

## 1. Use the Previously Created Linux VM

- In Azure Portal:
  1. Go to "Virtual Machines."
  2. Select the previously created **Linux VM**.

## 2. Install Apache2 on This VM

- Via SSH:
  1. Connect to your Linux VM using SSH. In your terminal, run:
  2. Once logged in, update the package list:

```
sudo apt update
```

3. Install Apache2:

```
sudo apt install apache2 -y
```

4. Start and enable Apache2 to run on boot:

```
sudo systemctl start apache2
```

```
sudo systemctl enable apache2
```

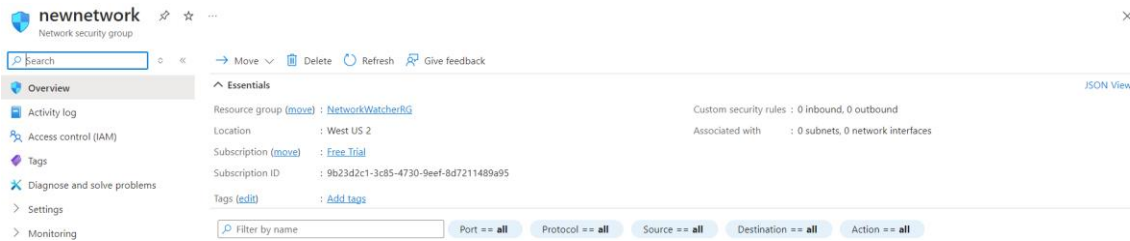
```
azureuser@ubuntu:~$ systemctl status apache2
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/apache2.service; enabled; preset: enabled)
   Active: active (running) since Thu 2024-09-26 14:57:03 UTC; 5min ago
     Docs: https://httpd.apache.org/docs/2.4/
   Main PID: 968 (apache2)
    Tasks: 55 (limit: 1064)
   Memory: 8.1M (peak: 8.3M)
      CPU: 73ms
   CGroup: /system.slice/apache2.service
           └─968 /usr/sbin/apache2 -k start
             └─969 /usr/sbin/apache2 -k start
               └─970 /usr/sbin/apache2 -k start

Sep 26 14:57:01 ubuntu systemd[1]: Starting apache2.service - The Apache HTTP Server...
Sep 26 14:57:03 ubuntu systemd[1]: Started apache2.service - The Apache HTTP Server.
azureuser@ubuntu:~$
```

## 3. Create a Network Security Group (NSG) for the Subnet

- In Azure Portal:
  1. Navigate to "Network Security Groups."
  2. Click "Create."
  3. Enter a name for the NSG and select the appropriate **resource group** and **region** (same as your VM).


#### 4. Click "Review + Create," then "Create."



#### 4. Open NSG Rules for Subnet and VM on Port 80

- **In Azure Portal:**

1. After the NSG is created, go to the **NSG** and select **Inbound Security Rules**.
2. Click "Add" to create a new inbound rule:
  - **Source:** Any
  - **Source port ranges:** \*
  - **Destination:** Any
  - **Destination port ranges:** 80
  - **Protocol:** TCP
  - **Action:** Allow
  - **Priority:** Provide a number (e.g., 100)
  - **Name:** Open-Port-80

 **Add inbound security rule** ×

Source ⓘ

Any

Source port ranges \* ⓘ

\*

Destination ⓘ

Any

Service ⓘ

HTTP

Destination port ranges ⓘ

80

Protocol

☐ Any

☒ TCP

☐ UDP

☐ ICMPv4

Action

☒ Allow

☐ Deny

Add

Cancel

 Give feedback

- Click "Add" to apply the rule.
- Associate the NSG with the subnet where the VM is deployed:
  - In the NSG, click on **Subnets** under "Settings."
  - Select the subnet of your VM's virtual network and click "Save."

# Associate subnet



newnetwork

Virtual network ⓘ

west-us (NetworkWatcherRG)



Subnet \* ⓘ

default2



OK

## 5. Verify If You Can See the Apache2 Page

- **In Your Browser:**

1. Open a browser and go to <http://<VM-public-IP>>.
2. You should see the Apache2 default page.

← → ↻ ⚠ Not secure 13.66.251.56



# Apache2 Default Page

# Ubuntu

It works!

This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should **replace this file** (located at `/var/www/html/index.html`) before continuing to operate your HTTP server.

If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.

Configuration Overview

Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu tools. The configuration system is **fully documented in `/usr/share/doc/apache2/README.Debian.gz`**. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the **manual** if the `apache2` package was installed on this system.