DevOps Advance - EC2 instance
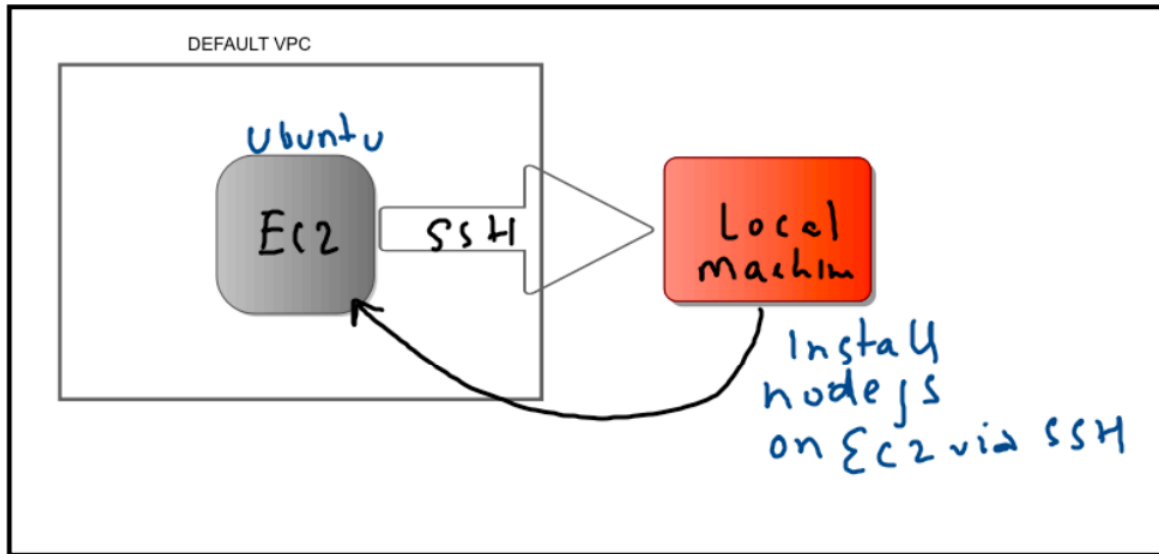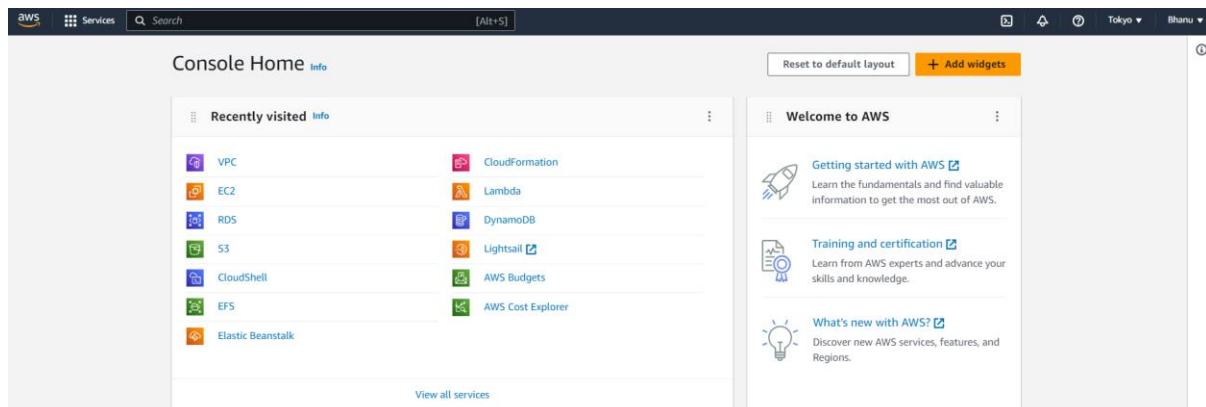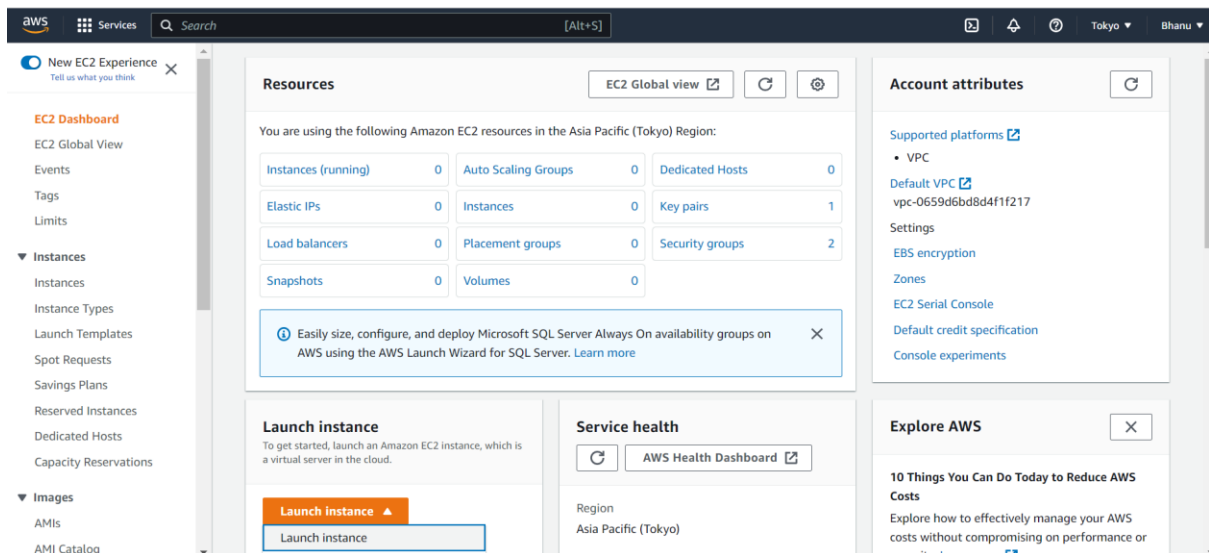
Architecture

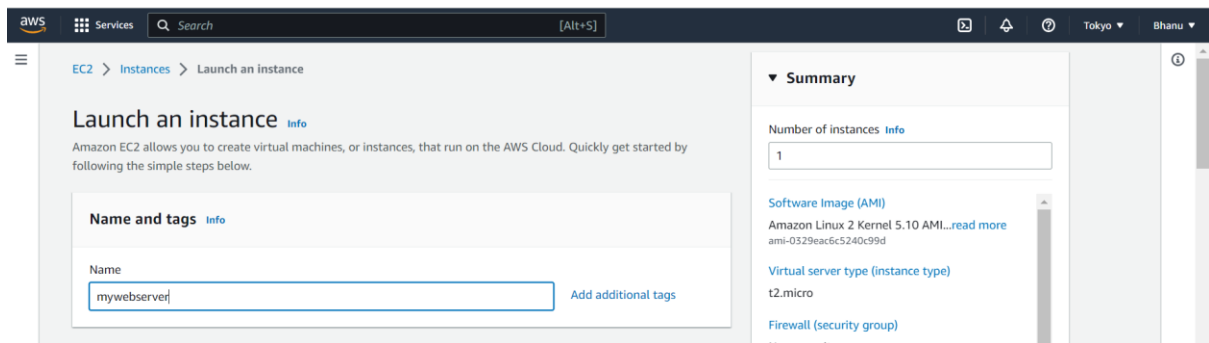**Login to the AWS management console

Step1:

Choose EC2 and click on launch instance.
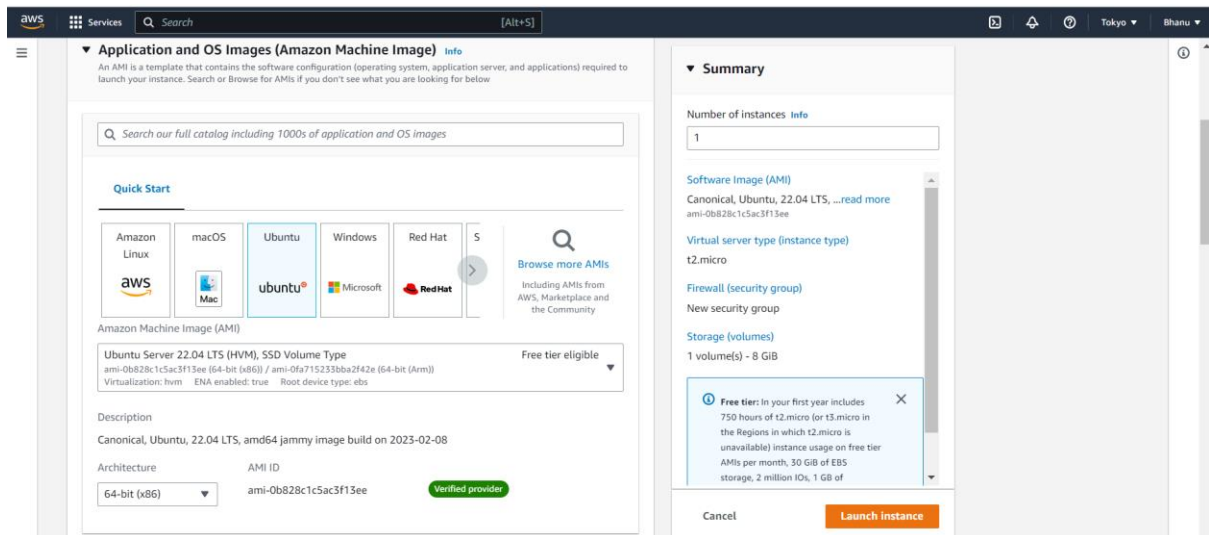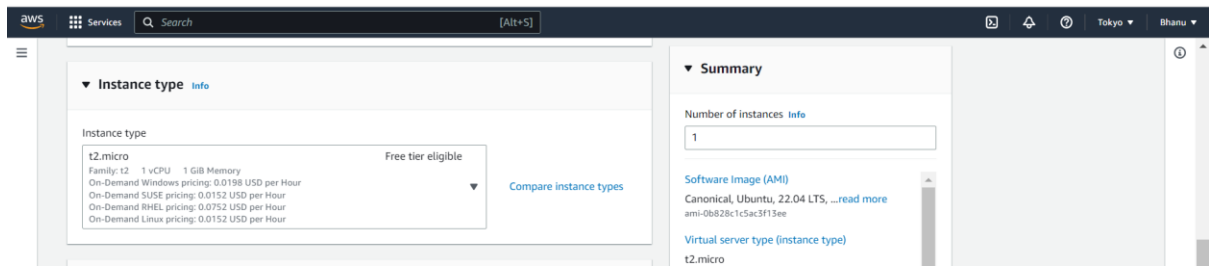
Create EC2 Instance with Ubuntu AMI.
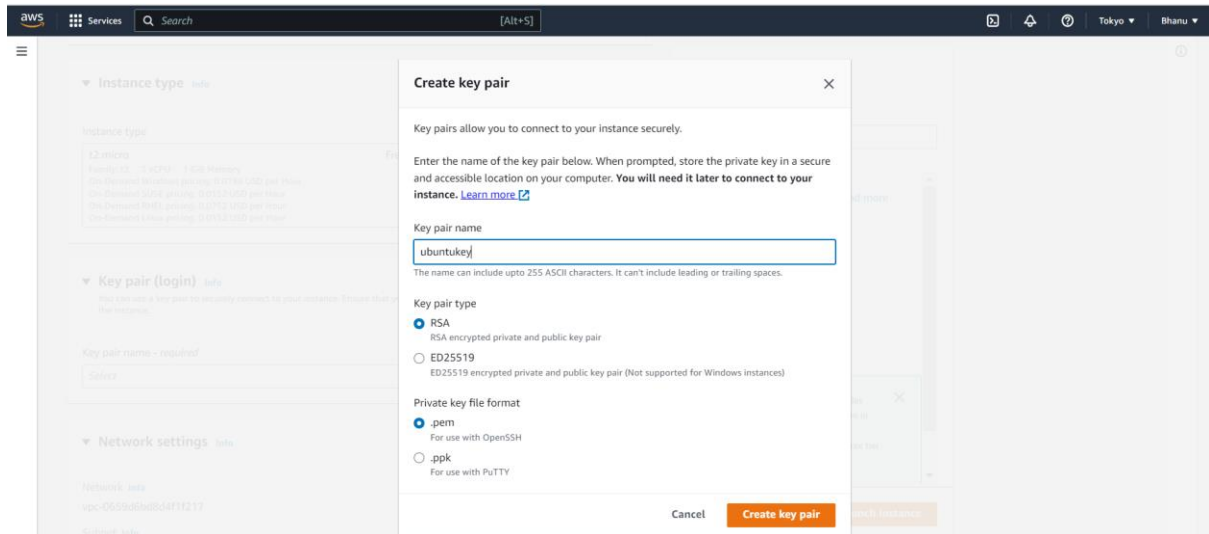
**Give name for the instance as "mywebserver".

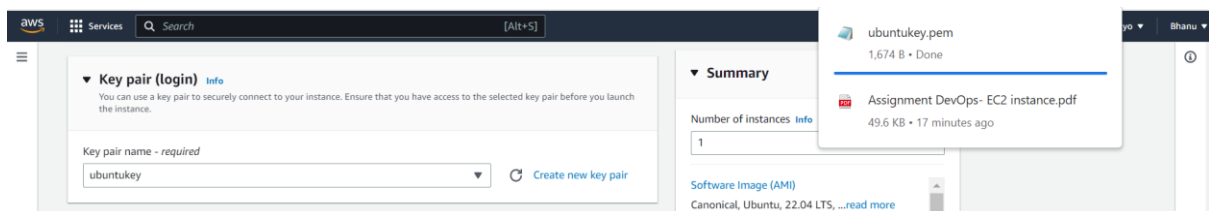**Select the Ubuntu AMI. And the type of instance is t2.micro.

Step2:

Create key pair for SSH access.

**Keypair is downloaded to the local machine.

**Select the default VPC

Step3: Creating Security Group with SSH and HTTP/HTTPs Ports Enabled

Screenshot 1

aws | Services | Q Search | [Alt+S] | Tokyo ▼ | Bhanu ▼

▼ Network settings Info

VPC - *required* Info

vpc-0659d6bd8d4f1f217 (default) ▾
172.31.0.0/16

Subnet Info

No preference ▼ | Create new subnet ↗

Auto-assign public IP Info

Enable ▼

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

Security group name - *required*

ubuntusecuritygroup

This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and ._-:/()#,@[]+=&;{}!$*

Description - *required* Info

launch-wizard-1 created 2023-03-01T14:00:56.342Z

Inbound security groups rules

▾ Security group rule 1 (TCP, 22, 0.0.0.0/0)   [Remove]

▼ Summary

Number of instances Info

1

Software Image (AMI)
Canonical, Ubuntu, 22.04 LTS, ...read more
ami-0b828c1c5ac3f13ee

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, 30 GiB of EBS
storage, 2 million IOs, 1 GB of

Cancel   **Launch instance**

**Enable SSH port,HTTPS port and HTTP port.

Screenshot 2

aws | Services | Q Search | [Alt+S] | Tokyo ▼ | Bhanu ▼

Inbound security groups rules

▾ Security group rule 1 (TCP, 22, 0.0.0.0/0)   [Remove]

Type Info
ssh ▼

Protocol Info
TCP

Port range Info
22

Source type Info
Anywhere ▼

Source Info
Q Add CIDR, prefix list or security
0.0.0.0/0 ✕

Description - *optional* Info
e.g. SSH for admin desktop

▾ Security group rule 2 (TCP, 443, 0.0.0.0/0)   [Remove]

Type Info
HTTPS ▼

Protocol Info
TCP

Port range Info
443

Source type Info
Anywhere ▼

Source Info
Q Add CIDR, prefix list or security
0.0.0.0/0 ✕

Description - *optional* Info
e.g. SSH for admin desktop

▾ Security group rule 3 (TCP, 80, 0.0.0.0/0)   [Remove]

Type Info
HTTP ▼

Protocol Info
TCP

Port range Info
80

▼ Summary

Number of instances Info

1

Software Image (AMI)
Canonical, Ubuntu, 22.04 LTS, ...read more
ami-0b828c1c5ac3f13ee

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, 30 GiB of EBS
storage, 2 million IOs, 1 GB of

Cancel   **Launch instance**

Screenshot 3

aws | Services | Q Search | [Alt+S] | Tokyo ▼ | Bhanu ▼

Type Info
HTTP ▼

Protocol Info
TCP

Port range Info
80

Source type Info
Anywhere ▼

Source Info
Q Add CIDR, prefix list or security
0.0.0.0/0 ✕

Description - *optional* Info
e.g. SSH for admin desktop

⚠ Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting   ✕
security group rules to allow access from known IP addresses only.

[Add security group rule]

▼ Summary

Number of instances Info

1

Software Image (AMI)
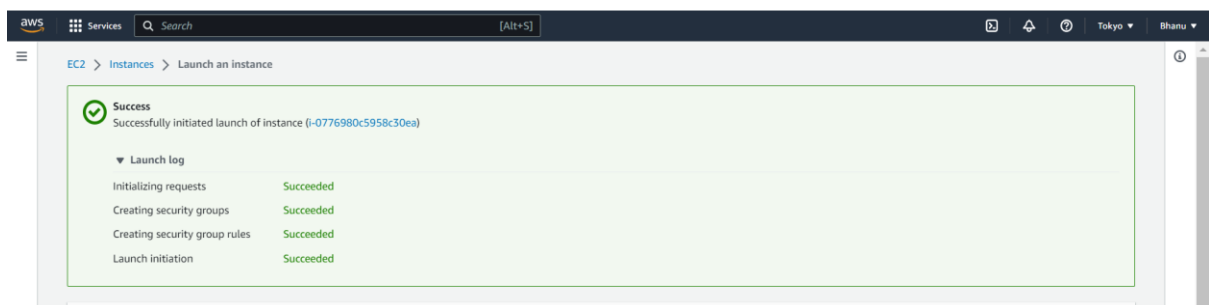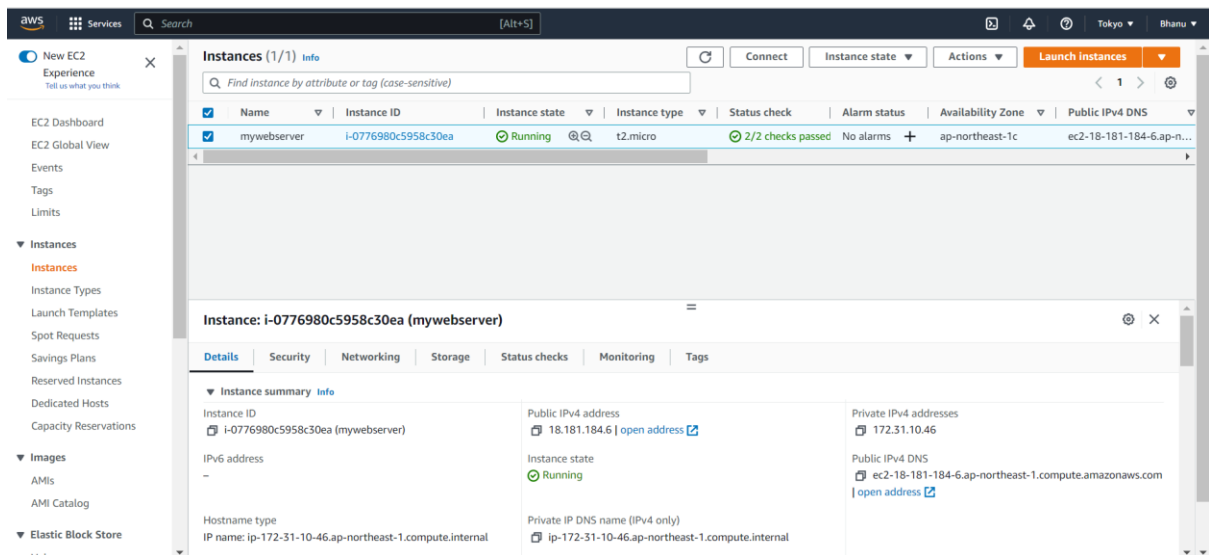Canonical, Ubuntu, 22.04 LTS, ...read more
ami-0b828c1c5ac3f13ee

Virtual server type (instance type)
t2.micro

Firewall (security group)
New security group

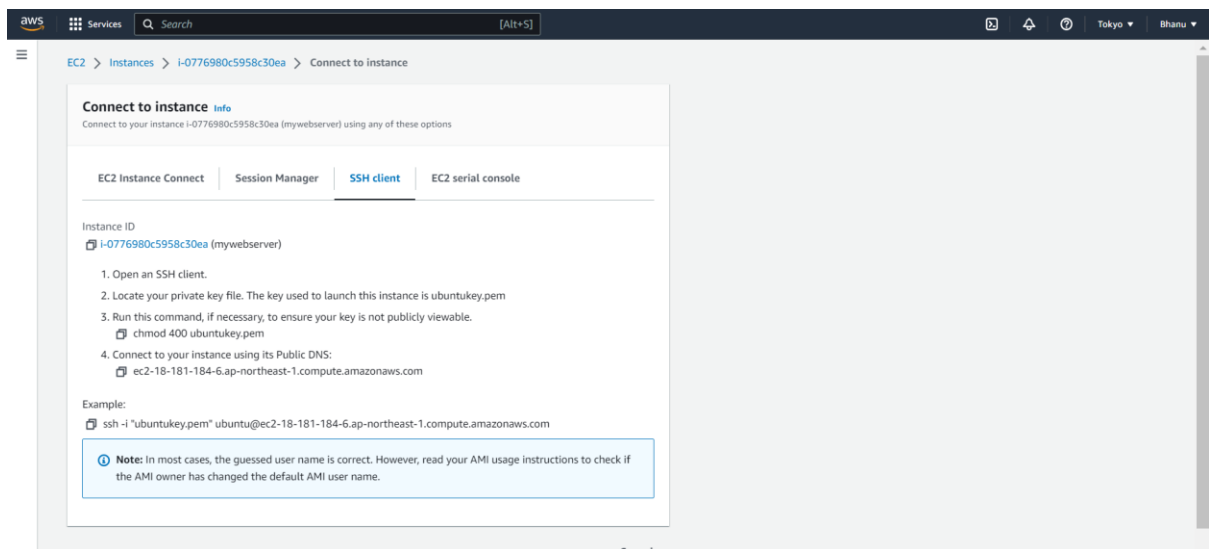**Keep the storage settings default.
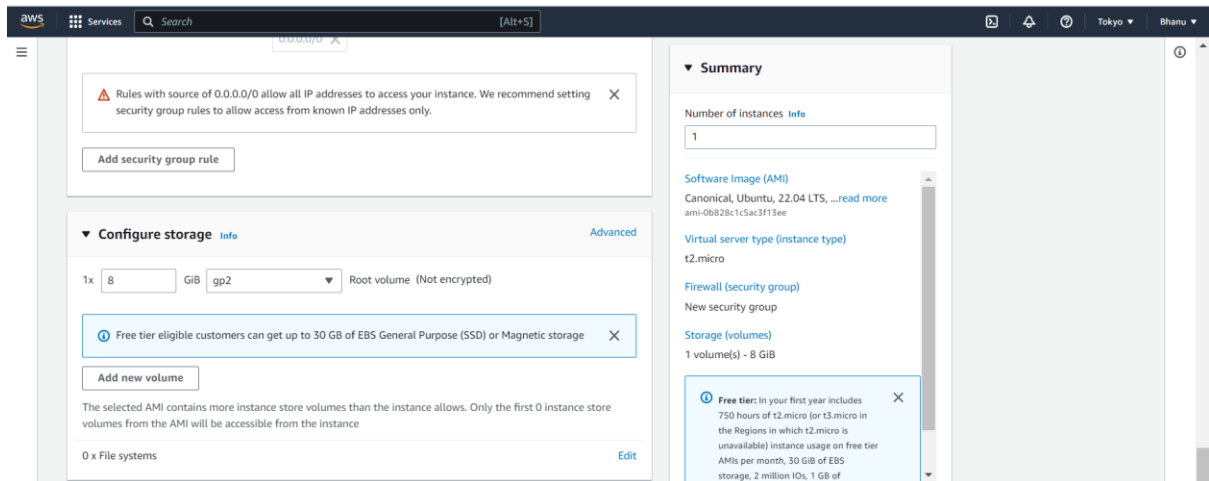
**Click on the Launch instance.

**The instance is now running.

Step 4:

SSH Created EC2 Instance to local Machine.

**Connect to the EC2 instance using the key pair through ssh.

**Now we are connected to the EC2 instance.

**To install the updates,the command is

sudo apt update

Step 5:

To install the node js give the below command.

sudo apt install nodejs

```
■ ubuntu@ip-172-31-10-46: ~                                          —    □    ✕
ubuntu@ip-172-31-10-46:~$ sudo apt install nodejs
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  javascript-common libc-ares2 libjs-highlight.js libnode72 nodejs-doc
Suggested packages:
  apache2 | lighttpd | httpd npm
The following NEW packages will be installed:
  javascript-common libc-ares2 libjs-highlight.js libnode72 nodejs nodejs-doc
0 upgraded, 6 newly installed, 0 to remove and 36 not upgraded.
Need to get 13.7 MB of archives.
After this operation, 53.9 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
```

```
■ ubuntu@ip-172-31-10-46: ~                                          —    □    ✕
Do you want to continue? [Y/n] Y
Get:1 http://ap-northeast-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 javascript-common all 11+nmu1 [5936 B]
Get:2 http://ap-northeast-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 libjs-highlight.js all 9.18.5+dfsg1-1 [36
7 kB]
Get:3 http://ap-northeast-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libc-ares2 amd64 1.18.1-1build1 [44.9 kB]
Get:4 http://ap-northeast-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 libnode72 amd64 12.22.9~dfsg-1ubuntu3 [10
.8 MB]
Get:5 http://ap-northeast-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 nodejs-doc all 12.22.9~dfsg-1ubuntu3 [240
9 kB]
Get:6 http://ap-northeast-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 nodejs amd64 12.22.9~dfsg-1ubuntu3 [122 k
B]
Fetched 13.7 MB in 0s (60.7 MB/s)
Selecting previously unselected package javascript-common.
(Reading database ... 63605 files and directories currently installed.)
Preparing to unpack .../0-javascript-common_11+nmu1_all.deb ...
Unpacking javascript-common (11+nmu1) ...
Selecting previously unselected package libjs-highlight.js.
Preparing to unpack .../1-libjs-highlight.js_9.18.5+dfsg1-1_all.deb ...
Unpacking libjs-highlight.js (9.18.5+dfsg1-1) ...
Selecting previously unselected package libc-ares2:amd64.
Preparing to unpack .../2-libc-ares2_1.18.1-1build1_amd64.deb ...
Unpacking libc-ares2:amd64 (1.18.1-1build1) ...
Selecting previously unselected package libnode72:amd64.
Preparing to unpack .../3-libnode72_12.22.9~dfsg-1ubuntu3_amd64.deb ...
Unpacking libnode72:amd64 (12.22.9~dfsg-1ubuntu3) ...
Selecting previously unselected package nodejs-doc.
Preparing to unpack .../4-nodejs-doc_12.22.9~dfsg-1ubuntu3_all.deb ...
Unpacking nodejs-doc (12.22.9~dfsg-1ubuntu3) ...
Selecting previously unselected package nodejs.
Preparing to unpack .../5-nodejs_12.22.9~dfsg-1ubuntu3_amd64.deb ...
```

```
■ ubuntu@ip-172-31-10-46: ~                                          —    □    ✕
Setting up libc-ares2:amd64 (1.18.1-1build1) ...
Setting up libnode72:amd64 (12.22.9~dfsg-1ubuntu3) ...
Setting up libjs-highlight.js (9.18.5+dfsg1-1) ...
Setting up nodejs (12.22.9~dfsg-1ubuntu3) ...
update-alternatives: using /usr/bin/nodejs to provide /usr/bin/js (js) in auto mode
Setting up nodejs-doc (12.22.9~dfsg-1ubuntu3) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
```

Step 6:

To check the status of nodejs ,whether it is installed or not,give the command

   node -v

```
ubuntu@ip-172-31-10-46: ~                                              —    □    ×
ubuntu@ip-172-31-10-46:~$ node -v
v12.22.9
```

This command gives the output as v12.22.9 ,that indicates node js is successfully installed and it is the version of it.