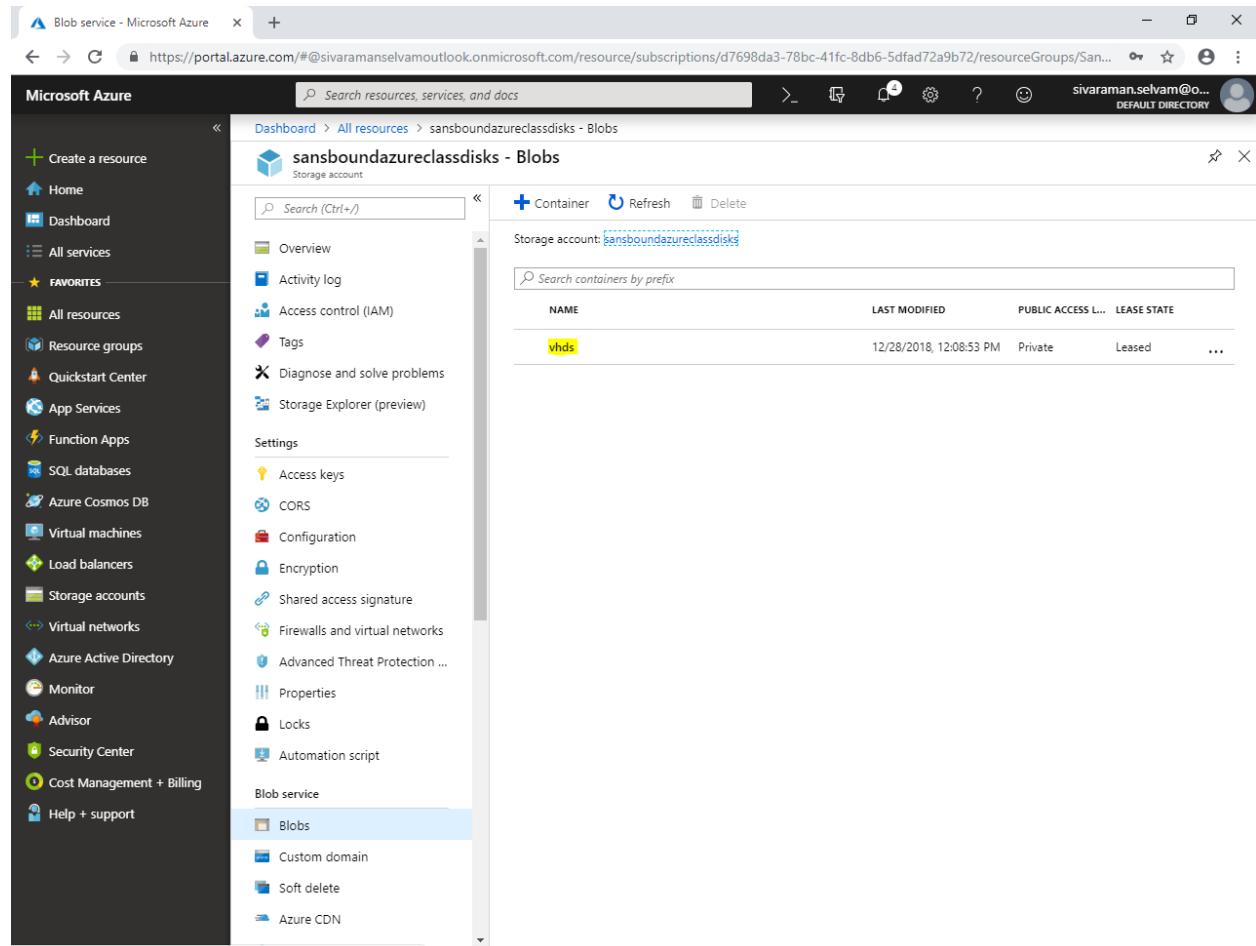
NAME	TYPE	RESOURCE GROUP	LOCATION	SUBSCRIPTION
sansboundazureclassdisks	Storage account	SansboundAzureClass	South India	Free Trial
SANS-VNET	Virtual network	SansboundAzureClass	South India	Free Trial
WindowsVM-Azure	Virtual machine	SansboundAzureClass	South India	Free Trial
windowsvm-azure103	Network interface	SansboundAzureClass	South India	Free Trial
WindowsVM-Azure-ip	Public IP address	SansboundAzureClass	South India	Free Trial
WindowsVM-Azure-nsg	Network security group	SansboundAzureClass	South India	Free Trial

Click “Blobs”.



The screenshot shows the Microsoft Azure portal interface. On the left, the navigation menu is visible with various services like Home, Dashboard, All services, and Favorites. Under Favorites, Storage accounts is selected. In the center, the 'sansboundazureclassdisks' storage account is displayed. The 'Overview' tab is selected. On the right, detailed information about the storage account is shown, including its performance level (Standard), replication type (Locally-redundant storage (LRS)), and account kind (Storage (general purpose v1)). Below this, there are sections for Services, each with a thumbnail icon and a brief description. The 'Blobs' service is highlighted with a yellow box. Other services listed are Files, Tables, and Queues.

Click “vhds”.

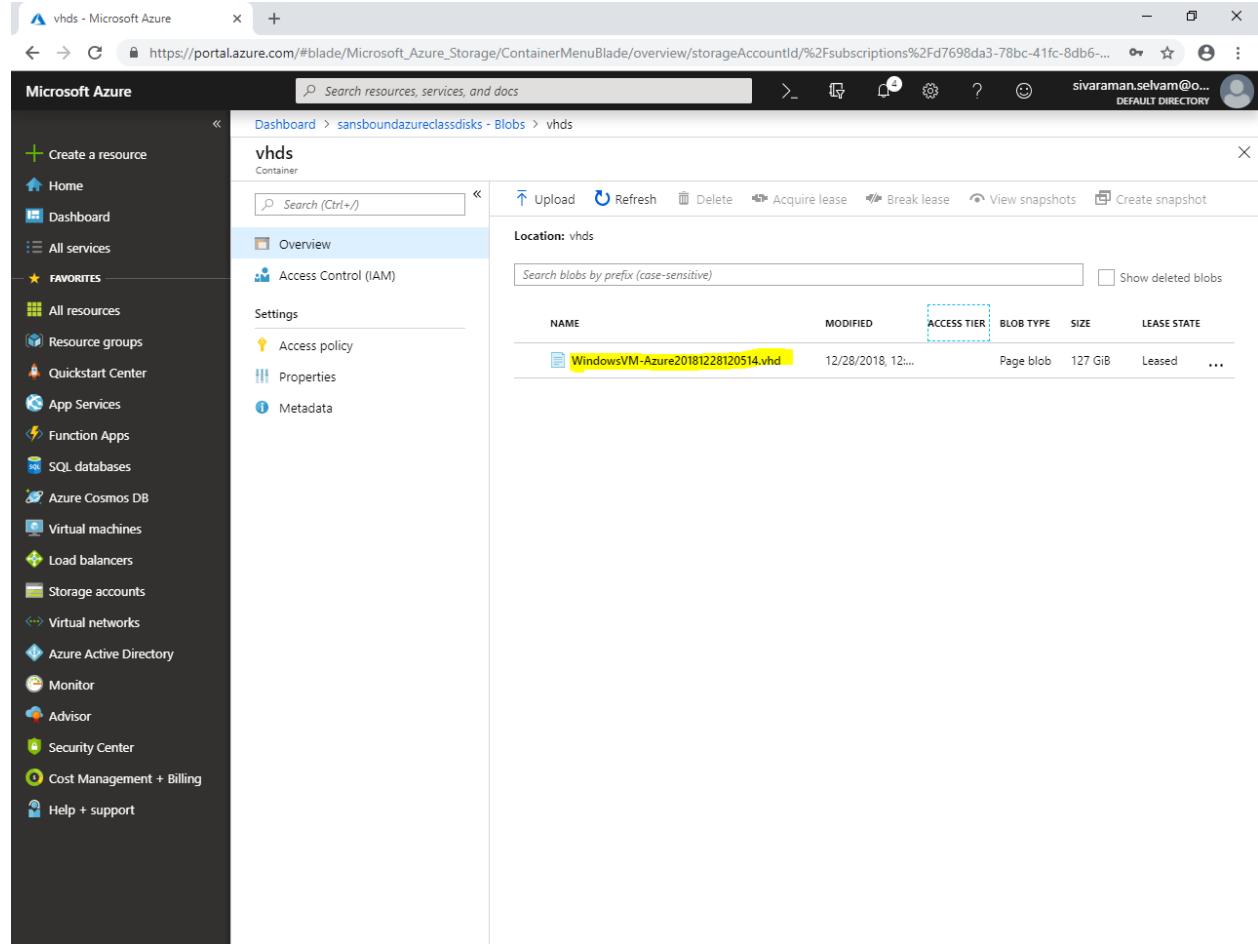


The screenshot shows the Microsoft Azure portal interface for a storage account named "sansboundazureclassdisks". The left sidebar is filled with various service icons under the "FAVORITES" section. The main content area displays the "Blobs" section of the storage account. A table lists a single container named "vhds".

NAME	LAST MODIFIED	PUBLIC ACCESS L...	LEASE STATE
vhds	12/28/2018, 12:08:53 PM	Private	Leased

In "vhds"

You are able to see "**WindowsVM-Azure*.vhdx**" which contains operating system.



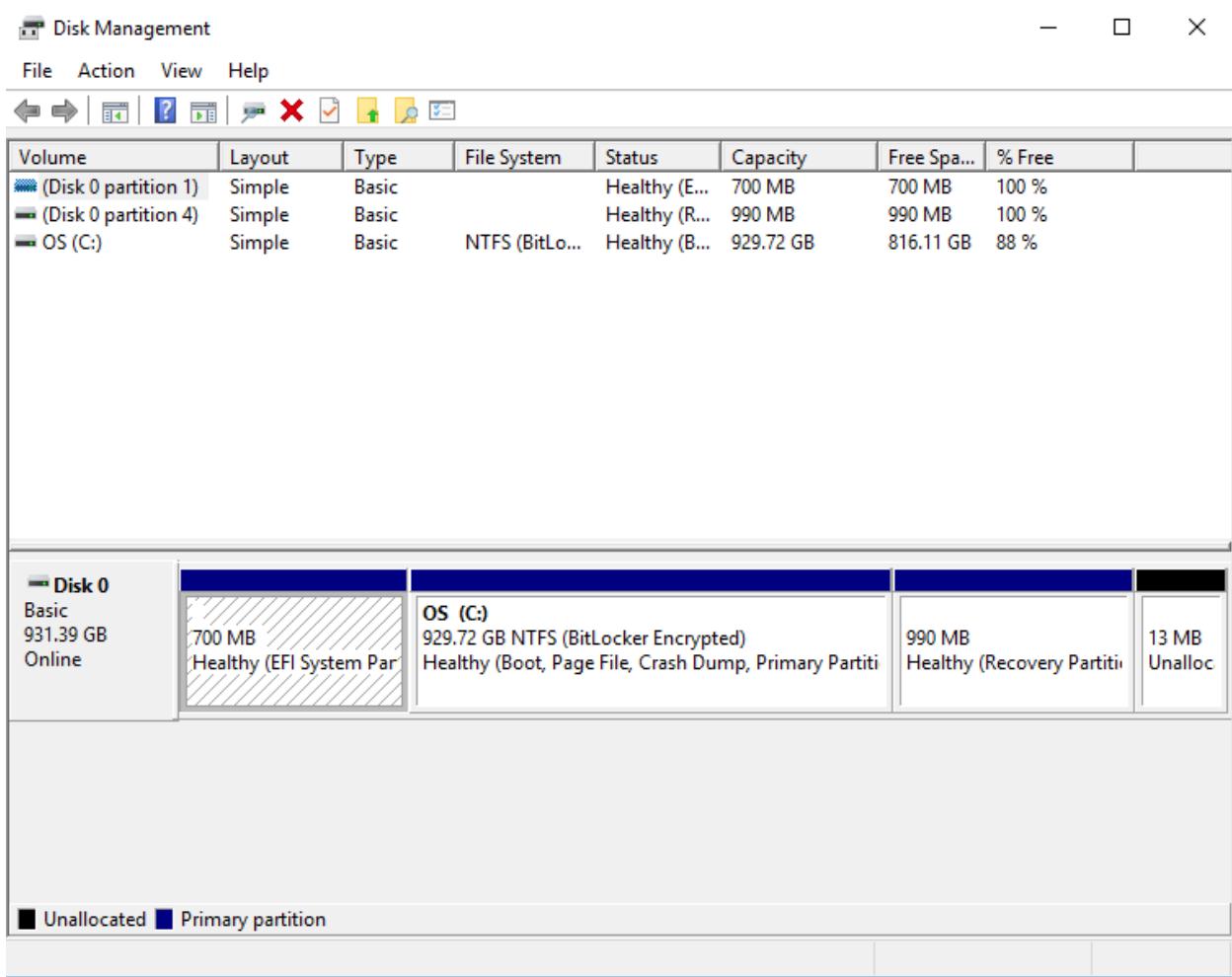
The screenshot shows the Microsoft Azure portal interface. The left sidebar is filled with various service icons under the 'FAVORITES' section. The main content area is titled 'vhds' under 'Container'. It includes a search bar, navigation buttons (Upload, Refresh, Delete, Acquire lease, Break lease, View snapshots, Create snapshot), and a table header with columns: NAME, MODIFIED, ACCESS TIER, BLOB TYPE, SIZE, and LEASE STATE. A single blob entry is listed: 'WindowsVM-Azure20181228120514.vhdx'. The 'ACCESS TIER' column for this entry is highlighted with a dashed blue border.

NAME	MODIFIED	ACCESS TIER	BLOB TYPE	SIZE	LEASE STATE
WindowsVM-Azure20181228120514.vhdx	12/28/2018, 12...		Page blob	127 GiB	Leased

Now I have required to create one *.vhf file in my local machine.

In your local machine, type “**diskmgmt.msc**” in “Run” box and press “Enter”.

In “Disk management”, **Action** → click “Create VHD”.

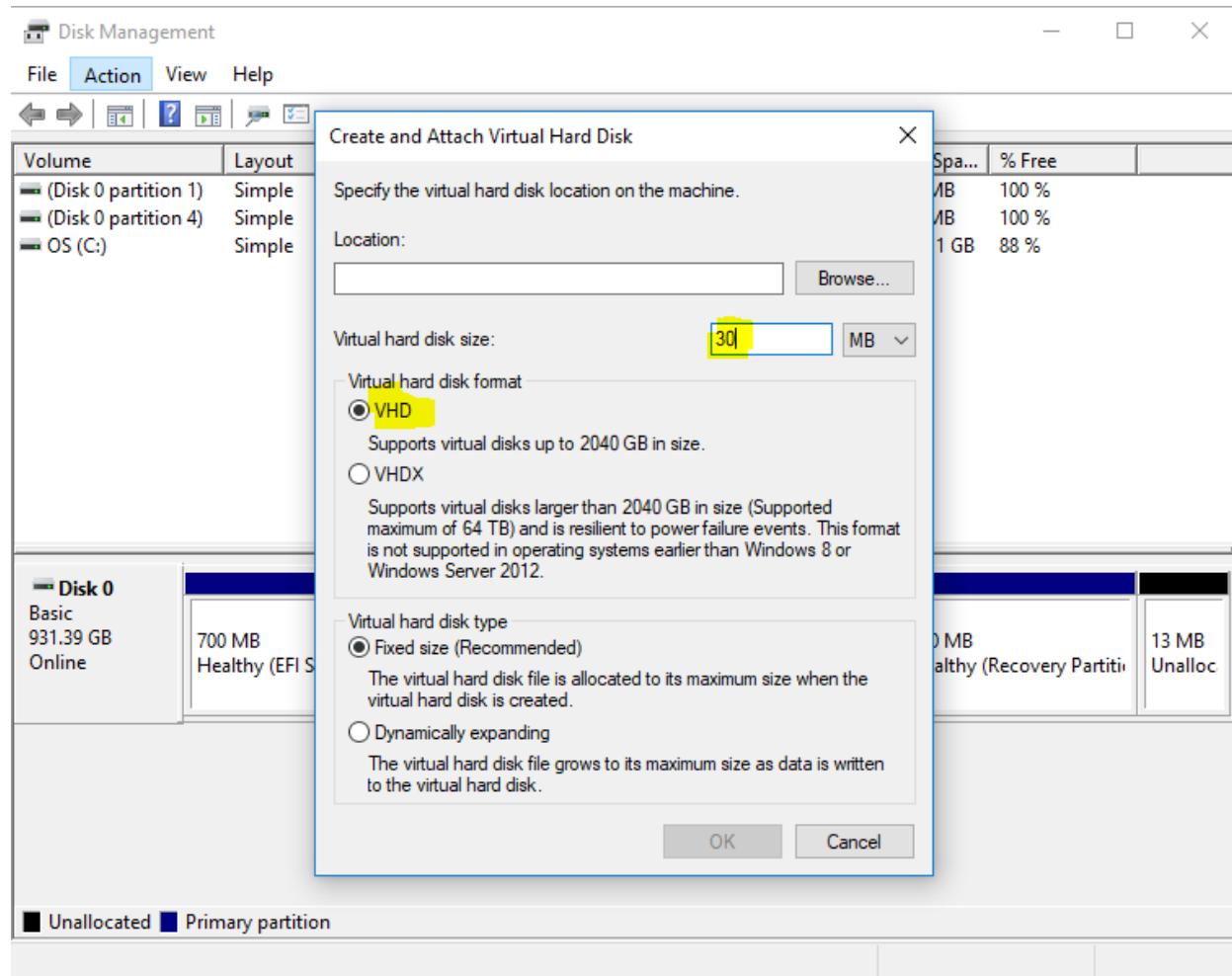


In “Create and Attach Virtual Hard Disk”.

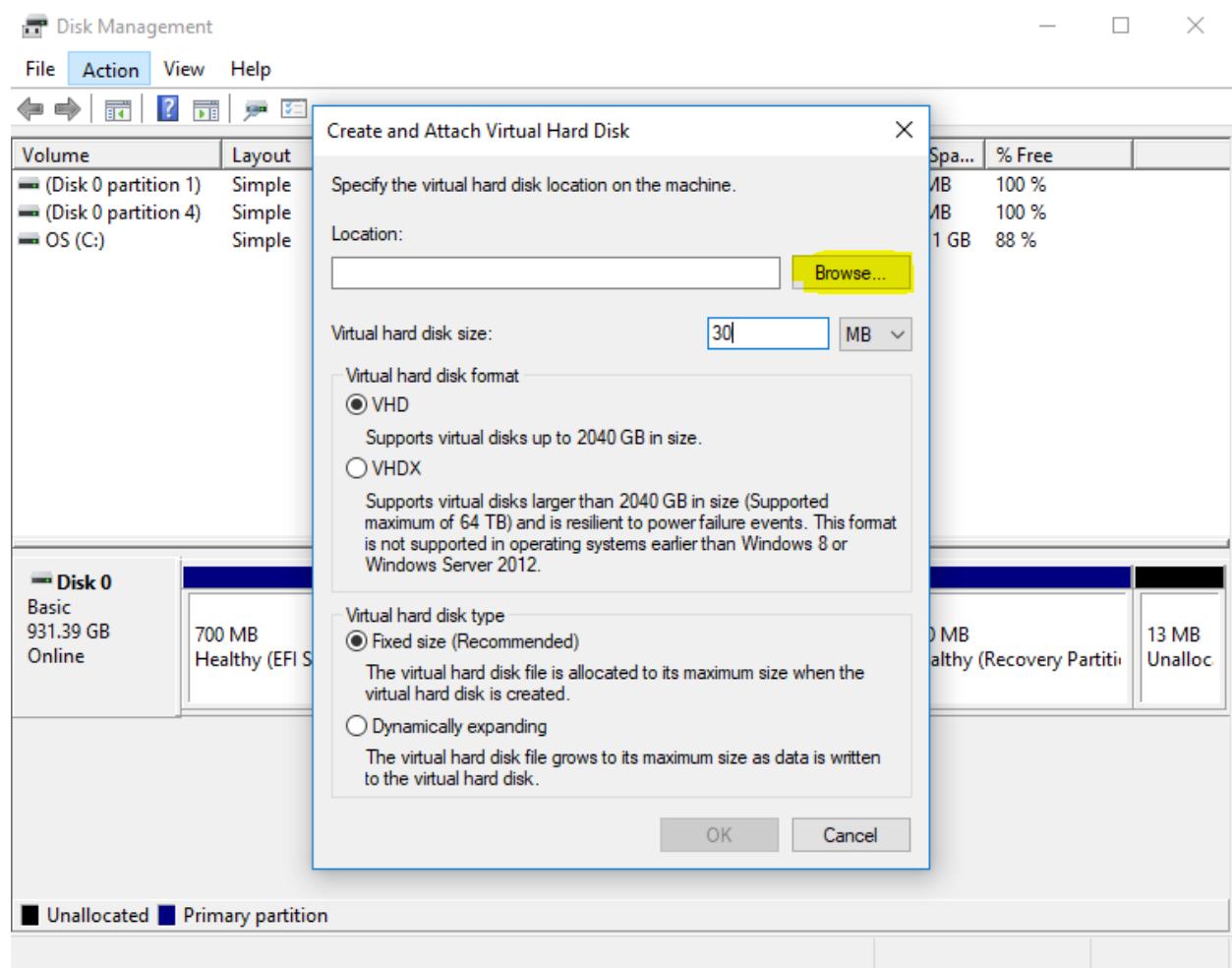
Specify the “Virtual hard disk size” as “**30 MB**”.

Ensure hard disk format as “**VHD**”.

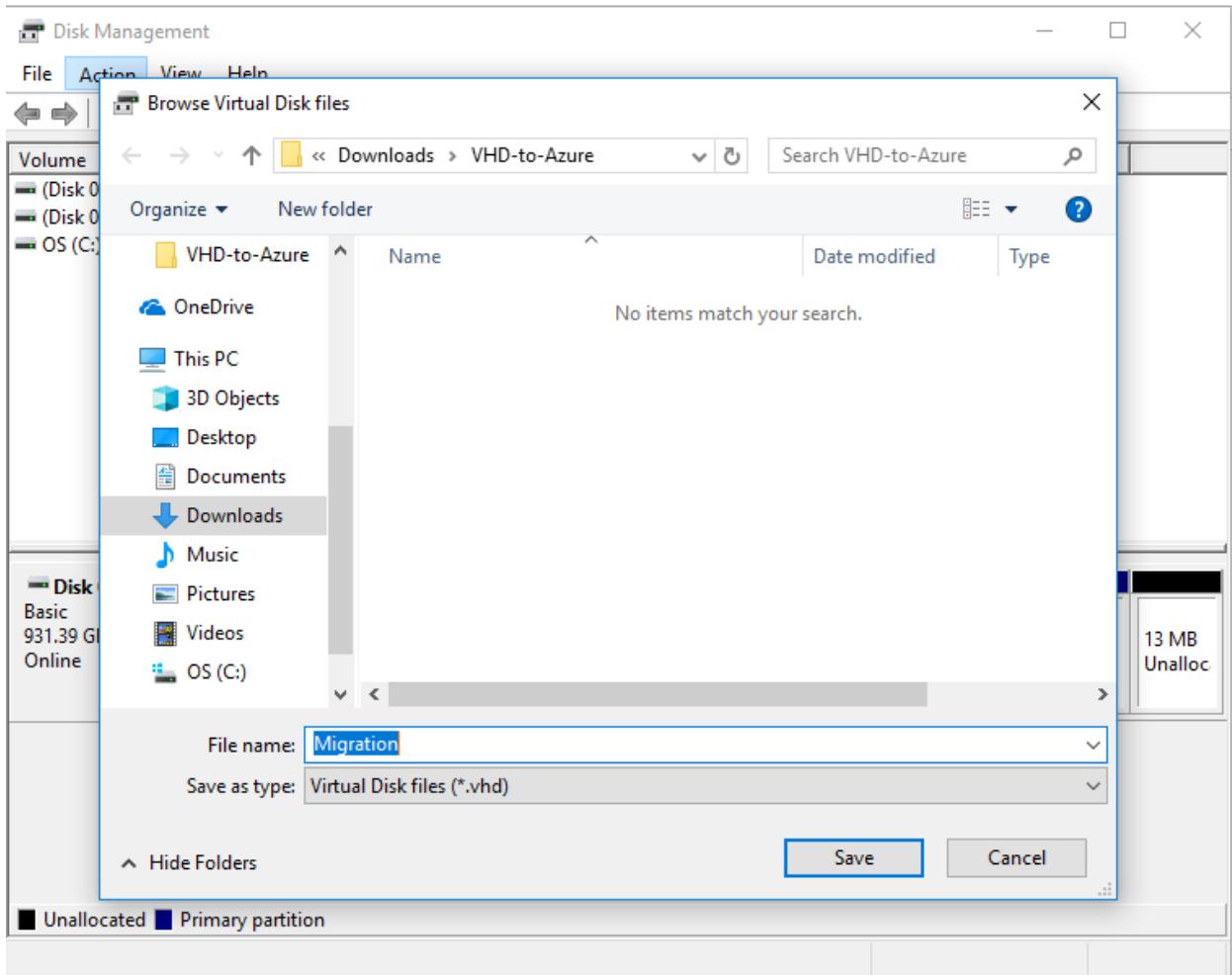
Note: Because, as of now Azure will support only for .vhf file.



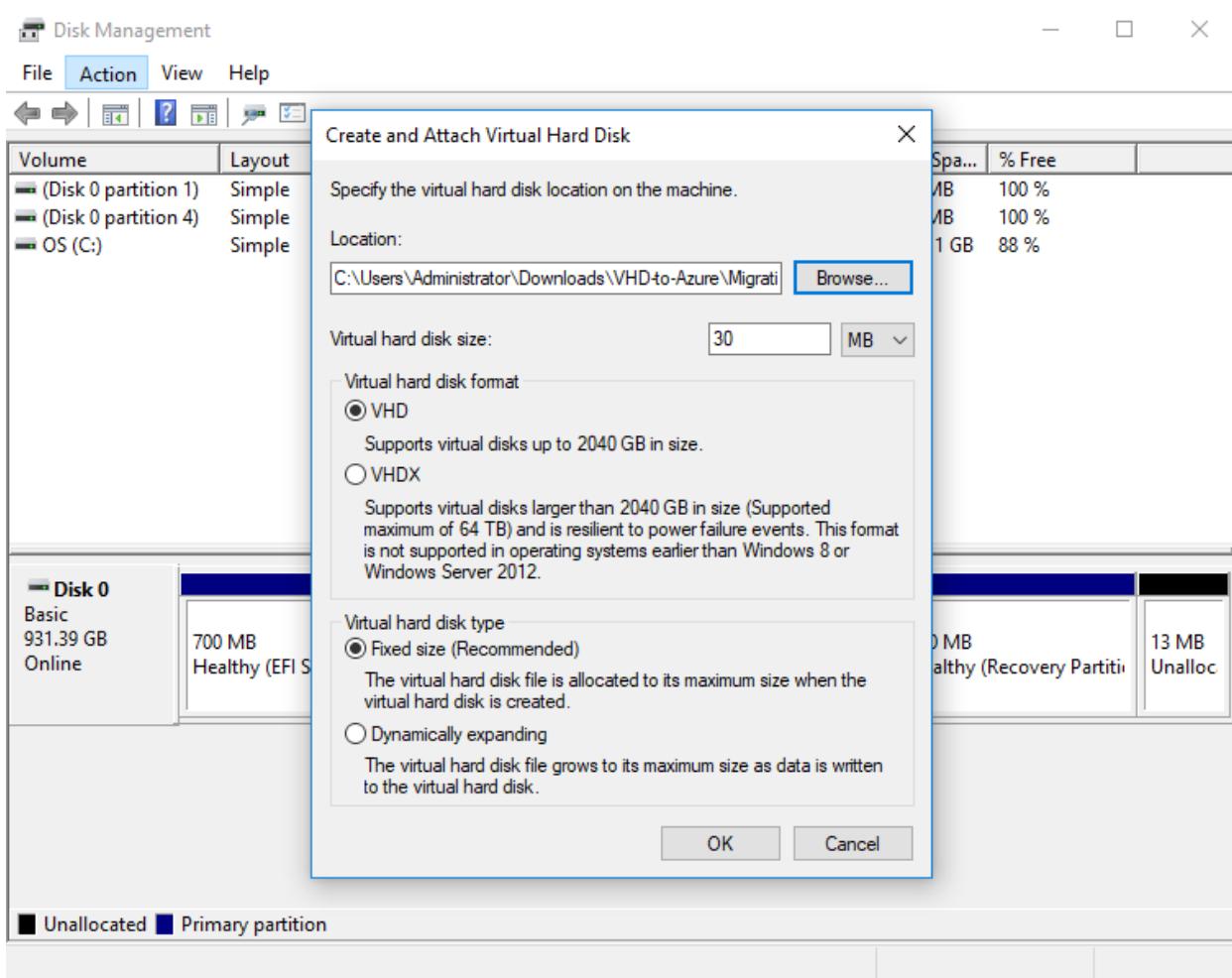
Click “**Browse**” to locate store the vhd file.



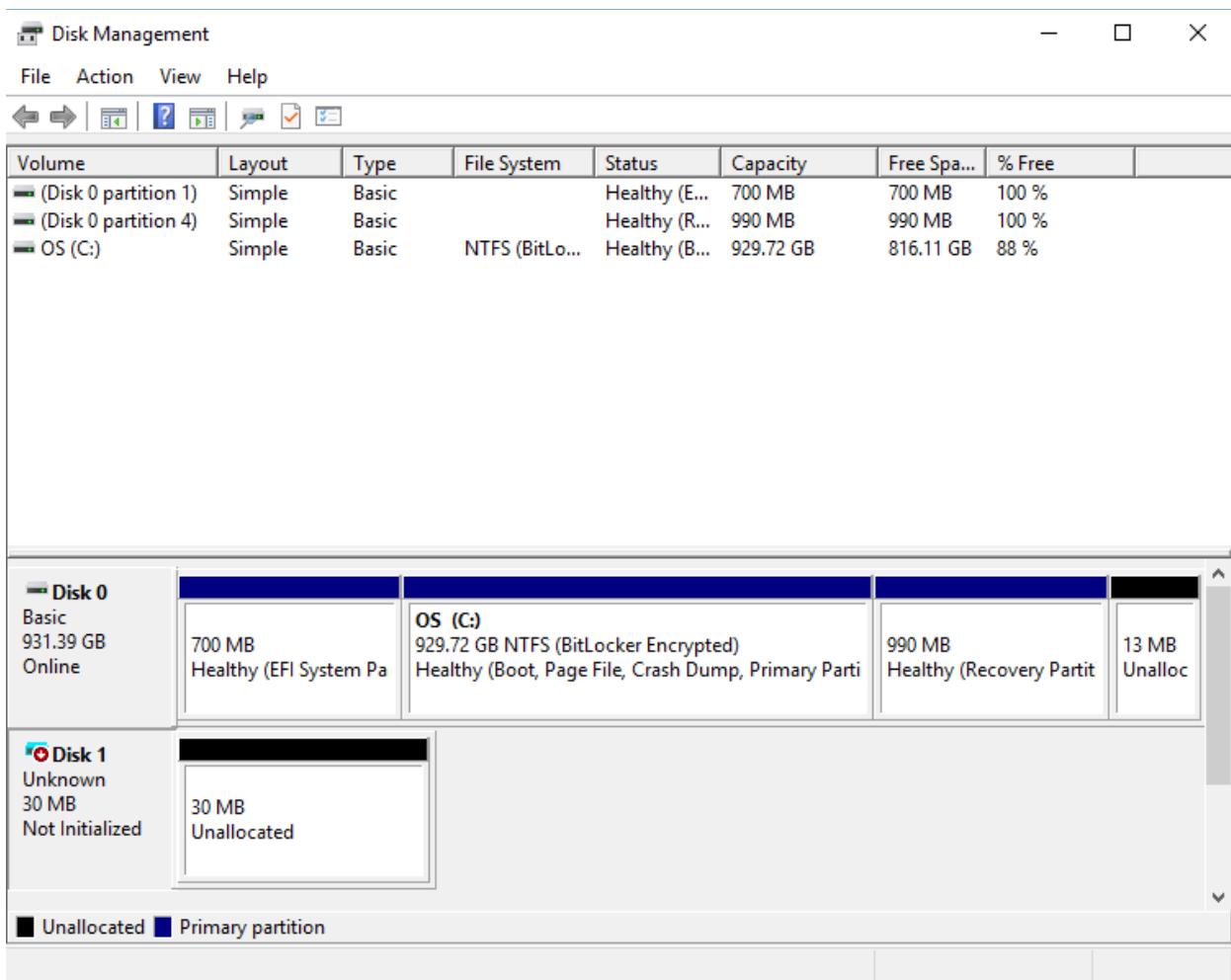
Type file name as “**Migration**” as file name and click “**Save**”.



Click "Ok".

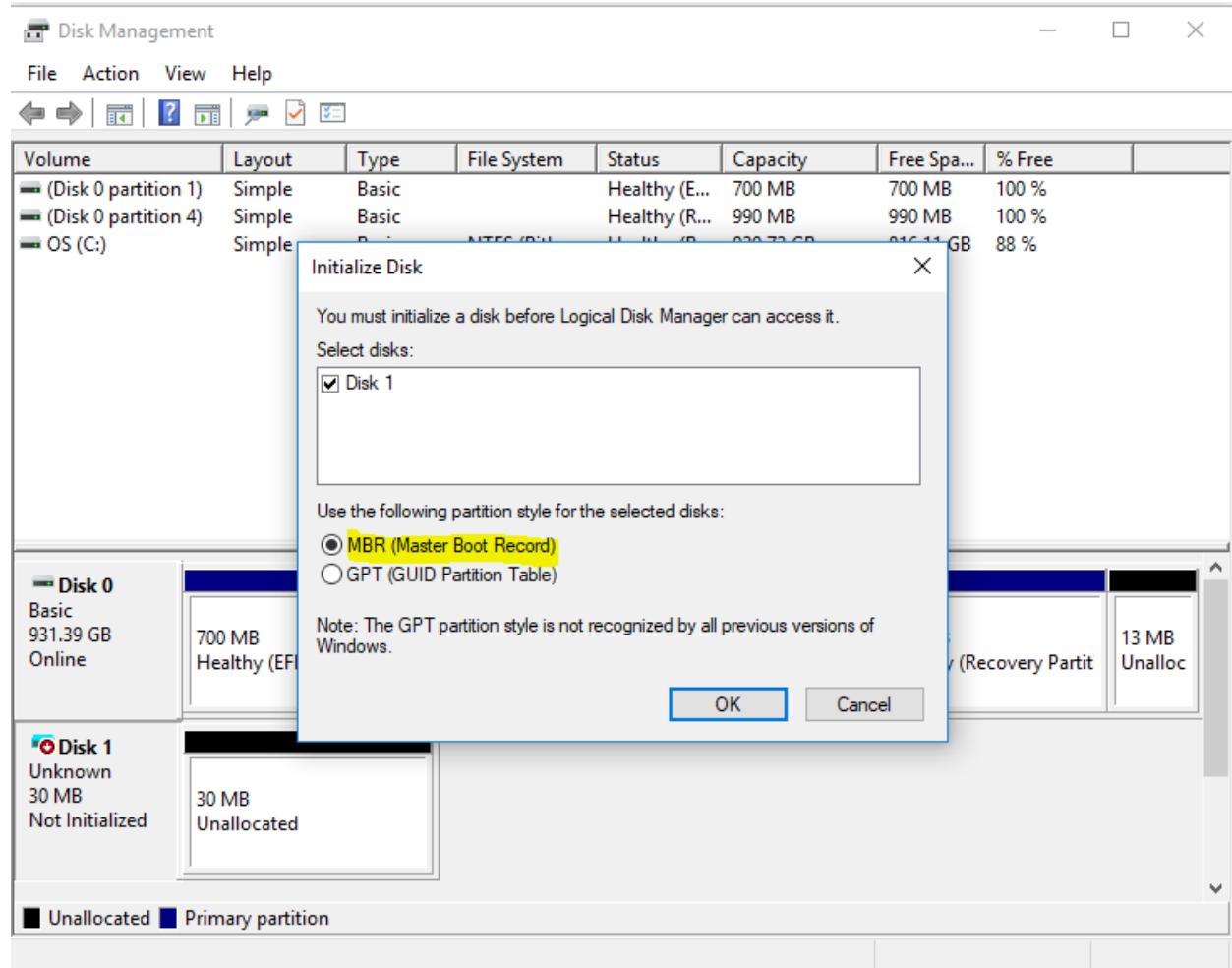


In “Disk 1” right click “Initialize Disk”.



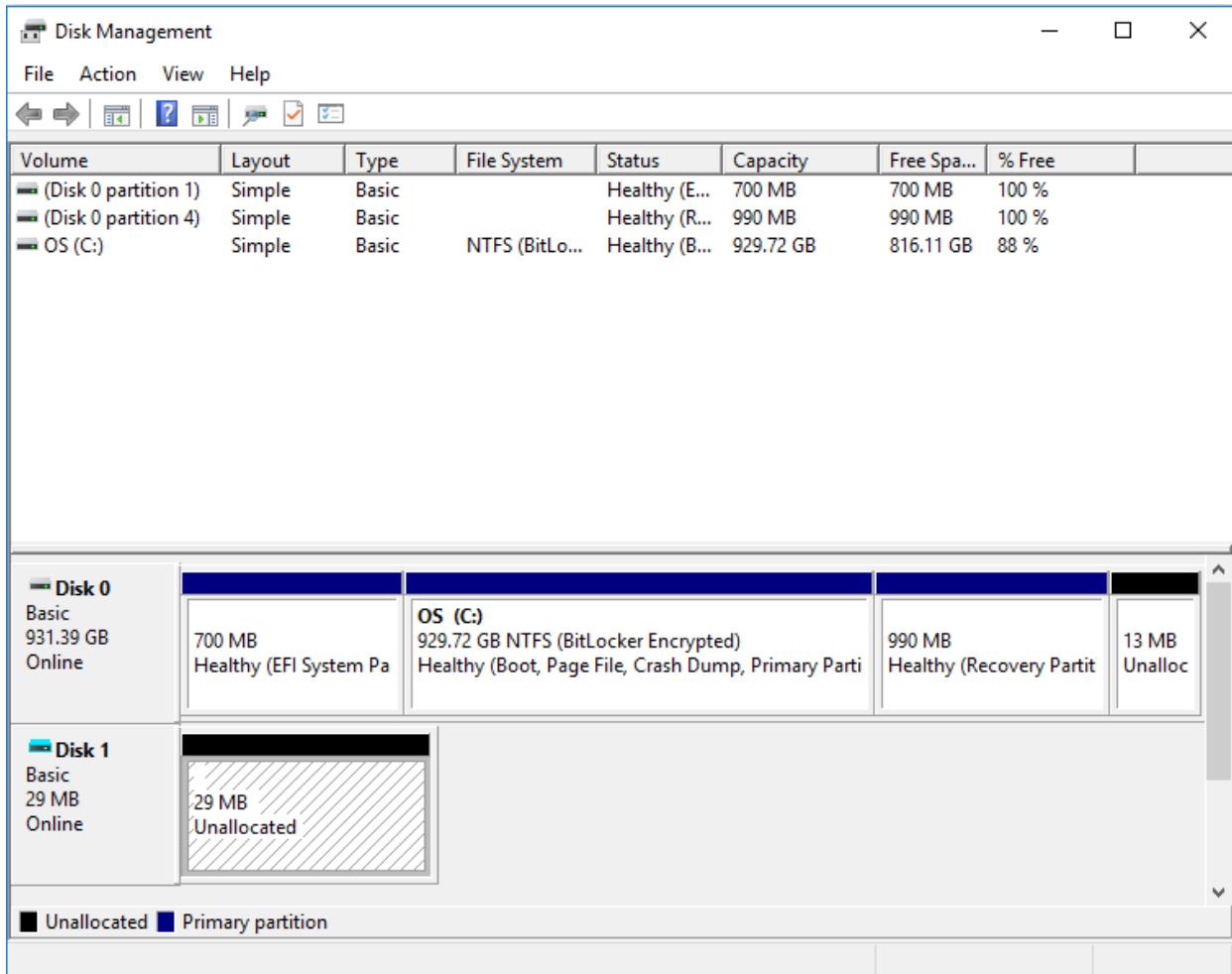
While “Initialize Disk”, ensure that “**MBR**” is selected.

Click “Ok”.

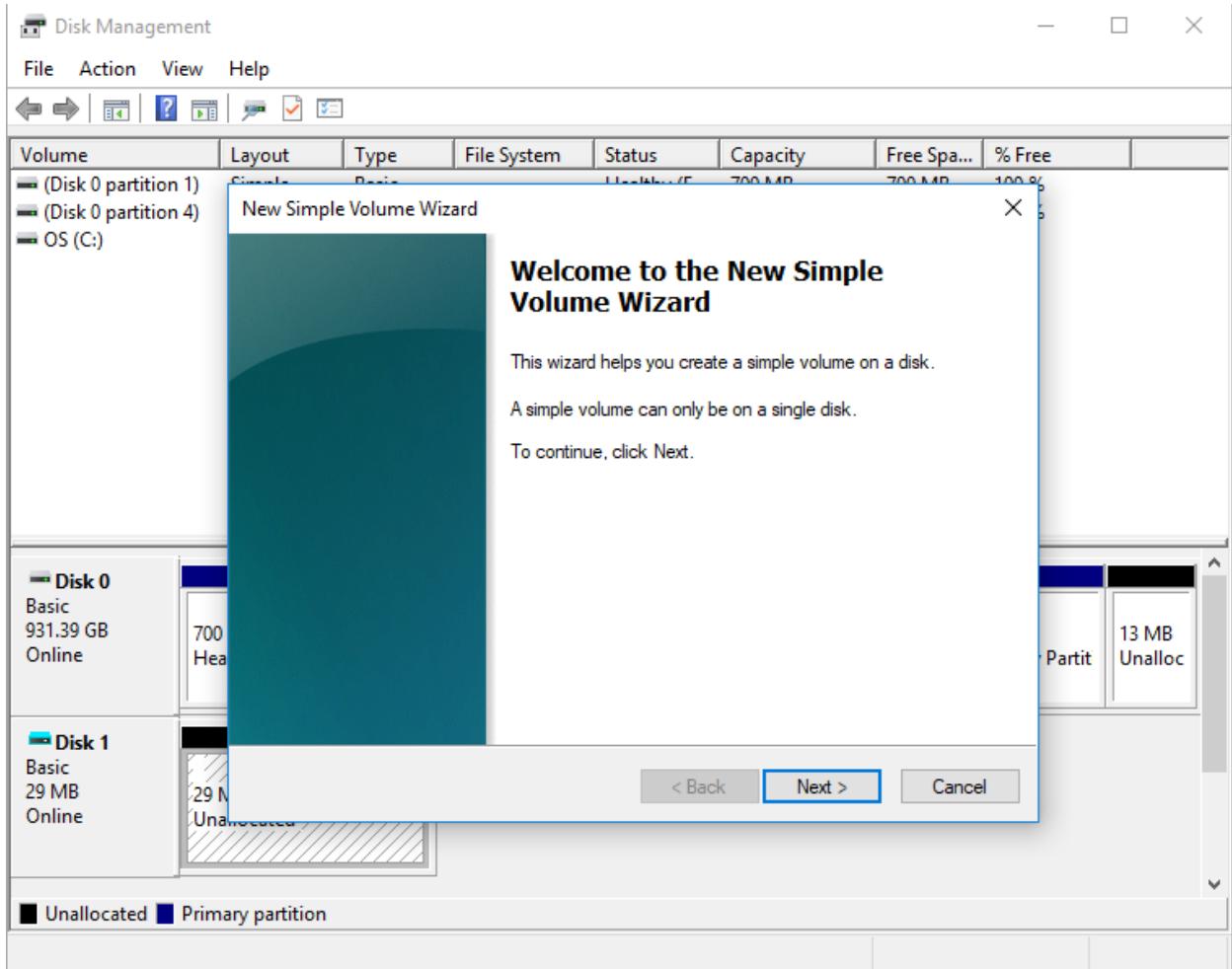


Select “**unallocated**” partition and right click it.

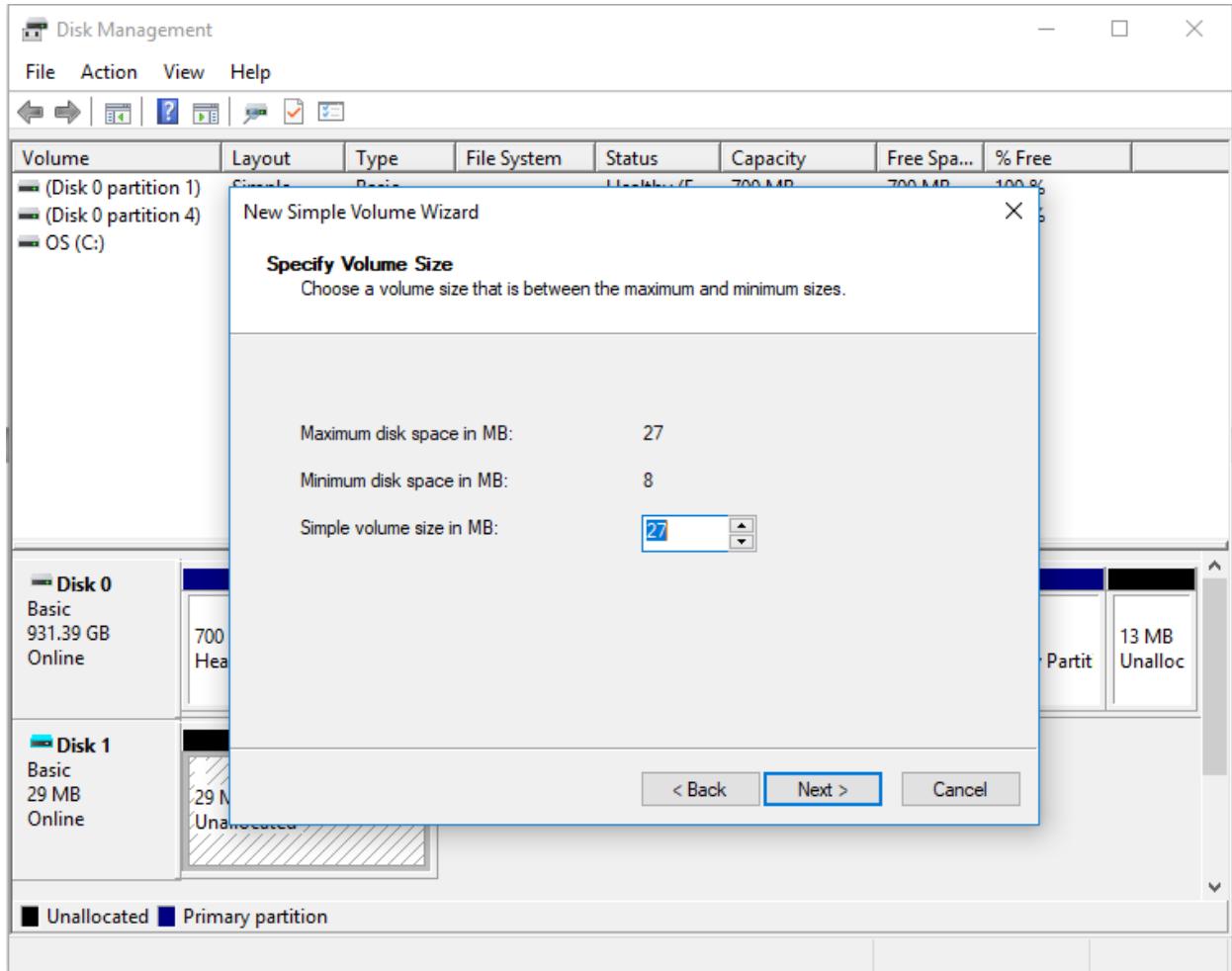
Click “**New Simple Volume**”.



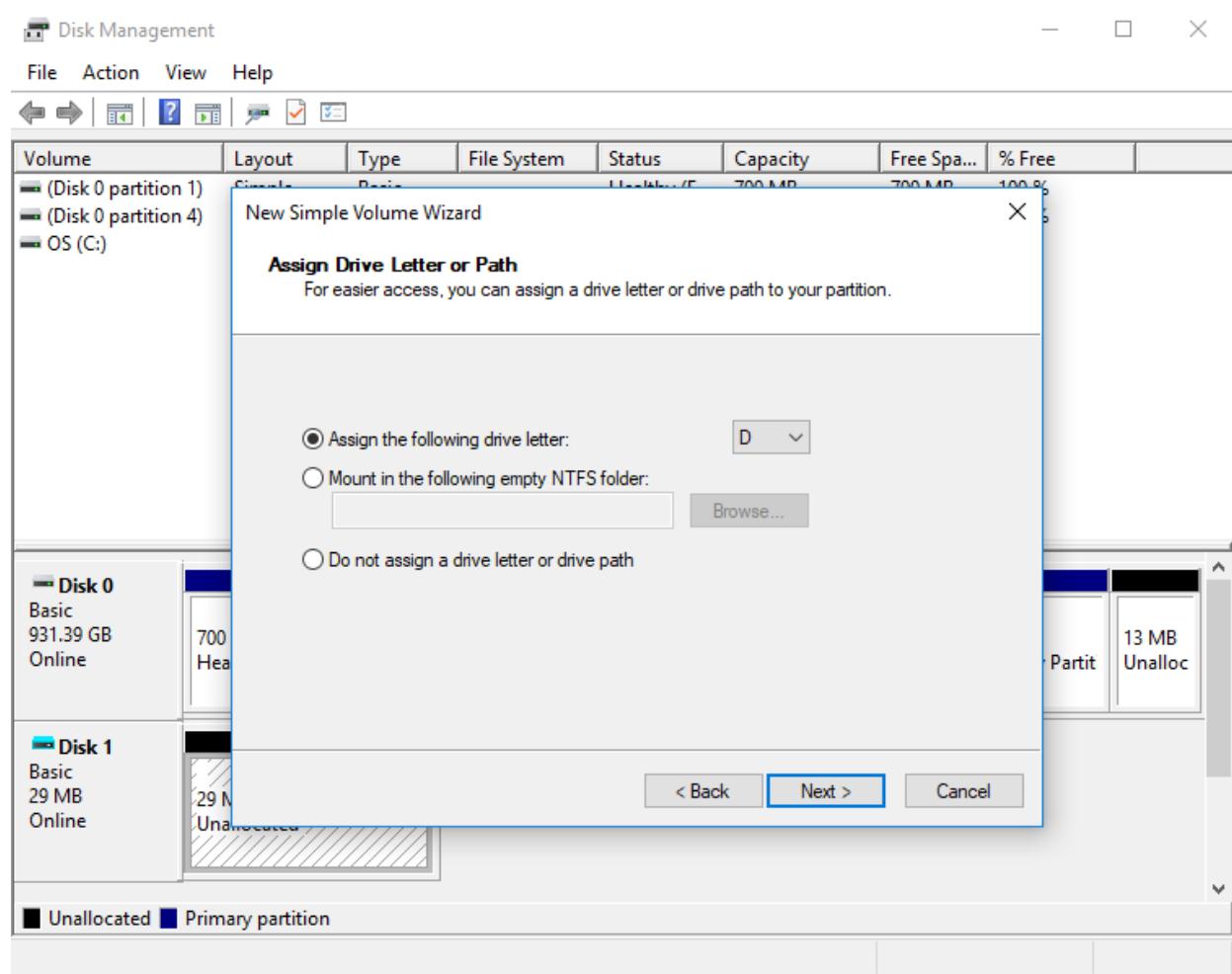
Click “Next”.



Click “Next”.

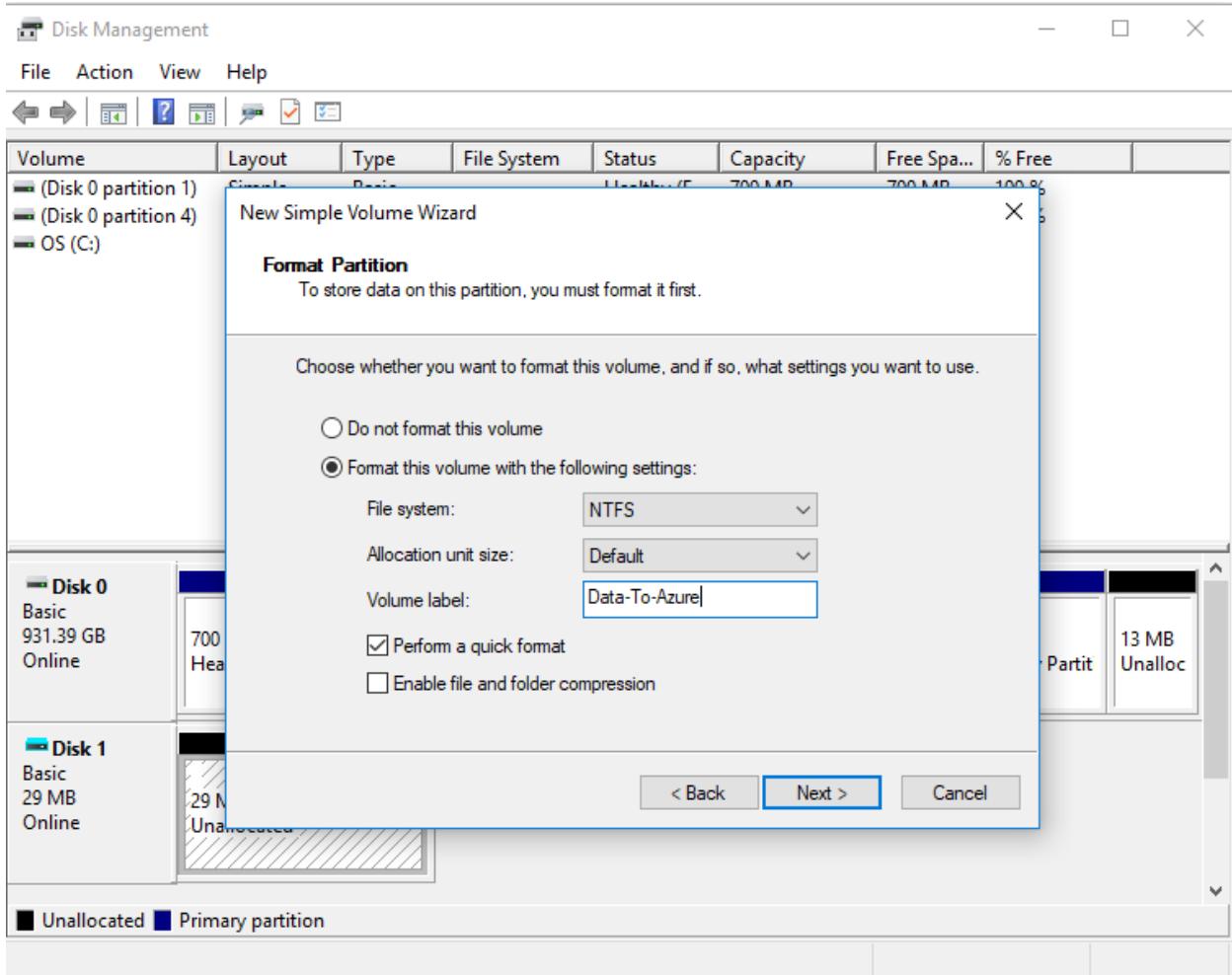


Click “Next”.

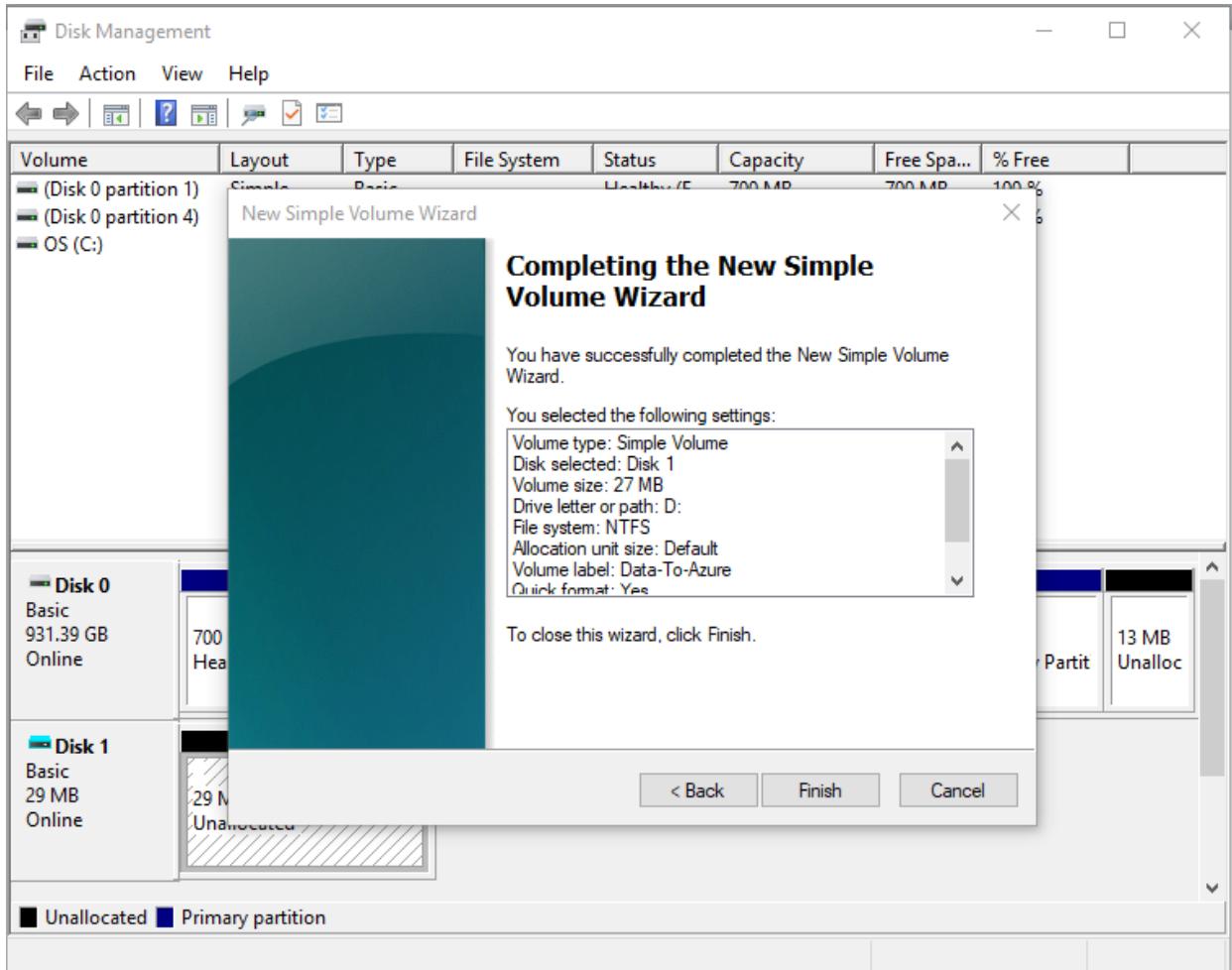


In “Volume label” type “Data-To-Azure”.

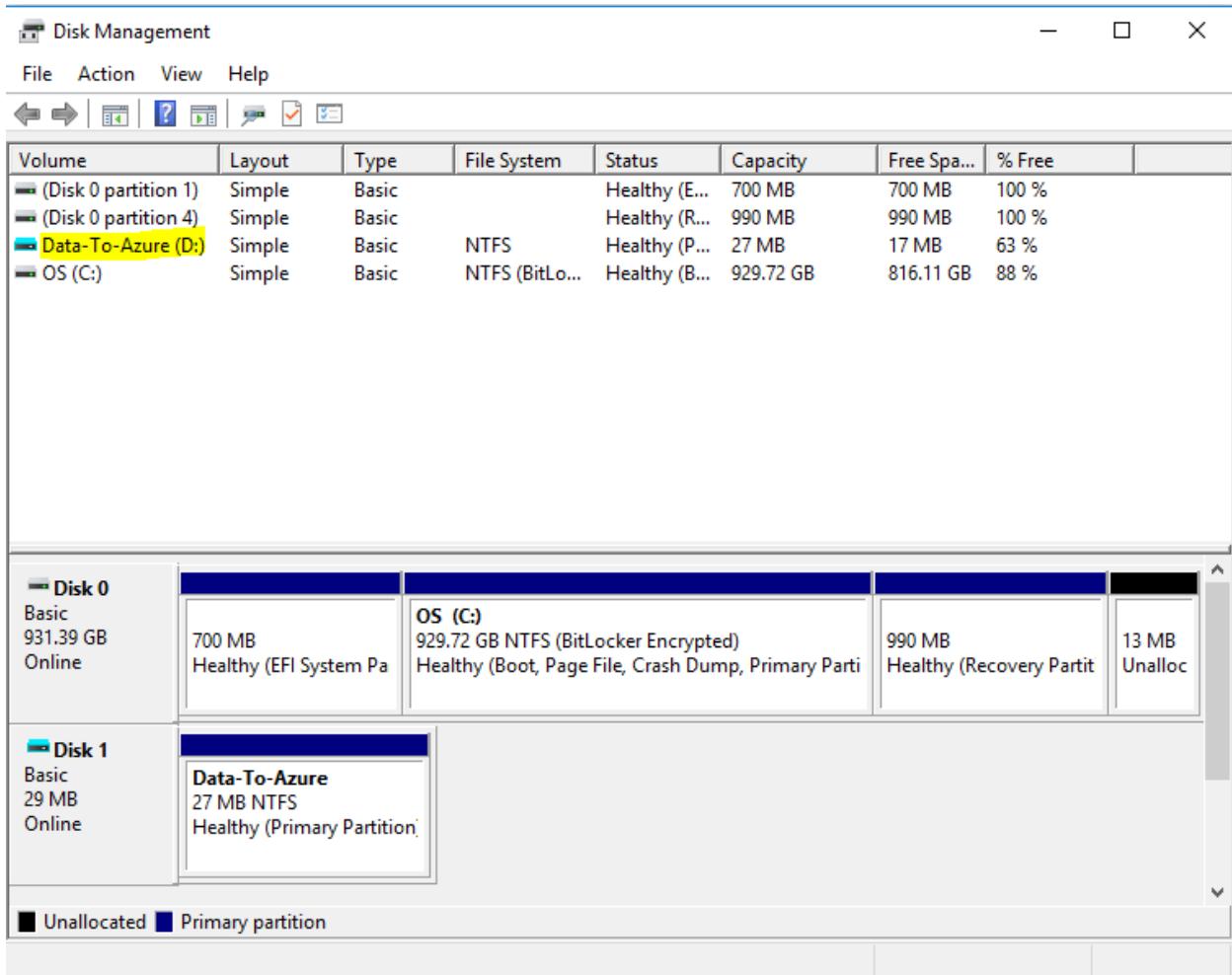
Click “Next”.



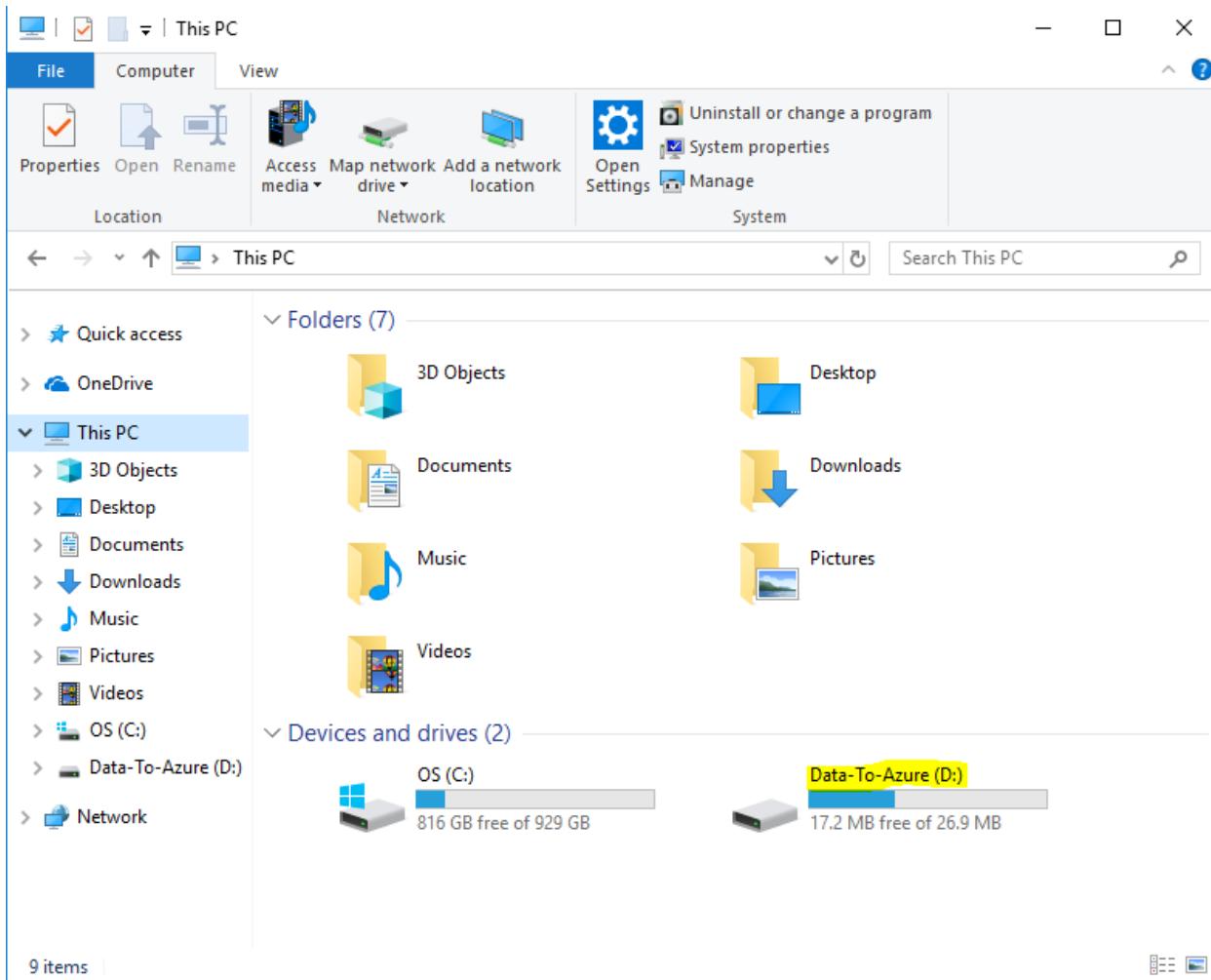
Click “Finish”.



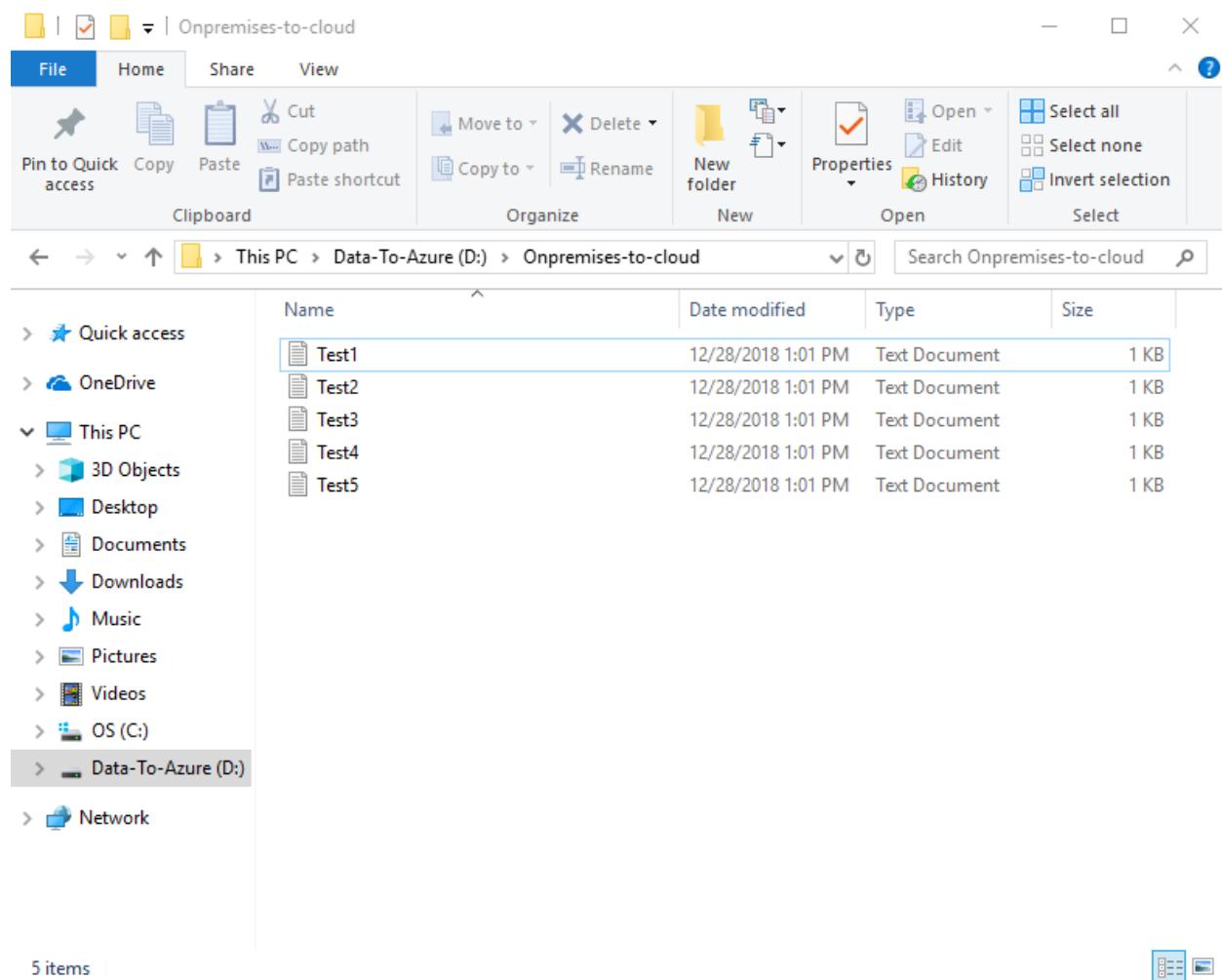
I have successfully mounted *.vhdx file as volume.



In “Data-To-Azure”.



Create files / copy files which you have required to upload to Azure.



The screenshot shows a Windows File Explorer window with the following details:

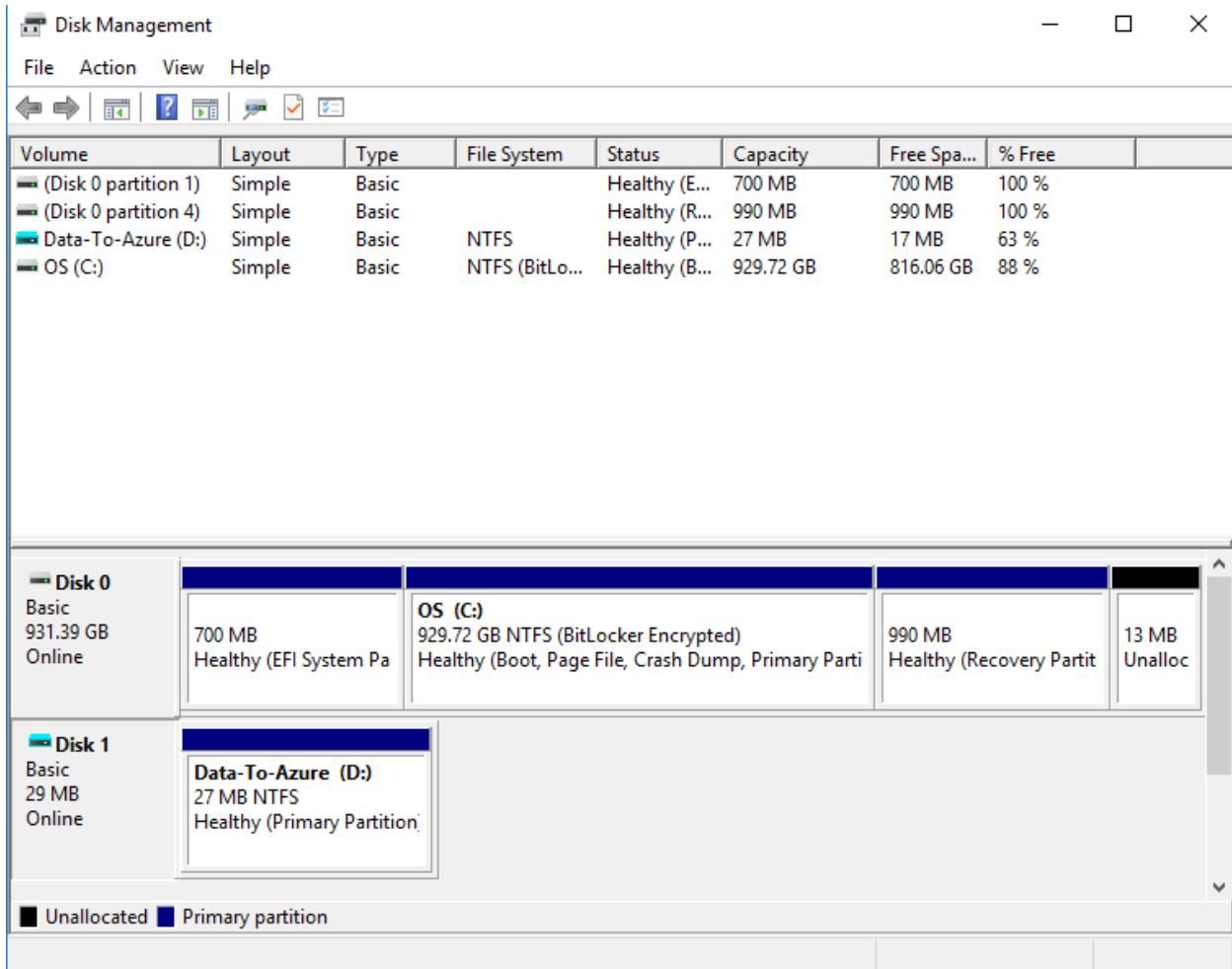
- Address Bar:** This PC > Data-To-Azure (D:) > Onpremises-to-cloud
- File Explorer Navigation:** Quick access, OneDrive, This PC (expanded), 3D Objects, Desktop, Documents, Downloads, Music, Pictures, Videos, OS (C:), Data-To-Azure (D:), Network.
- Selected Item:** Data-To-Azure (D:)
- Content Area:** A list of 5 items in the 'Onpremises-to-cloud' folder:

Name	Date modified	Type	Size
Test1	12/28/2018 1:01 PM	Text Document	1 KB
Test2	12/28/2018 1:01 PM	Text Document	1 KB
Test3	12/28/2018 1:01 PM	Text Document	1 KB
Test4	12/28/2018 1:01 PM	Text Document	1 KB
Test5	12/28/2018 1:01 PM	Text Document	1 KB

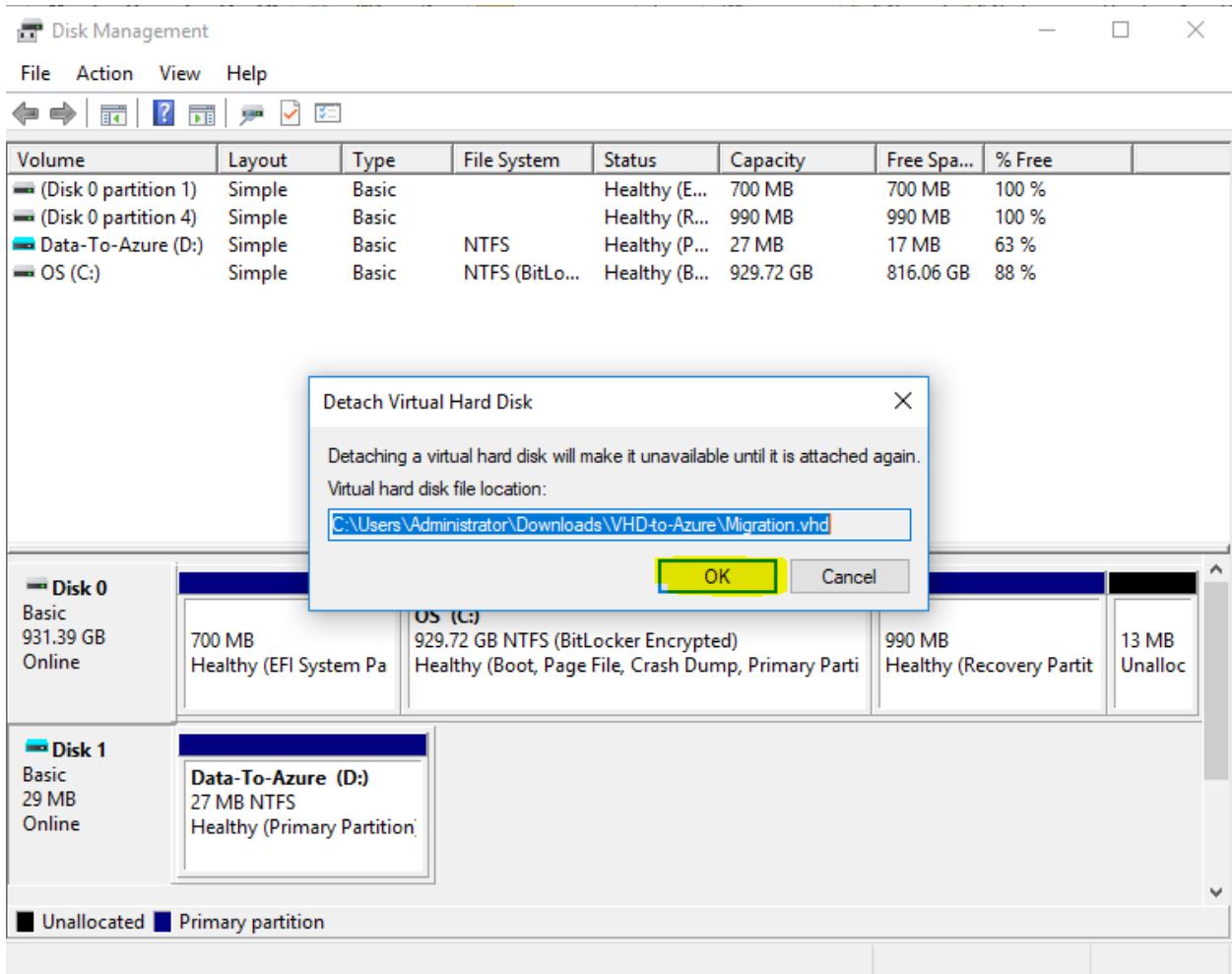
Now we have required to detach the VHD file from local machine.

In local machine, “**Disk management**”.

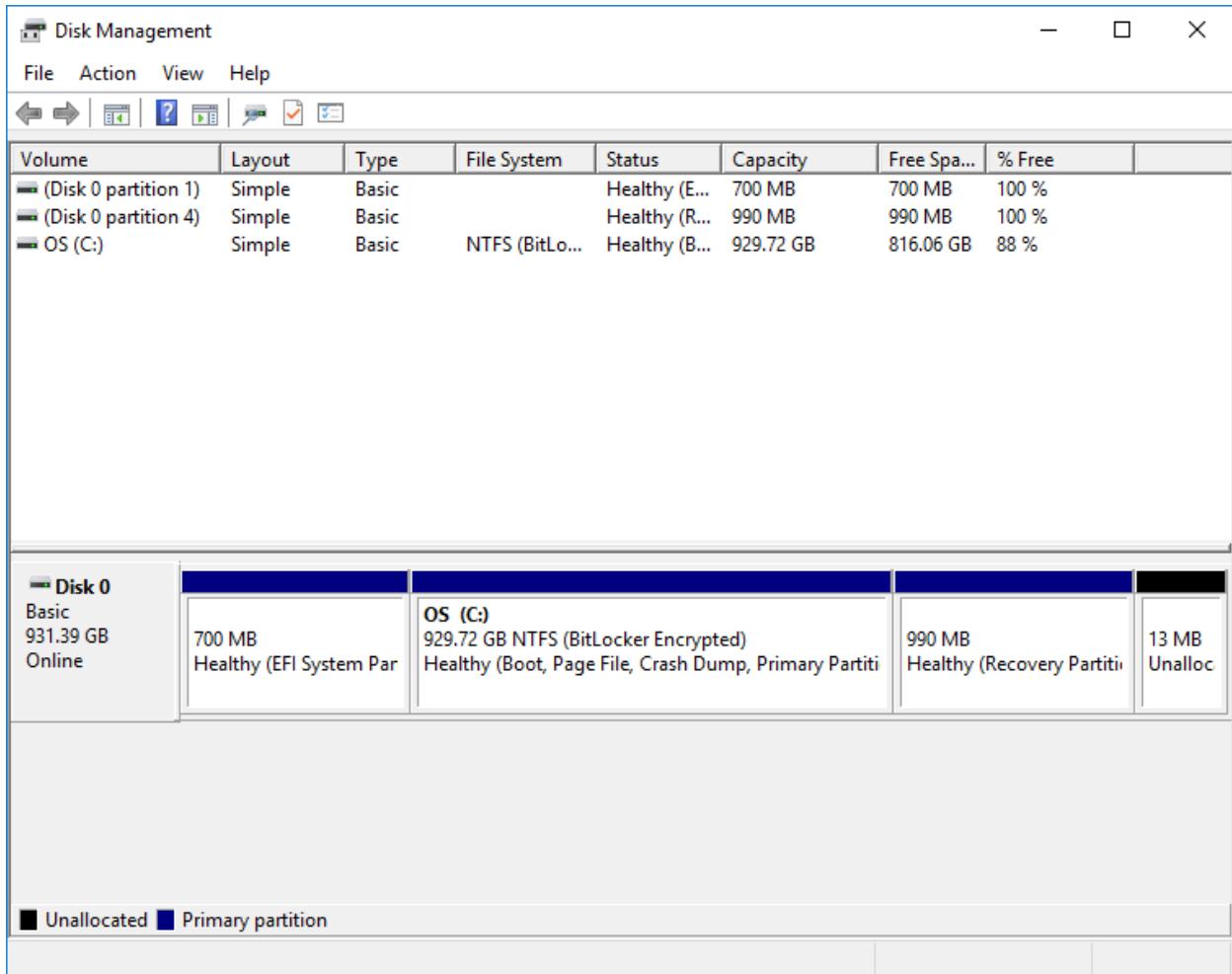
Click “**Disk 1**” and right click it, then click “**Detach VHD**”.



Click “Ok” to Detach Virtual Hard disk.

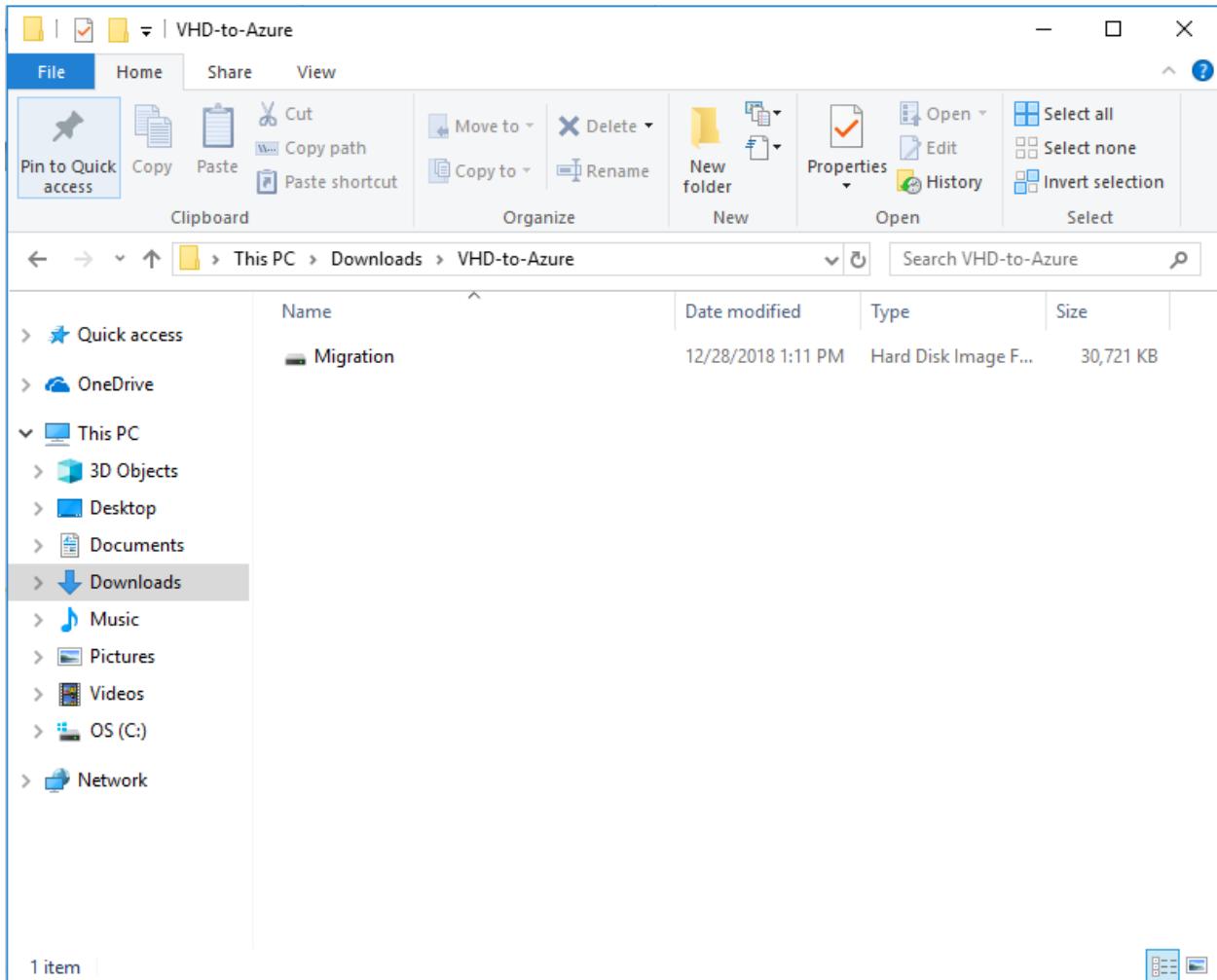


Ensure that vhd has been detached successfully.

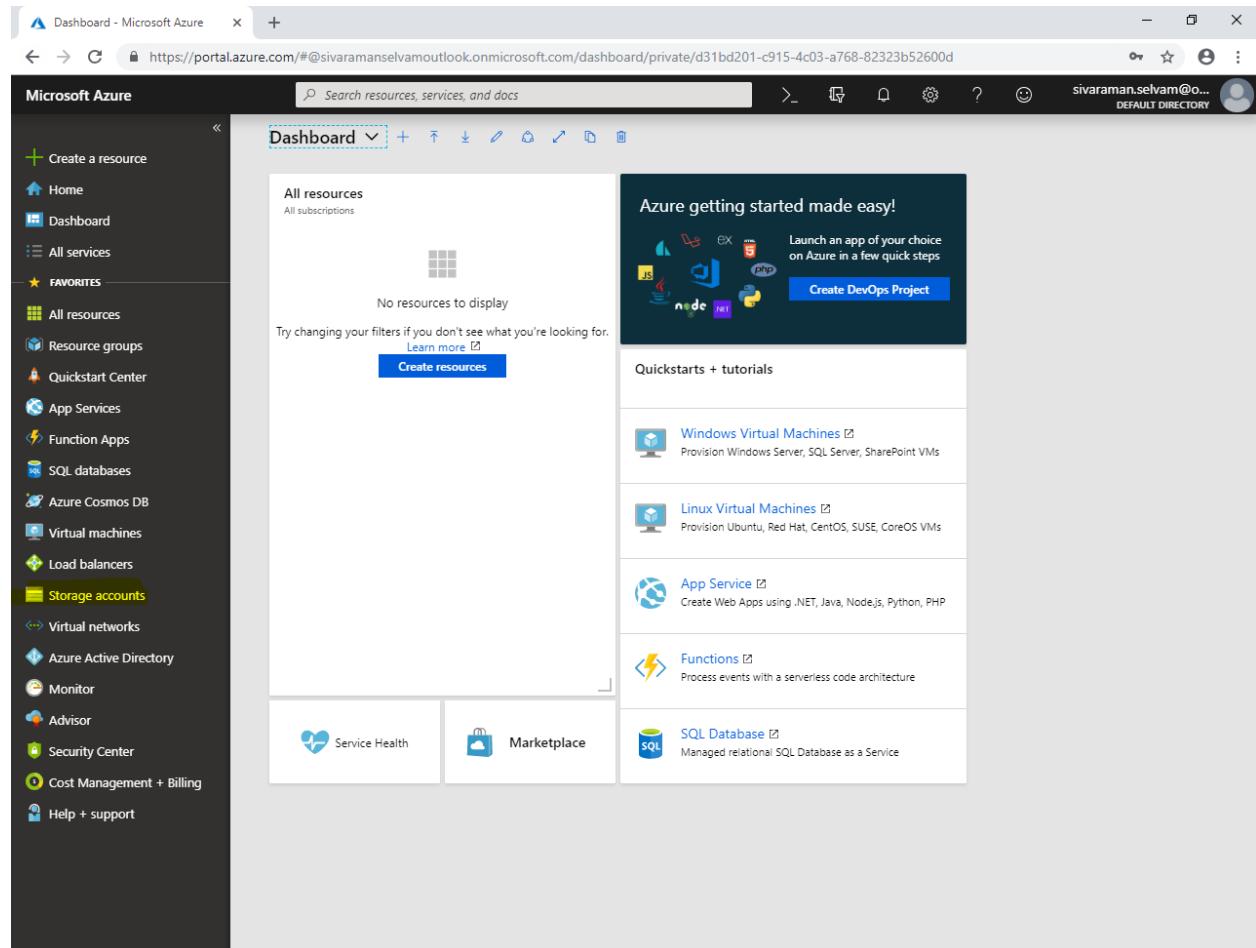


Go to the path where you have stored the “migration.vhd” file.

You are able to see the Migration.vhd file.



In Azure portal, click “**Storage accounts**”.



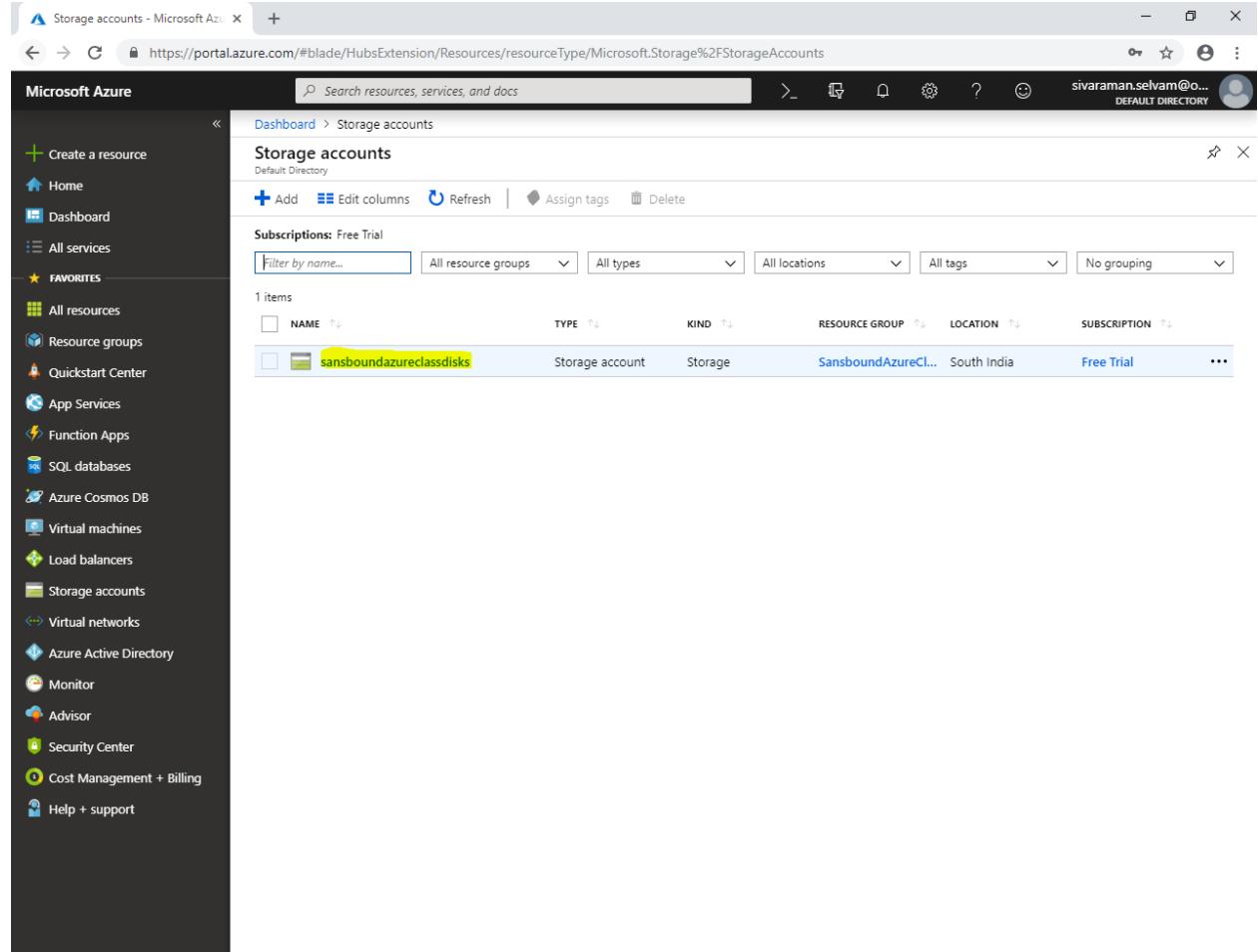
The screenshot shows the Microsoft Azure portal dashboard. The left sidebar has a dark theme with various service icons and names. Under the 'FAVORITES' section, 'Storage accounts' is highlighted with a yellow background. The main content area is titled 'Dashboard' and shows a message 'No resources to display'. Below this, there's a 'Quickstarts + tutorials' section with five items:

- Windows Virtual Machines: Provision Windows Server, SQL Server, SharePoint VMs
- Linux Virtual Machines: Provision Ubuntu, Red Hat, CentOS, SUSE, CoreOS VMs
- App Service: Create Web Apps using .NET, Java, Node.js, Python, PHP
- Functions: Process events with a serverless code architecture
- SQL Database: Managed relational SQL Database as a Service

At the bottom of the main area, there are two buttons: 'Service Health' and 'Marketplace'.

You are able to see the storage which you have created earlier.

Click on storage account named “**sansboundazureclassdisks**”.

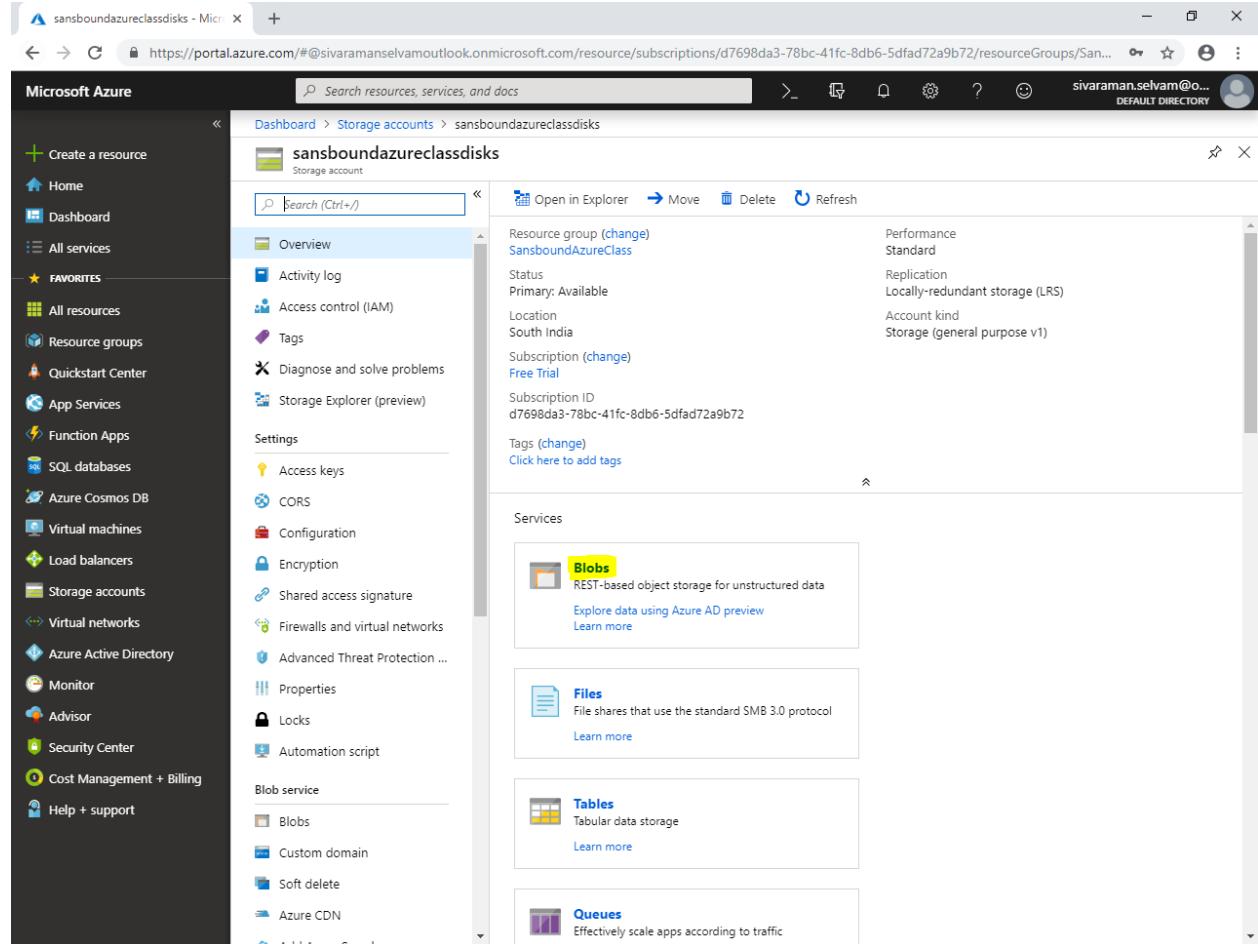


The screenshot shows the Microsoft Azure Storage accounts page. The left sidebar has a 'FAVORITES' section with items like All resources, Resource groups, Quickstart Center, App Services, Function Apps, SQL databases, Azure Cosmos DB, Virtual machines, Load balancers, Storage accounts, Virtual networks, Azure Active Directory, Monitor, Advisor, Security Center, Cost Management + Billing, and Help + support. The main content area shows a table of storage accounts. The table has columns: NAME, TYPE, KIND, RESOURCE GROUP, LOCATION, and SUBSCRIPTION. There is one item listed:

NAME	TYPE	KIND	RESOURCE GROUP	LOCATION	SUBSCRIPTION
sansboundazureclassdisks	Storage account	Storage	SansboundAzureCl..	South India	Free Trial

In “sansboundazureclassdisks”,

Click “Blobs”.

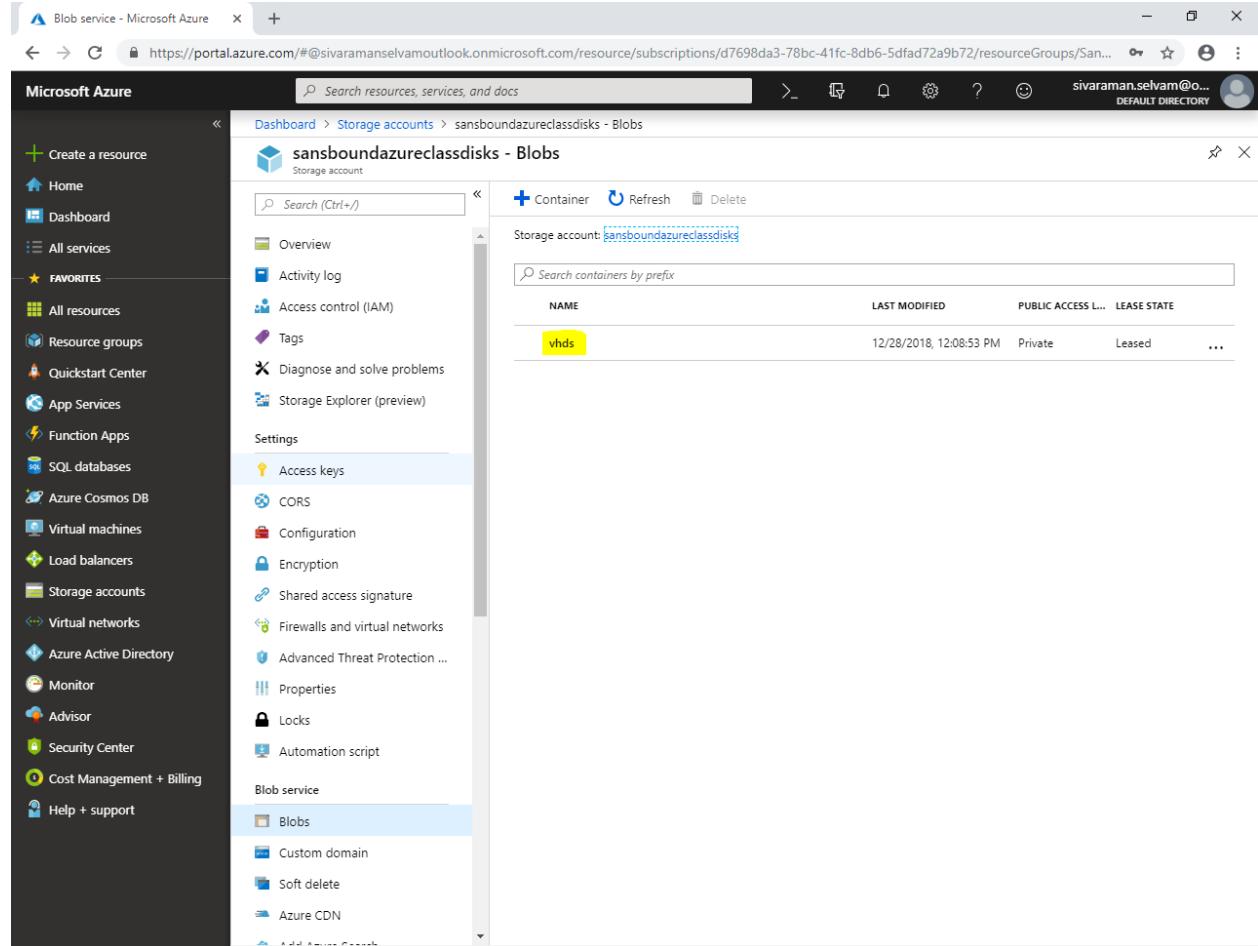


The screenshot shows the Microsoft Azure portal interface. The left sidebar navigation bar includes options like Create a resource, Home, Dashboard, All services, Favorites (All resources, Resource groups, Quickstart Center, App Services, Function Apps, SQL databases, Azure Cosmos DB, Virtual machines, Load balancers, Storage accounts, Virtual networks, Azure Active Directory, Monitor, Advisor, Security Center, Cost Management + Billing, and Help + support). The main content area is titled "sansboundazureclassdisks" and shows the "Storage account" overview. Key details include:

- Resource group (change):** SansboundAzureClass
- Status:** Primary: Available
- Location:** South India
- Subscription (change):** Free Trial
- Subscription ID:** d7698da3-78bc-41fc-8db6-5dfad72a9b72
- Tags:** Click here to add tags
- Services:**
 - Blobs:** REST-based object storage for unstructured data. (Selected item)
 - Files:** File shares that use the standard SMB 3.0 protocol.
 - Tables:** Tabular data storage.
 - Queues:** Effectively scale apps according to traffic.

In “**Blobs**”, you are able to see the container named “**vhds**”.

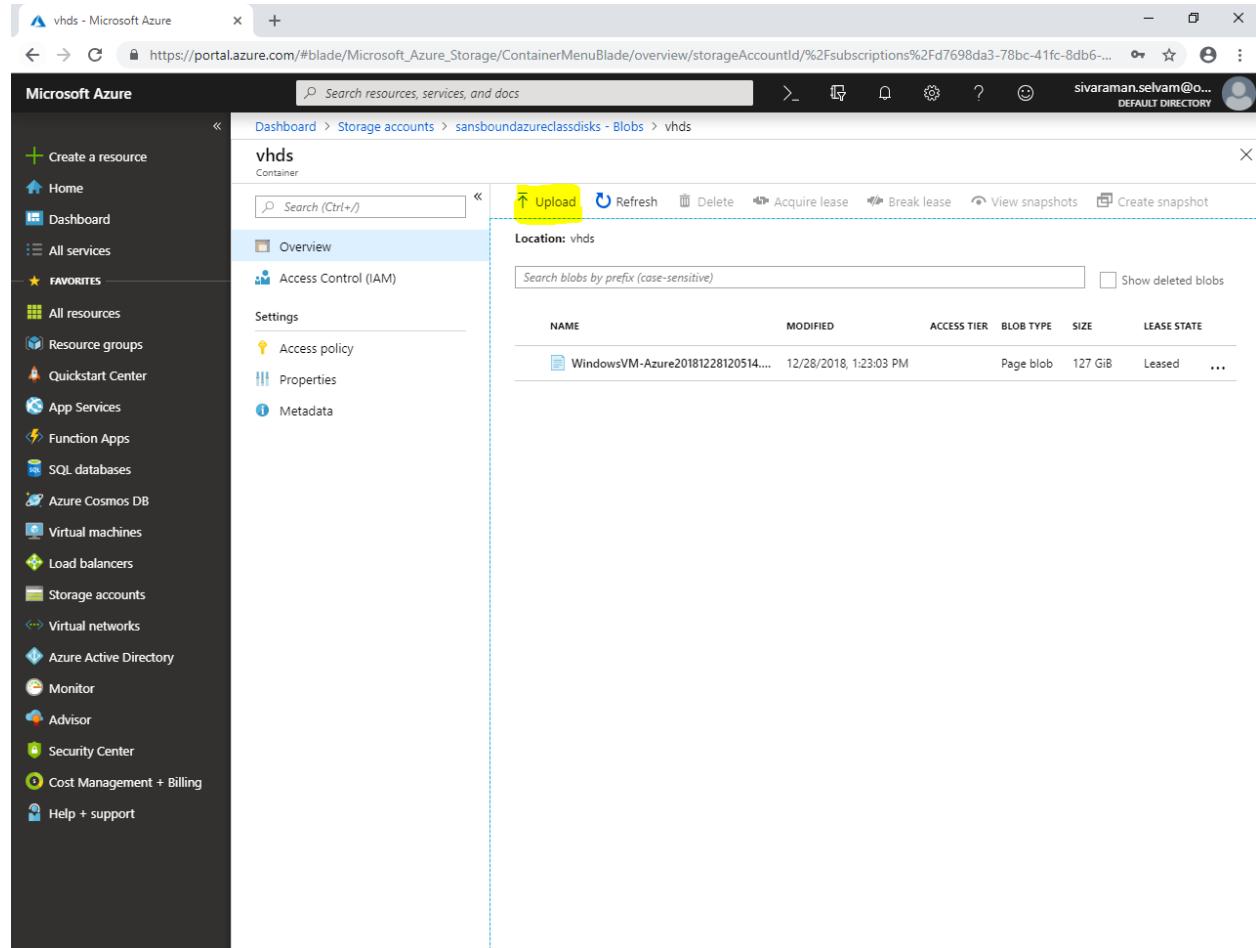
Click “**vhds**”.



The screenshot shows the Microsoft Azure portal interface for managing a storage account. The left sidebar navigation bar is visible, showing various services like Home, Dashboard, All services, Favorites, and Blob service. Under the Favorites section, the 'Storage accounts' item is selected. The main content area displays the 'sansboundazureclassdisks - Blobs' page. At the top, there are tabs for Container, Refresh, and Delete. A search bar labeled 'Search containers by prefix' contains the text 'vhds'. Below this is a table with columns: NAME, LAST MODIFIED, PUBLIC ACCESS L..., and LEASE STATE. One row is shown in the table, corresponding to the 'vhds' container. The 'vhds' container is highlighted with a yellow background.

NAME	LAST MODIFIED	PUBLIC ACCESS L...	LEASE STATE
vhds	12/28/2018, 12:08:53 PM	Private	Leased

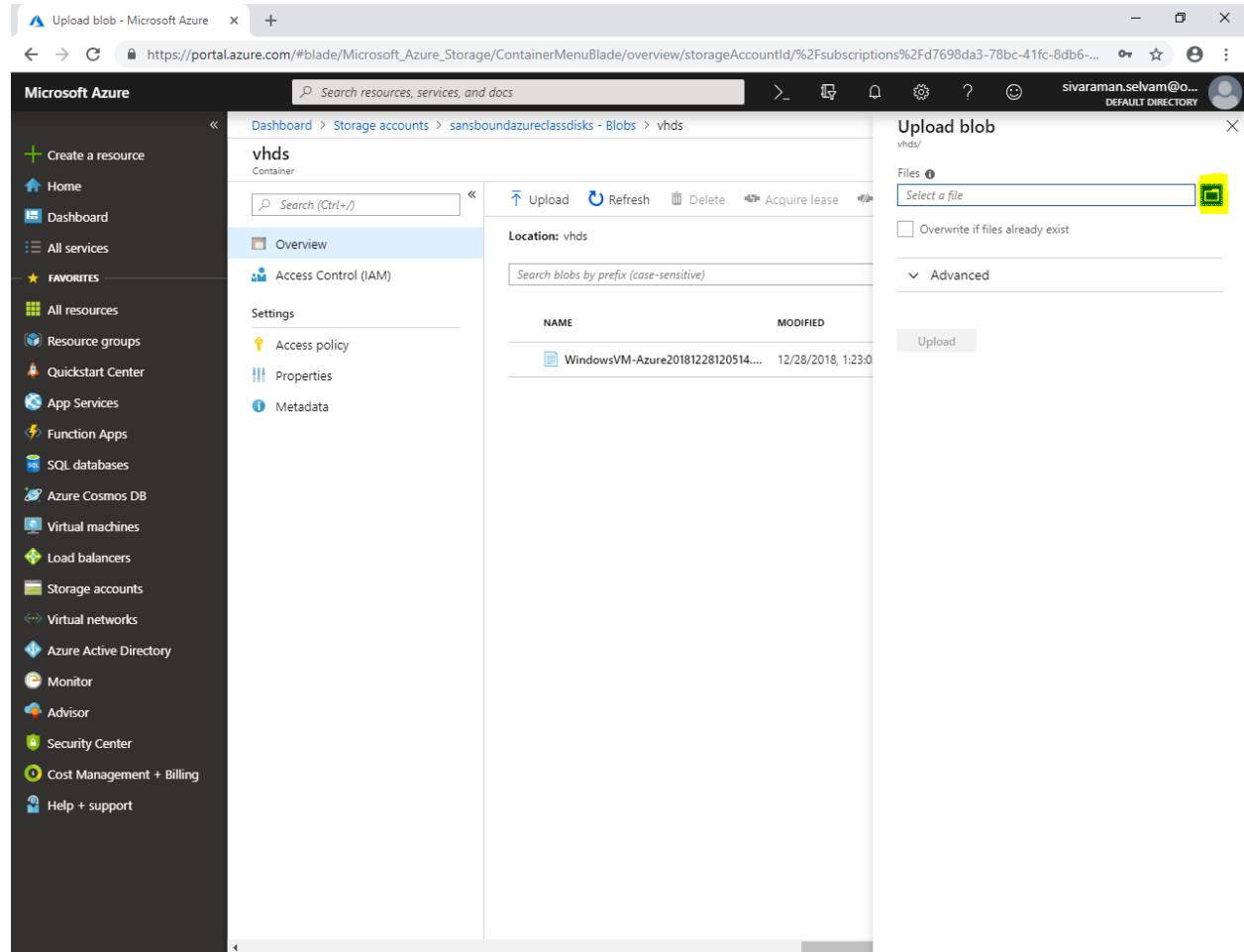
Click “Upload”.



The screenshot shows the Microsoft Azure portal interface. The left sidebar contains a list of services under 'FAVORITES'. The main area displays a 'vhds' container within a storage account. The top navigation bar includes a search bar, user information, and various icons. The 'Upload' button, located in the top right of the container's toolbar, is highlighted with a yellow box. Below it, a table lists a single blob named 'WindowsVM-Azure20181228120514...', which is a page blob of size 127 GiB and is leased.

NAME	MODIFIED	ACCESS TIER	BLOB TYPE	SIZE	LEASE STATE
WindowsVM-Azure20181228120514...	12/28/2018, 1:23:03 PM		Page blob	127 GiB	Leased

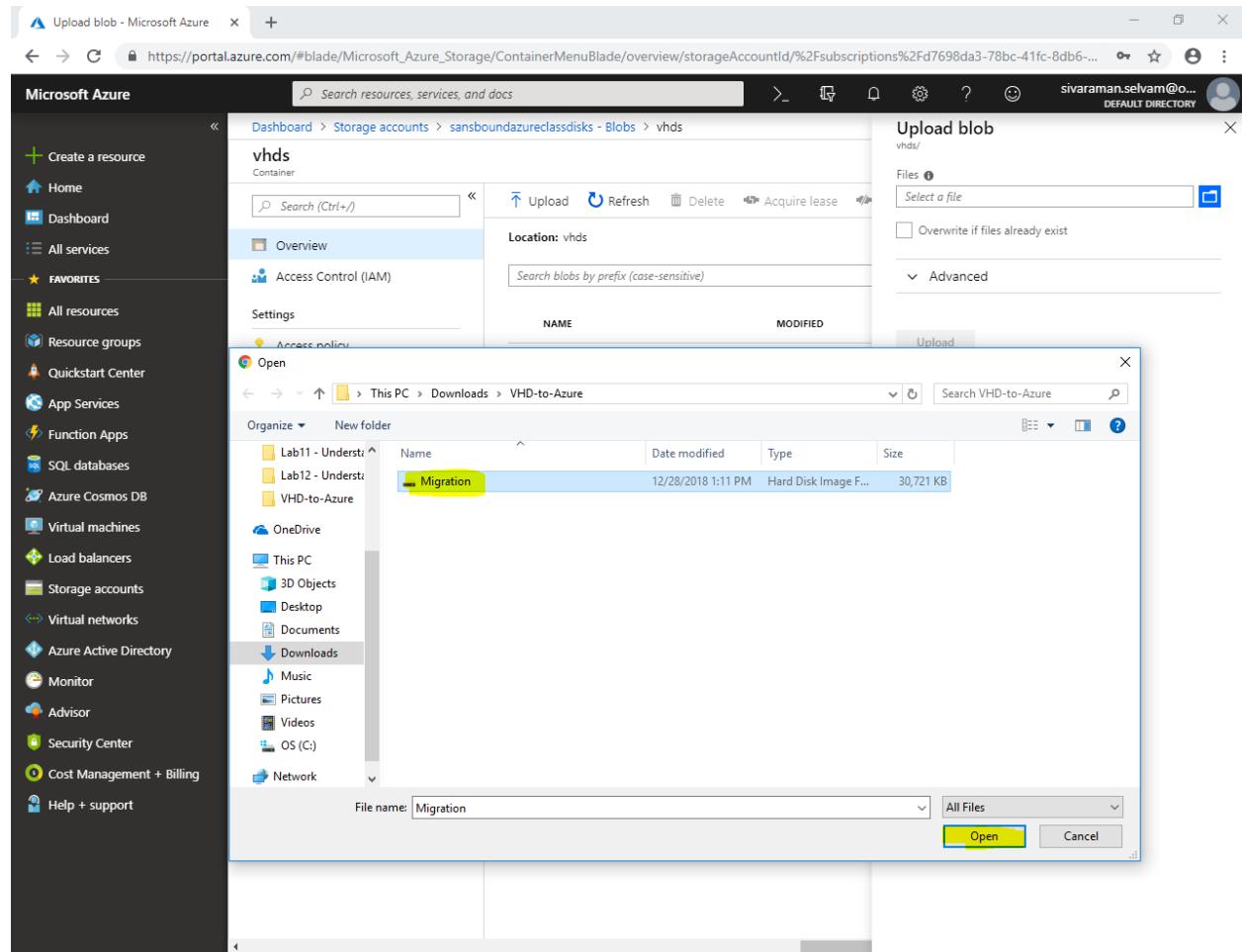
Click “Files” icon to browse the file.



The screenshot shows the Microsoft Azure portal interface. The left sidebar contains a list of services under "FAVORITES". The main area displays a storage account named "sansboundazureclassdisks" with a container named "vhds". The "Overview" tab is selected. On the right, there is a modal window titled "Upload blob" with a "Select a file" input field. A file named "WindowsVM-Azure20181228120514...." is listed in the preview area. The status bar at the bottom indicates "1 item" and "1 item".

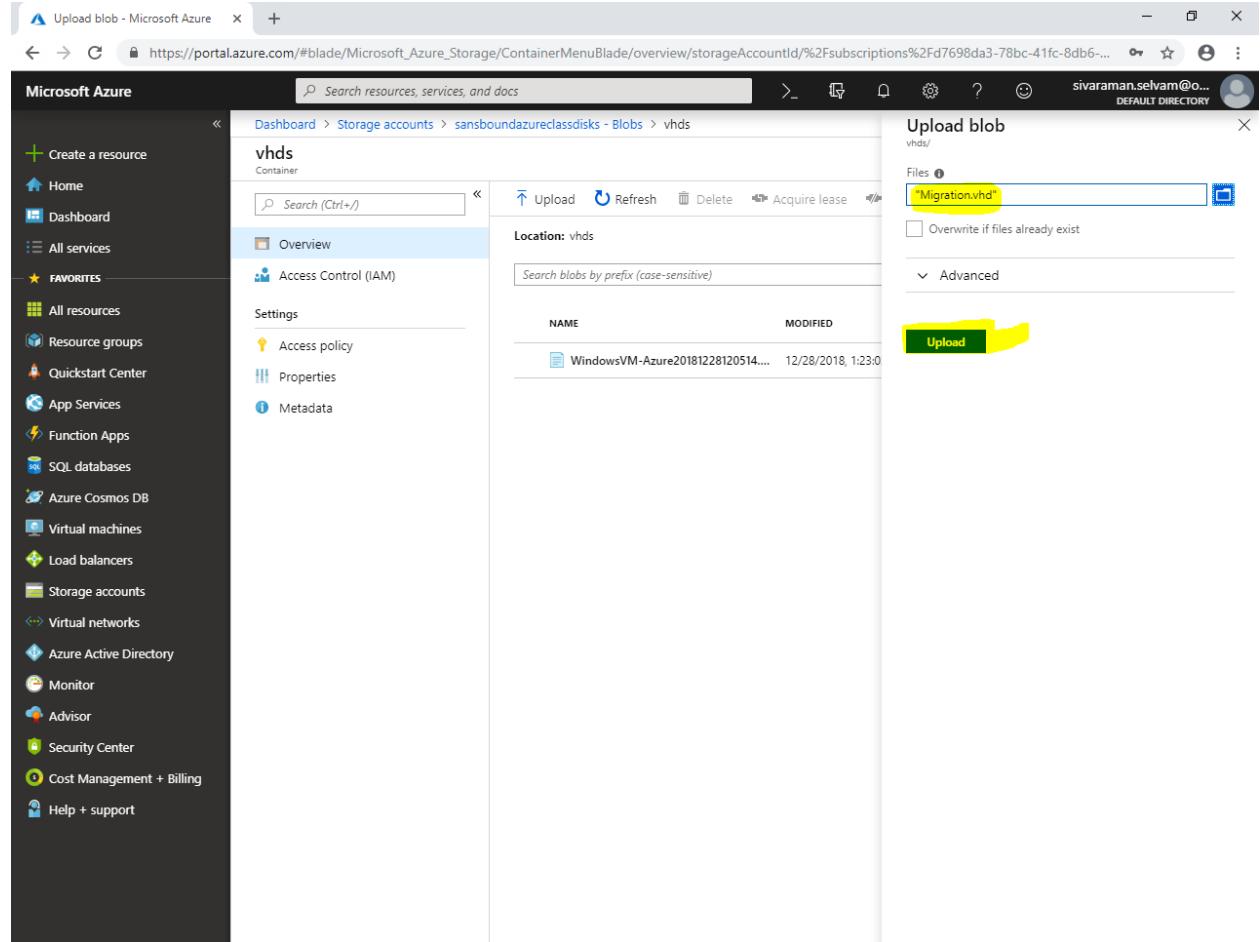
Locate the path of vhd file, and select "**Migration.vhd**" which you have created in your local machine.

Click "**Open**".



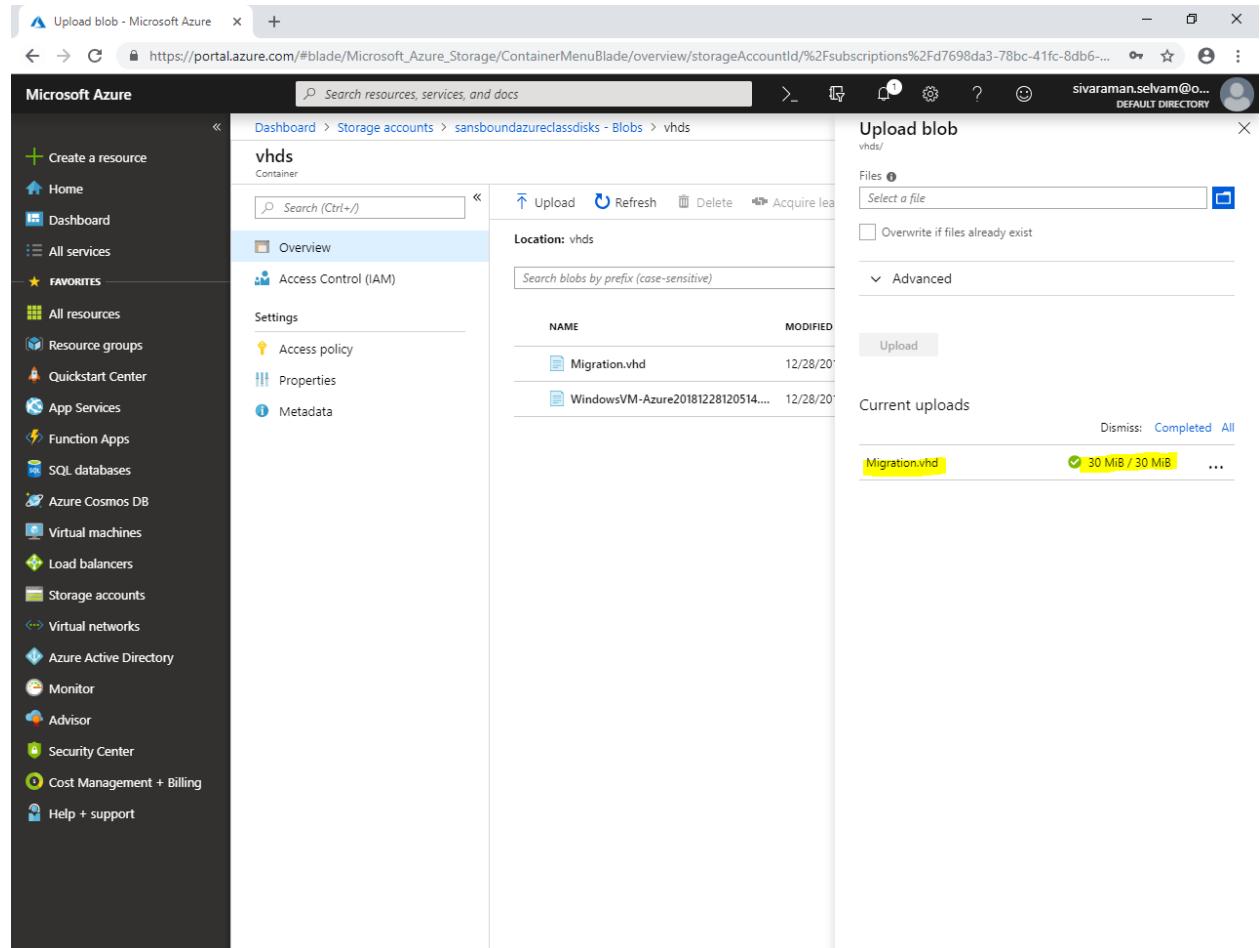
Ensure that selected Files as "**Migration.vhd**".

Click "**Upload**".



The screenshot shows the Microsoft Azure portal interface for uploading a blob. The left sidebar contains a list of services including Home, Dashboard, All services, Favorites (with Storage accounts selected), All resources, Resource groups, Quickstart Center, App Services, Function Apps, SQL databases, Azure Cosmos DB, Virtual machines, Load balancers, Storage accounts, Virtual networks, Azure Active Directory, Monitor, Advisor, Security Center, Cost Management + Billing, and Help + support. The main content area shows the 'vhds' container under 'sansboundazureclassdisks - Blobs'. A sub-menu on the left of this container lists Overview, Access Control (IAM), Settings, Access policy, Properties, and Metadata. The 'Overview' tab is selected. On the right, there is a 'Upload blob' dialog box. It has a 'Files' input field containing 'Migration.vhd' (which is highlighted with a yellow box). Below it is a checkbox for 'Overwrite if files already exist'. At the bottom of the dialog is a large green 'Upload' button, which is also highlighted with a yellow box.

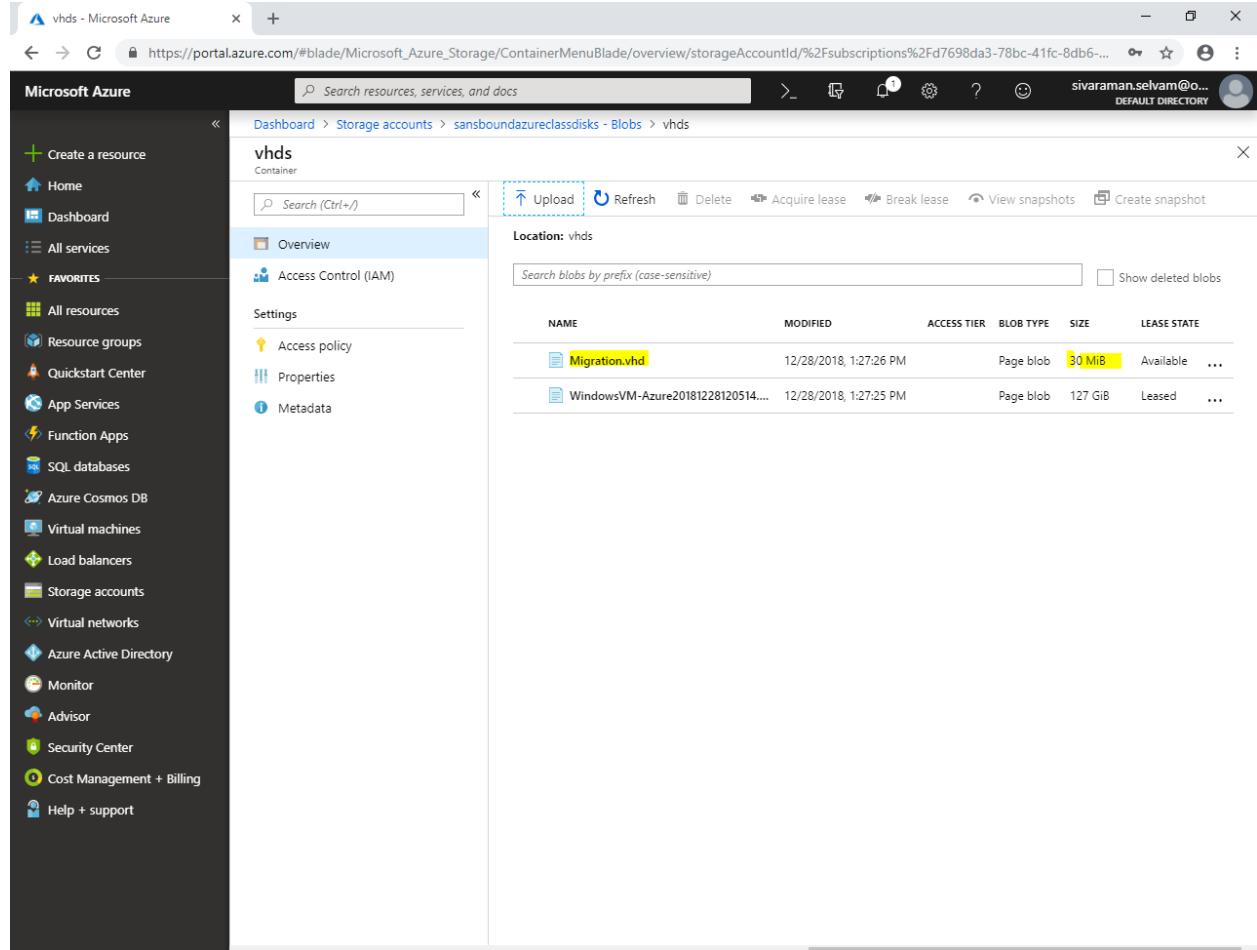
You have successfully uploaded the “Migration.vhd” file to Azure Blob storage.



The screenshot shows the Microsoft Azure portal interface. The left sidebar contains a navigation menu with various services like Home, Dashboard, All services, Favorites, Resource groups, Quickstart Center, App Services, Function Apps, SQL databases, Azure Cosmos DB, Virtual machines, Load balancers, Storage accounts, Virtual networks, Azure Active Directory, Monitor, Advisor, Security Center, Cost Management + Billing, and Help + support. The main content area shows the 'vhds' container within the 'sansboundazureclassdisks' storage account under the 'Blobs' section. The 'Overview' tab is selected. On the right, an 'Upload blob' dialog is open, showing the file 'Migration.vhd' has been uploaded successfully. The status bar at the bottom indicates '30 MiB / 30 MiB'.

NAME	MODIFIED
Migration.vhd	12/28/2018
WindowsVM-Azure20181228120514....	12/28/2018

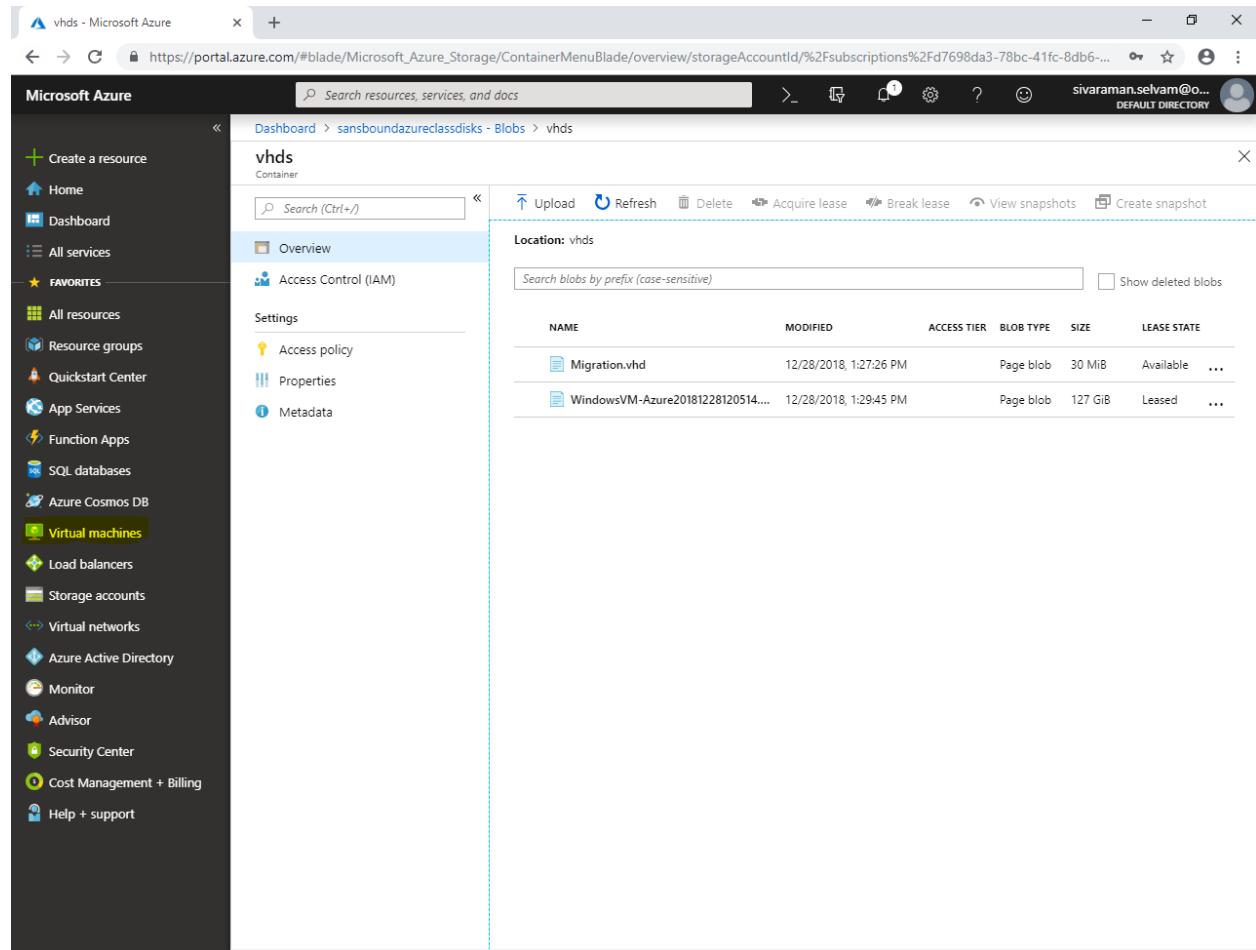
In “Migration.vhd” ensure the Size as “30 MB”.



The screenshot shows the Microsoft Azure portal interface. The left sidebar is the navigation menu, and the main area is the "vhds" container under the "Storage accounts" section. The "Overview" tab is selected. A table lists two blobs:

NAME	MODIFIED	ACCESS TIER	BLOB TYPE	SIZE	LEASE STATE
Migration.vhd	12/28/2018, 1:27:26 PM	Page blob	30 MiB	Available	...
WindowsVM-Azure20181228120514....	12/28/2018, 1:27:25 PM	Page blob	127 GiB	Leased	...

Click “Virtual machines” in left side panel.

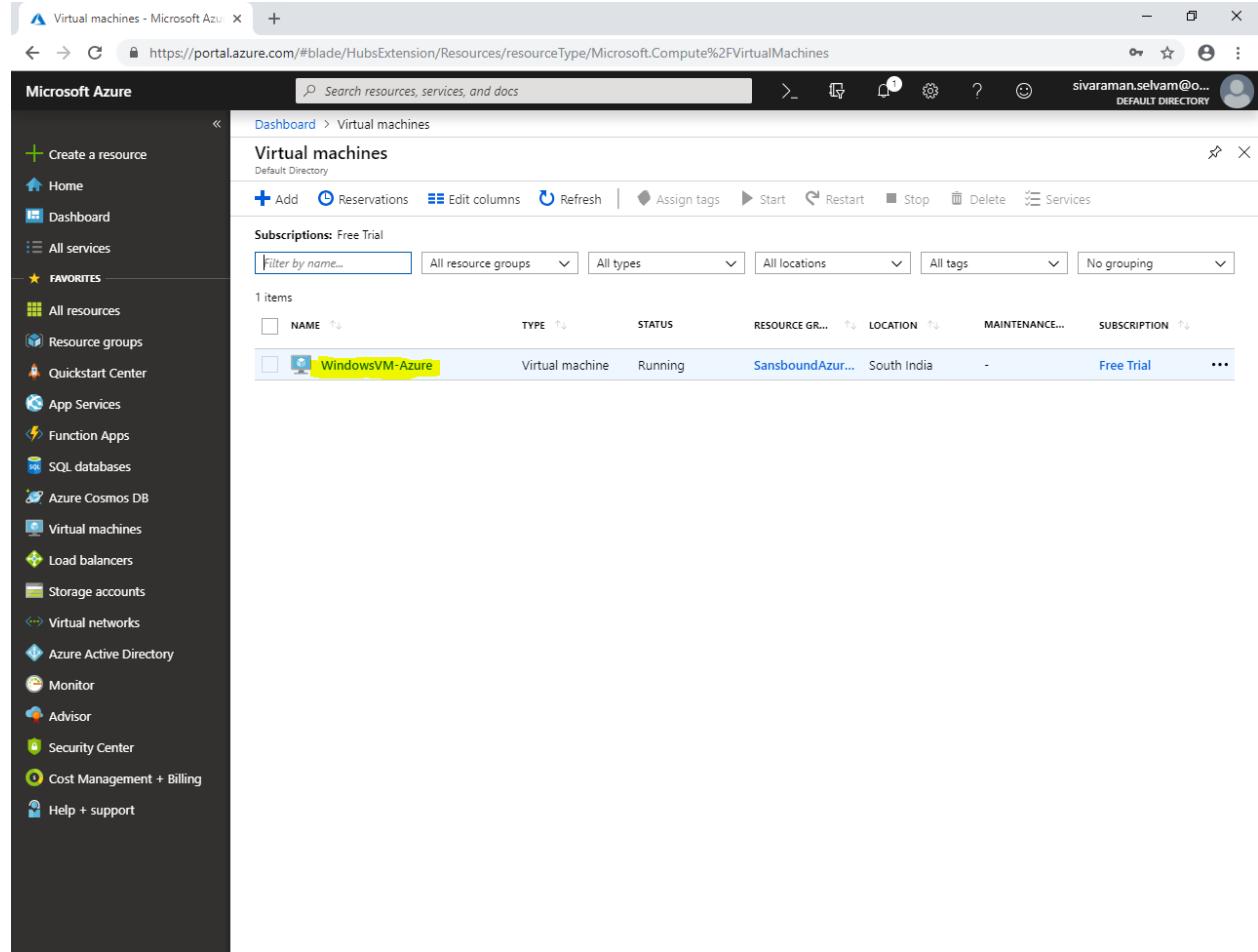


The screenshot shows the Microsoft Azure portal interface. The left sidebar is dark-themed and lists various services. The 'Virtual machines' link is highlighted with a yellow box. The main content area shows the 'vhds' container within the 'sansboundazureclassdisks - Blobs' storage account. The 'Overview' tab is selected. The table below lists two blobs:

NAME	MODIFIED	ACCESS TIER	BLOB TYPE	SIZE	LEASE STATE
Migration.vhd	12/28/2018, 1:27:26 PM	Page blob	30 MiB	Available	...
WindowsVM-Azure20181228120514....	12/28/2018, 1:29:45 PM	Page blob	127 GiB	Leased	...

In “Virtual machines”,

Click “WindowsVM-Azure”.



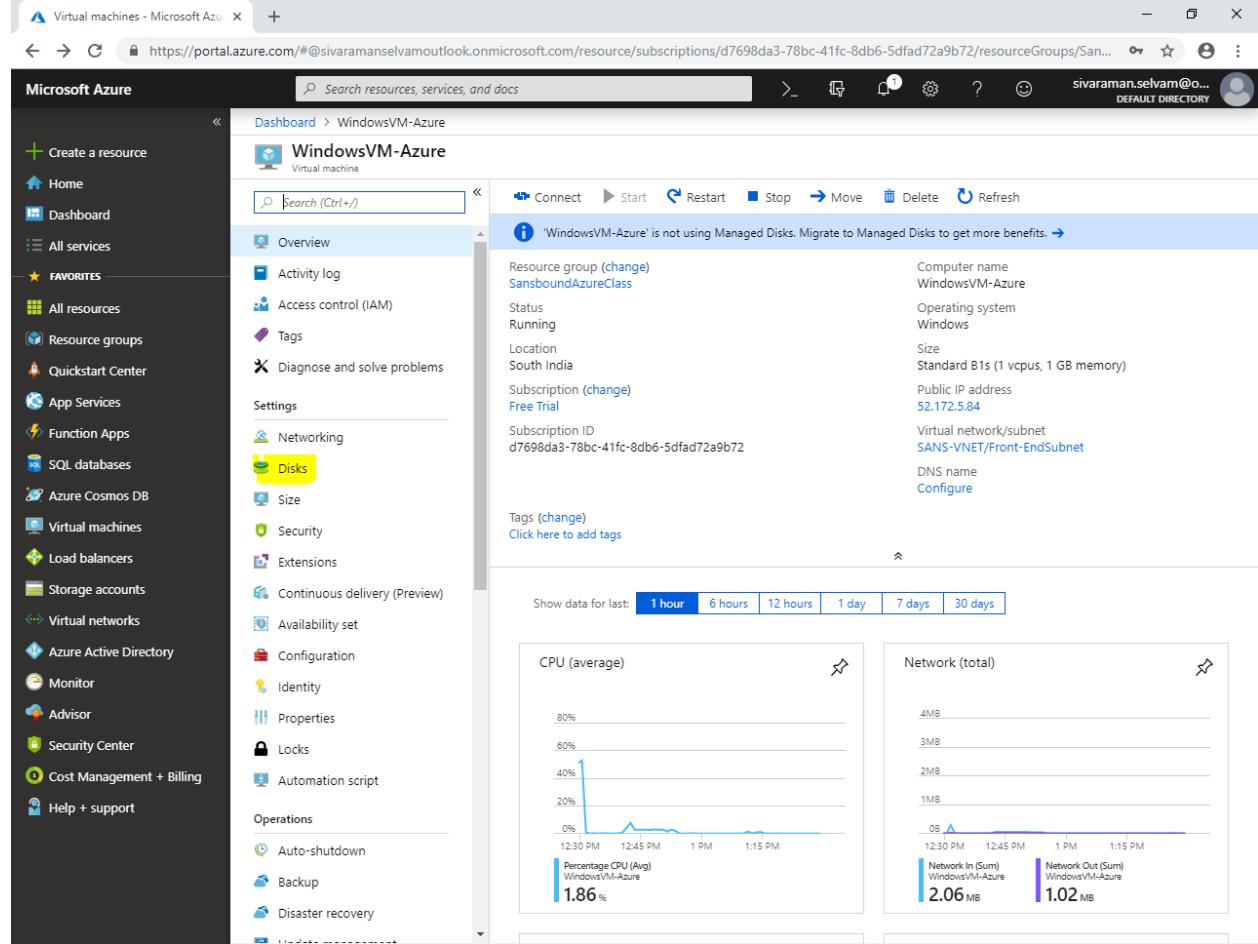
The screenshot shows the Microsoft Azure portal interface. On the left, there is a navigation sidebar with various service icons. The main area is titled "Virtual machines". At the top of this section, there are several buttons: "+ Add", "Reservations", "Edit columns", "Refresh", "Assign tags", "Start", "Restart", "Stop", "Delete", and "Services". Below these buttons, there is a search bar labeled "Filter by name..." and dropdown menus for "All resource groups", "All types", "All locations", "All tags", and "No grouping". A table titled "Subscriptions: Free Trial" displays one item:

NAME	TYPE	STATUS	RESOURCE GR...	LOCATION	MAINTENANCE...	SUBSCRIPTION
WindowsVM-Azure	Virtual machine	Running	SansboundAzur...	South India	-	Free Trial

Now we have required to attach the blob storage in existing virtual machine.

In “WindowsVM-Azure”.

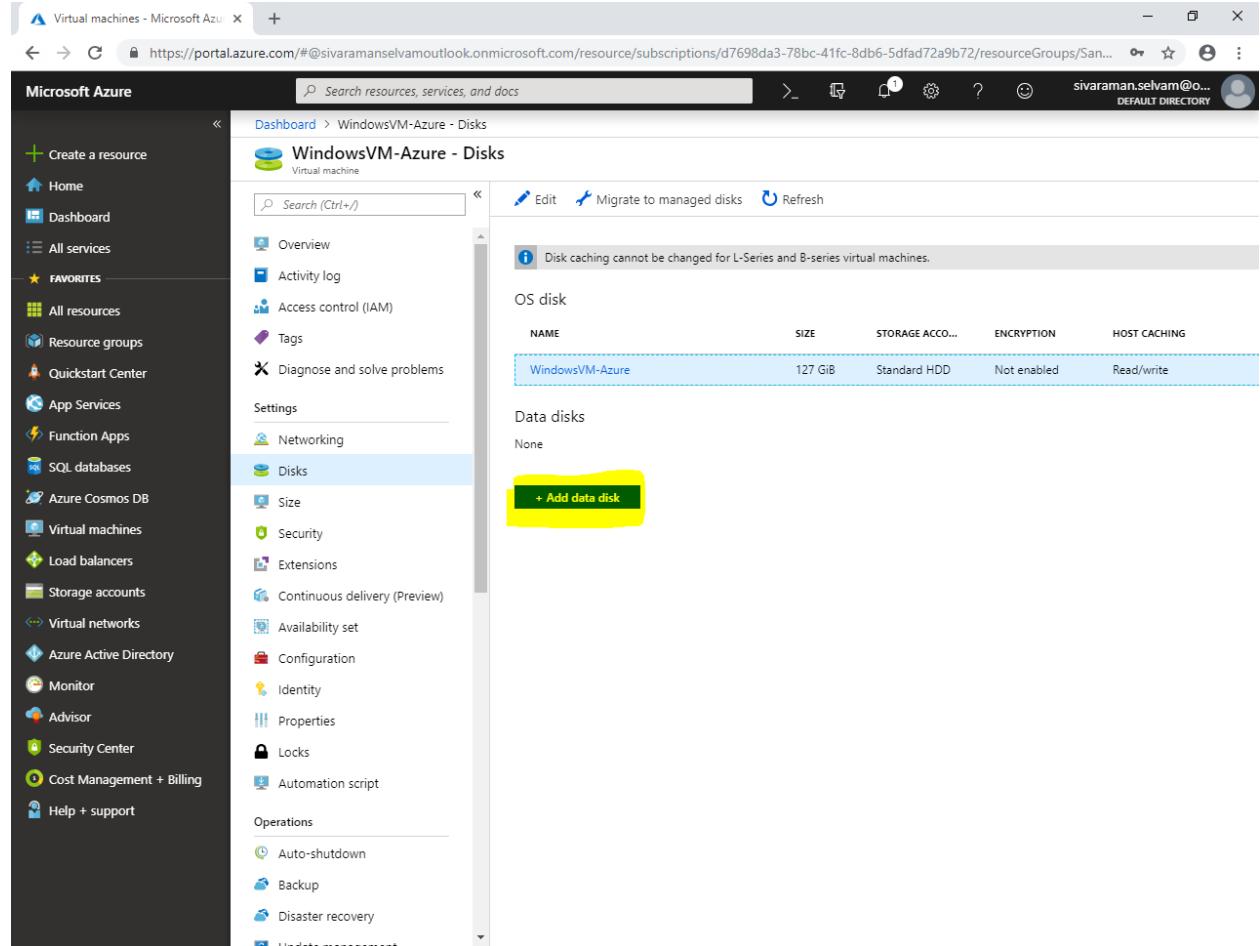
Click “Disks”.



The screenshot shows the Microsoft Azure portal interface for a virtual machine named "WindowsVM-Azure". The left sidebar contains a navigation menu with various services like Home, Dashboard, All services, Favorites, and more. The "Disks" option under the "Virtual machines" section is highlighted with a yellow box. The main content area displays the VM's details, including its resource group (SansboundAzureClass), status (Running), location (South India), subscription (Free Trial), and public IP address (52.172.5.84). It also shows the VM's computer name (WindowsVM-Azure), operating system (Windows), size (Standard B1s), and network information (Virtual network/subnet SANS-VNET/Front-EndSubnet). Below this, there are two charts: "CPU (average)" showing usage at 1.86% and "Network (total)" showing network in (2.06 MB) and network out (1.02 MB).

In “WindowsVM-Azure – Disks”.

Click “Add data disk”.

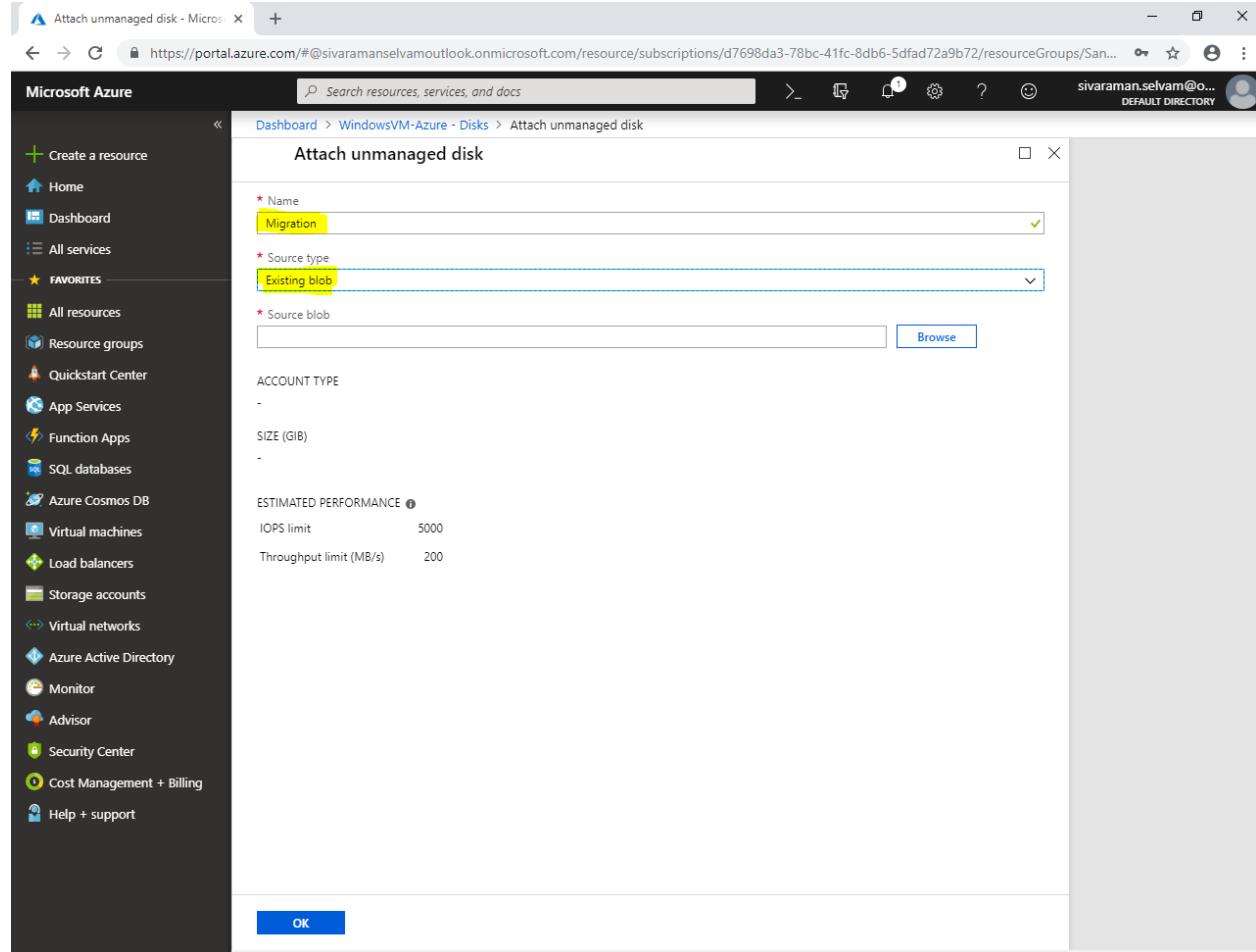


The screenshot shows the Microsoft Azure portal interface. The left sidebar is filled with various service icons under categories like Home, All services, Favorites, and Virtual machines. The main content area is titled "WindowsVM-Azure - Disks". It displays an OS disk named "WindowsVM-Azure" with details: Size 127 GB, Storage Account Standard HDD, Encryption Not enabled, and Host Caching Read/write. Below this, a section for "Data disks" shows "None" and features a prominent yellow button labeled "+ Add data disk".

In “Attach unmanaged disk”

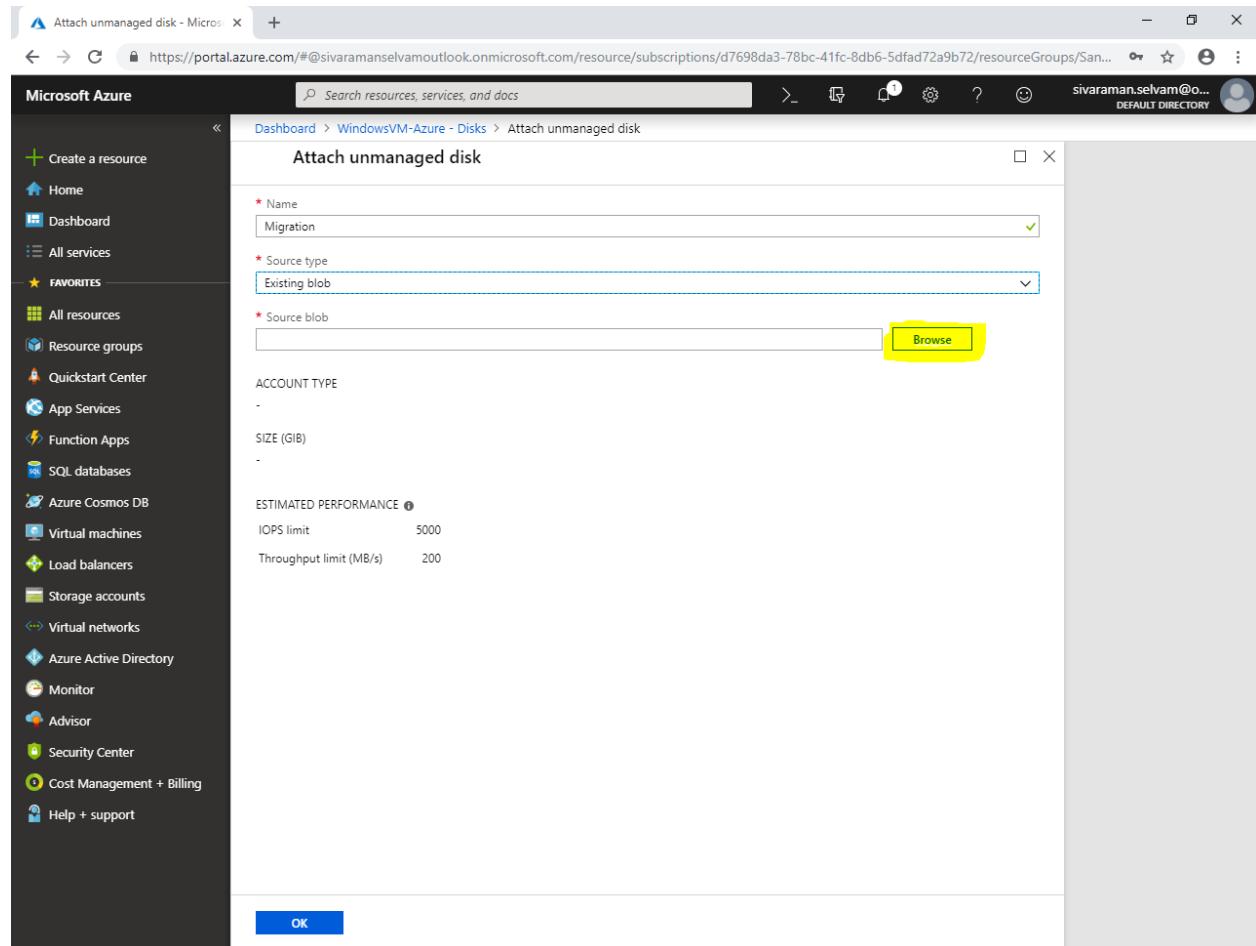
Type disk “Name” as “Migration”.

Select “Source Type” as “Existing blob”.



The screenshot shows the Microsoft Azure portal interface. On the left, there is a sidebar with various service icons and links such as Home, Dashboard, All services, Resource groups, Quickstart Center, App Services, Function Apps, SQL databases, Azure Cosmos DB, Virtual machines, Load balancers, Storage accounts, Virtual networks, Azure Active Directory, Monitor, Advisor, Security Center, Cost Management + Billing, and Help + support. The main content area is titled "Attach unmanaged disk". It has three input fields: "Name" (containing "Migration"), "Source type" (containing "Existing blob"), and "Source blob" (with a "Browse" button). Below these fields, there is a section titled "ACCOUNT TYPE" with a "SIZE (GB)" field. Under "ESTIMATED PERFORMANCE", it shows "IOPS limit" as 5000 and "Throughput limit (MB/s)" as 200. At the bottom of the dialog box is a blue "OK" button.

Click "Browse".

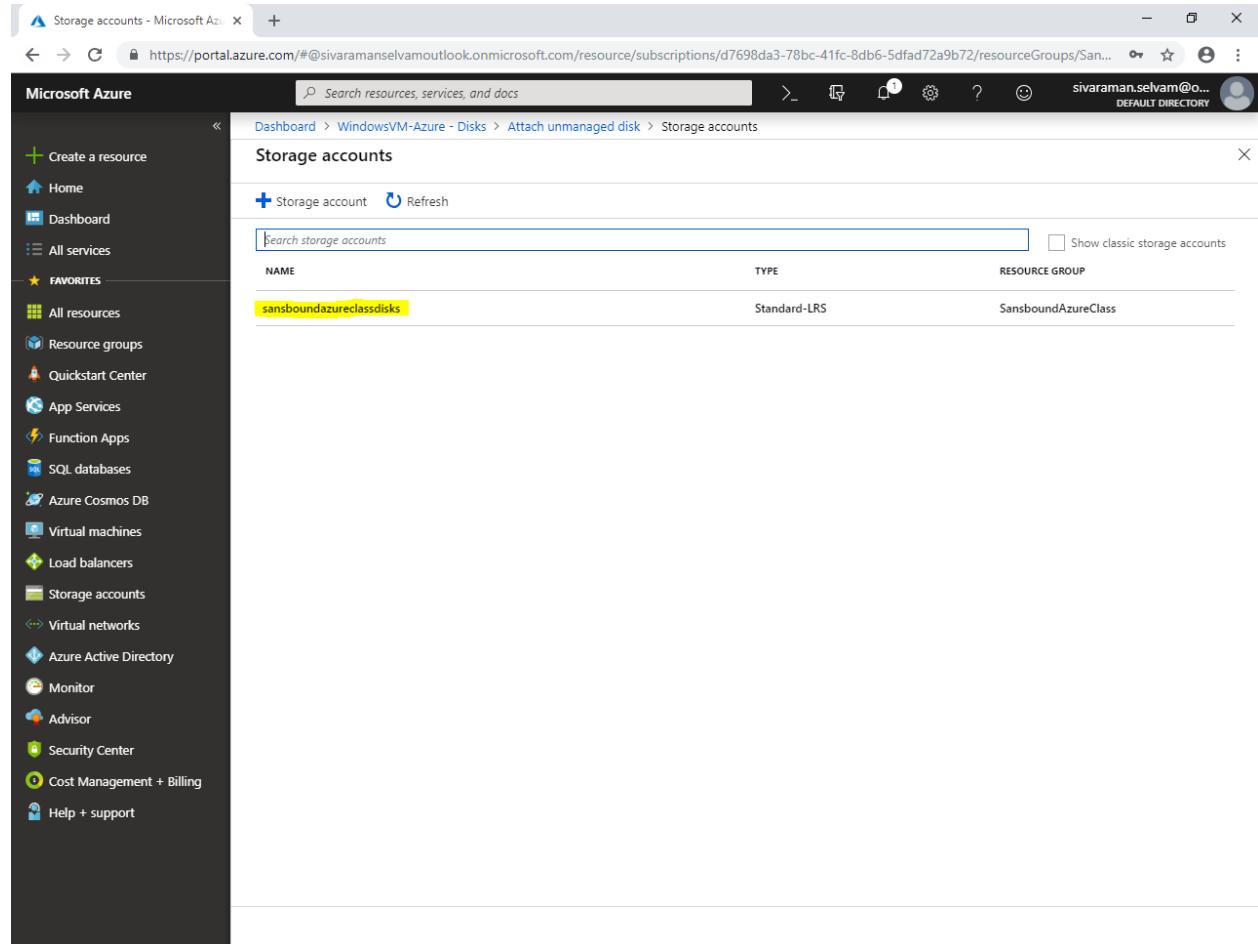


The screenshot shows the Microsoft Azure portal interface. On the left, there's a sidebar with various service icons under 'FAVORITES'. The main area is titled 'Attach unmanaged disk' and contains the following fields:

- * Name: Migration
- * Source type: Existing blob (highlighted with a yellow box)
- * Source blob: An input field with a 'Browse' button to its right (also highlighted with a yellow box).
- ACCOUNT TYPE: A dropdown menu.
- SIZE (GiB): A dropdown menu.
- ESTIMATED PERFORMANCE:
 - IOPS limit: 5000
 - Throughput limit (MB/s): 200

At the bottom right of the dialog is a blue 'OK' button.

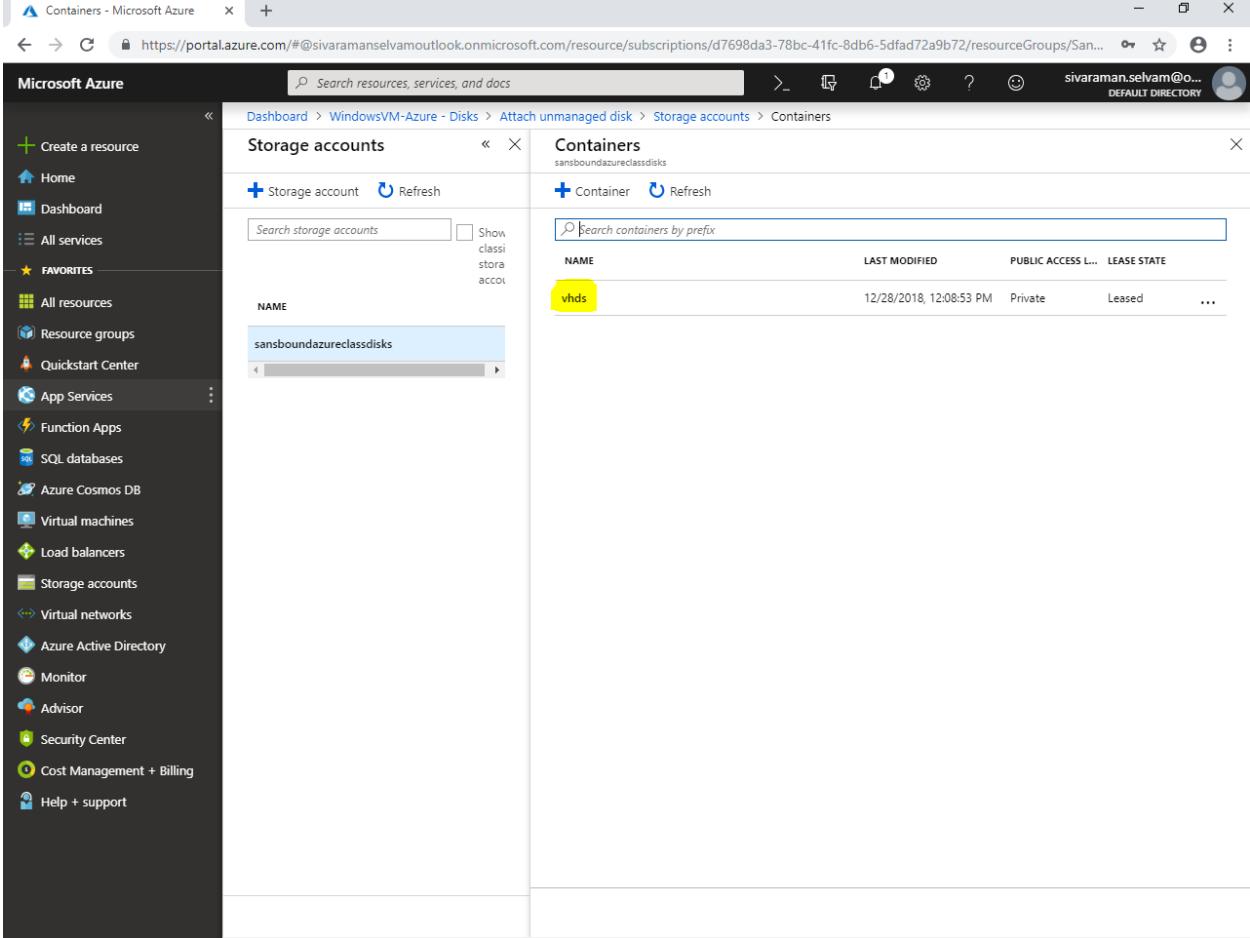
Click the “**Storage accounts**” which you are going to use.



The screenshot shows the Microsoft Azure portal interface. The left sidebar is dark-themed and includes a 'FAVORITES' section with links to All resources, Resource groups, Quickstart Center, App Services, Function Apps, SQL databases, Azure Cosmos DB, Virtual machines, Load balancers, Storage accounts, Virtual networks, Azure Active Directory, Monitor, Advisor, Security Center, Cost Management + Billing, and Help + support. The main content area has a light background and displays the 'Storage accounts' page. At the top, there's a breadcrumb trail: Dashboard > WindowsVM-Azure - Disks > Attach unmanaged disk > Storage accounts. Below the breadcrumb is a search bar labeled 'Search resources, services, and docs'. A 'Storage accounts' section header is followed by a 'Storage account' button and a 'Refresh' button. A search input field contains the text 'sansboundazureclassdisks'. A checkbox labeled 'Show classic storage accounts' is unchecked. A table lists one storage account entry:

NAME	TYPE	RESOURCE GROUP
sansboundazureclassdisks	Standard-LRS	SansboundAzureClass

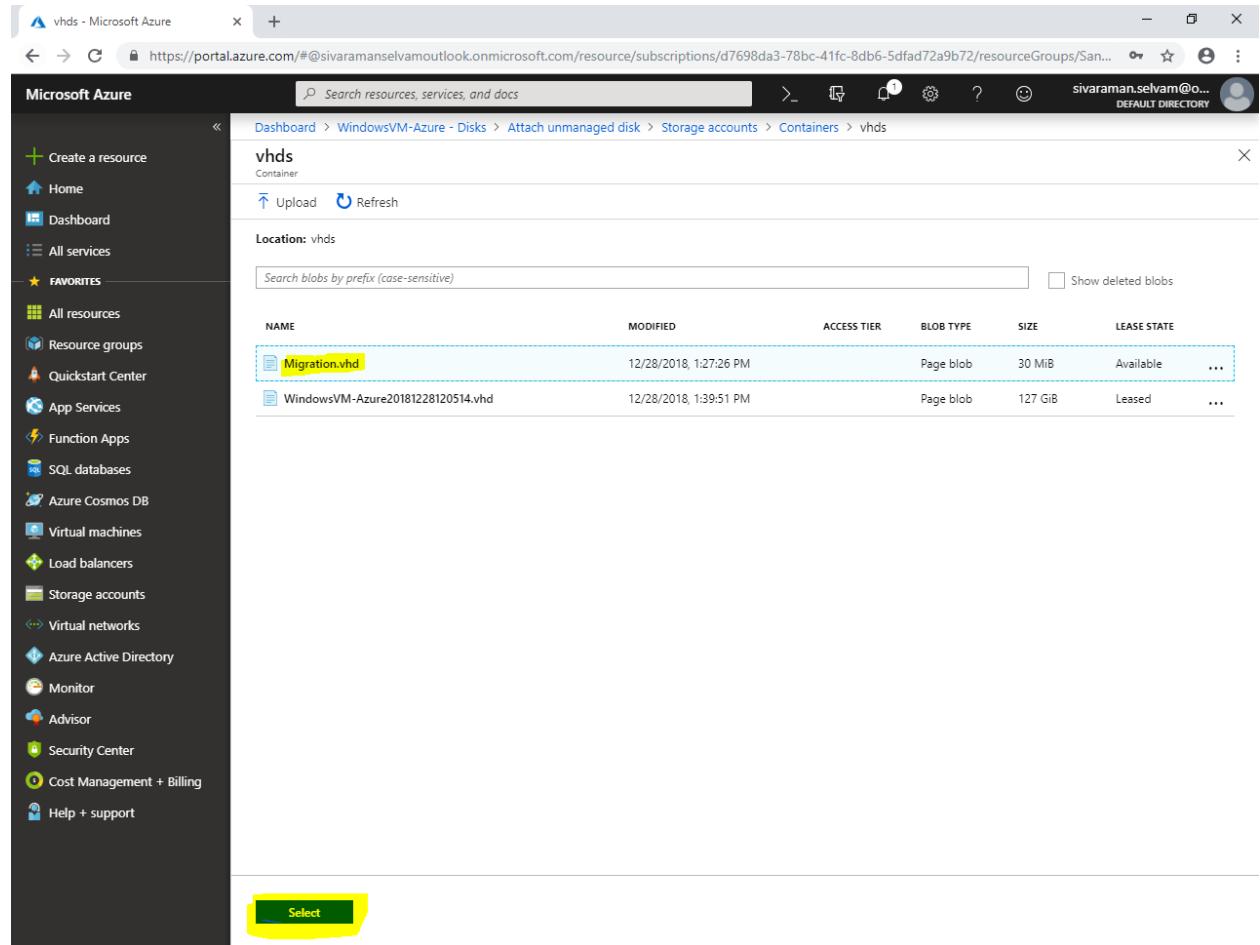
Click “vhds”.



The screenshot shows the Microsoft Azure portal interface. The left sidebar contains a list of services: Create a resource, Home, Dashboard, All services, Favorites (All resources, Resource groups, Quickstart Center, App Services, Function Apps, SQL databases, Azure Cosmos DB, Virtual machines, Load balancers, Storage accounts, Virtual networks, Azure Active Directory, Monitor, Advisor, Security Center, Cost Management + Billing, and Help + support. The main content area is titled "Containers" under "Storage accounts". It shows a list of containers for the storage account "sansboundazureclassdisks". One container, "vhds", is highlighted with a yellow box. The table has columns for NAME, LAST MODIFIED, PUBLIC ACCESS L..., and LEASE STATE. The "vhds" row shows the value "12/28/2018, 12:08:53 PM" for LAST MODIFIED, "Private" for PUBLIC ACCESS L..., and "Leased" for LEASE STATE.

NAME	LAST MODIFIED	PUBLIC ACCESS L...	LEASE STATE
vhds	12/28/2018, 12:08:53 PM	Private	Leased

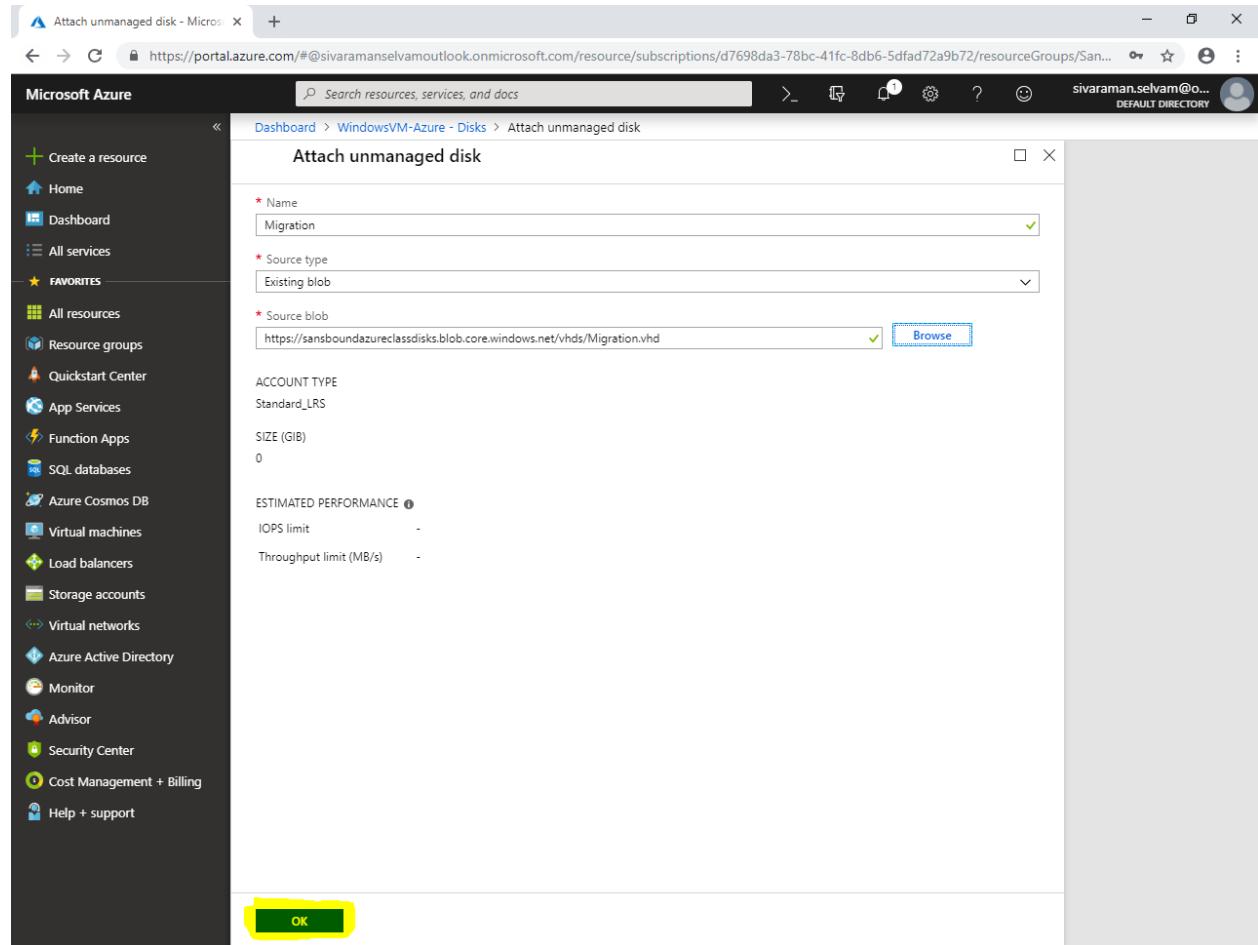
Select “**Migration.vhd**” and click “**Select**”.



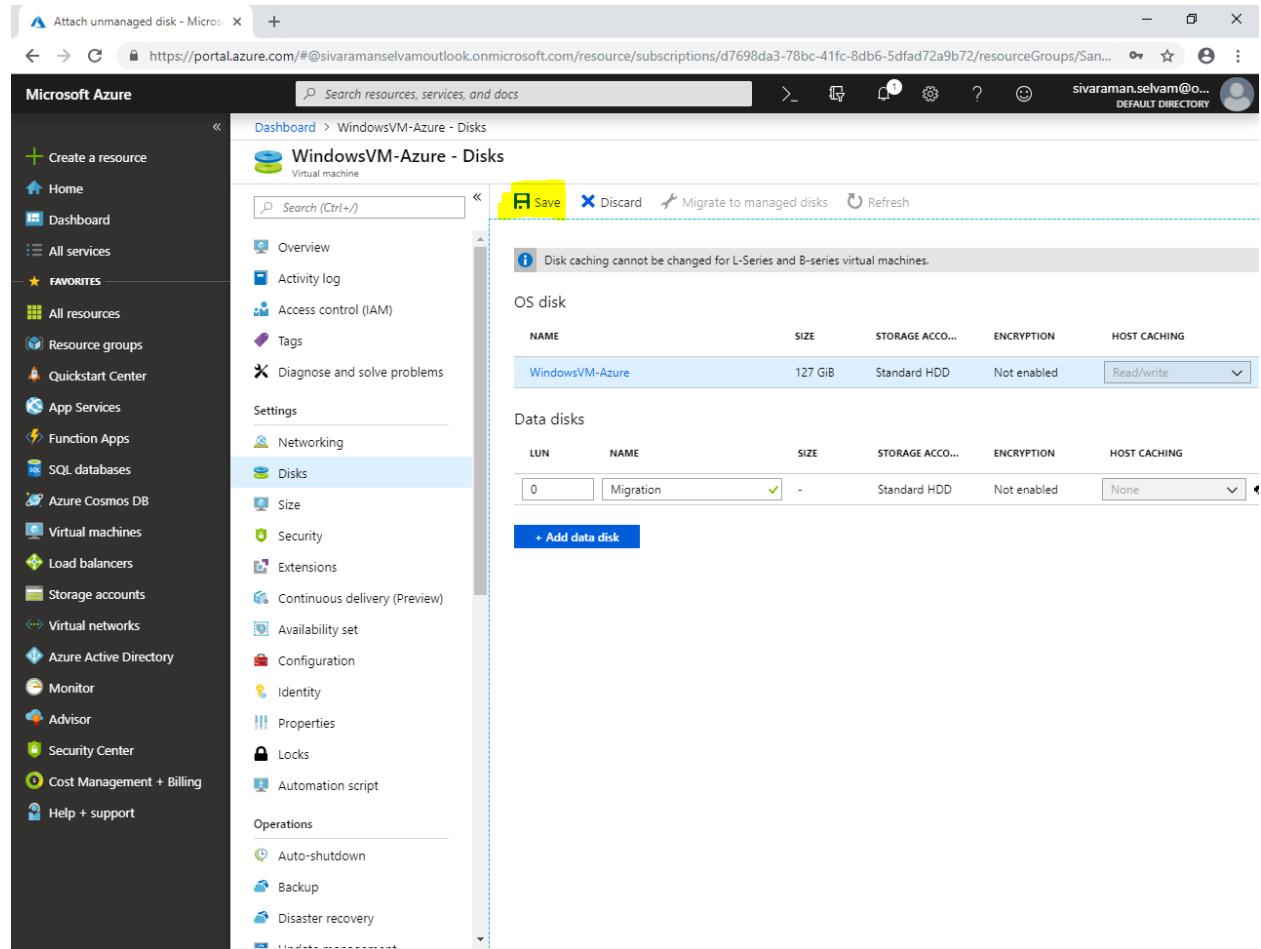
The screenshot shows the Microsoft Azure portal interface. The left sidebar contains a list of services under 'FAVORITES'. The main content area displays a table of blobs in the 'vhds' container. The blob 'Migration.vhd' is highlighted with a yellow box. At the bottom of the table, there is a large yellow box highlighting the 'Select' button.

NAME	MODIFIED	ACCESS TIER	BLOB TYPE	SIZE	LEASE STATE
Migration.vhd	12/28/2018, 1:27:26 PM		Page blob	30 MiB	Available
WindowsVM-Azure20181228120514.vhd	12/28/2018, 1:39:51 PM		Page blob	127 GiB	Leased

Click "Ok".



Click “Save”.



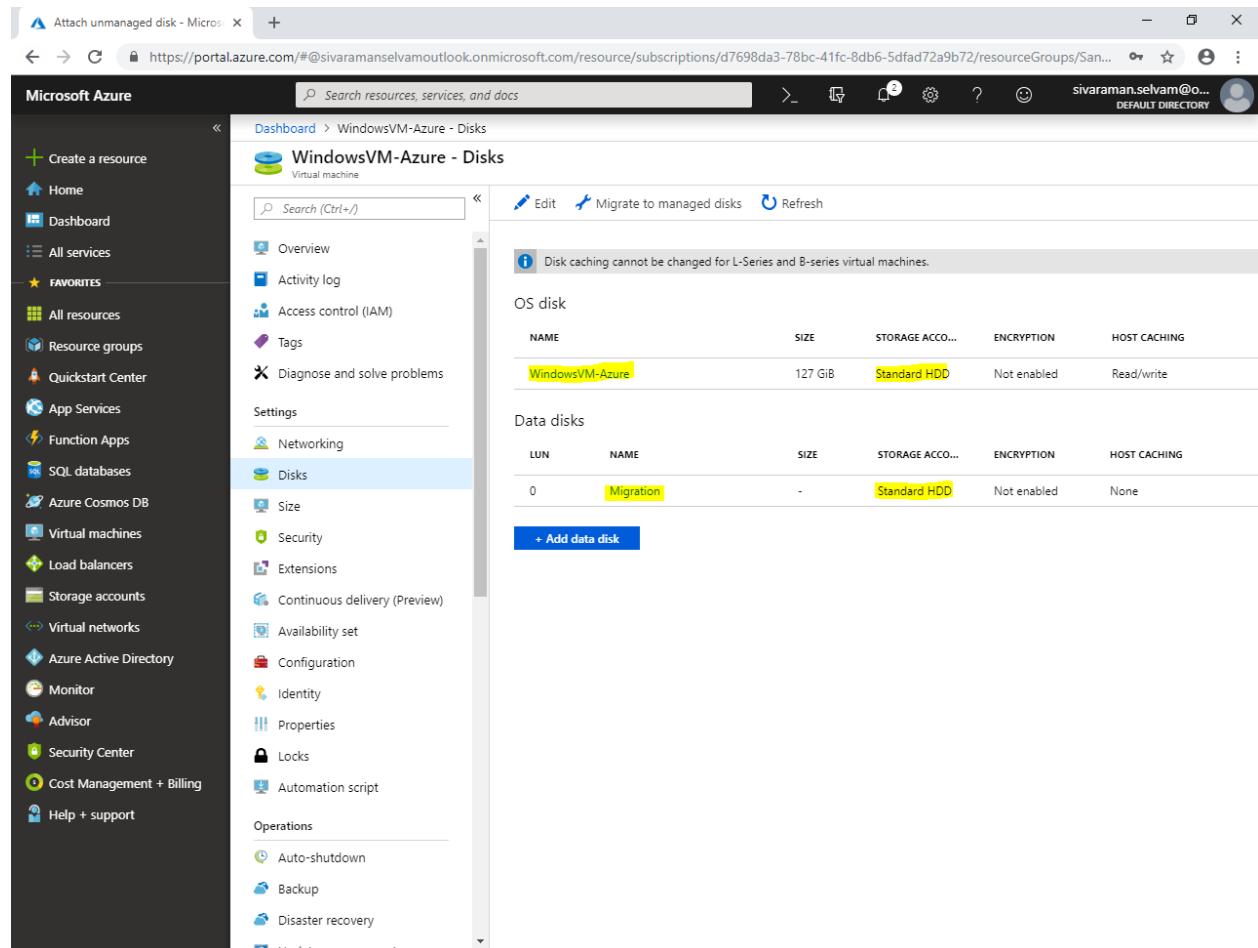
The screenshot shows the Microsoft Azure portal interface. The left sidebar contains a list of services and resources. The main content area is titled "WindowsVM-Azure - Disks" under the "Virtual machine" category. The "OS disk" section shows a single disk entry for "WindowsVM-Azure". The "Data disks" section shows one disk entry named "Migration". The "Save" button is highlighted with a yellow box. A status message at the top right says "Disk caching cannot be changed for L-Series and B-series virtual machines.".

NAME	SIZE	STORAGE ACCO...	ENCRYPTION	HOST CACHING
WindowsVM-Azure	127 GiB	Standard HDD	Not enabled	Read/write

LUN	NAME	SIZE	STORAGE ACCO...	ENCRYPTION	HOST CACHING
0	Migration	-	Standard HDD	Not enabled	None

In “Disks”,

You are able to see OS disk and Data disks.



The screenshot shows the Microsoft Azure portal's Disks page for a virtual machine named "WindowsVM-Azure".

OS Disk:

NAME	SIZE	STORAGE ACCO...	ENCRYPTION	HOST CACHING
WindowsVM-Azure	127 GiB	Standard HDD	Not enabled	Read/write

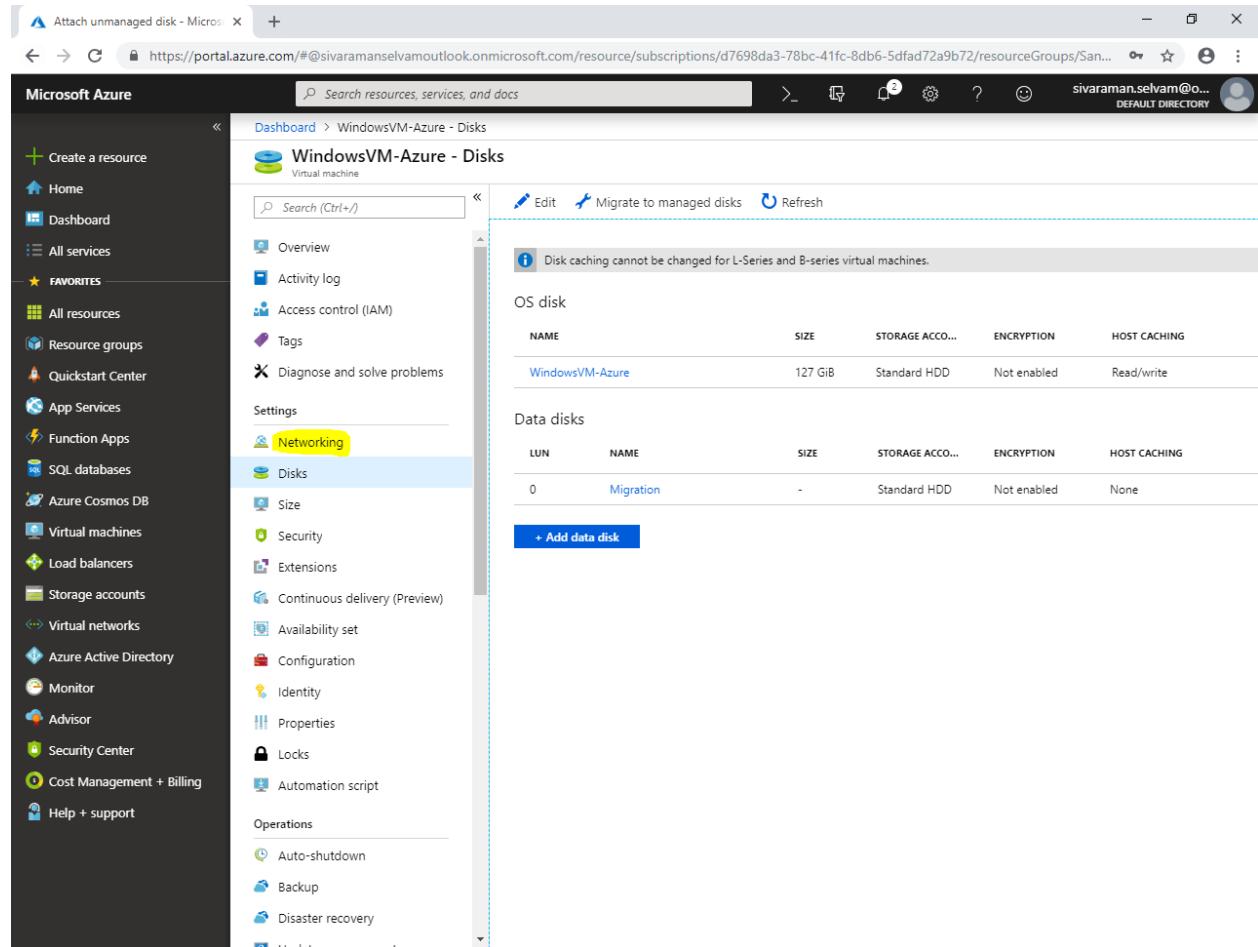
Data disks:

LUN	NAME	SIZE	STORAGE ACCO...	ENCRYPTION	HOST CACHING
0	Migration	-	Standard HDD	Not enabled	None

Actions:

- + Add data disk

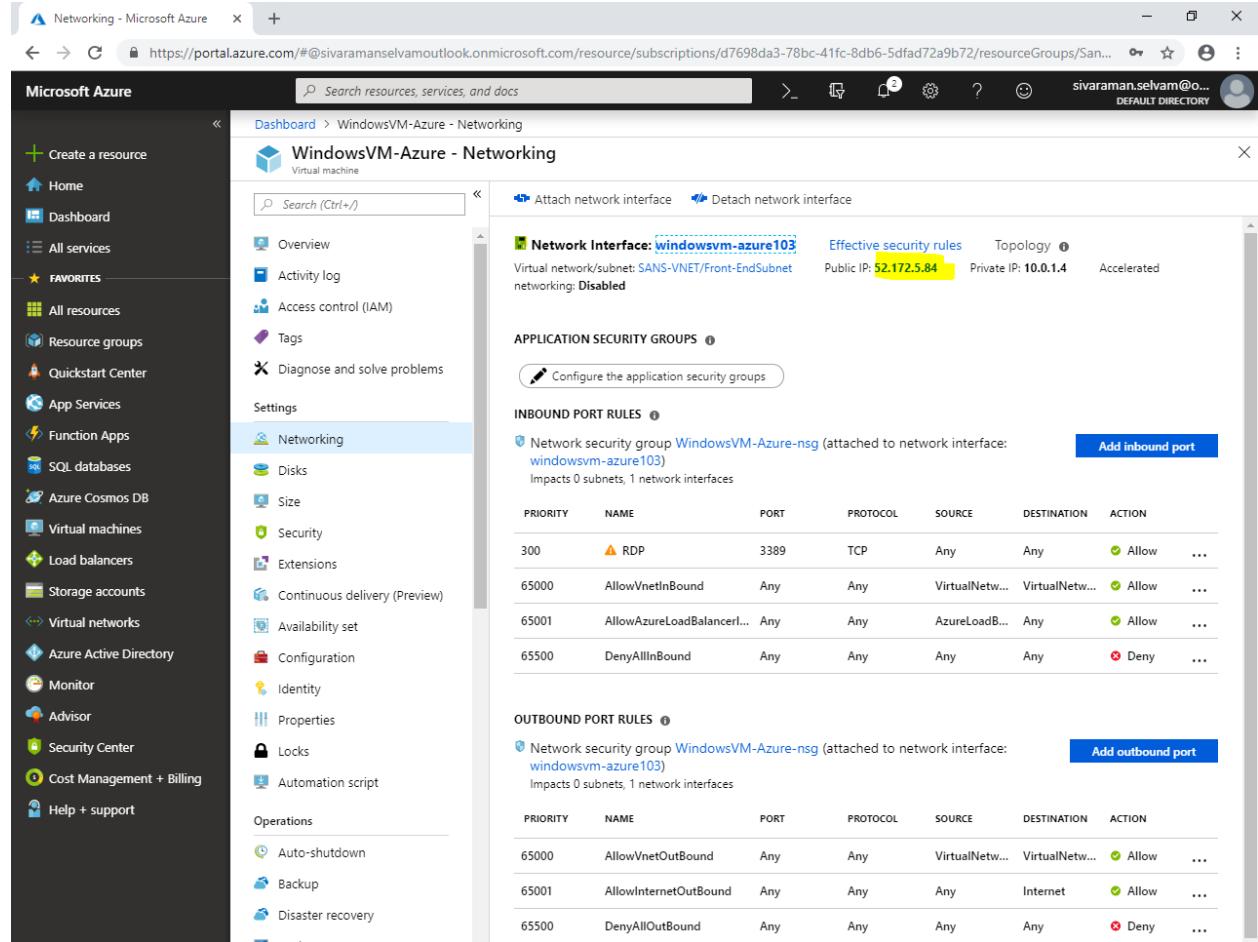
Click “Networking”.



The screenshot shows the Microsoft Azure portal interface. The left sidebar is open, displaying various service categories. Under the 'Virtual machines' section, the 'Networking' option is highlighted with a yellow box. The main content area is titled 'WindowsVM-Azure - Disks' and shows disk management settings. A message at the top states: 'Disk caching cannot be changed for L-Series and B-series virtual machines.' Below this, there are two tables: 'OS disk' and 'Data disks'. The 'OS disk' table shows one entry for 'WindowsVM-Azure' with a size of 127 GiB, standard HDD storage, and no encryption. The 'Data disks' table shows one entry for 'Migration' with a size of -, standard HDD storage, and no encryption. A blue button labeled '+ Add data disk' is visible at the bottom of the data disk table.

In “Networking”.

Kindly note the Public IP address to connect windows Server 2008 R2 through RDP.



Network Interface: windowsvm-azure103

Virtual network/subnet: SANS-VNET/Front-EndSubnet
Public IP: **52.172.5.84** Private IP: 10.0.1.4 Accelerated networking: Disabled

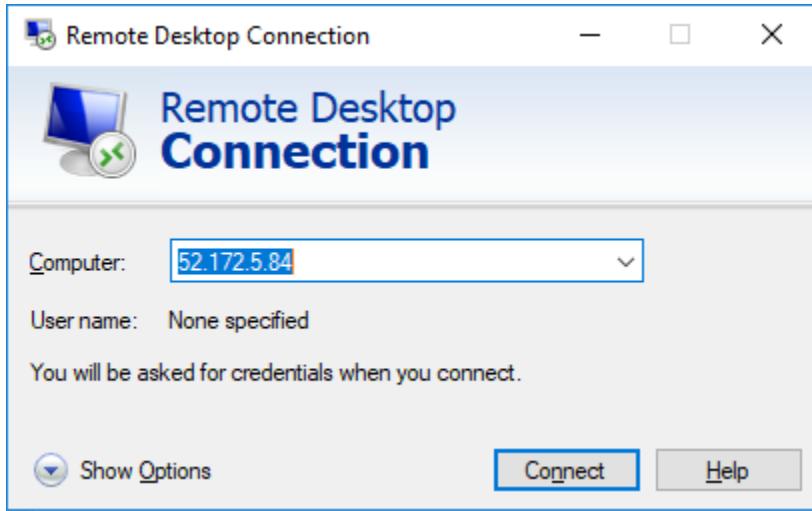
PRIORITY	NAME	PORT	PROTOCOL	SOURCE	DESTINATION	ACTION
300	⚠️ RDP	3389	TCP	Any	Any	Allow
65000	AllowVnetInBound	Any	Any	VirtualNetw...	VirtualNetw...	Allow
65001	AllowAzureLoadBalancer...	Any	Any	AzureLoadB...	Any	Allow
65500	DenyAllInBound	Any	Any	Any	Any	Deny

PRIORITY	NAME	PORT	PROTOCOL	SOURCE	DESTINATION	ACTION
65000	AllowVnetOutBound	Any	Any	VirtualNetw...	VirtualNetw...	Allow
65001	AllowInternetOutBound	Any	Any	Any	Internet	Allow
65500	DenyAllOutBound	Any	Any	Any	Any	Deny

In your local machine,

Type “**mstsc**” in “Run” box and press “**Enter**”.

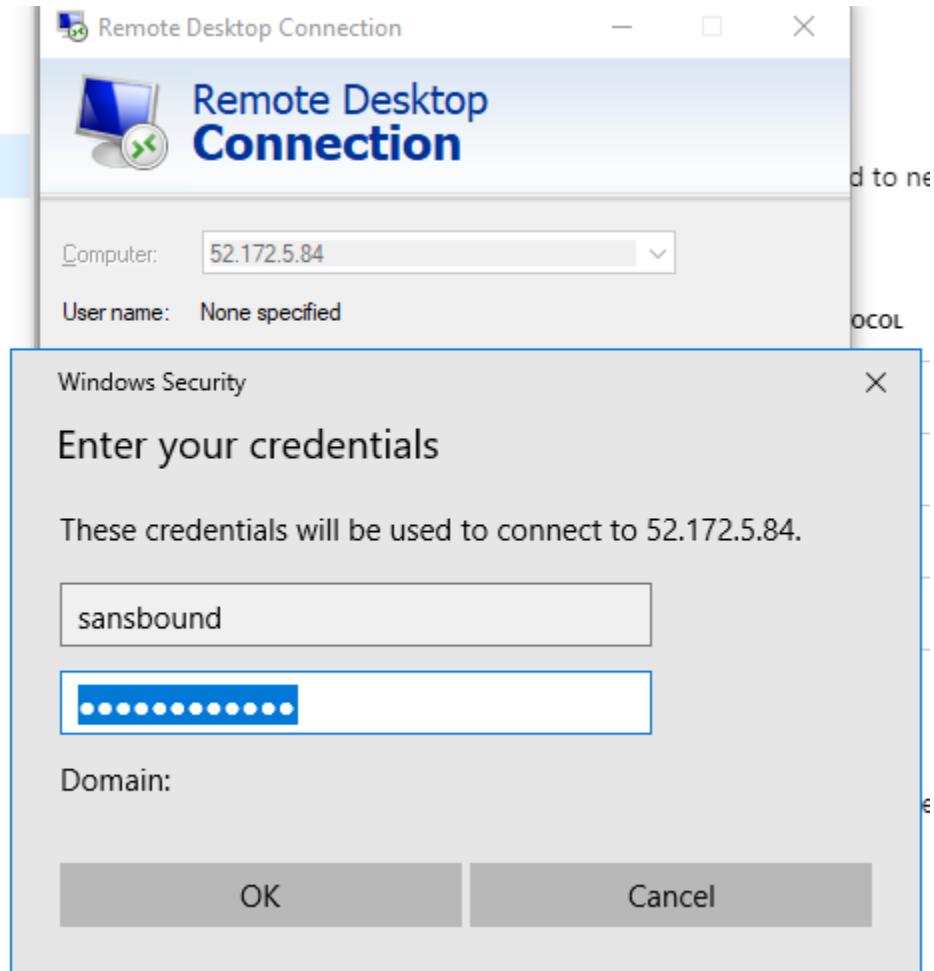
Type Public IP address of the windows server.



Click “**Connect**”.

Type “**username**” as sansbound

Type “**Password**” of Windows server 2008 R2.



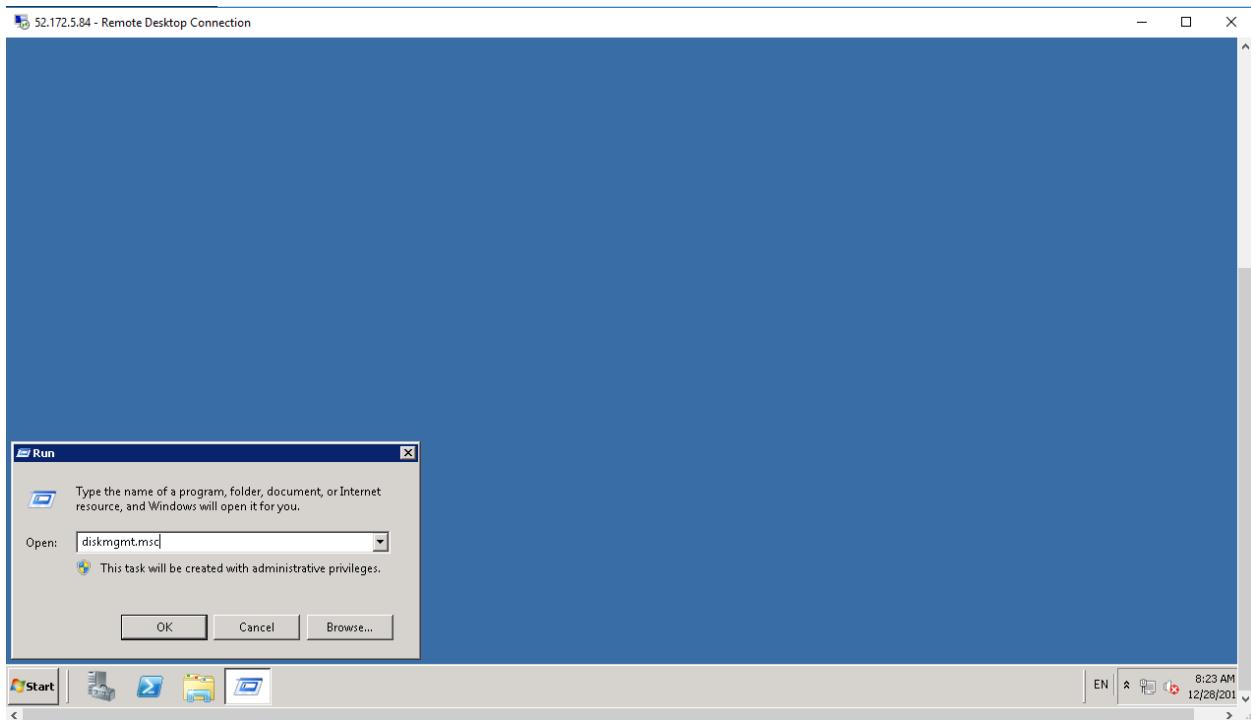
Click “**Ok**”.

Click "Yes".

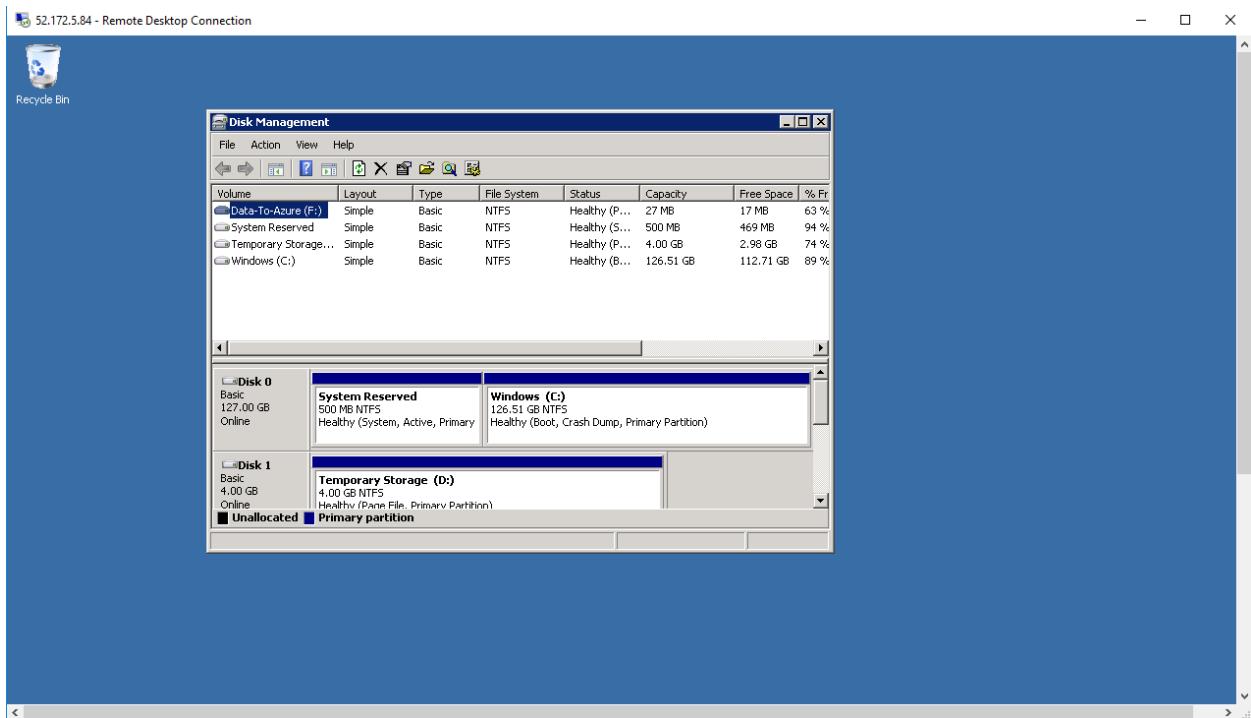


You have successfully logged on to Windows Server 2008 R2.

Type “**diskmgmt.msc**” in Run box and press “**Enter**”.

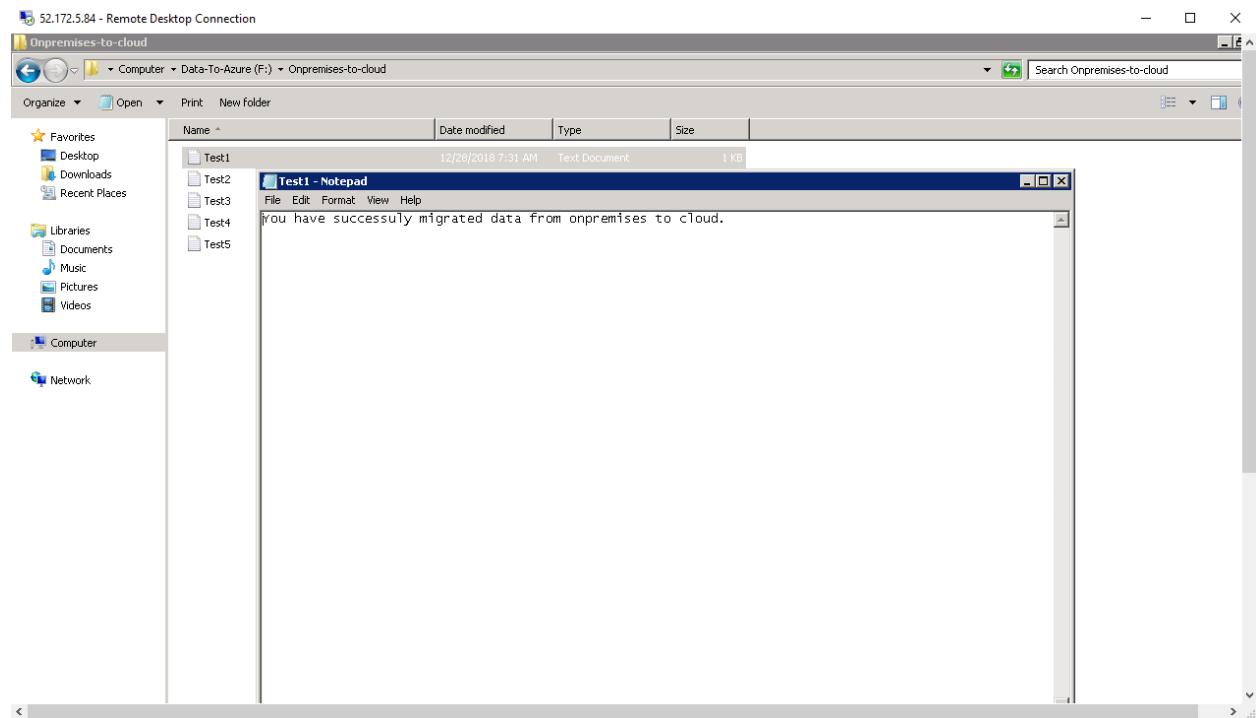


In “Disk management” you are able to see that vhd file which you have uploaded in Blob has been attached to this virtual machine successfully in “F” drive.



Open “F” drive in explorer.

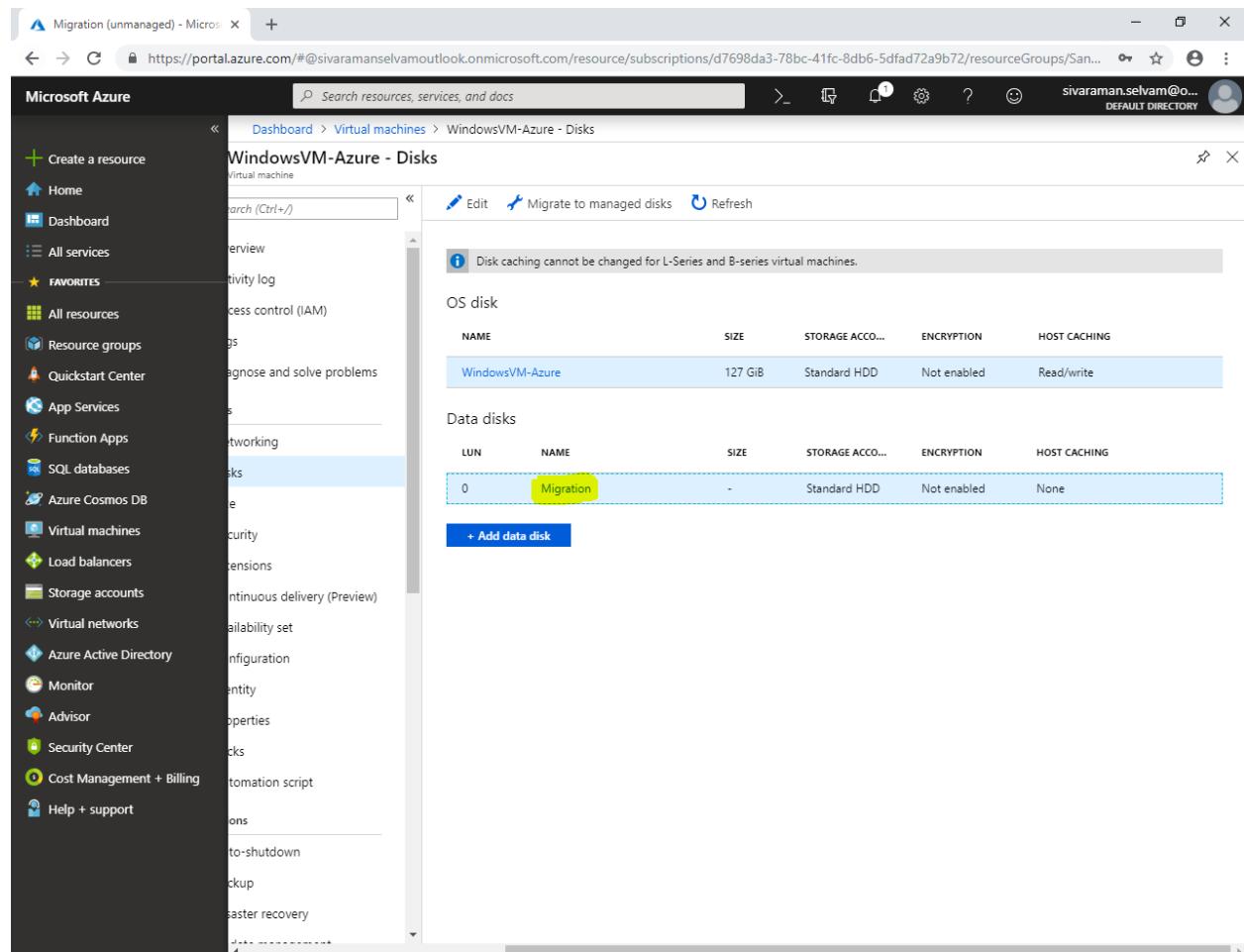
Open the text file / document which you have uploaded from On premises / local machine.



If you have required to attach the Migration.vhd in another machine, you must required to detach from the existing virtual machine.

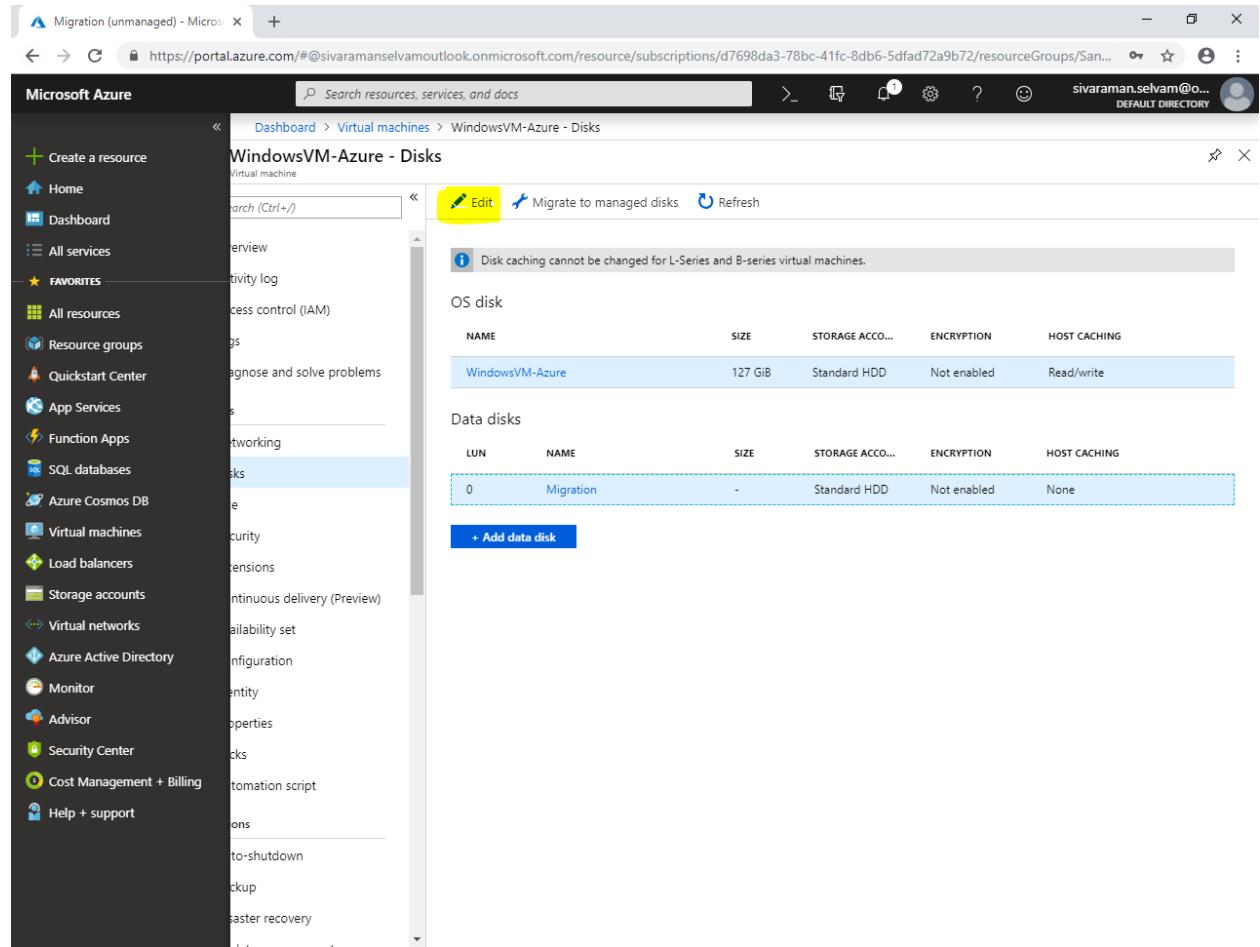
In “WindowsVM-Azure – Disks”.

Click on “Data disk” named “Migration”.



The screenshot shows the Microsoft Azure portal interface. The left sidebar navigation bar is visible, showing various service categories like Home, Dashboard, All services, Favorites, and more. The main content area is titled "WindowsVM-Azure - Disks". It displays two sections: "OS disk" and "Data disks". The "OS disk" section lists one entry: "WindowsVM-Azure" with a size of 127 GiB, Standard HDD storage, and "Not enabled" encryption. The "Data disks" section lists one entry: "Migration" with a size of -, Standard HDD storage, and "Not enabled" encryption. A blue dashed box highlights the "Migration" row. At the bottom of the "Data disks" section, there is a blue button labeled "+ Add data disk".

Click “Edit”.

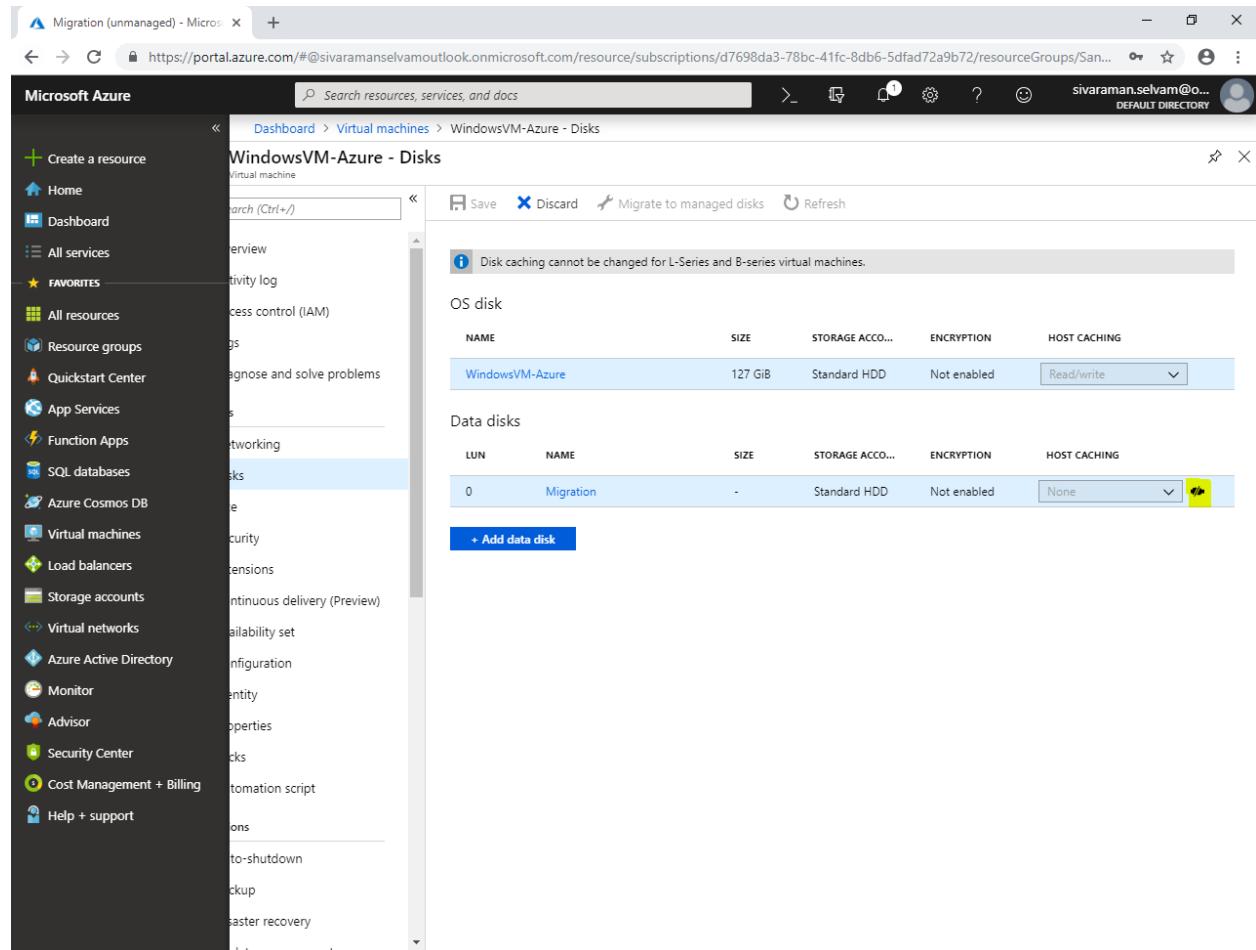


The screenshot shows the Microsoft Azure portal interface. The left sidebar navigation bar is visible, showing various service categories like Home, Dashboard, All services, Favorites, All resources, Resource groups, Quickstart Center, App Services, Function Apps, SQL databases, Azure Cosmos DB, Virtual machines, Load balancers, Storage accounts, Virtual networks, Azure Active Directory, Monitor, Advisor, Security Center, Cost Management + Billing, and Help + support. The 'Virtual machines' section is expanded, and 'Disks' is selected under it. The main content area displays the 'WindowsVM-Azure - Disks' page. At the top right of this page, there is a yellow rectangular callout highlighting the 'Edit' button. Below the 'Edit' button, there are other options: 'Migrate to managed disks' and 'Refresh'. A tooltip message states: 'Disk caching cannot be changed for L-Series and B-series virtual machines.' The 'OS disk' section shows one disk named 'WindowsVM-Azure' with a size of 127 GiB, using Standard HDD storage, and no encryption enabled. The 'Data disks' section shows one disk named 'Migration' with a size of - (empty), using Standard HDD storage, and no encryption enabled. There is also a blue 'Add data disk' button at the bottom of the data disk table.

In “Data disks”

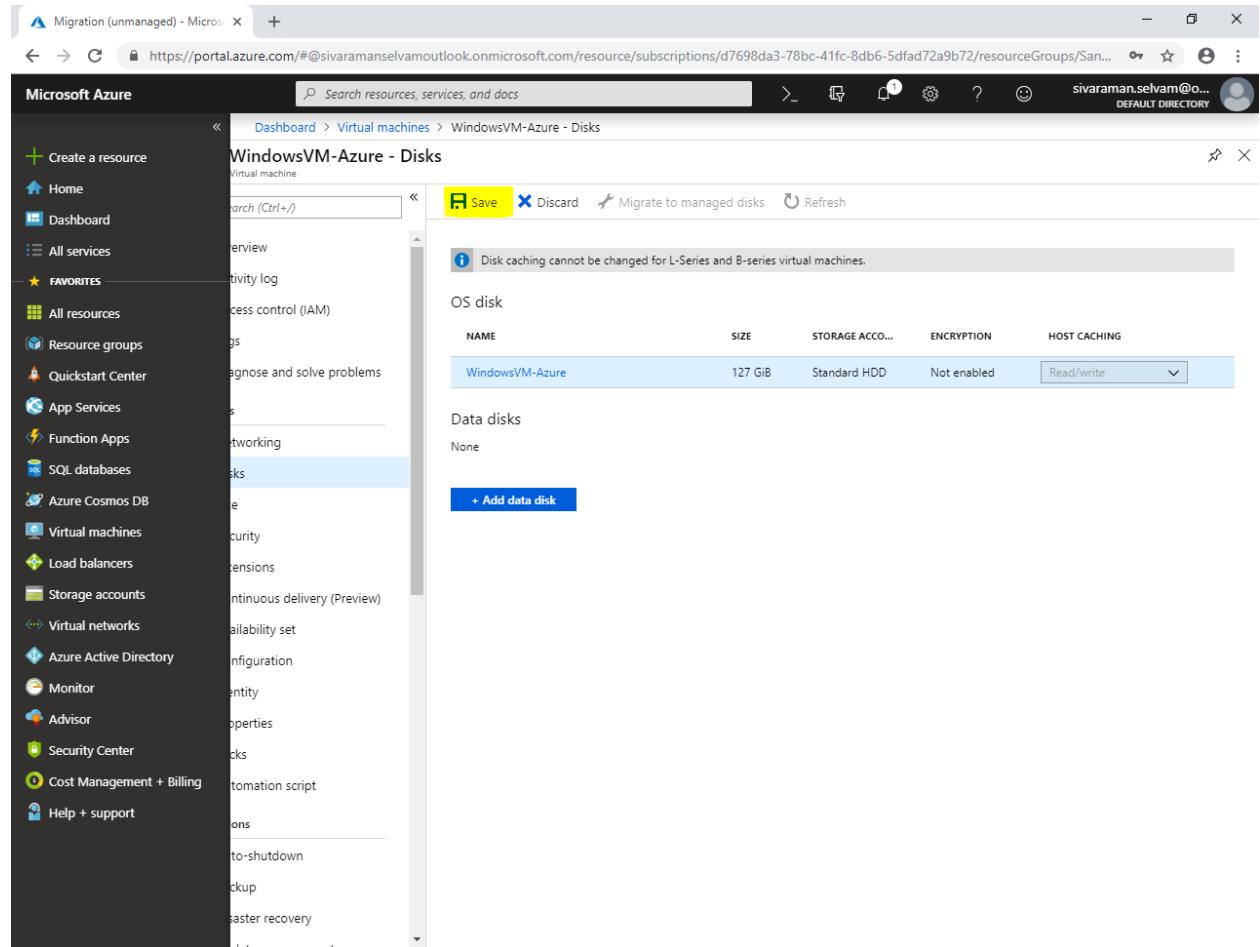
You are able to see new option, that is “**Detach**”.

Click the highlighted icon to “**Detach**” the migration.vhd from this virtual machine.



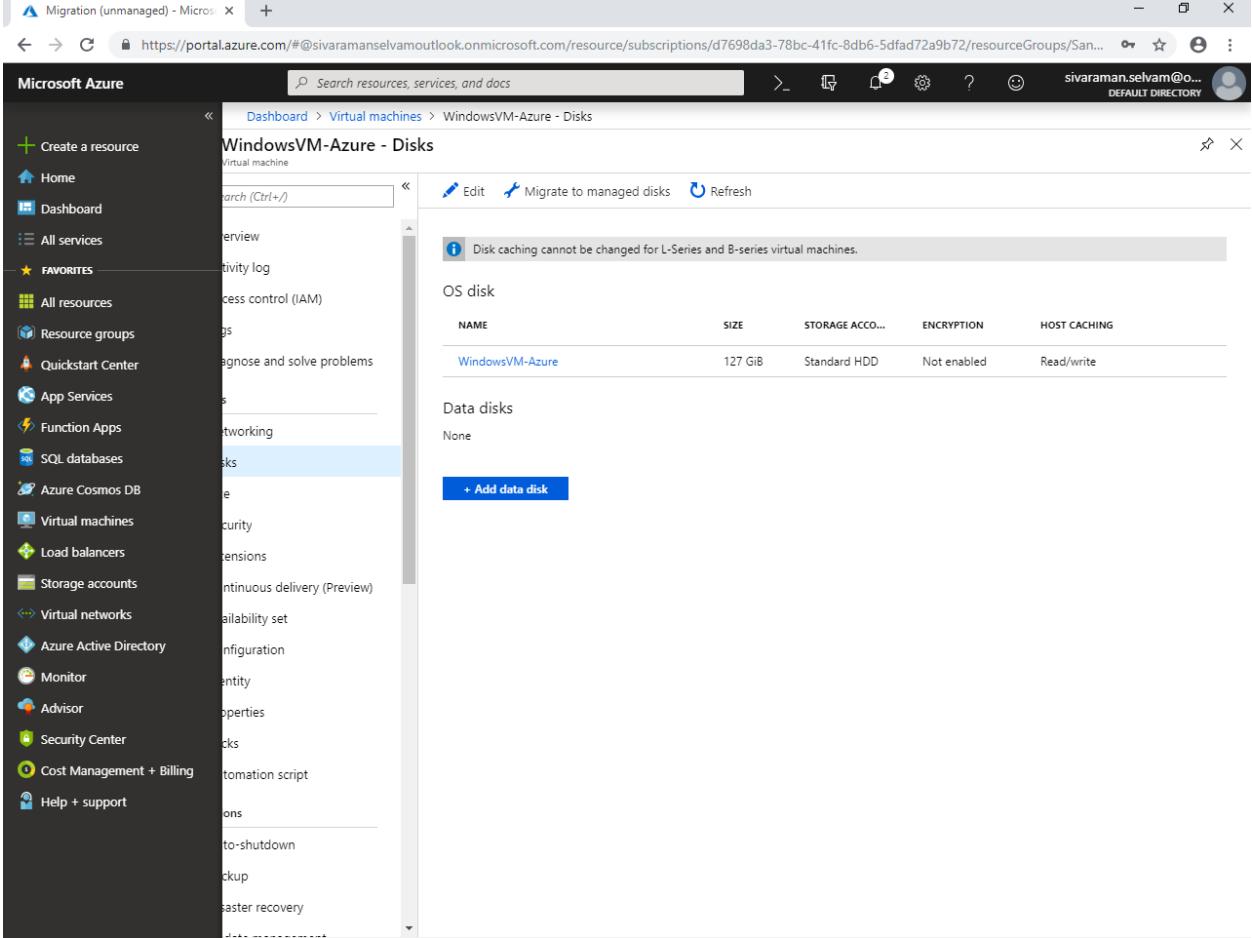
LUN	NAME	SIZE	STORAGE ACCO...	ENCRYPTION	HOST CACHING
0	Migration	-	Standard HDD	Not enabled	None

Click "Save" to apply the changes.



The screenshot shows the Microsoft Azure portal interface. The left sidebar contains a navigation menu with various services like Home, Dashboard, All services, Favorites, All resources, Resource groups, Quickstart Center, App Services, Function Apps, SQL databases, Azure Cosmos DB, Virtual machines, Load balancers, Storage accounts, Virtual networks, Azure Active Directory, Monitor, Advisor, Security Center, Cost Management + Billing, and Help + support. The 'Virtual machines' section is expanded, and 'Disks' is selected. The main content area is titled 'WindowsVM-Azure - Disks' and shows a table for 'OS disk'. One row is present: 'WindowsVM-Azure' with a size of 127 GiB, using Standard HDD storage, and 'Not enabled' for encryption. The 'HOST CACHING' dropdown is set to 'Read/write'. A note at the top states: 'Disk caching cannot be changed for L-Series and B-series virtual machines.' At the top right, there are 'Save', 'Discard', 'Migrate to managed disks', and 'Refresh' buttons. The 'Save' button is highlighted with a yellow box.

You have successfully detached migration.vhd from WindowsVM-Azure.



NAME	SIZE	STORAGE ACCO...	ENCRYPTION	HOST CACHING
WindowsVM-Azure	127 GiB	Standard HDD	Not enabled	Read/write

Note: If you have required to attach migrate.vhd to another virtual machine, you can create the virtual machine and attach it.