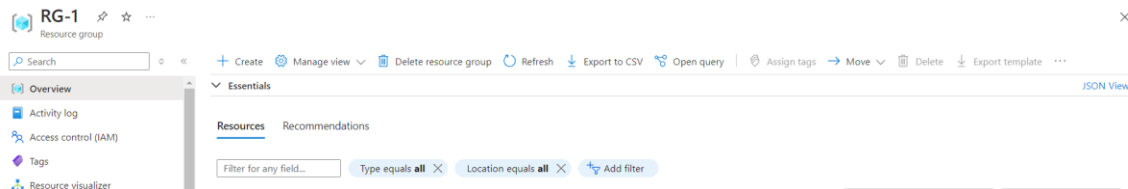


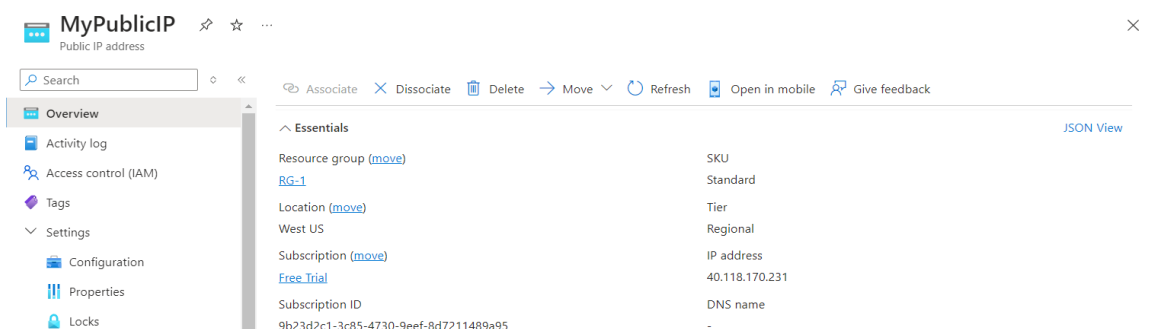
## Step 1: Create a Resource Group

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

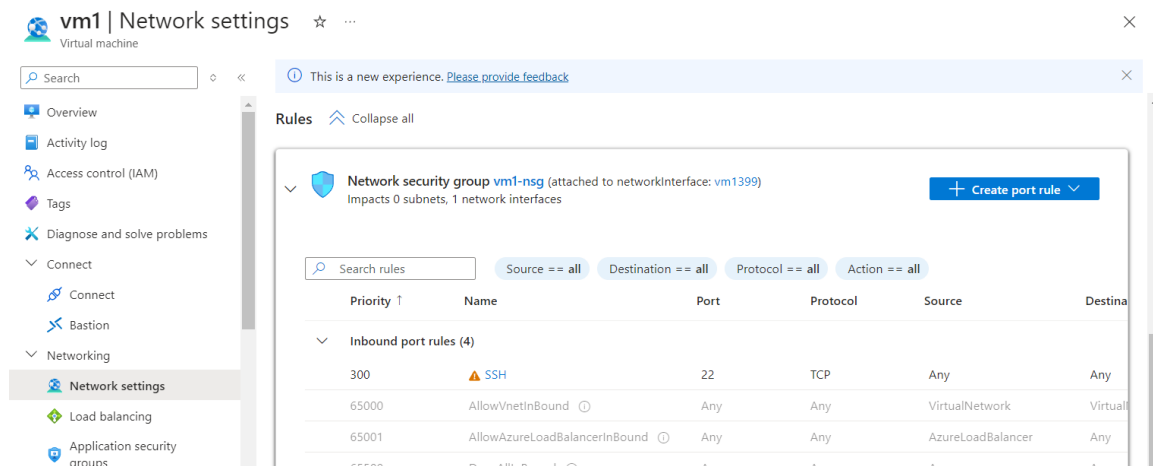
1. Go to the Azure Portal.
2. Search for and select "Public IP addresses".
3. Click on "Create".
4. Fill in the details:
  - **Name:** MyPublicIP
  - **SKU:** Standard
5. Click "Review + Create" and then "Create".



### 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:

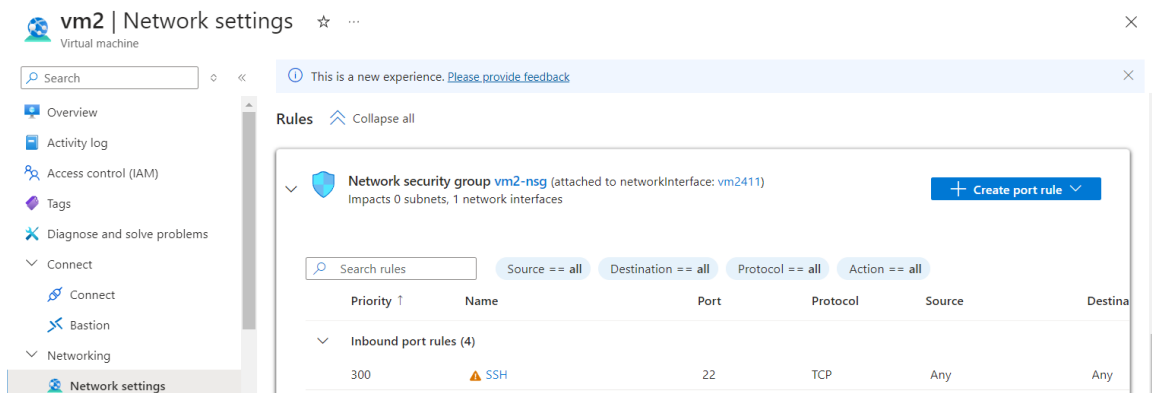
**sudo apt update && sudo apt install -y apache2**



### 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**



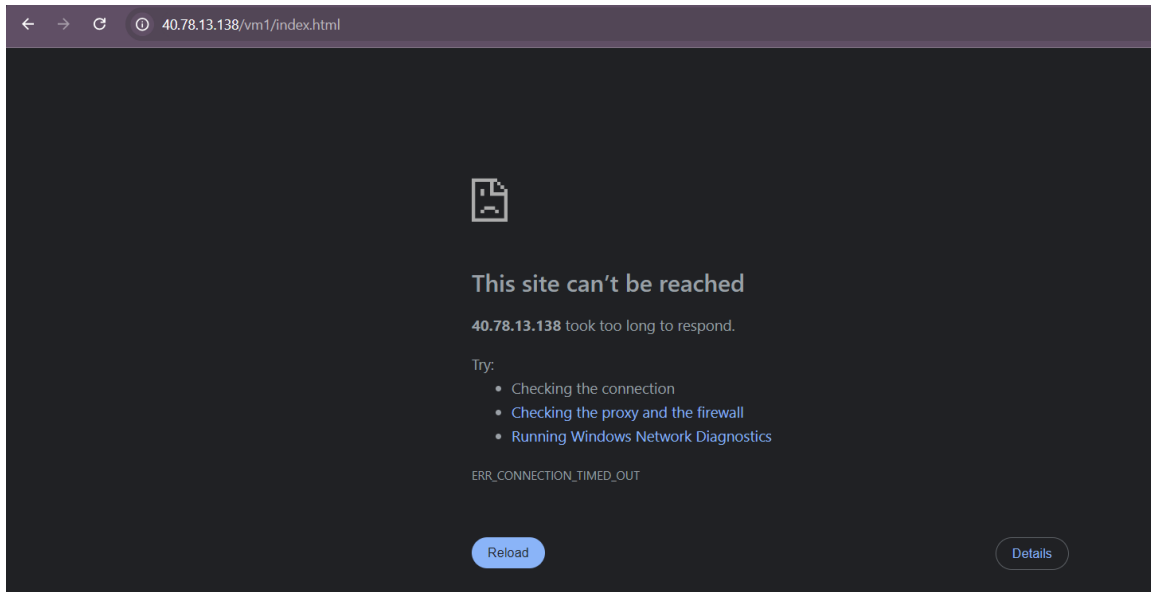
**We do not require to allow port 80 in NSG because we are using App Gateway. It will not be accessible directly.**

#### **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:

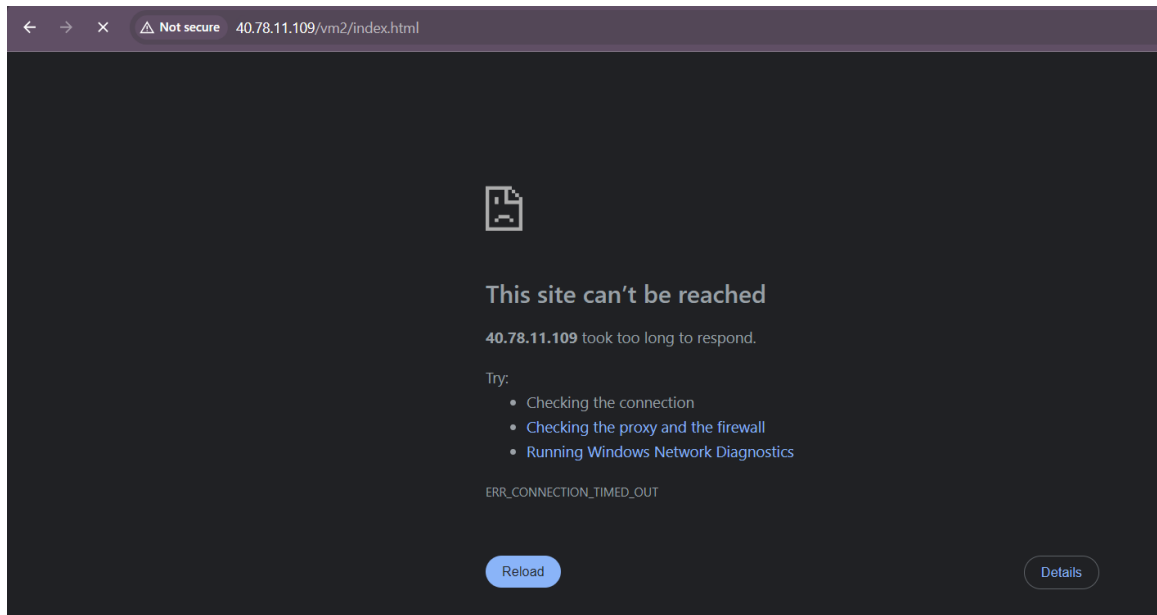
1. SSH into VM2:

**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.

## Create application gateway

✓ Basics ✓ Frontends ✓ Backends **Configuration** ⌵ Tags ⌵ Review + create

Create routing rules that link your frontend(s) and backend(s). You can also add more backend pools, add a second frontend IP configuration if you haven't already, or edit previous configurations. [?](#)

Frontends

+ Add a frontend IP

Public: MyPublicIP (40.118.170.231)

Routing rules

+ Add a routing rule

rule1

Manage Backend settings

Backend pools

+ Add a backend pool

backendpool

backendpool2

## Add a routing rule

Priority \* ⓘ

\* Listener    \* Backend targets

Choose a backend pool to which this routing rule will send traffic. You will also need to specify a set of Backend settings that define the behavior of the routing rule. [?](#)

Target type

☒ Backend pool    ☐ Redirection

Add new

Add new

Backend target \* ⓘ

Backend settings \* ⓘ

**Path-based routing**

You can route traffic from this rule's listener to different backend targets based on the URL path of the request. You can also apply a different set of Backend settings based on the URL path. [?](#)

Path	Target name	Backend setting name	Backend pool
/vm1/*	VM1	httpsetting	backendpool
/vm2/*	VM2	httpsetting	backendpool2

## 4. Save the rule.

AppGateway

Application gateway

☆

...

Search

◊

«

🗑️ Delete

🔄 Refresh

🗨️ Feedback

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Settings

Configuration

Essentials

Resource group [\(move\)](#)  
[RG-1](#)

Location  
West US

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

Subscription ID  
9b23d2c1-3c85-4730-9eef-8d7211489a95

Virtual network/subnet  
[VNet-1/default](#)

Frontend public IP address  
[13.87.130.221 \(MyPublicIP\)](#)

Frontend private IP address  
-

Tier  
Standard V2

Availability zone

JSON View

← → ↻ ⚠️ Not secure 13.87.130.221:8080/vm2/index.html ☆

This is VM2

← → ↻ ⚠️ Not secure 13.87.130.221:8080/vm1/index.html ☆

This is VM1