

# ARM-Azure-Storage:3

Do the following tasks:

1. Create a File share in Azure Storage.
2. Mount this file share on windows and linux.

Let us use one of the storage system previously created to do a file share.  
Open a storage system and click on file shares on LHS under Data Storage options.

The screenshot shows the Microsoft Azure portal interface. On the left, the 'Storage accounts' list is visible, with 'forassignment1' selected. The main pane shows the 'Properties' tab for the 'forassignment1' storage account. The 'Security' section is expanded, showing settings for 'Blob service' and 'File service'. The 'Networking' section is also visible, showing settings for 'Allow access from' and 'Access for trusted Microsoft services'.

Click on “+ File Share” to create a file share.

The screenshot shows the Microsoft Azure portal interface. On the left, the 'Storage accounts' list is visible, with 'forassignment1' selected. The main pane shows the 'File shares' section for the 'forassignment1' storage account. The 'File share settings' section is expanded, showing options for 'Active Directory', 'Default share-level permissions', 'Soft delete', 'Maximum capacity', and 'Security'. The 'Show deleted shares' toggle is also visible.

## Name it and create.

The screenshot shows the Microsoft Azure portal interface. On the left, the 'Storage accounts' section is expanded, showing a list of storage accounts including 'forassignment1' through 'forassignment5'. The main pane displays the 'forassignment1 | File shares' page. A 'New file share' dialog box is open on the right. The dialog has a 'Name' field with the value 'forassignment3'. Below the name field, there are settings for 'Tier' (set to 'Transaction optimized') and 'Performance' (Maximum IOPS: 1000, Egress rate: 60 MiB/s, Ingress rate: 60 MiB/s, Maximum capacity: 5 TiB, Large file shares: Disabled). At the bottom of the dialog, there are two buttons: 'Create' and 'Cancel'.

Open the file share that you created. Click on connect. Let us connect it to windows as our first task.

The screenshot shows the Microsoft Azure portal interface. The main pane displays the 'forassignment3 | File shares' page. The 'Overview' tab is selected. At the top of the main pane, there is a 'Connect' button. Below the 'Connect' button, there is a table with columns 'Name', 'Type', and 'Size'. The table is empty, and the text 'No files found.' is displayed below it.

## Copy the script.

The screenshot shows the Microsoft Azure portal interface. On the left, the 'forassignment3' storage account is selected, and the 'Overview' tab is active. The main pane shows a table with columns 'Name' and 'Type', and a message 'No files found.' Below this, there are links for 'Connect', 'Upload', 'Add directory', 'Refresh', 'Delete share', 'Change tier', and 'Edit quota'. On the right, the 'Connect' dialog box is open, showing options for connecting to the Azure file share from Windows, Linux, or macOS. The 'Storage account key' authentication method is selected. A PowerShell script is displayed in a text area, which is copied to the clipboard. The script is a PowerShell command that tests the connection to the Azure file share and mounts it as a drive letter 'Z' if the connection is successful. The script is as follows:

```
$connectTestResult = Test-NetConnection -ComputerName forassignment1.file.core.windows.net -Port 445
if ($connectTestResult.TcpTestSucceeded) {
    # Save the password so the drive will persist on reboot
    cmd.exe /C "cmdkey /add:"forassignment1.file.core.windows.net" /user:"localhost\forassignment1" /pass:"p2DKXv6tbRigMIzVWuqUvnnL5y3sTieqgWw0UMjA4WAnvveesm/XbCSEGV0WkTnz" /p:"p2DKXv6tbRigMIzVWuqUvnnL5y3sTieqgWw0UMjA4WAnvveesm/XbCSEGV0WkTnz" /add:"forassignment1.file.core.windows.net"
    # Mount the drive
    New-PSDrive -Name Z -PSProvider FileSystem -Root "\\forassignment1.file.core.windows.net\forassignment3" -Persist
} else {
    Write-Error -Message "Unable to reach the Azure storage account via port 445. Check to make sure your organization or ISP is not blocking port 445, or use Azure P2S VPN, Azure S2S VPN, or Express Route to tunnel SMB traffic over a different port."
}
```

Note down the user password and root path as shown.

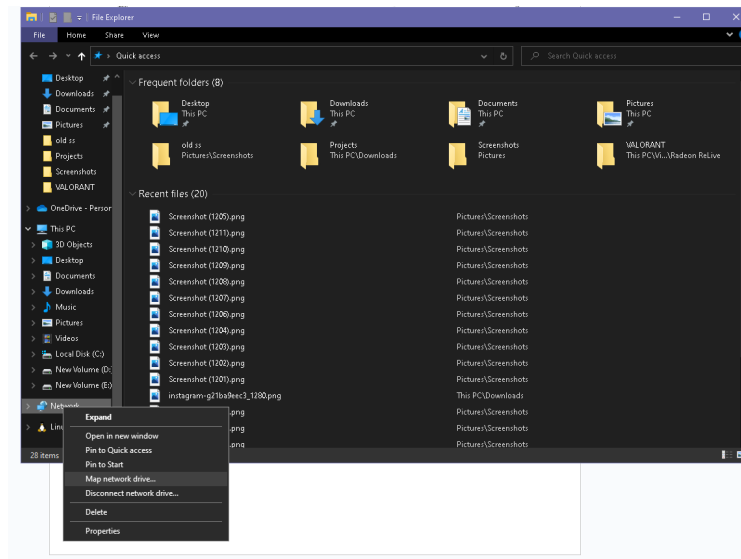
The screenshot shows a Notepad window with the following PowerShell script:

```
File Edit Format View Help
$connectTestResult = Test-NetConnection -ComputerName forassignment1.file.core.windows.net -Port 445
if ($connectTestResult.TcpTestSucceeded) {
    # Save the password so the drive will persist on reboot
    cmd.exe /C "cmdkey /add:"forassignment1.file.core.windows.net" /user:"localhost\forassignment1" /pass:"p2DKXv6tbRigMIzVWuqUvnnL5y3sTieqgWw0UMjA4WAnvveesm/XbCSEGV0WkTnz" /p:"p2DKXv6tbRigMIzVWuqUvnnL5y3sTieqgWw0UMjA4WAnvveesm/XbCSEGV0WkTnz" /add:"forassignment1.file.core.windows.net"
    # Mount the drive
    New-PSDrive -Name Z -PSProvider FileSystem -Root "\\forassignment1.file.core.windows.net\forassignment3" -Persist
} else {
    Write-Error -Message "Unable to reach the Azure storage account via port 445. Check to make sure your organization or ISP is not blocking port 445, or use Azure P2S VPN, Azure S2S VPN, or Express Route to tunnel SMB traffic over a different port."
}
```

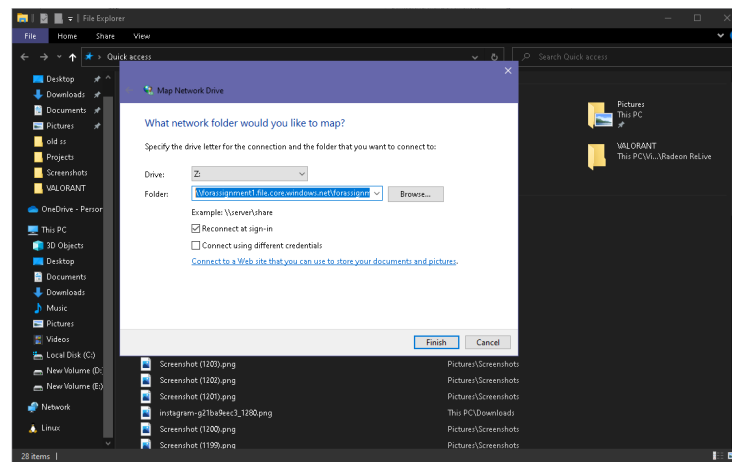
The script is saved in a file named 'forassignment3.ps1' in the directory 'C:\Users\user\AppData\Local\Microsoft\Windows\CurrentVersion\Shell\Bags\Local Objects\Shell Objects\forassignment3.ps1'.

Now let us connect to our system.

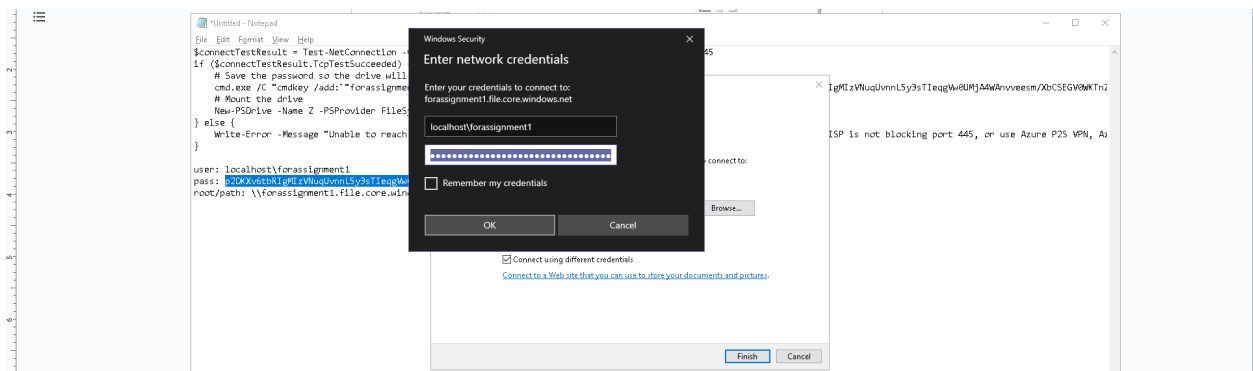
Right click on network in your windows pc, click on map network drive.



Here Paste the root path as folder name.



Enter the username and password credentials that we noted earlier.



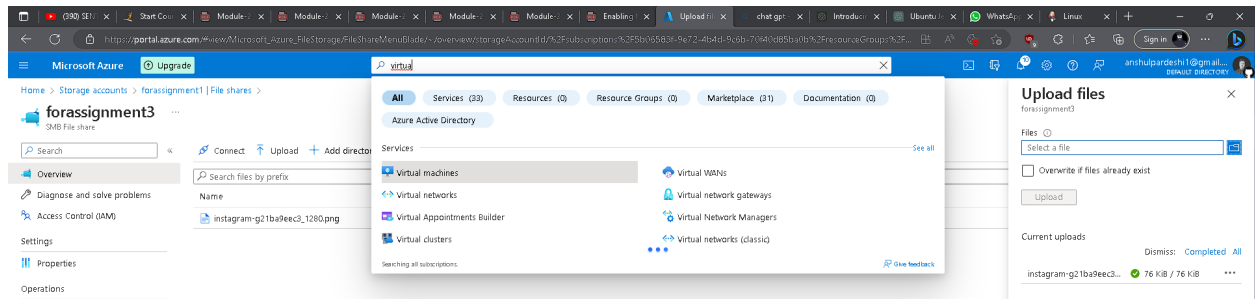
**Due to port 445 not being opened from our side or our ISP side it is unable to connect. Once it is configured you can access the file share.**

The screenshot shows the Microsoft Azure portal interface for a storage account named 'forassignment3'. The left sidebar contains navigation options like Overview, Diagnose and solve problems, Access Control (IAM), Settings, Properties, Operations, Snapshots, and Backup. The main area displays the 'forassignment3' file share with a search bar and a table of files. A 'Network Error' dialog box is open, indicating a connection failure to the share. The error message is: 'Windows cannot access \\forassignment3.file.core.windows.net\forassignment3. Check the spelling of the name. Otherwise, there might be a problem with your network. To try to identify and resolve network problems, click Diagnose.' Below the message is a 'Diagnose' button. The right sidebar shows the 'Connect' section for the file share, with tabs for Windows, Linux, and macOS. The Windows tab is active, showing instructions on how to connect using PowerShell. A PowerShell script is provided, which includes commands to test the connection, set the drive letter to 'Z', and mount the share. The script also includes a 'Write-Error' message indicating the connection failed due to port 445 not being open.

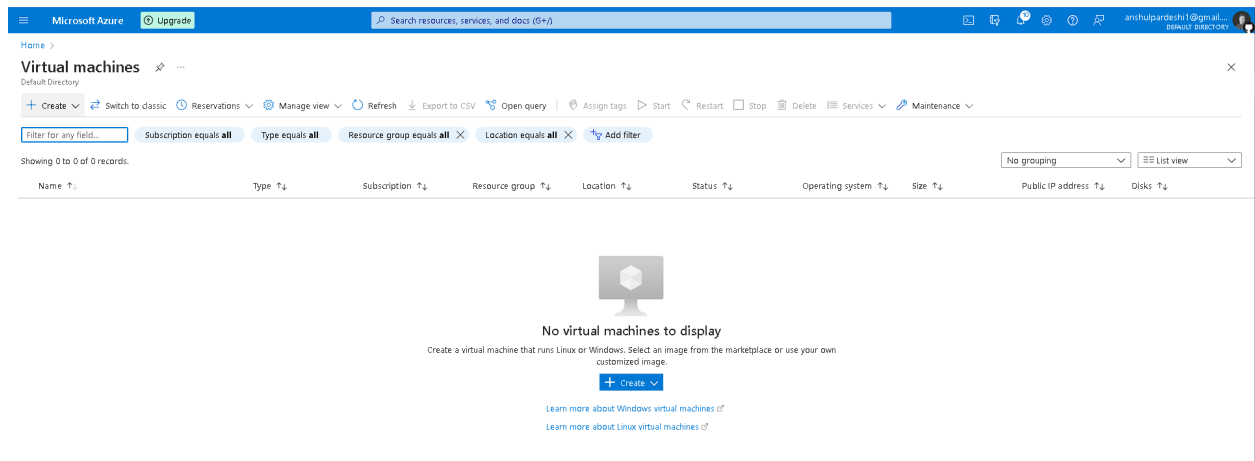
**To upload files in file share, click on upload option then select option then choose the file that you opt to upload.**

The screenshot shows the Microsoft Azure portal interface for the 'forassignment3' file share. The left sidebar is the same as in the previous image. The main area shows the file share with a search bar and a table of files. The 'Upload files' sidebar on the right is open, showing a 'Select a file' button and a list of files to upload. The file 'instagram-g21ba9eec3\_1280.png' is selected. The 'Current uploads' section shows the progress of the upload, with a green progress bar and the file name 'instagram-g21ba9eec3\_1280.png'.

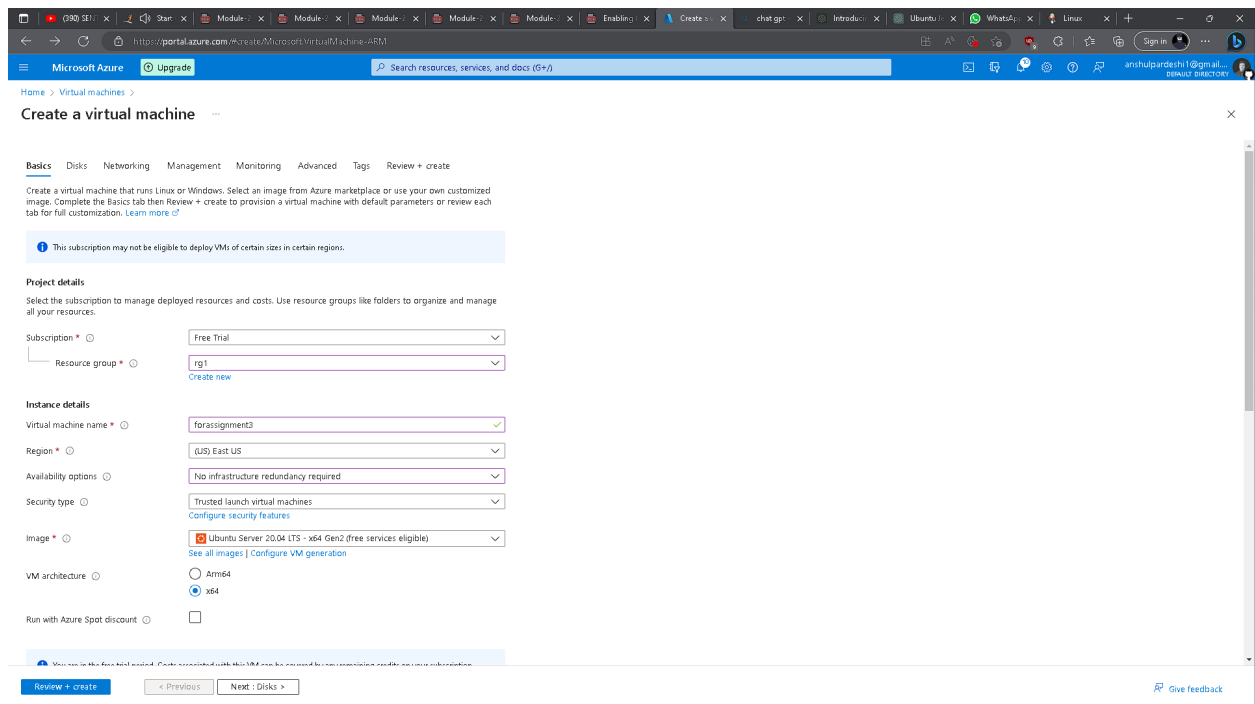
Now let us create a VM to do the same with Linux.  
Search for VM in the search box.



Select it. Then, Click on create to create a VM.



Give your VM a name. Select image that you want, we are going with Ubuntu.



Select ssh method you are comfortable with. We chose user password and give credentials as per your choice. Click on review and create.

Home > Virtual machines >

## Create a virtual machine

☒ x64

Run with Azure Spot discount ☐

**You are in the free trial period.** Costs associated with this VM can be covered by any remaining credits on your subscription. [Learn more](#)

Size \*  [See all sizes](#)

**Administrator account**

Authentication type ☐ SSH public key ☒ Password

Username \*  ✓

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 \*  ✓

**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 >](#) [Give feedback](#)

Go to resource that you created and copy public ip.

Home > CreateVM>canonical.0001-com-ubuntu-server-focal-2-20230404200148 | Overview >

## forassignment3

Virtual machine

Search

Connect ☒ Start ☐ Restart ☐ Stop ☐ Capture ☐ Delete ☐ Refresh ☐ Open in mobile [Feedback](#) [CLI / PS](#)

**Overview**

- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems
- Settings
- Networking
- Connect
- Disks
- Size
- Microsoft Defender for Cloud
- Advisor recommendations
- Extensions + applications
- Continuous delivery
- Availability + scaling
- Configuration
- Identity
- Properties
- Locks
- Operations
- Bastion
- Auto-shutdown
- Backup
- Disaster recovery
- Updates
- Inventory

**Essentials**

Resource group [\(move\)](#) : [rg1](#)

Status : Running

Location : East US

Subscription [\(move\)](#) : [Free Trial](#)

Subscription ID : Sb06593f-9e72-4b4d-9c6b-7040d85ba0b

Tags [\(edit\)](#) : [Click here to add tags](#)

Operating system : Linux (ubuntu 20.04)

Size : [Standard\\_B1s](#) [Copy to clipboard](#) | 1 GB memory

Public IP address : [20.25.15.50](#)

Virtual network/subnet : [forassignment3-vnet/default](#)

DNS name : [Not configured](#)

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

**Virtual machine**

Computer name	forassignment3
Health state	-
Operating system	Linux (ubuntu 20.04)
Publisher	canonical
Offer	0001-com-ubuntu-server-focal
Plan	20_04-lts-gen2
VM generation	V2
VM architecture	x64
Agent status	Ready
Agent version	2.9.0.4
Host group	None
Host	-
Proximity placement group	-
Colocation status	N/A
Capacity reservation group	-

**Availability + scaling**

Availability zone	-
Availability set	-

**Networking**

Public IP address	20.25.15.50 ( Network interface forassignment3nics )
Public IP address (IPv6)	-
Private IP address	10.0.0.4
Private IP address (IPv6)	-
Virtual network/subnet	forassignment3-vnet/default
DNS name	Configure

**Size**

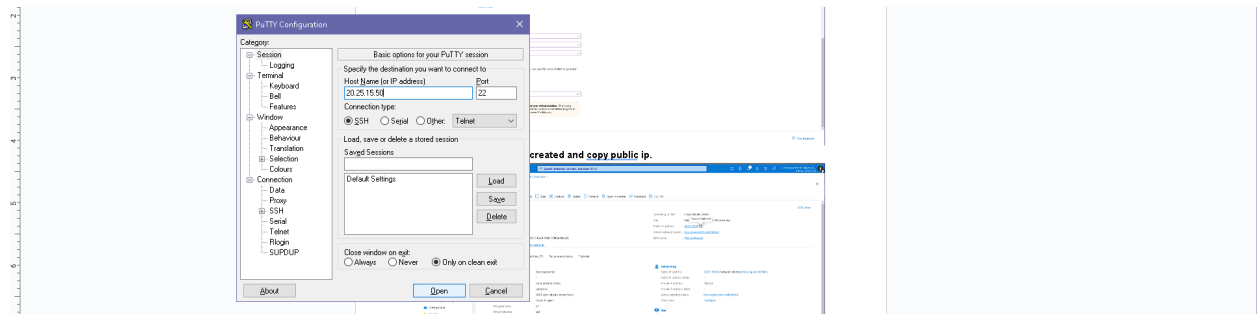
Size	Standard B1s
vCPUs	1
RAM	1 GB

**Disk**

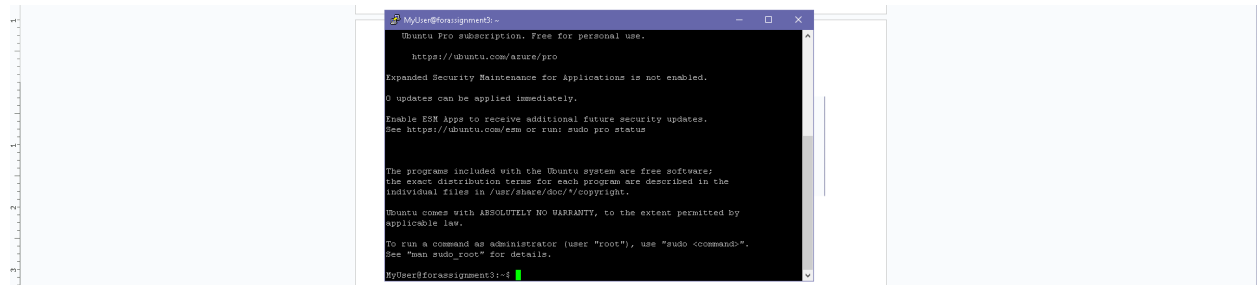
OS disk	forassignment3_OsDisk_1_4240794cxc3045369957146ca74741a
Encryption at host	Disabled
Azure disk encryption	Not enabled
Ephemeral OS disk	N/A
Data disks	0

**Auto shutdown**

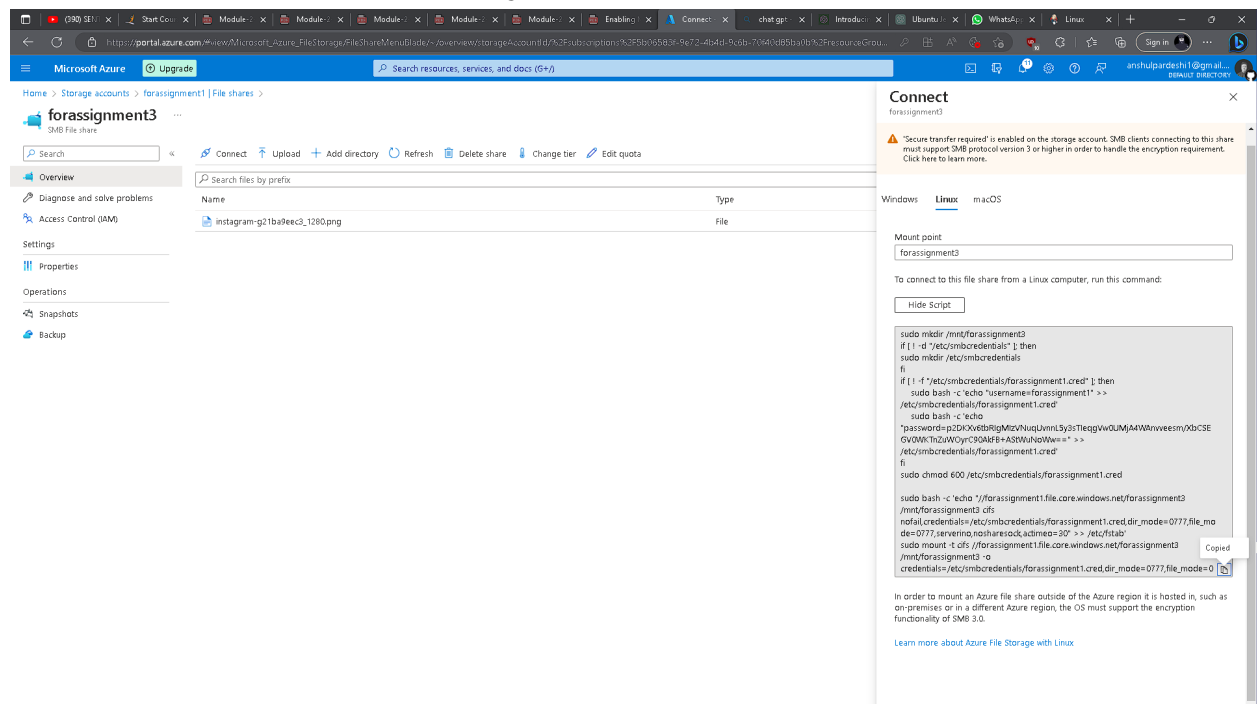
Now open PUTTY to connect. And paste public ip and connect.



Connect then enter username and password.  
We are shed into VM.



Now we need to connect file share to this linux instance.  
Go to the file share that you want to connect from specific storage account.  
Click on connect then linux and copy the script.





Paste it in sshed VM. We are into file share. We do ls and there is no file here right now.

```
MyUser@forassignment3:~$
login as: MyUser
MyUser@20.26.15.50's password:
Welcome to Ubuntu 20.04.6 LTS (GNU/Linux 5.15.0-1035-azure x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

System information as of Tue Apr  4 14:55:43 UTC 2023

System load:  0.0          Processes:    102
Usage of /:   5.3% of 28.89GB    Users logged in:  0
Memory usage: 30%          IPv4 address for eth0: 10.0.0.4
Swap usage:   0%

 * Introducing Expanded Security Maintenance for Applications.
   Receive updates to over 25,000 software packages with your
   Ubuntu Pro subscription. Free for personal use.
   https://ubuntu.com/azure/pro

Expanded Security Maintenance for Applications is not enabled.
0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

MyUser@forassignment3:~$ sudo mkdir /mnt/forassignment3
MyUser@forassignment3:~$ if [ ! -d /etc/smbcredentials ]; then
> sudo mkdir /etc/smbcredentials
> fi
MyUser@forassignment3:~$ if [ ! -f /etc/smbcredentials/forassignment1.cred ]; then
> sudo bash -c 'echo "username=forassignment1" >> /etc/smbcredentials/forassignment1.cred'
> sudo bash -c 'echo "password=p2dKXv6thRgItWVuqVnml5y5TlqgVw0UNjA4W4nyvveemZdCE8QV0NRTaIu0YpC9QAKFB+8t8uWuVw==" >> /etc/smbcredentials/forassignment1.cred'
> fi
MyUser@forassignment3:~$ sudo chmod 600 /etc/smbcredentials/forassignment1.cred
MyUser@forassignment3:~$
MyUser@forassignment3:~$ sudo bash -c 'echo "/forassignment1.file.core.windows.net/forassignment3 /mnt/forassignment3 cifs nofail,credentials=/etc/smbcredentials/forassignment1.cred,dir_mode=0777,file_mode=0777,serverino,nobacsock,actimeo=30" >> /etc/fstab'
MyUser@forassignment3:~$ sudo mount -t cifs //forassignment1.file.core.windows.net/forassignment3 /mnt/forassignment3 -o credentials=/etc/smbcredentials/forassignment1.cred,dir_mode=0777,file_mode=0777,serverino,nobacsock,actimeo=30
MyUser@forassignment3:~$ ls
MyUser@forassignment3:~$
```

Now do `cd /mnt/<fileshare name that you gave>` , in this case:

`Cd /mnt/forassignment3`

Now ls

We will be able to see file that we uploaded earlier.

```
MyUser@forassignment3:/mnt/forassignment3$
login as: MyUser
MyUser@20.26.15.50's password:
Welcome to Ubuntu 20.04.6 LTS (GNU/Linux 5.15.0-1035-azure x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

System information as of Tue Apr  4 14:55:43 UTC 2023

System load:  0.0          Processes:    102
Usage of /:   5.3% of 28.89GB    Users logged in:  0
Memory usage: 30%          IPv4 address for eth0: 10.0.0.4
Swap usage:   0%

 * Introducing Expanded Security Maintenance for Applications.
   Receive updates to over 25,000 software packages with your
   Ubuntu Pro subscription. Free for personal use.
   https://ubuntu.com/azure/pro

Expanded Security Maintenance for Applications is not enabled.
0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

MyUser@forassignment3:~$ sudo mkdir /mnt/forassignment3
MyUser@forassignment3:~$ if [ ! -d /etc/smbcredentials ]; then
> sudo mkdir /etc/smbcredentials
> fi
MyUser@forassignment3:~$ if [ ! -f /etc/smbcredentials/forassignment1.cred ]; then
> sudo bash -c 'echo "username=forassignment1" >> /etc/smbcredentials/forassignment1.cred'
> sudo bash -c 'echo "password=p2dKXv6thRgItWVuqVnml5y5TlqgVw0UNjA4W4nyvveemZdCE8QV0NRTaIu0YpC9QAKFB+8t8uWuVw==" >> /etc/smbcredentials/forassignment1.cred'
> fi
MyUser@forassignment3:~$ sudo chmod 600 /etc/smbcredentials/forassignment1.cred
MyUser@forassignment3:~$
MyUser@forassignment3:~$ sudo bash -c 'echo "/forassignment1.file.core.windows.net/forassignment3 /mnt/forassignment3 cifs nofail,credentials=/etc/smbcredentials/forassignment1.cred,dir_mode=0777,file_mode=0777,serverino,nobacsock,actimeo=30" >> /etc/fstab'
MyUser@forassignment3:~$ sudo mount -t cifs //forassignment1.file.core.windows.net/forassignment3 /mnt/forassignment3 -o credentials=/etc/smbcredentials/forassignment1.cred,dir_mode=0777,file_mode=0777,serverino,nobacsock,actimeo=30
MyUser@forassignment3:~$ ls
MyUser@forassignment3:/mnt/forassignment3$ ls
data-gm-g2ib0eeec3_1426.jpg
MyUser@forassignment3:/mnt/forassignment3$
```