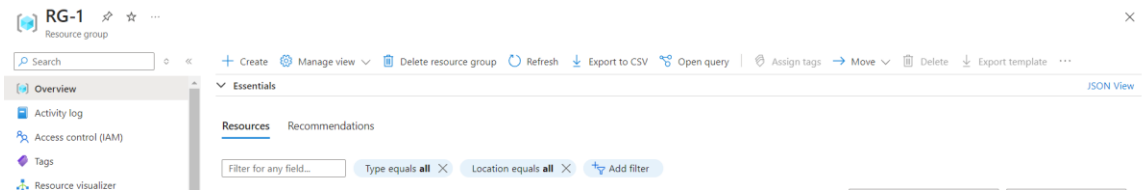
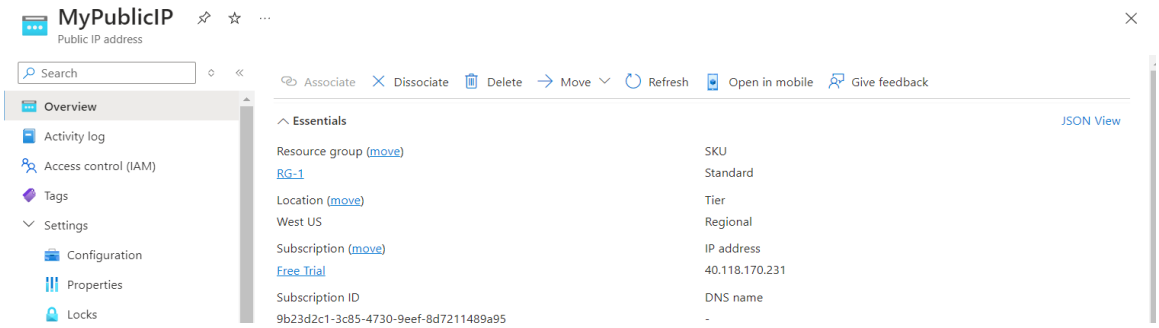
Step 1: Create a Resource Group

1. Go to the Azure Portal.
2. Search for and select "Resource groups".
3. Click on "Create".
4. Fill in the details:
    - **Resource group name**: RG-1
    - **Region**: Select "West US"
5. Click "Review + Create" and then "Create".



Step 2: Create a Public IP Address for the Load Balancer

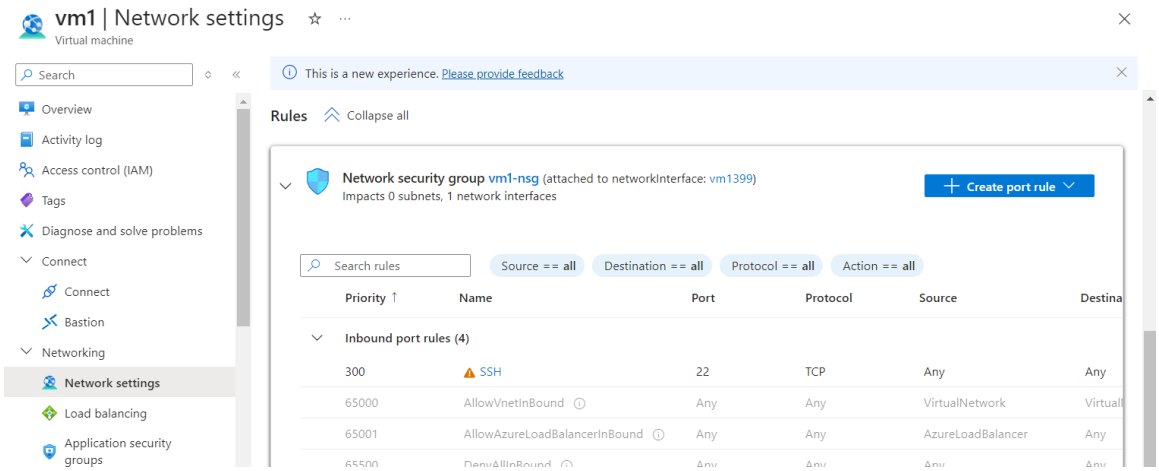
1. Go to the Azure Portal.
2. Search for and select "Public IP addresses".
3. Click on "Create".
4. Fill in the details:
    - **Name**: MyPublicIP
    - **SKU**: Standard
5. Click "Review + Create" and then "Create".



Step 3: Deploy VM1

1. Go to the Azure Portal.
2. Search for and select "Virtual machines".
3. Click on "Add" and select "Virtual machine".
4. Fill in the details:
    - **VM name**: VM1
    - **Region**: RG-1
    - **Image**: Ubuntu LTS
    - **Admin username**: azureuser
    - **Authentication type**: SSH public key
5. Click on "Review + Create" and then "Create".
6. After VM1 is created, navigate to the "VM1" blade, select "Run command", and then "RunShellScript". Enter the command to install Apache2:

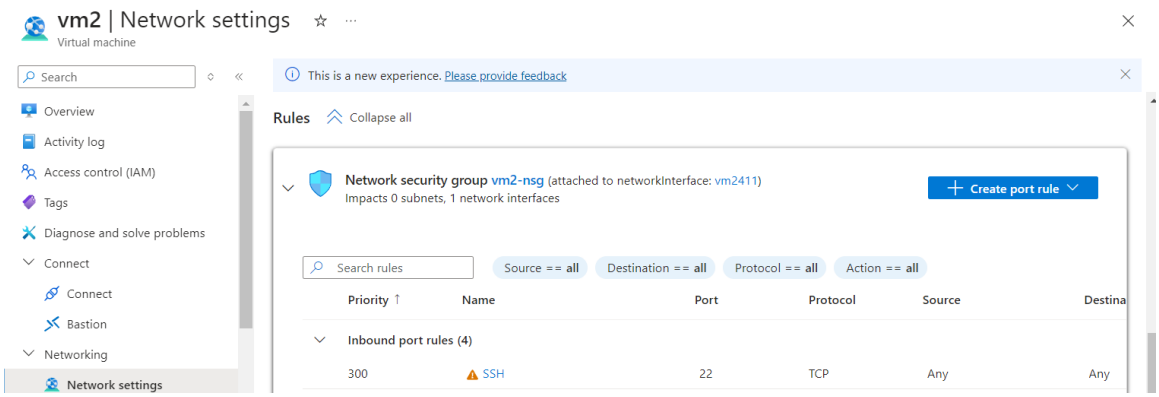
    sudo apt update && sudo apt install -y apache2



Step 4: Deploy VM2

1. Go to the Azure Portal.
2. Search for and select "Virtual machines".
3. Click on "Add" and select "Virtual machine".
4. Fill in the details:
    - **VM name**: VM2
    - **Region**: RG-1
    - **Image**: Ubuntu LTS
    - **Admin username**: azureuser
    - **Authentication type**: SSH public key
5. Click on "Review + Create" and then "Create".
6. After VM2 is created, navigate to the "VM2" blade, select "Run command", and then "RunShellScript". Enter the command to install Apache2:

sudo apt update && sudo apt install -y apache2



We do not require to allow port 80 in NSG because we are using App Gateway. It will not be accessible directly.

Step 5: Update index.html on VM1

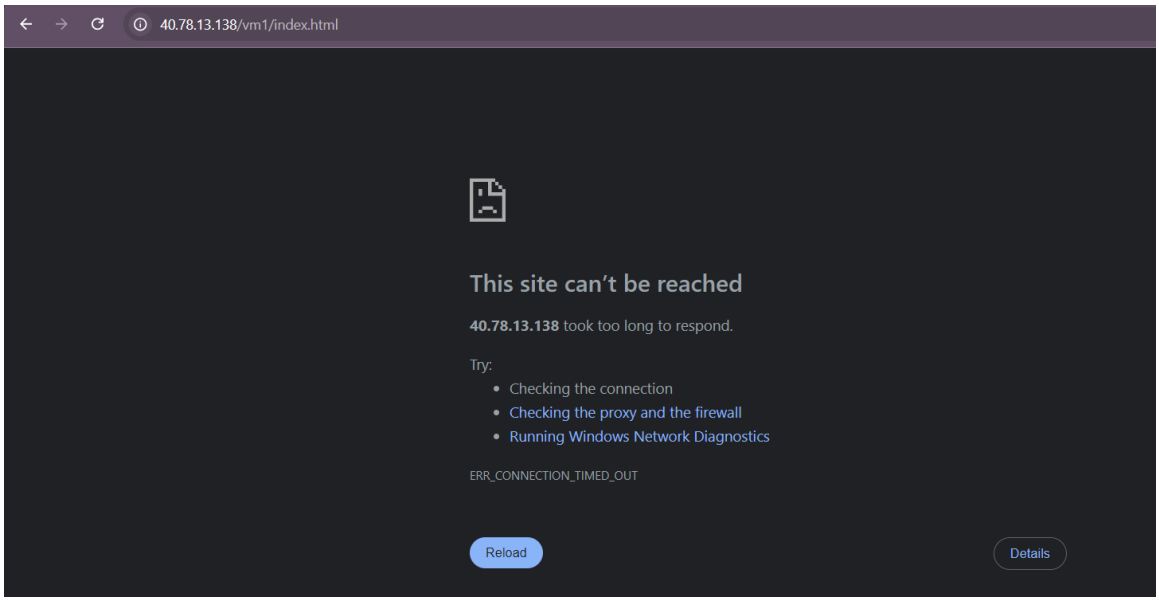
1. SSH into VM1:

    ssh azureuser@<VM1_Public_IP>

2. Change the index.html file:

echo "This is VM1" | sudo tee /var/www/html/vm1/index.html

```
root@Linux-VM:/home/azureuser# echo "This is VM1" | sudo tee /var/www/html/index.html
This is VM1
root@Linux-VM:/home/azureuser# exit
```



Step 6: Update index.html on VM2

Using Azure CLI:

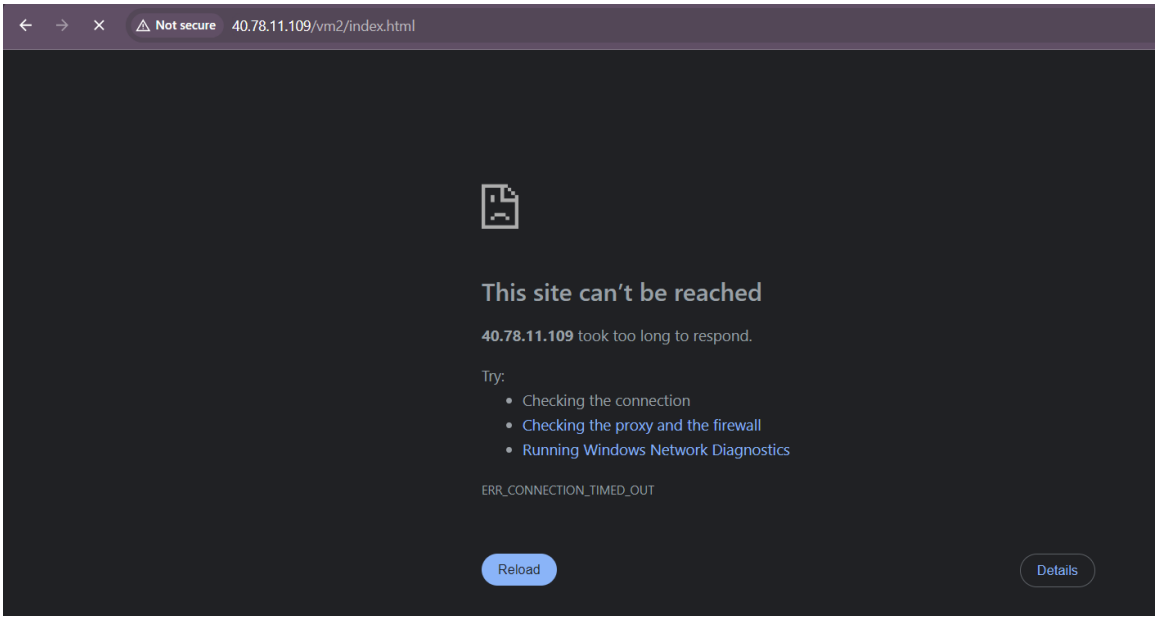
1. SSH into VM2:

ssh azureuser@<VM2_Public_IP>

2. Change the index.html file:

echo "This is VM2" | sudo tee /var/www/html/vm2/index.html

```
azureuser@vm2:~$ sudo su
root@vm2:/home/azureuser# echo "This is VM2" | sudo tee /var/www/html/index.html
tee: /var/www/html/index.html: No such file or directory
This is VM2
```



Step 7: Create an Application Gateway

1. In the Azure Portal, search for **Application Gateway** in the search bar and click **Create**.
2. Select your **Subscription** and an existing **Resource Group** (or create a new one).
3. In the **Instance Details** section:
    - Provide the **Name** for the Application Gateway (AppGateway).
    - Select **Region** where both your VMs are located.
    - Choose **Tier** as **Standard V2** depending on your needs.
4. In the **Virtual Network** section:
    - Select the **VNet** that your VMs are connected to.
    - Create a **Subnet** if not already available for the Application Gateway.
5. In the **Frontend IP** section:
    - Choose **Public** or **Private IP** based on your application.
    - Create a new **Public IP** if needed.
6. Click **Review + Create** and complete the deployment process.

Step 3: Configure Backend Pools

1. Once the Application Gateway is deployed, go to the resource and select **Backend pools** in the left menu.
2. Create two backend pools:
    - **backendpool**: Add **VM1** as a target.
    - **backendpool1**: Add **VM2** as a target.

Step 4: Create HTTP Settings

1. In the Application Gateway settings, navigate to **HTTP settings**.
2. Click **+ Add** and create HTTP settings:
    - Name: httpsetting
    - Protocol: **HTTP**
    - Port: **80**
3. Save both settings.

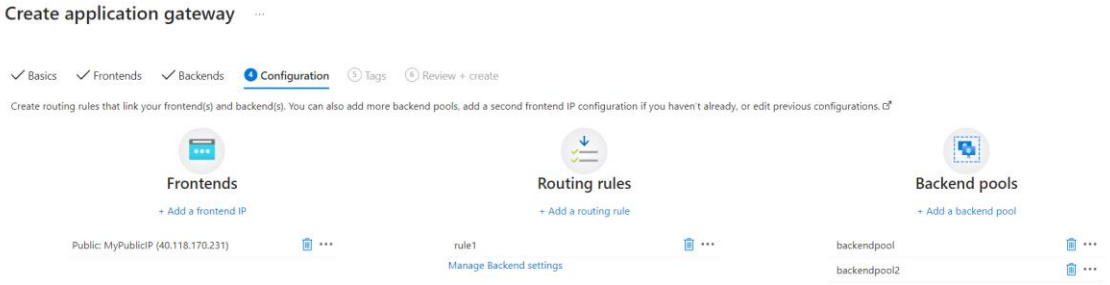
Step 5: Set Up Listeners

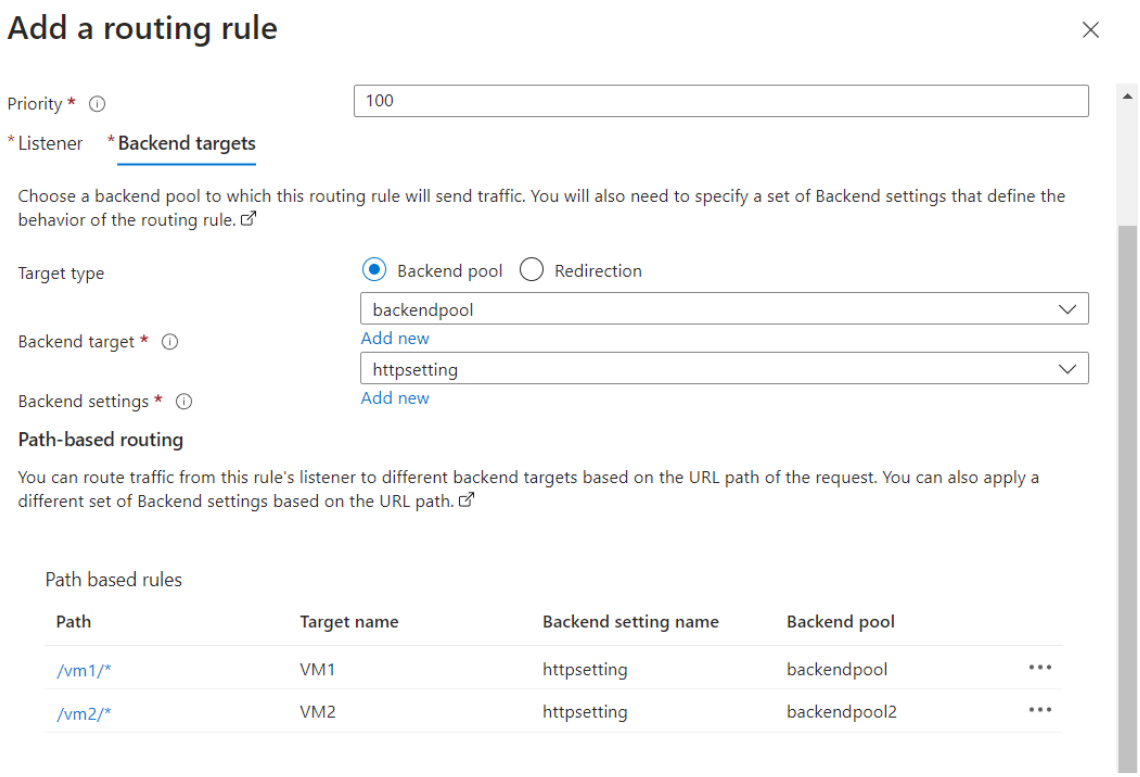
1. In the **Listeners** section of the Application Gateway, create a new listener:
    - **Name**: HTTPListener
    - **Frontend IP**: Select the **Public IP** created in Step 2.
    - **Port**: **8080**
    - **Protocol**: **HTTP**
2. Save the listener configuration.

Step 6: Set Up Path-Based Routing Rules

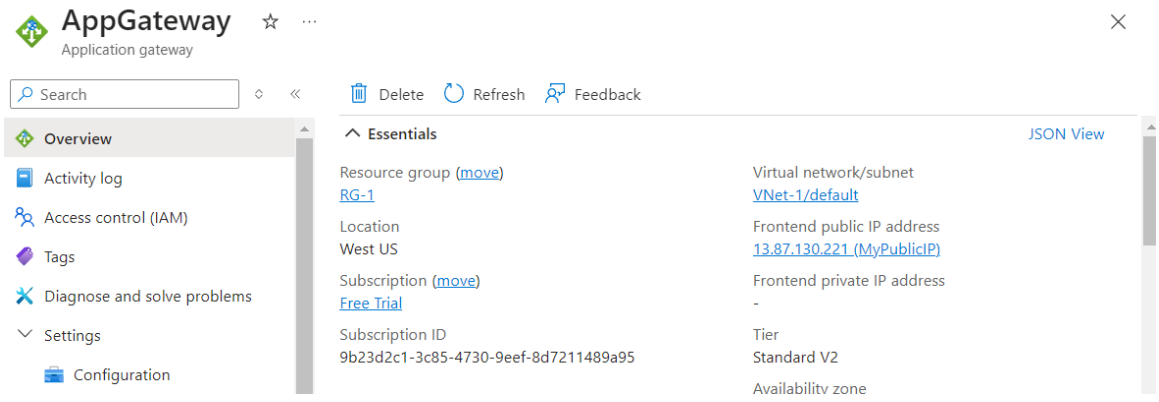
1. In the **Rules** section, click **+ Add Rule**.
2. Set up a rule with **path-based routing**:
    - **Name**: rule1
    - **Listener**: Choose the **HTTPListener**
3. In the **Routing rules** section:
    - Under **Paths**, add the following rules:

- Path /vm1/*: Select **backendpool** and **httpsetting** as the target.
- Path /vm2/*: Select **backendpool1** and **httpsetting** as the target.





4. Save the rule.



This is VM2

This is VM1