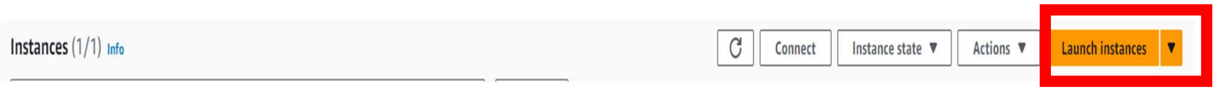
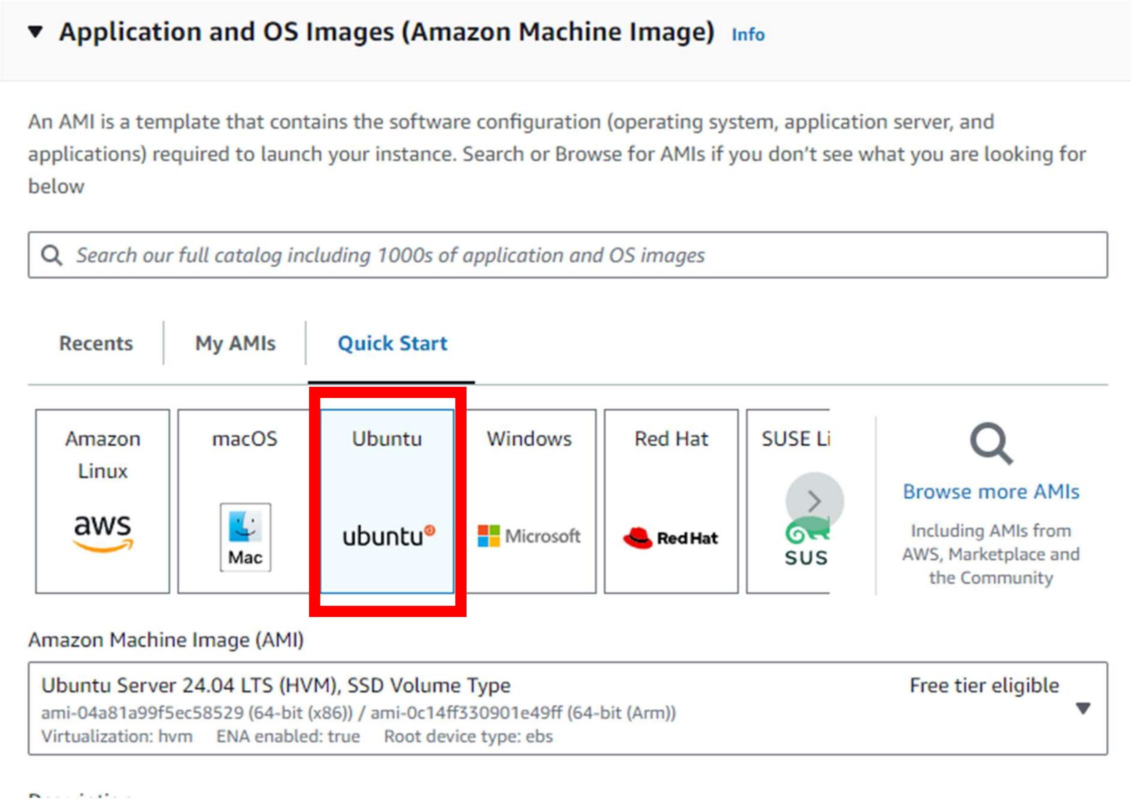
Step 1: Launch an EC2 Instance

1. **Log in to AWS Management Console**:
   - Go to the AWS Management Console at https://aws.amazon.com/console/
   - Sign in with your AWS credentials.
2. **Navigate to EC2 Dashboard**:
   - In the AWS Management Console, type "EC2" in the search bar and select EC2 to navigate to the EC2 Dashboard.
3. **Launch an Instance**:
   - Click on the "Launch Instance" button.



   - Choose an Amazon Machine Image (AMI): Select "Ubuntu Server 20.04 LTS (HVM), SSD Volume Type".



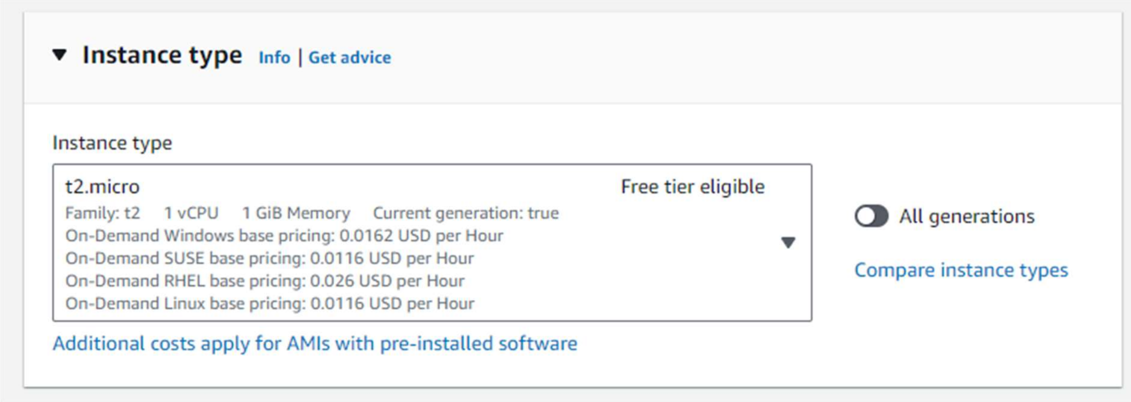
An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Search our full catalog including 1000s of application and OS images

Amazon Machine Image (AMI)

Ubuntu Server 24.04 LTS (HVM), SSD Volume Type — Free tier eligible
ami-04a81a99f5ec58529 (64-bit (x86)) / ami-0c14ff330901e49ff (64-bit (Arm))
Virtualization: hvm   ENA enabled: true   Root device type: ebs

   - Choose an Instance Type: Select `t2.micro` (eligible for the free tier).



▼ Instance type Info | Get advice

Instance type

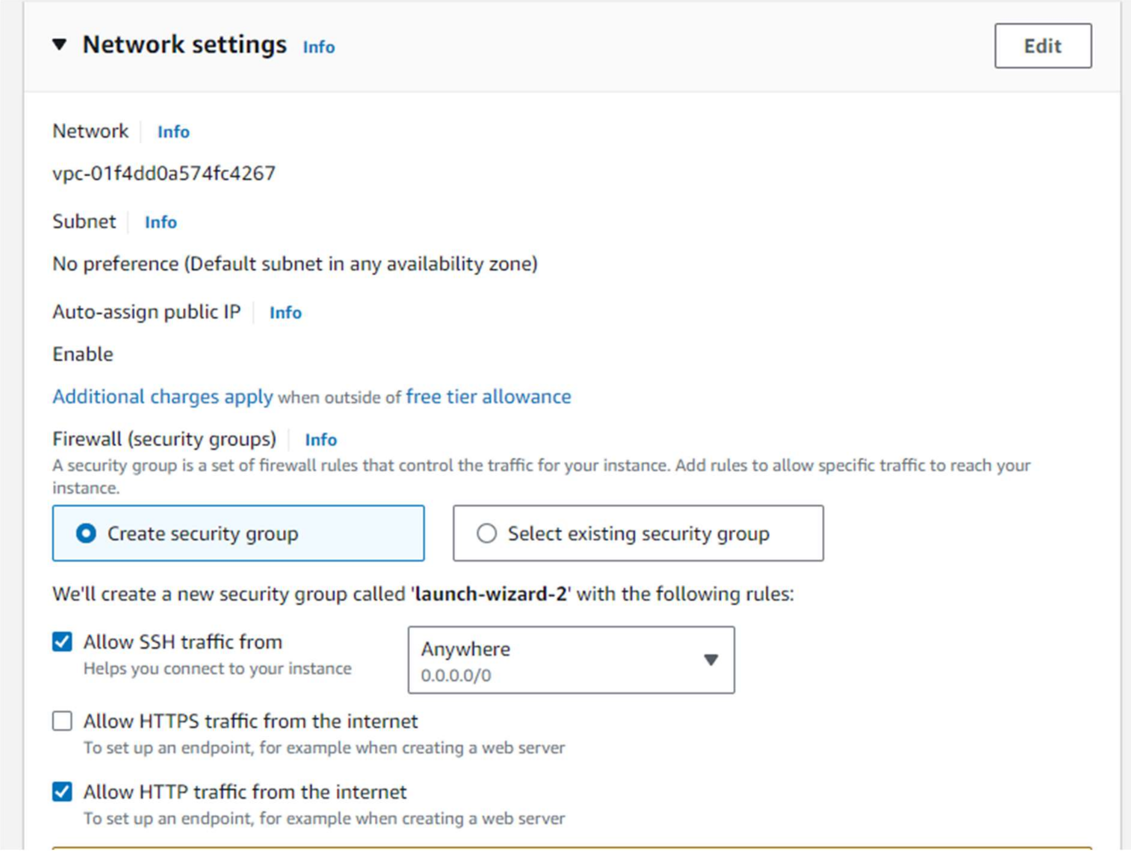
t2.micro Free tier eligible
Family: t2 1 vCPU 1 GiB Memory Current generation: true
On-Demand Windows base pricing: 0.0162 USD per Hour
On-Demand SUSE base pricing: 0.0116 USD per Hour
On-Demand RHEL base pricing: 0.026 USD per Hour
On-Demand Linux base pricing: 0.0116 USD per Hour

All generations

Compare instance types

Additional costs apply for AMIs with pre-installed software

- Configure Instance:
  - Select an existing key pair or create a new one.
  - Network: Choose the default VPC.
  - Subnet: Choose a subnet in the US-East-1 (N. Virginia) region.
  - Enable Auto-assign Public IP.



▼ Network settings Info

Edit

Network Info

vpc-01f4dd0a574fc4267

Subnet Info

No preference (Default subnet in any availability zone)

Auto-assign public IP Info

Enable

Additional charges apply when outside of free tier allowance

Firewall (security groups) Info

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

● Create security group ○ Select existing security group

We'll create a new security group called '**launch-wizard-2**' with the following rules:

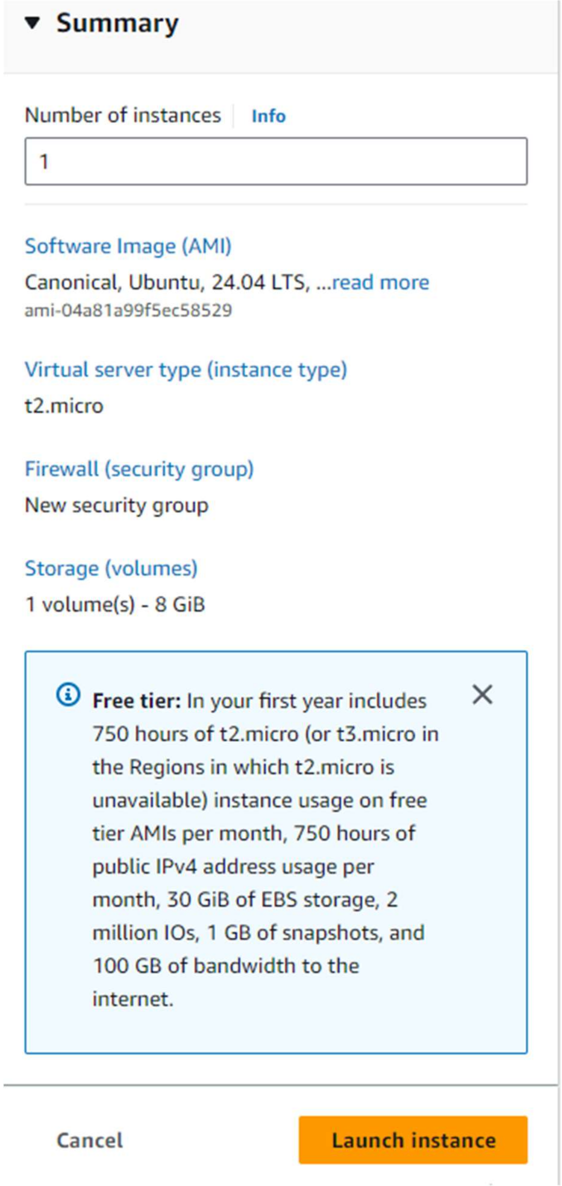
☑ Allow SSH traffic from — Anywhere 0.0.0.0/0
Helps you connect to your instance

□ Allow HTTPS traffic from the internet
To set up an endpoint, for example when creating a web server

☑ Allow HTTP traffic from the internet
To set up an endpoint, for example when creating a web server

- Add Storage: Keep the default settings.
- Add Tags: Add a tag to identify your instance (e.g., Key: Name, Value: Nginx).

4. **Review and Launch**:
    - Review your instance settings and click "Launch".



Summary

Number of instances Info

1

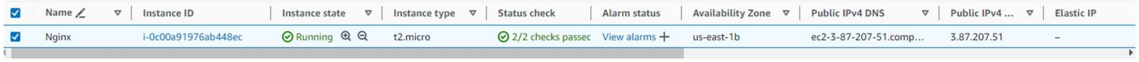
Software Image (AMI)
Canonical, Ubuntu, 24.04 LTS, ...read more
ami-04a81a99f5ec58529

Virtual server type (instance type)
t2.micro

Firewall (security group)
New security group

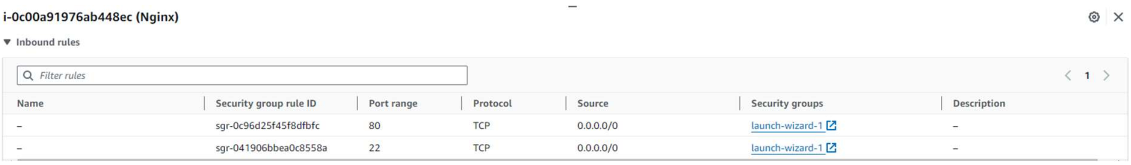
Storage (volumes)
1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet.



☑	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP
☑	Nginx	i-0c00a91976ab448ec	✓ Running	t2.micro	✓ 2/2 checks passec	View alarms +	us-east-1b	ec2-3-87-207-51.comp...	3.87.207.51	–

5. **Configure Security Group:**
   - Add a new security group with the following rules:
     - Type: HTTP, Protocol: TCP, Port Range: 80, Source: 0.0.0.0/0
     - Type: SSH, Protocol: TCP, Port Range: 22, Source: 0.0.0.0/0



i-0c00a91976ab448ec (Nginx)

▼ Inbound rules

Name	Security group rule ID	Port range	Protocol	Source	Security groups	Description
–	sgr-0c96d25f45f8dfbfc	80	TCP	0.0.0.0/0	launch-wizard-1	–
–	sgr-041906bbea0c8558a	22	TCP	0.0.0.0/0	launch-wizard-1	–

Step 2: Connect to Your Instance

1. **Connect to the EC2 Instance**:
   - In the EC2 Dashboard, select your instance.
   - Click on "Connect" and follow the instructions to connect to your instance using SSH.

Step 3: Install Nginx

1. **Update Package List**:

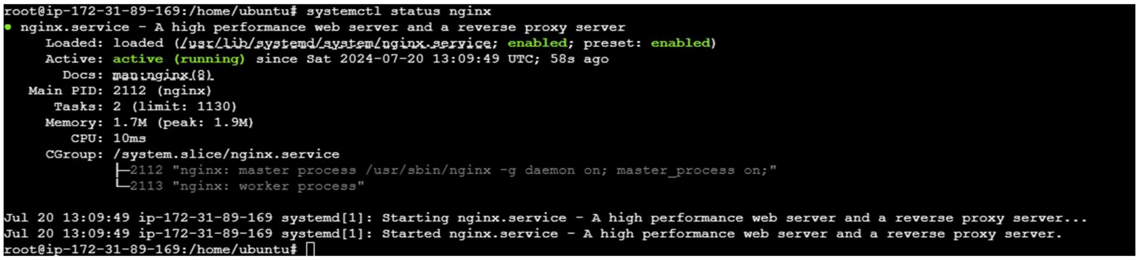
```
sudo apt update
```

2. **Install Nginx**:

```
sudo apt install nginx -y
```

3. **Start and Enable Nginx**:

```
sudo systemctl start nginx
sudo systemctl enable nginx
sudo systemctl status nginx
```



```
root@ip-172-31-89-169:/home/ubuntu# systemctl status nginx
● nginx.service - A high performance web server and a reverse proxy server
     Loaded: loaded (/usr/lib/systemd/system/nginx.service; enabled; preset: enabled)
     Active: active (running) since Sat 2024-07-20 13:09:49 UTC; 58s ago
       Docs: man:nginx(8)
   Main PID: 2112 (nginx)
      Tasks: 2 (limit: 1130)
     Memory: 1.7M (peak: 1.9M)
        CPU: 10ms
     CGroup: /system.slice/nginx.service
             ├─2112 "nginx: master process /usr/sbin/nginx -g daemon on; master_process on;"
             └─2113 "nginx: worker process"

Jul 20 13:09:49 ip-172-31-89-169 systemd[1]: Starting nginx.service - A high performance web server and a reverse proxy server...
Jul 20 13:09:49 ip-172-31-89-169 systemd[1]: Started nginx.service - A high performance web server and a reverse proxy server.
root@ip-172-31-89-169:/home/ubuntu# 
```

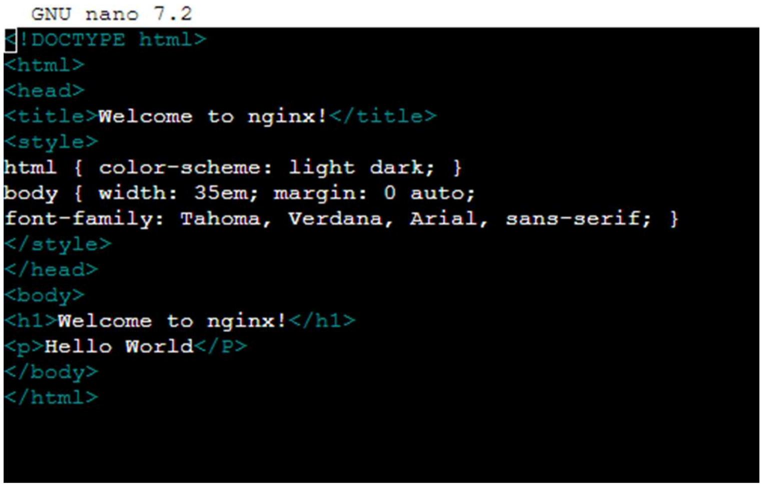
Step 4: Configure Nginx to Display "Hello World"

1. **Modify the Default Nginx Webpage**:
   - Open the default Nginx configuration file:

```
sudo nano /var/www/html/index.nginx-debian.html
```

- Replace the content with the following HTML:

```
<!DOCTYPE html>
<html>
<head>
    <title>Welcome to Nginx!</title>
</head>
<body>
    <h1>Hello World</h1>
</body>
</html>
```

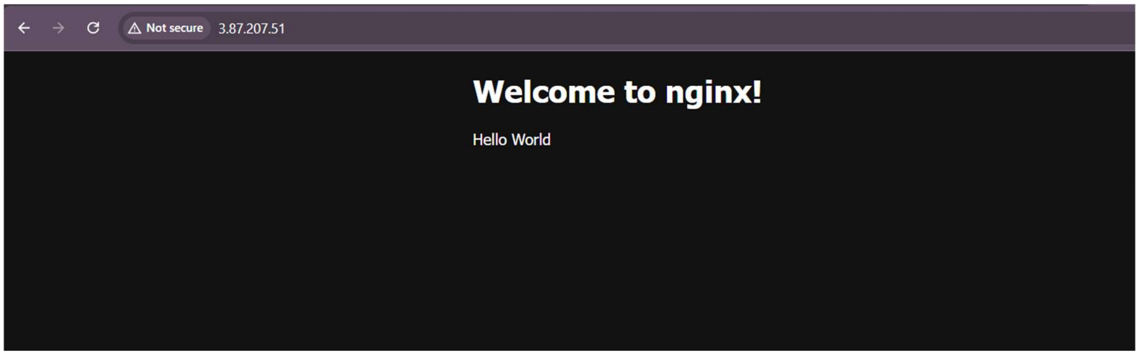


```
  GNU nano 7.2
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
html { color-scheme: light dark; }
body { width: 35em; margin: 0 auto;
font-family: Tahoma, Verdana, Arial, sans-serif; }
</style>
</head>
<body>
<h1>Welcome to nginx!</h1>
<p>Hello World</P>
</body>
</html>
```

2. **Save and Close the File**:
   - Press `Ctrl + X` to close the file.
   - Press `Y` to confirm changes, then press `Enter`.

Step 5: Verify the Configuration

1. **Open a Web Browser**:
   - Enter the public IP address of your EC2 instance in the address bar.
   - You should see a webpage displaying the message: "Hello World".



Welcome to nginx!

Hello World