DVS Technologies

Azure adminstration

Compiled and Scrutinized by
Mr. Shaan Shaik
(Senior DevOps Lead)

Words To The Students

Though we have taken utmost efforts to present you this book error free, but still it may contain some errors or mistakes. Students are encouraged to bring, if there are any mistakes or errors in this document to our notice. So that it may be rectified in the next edition of this document.

"Suppressing your doubts is Hindering your growth".

We urge you to work hard and make use of the facilities we are providing to you, because there is no substitute for hard work. We wish you all the best for your future.

"The grass isn't greener on the other side; the grass is greener where you water it."

You and your suggestions are valuable to us; Help us to serve you better. In case of any suggestions, grievance, or complaints, please feel free to write us your suggestions, grievance and feedback on the following

Dvs.training@gmail.com

DVS Technologies

1 Creating a virtual machine

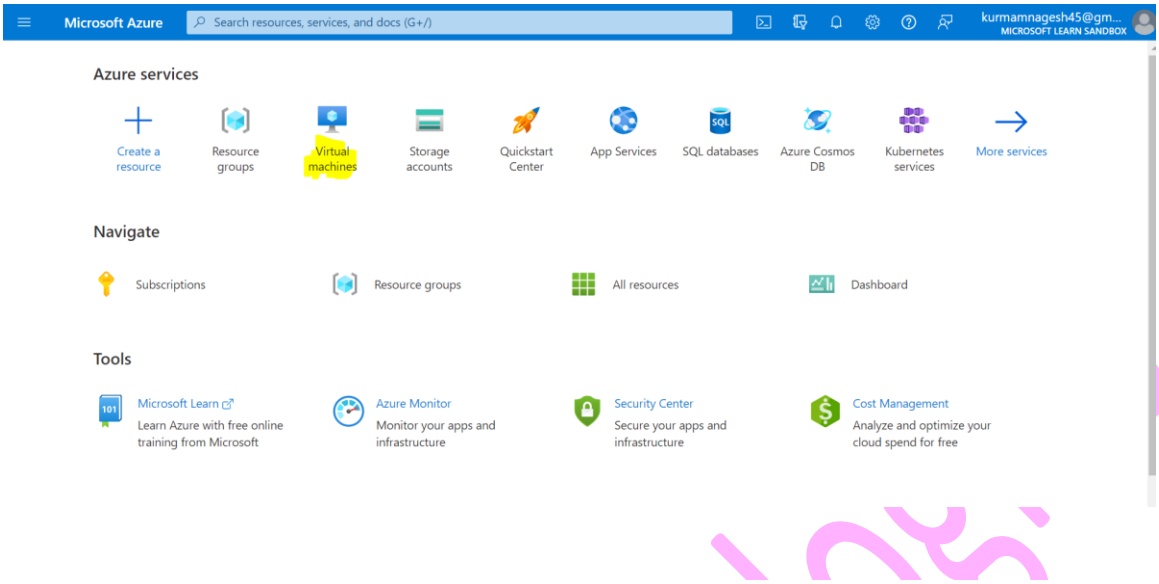
Explain in detail about the virtual machine. Why we need these machines and compare it with your laptop

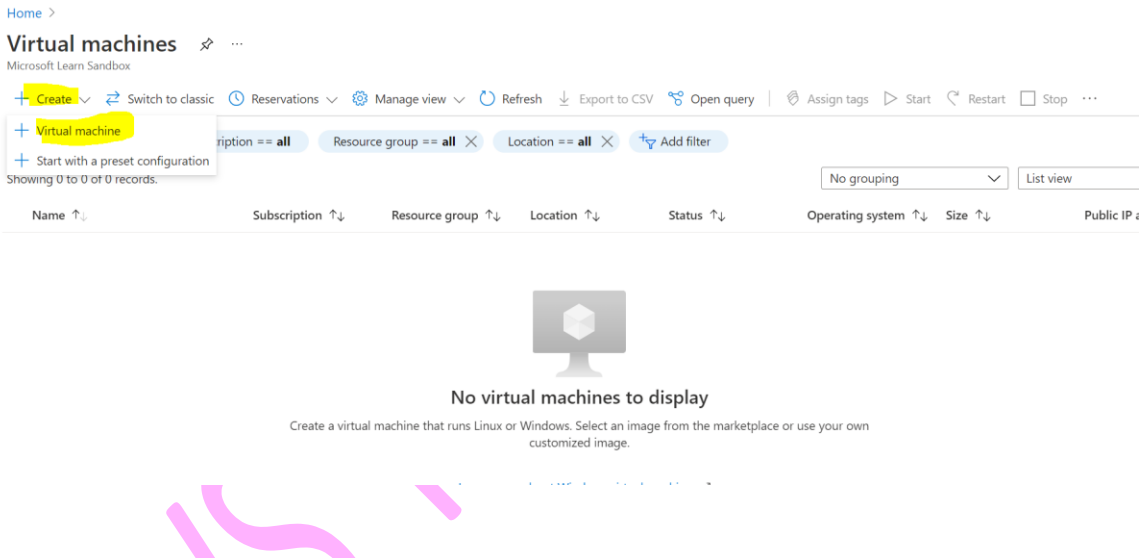
https://docs.microsoft.com/en-us/azure/virtual-machines/sizes
https://azure.microsoft.com/en-us/pricing/details/virtual-machines/linux/
https://www.cisecurity.org/cis-benchmarks/
https://azure.microsoft.com/en-in/pricing/details/managed-disks/

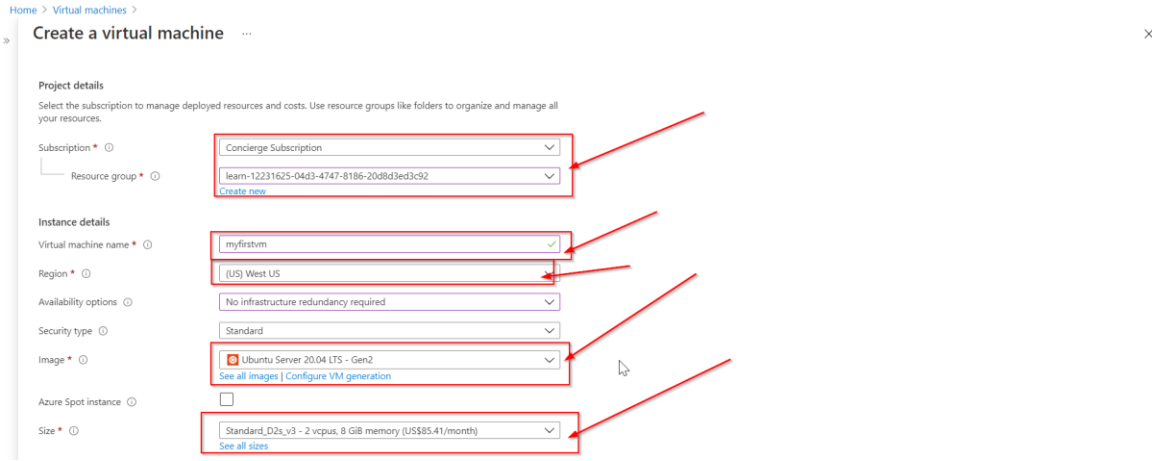
Pricing Calculator:
https://azure.microsoft.com/en-in/pricing/calculator/

Virtual Machine Sizing

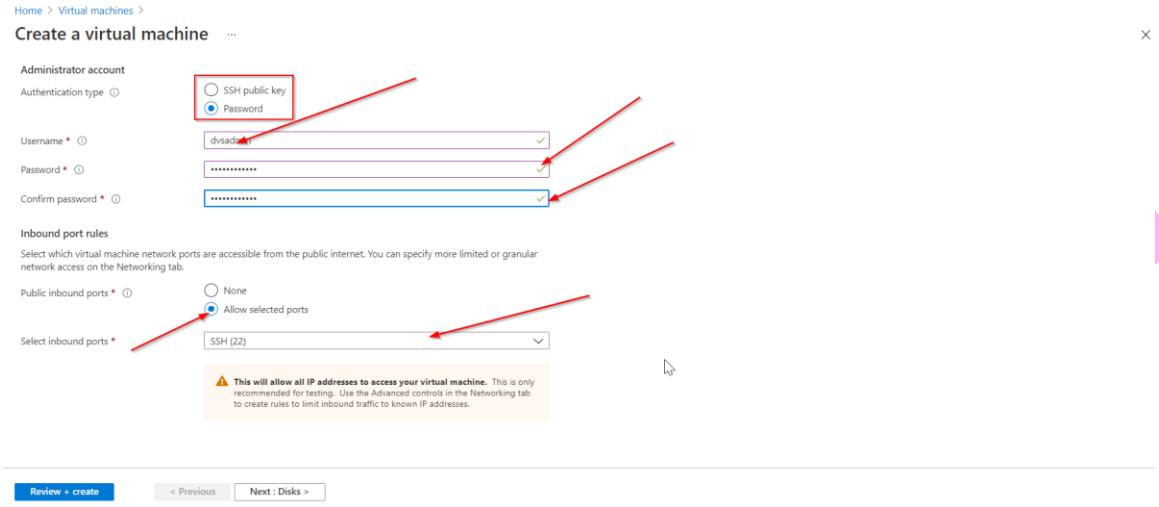
VM Type	Sizes	Purpose
General Purpose	B, Dsv3, Dv3, Dasv4, Dav4, DSv2, Dv2, Av2, DC	Balanced CPU-to-memory ratio; ideal for testing and development, small to medium databases, and low to medium traffic web servers.
Compute Optimized	Fsv2	High CPU-to-memory ratio; good for medium traffic web servers, network appliances, batch processes, and application servers.
Memory Optimized	Esv3, Ev3, Easv4, Eav4, Mv2, M, DSv2, Dv2	High memory-to-CPU ratio; great for relational database servers, medium to large caches, and in-memory analytics.
Storage Optimized	Lsv2	High disk throughput and IO; ideal for Big Data, SQL, NoSQL databases, data warehousing, and large transactional databases.
GPU	NC, NCv2, NCv3, ND, NDv2 (preview), NV, NVv3, NVv4 (preview)	Specialized virtual machines targeted for heavy graphic rendering and video editing as well as model training and inferencing (ND) with deep learning. Available with single or multiple GPUs.
High Performance Compute	HB, HC, H	Our fastest and most powerful CPU virtual machines with optional high-throughput network interfaces (RDMA).

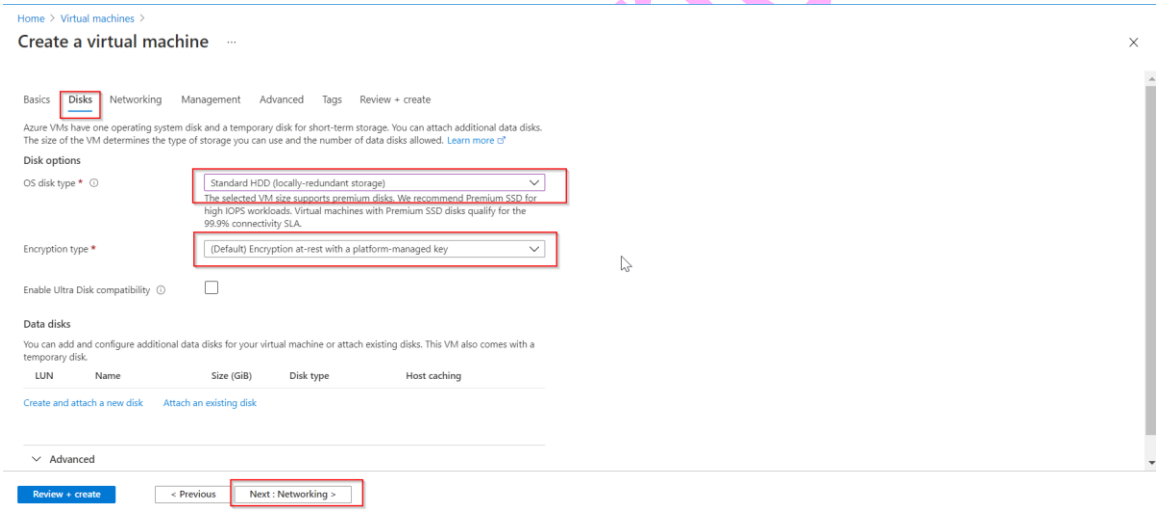

Microsoft Azure
Search resources, services, and docs (G+/)
kurmamnagesh45@gm...
MICROSOFT LEARN SANDBOX
Azure services
Create a resource
Resource groups
Virtual machines
Storage accounts
Quickstart Center
App Services
SQL databases
Azure Cosmos DB
Kubernetes services
More services
Navigate
Subscriptions
Resource groups
All resources
Dashboard
Tools
Microsoft Learn
Learn Azure with free online training from Microsoft
Azure Monitor
Monitor your apps and infrastructure
Security Center
Secure your apps and infrastructure
Cost Management
Analyze and optimize your cloud spend for free


Home >
Virtual machines
Microsoft Learn Sandbox
Create
Switch to classic
Reservations
Manage view
Refresh
Export to CSV
Open query
Assign tags
Start
Restart
Stop
Virtual machine
Start with a preset configuration
Resource group == all
Location == all
Add filter
Showing 0 to 0 of 0 records.
No grouping
List view
Name
Subscription
Resource group
Location
Status
Operating system
Size
Public IP
No virtual machines to display
Create a virtual machine that runs Linux or Windows. Select an image from the marketplace or use your own customized image.


Home > Virtual machines >
Create a virtual machine
Project details
Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.
Subscription *
Concierge Subscription
Resource group *
learn-12231625-04d3-4747-8186-20d8d3ed3c92
Create new
Instance details
Virtual machine name *
myfirstvm
Region *
(US) West US
Availability options
No infrastructure redundancy required
Security type
Standard
Image *
Ubuntu Server 20.04 LTS - Gen2
See all images | Configure VM generation
Azure Spot instance
Size *
Standard_D2s_v3 - 2 vcpus, 8 GiB memory (US$85.41/month)
See all sizes

https://docs.microsoft.com/en-gb/azure/virtual-machines/sizes





Home > Virtual machines >

Create a virtual machine

Basics | Disks | Networking | Management | Advanced | Tags | Review + create

Define network connectivity for your virtual machine by configuring network interface card (NIC) settings. You can control ports, inbound and outbound connectivity with security group rules, or place behind an existing load balancing solution.
Learn more

Network interface

When creating a virtual machine, a network interface will be created for you.

Virtual network * (new) learn-12231625-04d3-4747-8186-20d8d3ed3c92-vnet
Create new

Subnet * (new) default (10.0.0.0/24)

Public IP (new) myfirstvm-ip
Create new

NIC network security group
- None
- Basic
- Advanced

Public inbound ports *
- None
- Allow selected ports

Select inbound ports * SSH (22)

Review + create | < Previous | Next : Management >

Home > Virtual machines >

Create a virtual machine

Basics | Disks | Networking | Management | Advanced | Tags | Review + create

Configure monitoring and management options for your VM.

Azure Security Center

Azure Security Center provides unified security management and advanced threat protection across hybrid cloud workloads.
Learn more

Your subscription is protected by Azure Security Center basic plan.

Monitoring

Boot diagnostics
- Enable with managed storage account (recommended)
- Enable with custom storage account
- Disable

Enable OS guest diagnostics

Identity

System assigned managed identity

Azure AD

Login with Azure AD

Review + create | < Previous | Next : Advanced >

Home > Virtual machines >

Create a virtual machine ...

Basics | Disks | Networking | Management | Advanced | Tags | Review + create

Add additional configuration, agents, scripts or applications via virtual machine extensions or cloud-init.

Extensions

Extensions provide post-deployment configuration and automation.

Extensions ⓘ Select an extension to install

VM applications (preview)

VM applications contain application files that are securely and reliably downloaded on your VM after deployment. In addition to the application files, an install and uninstall script are included in the application. You can easily add or remove applications on your VM after create. Learn more

Select a VM application to install

Custom data and cloud init

Pass a cloud-init script, configuration file, or other data into the virtual machine **while it is being provisioned**. The data will be saved on the VM in a known location. Learn more about custom data for VMs

Custom data

Home > Virtual machines >

Create a virtual machine ...

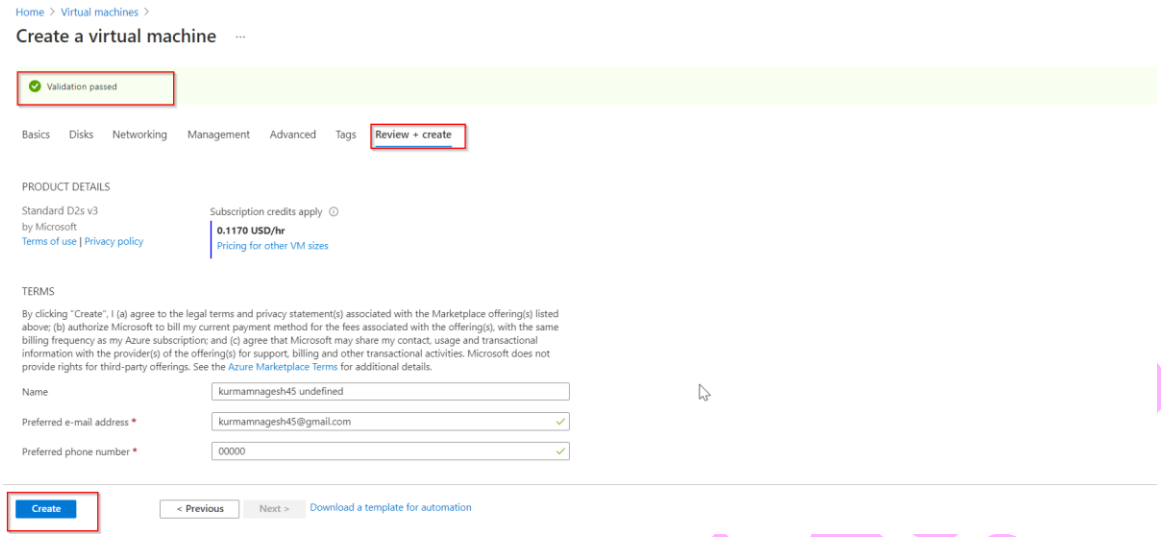
Basics | Disks | Networking | Management | Advanced | Tags | Review + create

Tags are name/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups. Learn more about tags

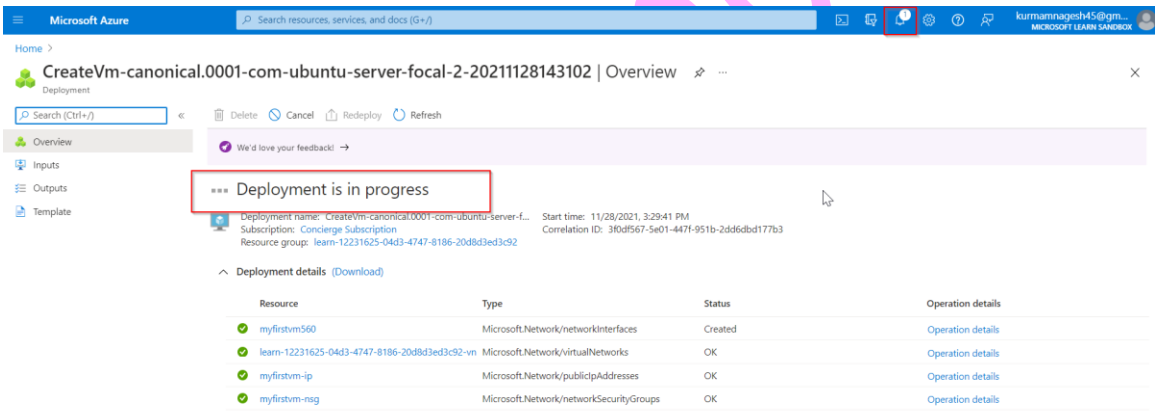
Note that if you create tags and then change resource settings on other tabs, your tags will be automatically updated.

Name ⓘ	Value ⓘ	Resource
ENV	test	12 selected
		12 selected

Review + create | < Previous | Next : Review + create >



Once you click on create your VM will start provisioning and you can see the deployment status like below



Microsoft Azure | Search resources, services, and docs (G+/) | kurmamnagesh45@gm... MICROSOFT LEARN SANDBOX

Home >

CreateVm-canonical.0001-com-ubuntu-server-focal-2-20211128143102 | Overview

Deployment

Search (Ctrl+/)

Overview
Inputs
Outputs
Template

Delete | Cancel | Redeploy | Refresh

We'd love your feedback! →

Your deployment is complete

Deployment name: CreateVm-canonical.0001-com-ubuntu-server-f... Start time: 11/28/2021, 3:29:41 PM
Subscription: Concierge Subscription Correlation ID: 3f0df567-5e01-447f-951b-2dd6dbd177b3
Resource group: learn-12231625-04d3-4747-8186-20d8d3ed3c92

Deployment details (Download)

Next steps

Setup auto-shutdown Recommended
Monitor VM health, performance and network dependencies Recommended
Run a script inside the virtual machine Recommended

Go to resource | Create another VM

Microsoft Defender for Cloud
Secure your apps and infrastructure
Go to Azure security center >

Free Microsoft tutorials
Start learning today >

Work with an expert
Azure experts are service provider partners who can help manage your assets on Azure and be your first line of support.
Find an Azure expert >

Microsoft Azure | Search resources, services, and docs (G+/) | kurmamnagesh45@gm... MICROSOFT LEARN SANDBOX

Home > CreateVm-canonical.0001-com-ubuntu-server-focal-2-20211128143102 >

myfirstvm

Virtual machine

Search (Ctrl+/)

Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems

Settings
Networking
Connect
Disks
Size
Security
Advisor recommendations
Extensions + applications
Continuous delivery
Availability + scaling
Configuration
Identity
Properties

Connect | Start | Restart | Stop | Capture | Delete | Refresh | Open in mobile | CLI / PS | Feedback

Essentials JSON View

Resource group (Move) : learn-12231625-04d3-4747-8186-20d8d3ed3c92
Status : Running
Location : West US
Subscription (Move) : Concierge Subscription
Subscription ID : 24f6044d-738b-4d20-8eba-a9307e45b4b4
Tags (Edit) : ENV : test

Operating system : Linux (ubuntu 20.04)
Size : Standard D2s v3 (2 vcpus, 8 GiB memory)
Public IP address : 104.209.35.175
Virtual network/subnet : learn-12231625-04d3-4747-8186-20d8d3ed3c92-vnet/default
DNS name : Not configured

Properties | Monitoring | Capabilities (7) | Recommendations | Tutorials

Virtual machine

Computer name	myfirstvm
Health state	-
Operating system	Linux (ubuntu 20.04)
Publisher	canonical
Offer	0001-com-ubuntu-server-focal
Plan	20_04-lts-gen2
VM generation	V2
Agent status	Ready
Agent version	2.5.0.2
Host group	None

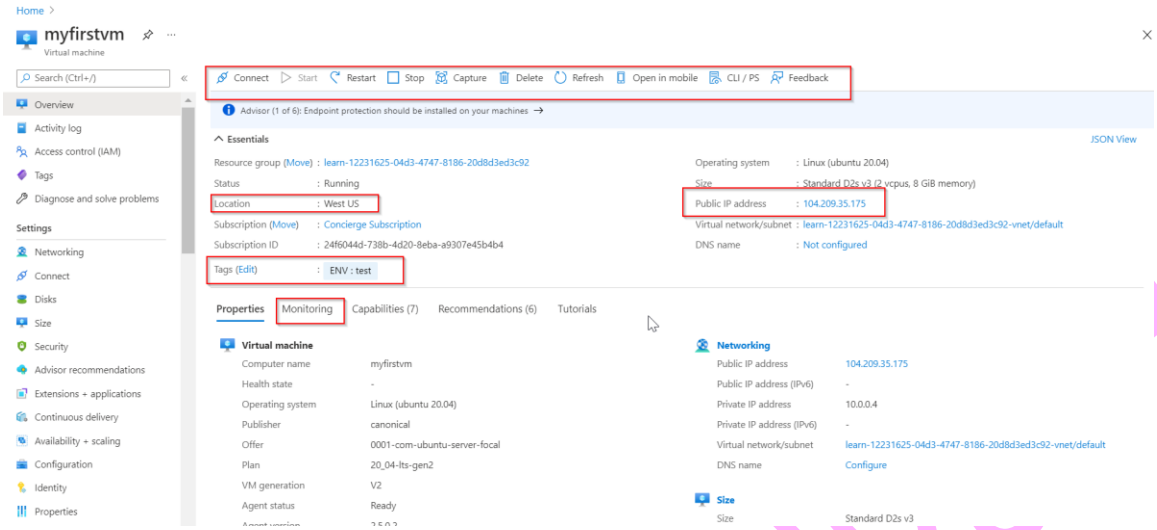
Networking

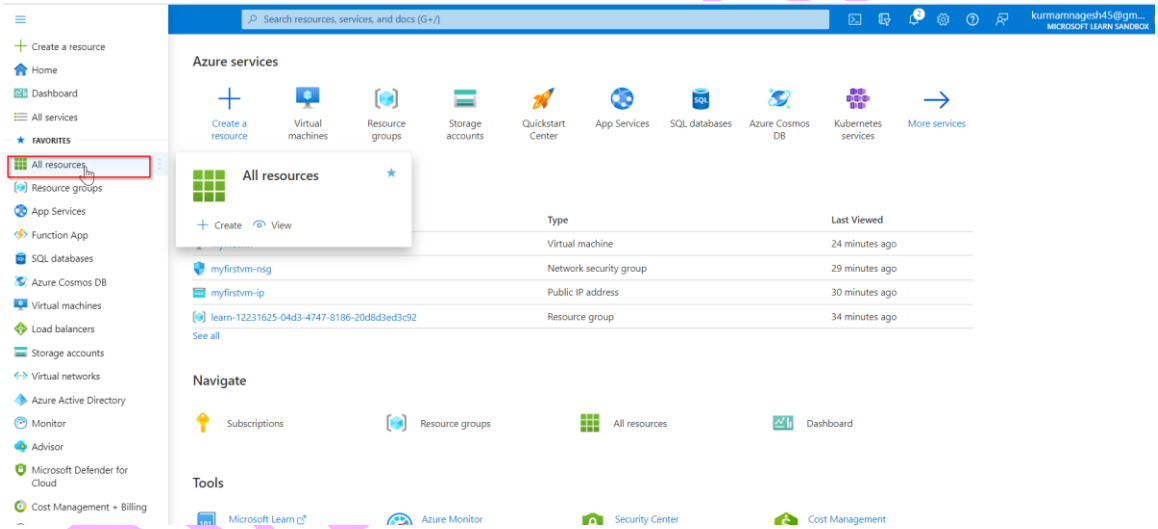
Public IP address	104.209.35.175
Public IP address (IPv6)	-
Private IP address	10.0.0.4
Private IP address (IPv6)	-
Virtual network/subnet	learn-12231625-04d3-4747-8186-20d8d3ed3c92-vnet/default
DNS name	Configure

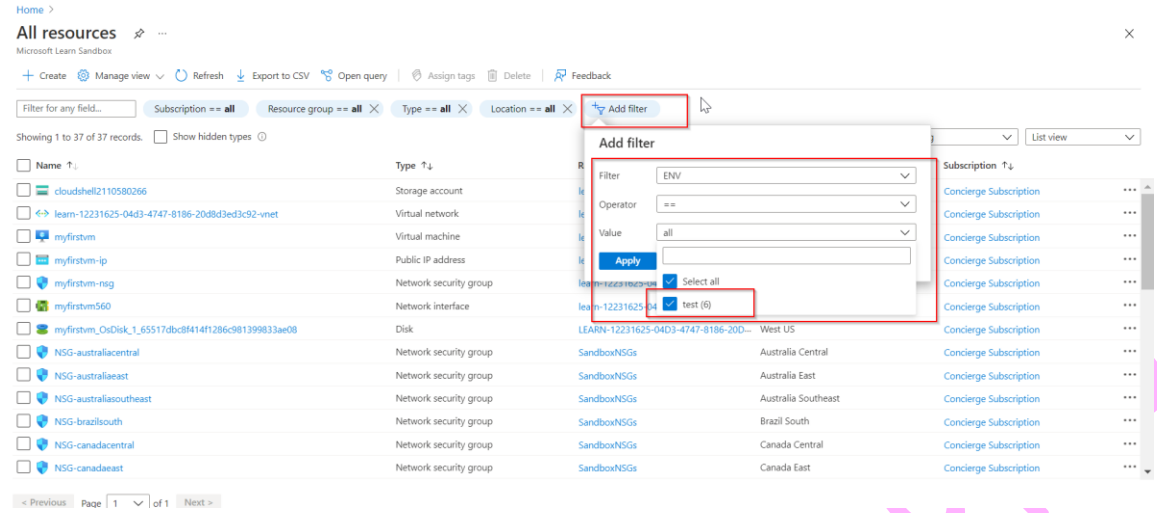
Size

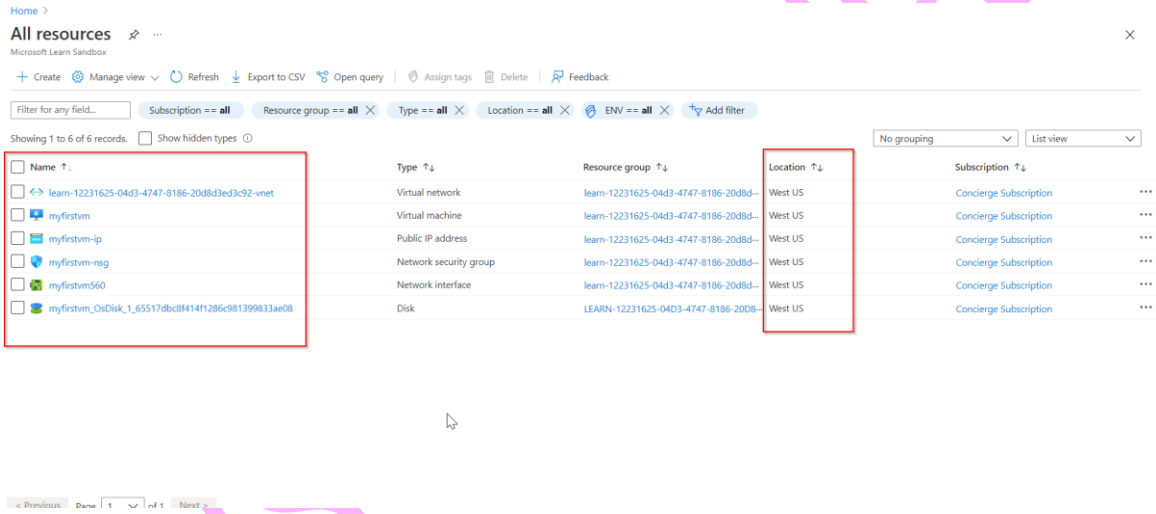
Size	Standard D2s v3
vCPUs	2

2 Login in to VM



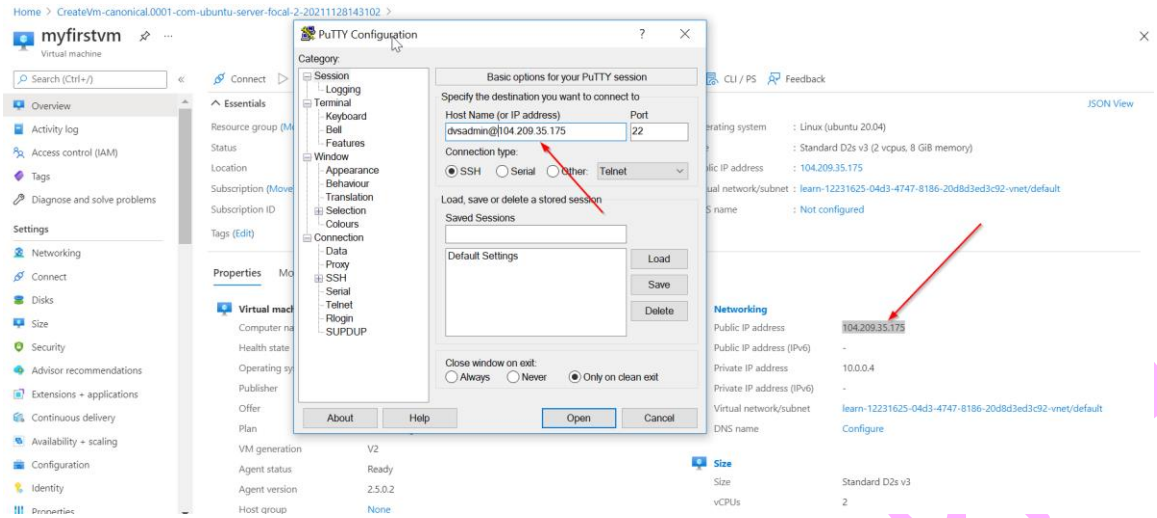






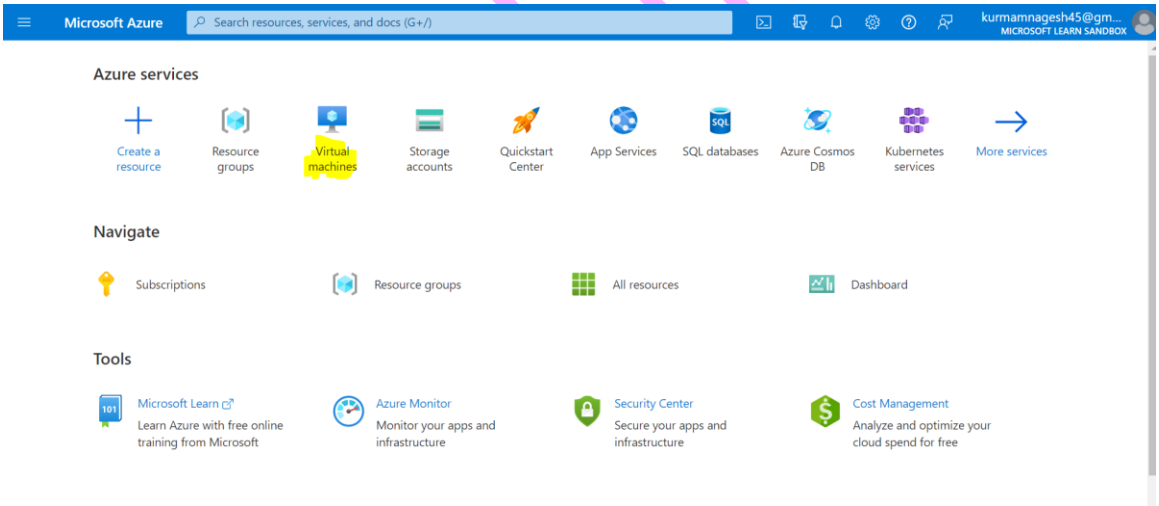
Let's try to login to the server via putty:

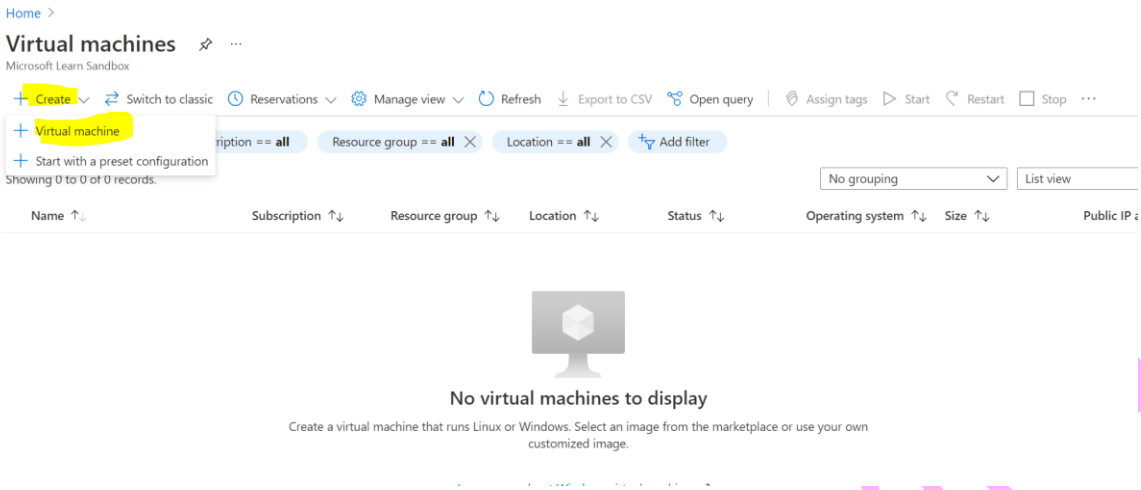
Username: dvsadmin
Password: dvs*****

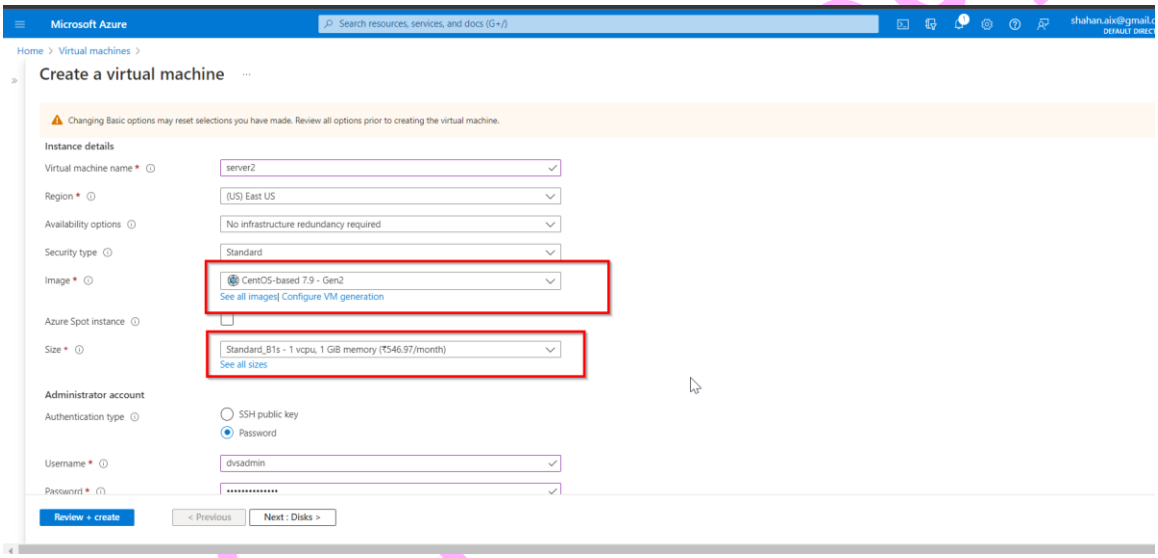


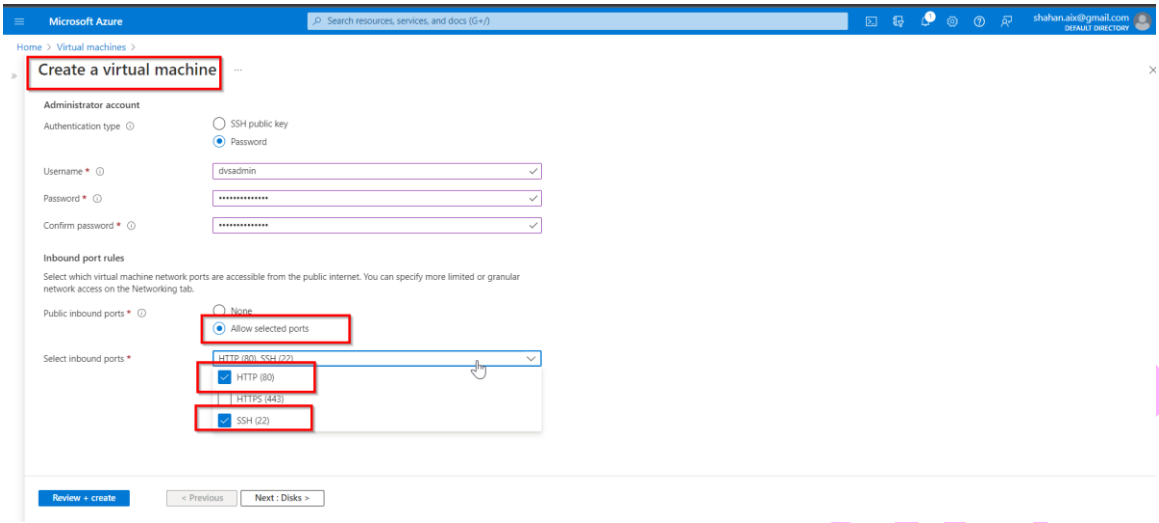
3 Boot strap - Custom Data

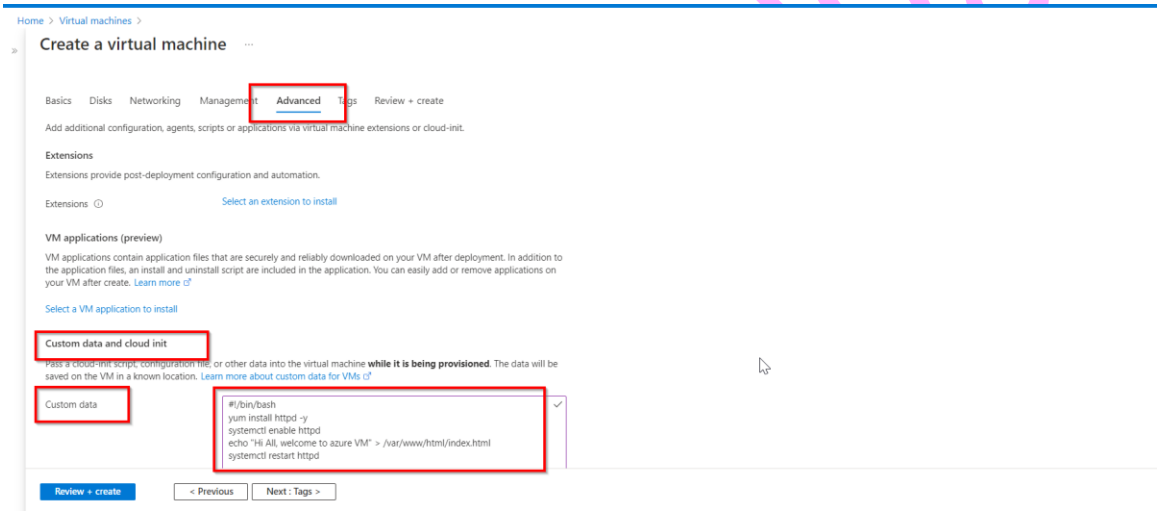
Using Custom data area for creating the server:




Home >
Virtual machines
Microsoft Learn Sandbox
Create
Switch to classic
Reservations
Manage view
Refresh
Export to CSV
Open query
Assign tags
Start
Restart
Stop
Virtual machine
Start with a preset configuration
Resource group == all
Location == all
Add filter
Showing 0 to 0 of 0 records.
No grouping
List view
Name
Subscription
Resource group
Location
Status
Operating system
Size
No virtual machines to display
Create a virtual machine that runs Linux or Windows. Select an image from the marketplace or use your own customized image.

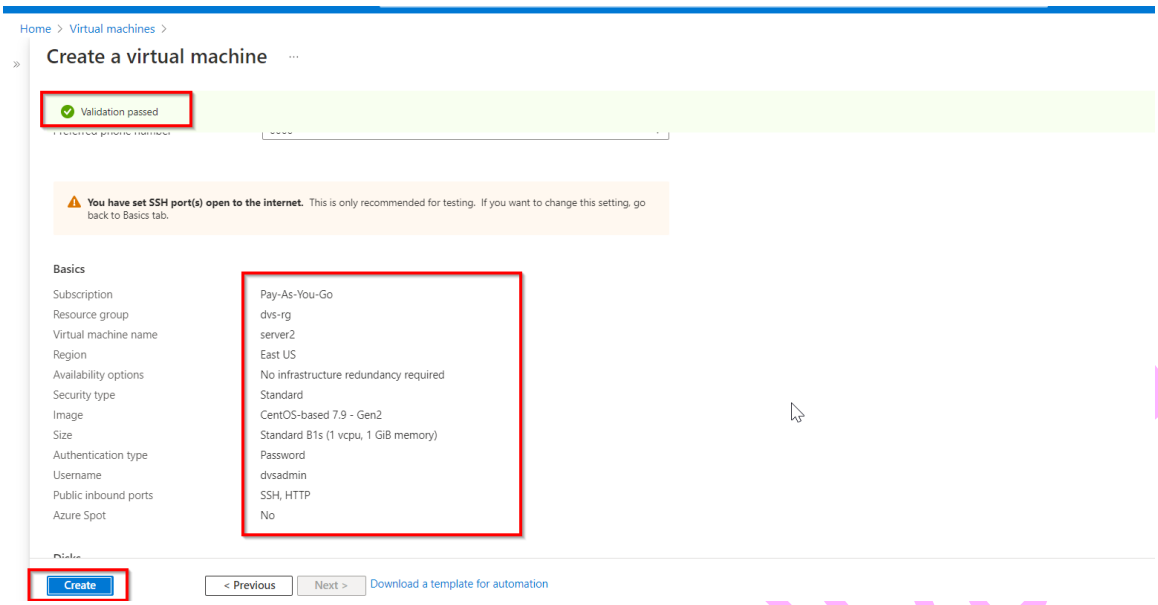

Microsoft Azure
Search resources, services, and docs (G+/)
Home > Virtual machines >
Create a virtual machine
Changing Basic options may reset selections you have made. Review all options prior to creating the virtual machine.
Instance details
Virtual machine name *
server2
Region *
(US) East US
Availability options
No infrastructure redundancy required
Security type
Standard
Image *
CentOS-based 7.9 - Gen2
See all images| Configure VM generation
Azure Spot instance
Size *
Standard_B1s - 1 vcpu, 1 GiB memory (₹546.97/month)
See all sizes
Administrator account
Authentication type
SSH public key
Password
Username *
dvsadmin
Password *
Review + create
< Previous
Next : Disks >



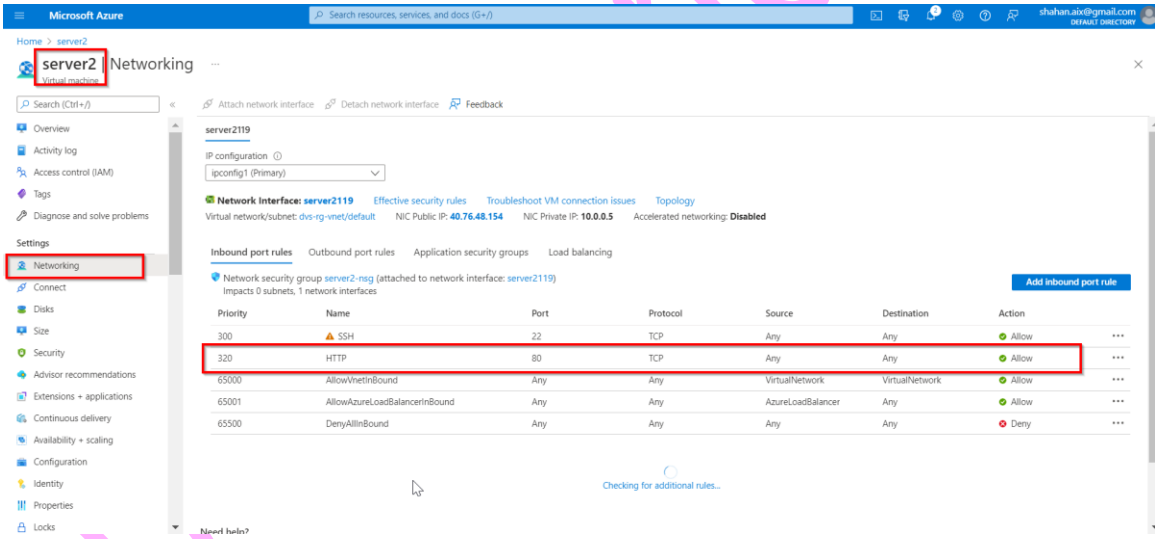


Userdata:

```
#!/bin/bash
yum install httpd -y
systemctl enable httpd
echo "Hi All, welcome to azure VM" > /var/www/html/index.html
systemctl restart httpd
```

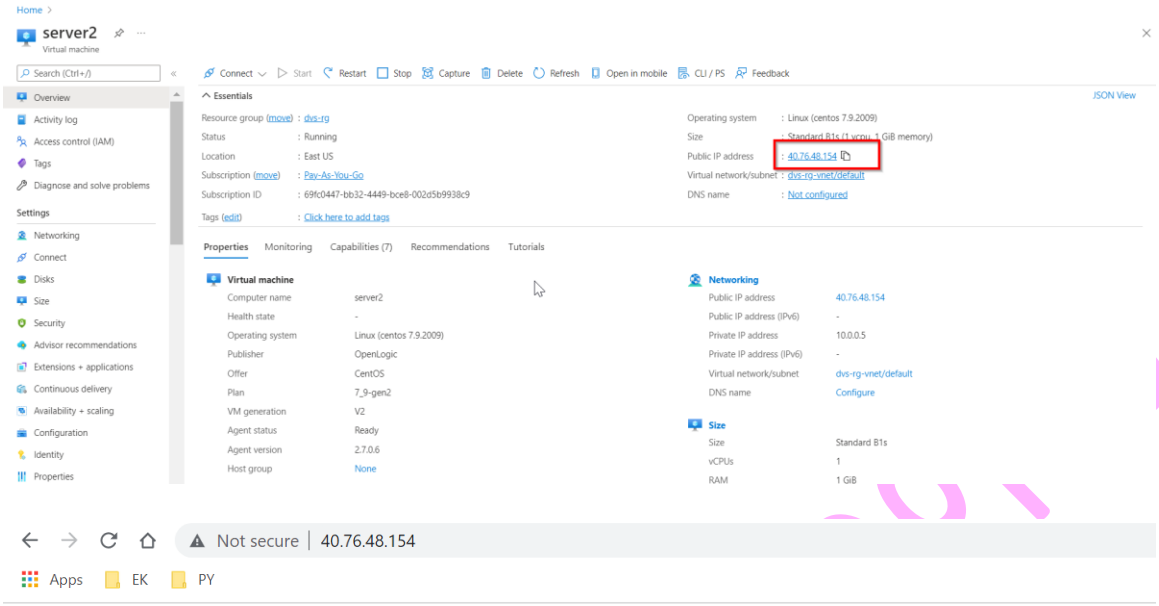


Make sure that port 80 is allowed in the network security group:



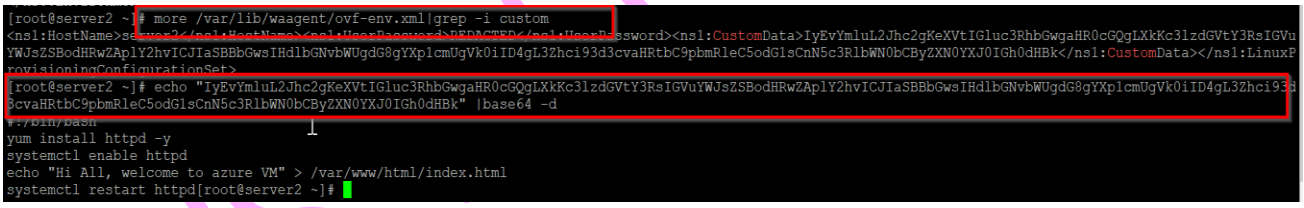
If not opened then please click on add inbound port rule and allow port 80 for httpd.

Verifying the custom data:



Hi All, welcome to azure VM

Cross verifying custom data from the server if in case of issue:



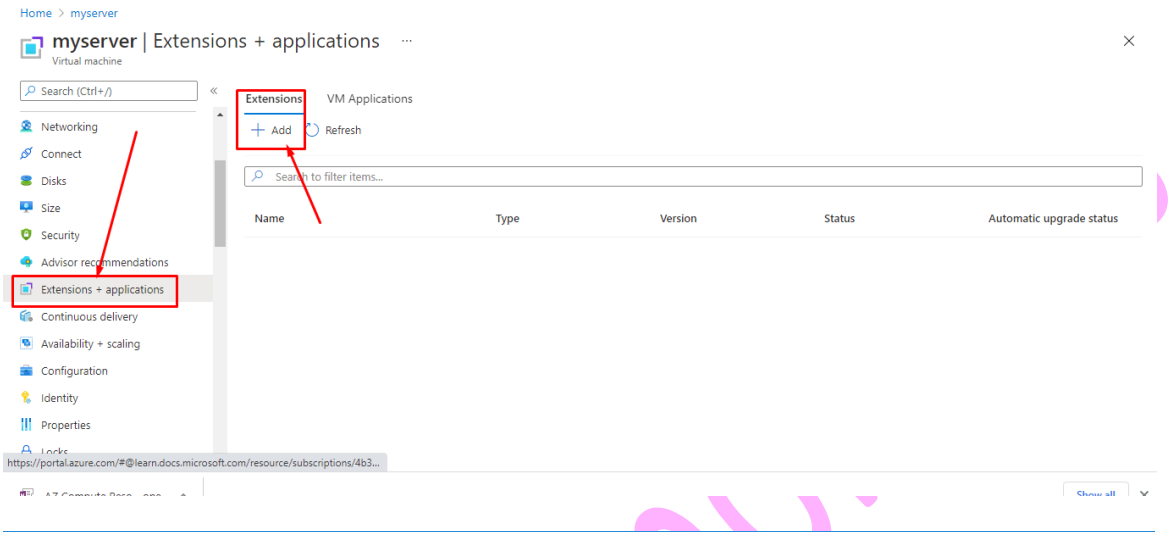
more /var/lib/waagent/ovf-env.xml|grep -i custom
echo "IyEvYmluL2Jhc2gKeXVtIGluc3RhbGwgaHR0cGQgLXkKc3lzdGVtY3RsIGVuYWJsZSBodHRwZAplY2hvICJIaSBBbGwsIHdlbGNvbWUgdG8gYXp1cmUgVk0iID4gL3Zhci93d3cvaHRtbC9pbmRleC5odG1sCnN5c3RlbWN0bCByZXN0YXJ0IGh0dHBk" |base64 -d

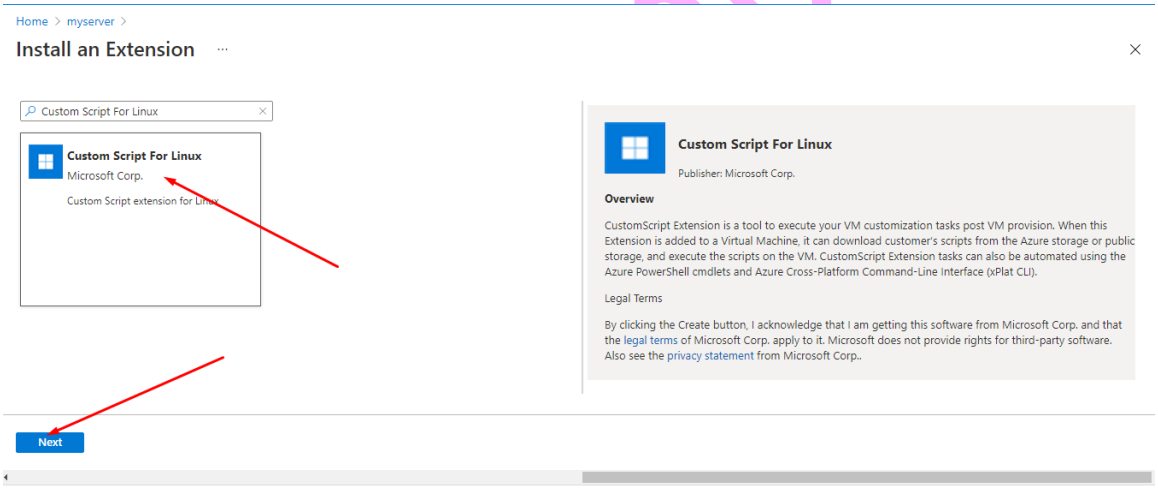
Metadata:

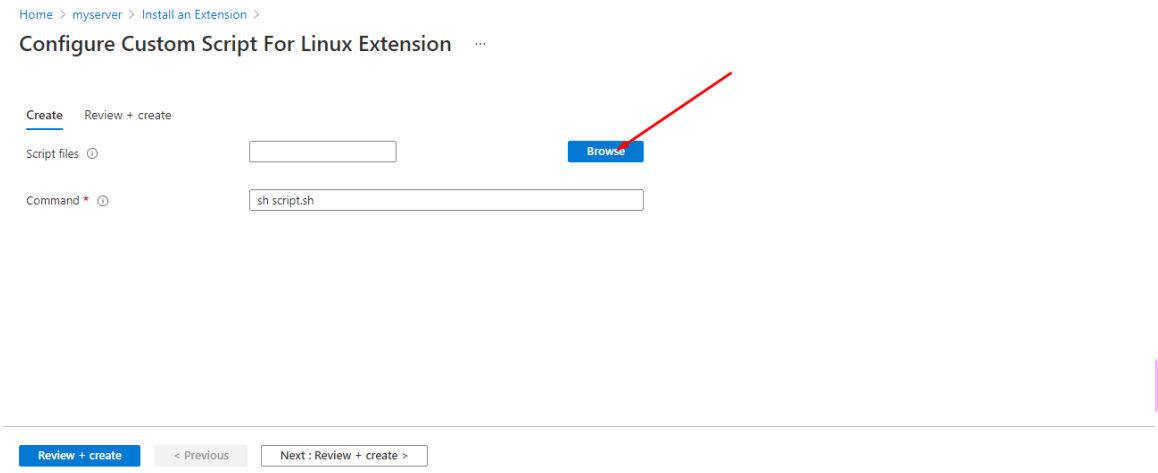
curl -H Metadata:true --noproxy "*" "http://169.254.169.254/metadata/instance/compute?api-version=2021-01-01&format=text"
curl -H Metadata:true --noproxy "*" "http://169.254.169.254/metadata/instance/compute/name?api-version=2021-01-01&format=text"

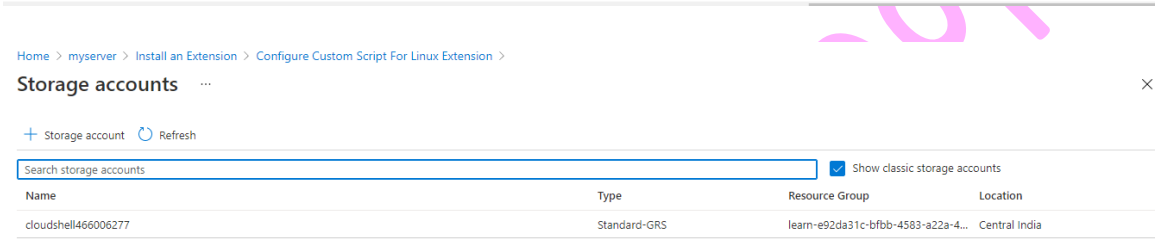
4 Custom Script extension

You can copy the script to the storage account and then you can execute code. Please follow the below steps

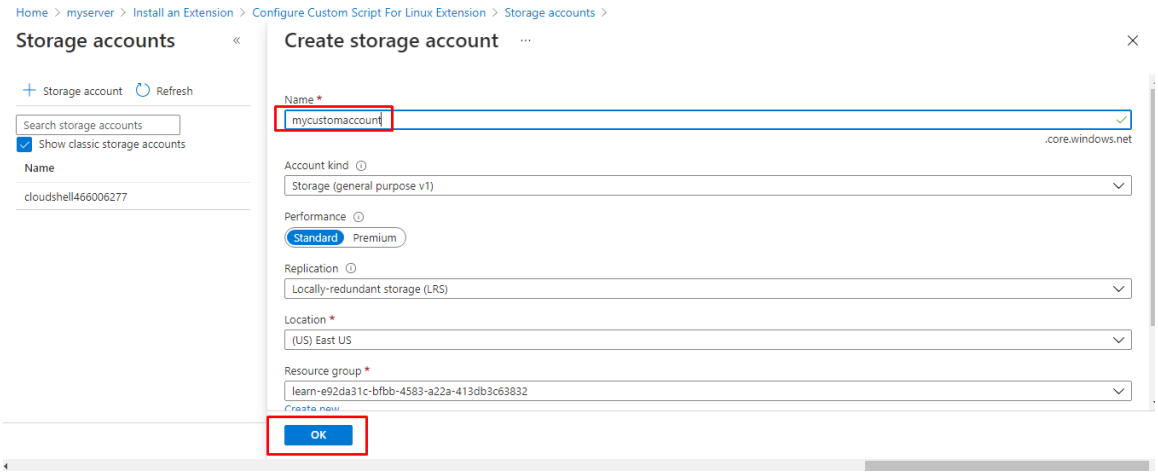








You can create or use the existing storage accounts. Let's create a new one.



Home > myserver > Install an Extension > Configure Custom Script For Linux Extension >

Storage accounts

+ Storage account Refresh

Search storage accounts Show classic storage accounts

Name	Type	Resource Group	Location
cloudshell466006277	Standard-GRS	learn-e92da31c-bfbb-4583-a22a-4...	Central India
mycustomaccount		learn-e92da31c-bfbb-4583-a22a-4...	East US

Home > myserver > Install an Extension > Configure Custom Script For Linux Extension > Storage accounts >

Storage accounts

+ Storage account Refresh

Search storage accounts

Show classic storage accounts

Name

cloudshell466006277

mycustomaccount

Containers

mycustomaccount

+ Container Refresh

Search containers by prefix

Name	Last modified	Public access level	Lease state

You don't have any containers yet. Click '+ Container' to get started.

Home > myserver > Install an Extension > Configure Custom Script For Linux Extension > Storage accounts >

Storage accounts

+ Storage account Refresh

Search storage accounts

Show classic storage accounts

Name

cloudshell466006277

mycustomaccount

Containers

mycustomaccount

+ Container Refresh

Search containers by prefix

Name	Last modified	Public access level

You don't have any containers yet. Click '+ Container' to get started.

New container

Name *

mycustomscript

Public access level

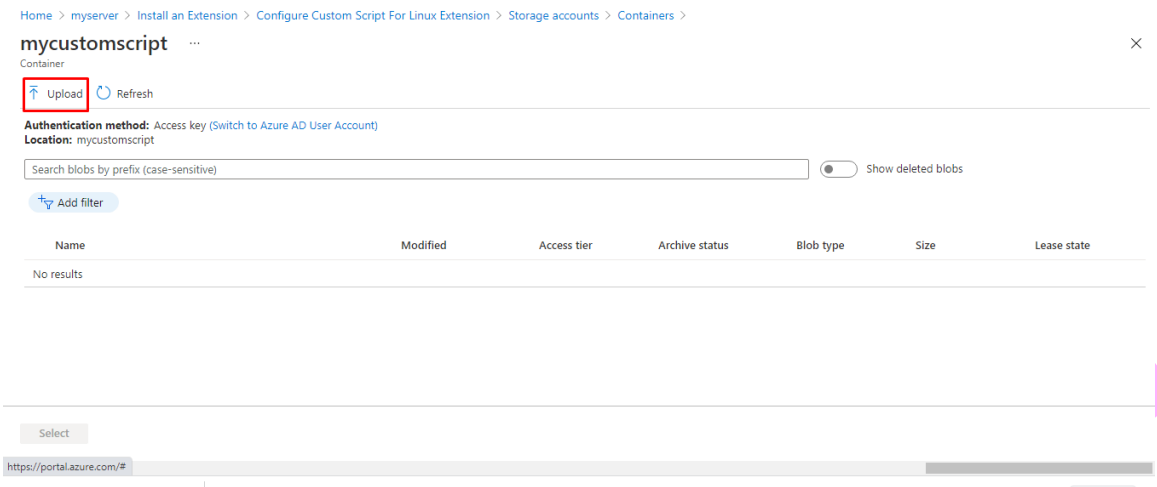
Private (no anonymous access)

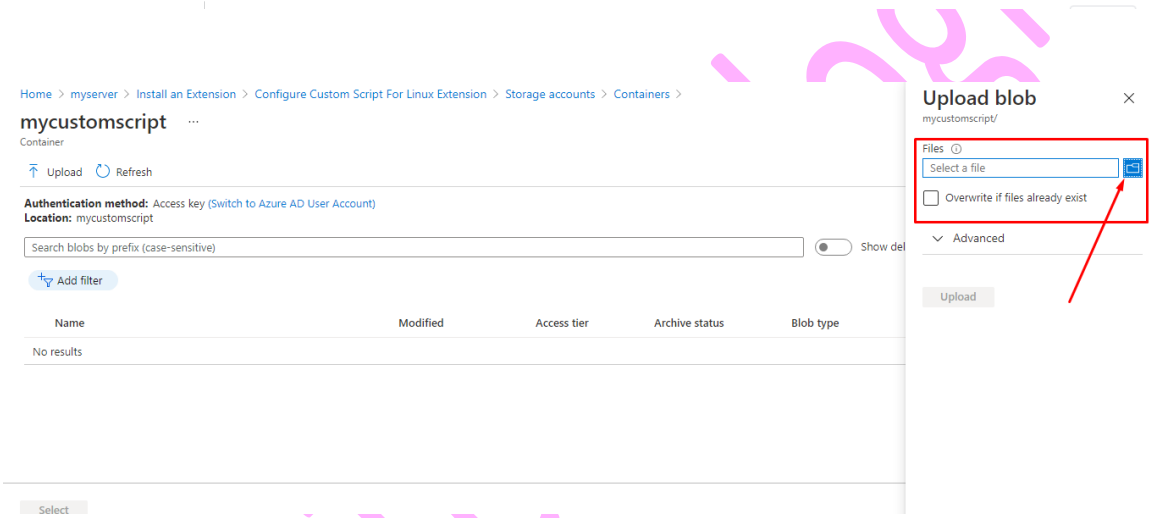
Advanced

Create Discard

AZ Compute Reso...one

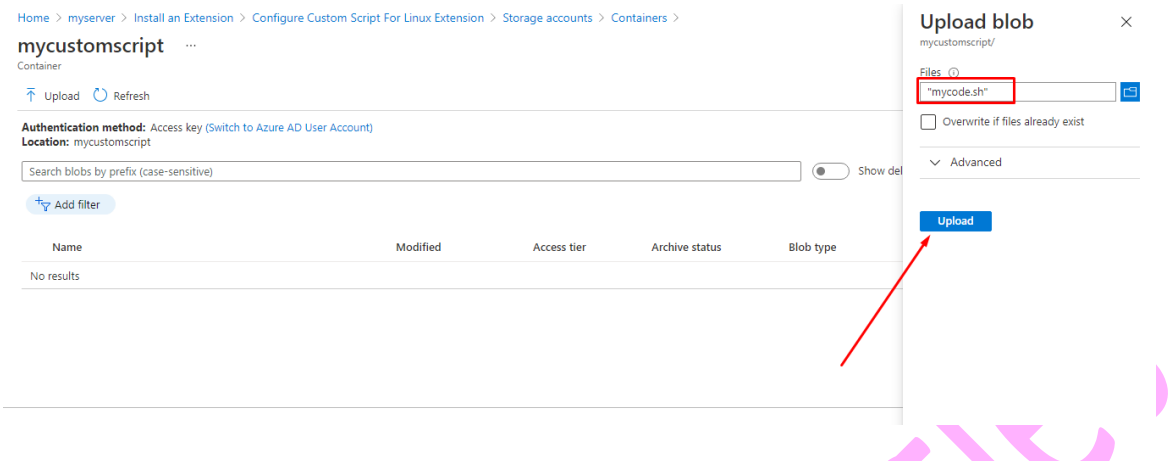
Show all

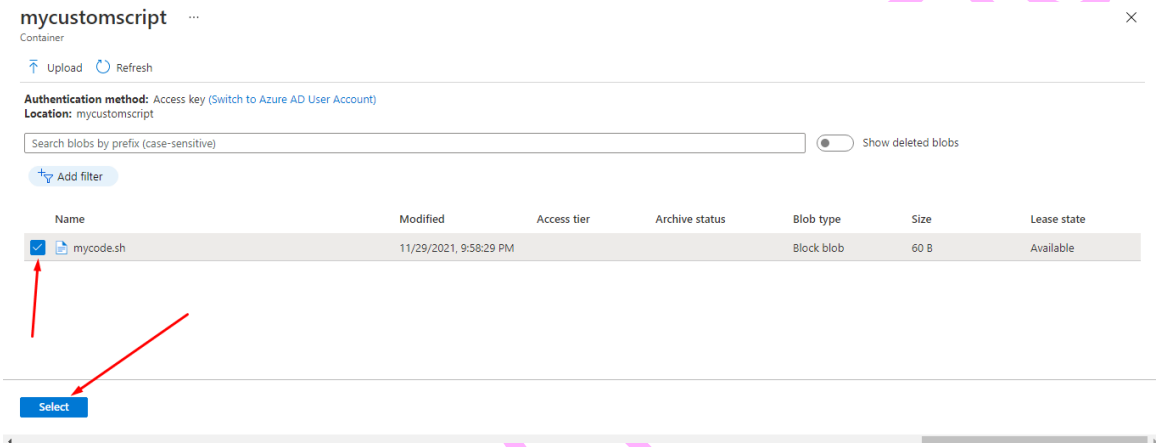


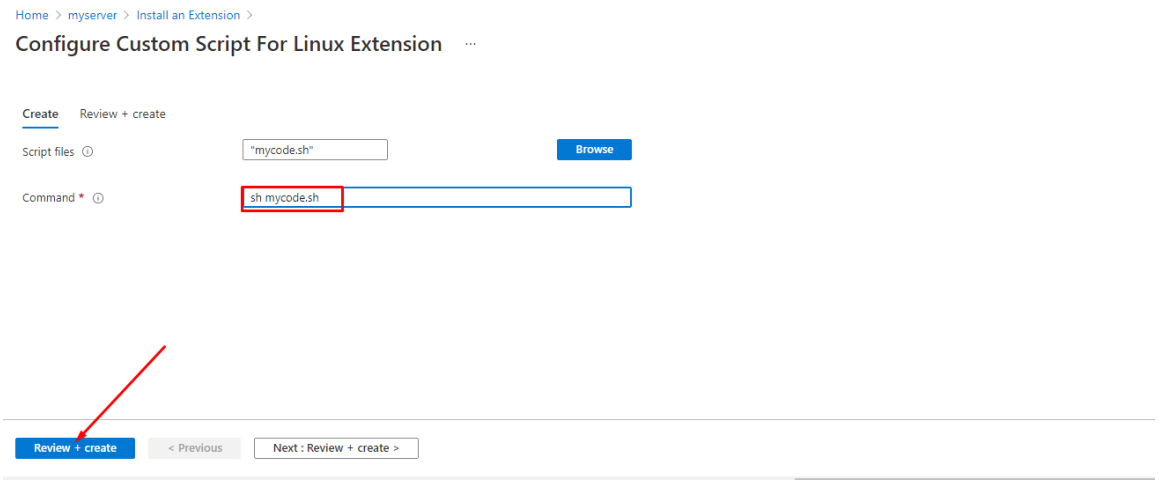


mycode.sh

```
#!/bin/bash
echo "Hi Team welcome to dvs" > /tmp/mydata.txt
```

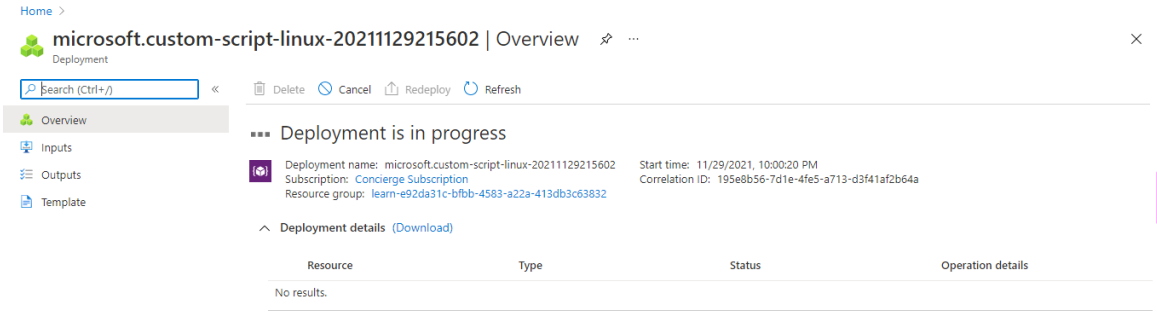


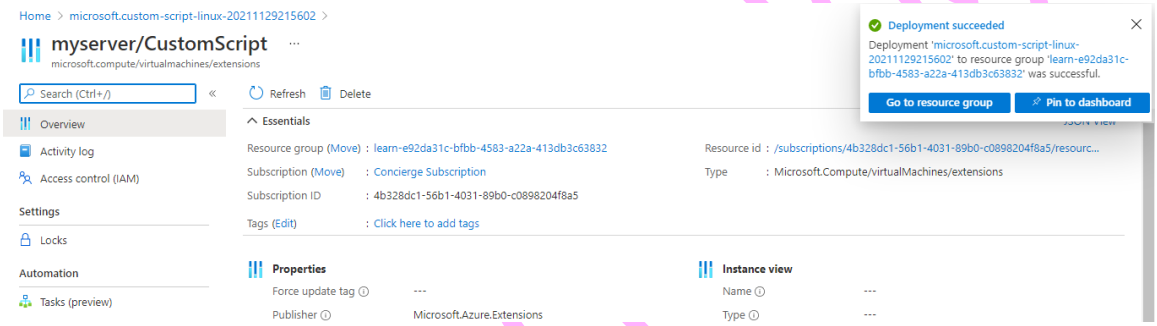




Before we click on review + create let's see the data in the server

```
[root@myserver ~]# ls -l /tmp/mydata.txt
ls: cannot access /tmp/mydata.txt: No such file or directory
[root@myserver ~]#
```





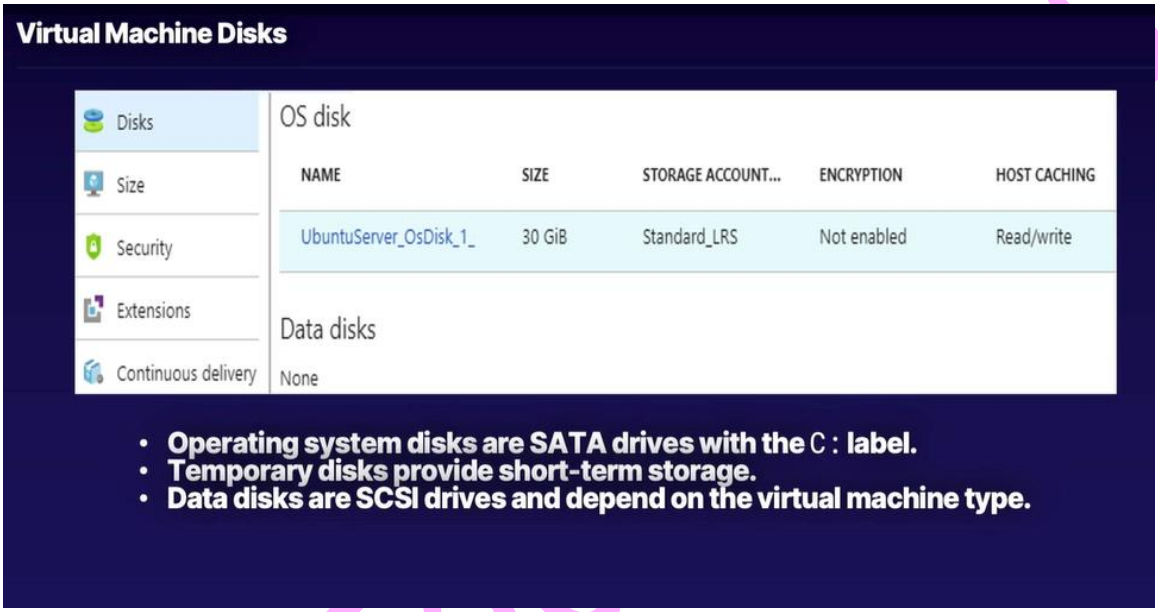

```
[root@myserver ~]# ls -l /tmp/mydata.txt
-rw-r--r--. 1 root root 23 Nov 29 18:00 /tmp/mydata.txt
[root@myserver ~]# cat /tmp/mydata.txt
Hi Team welcome to dvs
[root@myserver ~]#
```

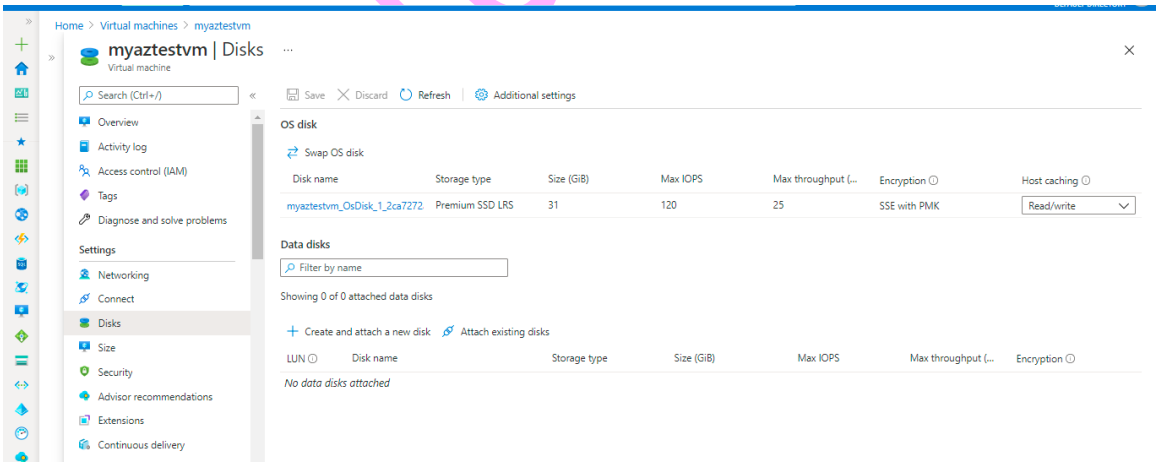
Note: customscript works only once

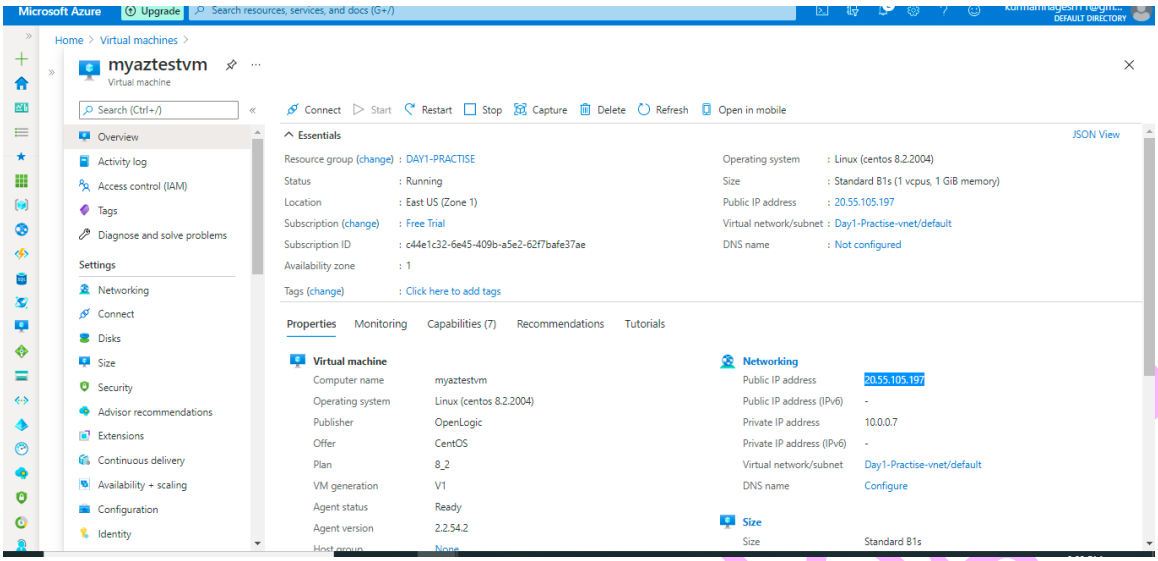
5 Add disk to VM

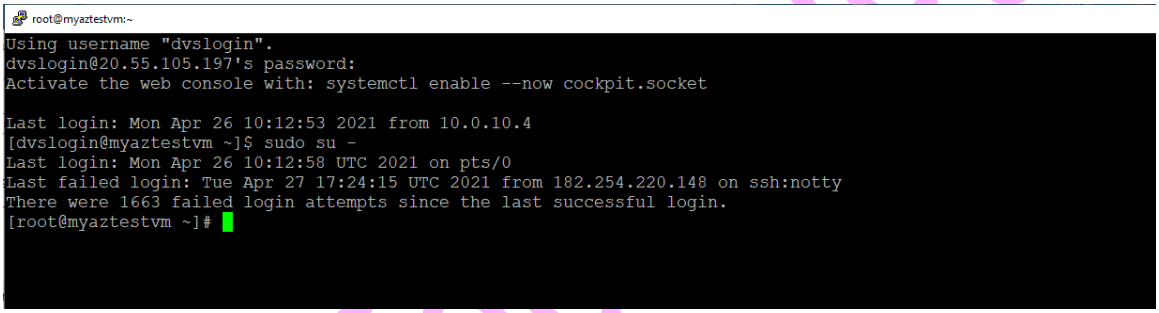
Let's add a disk to the running vm

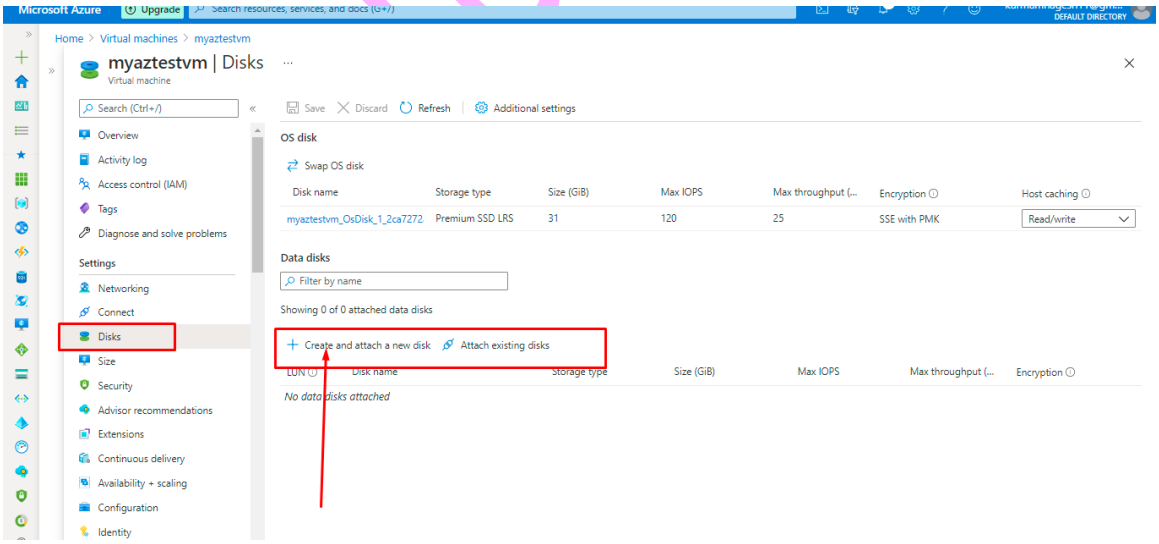
IOPS: No of input and output transactions happening on the disk
Throughput: Total number of data transferred through & from to the disk per second

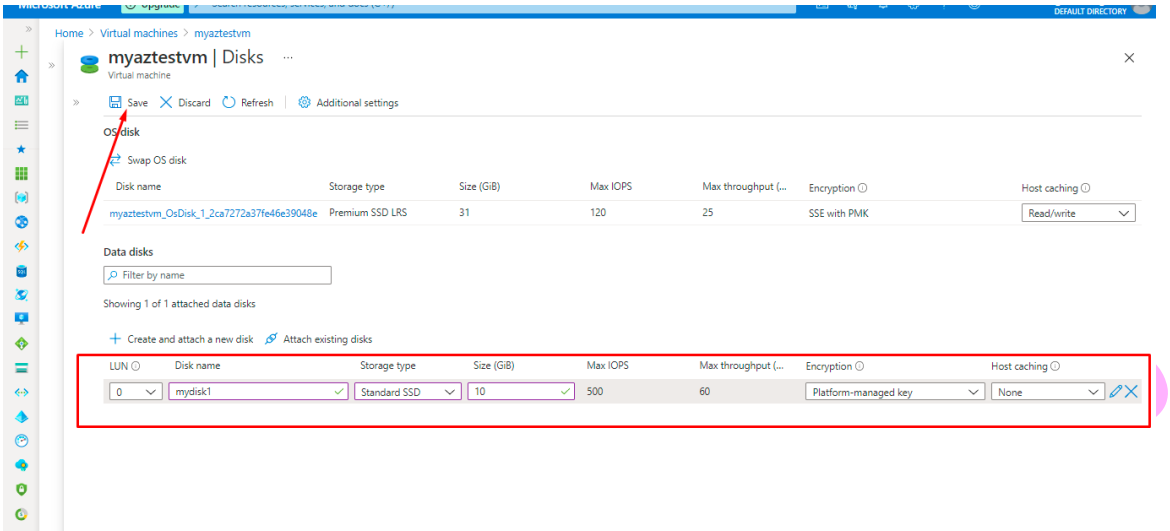


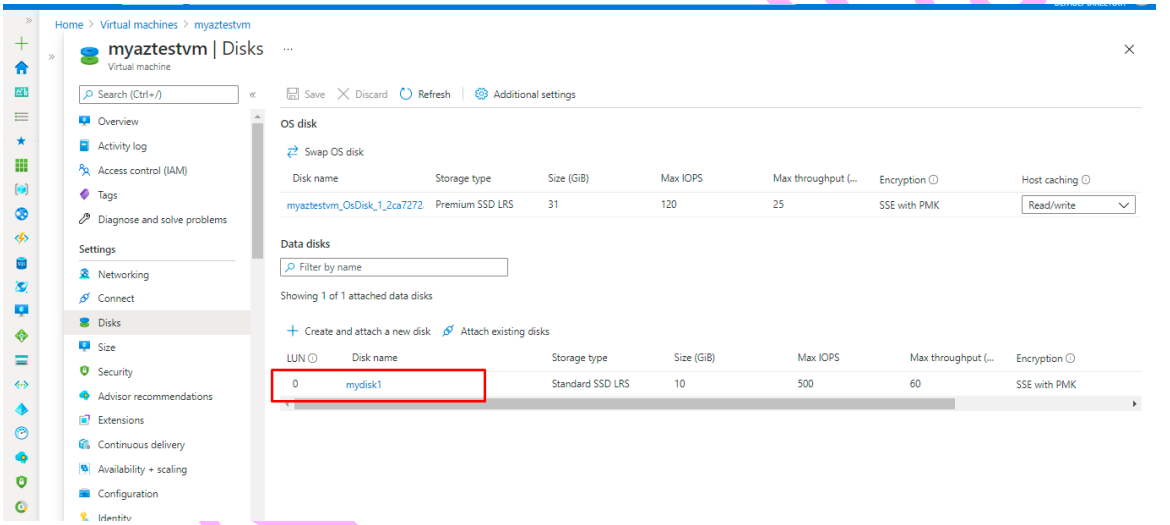


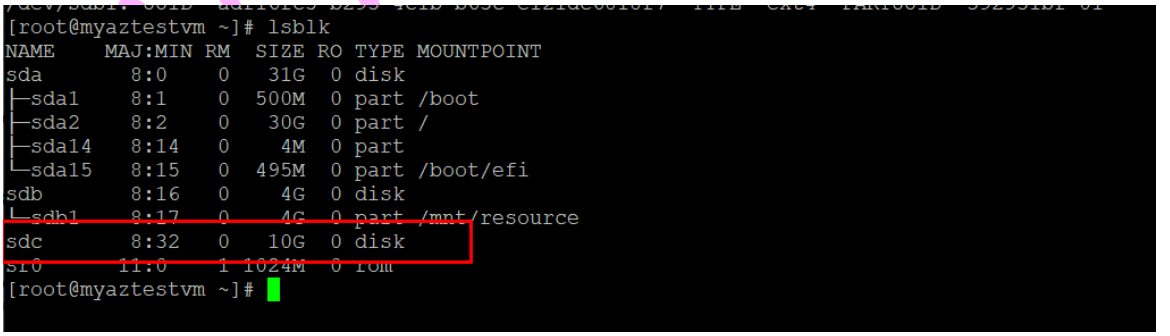

Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
DEFAULT DIRECTORY
Home > Virtual machines >
myaztestvm
Virtual machine
Search (Ctrl+/)
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Settings
Networking
Connect
Disks
Size
Security
Advisor recommendations
Extensions
Continuous delivery
Availability + scaling
Configuration
Identity
Connect
Start
Restart
Stop
Capture
Delete
Refresh
Open in mobile
Essentials
JSON View
Resource group (change) : DAY1-PRACTISE
Status : Running
Location : East US (Zone 1)
Subscription (change) : Free Trial
Subscription ID : c44e1c32-6e45-409b-a5e2-62f7bafe37ae
Availability zone : 1
Tags (change) : Click here to add tags
Operating system : Linux (centos 8.2.2004)
Size : Standard B1s (1 vcpus, 1 GiB memory)
Public IP address : 20.55.105.197
Virtual network/subnet : Day1-Practise-vnet/default
DNS name : Not configured
Properties
Monitoring
Capabilities (7)
Recommendations
Tutorials
Virtual machine
Computer name myaztestvm
Operating system Linux (centos 8.2.2004)
Publisher OpenLogic
Offer CentOS
Plan 8_2
VM generation V1
Agent status Ready
Agent version 2.2.54.2
Networking
Public IP address 20.55.105.197
Public IP address (IPv6) -
Private IP address 10.0.0.7
Private IP address (IPv6) -
Virtual network/subnet Day1-Practise-vnet/default
DNS name Configure
Size
Size Standard B1s


root@myaztestvm:~
Using username "dvslogin".
dvslogin@20.55.105.197's password:
Activate the web console with: systemctl enable --now cockpit.socket
Last login: Mon Apr 26 10:12:53 2021 from 10.0.10.4
[dvslogin@myaztestvm ~]$ sudo su -
Last login: Mon Apr 26 10:12:58 UTC 2021 on pts/0
Last failed login: Tue Apr 27 17:24:15 UTC 2021 from 182.254.220.148 on ssh:notty
There were 1663 failed login attempts since the last successful login.
[root@myaztestvm ~]#


Microsoft Azure
Upgrade
Home > Virtual machines > myaztestvm
myaztestvm | Disks
Virtual machine
Search (Ctrl+/)
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Settings
Networking
Connect
Disks
Size
Security
Advisor recommendations
Extensions
Continuous delivery
Availability + scaling
Configuration
Identity
Save
Discard
Refresh
Additional settings
OS disk
Swap OS disk
Disk name
Storage type
Size (GiB)
Max IOPS
Max throughput (...
Encryption
Host caching
myaztestvm_OsDisk_1_2ca7272
Premium SSD LRS
31
120
25
SSE with PMK
Read/write
Data disks
Filter by name
Showing 0 of 0 attached data disks
Create and attach a new disk
Attach existing disks
LUN
Disk name
Storage type
Size (GiB)
Max IOPS
Max throughput (...
Encryption
No data disks attached


Home > Virtual machines > myaztestvm
myaztestvm | Disks
Virtual machine
Save
Discard
Refresh
Additional settings
OS disk
Swap OS disk
Disk name
Storage type
Size (GiB)
Max IOPS
Max throughput (...
Encryption
Host caching
myaztestvm_OsDisk_1_2ca7272a37fe46e39048e
Premium SSD LRS
31
120
25
SSE with PMK
Read/write
Data disks
Filter by name
Showing 1 of 1 attached data disks
Create and attach a new disk
Attach existing disks
LUN
Disk name
Storage type
Size (GiB)
Max IOPS
Max throughput (...
Encryption
Host caching
0
mydisk1
Standard SSD
10
500
60
Platform-managed key
None


Home > Virtual machines > myaztestvm
myaztestvm | Disks
Virtual machine
Search (Ctrl+/)
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Settings
Networking
Connect
Disks
Size
Security
Advisor recommendations
Extensions
Continuous delivery
Availability + scaling
Configuration
Save
Discard
Refresh
Additional settings
OS disk
Swap OS disk
Disk name
Storage type
Size (GiB)
Max IOPS
Max throughput (...
Encryption
Host caching
myaztestvm_OsDisk_1_2ca7272
Premium SSD LRS
31
120
25
SSE with PMK
Read/write
Data disks
Filter by name
Showing 1 of 1 attached data disks
Create and attach a new disk
Attach existing disks
LUN
Disk name
Storage type
Size (GiB)
Max IOPS
Max throughput (...
Encryption
0
mydisk1
Standard SSD LRS
10
500
60
SSE with PMK

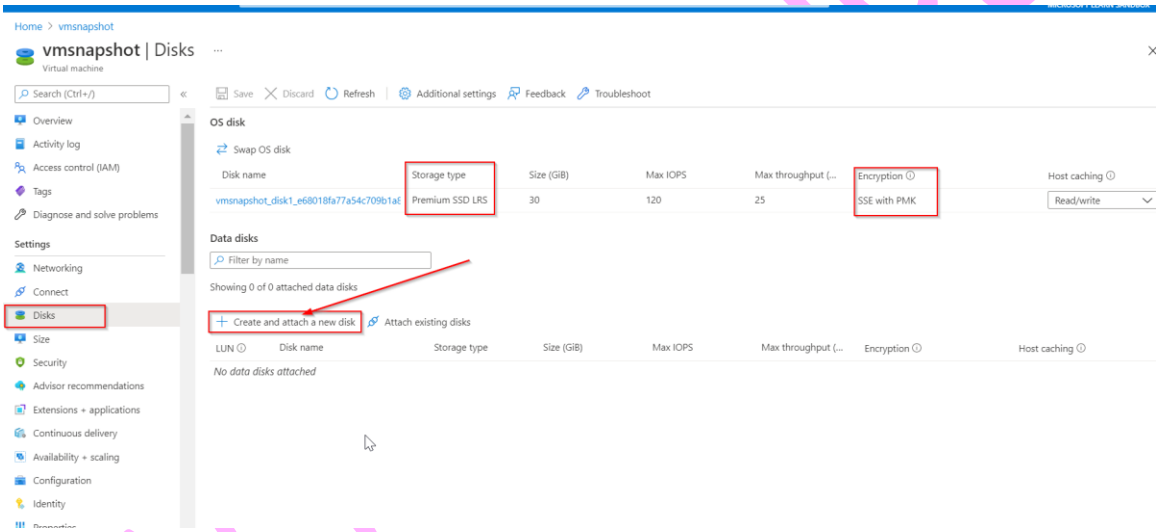

[root@myaztestvm ~]# lsblk
NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
sda 8:0 0 31G 0 disk
├─sda1 8:1 0 500M 0 part /boot
├─sda2 8:2 0 30G 0 part /
├─sda14 8:14 0 4M 0 part
└─sda15 8:15 0 495M 0 part /boot/efi
sdb 8:16 0 4G 0 disk
└─sdb1 8:17 0 4G 0 part /mnt/resource
sdc 8:32 0 10G 0 disk
sr0 11:0 1 1024M 0 rom
[root@myaztestvm ~]#

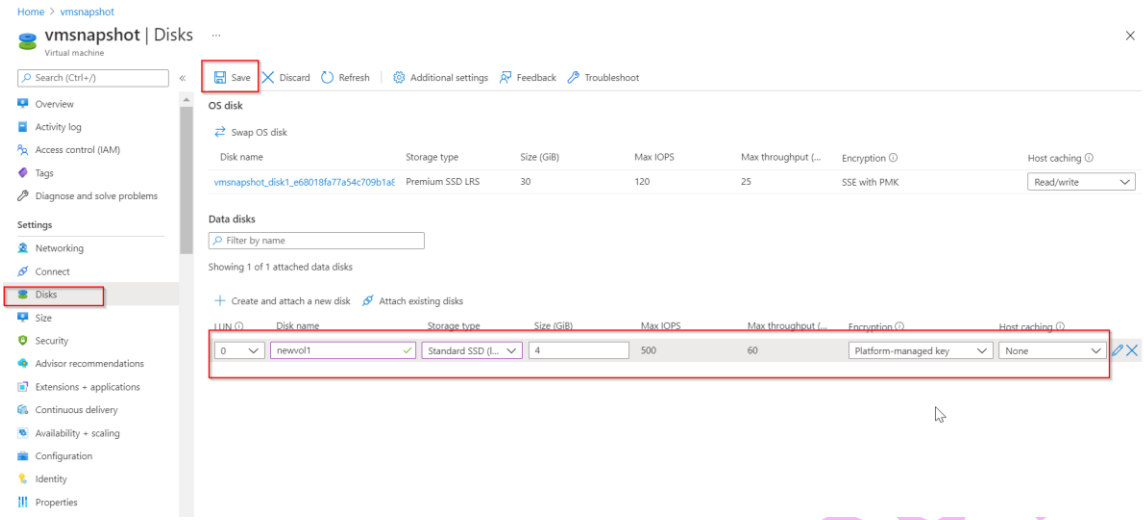
6 Disk snapshot

Create one VM and attach a disk to it then try to write some data to that disk & then take the snapshot backup.

```
[root@vmsnapshot ~]# lsblk
NAME    MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda       8:0    0   30G  0 disk
├─sda1    8:1    0  500M  0 part /boot
├─sda2    8:2    0   29G  0 part /
├─sda14   8:14   0    4M  0 part
└─sda15   8:15   0  495M  0 part /boot/efi
sdb       8:16   0   16G  0 disk
└─sdb1    8:17   0   16G  0 part /mnt/resource
[root@vmsnapshot ~]#
```

Add a new disk to the system.






```
[root@vmsnapshot ~]# lsblk
NAME    MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda       8:0    0   30G  0 disk
├─sda1    8:1    0  500M  0 part /boot
├─sda2    8:2    0   29G  0 part /
├─sda14   8:14   0    4M  0 part
└─sda15   8:15   0  495M  0 part /boot/efi
sdb       8:16   0   16G  0 disk
└─sdb1    8:17   0   16G  0 part /mnt/resource
sdc       8:32   0    4G  0 disk
[root@vmsnapshot ~]# blkid
```

Now we see the data let's format and write some data to this disk.

```
[root@vmsnapshot ~]# mkfs.ext4 /dev/sdc
mke2fs 1.42.9 (28-Dec-2013)
/dev/sdc is entire device, not just one partition!
Proceed anyway? (y,n) y
Discarding device blocks: done
Filesystem label=
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
Stride=0 blocks, Stripe width=0 blocks
262144 inodes, 1048576 blocks
52428 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=1073741824
32 block groups
32768 blocks per group, 32768 fragments per group
8192 inodes per group
Superblock backups stored on blocks:
        32768, 98304, 163840, 229376, 294912, 819200, 884736

Allocating group tables: done
Writing inode tables: done
Creating journal (32768 blocks): done
Writing superblocks and filesystem accounting information: done

[root@vmsnapshot ~]# mkdir /app1
[root@vmsnapshot ~]# mount -t ext4 /dev/sdc /app1
[root@vmsnapshot ~]# df -hT /app1
Filesystem     Type  Size  Used Avail Use% Mounted on
```

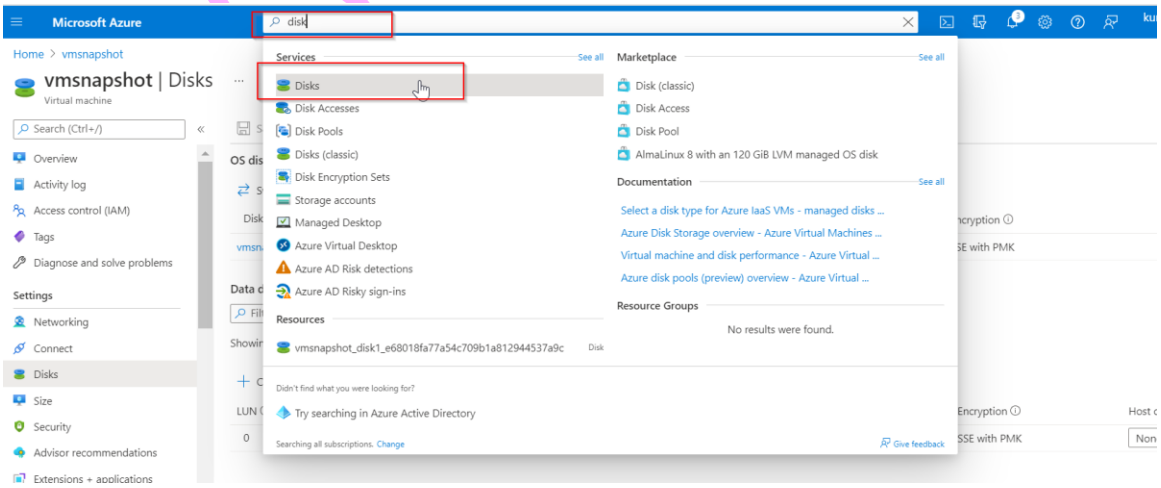
```
[root@vmsnapshot ~]# df -hT /app1
Filesystem     Type  Size  Used Avail Use% Mounted on
/dev/sdc       ext4  3.9G   16M  3.6G   1% /app1
[root@vmsnapshot ~]# echo "Hi I am from disk sdc" > /app1/disk-sdc.txt
[root@vmsnapshot ~]#
[root@vmsnapshot ~]#
[root@vmsnapshot ~]#
```

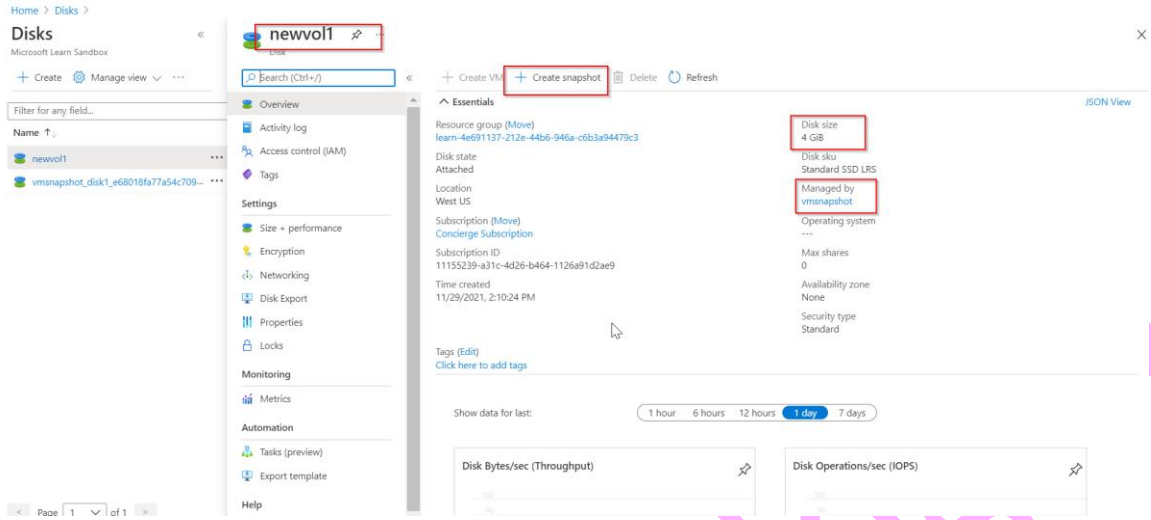
Now let's try to create the snapshot and create the disk out of the snapshot & try to mount it and check if we see the file disk-sdc.txt or not.

Before:

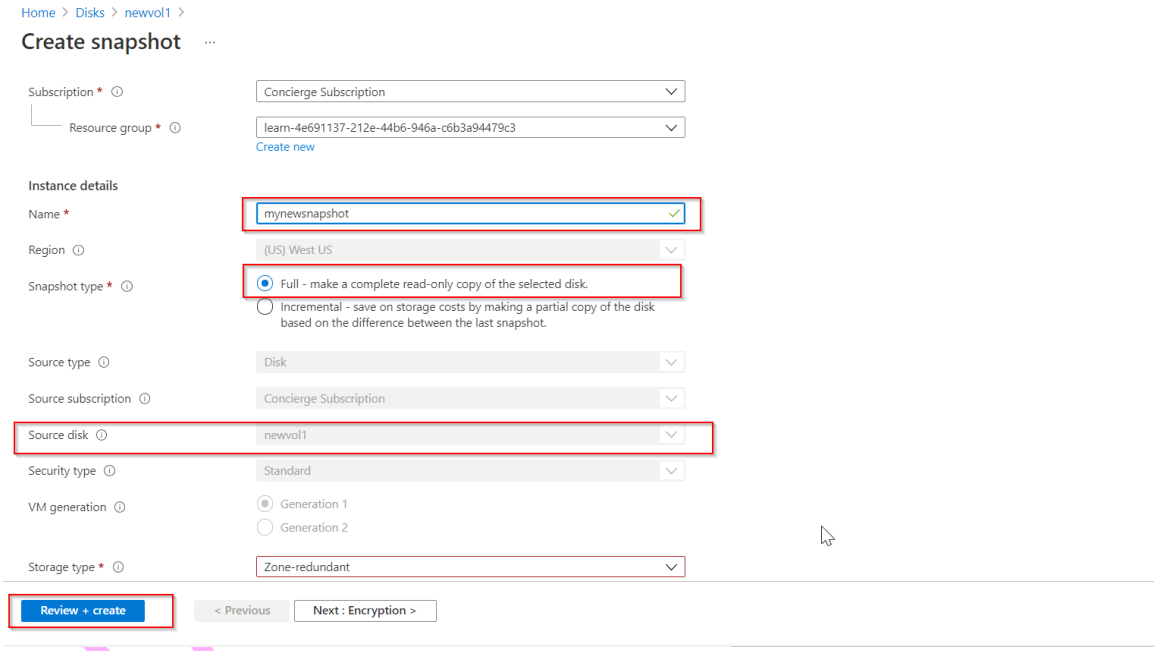
```
[root@vmsnapshot ~]# df -hT
Filesystem     Type      Size  Used Avail Use% Mounted on
devtmpfs       devtmpfs  3.9G     0  3.9G   0% /dev
tmpfs          tmpfs     3.9G     0  3.9G   0% /dev/shm
tmpfs          tmpfs     3.9G  8.5M  3.9G   1% /run
tmpfs          tmpfs     3.9G     0  3.9G   0% /sys/fs/cgroup
/dev/sda2      xfs        30G  1.6G   28G   6% /
/dev/sda1      xfs       494M   75M  419M  16% /boot
/dev/sda15     vfat      495M   12M  484M   3% /boot/efi
/dev/sdb1      ext4       16G   45M   15G   1% /mnt/resource
tmpfs          tmpfs     783M     0  783M   0% /run/user/1000
/dev/sdc       ext4      3.9G   16M  3.6G   1% /app1
[root@vmsnapshot ~]# lsblk
NAME    MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda       8:0    0   30G  0 disk
├─sda1    8:1    0  500M  0 part /boot
├─sda2    8:2    0   29G  0 part /
├─sda14   8:14   0    4M  0 part
└─sda15   8:15   0  495M  0 part /boot/efi
sdb       8:16   0   16G  0 disk
└─sdb1    8:17   0   16G  0 part /mnt/resource
sdc       8:32   0    4G  0 disk /app1
[root@vmsnapshot ~]#
```

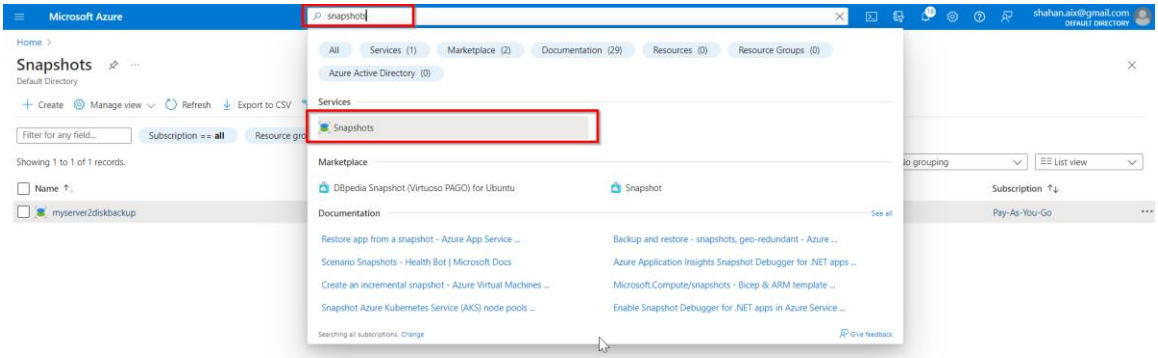
Taking snapshot:

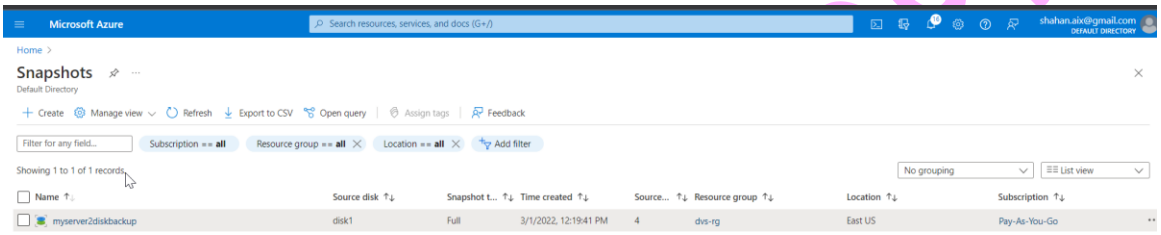


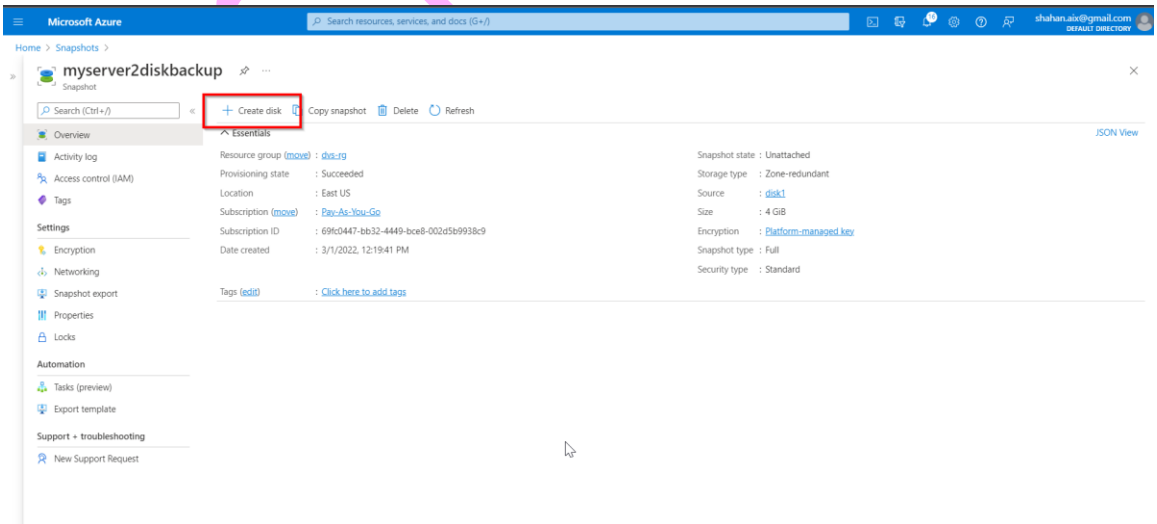

Home > Disks >
Disks
Microsoft Learn Sandbox
Create
Manage view
Filter for any field...
Name
newvol1
vmsnapshot_disk1_e68018fa77a54c709...
Page 1 of 1
newvol1
Disk
Search (Ctrl+/)
Overview
Activity log
Access control (IAM)
Tags
Settings
Size + performance
Encryption
Networking
Disk Export
Properties
Locks
Monitoring
Metrics
Automation
Tasks (preview)
Export template
Help
Create VM
Create snapshot
Delete
Refresh
Essentials
JSON View
Resource group (Move)
learn-4e691137-212e-44b6-946a-c6b3a94479c3
Disk state
Attached
Location
West US
Subscription (Move)
Concierge Subscription
Subscription ID
11155239-a31c-4d26-b464-1126a91d2ae9
Time created
11/29/2021, 2:10:24 PM
Disk size
4 GiB
Disk sku
Standard SSD LRS
Managed by
vmsnapshot
Operating system

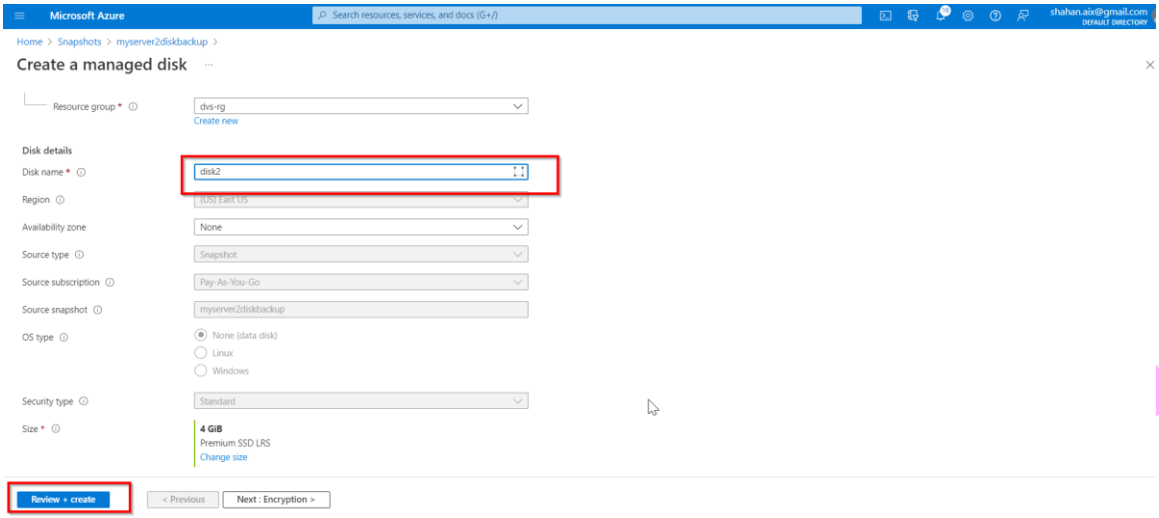
Max shares
0
Availability zone
None
Security type
Standard
Tags (Edit)
Click here to add tags
Show data for last:
1 hour
6 hours
12 hours
1 day
7 days
Disk Bytes/sec (Throughput)
Disk Operations/sec (IOPS)


Home > Disks > newvol1 >
Create snapshot
Subscription *
Concierge Subscription
Resource group *
learn-4e691137-212e-44b6-946a-c6b3a94479c3
Create new
Instance details
Name *
mynewsnapshot
Region
(US) West US
Snapshot type *
Full - make a complete read-only copy of the selected disk.
Incremental - save on storage costs by making a partial copy of the disk based on the difference between the last snapshot.
Source type
Disk
Source subscription
Concierge Subscription
Source disk
newvol1
Security type
Standard
VM generation
Generation 1
Generation 2
Storage type *
Zone-redundant
Review + create
< Previous
Next : Encryption >

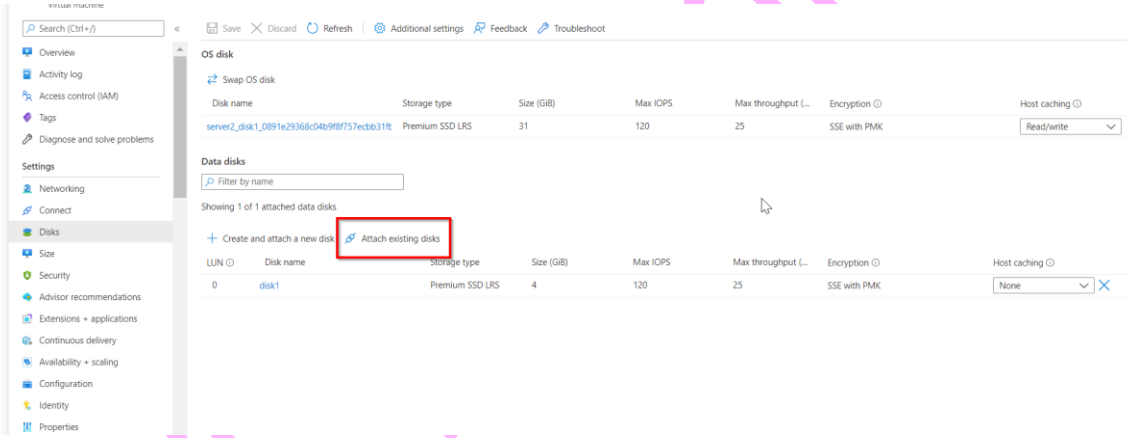

Microsoft Azure
snapshots
shahan.aix@gmail.com
DEFAULT DIRECTORY
Home >
Snapshots
Default Directory
Create
Manage view
Refresh
Export to CSV
Filter for any field...
Subscription == all
Showing 1 to 1 of 1 records.
Name
myserver2diskbackup
All
Services (1)
Marketplace (2)
Documentation (29)
Resources (0)
Resource Groups (0)
Azure Active Directory (0)
Services
Snapshots
Marketplace
DBpedia Snapshot (Virtuoso PAGO) for Ubuntu
Snapshot
Documentation
See all
Restore app from a snapshot - Azure App Service ...
Backup and restore - snapshots, geo-redundant - Azure ...
Scenario Snapshots - Health Bot | Microsoft Docs
Azure Application Insights Snapshot Debugger for .NET apps ...
Create an incremental snapshot - Azure Virtual Machines ...
Microsoft.Compute/snapshots - Bicep & ARM template ...
Snapshot Azure Kubernetes Service (AKS) node pools ...
Enable Snapshot Debugger for .NET apps in Azure Service ...
Searching all subscriptions. Change
Give feedback
List view
Subscription
Pay-As-You-Go

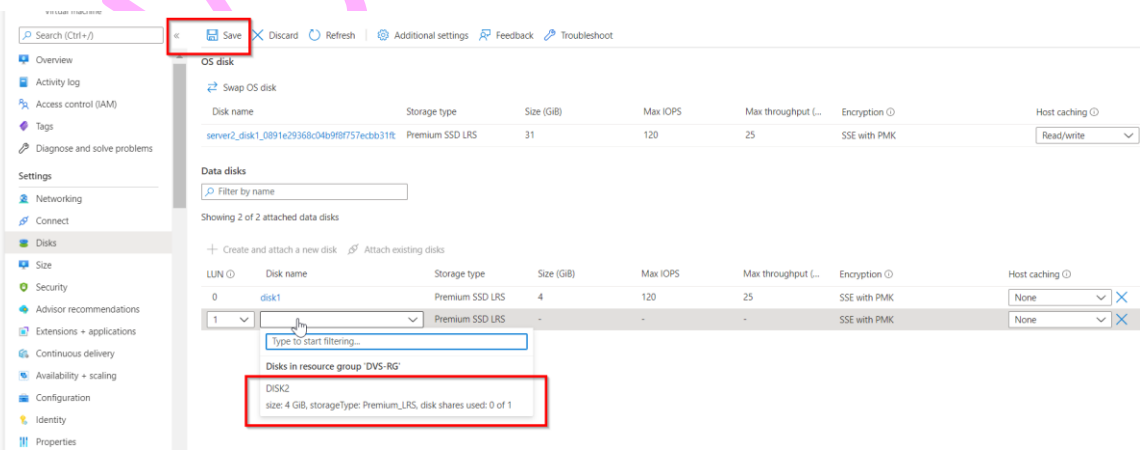

Microsoft Azure
Search resources, services, and docs (G+/)
shahan.aix@gmail.com
DEFAULT DIRECTORY
Home >
Snapshots
Default Directory
Create
Manage view
Refresh
Export to CSV
Open query
Assign tags
Feedback
Filter for any field...
Subscription == all
Resource group == all
Location == all
Add filter
Showing 1 to 1 of 1 records.
No grouping
List view
Name
Source disk
Snapshot t...
Time created
Source...
Resource group
Location
Subscription
myserver2diskbackup
disk1
Full
3/1/2022, 12:19:41 PM
4
dvs-rg
East US
Pay-As-You-Go


Microsoft Azure
Search resources, services, and docs (G+/)
shahan.aix@gmail.com
DEFAULT DIRECTORY
Home > Snapshots >
myserver2diskbackup
Snapshot
Search (Ctrl+/)
Overview
Activity log
Access control (IAM)
Tags
Settings
Encryption
Networking
Snapshot export
Properties
Locks
Automation
Tasks (preview)
Export template
Support + troubleshooting
New Support Request
Create disk
Copy snapshot
Delete
Refresh
Essentials
JSON View
Resource group (move) : dvs-rg
Provisioning state : Succeeded
Location : East US
Subscription (move) : Pay-As-You-Go
Subscription ID : 69fc0447-bb32-4449-bce8-002d5b9938c9
Date created : 3/1/2022, 12:19:41 PM
Tags (edit) : Click here to add tags
Snapshot state : Unattached
Storage type : Zone-redundant
Source : disk1
Size : 4 GiB
Encryption : Platform-managed key
Snapshot type : Full
Security type : Standard



Adding the disk to the server:





```
root@server2:~
[root@server2 ~]# lsblk
NAME     MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda        8:0    0   31G  0 disk
├─sda1     8:1    0  500M  0 part /boot
├─sda2     8:2    0   30G  0 part /
├─sda14    8:14   0    4M  0 part
└─sda15    8:15   0  495M  0 part /boot/efi
sdb        8:16   0    4G  0 disk
└─sdb1     8:17   0    4G  0 part /mnt/resource
sdc        8:32   0    4G  0 disk /test
sdd        8:48   0    4G  0 disk
[root@server2 ~]#
```

Mounting the disk & verifying the data:

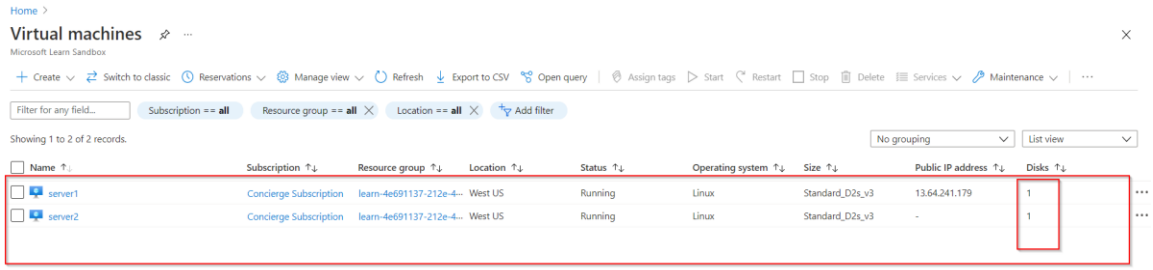
```
sdc        8:32   0    4G  0 disk /test
sdd        8:48   0    4G  0 disk
[root@server2 ~]# blkid
/dev/sda1: UUID="ae9ae01e-6596-4593-8a33-8deeb9820e38" TYPE="xfs" PARTUUID="5c86595d-a28a-43ea-9102-f192eee01417"
/dev/sda2: UUID="8fad5ef4-9341-44dc-9538-1941f55e4f44" TYPE="xfs" PARTUUID="fd2b2dda-b5cf-4490-a3c5-a1127e1dfd32"
/dev/sda15: SEC_TYPE="msdos" UUID="38D3-7C4E" TYPE="vfat" PARTLABEL="EFI System Partition" PARTUUID="60f61173-b112-4c24-9d65-c7035541eb15"
/dev/sdb1: UUID="73b6c027-195e-4576-9f0c-8a1ba25abaa1" TYPE="ext4"
/dev/sda14: PARTUUID="593a0311-9927-4e3f-9778-a4953ae15f76"
/dev/sdc: UUID="c133c166-494f-4f75-88a7-7df554cfa4ba" TYPE="ext4"
/dev/sdd: UUID="c133c166-494f-4f75-88a7-7df554cfa4ba" TYPE="ext4"
[root@server2 ~]# mkdir /snapshotdisk
[root@server2 ~]# mount -t ext4 /dev/sdd /snapshotdisk/
[root@server2 ~]# df -hT /snapshotdisk/
Filesystem     Type  Size  Used Avail Use% Mounted on
/dev/sdd       ext4  3.9G   16M  3.6G   1% /snapshotdisk
[root@server2 ~]#
```

7 AZ shared disks

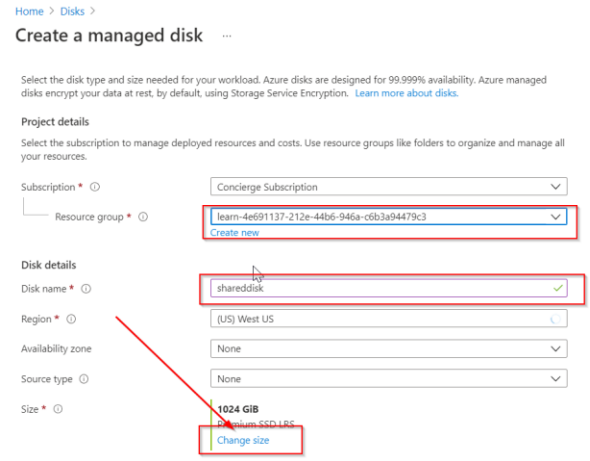
Create two servers & try to create the disk and attach it to the servers then check if we can get shared data or not.

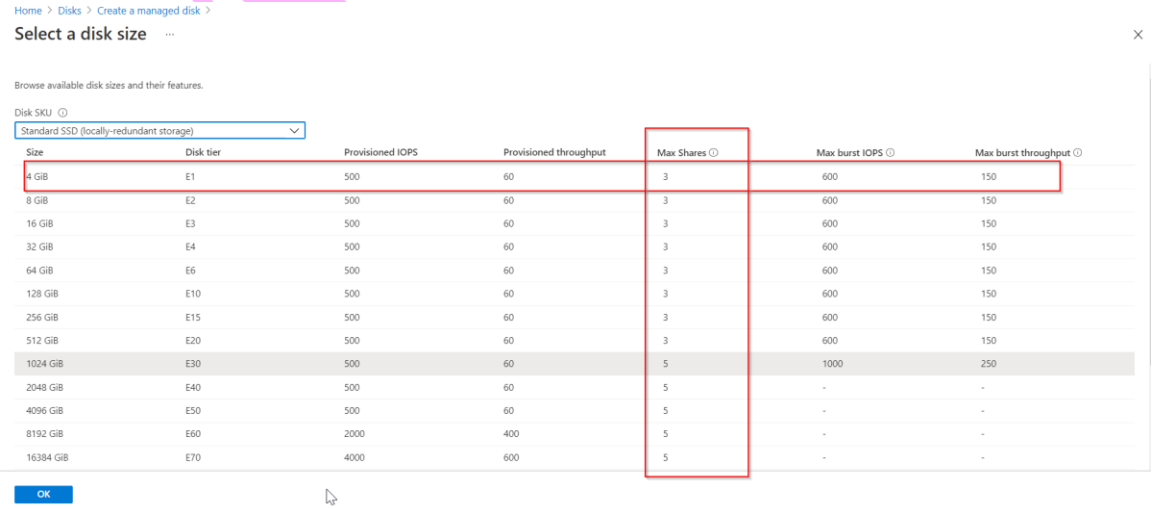
Create two machines

Note: Make sure that the storage & region in which you are creating the VM's are same



Let's create the shared disk & try to mount it.





Home > Disks >

Create a managed disk ...

Select the disk type and size needed for your workload. Azure disks are designed for 99.999% availability. Azure managed disks encrypt your data at rest, by default, using Storage Service Encryption. Learn more about disks.

Project details

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

Subscription * Concierge Subscription

Resource group * learn-4e691137-212e-44b6-946a-c6b3a94479c3

Create new

Disk details

Disk name * shareddisk

Region * (US) West US

Availability zone None

Source type None

Size * 4 GiB
Standard SSD LRS
Change size

Review + create | < Previous | Next : Encryption >

Home > Disks >

Create a managed disk ...

Basics | Encryption | Networking | Advanced | Tags | Review + create

Add additional configurations for your managed disk

Shared disk

Allow this disk to be attached to two or more virtual machines, depending on storage type and disk size. When shared disk is enabled host caching is unavailable. Learn more about shared disks

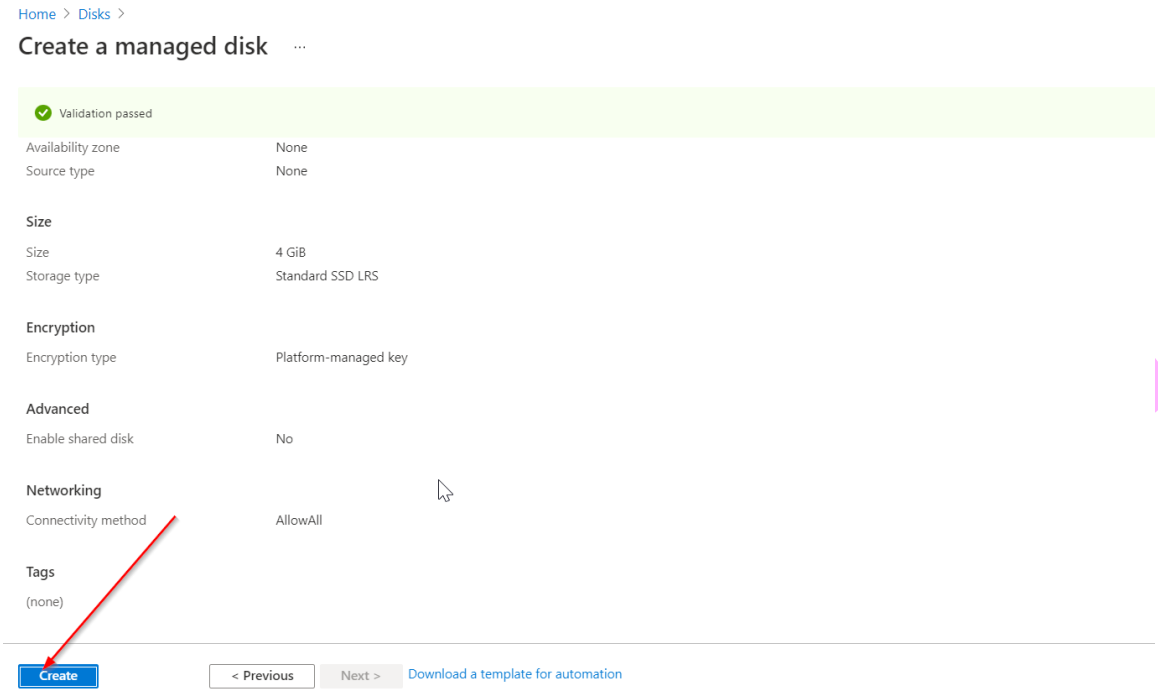
Enable shared disk Yes No

Max shares 2

2

3

Review + create | < Previous | Next : Tags >

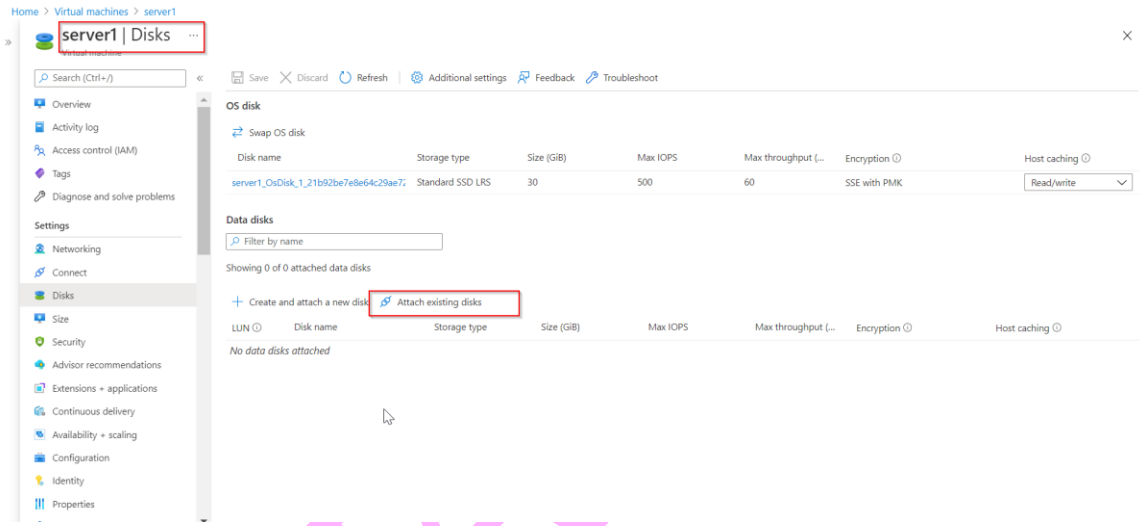


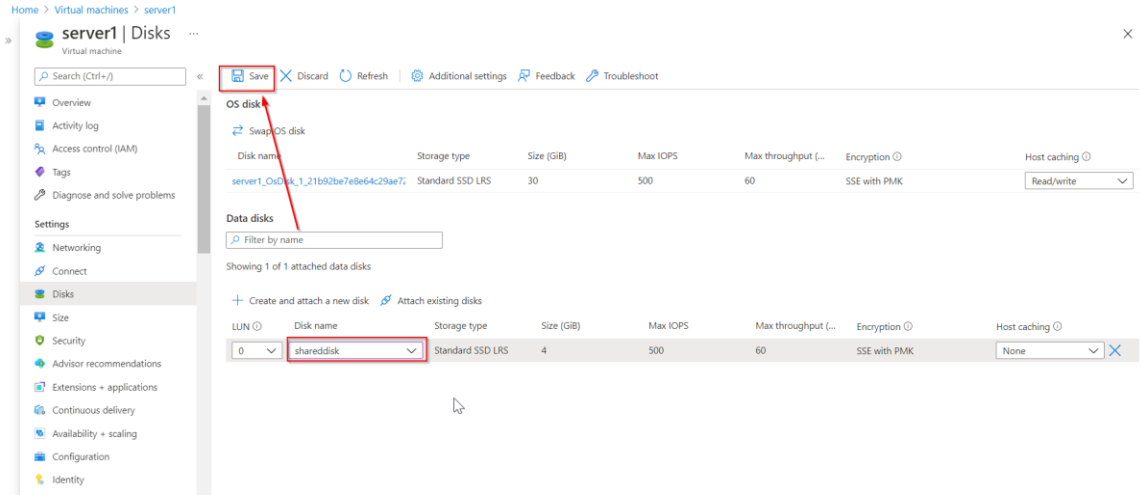
Now let's try to login to the servers

```
[dvsadmin@server1 ~]$ sudo su -
[root@server1 ~]# lsblk
NAME    MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda       8:0    0   30G  0 disk
├─sda1    8:1    0  500M  0 part /boot
├─sda2    8:2    0   29G  0 part /
├─sda14   8:14   0    4M  0 part
└─sda15   8:15   0  495M  0 part /boot/efi
sdb       8:16   0   16G  0 disk
└─sdb1    8:17   0   16G  0 part /mnt/resource
[root@server1 ~]#
```

```
[dvsadmin@server2 ~]$ sudo su -
[root@server2 ~]#
[root@server2 ~]# lsblk
NAME    MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda       8:0    0   30G  0 disk
├─sda1    8:1    0  500M  0 part /boot
├─sda2    8:2    0   29G  0 part /
├─sda14   8:14   0    4M  0 part
└─sda15   8:15   0  495M  0 part /boot/efi
sdb       8:16   0   16G  0 disk
└─sdb1    8:17   0   16G  0 part /mnt/resource
[root@server2 ~]#
```

Let's attach the disk to the system



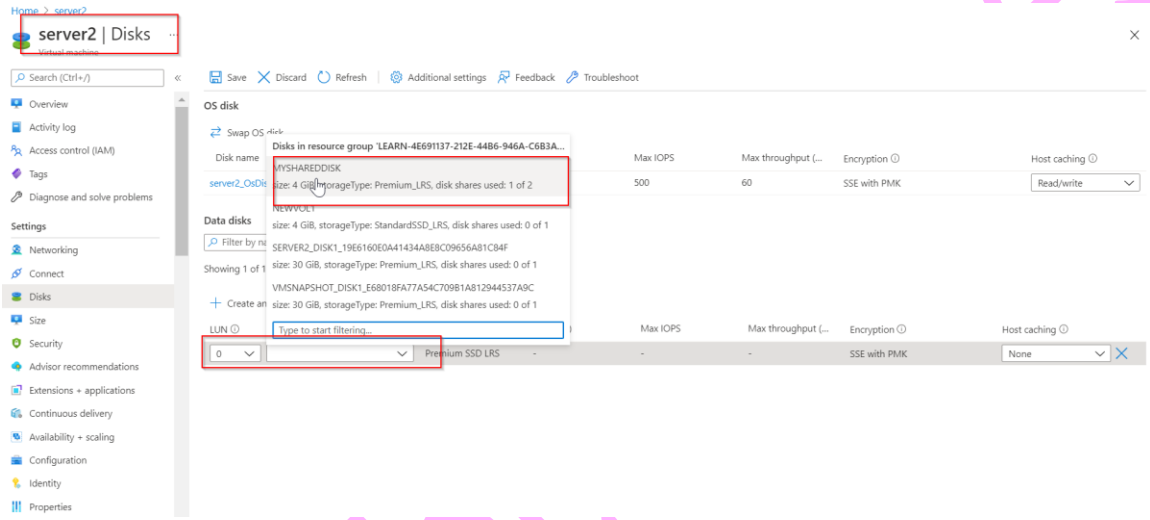


Server1:

mkfs.ext4 /dev/sdc
mkdir /mydata
mount -f /dev/sdc /mydata
df -hT /mydata/
echo "Hi I am from server1" > /mydata/server1.txt

Server2:

Now let's attach the same disk to server2 & check what will happen




```
Last login: Mon Nov 29 10:54:36 2021 from ec2-54-158-209-232.compute-1.amazonaws.com
[dvsadmin@server2 ~]$ sudo su -
Last login: Mon Nov 29 11:06:37 UTC 2021
[root@server2 ~]# lsblk
NAME    MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda       8:0    0   30G  0 disk
├─sda1    8:1    0  500M  0 part /boot
├─sda2    8:2    0   29G  0 part /
├─sda14   8:14   0    4M  0 part
└─sda15   8:15   0  495M  0 part /boot/efi
sdb       8:16   0   16G  0 disk
└─sdb1    8:17   0   16G  0 part /mnt/resource
sdc       8:32   0    4G  0 disk
[root@server2 ~]# blkid
/dev/sdb1: UUID="95a83c23-bb03-4ef7-83c2-f247abd7ed2d" TYPE="ext4"
/dev/sda1: UUID="f7482465-4b1b-4f2b-9ec1-d27be9137929" TYPE="xfs" PARTUUID="81192d56-b03e-4997-bdcb-e30265cdae4f"
/dev/sda2: UUID="9707334d-8bf3-4fb0-a579-6a8bf375ab4e" TYPE="xfs" PARTUUID="d22e59c5-f86f-4c9e-bdd3-07ed2cdff6b8"
/dev/sda15: SEC_TYPE="msdos" UUID="1AF5-E6C5" TYPE="vfat" PARTLABEL="EFI System Partition" PARTUUID="4c66abd1-0ff2-4b
b5-9e7b-167100f03300"
/dev/sda14: PARTUUID="5a5e1b62-cb54-4080-a361-d214021a9fdf"
/dev/sdc: UUID="4fb15c58-f430-4508-b92e-3caa163e9926" TYPE="ext4"
[root@server2 ~]#
```

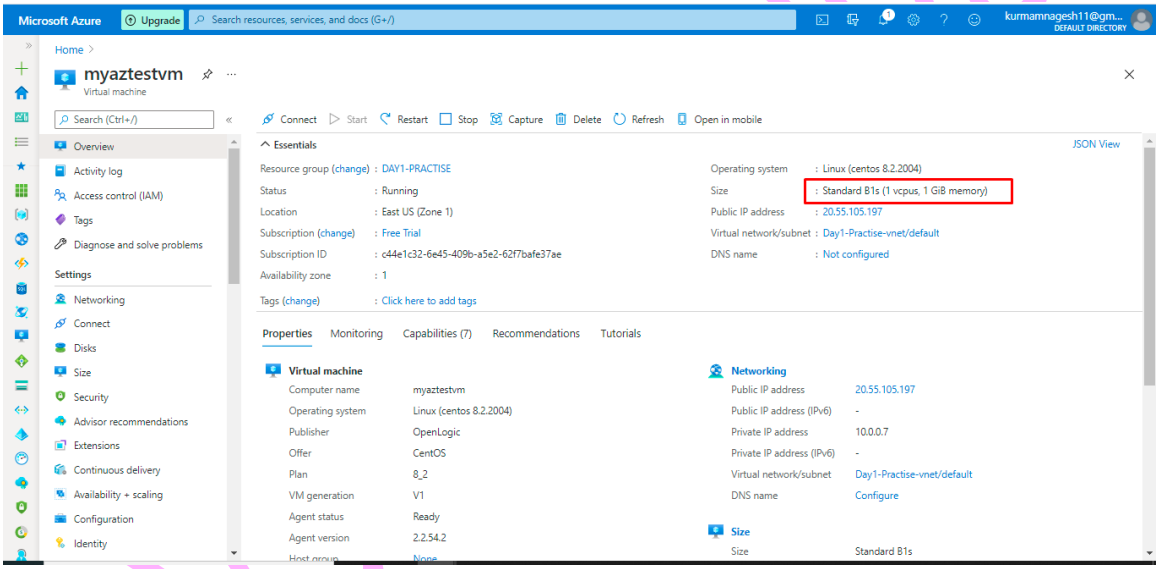
If you observe above your disk is already formatted in server2 in simple since you already formatted in server1 then you no need to do it again in server1.

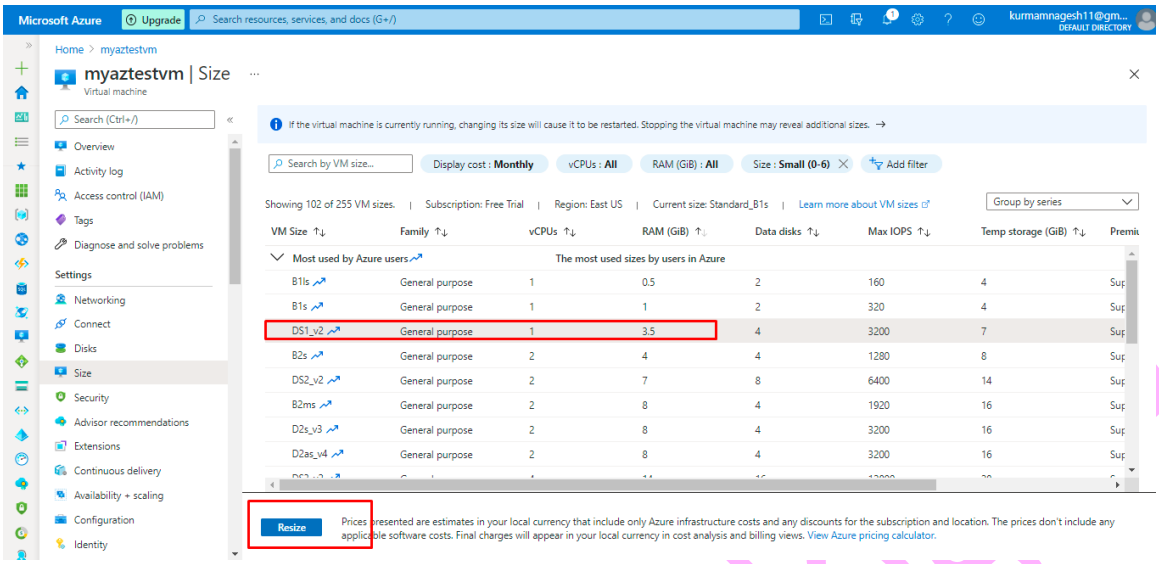
Now let's mount it and check if we can see the file server1.txt is available or not.

```
[root@server2 ~]# mkdir /mydata
[root@server2 ~]# mount -t ext4 /dev/sdc /mydata
[root@server2 ~]# ls -l /mydata/
total 20
drwx------. 2 root root 16384 Nov 29 11:16 lost+found
-rw-r--r--. 1 root root    21 Nov 29 11:17 server1.txt
[root@server2 ~]# cat /myydata/server1.txt
cat: /myydata/server1.txt: No such file or directory
[root@server2 ~]# cat /mydata/server1.txt
Hi I am from server1
[root@server2 ~]#
```

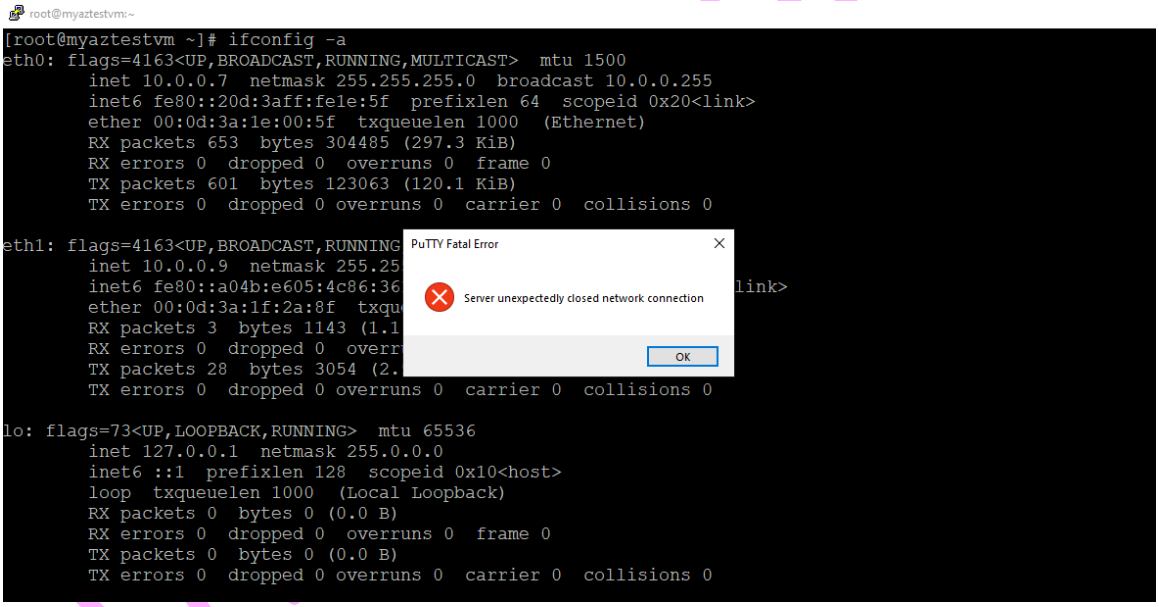
8 VM Resize

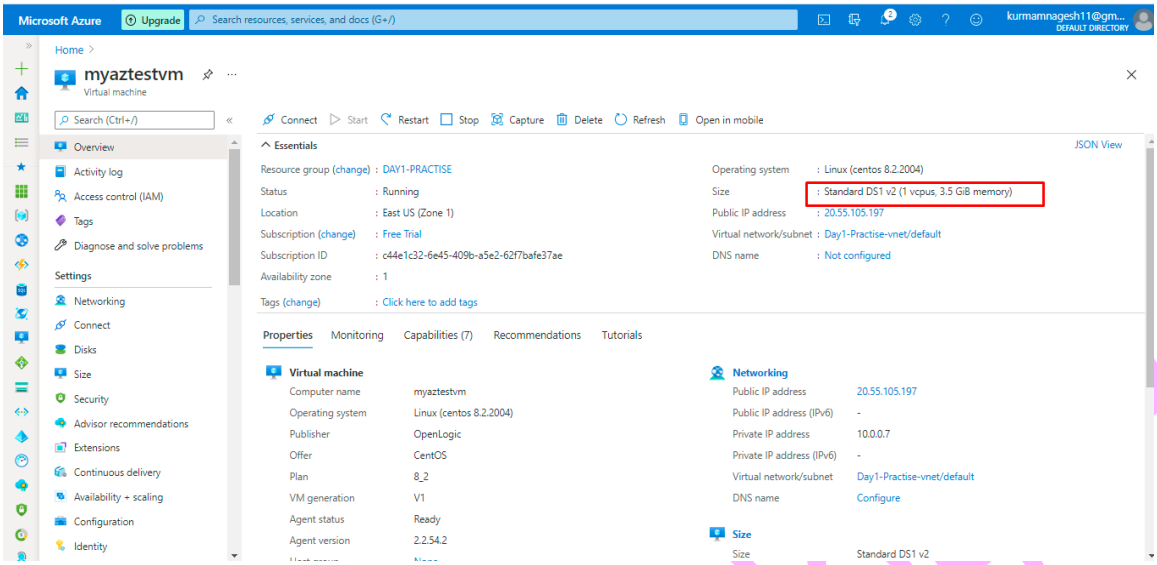
Let's try to resize the VM. Resize need's downtime.





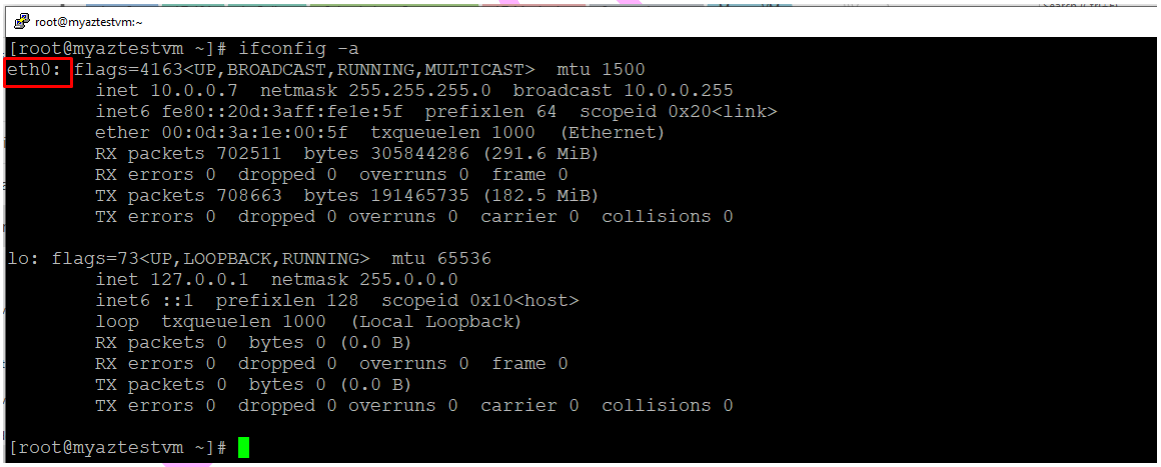
Server go down during this resize process



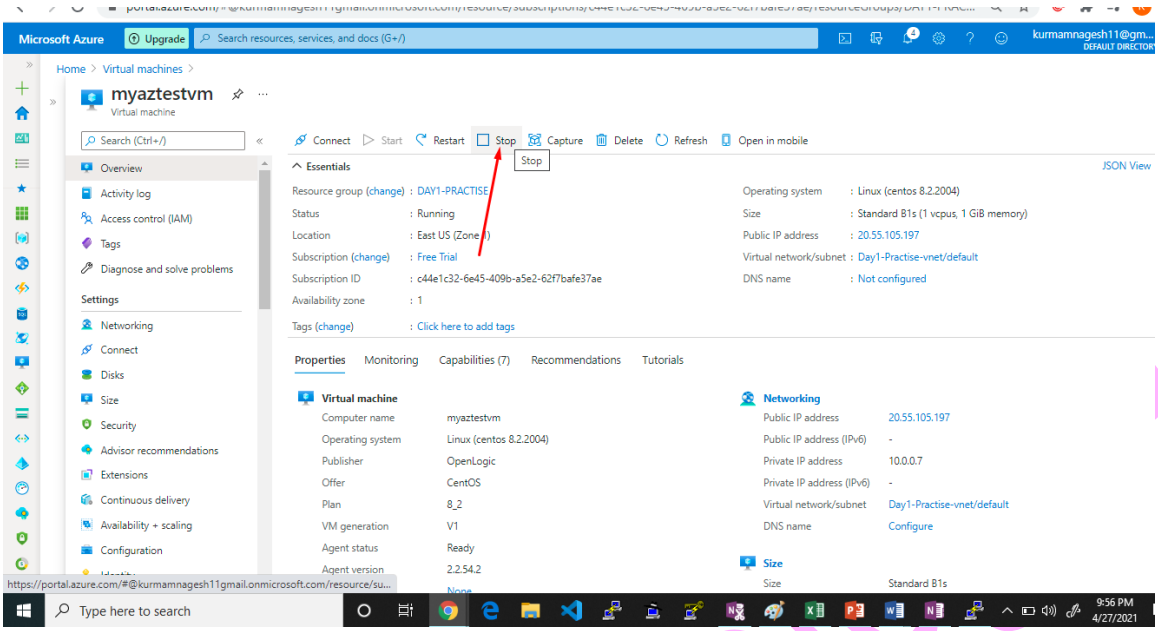


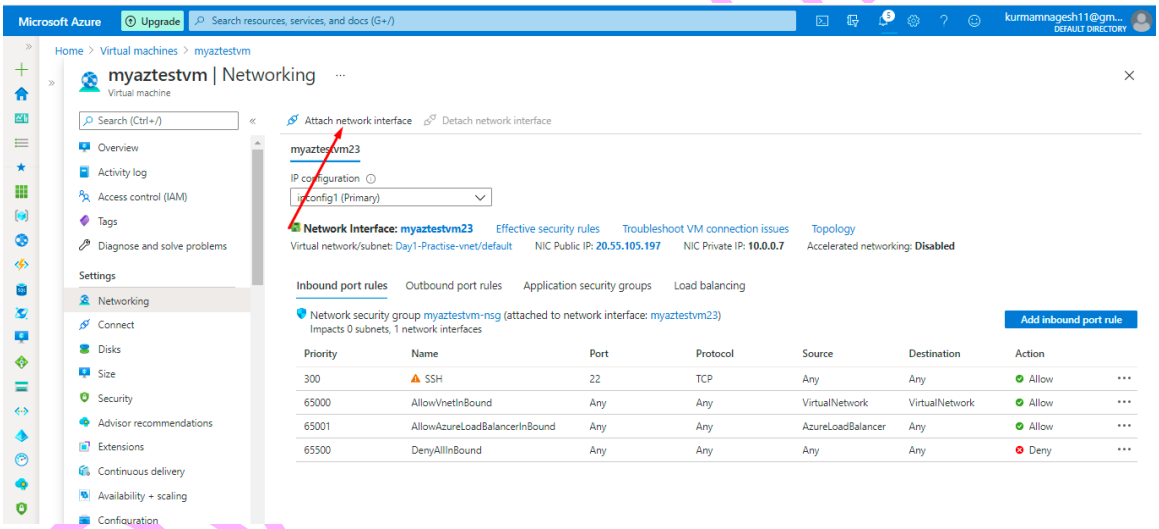
9 Adding a network interface

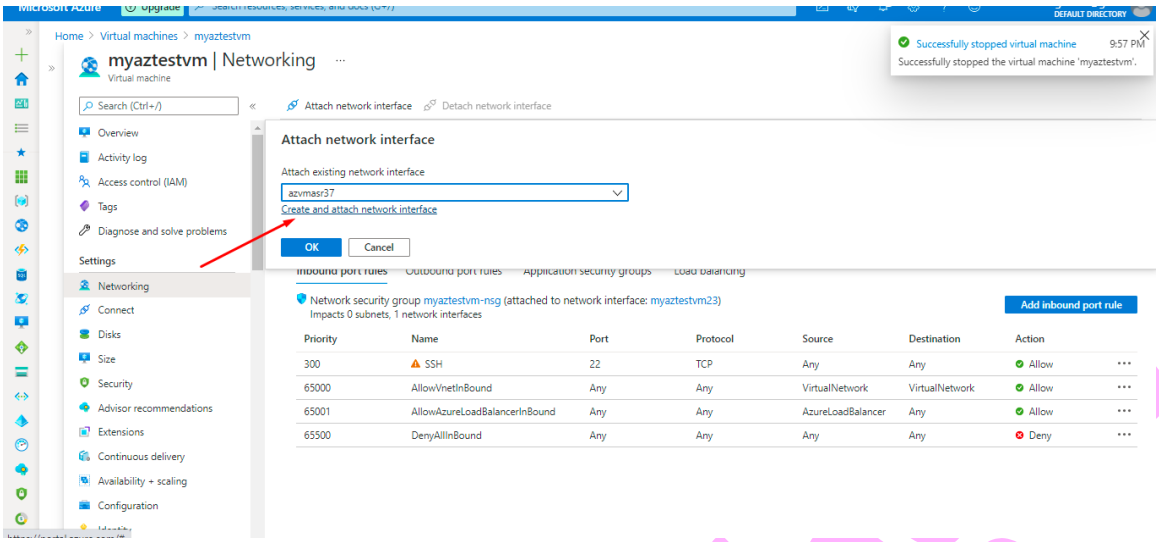
If you want to add one more interface to the VM then you need to stop the server.

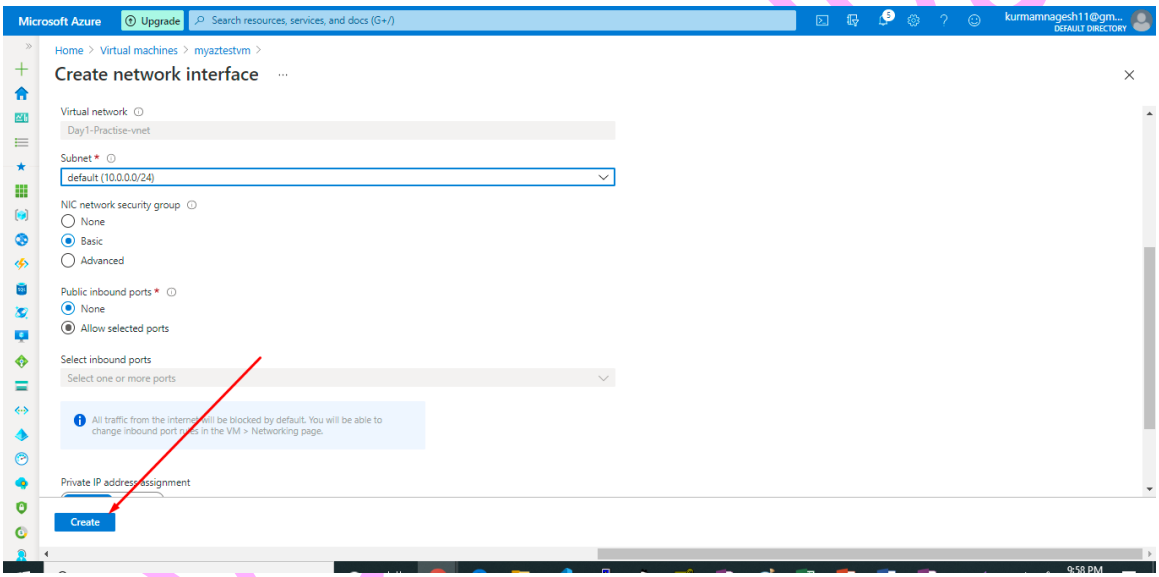


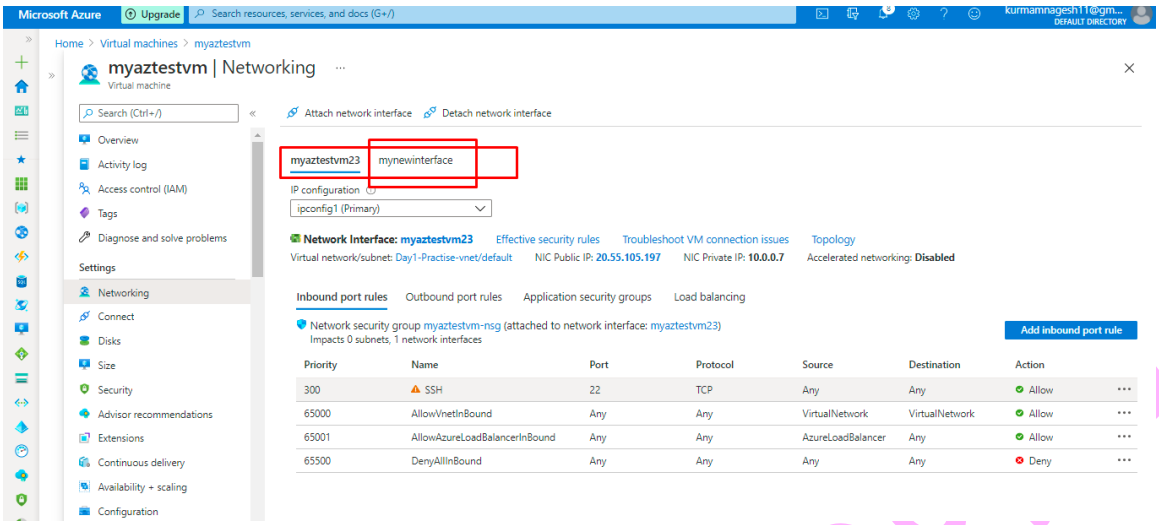
```
root@myaztestvm:~
[root@myaztestvm ~]# ifconfig -a
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 10.0.0.7  netmask 255.255.255.0  broadcast 10.0.0.255
        inet6 fe80::20d:3aff:fe1e:5f  prefixlen 64  scopeid 0x20<link>
        ether 00:0d:3a:1e:00:5f  txqueuelen 1000  (Ethernet)
        RX packets 702511  bytes 305844286 (291.6 MiB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 708663  bytes 191465735 (182.5 MiB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
        inet 127.0.0.1  netmask 255.0.0.0
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1000  (Local Loopback)
        RX packets 0  bytes 0 (0.0 B)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 0  bytes 0 (0.0 B)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

[root@myaztestvm ~]#
```

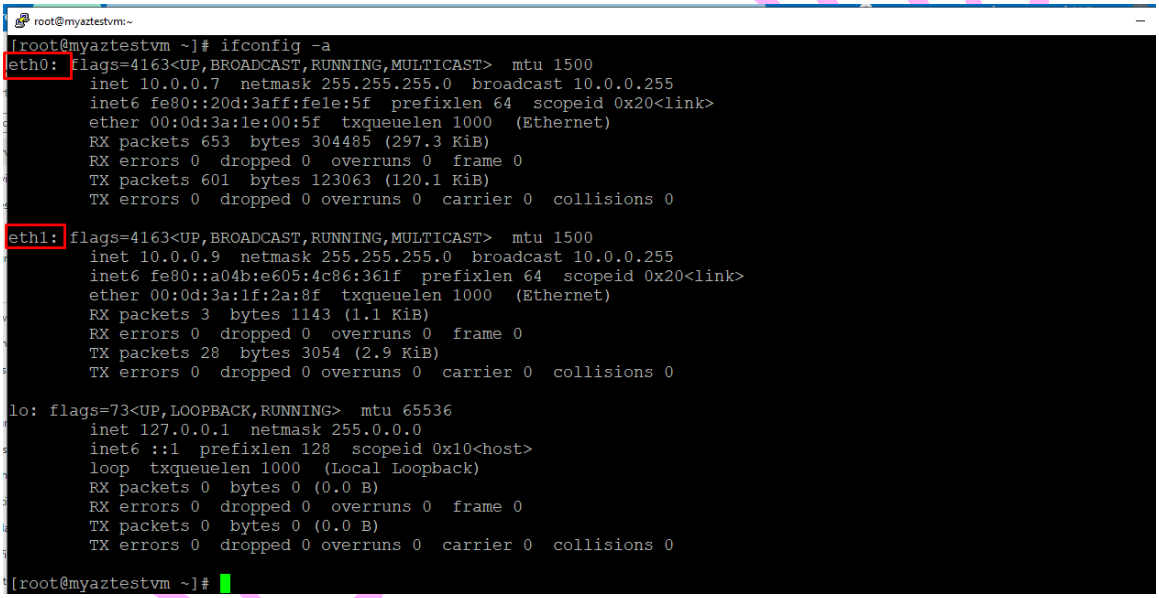

Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
kurmamnagesh11@gm...
DEFAULT DIRECTORY
Home > Virtual machines >
myaztestvm
Virtual machine
Search (Ctrl+/)
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Settings
Networking
Connect
Disks
Size
Security
Advisor recommendations
Extensions
Continuous delivery
Availability + scaling
Configuration
Connect
Start
Restart
Stop
Capture
Delete
Refresh
Open in mobile
Essentials
JSON View
Resource group (change) : DAY1-PRACTISE
Status : Running
Location : East US (Zone 1)
Subscription (change) : Free Trial
Subscription ID : c44e1c32-6e45-409b-a5e2-62f7bafe37ae
Availability zone : 1
Tags (change) : Click here to add tags
Operating system : Linux (centos 8.2.2004)
Size : Standard B1s (1 vcpus, 1 GiB memory)
Public IP address : 20.55.105.197
Virtual network/subnet : Day1-Practise-vnet/default
DNS name : Not configured
Properties
Monitoring
Capabilities (7)
Recommendations
Tutorials
Virtual machine
Computer name myaztestvm
Operating system Linux (centos 8.2.2004)
Publisher OpenLogic
Offer CentOS
Plan 8_2
VM generation V1
Agent status Ready
Agent version 2.2.54.2
Networking
Public IP address 20.55.105.197
Public IP address (IPv6) -
Private IP address 10.0.0.7
Private IP address (IPv6) -
Virtual network/subnet Day1-Practise-vnet/default
DNS name Configure
Size
Size Standard B1s
Type here to search
9:56 PM
4/27/2021


Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
kurmamnagesh11@gm...
DEFAULT DIRECTORY
Home > Virtual machines > myaztestvm
myaztestvm | Networking
Virtual machine
Search (Ctrl+/)
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Settings
Networking
Connect
Disks
Size
Security
Advisor recommendations
Extensions
Continuous delivery
Availability + scaling
Configuration
Attach network interface
Detach network interface
myaztestvm23
IP configuration
ipconfig1 (Primary)
Network Interface: myaztestvm23
Effective security rules
Troubleshoot VM connection issues
Topology
Virtual network/subnet: Day1-Practise-vnet/default
NIC Public IP: 20.55.105.197
NIC Private IP: 10.0.0.7
Accelerated networking: Disabled
Inbound port rules
Outbound port rules
Application security groups
Load balancing
Network security group myaztestvm-nsg (attached to network interface: myaztestvm23)
Impacts 0 subnets, 1 network interfaces
Add inbound port rule
Priority
Name
Port
Protocol
Source
Destination
Action
300 SSH 22 TCP Any Any Allow
65000 AllowVnetInBound Any Any VirtualNetwork VirtualNetwork Allow
65001 AllowAzureLoadBalancerInBound Any Any AzureLoadBalancer Any Allow
65500 DenyAllInBound Any Any Any Any Deny


Home > Virtual machines > myaztestvm
myaztestvm | Networking
Virtual machine
Successfully stopped virtual machine
Successfully stopped the virtual machine 'myaztestvm'.
Attach network interface
Detach network interface
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Settings
Networking
Connect
Disks
Size
Security
Advisor recommendations
Extensions
Continuous delivery
Availability + scaling
Configuration
Attach network interface
Attach existing network interface
azvmasr37
Create and attach network interface
OK
Cancel
Network security group myaztestvm-nsg (attached to network interface: myaztestvm23)
Impacts 0 subnets, 1 network interfaces
Add inbound port rule
Priority
Name
Port
Protocol
Source
Destination
Action
300
SSH
22
TCP
Any
Any
Allow
65000
AllowVnetInBound
Any
Any
VirtualNetwork
VirtualNetwork
Allow
65001
AllowAzureLoadBalancerInBound
Any
Any
AzureLoadBalancer
Any
Allow
65500
DenyAllInBound
Any
Any
Any
Any
Deny

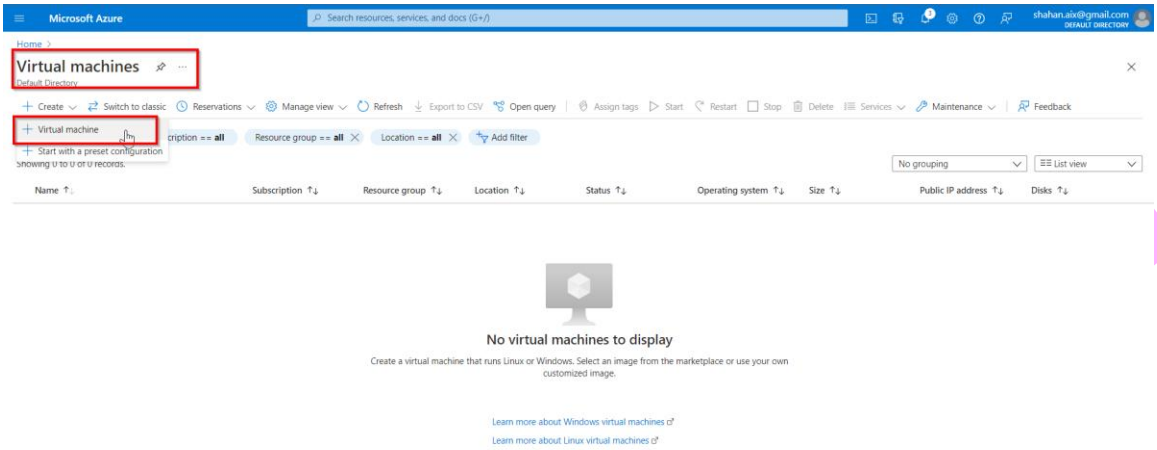

Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Home > Virtual machines > myaztestvm >
Create network interface
Virtual network
Day1-Practise-vnet
Subnet *
default (10.0.0.0/24)
NIC network security group
None
Basic
Advanced
Public inbound ports *
None
Allow selected ports
Select inbound ports
Select one or more ports
Private IP address assignment
Create

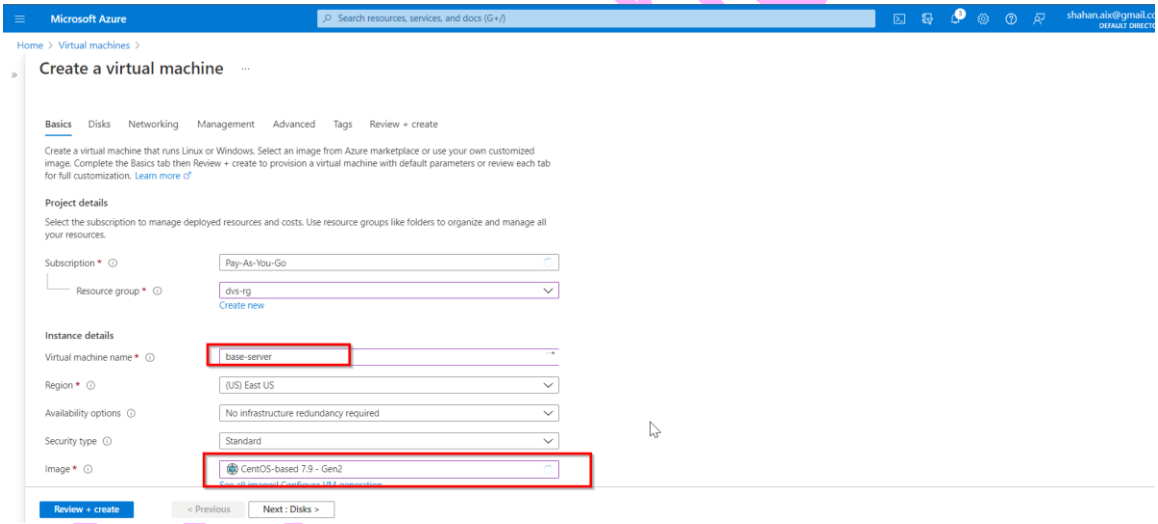

Microsoft Azure
Upgrade
Search resources, services, and docs (G+/)
Home > Virtual machines > myaztestvm
myaztestvm | Networking
Virtual machine
Search (Ctrl+/)
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Settings
Networking
Connect
Disks
Size
Security
Advisor recommendations
Extensions
Continuous delivery
Availability + scaling
Configuration
Attach network interface
Detach network interface
myaztestvm23
mynewinterface
IP configuration
ipconfig1 (Primary)
Network Interface: myaztestvm23
Effective security rules
Troubleshoot VM connection issues
Topology
Virtual network/subnet: Day1-Practise-vnet/default
NIC Public IP: 20.55.105.197
NIC Private IP: 10.0.0.7
Accelerated networking: Disabled
Inbound port rules
Outbound port rules
Application security groups
Load balancing
Network security group myaztestvm-nsg (attached to network interface: myaztestvm23)
Impacts 0 subnets, 1 network interfaces
Add inbound port rule
Priority Name Port Protocol Source Destination Action
300 SSH 22 TCP Any Any Allow
65000 AllowVnetInBound Any Any VirtualNetwork VirtualNetwork Allow
65001 AllowAzureLoadBalancerInBound Any Any AzureLoadBalancer Any Allow
65500 DenyAllInBound Any Any Any Any Deny

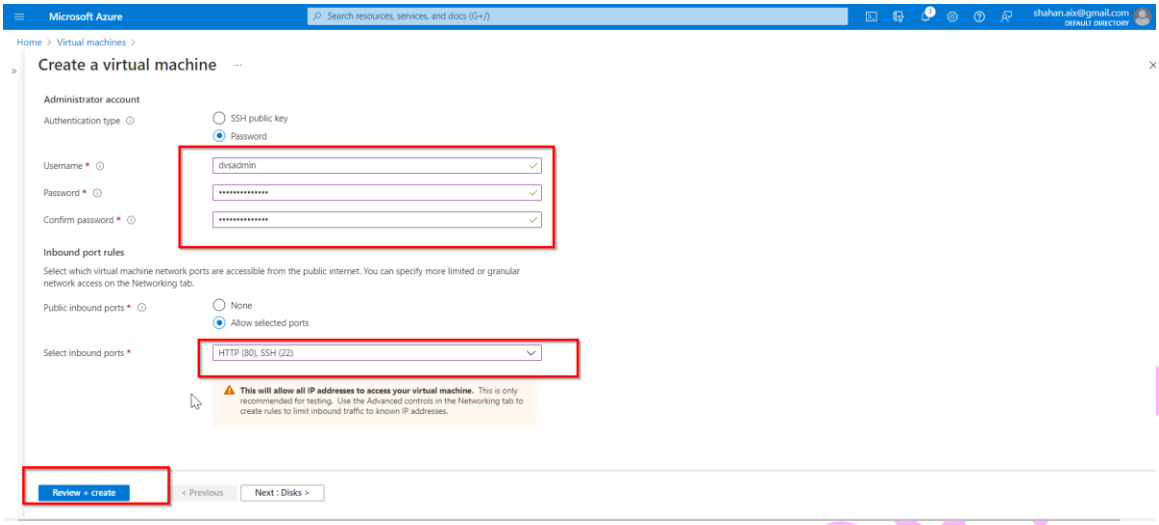

root@myaztestvm:~
[root@myaztestvm ~]# ifconfig -a
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
inet 10.0.0.7 netmask 255.255.255.0 broadcast 10.0.0.255
inet6 fe80::20d:3aff:fe1e:5f prefixlen 64 scopeid 0x20<link>
ether 00:0d:3a:1e:00:5f txqueuelen 1000 (Ethernet)
RX packets 653 bytes 304485 (297.3 KiB)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 601 bytes 123063 (120.1 KiB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
eth1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
inet 10.0.0.9 netmask 255.255.255.0 broadcast 10.0.0.255
inet6 fe80::a04b:e605:4c86:361f prefixlen 64 scopeid 0x20<link>
ether 00:0d:3a:1f:2a:8f txqueuelen 1000 (Ethernet)
RX packets 3 bytes 1143 (1.1 KiB)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 28 bytes 3054 (2.9 KiB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
inet 127.0.0.1 netmask 255.0.0.0
inet6 ::1 prefixlen 128 scopeid 0x10<host>
loop txqueuelen 1000 (Local Loopback)
RX packets 0 bytes 0 (0.0 B)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 0 bytes 0 (0.0 B)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
[root@myaztestvm ~]#

10 Using Custom Images for a Virtual Machine

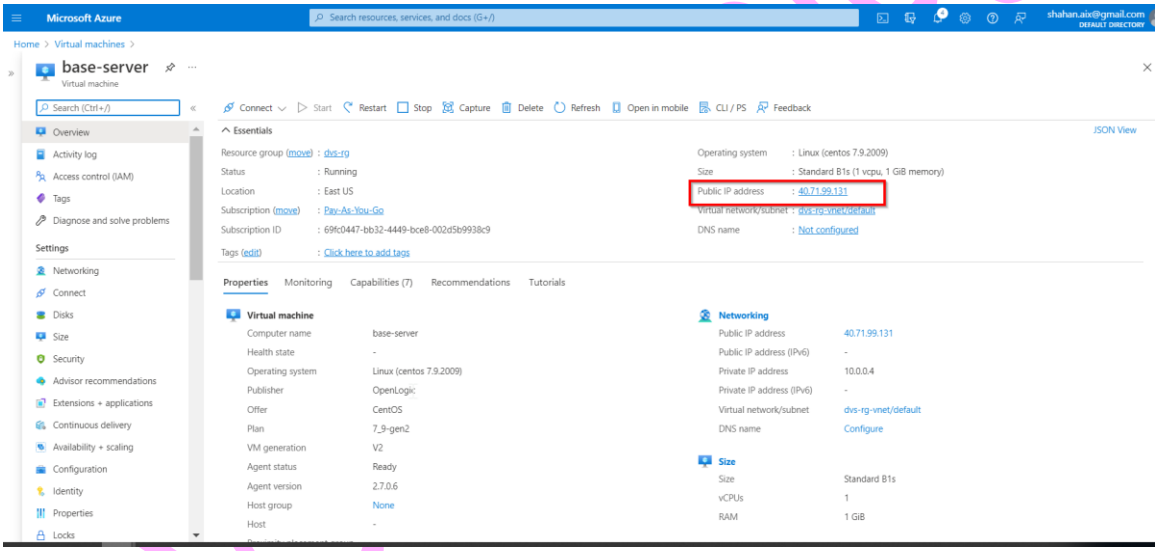
Server creation:



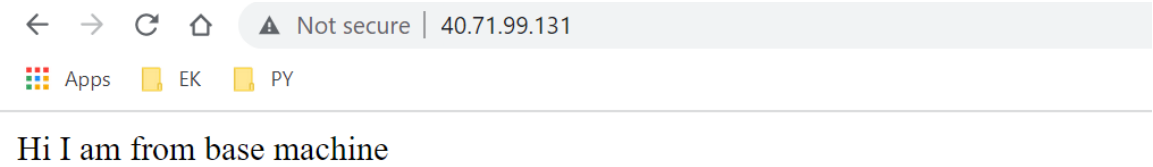




Let's configure the apache in the server:

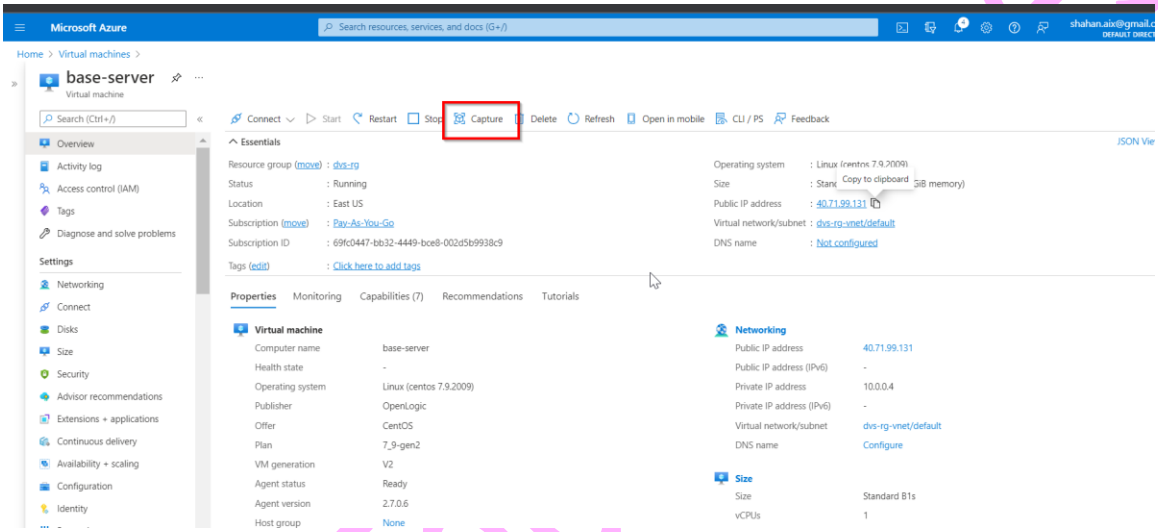


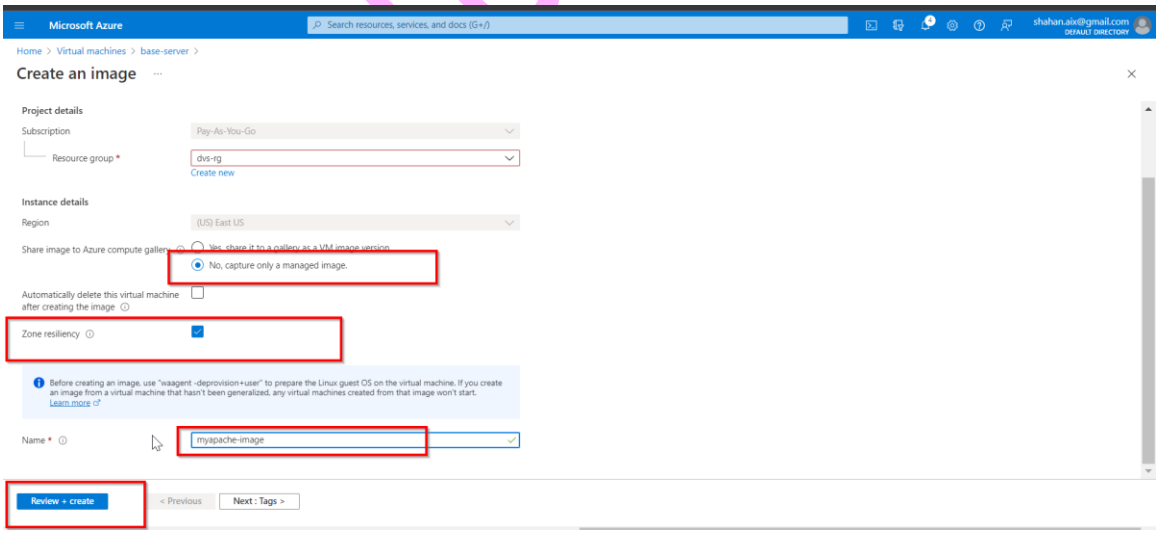

```
yum install httpd -y
systemctl enable httpd
echo "Hi I am from base machine" > /var/www/html/index.html
systemctl  restart httpd
```

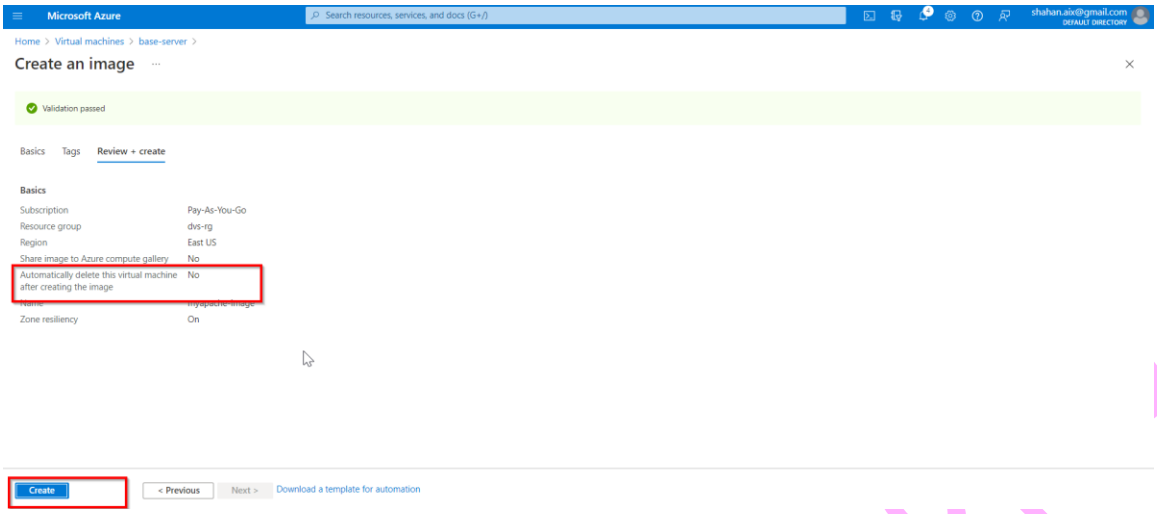


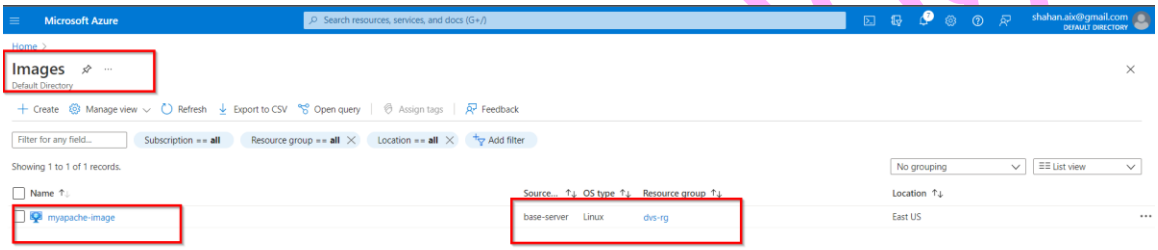
Hi I am from base machine

Let's create the custom image:

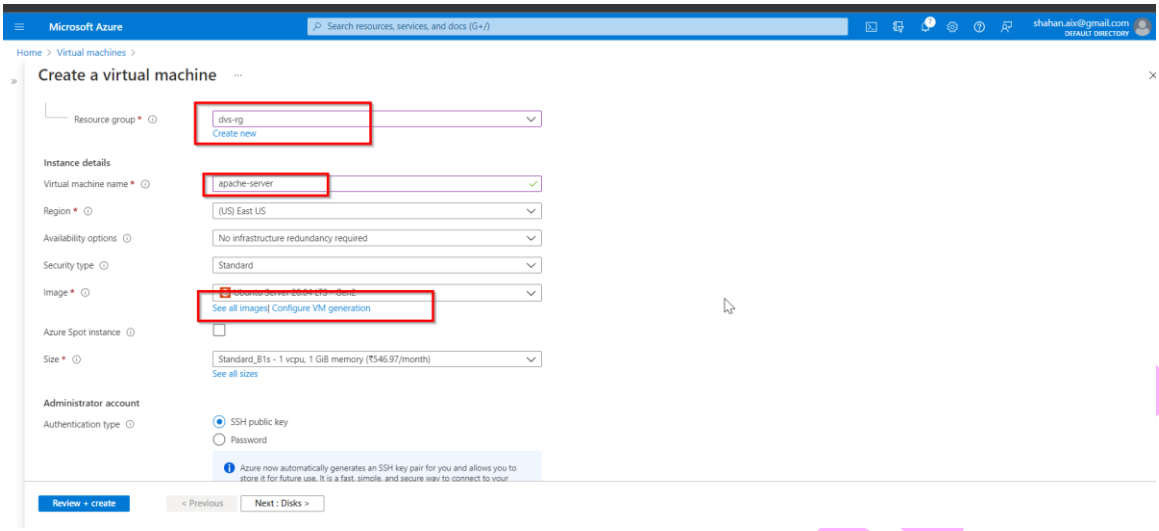


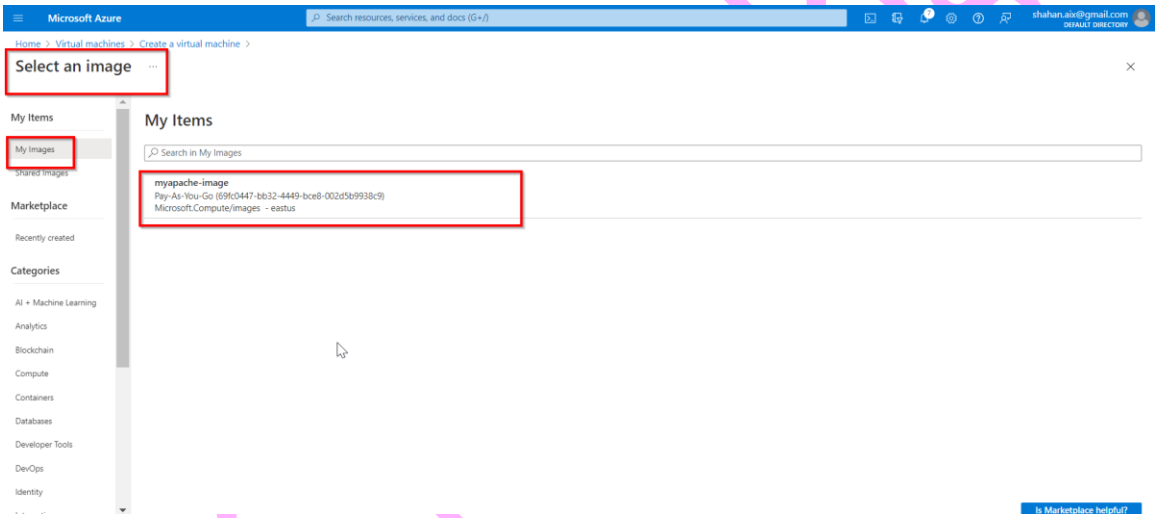


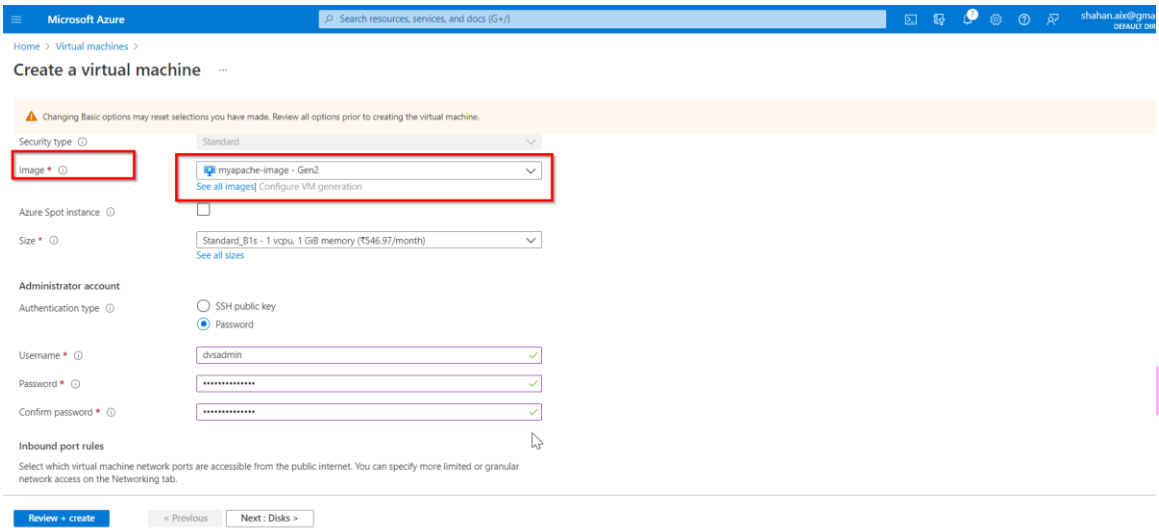


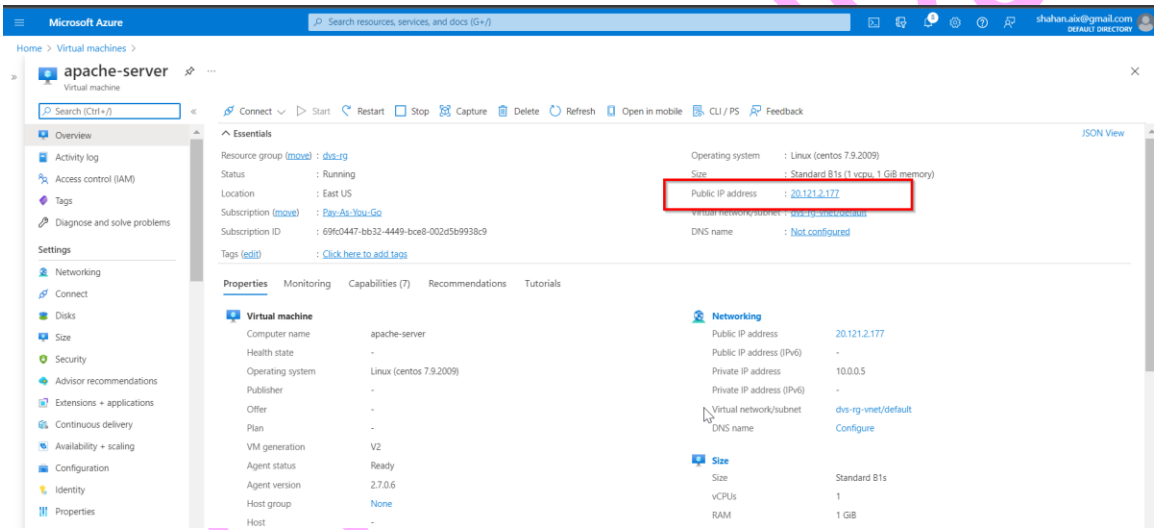


Now let's create one server from our image:

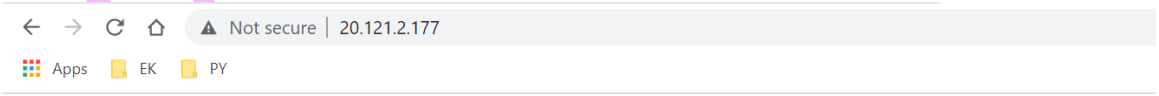

Microsoft Azure
Search resources, services, and docs (G+/)
shahan.aix@gmail.com
DEFAULT DIRECTORY
Home > Virtual machines >
Create a virtual machine
Resource group *
dvs-rg
Create new
Instance details
Virtual machine name *
apache-server
Region *
(US) East US
Availability options
No infrastructure redundancy required
Security type
Standard
Image *
See all images | Configure VM generation
Azure Spot instance
Size *
Standard_B1s - 1 vcpu, 1 GiB memory (₹546.97/month)
See all sizes
Administrator account
Authentication type
SSH public key
Password
Review + create
< Previous
Next : Disks >


Microsoft Azure
Search resources, services, and docs (G+/)
shahan.aix@gmail.com
DEFAULT DIRECTORY
Home > Virtual machines > Create a virtual machine >
Select an image
My Items
My Images
Shared Images
Marketplace
Recently created
Categories
AI + Machine Learning
Analytics
Blockchain
Compute
Containers
Databases
Developer Tools
DevOps
Identity
My Items
Search in My Images
myapache-image
Pay-As-You-Go (69fc0447-bb32-4449-bce8-002d5b9938c9)
Microsoft.Compute/images - eastus
Is Marketplace helpful?





Check the application now:



Hi I am from base machine

11 Managed Vs Unmanaged disks

Managed Disks = are managed by Microsoft Azure and you don't need any storage account while created new disk. Since the storage account is managed by Azure you do not have full control of the disks that are being created.

Un-managed Disks = is something which requires you to create a storage account before you create any new disk. Since, the storage account is created and owned by you, you have full control over all the data that is present on your storage account. Additionally, you also need to take care of encryption, data recovery plans etc.

Note:In simple for unmanaged you are the boss & for managed is Azure is the boss.

Lets' create a server with unmanaged disk

But before that you have to make sure that you are creating a storage account. Let's create it as below.

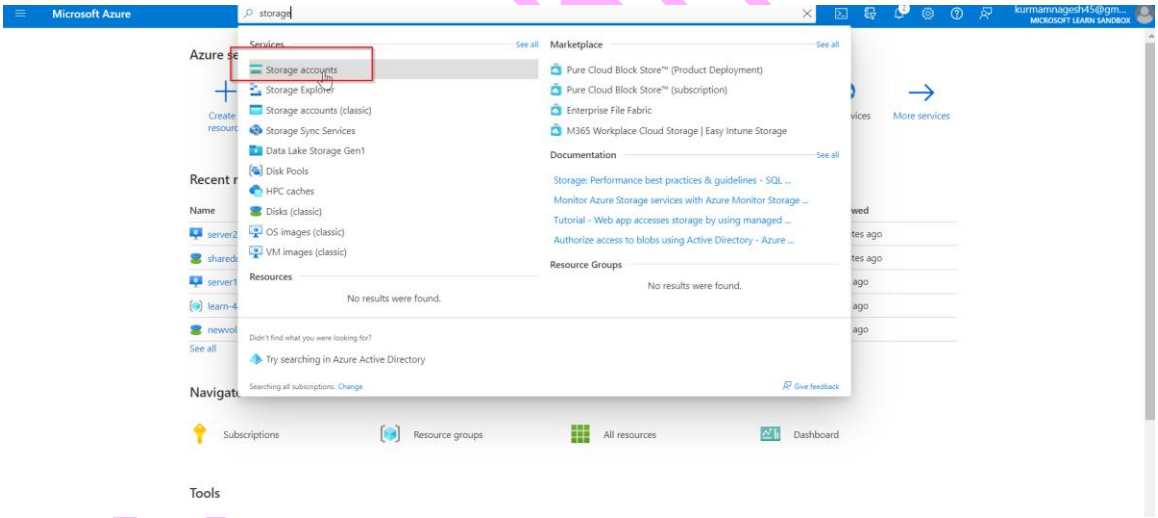
Differences Unmanaged vs Managed

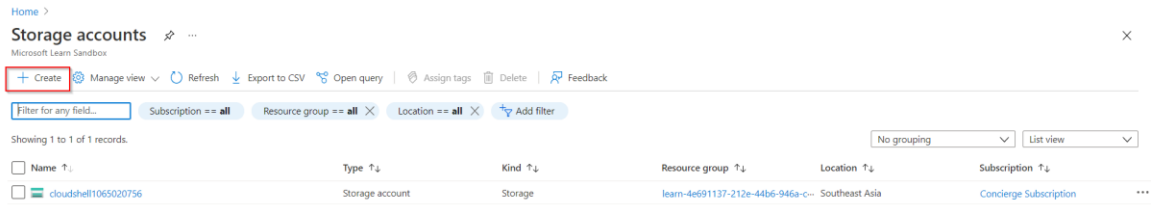
Category	Unmanaged	Managed
Size	Custom & Resizable	Pick List & Resizable
Management	.vhd inside a storage account	ARM Resource
Performance	Variable if Standard	Predictable
Redundancy	LRS or GRS	LRS
Fault Domain Protection	Limited	Included
Cost	Size of VHX	SKU

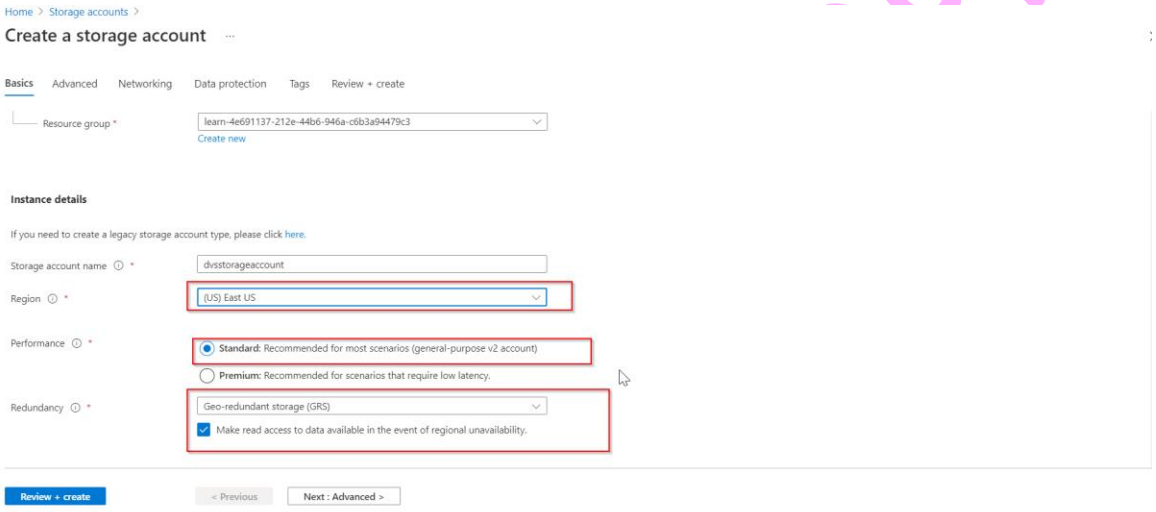
Benefits of Managed Disks

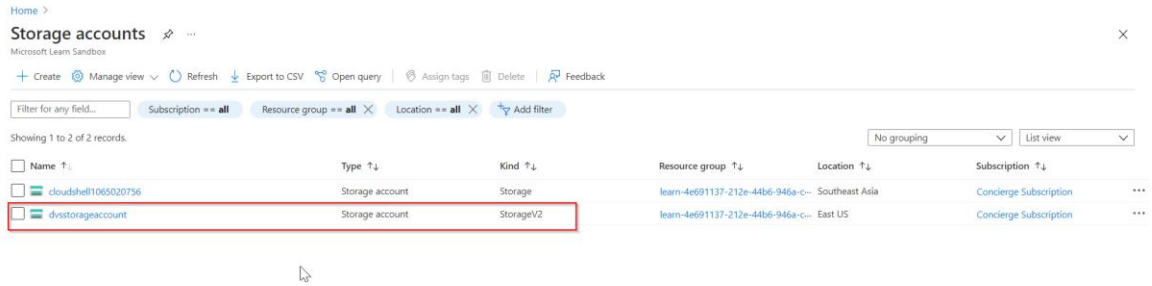
Benefit	Justification
Highly durable and available	99.9999% uptime
Simple and scalable VM deployment	50,000 disks per subscription 1,000 VMs in a scale set
Fully integrated with availability sets	Automatic fault isolation
Fully integrated with availability zones	Protection against data center failure
Azure backup support	Fully integrated
Granular access control	RBAC for managed disk instead of storage account
Upload our VHD	Easily deploy our own settings as a managed disk
Server-side encryption by default	Encrypted disk, snapshot, and images
Azure disk encryption	Available to manage our own keys

Correction: Managed Disks have 99.999% availability









Now let's try to create a VM from unmanaged storage

Home >

Virtual machines

Microsoft Learn Sandbox

+ Create | Switch to classic | Reservations | Manage view | Refresh | Export to CSV | Open query | Assign tags | Start | Restart | Stop | Delete | Services | Maintenance | ...

Filter for any field... | Subscription == all | Resource group == all | Location == all | Add filter

Showing 1 to 2 of 2 records. | No grouping | List view

Name	Subscription	Resource group	Location	Status	Operating system	Size	Public IP address	Disks
server1	Concierge Subscription	learn-4e691137-212e-4...	West US	Running	Linux	Standard_D2s_v3	13.64.241.179	2
server2	Concierge Subscription	learn-4e691137-212e-4...	West US	Running	Linux	Standard_D2s_v3	40.78.122.184	2

Home > Virtual machines >

Create a virtual machine

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

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

Subscription * : Concierge Subscription

Resource group * : learn-4e691137-212e-44b6-946a-c6b3a94479c3

Create new

Instance details

Virtual machine name * : dvsserver

Region * : (US) East US

Availability options : No infrastructure redundancy required

Security type : Standard

Image * : CentOS-based 7.8 - Gen1

See all images | Configure VM generation

Azure Spot instance : ☐

Please make sure that your server is in the same region of your storage other wise it will not work

Make a note that gen2 won't support unmanaged disks

Home > Virtual machines >

Virtual machines

Microsoft Learn Sandbox

+ Create | Switch to classic | ...

Filter for any field...

Name	Subscription
server1	Concierge Subscripti
server2	Concierge Subscripti

Page 1 of 1

Create a virtual machine

Administrator account

Authentication type : ○ SSH public key ◉ Password

Username * : dvsadmin

Password * : ••••••••••••

Confirm password * : ••••••••••••

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 * : SSH (22)

This will allow all IP addresses to access your virtual machine. This is only recommended for testing. Use the Advanced controls in the Networking tab to create rules to limit inbound traffic to known IP addresses.

Review + create | < Previous | Next : Disks >

Home > Virtual machines >

Create a virtual machine ...

Azure VMs have one operating system disk and a temporary disk for short-term storage. You can attach additional data disks. The size of the VM determines the type of storage you can use and the number of data disks allowed. Learn more

Disk options

OS disk type * : Standard HDD (locally-redundant storage)

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.

Encryption type * : (Default) Encryption at-rest with a platform-managed key

Enable Ultra Disk compatibility : Ultra disk is supported in Availability Zone(s) 1,2,3 for the selected VM size Standard_D2s_v3.

Data disks

You can add and configure additional data disks for your virtual machine or attach existing disks. This VM also comes with a temporary disk.

Adding unmanaged data disks is currently not supported at the time of VM creation. You can add them after the VM is created.

Advanced

Home > Virtual machines >

Create a virtual machine ...

Advanced

Use managed disks :

Storage account * : dvsstorageaccount

Create new

We recommend Azure managed disks. Key benefits include:
High fault tolerance: Managed disks in an availability set are spread across multiple storage fault domains to protect against single points of failure. Learn more about managed disks in availability sets.
Industry-leading availability: Managed disks in Availability Zones have a 99.99% SLA. Learn more about Availability Zones.
Greater scale: Create up to 50,000 managed disks per subscription per region. Learn more about subscription limits.

Learn more about the benefits of Azure managed disks.

Still need to use unmanaged disks? Help us learn more with this 1-minute survey.

Ephemeral OS disk : None | OS cache placement | Temp disk placement

Ephemeral OS disks are available only with managed disks.

Home > Virtual machines >

Create a virtual machine ...

Validation passed

Basics | Disks | Networking | Management | Advanced | Tags | Review + create

PRODUCT DETAILS

Standard D2s v3
by Microsoft
Terms of use | Privacy policy

Subscription credits apply
0.0960 USD/hr
Pricing for other VM sizes

TERMS

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. See the Azure Marketplace Terms for additional details.

Name: kurmamnagesh45 undefined

Preferred e-mail address *: kurmamnagesh45@gmail.com

Preferred phone number *: 0000

Create | < Previous | Next > | Download a template for automation

Home >

Virtual machines

Microsoft Learn Sandbox

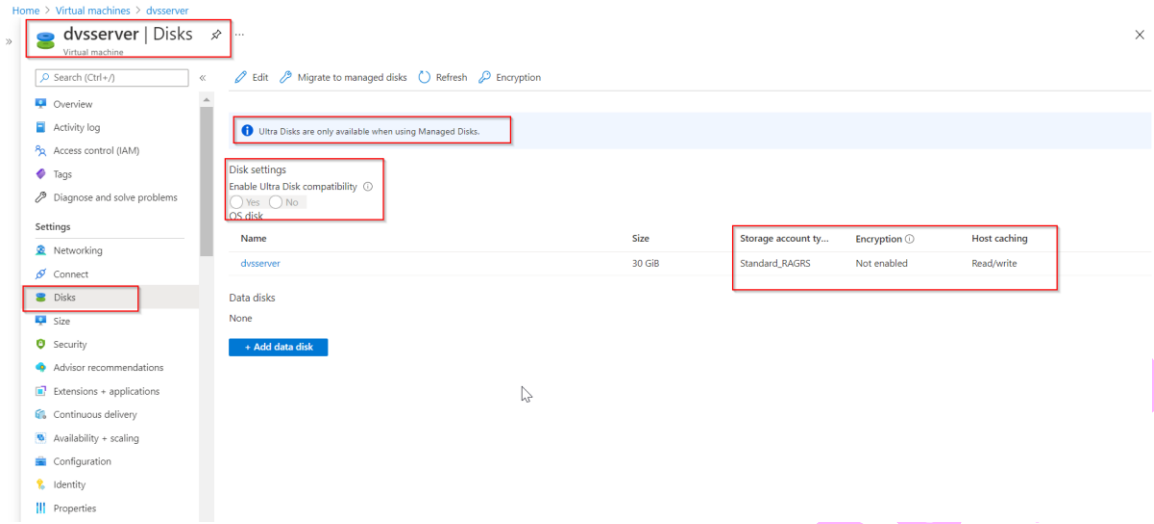
Create | Switch to classic | Reservations | Manage view | Refresh | Export to CSV | Open query | Assign tags | Start | Restart | Stop | Delete | Services | Maintenance

Filter for any field... | Subscription == all | Resource group == all | Location == all | Add filter

Showing 1 to 3 of 3 records. | No grouping | List view

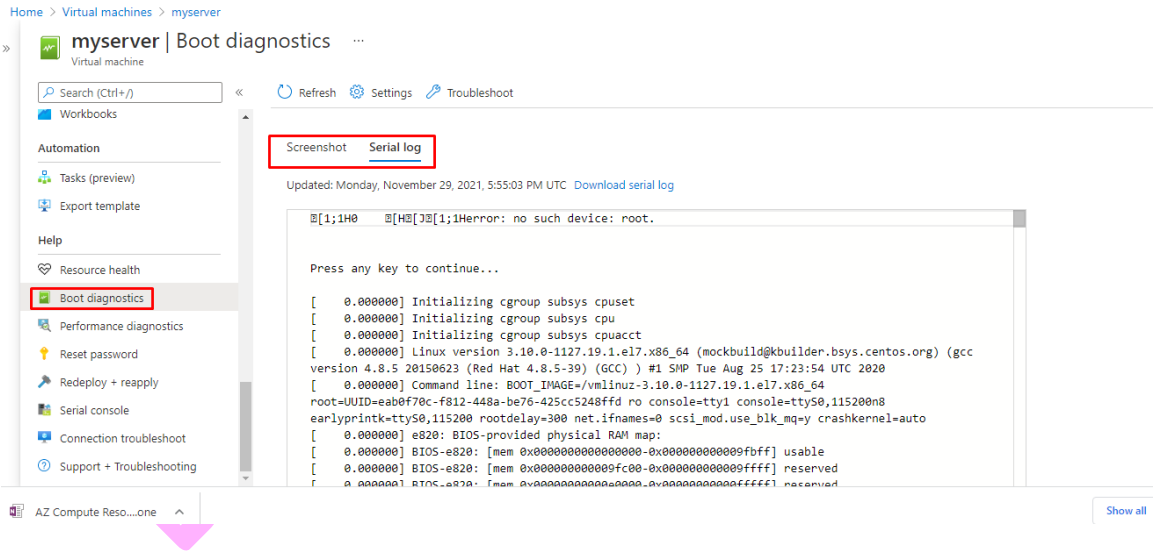
Name	Subscription	Resource group	Location	Status	Operating system	Size	Public IP address	Disks
dvsserver	Concierge Subscription	LEARN-4E691137-212E-...	East US	Creating	Linux	Standard_D2s_v3	-	1
server1	Concierge Subscription	learn-4e691137-212e-4-...	West US	Running	Linux	Standard_D2s_v3	13.64.241.179	2
server2	Concierge Subscription	learn-4e691137-212e-4-...	West US	Running	Linux	Standard_D2s_v3	40.78.122.184	2

Here we can see that the VM got created from unmanaged disk.

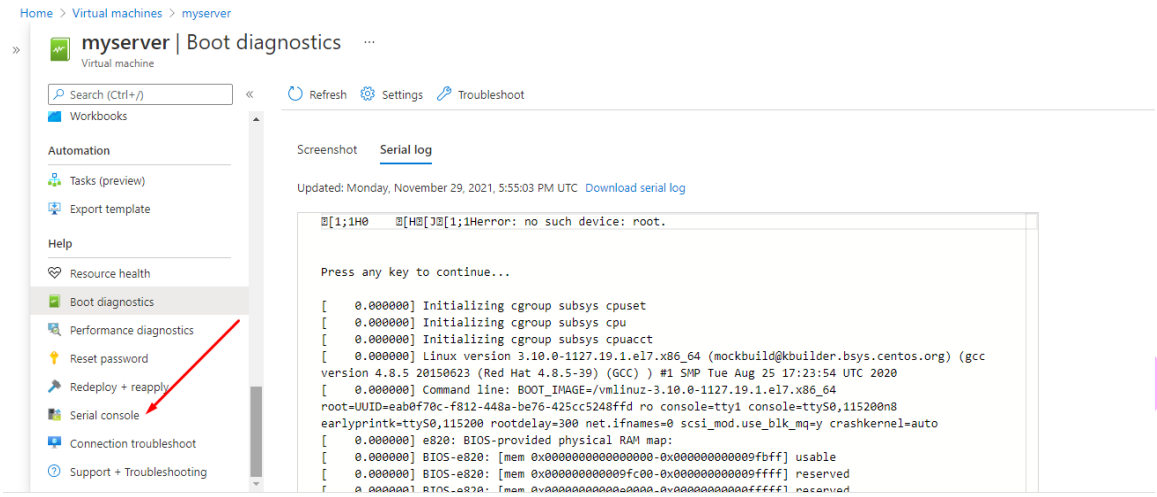


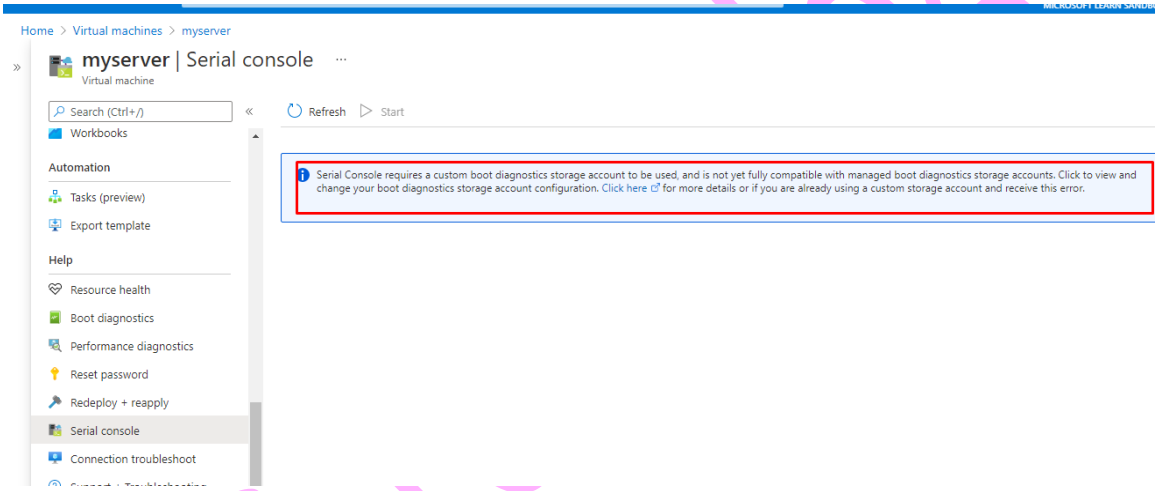
12 Boot diagnostics & Console connect

Boot Diagnostics:



Serial Console:





If you want to enable serial console you have to make sure that a storage account is assigned to boot diagnostics

Home > Virtual machines > myserver

myserver | Boot diagnostics
Virtual machine

Search (Ctrl+/)
Workbooks
Automation
Tasks (preview)
Export template
Help
Resource health
Boot diagnostics
Performance diagnostics
Reset password
Redeploy + reapply
Serial console
Connection troubleshoot
Support + Troubleshooting

Refresh | Settings | Troubleshoot

Screenshot | Serial log

Updated: Monday, November 29, 2021, 6:15:04 PM UTC Download screenshot

Home > Virtual machines > myserver >

Boot diagnostics
myserver

Save | Discard

Use this feature to troubleshoot boot failures for custom or platform images. Boot diagnostics can be used with a custom storage account or with a pre-provisioned storage account managed by Microsoft. Please download the info you need before switching from managed storage account to custom storage account. Learn more

Status
- Enable with managed storage account (recommended)
- Enable with custom storage account
- Disable

Diagnostics storage account *
No existing storage accounts in curre...
Create new

Home > Virtual machines > myserver >

Boot diagnostics
myserver

Save | Discard

Use this feature to troubleshoot boot failures for custom or platform images. Boot diagnostics can be used with a custom storage account or with a pre-provisioned storage account managed by Microsoft. Please download the info you need before switching from managed storage account to custom storage account. Learn more

Status
- Enable with managed storage account (recommended)
- Enable with custom storage account
- Disable

Diagnostics storage account *
No existing storage accounts in curre...
Create new

Create storage account

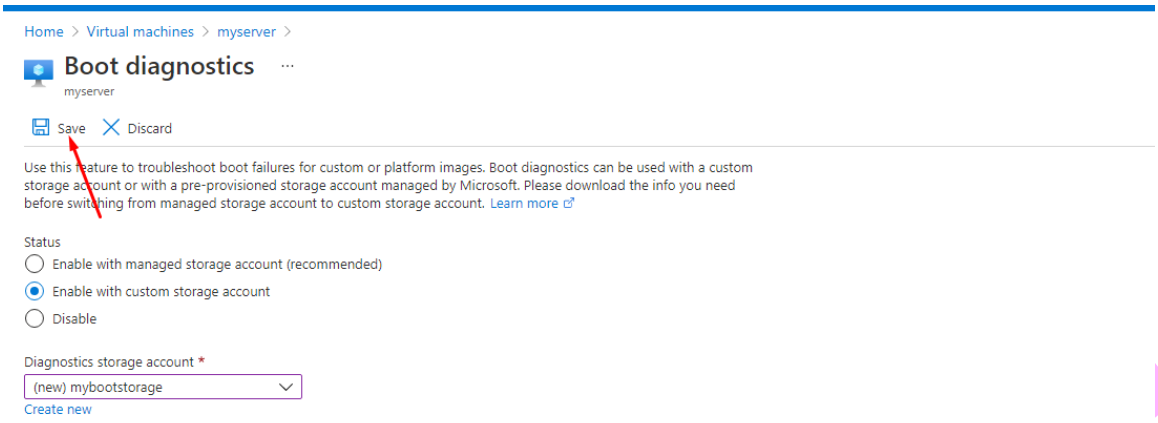
Name *
mybootstorage
.core.windows.net

Account kind
Storage (general purpose v1)

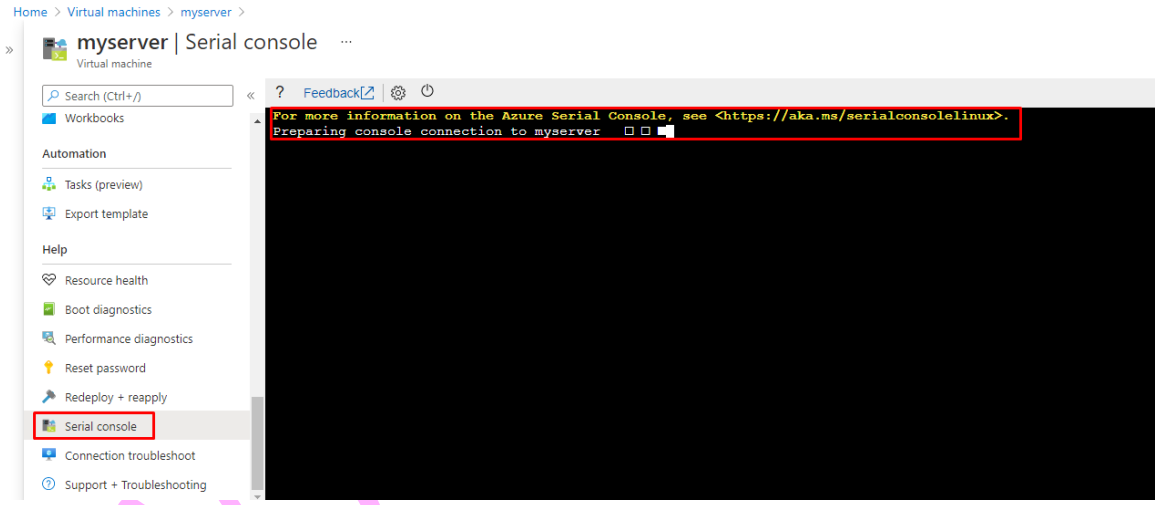
Performance
Standard | Premium

Replication
Locally-redundant storage (LRS)

OK



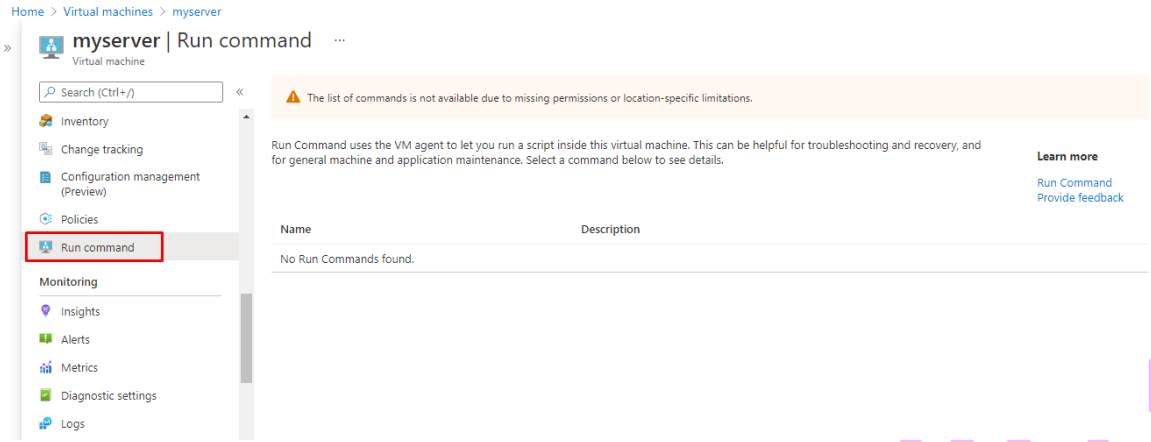
Now check the serial connect:



If you want to login then give the below command
ch -si 1

Then give the username & password

Run a command:



If you want to run any command in linux you can use this option to run them.

DVS Technologies