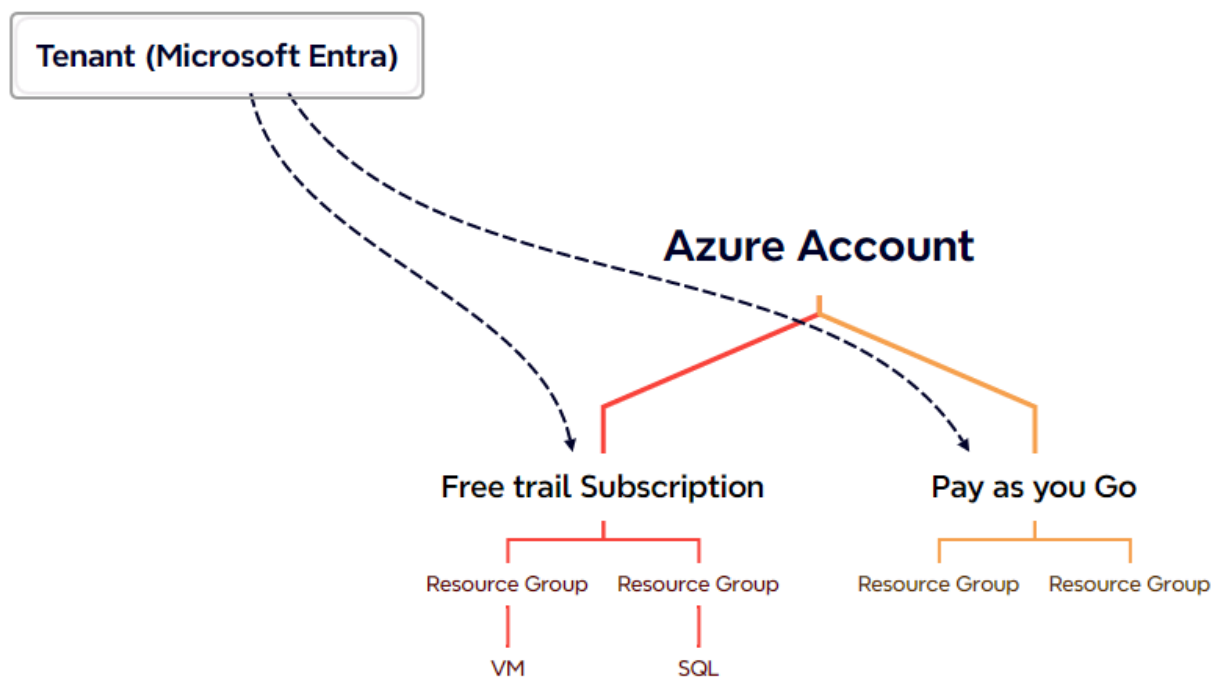


## Azure VM Creation (W.r.t disks)

### Organizing Azure Resources



### Windows Servers

- [Refer Here](#) for Quick start

- Disk section

[Home](#) > [Virtual machines](#) >

# Create a virtual machine ...

Basics Disks Networking Management Monitoring Advanced Tags Review + create

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](#)

### VM disk encryption

Azure disk storage encryption automatically encrypts your data stored on Azure managed disks (OS and data disks) at rest by default when persisting it to the cloud.

Encryption at host

☐

Encryption at host is not registered for the selected subscription. [Learn more about enabling this feature](#)

### OS disk

OS disk size

Image default (127 GiB)

OS disk type \*

Premium SSD (locally-redundant storage)

Delete with VM

☒

Key management

Platform-managed key

< Previous    Next : Networking >    Review + create

### Data disks for winserver

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

LUN	Name	Size (GiB)	Disk type	Host caching	Delete with VM
	<a href="#">Create and attach a new disk</a>		<a href="#">Attach an existing disk</a>		

Advanced

< Previous    Next : Networking >    Review + create

## Create a new disk ...

Create a new disk to store applications and data on your VM. Disk pricing varies based on factors including disk size, storage type, and number of transactions. [Learn more](#)

Name \*

winserver\_DataDisk\_0

Source type \* ⓘ

None (empty disk) ▾

Size \* ⓘ

4 GiB

Premium SSD LRS

[Change size](#)

Key management ⓘ

Platform-managed key ▾

Enable shared disk

☐ Yes ☒ No

Delete disk with VM

☐

OK

## Create a virtual machine ...

OS disk

OS disk size ⓘ

Image default (127 GiB) ▾

OS disk type \* ⓘ

Premium SSD (locally-redundant storage) ▾

Delete with VM ⓘ

☒

Key management ⓘ



Platform-managed key ▾

Enable Ultra Disk compatibility ⓘ

☐

Data disks for winserver

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

LUN	Name	Size (GiB)	Disk type	Host caching	Delete with VM ⓘ	
0	winserver_DataDisk_0	4	Premium SSD LRS	None ▾	<input type="checkbox"/>	 

[Create and attach a new disk](#) [Attach an existing disk](#)

# Create a virtual machine ...

### OS disk

OS disk size ⓘ

Image default (127 GiB)▼

OS disk type \* ⓘ

Premium SSD (locally-redundant storage)▼

Delete with VM ⓘ☒

Key management ⓘ

Platform-managed key▼

Enable Ultra Disk compatibility ⓘ☐

### Data disks for winserver

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

LUN	Name	Size (GiB)	Disk type	Host caching	Delete with VM ⓘ
0	winserver_DataDisk_0	4	Premium SSD LRS	None▼	<input type="checkbox"/>

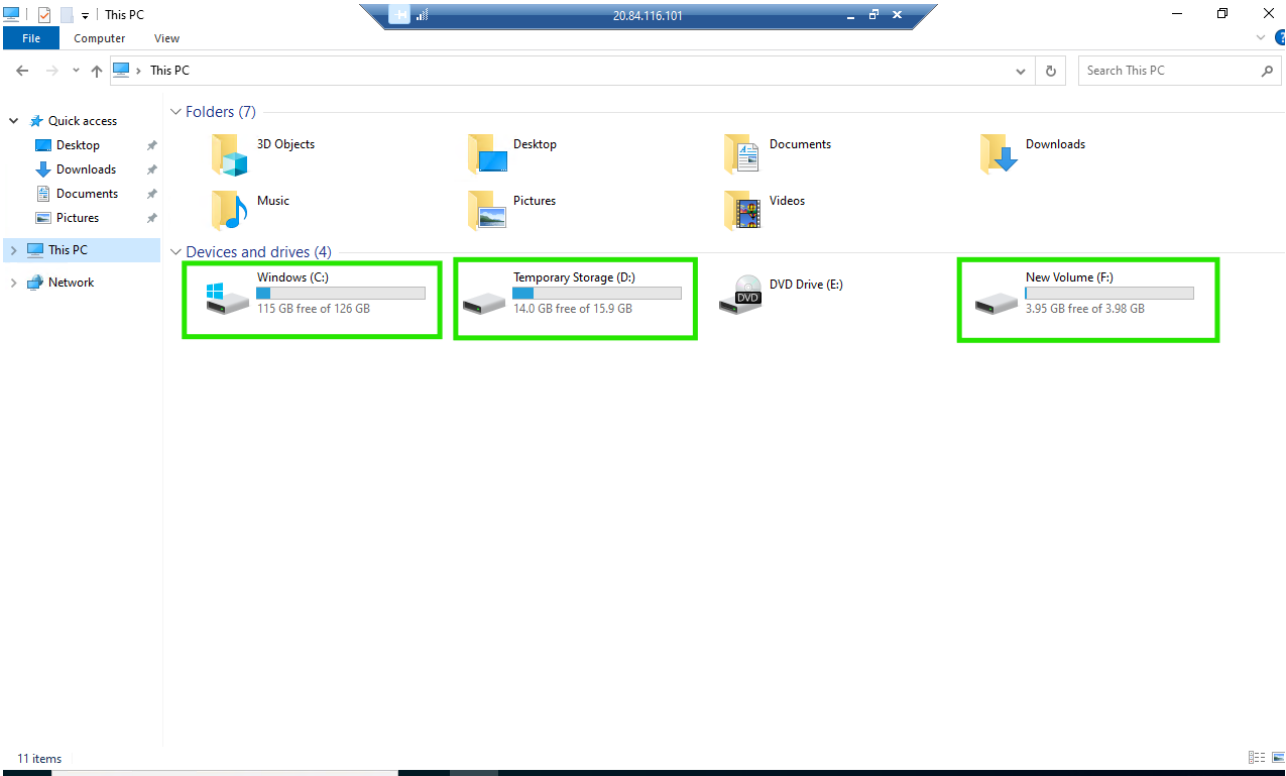
[Create and attach a new disk](#)   [Attach an existing disk](#)

< Previous

Next : Networking >

Review + create

- We have create windows server with
  - os disk 127 GB
  - data disk 4 GB
  - Local/Temp Disk (16 GB)
- We need to format the Data disk to be usable, we have formatted an mounted as F:



- Lets resize the data disk

Microsoft Azure portal interface showing the 'winserver' virtual machine's 'Disks' settings. The 'Data disks' section is highlighted, showing a single attached disk named 'winserver\_DataDisk\_0' with a size of 4 GiB. The 'Apply' button is visible at the bottom.

OS disk

Disk name	Storage type	Size (GiB)	Max IOPS	Max throughput (...)	Encryption
winserver_OsDisk_1_b65c5aedafac4c...	Premium SSD LRS	127	500	100	SSE with PMK

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 (...)	Encr...
0	winserver_DataDisk_0	Premium SSD LRS	4	120	25	SSE

Apply    Discard changes

Microsoft Azure portal interface showing the 'winserver\_DataDisk\_0' disk's 'Size + performance' settings. The 'Storage type' is set to 'Premium SSD (locally-redundant storage)'. A table lists various disk sizes and their performance metrics. The '8 GiB' option is highlighted, and the 'Save' button is visible at the bottom.

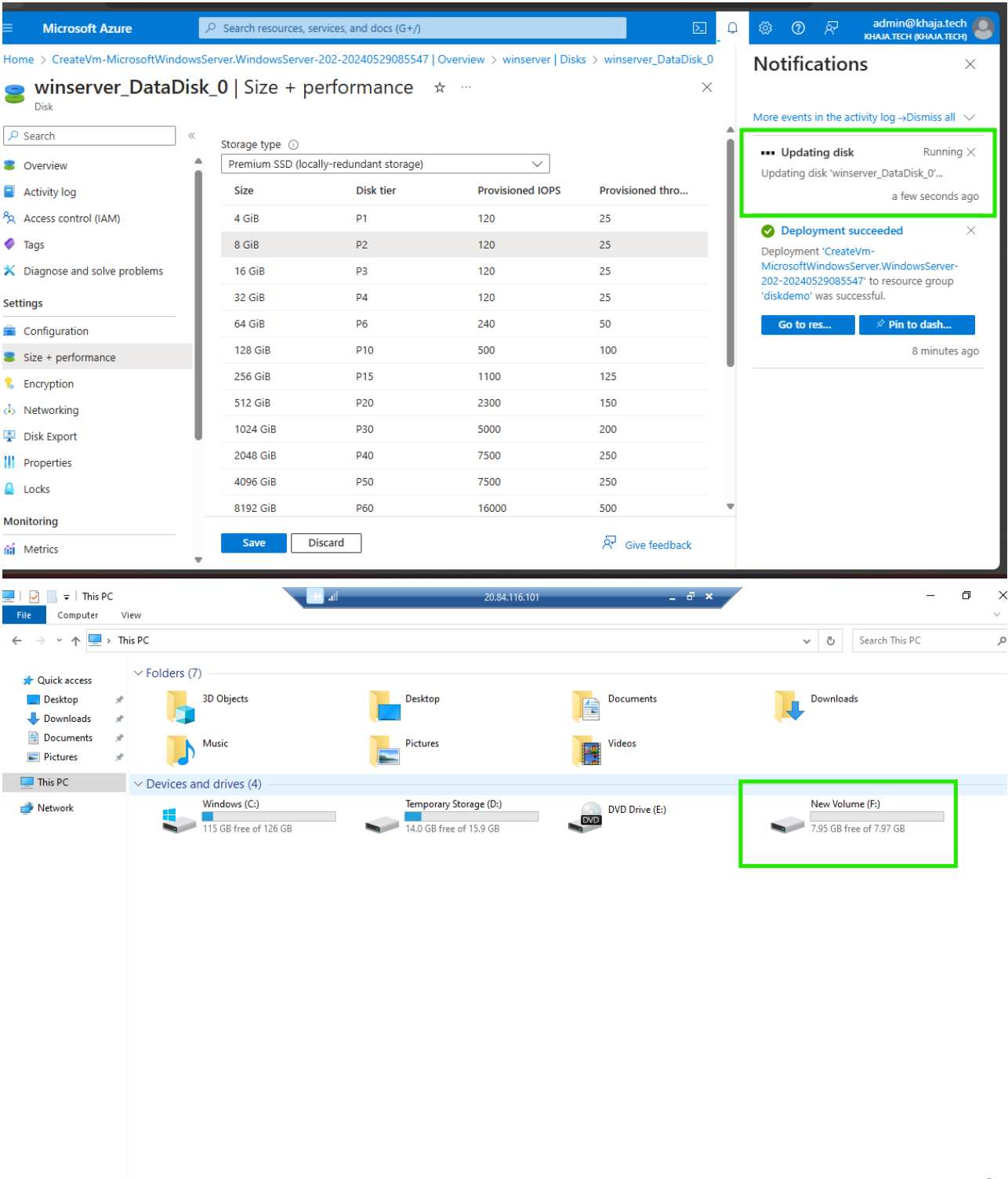
Storage type

Premium SSD (locally-redundant storage)

Size	Disk tier	Provisioned IOPS	Provisioned thro...	Max Shares	Max burst IOPS	Me...
4 GiB	P1	120	25	3	3500	1
8 GiB	P2	120	25	3	3500	1
16 GiB	P3	120	25	3	3500	1
32 GiB	P4	120	25	3	3500	1
64 GiB	P6	240	50	3	3500	1
128 GiB	P10	500	100	3	3500	1
256 GiB	P15	1100	125	3	3500	1
512 GiB	P20	2300	150	3	3500	1
1024 GiB	P30	5000	200	5	-	-
2048 GiB	P40	7500	250	5	-	-
4096 GiB	P50	7500	250	5	-	-
8192 GiB	P60	16000	500	10	-	-

Save    Discard

Give feedback



- Now lets try downsizing data disk back to 4 GiB. Reducing disk sizes is not possible.

Home > Resource groups > diskdemo > winserver\_DataDisk\_0

winserver\_DataDisk\_0 | Size + performance

Disk

Search

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Settings

Configuration

Size + performance

Encryption

Networking

Disk Export

Properties

Locks

Monitoring

Metrics

Reducing disk size is not supported in Azure to prevent data loss.

Storage type Premium SSD (locally-redundant storage)

Size	Disk tier	Provisioned IOPS	Provisioned thro...	Max Shares	Max burst IOPS	Me thr
4 GiB	P1	120	25	3	3500	1
8 GiB	P2	120	25	3	3500	1
16 GiB	P3	120	25	3	3500	1
32 GiB	P4	120	25	3	3500	1
64 GiB	P6	240	50	3	3500	1
128 GiB	P10	500	100	3	3500	1
256 GiB	P15	1100	125	3	3500	1
512 GiB	P20	2300	150	3	3500	1
1024 GiB	P30	5000	200	5	-	-
2048 GiB	P40	7500	250	5	-	-

Save Discard

Give feedback

Microsoft Azure

Search resources, services, and docs (G+)

admin@khaja.tech

Home > Resource groups > diskdemo > winserver

winserver

Virtual machine

Search

Connect

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Connect

Connect

Bastion

Windows Admin Center

Networking

Network settings

Load balancing

Application security groups

Network manager

Settings

Essential

Resource group diskdemo

Status Running

Location East US (Zone 1)

Subscription Azure subscription 7ee23928-6t

Availability zone 1

Tags (edit) Add tags

Properties

Virtual machine

Delete WINSERVER

WINSERVER

Virtual machine

Apply force delete

You can also choose to delete associated resources at the same time. Resources that aren't deleted will be orphaned. Associated resources that are in use by other resources are not shown here.

Associated resource type	Quantity	Delete with VM
OS disk	1	<input checked="" type="checkbox"/>
Data disks	1	<input type="checkbox"/>
Network interfaces	1	<input checked="" type="checkbox"/>
winserver282_z1		<input checked="" type="checkbox"/>
Public IP addresses	1	<input checked="" type="checkbox"/>

☒ I have read and understand that this virtual machine as well as any selected associated resources listed above will be deleted.

Delete Cancel

Feedback

Linux Servers

- [Refer Here](#) for quick start

Microsoft Azure

Search resources, services, and docs (G+)

[Home](#) > [Virtual machines](#) >

Create a virtual machine ...

Azure disk storage encryption automatically encrypts your data stored on Azure managed disks (OS and data disks) at rest by default when persisting it to the cloud.

Encryption at host ⓘ ☐

Encryption at host is not registered for the selected subscription.  
[Learn more about enabling this feature](#)

OS disk

OS disk size ⓘ 

64 GiB (P6, free tier eligible) ▼

Some images are, by default, smaller than the selected OS disk size.  
[Click here to learn how to expand your disk partition size after you create your VM.](#)

OS disk type \* ⓘ 

Premium SSD (locally-redundant storage) ▼

Delete with VM ⓘ ☒

Key management ⓘ 

Platform-managed key ▼

< Previous

Next : Networking >

Review + create





- Attach data disk


[Home](#) > [Virtual machines](#) >

# Create a virtual machine ...


[VM](#) 


OS disk type \* 


Premium SSD (locally-redundant storage) 

Delete with VM 

☒

Key management 


Platform-managed key 

Enable Ultra Disk compatibility 

☐

**Data disks for linuxvm**

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

LUN	Name	Size (GiB)	Disk type	Host caching	Delete with VM 
	Create and attach a new disk		Attach an existing disk		

 **Advanced**

< Previous

Next : Networking >

Review + create

# Create a new disk ...

Create a new disk to store applications and data on your VM. Disk pricing varies based on factors including disk size, storage type, and number of transactions. [Learn more](#)

Name \*

linuxvm\_DataDisk\_0

Source type \* ⓘ

None (empty disk) ▾

Size \* ⓘ

4 GiB

Premium SSD LRS

[Change size](#)

Key management ⓘ

Platform-managed key ▾

Enable shared disk

☐ Yes ☒ No

Delete disk with VM

☐

OK

# Create a virtual machine ...

[VM](#)

OS disk type \* ⓘ

Premium SSD (locally-redundant storage) ▾

Delete with VM ⓘ

☒

Key management ⓘ

Platform-managed key ▾

Enable Ultra Disk compatibility ⓘ

☐

Data disks for linuxvm

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

LUN	Name	Size (GiB)	Disk type	Host caching	Delete with VM ⓘ	
0	linuxvm_DataDisk_0	4	Premium SSD LRS	None ▾	<input type="checkbox"/>	

[Create and attach a new disk](#) [Attach an existing disk](#)

- Attaching data disks to linux article [Refer Here](#)

```
Dell@linuxvm:~$ sudo lsblk
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
loop0        7:0      0 63.9M  1 loop /snap/core20/2264
loop1        7:1      0   87M  1 loop /snap/lxd/28373
loop2        7:2      0 38.7M  1 loop /snap/snapd/21465
sda          8:0      0  64G   0 disk
├─sda1       8:1      0 63.9G   0 part /
├─sda14      8:14     0    4M   0 part
└─sda15      8:15     0 106M   0 part /boot/efi
sdb          8:16     0    4G   0 disk
└─sdb1       8:17     0    4G   0 part /mnt
sdc          8:32     0    4G   0 disk
sr0         11:0     1 628K   0 rom
Dell@linuxvm:~$
```

```
Windows PowerShell x Dell@linuxvm: ~ x + v
Dell@linuxvm:~$ sudo mkfs -t ext4 /dev/sdc
mke2fs 1.46.5 (30-Dec-2021)
Discarding device blocks: done
Creating filesystem with 1048576 4k blocks and 262144 inodes
Filesystem UUID: aa366c92-24f9-4075-ae7b-356585e71e2a
Superblock backups stored on blocks:
    32768, 98304, 163840, 229376, 294912, 819200, 884736

Allocating group tables: done
Writing inode tables: done
Creating journal (16384 blocks): done
Writing superblocks and filesystem accounting information: done

Dell@linuxvm:~$ sudo mkdir /projects
Dell@linuxvm:~$ sudo mount /dev/sdc /projects/
Dell@linuxvm:~$ df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root        62G   1.6G   61G   3% /
tmpfs            417M    0   417M   0% /dev/shm
tmpfs            167M  964K   166M   1% /run
tmpfs            5.0M    0    5.0M   0% /run/lock
efivarfs         128K   37K    87K  30% /sys/firmware/efi/efivars
/dev/sda15       105M   6.1M    99M   6% /boot/efi
/dev/sdb1        3.9G   28K   3.7G   1% /mnt
tmpfs            84M    4.0K   84M   1% /run/user/1000
/dev/sdc         3.9G   24K   3.7G   1% /projects
Dell@linuxvm:~$
```

- Add the entries into /etc/fstab after fetching uuid from `sudo blkid`

```
UUID=aa366c92-24f9-4075-ae7b-356585e71e2a /projects ext4 defaults 0 0
```

## Exercise

- Perform below steps in both azure and aws
  - Create a linux instance (ec2) with ubuntu 22.04 instance
  - Add an ebs volume of size 1 GB to the linux instance
  - format the disk and mount to /tools folder
  - add entries in fstab and now restart the instance.
  - After restart also you should see the mount in `df -h`