



IT4090

Cloud Computing

4th Year, 1st Semester

Azure Lab 2

Azure Lab Assignment

Submitted to

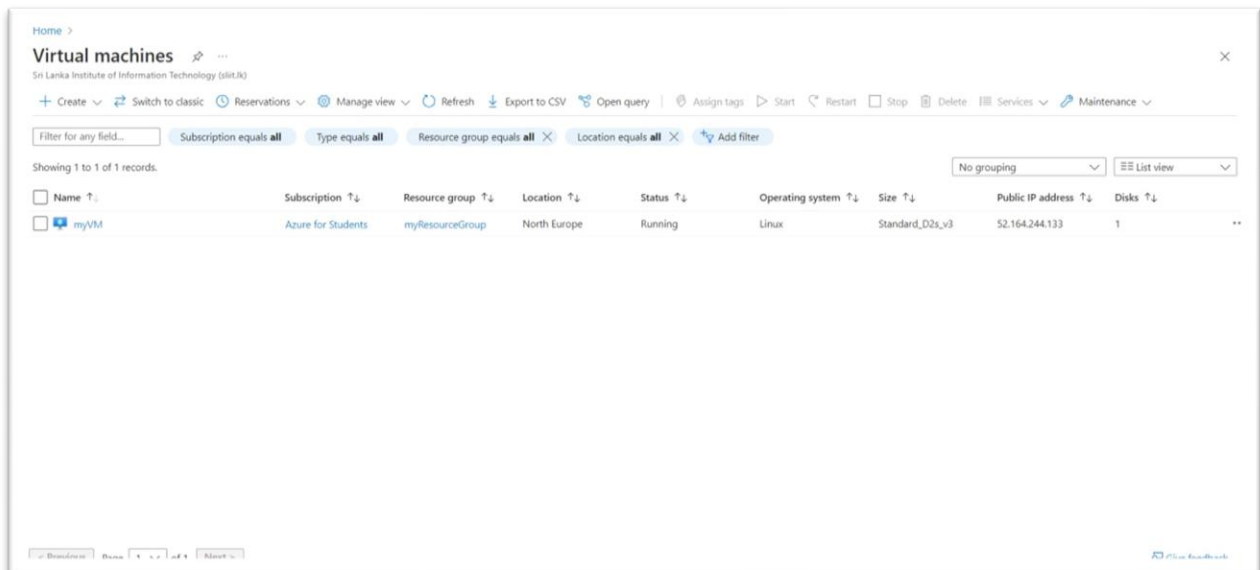
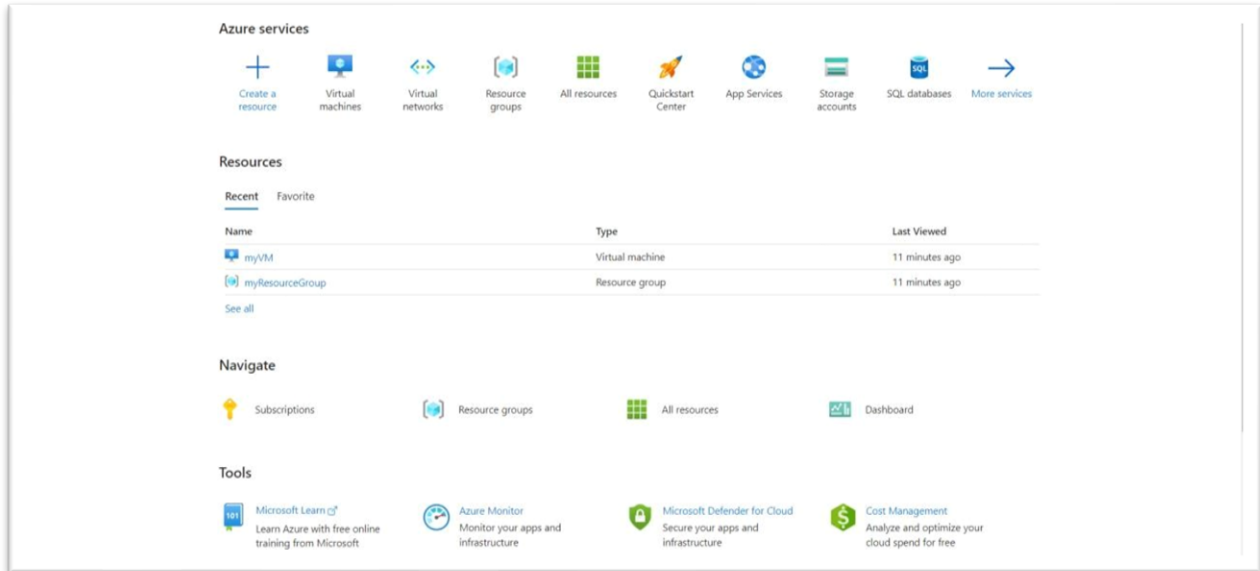
Sri Lanka Institute of Information Technology

IT21228094

In partial fulfillment of the requirements for the
Bachelor of Science Special Honors Degree in Information Technology

25.08.2024

1. Find the virtual machine



2. Attach a new disk

Home > Virtual machines > myVM

Virtual machines

Sri Lanka Institute of Information Technology (slit...)

+ Create ▾ Switch to classic ...

Filter for any field...

Name ↑

- myVM

Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Connect
Connect
Bastion
Networking
Settings
Disks
Extensions + applications
Operating system
Configuration
Advisor recommendations
Properties
Locks

myVM | Disks ☆ ...

Virtual machine

Search Refresh Additional settings Feedback Troubleshoot

OS disk

Swap OS disk

Disk name	Storage type	Size (GiB)	Max IOPS	Max throughput (...)	Encryption ⓘ
myVM_disk1_0d4055d77bc746d78eb6c1	Premium SSD LRS	30	120	25	SSE with PMK

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						

Apply Discard changes

Home > Virtual machines > myVM

Virtual machines

Sri Lanka Institute of Information Technology (slit...)

+ Create ▾ Switch to classic ...

Filter for any field...

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- myVM

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myVM | Disks ☆ ...

Virtual machine

Search Refresh Additional settings Feedback Troubleshoot

OS disk

Swap OS disk

Storage type	Size (GiB)	Max IOPS	Max throughput (...)	Encryption ⓘ	Host caching ⓘ
Premium SSD LRS	30	120	25	SSE with PMK	Read/write

Data disks

Filter by name

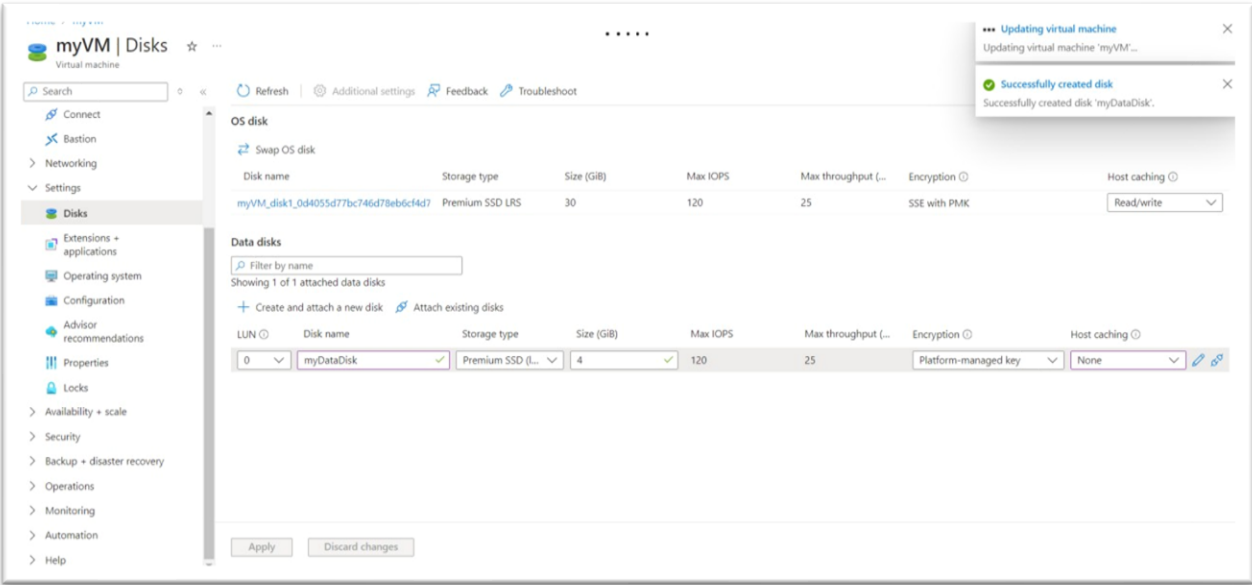
Showing 0 of 0 attached data disks

+ 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						

Apply Discard changes

3. Attach an existing disk



Home > myVM

myVM | Disks

Virtual machine

RefreshAdditional settingsFeedbackTroubleshoot

Connect

Bastion

Networking

Settings

Disks

Extensions + applications

Operating system

Configuration

Advisor recommendations

Properties

Locks

Availability + scale

Security

Backup + disaster recovery

Operations

Monitoring

Automation

Help

OS disk

Swap OS disk

Disk name	Storage type	Size (GiB)	Max IOPS	Max throughput (...)	Encryption	Host caching
myVM_disk1_0d4055d77bc746d78eb6cf4d7	Premium SSD LRS	30	120	25	SSE with PMK	Read/write

Data disks

Filter by name

Showing 1 of 1 attached data disks

Create and attach a new diskAttach existing disks

LUN	Disk name	Storage type	Size (GiB)	Max IOPS	Max throughput (...)	Encryption	Host caching
0	myDataDisk	Premium SSD LRS	4	120	25	SSE with PMK	None

ApplyDiscard changes

4. Connect to the Linux VM to mount the new disk

```
azureuser@myVM:~$ ssh azureuser@172.161.56.46
azureuser@172.161.56.46: Permission denied (publickey).
azureuser@myVM:~$ lsblk -o NAME,HCTL,SIZE,MOUNTPOINT | grep -i "sd"
sda      0:0:0:0      38G
├─sda1    0:0:0:1      4M
├─sda14   0:0:0:1     180M /boot/efi
├─sda15   0:0:0:1     913M /boot
└─sdb     0:0:0:1     16G
├─sdb1    0:0:0:1     16G /mnt
└─sdc     1:0:0:0      4G
azureuser@myVM:~$
```

5. Prepare a new empty disk

```
azureuser@myVM:~$ sudo parted /dev/sdc --script mklabel gpt mkpart xfspart xfs 0% 100%
sudo mkfs.xfs /dev/sdc1
sudo partprobe /dev/sdc1
meta-data=/dev/sdc1          isize=512    agcount=4, agsize=262016 blks
                             sectsz=4096   attr=2, projid32bit=1
                             crc=1          finobt=1, sparse=1, rmapbt=1
                             reflink=1      bigtime=1 inobtcount=1 rtextents=0
data=                        bsize=4096    blocks=1048064, imaxpct=25
naming=                      sunit=0        swidth=0 blks
log=                          bsize=4096    scallo=0, filetype=1
                             version=2      bsize=4096  blocks=16384, version=2
                             sectsz=4096    sunit=1 blks, lazy-count=1
realtime=none                extsz=4096    blocks=0, rtextents=0
Discarding blocks...Done.
azureuser@myVM:~$ sudo mkdir /datadrive
azureuser@myVM:~$ sudo mount /dev/sdc1 /datadrive
azureuser@myVM:~$ sudo blkid
/dev/sdb1: UUID="e56c886b-56ac-4d3b-ac89-e76457b6ef44" BLOCK_SIZE="4096" TYPE="ext4" PARTUUID="bf573a73-81"
/dev/sda16: LABEL="ROOT" UUID="8b78ac6c-5773-4eda-a453-28121710f73b" BLOCK_SIZE="4096" TYPE="ext4" PARTUUID="737a8877-abea-4f33-9197-0527b6c83c0d"
/dev/sda15: LABEL="FATROOT" UUID="UEFI" UUID="5670-2002" BLOCK_SIZE="512" TYPE="vfat" PARTUUID="3d02126a-c69a-498c-b4fa-cd88ec2f03d"
/dev/sda1: LABEL="clouding-rootfs" UUID="e5860b64-ee76-4af3-a198-b22ce71f4d8d" BLOCK_SIZE="4096" TYPE="ext4" PARTUUID="abda8da6-20d6-4d99-bc44-2852338a02f5"
/dev/sdc1: UUID="eb345333-b996-4333-86fc-c8416d0ba07d" BLOCK_SIZE="4096" TYPE="xfs" PARTLABEL="xfspart" PARTUUID="215e3db0-f0e4-4249-b1a8-350f8b7815eb"
/dev/sda14: PARTUUID="cb6c4405-6103-49a2-922c-6cd456d4cc1"
azureuser@myVM:~$
```

6. Mount the disk

```
azureuser@myVM:~$ sudo parted /dev/sdc --script mklabel gpt mkpart xfspart xfs 0% 100%
sudo mkfs.xfs /dev/sdc1
sudo partprobe /dev/sdc1
meta-data=/dev/sdc1               isize=512    agcount=4, agsize=26216 blks
                                   sectsz=4096   attr=2, projid32bit=1
                                   crc=1          finobt=1, sparse=1, rmapbt=1
                                   reflink=1      bigtime=1 inobtcount=1 nrext4=0
data                =              bsize=4096   blocks=1048864, imaxpct=25
                                   sunit=0        swidth=0 blks
naming              =version 2          bsize=4096   ascii-ci=0, ftypes=1
log                 =internal log       bsize=4096   blocks=16384, version=2
                                   sectsz=4096   sunit=1 blks, lazy-count=1
realtime            =none               extsz=4096   blocks=0, rtextents=0
Discarding blocks...Done.
azureuser@myVM:~$ sudo mkdir /datadrive
azureuser@myVM:~$ sudo mount /dev/sdc1 /datadrive
azureuser@myVM:~$ sudo blkid
/dev/sdb1: UUID="e6c886b-86ac-4d3b-ac89-e74457b6ef44" BLOCK_SIZE="4096" TYPE="ext4" PARTUUID="bf573a79-01"
/dev/sda16: LABEL="BOOT" UUID="8b78ac6c-5773-4eda-a453-28121710f73b" BLOCK_SIZE="4096" TYPE="ext4" PARTUUID="737a8877-abea-4f33-9197-8527b6c83c0d"
/dev/sda15: LABEL="FATBOOT" UUID="UEFI" LABEL="UEFI" UUID="567C-2CD2" BLOCK_SIZE="512" TYPE="vfat" PARTUUID="3d02126e-c694-498c-b4fa-cde88dc2fb82"
/dev/sda1: LABEL="cloudimg-rootfs" UUID="e5860b64-eef6-4af3-a198-b22ce7174d8d" BLOCK_SIZE="4096" TYPE="ext4" PARTUUID="abda0dad-28d6-4d98-bc44-2852338a02f5"
/dev/sdc1: UUID="db345333-b096-4332-b6fc-c0416d0b097d" BLOCK_SIZE="4096" TYPE="xfs" PARTLABEL="xfspart" PARTUUID="215e3db0-f0e4-4249-b1a0-35f0b7615eb"
/dev/sda14: PARTUUID="cb6c4485-6103-49a2-922c-6cdd455d4cc1"
```

```
azureuser@myVM:~$
```

```
GNU nano 7.2 /etc/fstab
# CLOUD_IMG: This file was created/modified by the Cloud Image build process
UUID=e5860b64-eef6-4af3-a198-b22ce7174d8d / ext4 discard,commit=30,errors=remount-ro 0 1
LABEL=BOOT /boot ext4 defaults,discard 0 2
UUID=567C-2CD2 /boot/efi vfat umask=0077 0 1
/dev/disk/cloud/azure_resource-part1 /mnt auto defaults,nofail,x-systemd.requires=cloud-init.service,_netdev,comment=cloudconfig 0 2
UUID=33333333-3b3b-3c3c-3d3d-3e3e3e3e3e3e /datadrive xfs defaults,nofail 1 2
```

Read 6 lines

Ctrl+H Help	Ctrl+W Write Out	Ctrl+M Where Is	Ctrl+X Cut	Ctrl+Z Execute	Ctrl+G Location	Ctrl+U Undo	Ctrl+M Set Mark	Ctrl+J To Bracket	Ctrl+O Previous	Ctrl+B Back	Ctrl+_ Prev Word
Ctrl+X Exit	Ctrl+R Read File	Ctrl+A Replace	Ctrl+V Paste	Ctrl+J Justify	Ctrl+G Go To Line	Ctrl+W Redo	Ctrl+C Copy	Ctrl+K Where Was	Ctrl+N Next	Ctrl+F Forward	Ctrl+_ Next Word

7. Verify the disk

```
azureuser@myVM:~$ sudo nano /etc/fstab
azureuser@myVM:~$ lsblk -o NAME,HCTL,SIZE,MOUNTPOINT | grep -i "sd"
sd 0:0:0:0 38G
├─sd1 29G /
├─sd14 4M
├─sd15 160M /boot/efi
├─sd16 913M /boot
sd 0:0:0:1 16G
├─sd1 16G /mnt
sd 1:0:0:0 4G
├─sd1 4G /datadrive
azureuser@myVM:~$
```