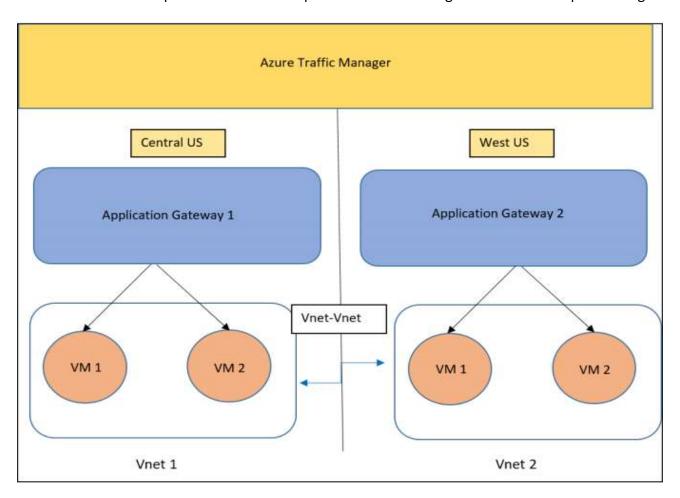
Azure Administrator Course AZ-104 Training

support@intellipaat.com - +91-7022374614 - US: 1-800-216-8930 (Toll Free)

Azure Capstone-Project COMPLETED by Nagesha KS Please check the following screenshots for each question.

You work as an Azure professional for a Corporation. You are assigned the task of implementing the below architecture for the company's website.



There are three web pages to be deployed:

- 1. The home page is the default page (VM2)
- 2. The upload page is where you can upload the files to your Azure Blob Storage (VM1)
- 3. The error page for 403 and 502 errors

Application Gateway has to be configured in the following manner:

- 1. Example.com should be pointed to the home page
- 2. Example.com/upload should be pointed to the upload page
- 3. Application Gateway's error pages should be pointed to error.html which should be hosted as a static website in Azure Containers. The error.html file is present in the GitHub repository

The term 'Example' here refers to the Traffic Manager's domain name.

The client wants you to deploy them in the Central US and the West US regions such that the traffic is distributed optimally between both regions.

Storage Account has to be configured in the following manner:

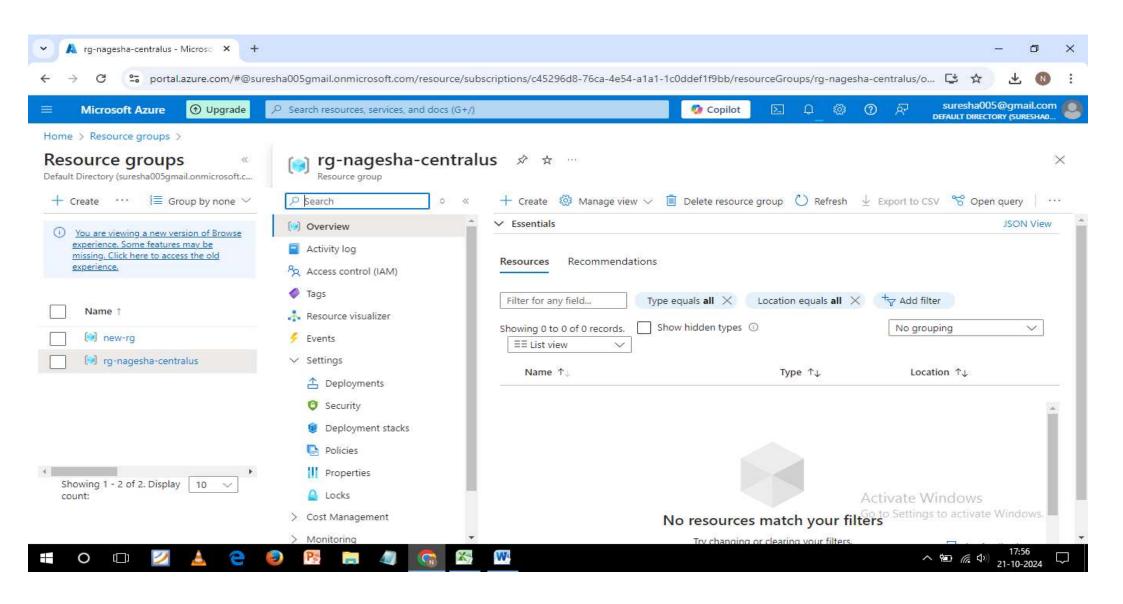
- 1. You need to host your error.html as a static website here, and then point the application gateway's 403 and 502 errors to it.
- 2. Create a container named upload, this will be used by your code to upload the files

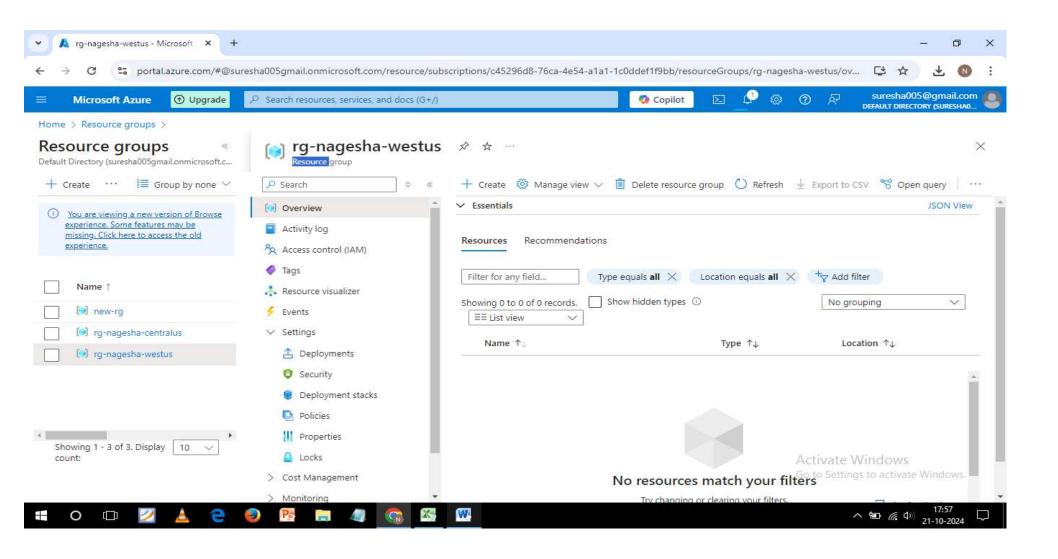
Technical specifications for the deployments are as follows:

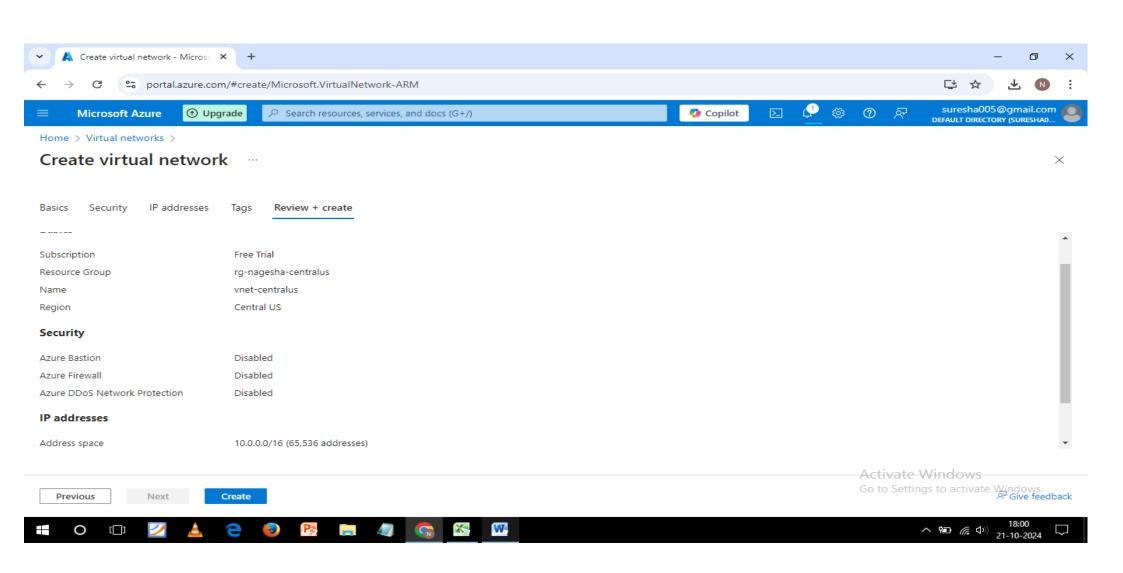
- 1. Deployments in both regions should have VMs inside VNets.
- 2. Clone the GitHub repo https://github.com/azcloudberg/azproject to all the VMs.
- 3. On VM1, please run vm1.sh this will deploy the upload page, on VM2 please run VM2.sh, this will install the home page.
- 4. For running the scripts, please run the following command inside the GitHub directory from the terminal.

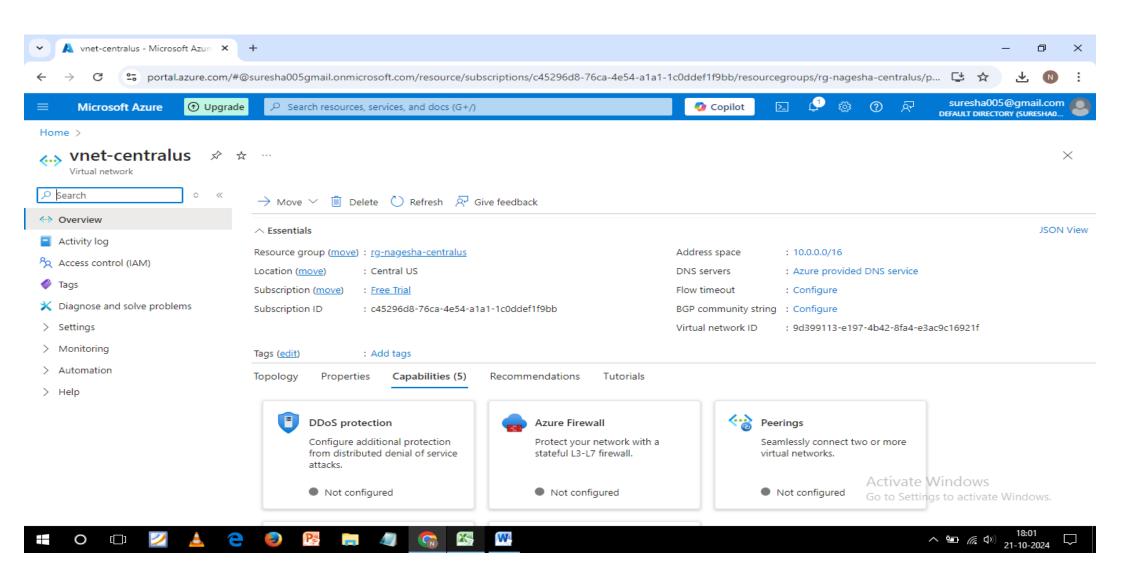
VM1: ./vm1.sh VM2: ./vm2.sh

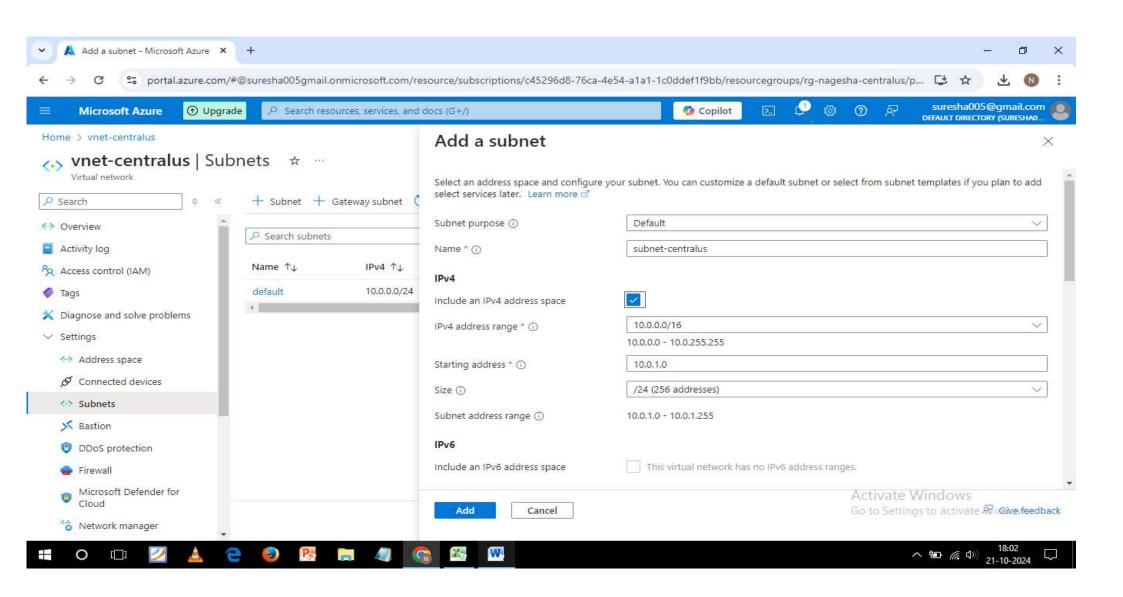
- 5. After running the scripts, please edit the config.py file on VM1, and enter the details related to your storage account where the files will be uploaded.
- 6. Once done, please run the following command: sudo python3 app.py
- 7. Both regions should be connected to each other using VNet-VNet Peering.
- 8. Finally, your Traffic Manager should be pointing to the application gateway of both the regions.

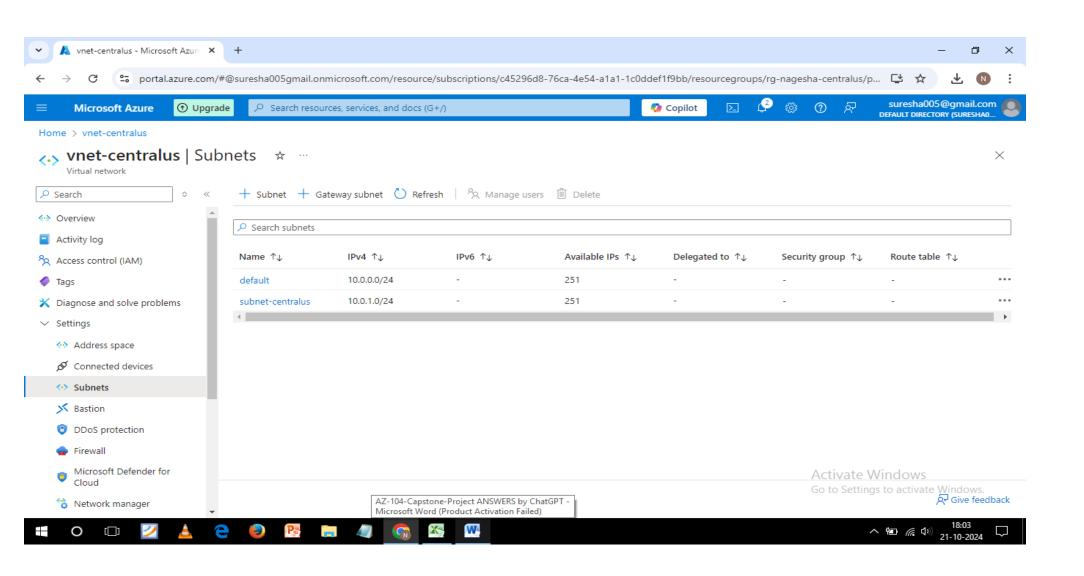


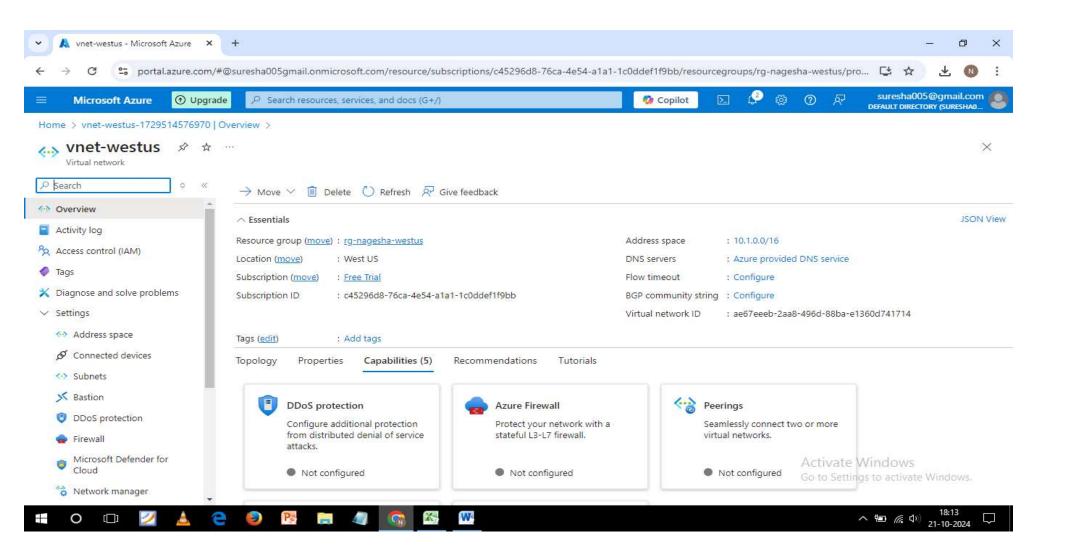


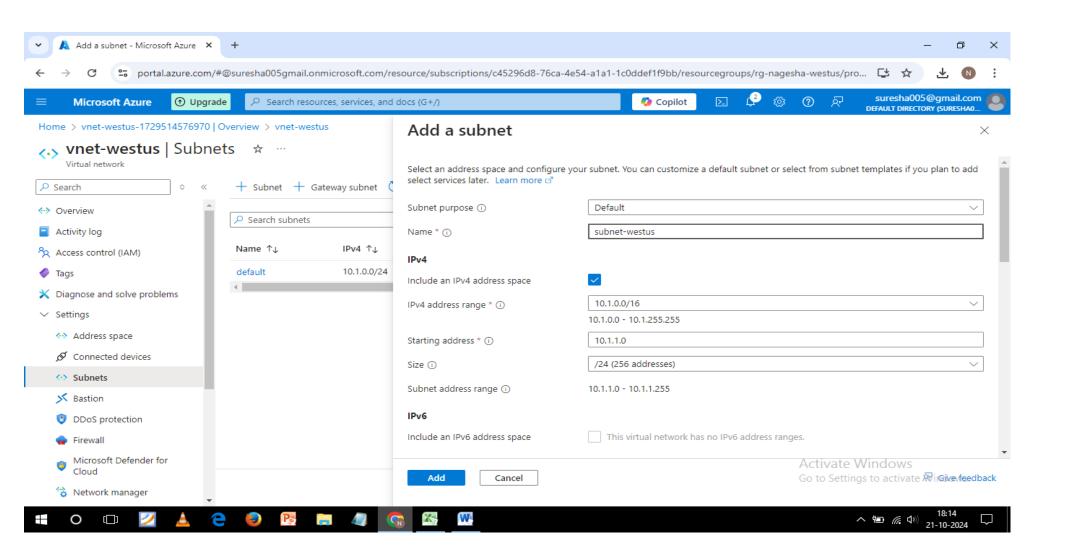


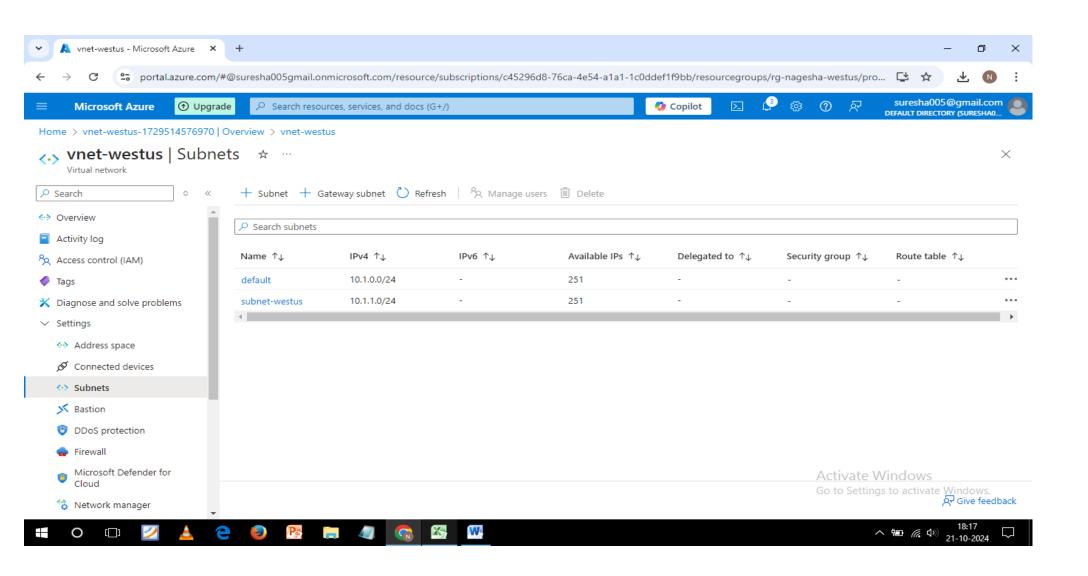


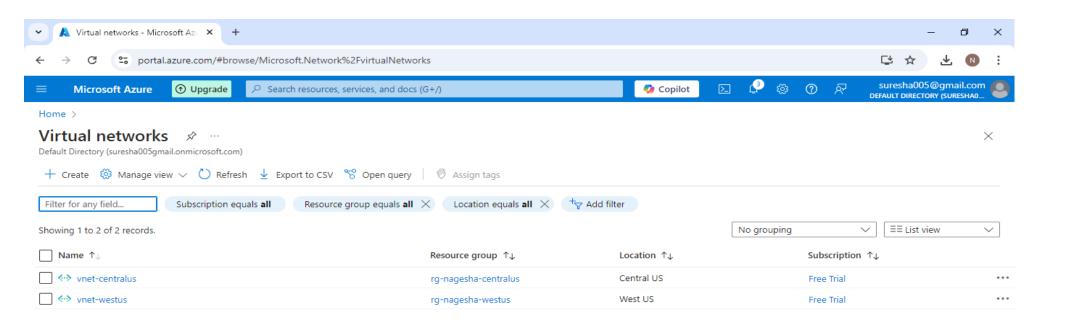












Activate Windows Go to Settings to activate Windows.

< Previous Page 1 V of 1 Next >





















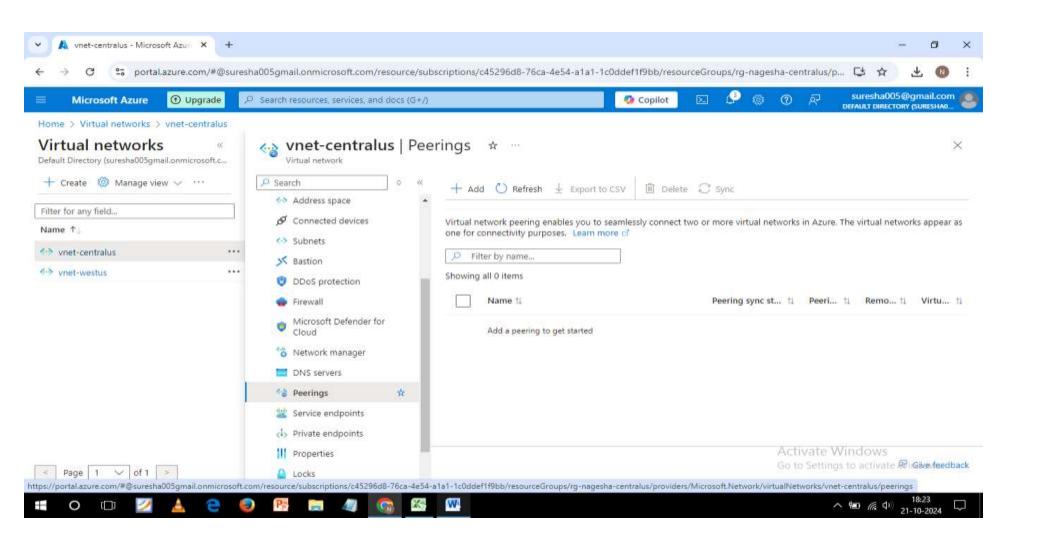


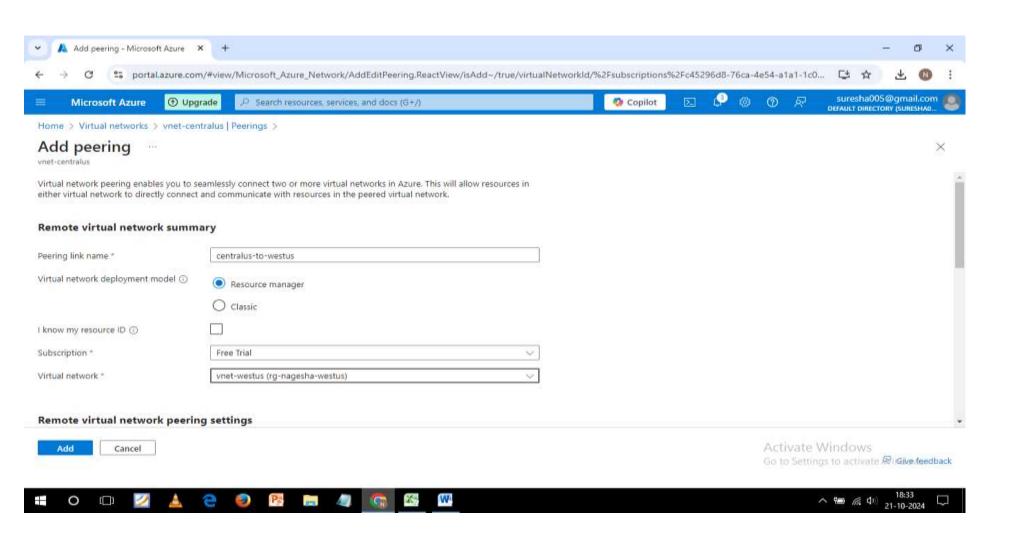


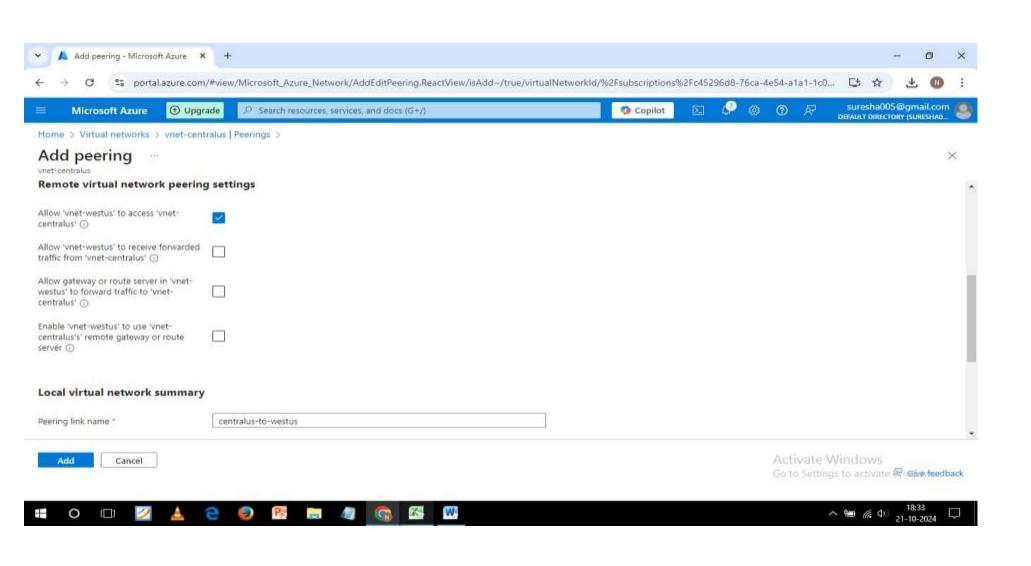


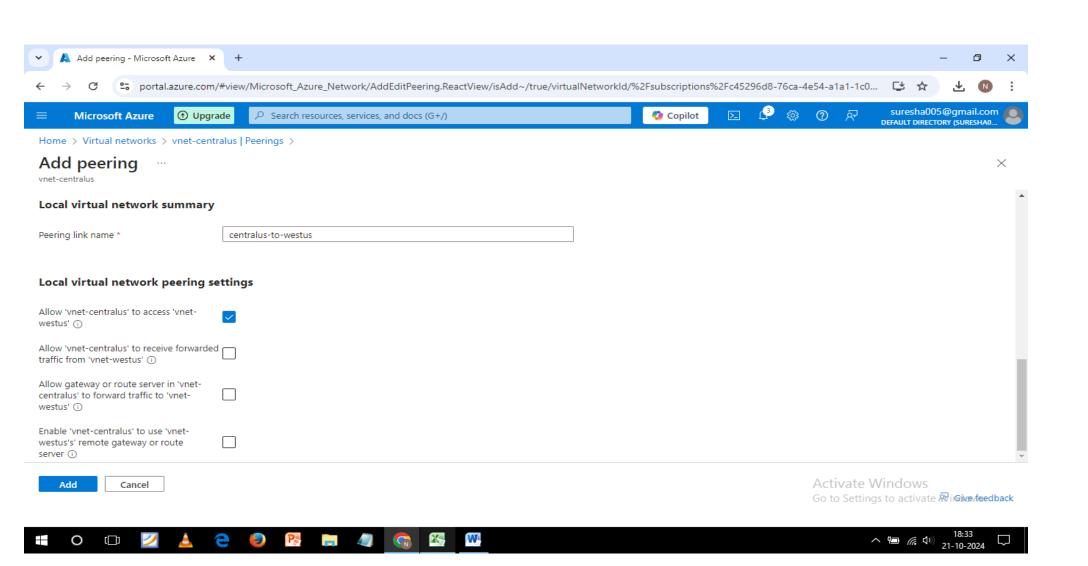


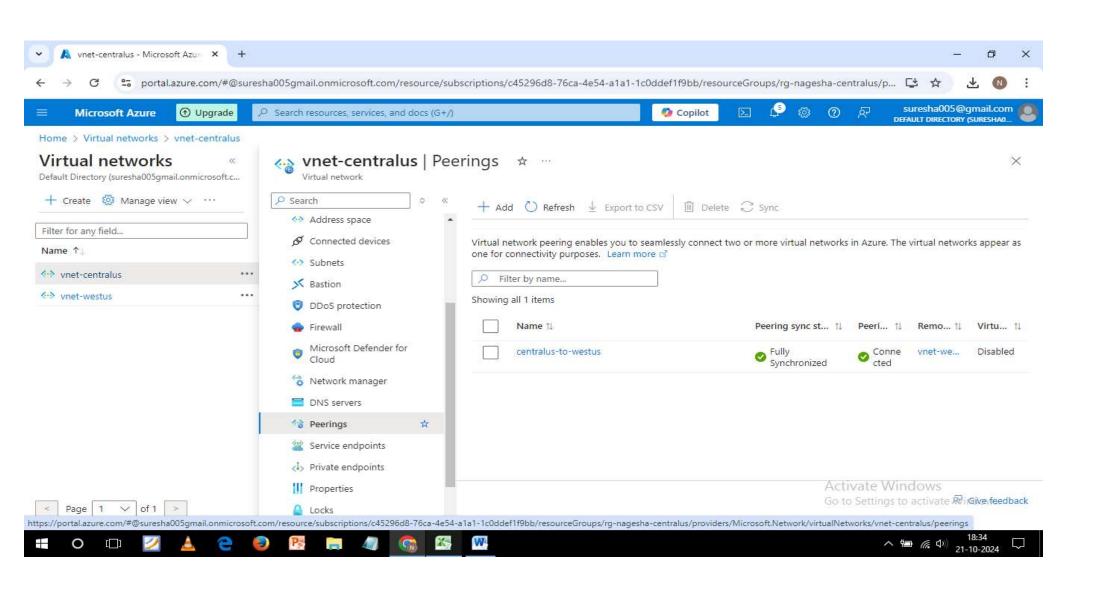


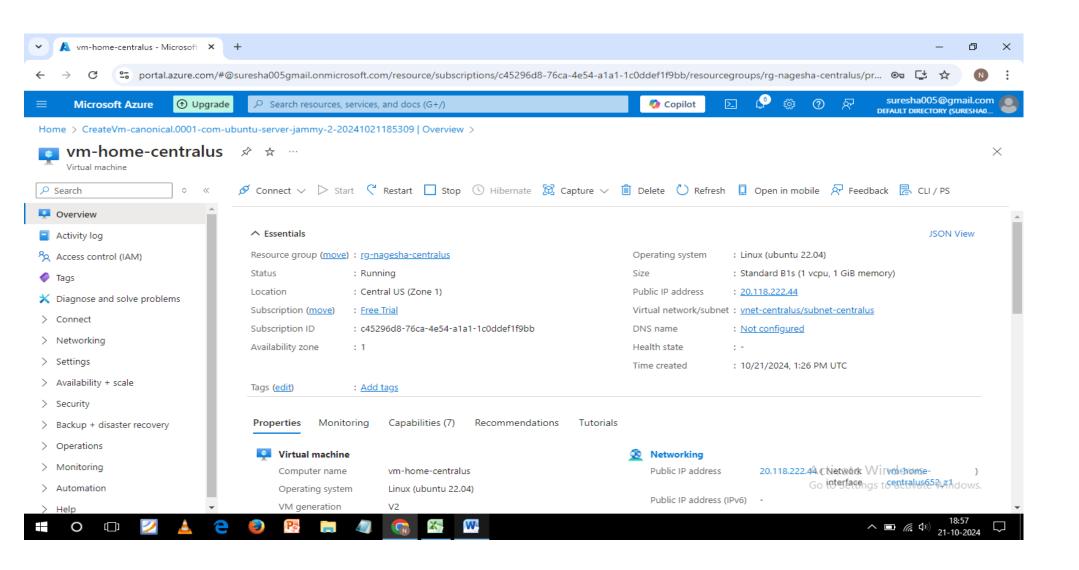


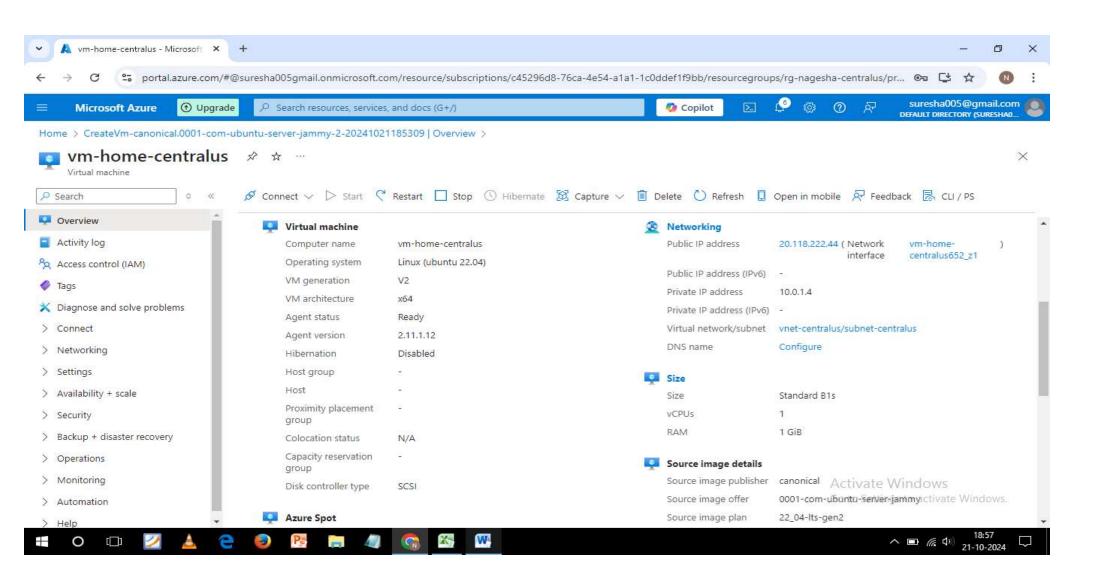


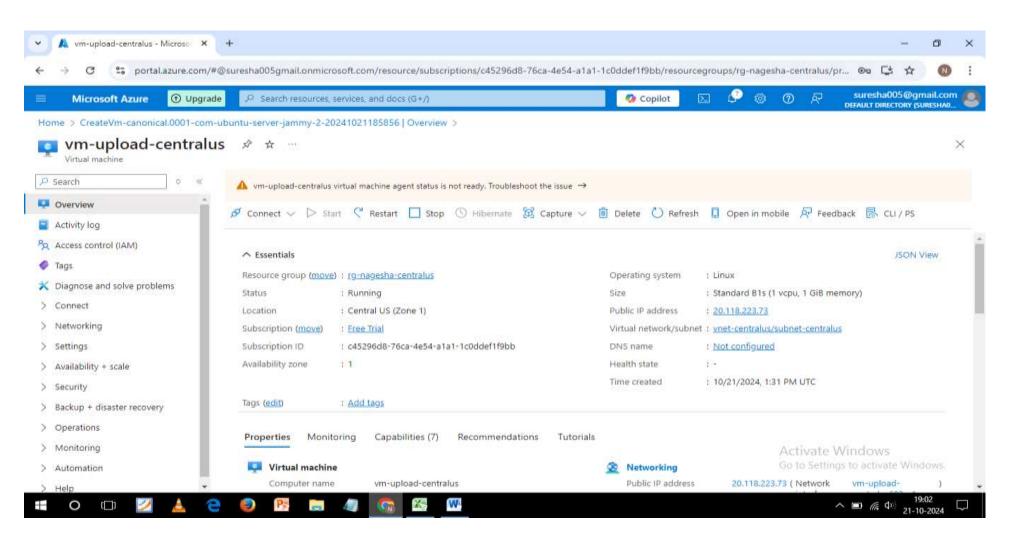


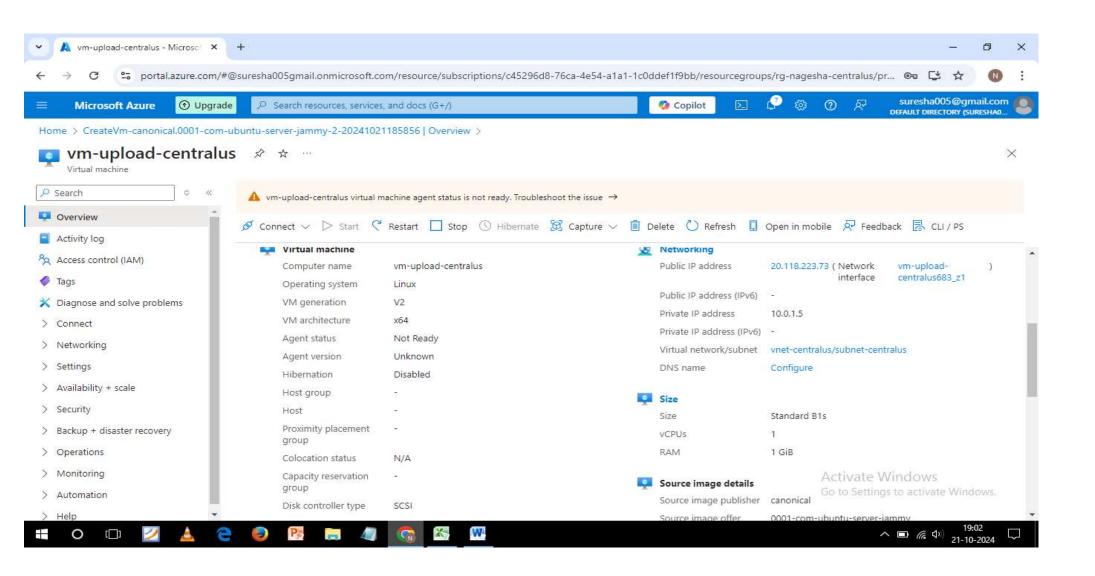


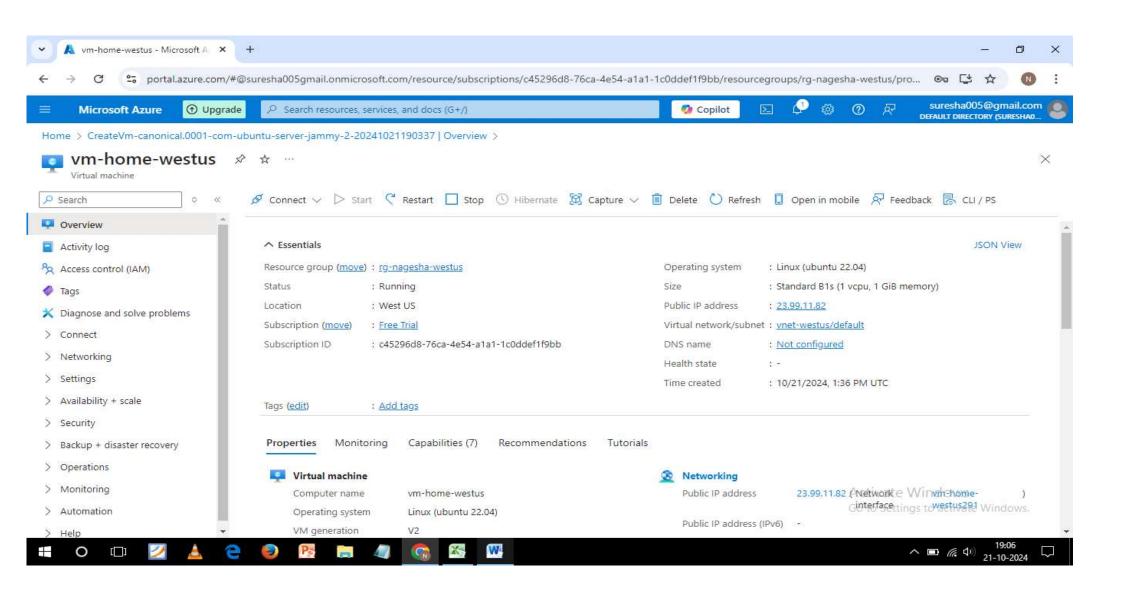


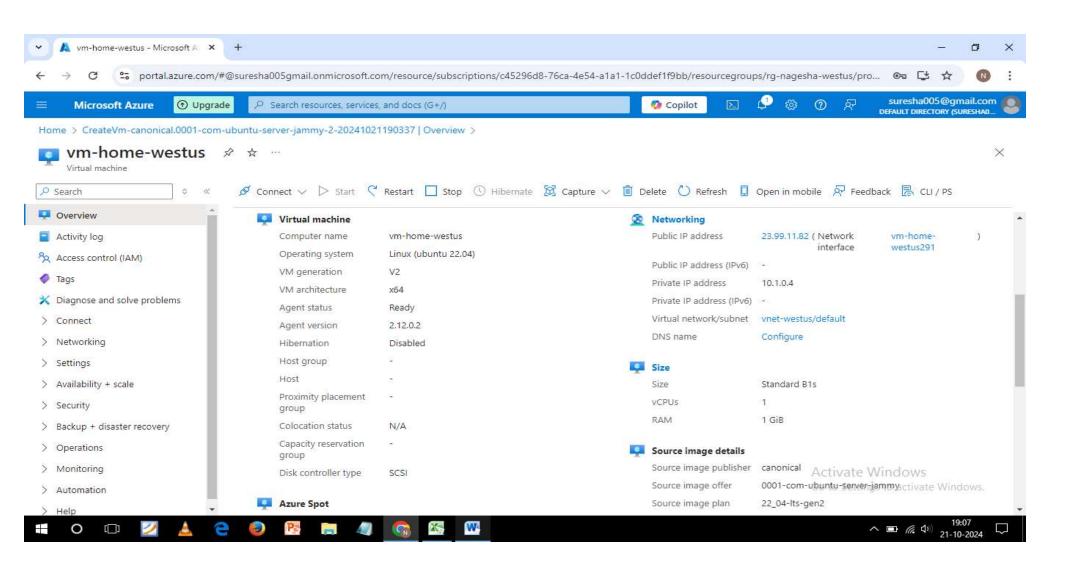


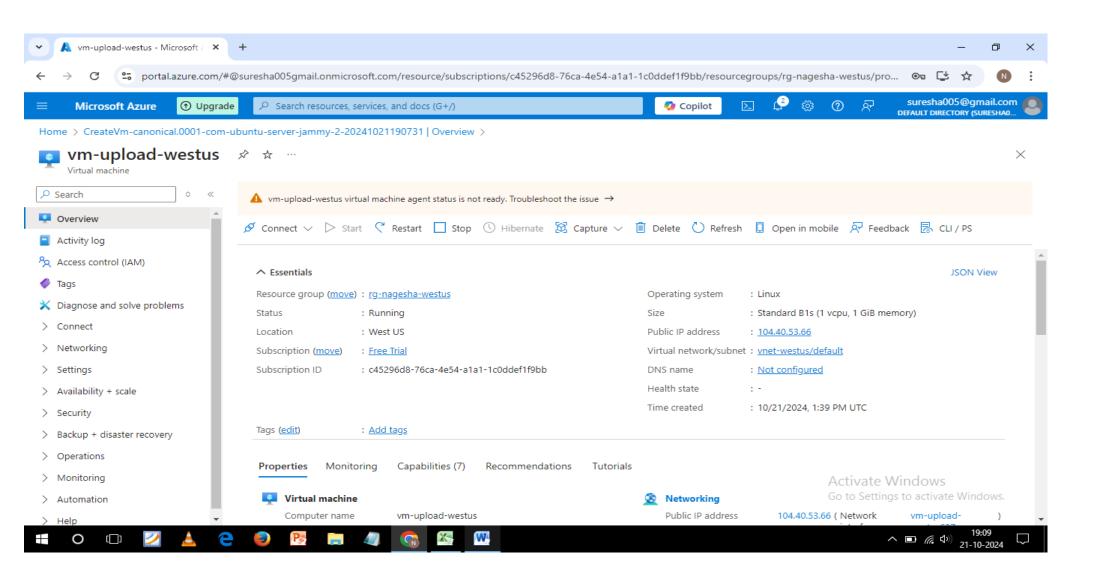


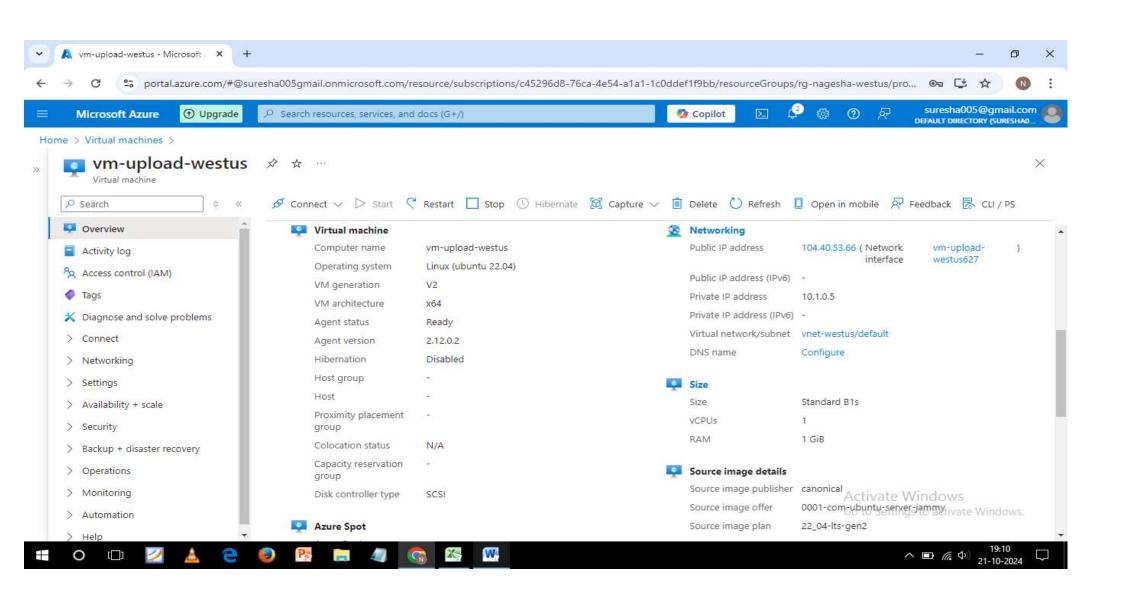


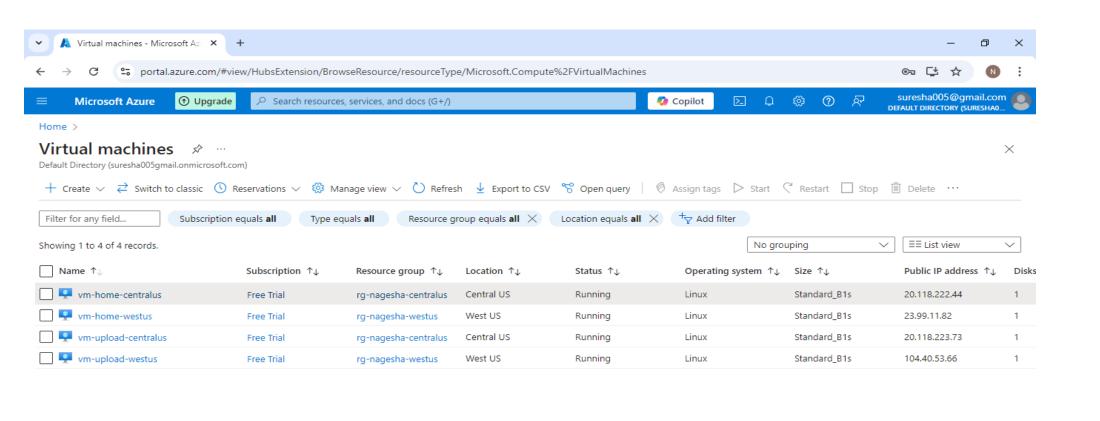




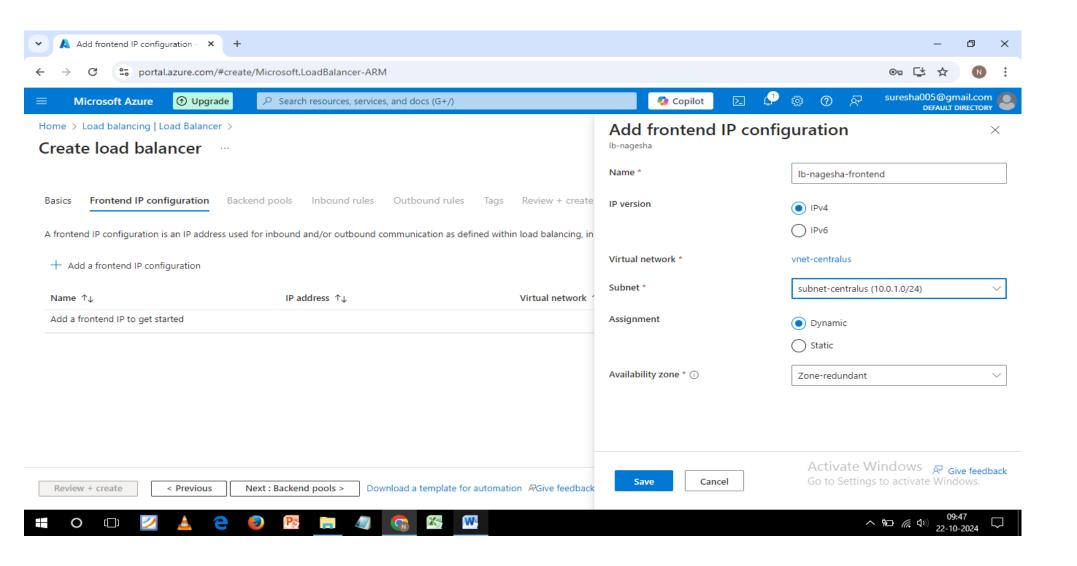


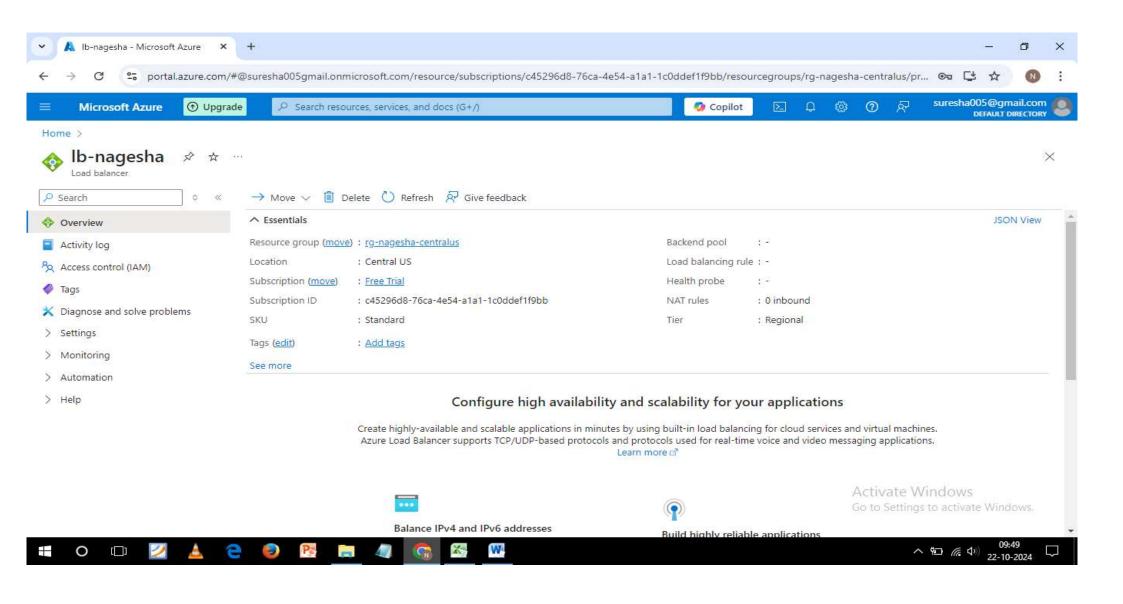


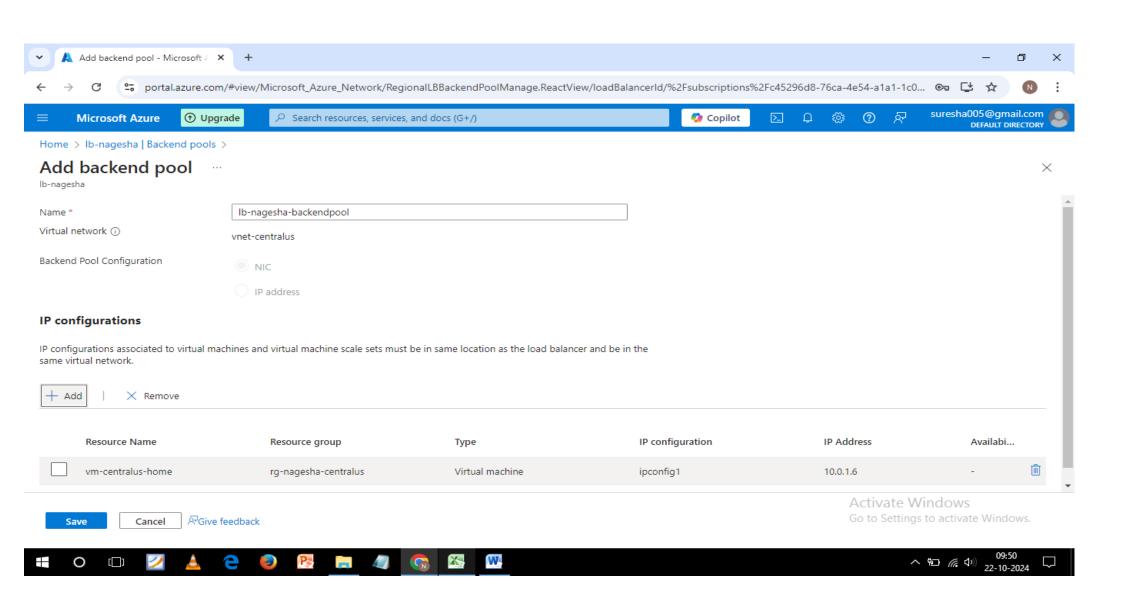


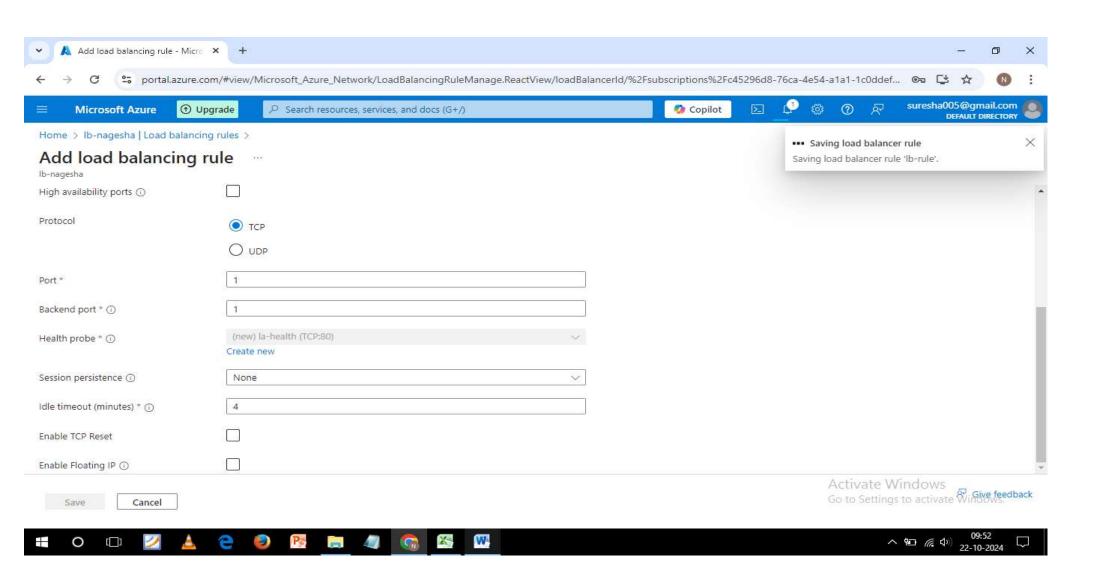


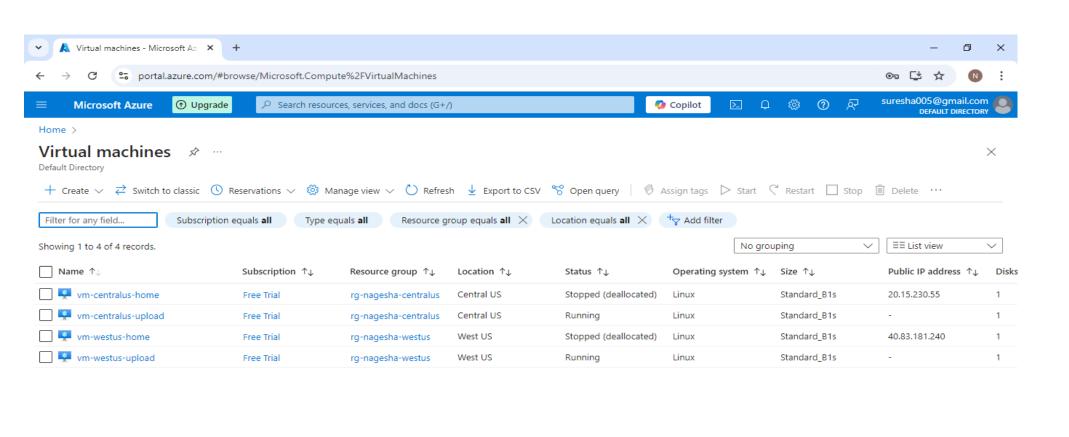




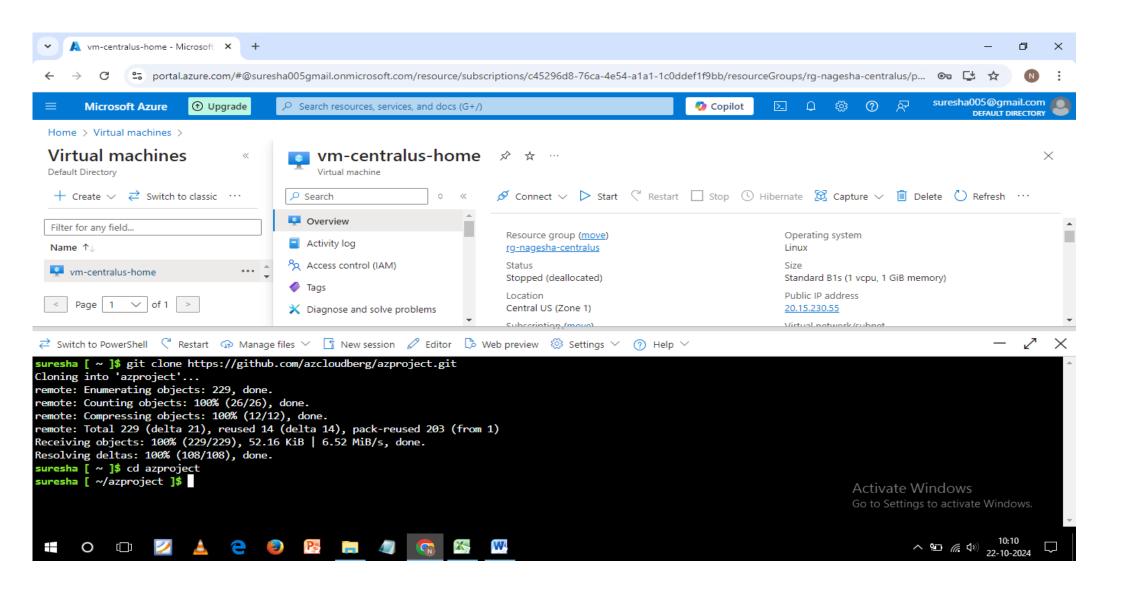


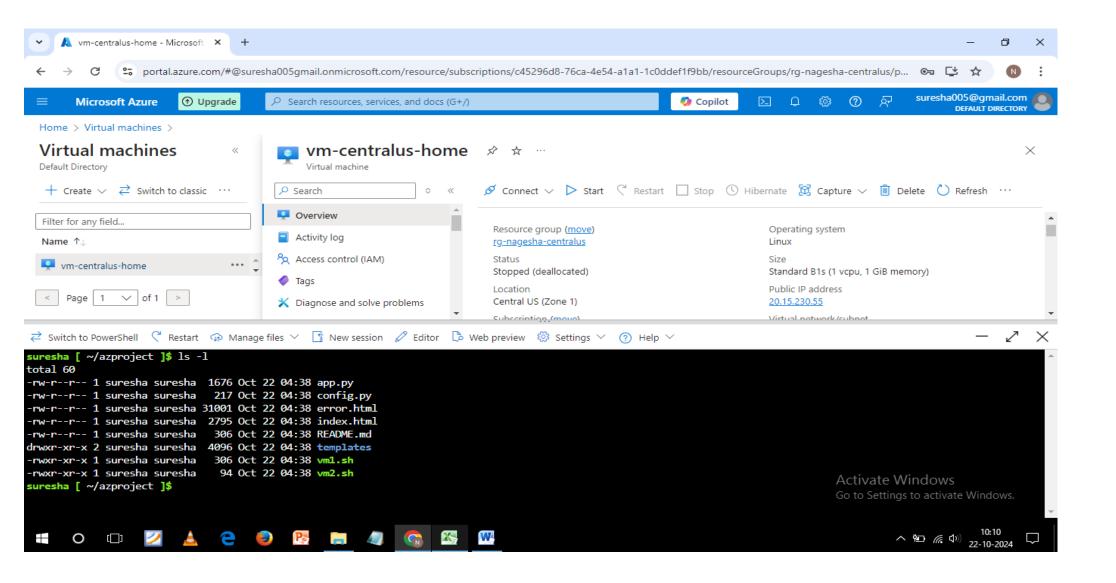


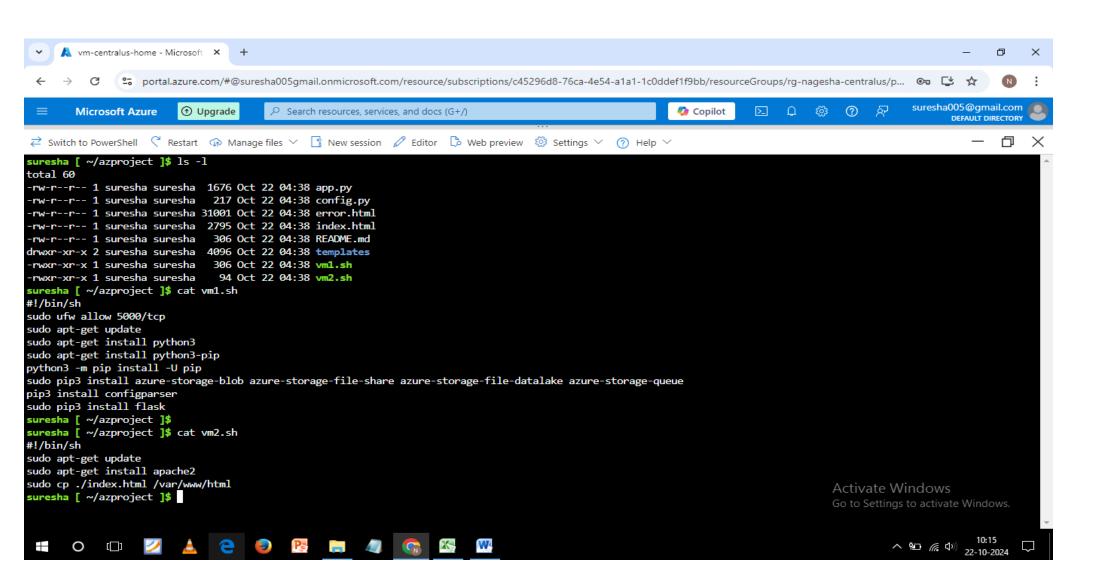


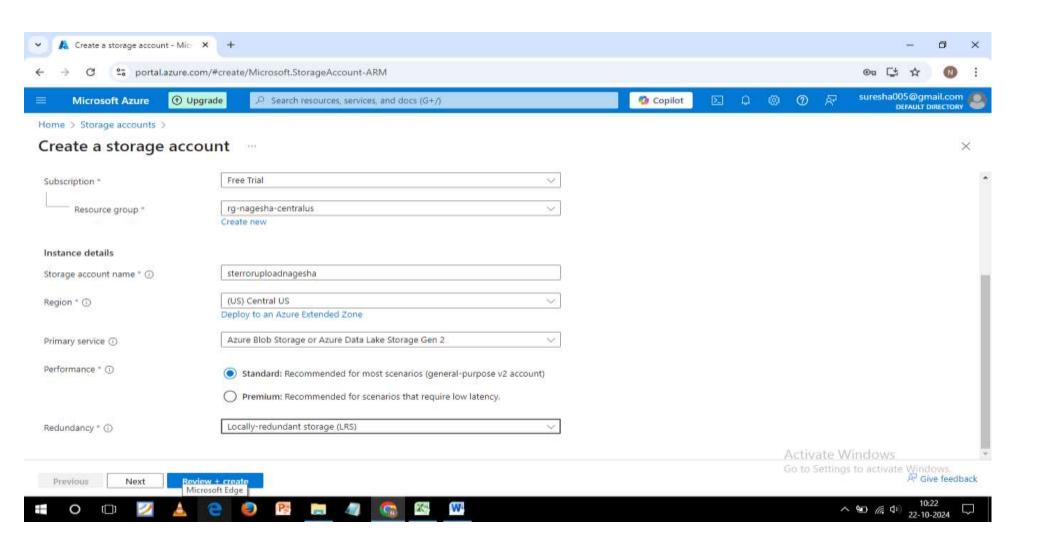


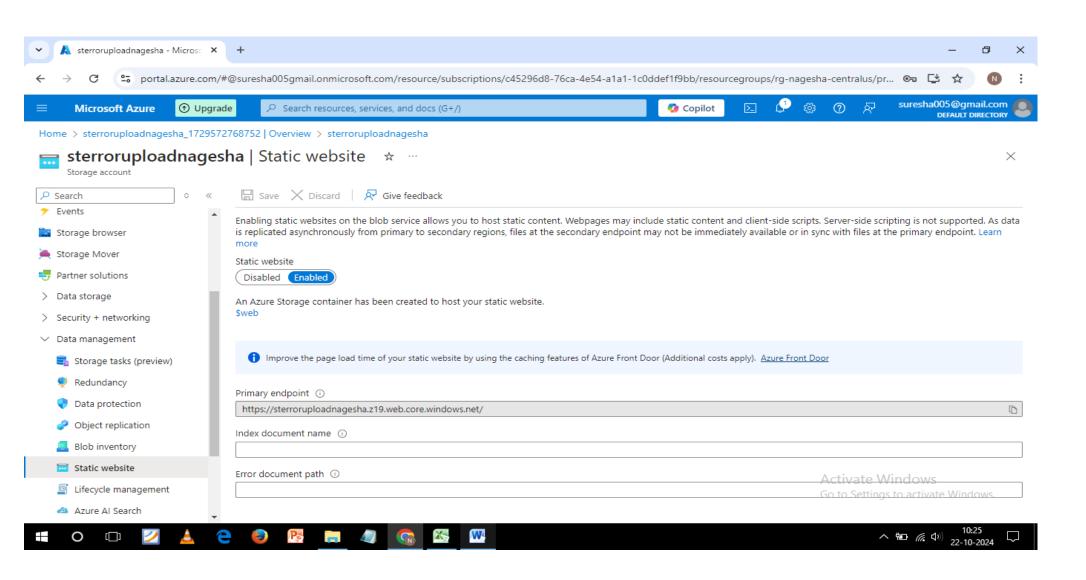


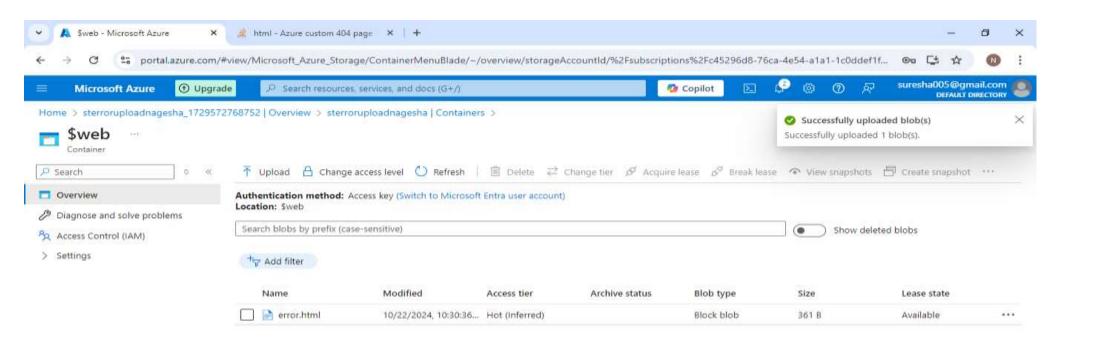






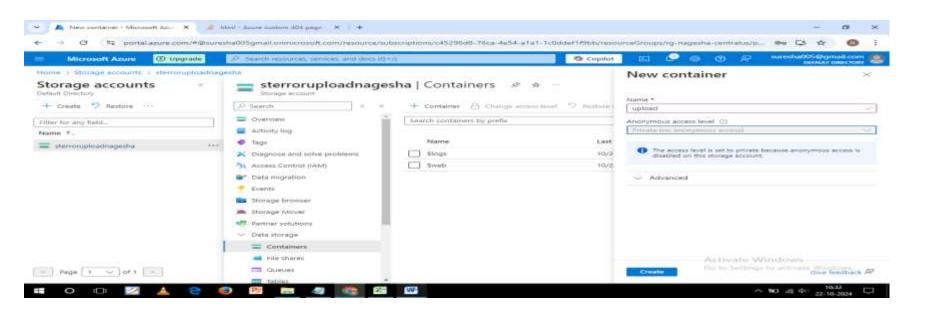


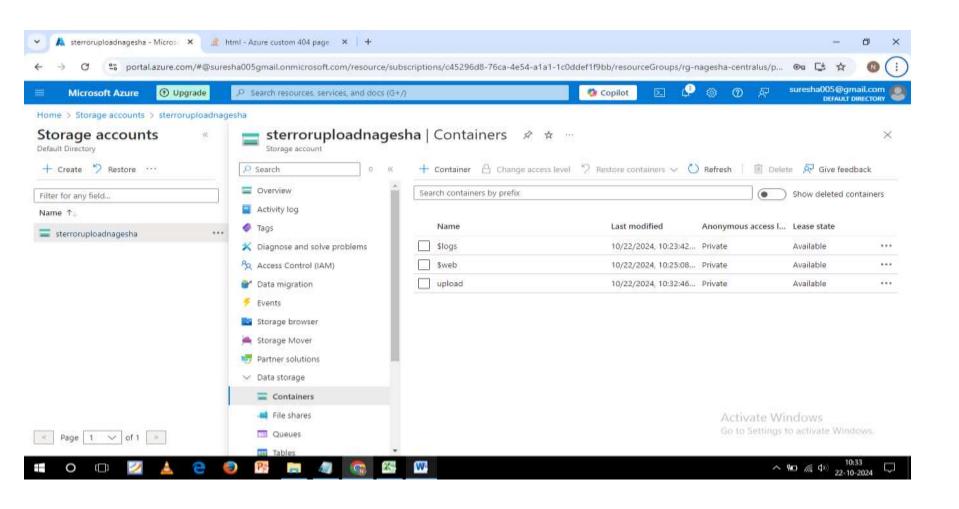


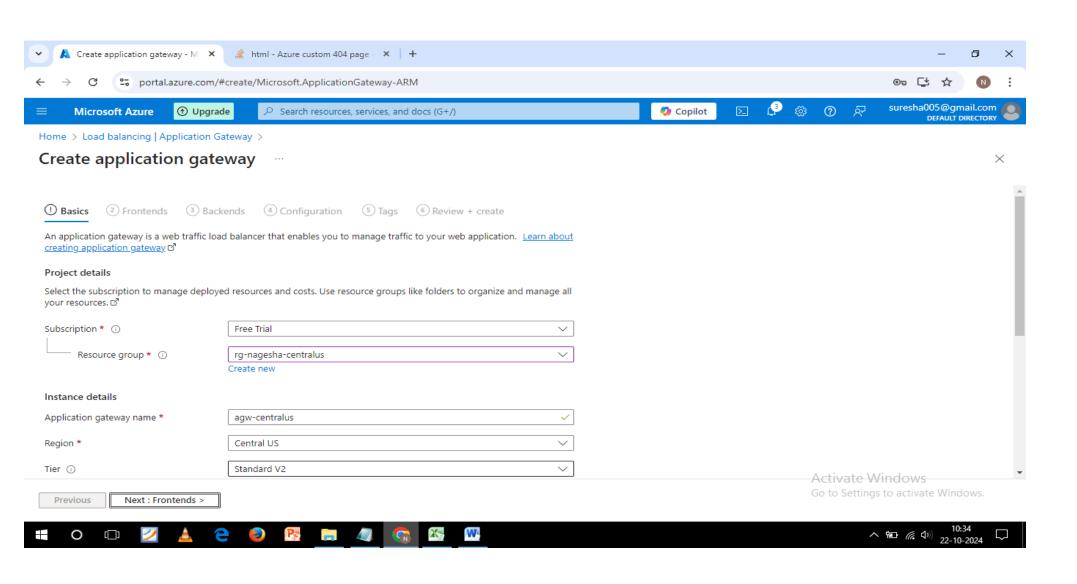


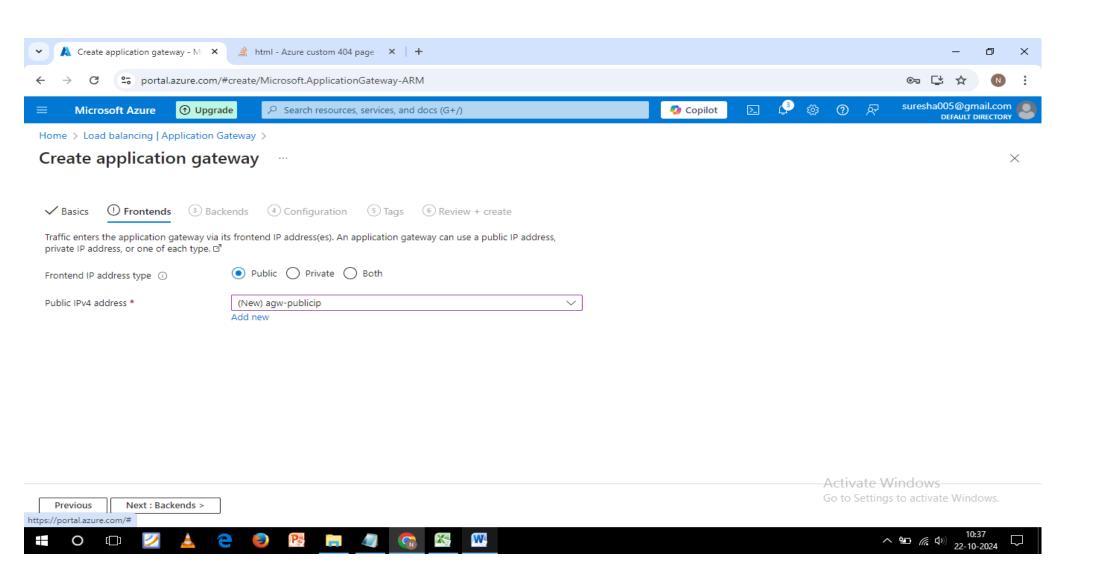
Activate Windows
Go to Settings to activate Windows.

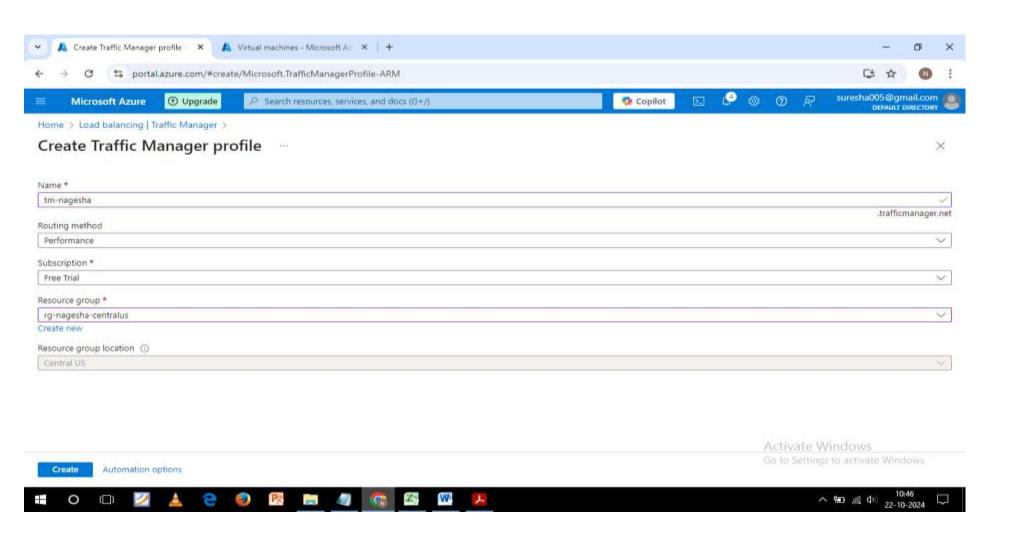


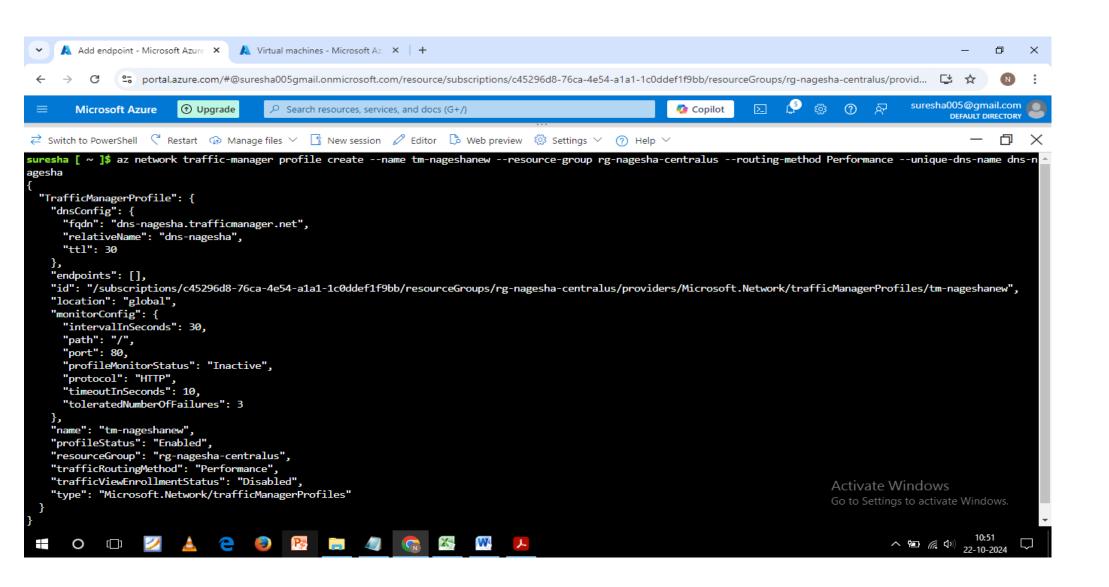


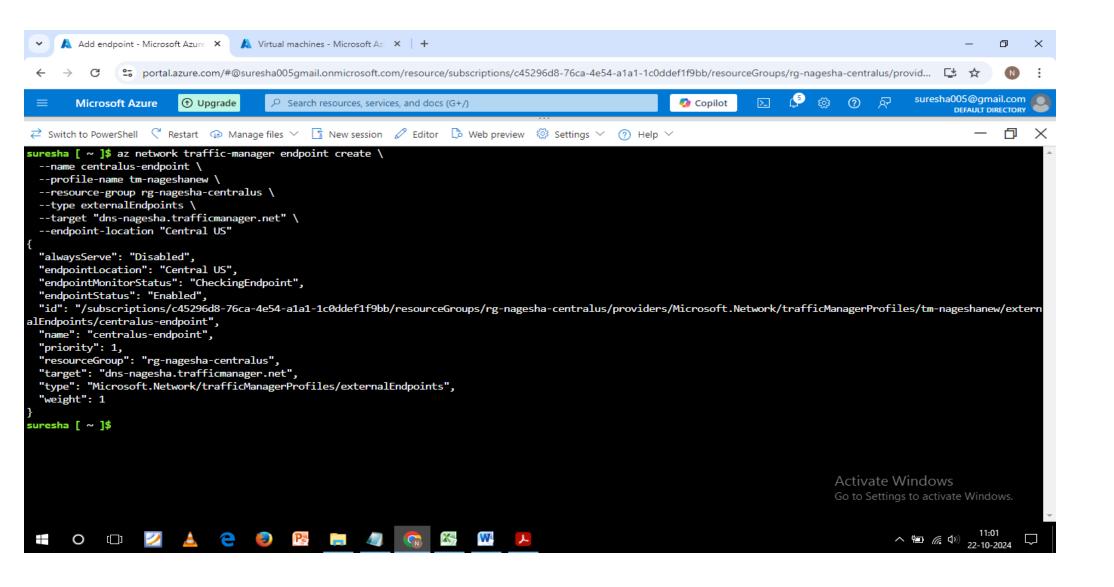


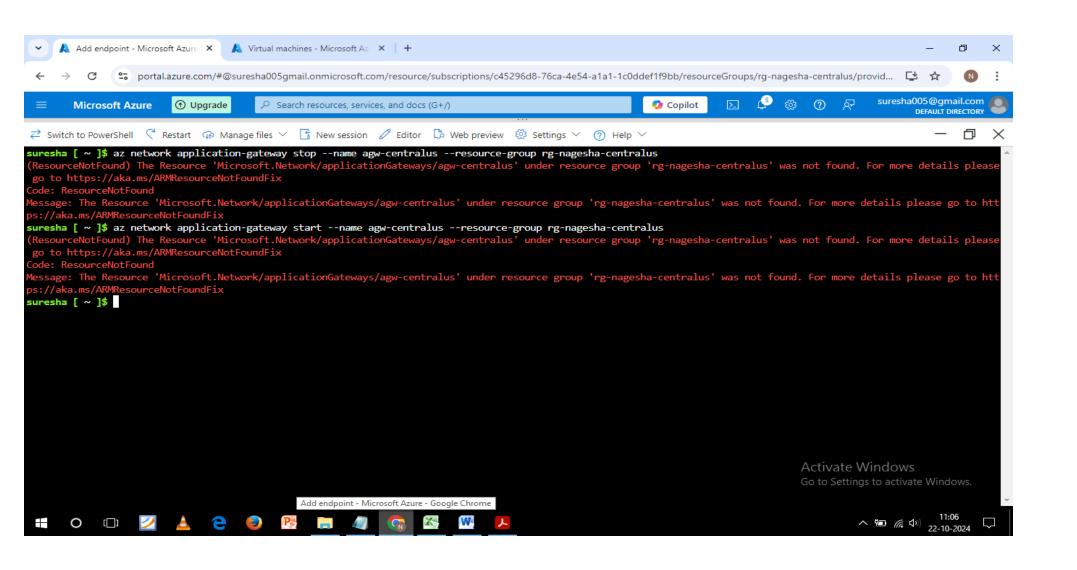












Commands

Set Up Resource Groups

rg-nagesha-centralus

rg-nagesha-westus

Go to Resource Groups > Create RG and region Central US or West US

Set Up Virtual Networks (VNets) and Subnets

Go to Virtual Networks > Create vnet-centralus and vnet-westus

Region: Select Central US / West US

Subnet Name: subnet-centralus / subnet-westus

Set Up VNet Peering

Go to vnet-westus > Peerings > Add westus-to-centralus

Virtual Network: vnet-westus

Peering Link Name (Remote VNet): westus-to-centralus

Remote Virtual Network: Select vnet-centralus.

Allow Virtual Network Access: Set this to Enabled.

Go to vnet-westus > Peerings > Add centralus-to-westus

Virtual Network: vnet-centralus

Peering Link Name (Remote VNet): centrals-to-westus

Remote Virtual Network: Select vnet-westus.

Allow Virtual Network Access: Set this to Enabled.

Create Virtual Machines (VM1 and VM2)

Central US VMs:

vm-centralus-home

vm-centralus-upload

West US VMs:

vm-westus-home

vm-westus-upload

Go to Virtual Machines > Add >

Resource Group: Choose rg-nagesha-centralus for the VMs: vm-centralus-home and vm-centralus-upload

Resource Group: Choose rg-nagesha-westus for the VMs: vm-westus-home annd vm-westus-upload

Image: Choose Ubuntu Server 20.04 LTS (Free Tier)

Size: Use Standard_B1s (Free Tier)
Authentication Type: Password

Username: user-centralus-home

Password: user-centralus-home@1234

ssh user-centralus-home@20.15.230.55

Username: user-centralus-upload

Password: user-centralus-upload@1234

ssh user-centralus-upload@20.118.223.73

Username: user-westus-home

Password: user-westus-home@1234

ssh user-westus-home@40.83.181.240

Username: user-westus-upload

Password: user-westus-upload@1234

ssh user-westus-upload@104.40.53.66

Create a Load Balancer with a Public IP

Go to Create a resource > Load Balancer lb-nagesha

For **SKU**, select **Standard** (supports both static and dynamic IPs).

Go to Frontend IP Configuration and create a new Public IP public-ip-lb-nagesha

In the Load Balancer, go to Backend Pools > Add backend-pool and Network Interface (NIC) of the existing VM and the new VM.

Go to **Load Balancing rules** under the Load Balancer > Add lb-rule and set Frontend IP as frontend-ip.

Clone the GitHub Repository and Run Scripts

git clone https://github.com/azcloudberg/azproject.git cd azproject

Run the Scripts:

On the vm-centralus-upload and vm-westus-upload VMs:

./vm1.sh

On the vm-centralus-home and vm-westus-home VMs:

./vm2.sh

Configure the Storage Account

Resource Group: Choose rg-nagesha-centralus / rg-nagesha-westus

Storage account name: sterroruploadnagesha

Region: Select Central US / West US

Performance: Standard.

Redundancy: Standard LRS (Locally Redundant Storage).

Enable Static Website Hosting:

Go to Static website under the Data management section. Click Enable.

Set the **Index document name** to error.html (or leave blank if there's no need for an index page).

Upload error.html

Go to the **\$web** container that was created automatically for static website hosting.

Click **Upload** and select the error.html file from your local system.

Create the upload Container:

Go to **Containers** under the **Data storage** section in the storage account > Upload

Set the Public access level to Private (no anonymous access) if you want to ensure security.

Configure the Application Gateway

Go to **Application Gateways** > Create agw-centralus / agw-westus

Resource Group: Select rg-nagesha-centralus for Central US or rg-nagesha-westus for West US.

Region: Select **Central US** for agw-centralus or **West US** for agw-westus.

Tier: Standard_v2

Configure Frontend > Select Public

Configure Backend Pools > Add backendpool-home

Add the IP addresses of vm-centralus-home or vm-westus-home

Set Up URL-Based Routing Rules > Add rule-home for example.com/ and rule-upload for example.com/upload.

Under the Routing rules > Add a routing rule.

Listener Name: listener-home or listener-upload.

Frontend IP: Select the public **Protocol**: HTTP or HTTPS

Port: 80 for HTTP or 443 for HTTPS.

Backend Target > backendpool-home or backendpool-upload

Configure Traffic Manager

Go to Traffic Manager profiles >

Resource Group: Select rg-nagesha-centralus (as Traffic Manager is a global service, it only needs to be created in one region).

Name: tm-nagesha.

Routing Method: **Performance** (to ensure users are directed to the region with the lowest latency).

Unique DNS Name: DNS-nagesha.

Add Endpoints:centralus-endpoint.

Under Settings, go to Endpoints > Add

For Endpoint type, select Azure endpoint.

Target resource type: Choose Public IP address.

Target resource: Select the public IP associated with agw-centralus.

Verify Traffic Routing

az network application-gateway stop --name agw-centralus --resource-group rg-nagesha-centralus az network application-gateway start --name agw-westus --resource-group rg-nagesha-westus