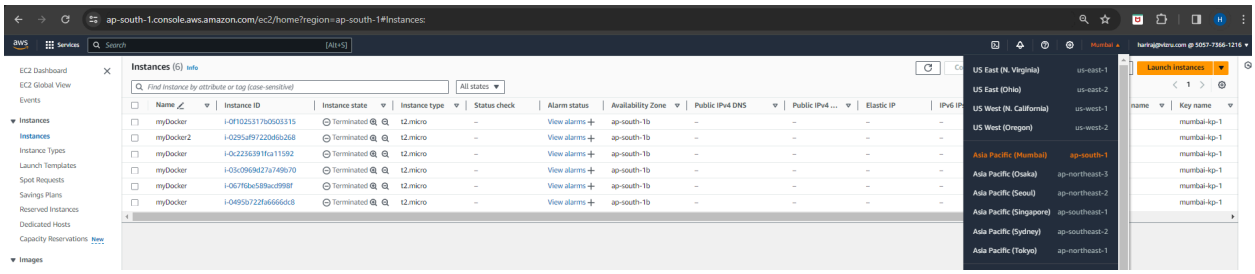
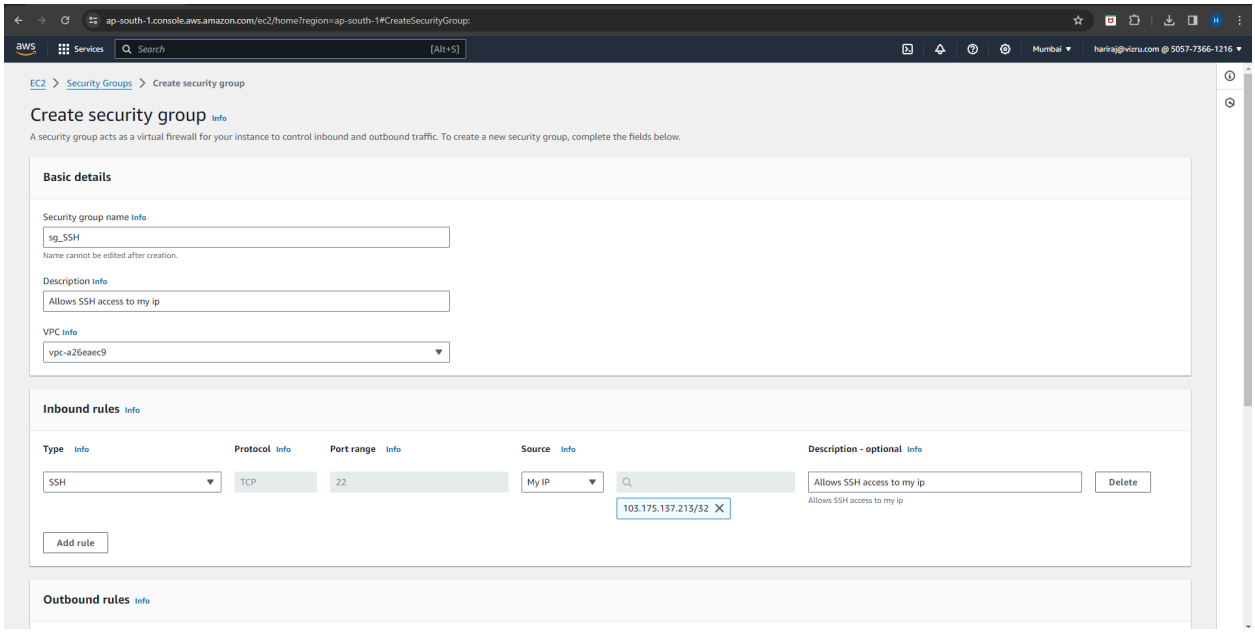
TASK

Launch a t2.micro instance in Mumbai region where ssh can be done only from your IP address with docker and docker-compose installed in it

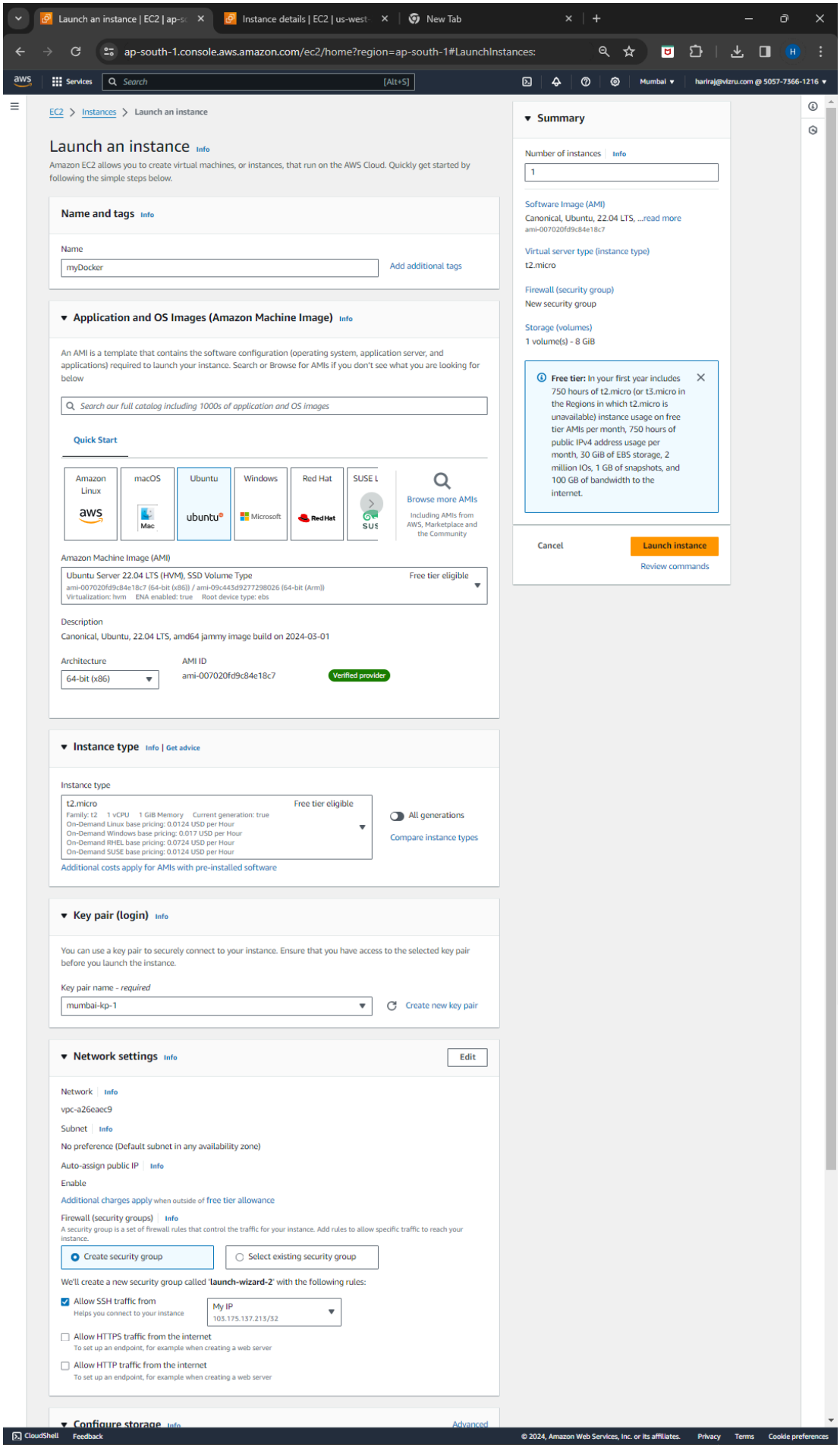
1. Selecting Mumbai region



2."We can create a security group during EC2 launch or use one that has already been created."



3.Lauching ec2 instance


Launch an instance | EC2 | ap-s
Instance details | EC2 | us-west
New Tab
ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#LaunchInstances:
Services
Search
[Alt+S]
Mumbai
hariraj@vizru.com @ 5057-7366-1216
EC2 > Instances > Launch an instance
Launch an instance Info
Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.
Name and tags Info
Name
myDocker
Add additional tags
Application and OS Images (Amazon Machine Image) Info
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
Quick Start
Amazon Linux
macOS
Ubuntu
Windows
Red Hat
SUSE L
Browse more AMIs
Including AMIs from AWS, Marketplace and the Community
Amazon Machine Image (AMI)
Ubuntu Server 22.04 LTS (HVM), SSD Volume Type
Free tier eligible
ami-007020fd9c84e18c7 (64-bit (x86)) / ami-09c443d9277298026 (64-bit (Arm))
Virtualization: hvm ENA enabled: true Root device type: ebs
Description
Canonical, Ubuntu, 22.04 LTS, amd64 jammy image build on 2024-03-01
Architecture
64-bit (x86)
AMI ID
ami-007020fd9c84e18c7
Verified provider
Instance type Info | Get advice
Instance type
t2.micro
Free tier eligible
Family: t2 1 vCPU 1 GiB Memory Current generation: true
On-Demand Linux base pricing: 0.0124 USD per Hour
On-Demand Windows base pricing: 0.017 USD per Hour
On-Demand RHEL base pricing: 0.0724 USD per Hour
On-Demand SUSE base pricing: 0.0124 USD per Hour
All generations
Compare instance types
Additional costs apply for AMIs with pre-installed software
Key pair (login) Info
You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.
Key pair name - required
mumbai-kp-1
Create new key pair
Network settings Info
Edit
Network Info
vpc-a26eaec9
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
Helps you connect to your instance
My IP
103.175.137.213/32
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
Configure storage Info
Advanced
Summary
Number of instances Info
1
Software Image (AMI)
Canonical, Ubuntu, 22.04 LTS, ...read more
ami-007020fd9c84e18c7
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.
Cancel
Launch instance
Review commands
CloudShell
Feedback
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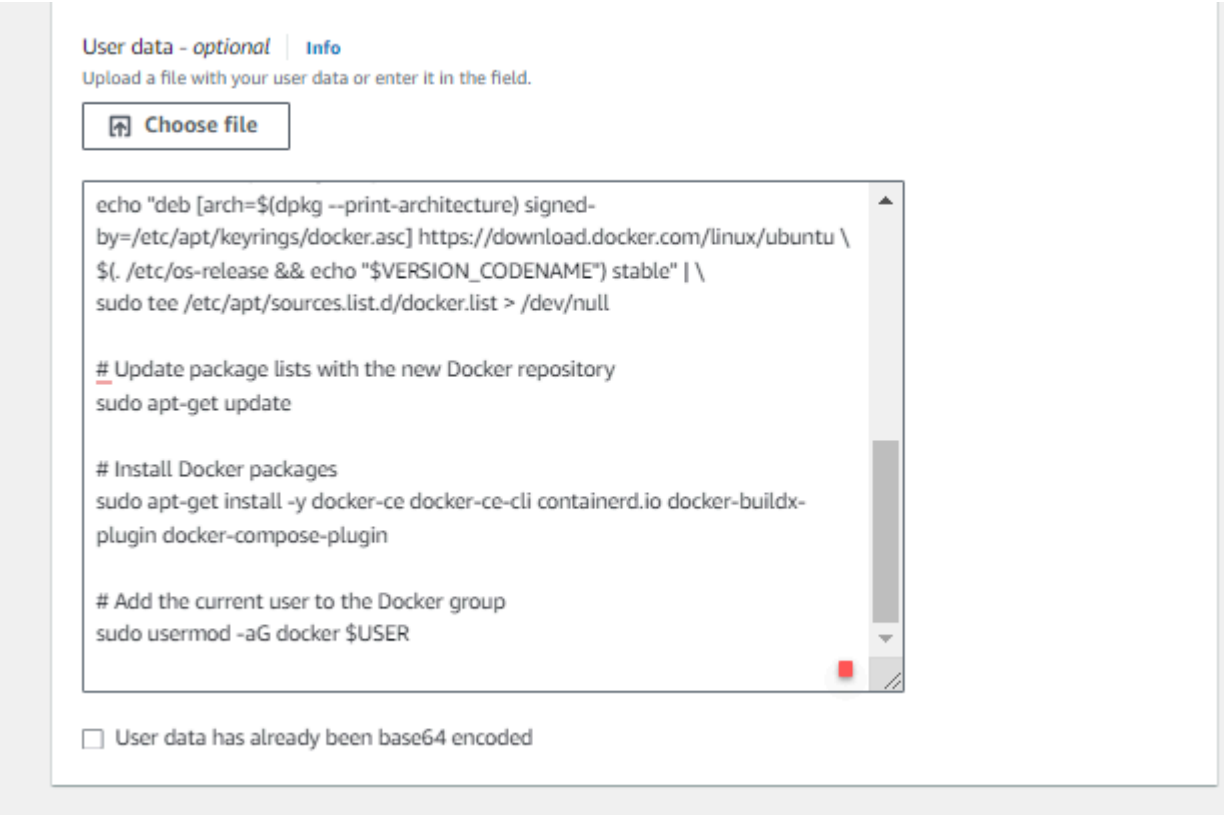
Privacy
Terms
Cookie preferences

4.Installing Docker during EC2 instance launch.

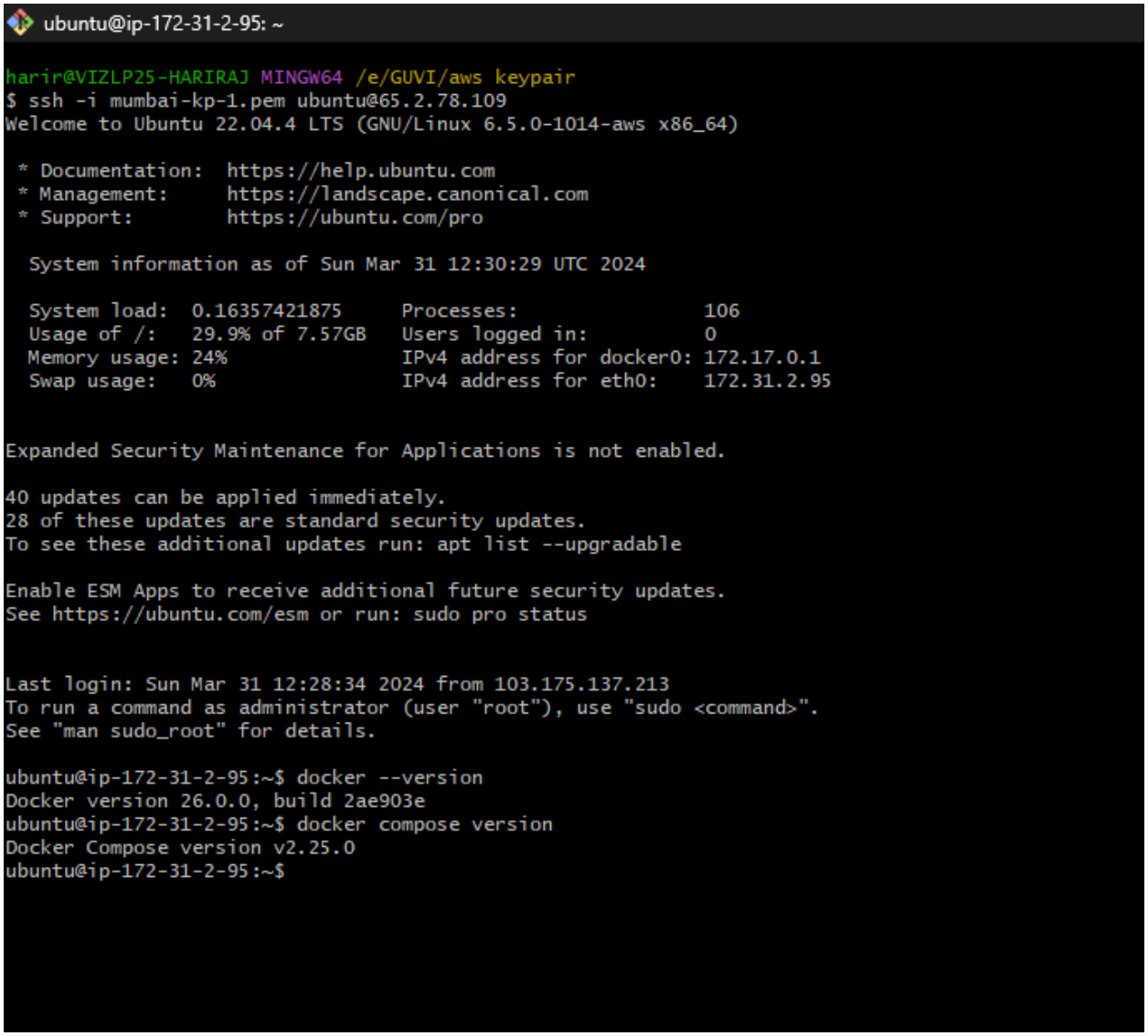


installDocker.sh

```
#!/bin/bash

# Update package lists
sudo apt-get update

# Install necessary packages
sudo apt-get install -y ca-certificates curl

# Create directory for Docker GPG key
sudo install -m 0755 -d /etc/apt/keyrings

# Download Docker's official GPG key
sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg -o /etc/apt/keyrings/docker.asc

# Set read permissions for the GPG key
sudo chmod a+r /etc/apt/keyrings/docker.asc

# Add Docker repository to Apt sources
echo "deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.asc]
https://download.docker.com/linux/ubuntu \
```

```
$(. /etc/os-release && echo "$VERSION_CODENAME") stable" | \
sudo tee /etc/apt/sources.list.d/docker.list > /dev/null

# Update package lists with the new Docker repository
sudo apt-get update

# Install Docker packages
sudo apt-get install -y docker-ce docker-ce-cli containerd.io docker-buildx-plugin
docker-compose-plugin

# Create the docker group if it doesn't exist
sudo groupadd docker || true

# Add the current user to the Docker group
sudo usermod -aG docker ubuntu

sudo reboot
```

Result


ubuntu@ip-172-31-2-95: ~
harir@VIZLP25-HARIRAJ MINGW64 /e/GUVI/aws keypair
$ ssh -i mumbai-kp-1.pem ubuntu@65.2.78.109
Welcome to Ubuntu 22.04.4 LTS (GNU/Linux 6.5.0-1014-aws x86_64)
* Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/pro
System information as of Sun Mar 31 12:30:29 UTC 2024
System load: 0.16357421875
Usage of /: 29.9% of 7.57GB
Memory usage: 24%
Swap usage: 0%
Processes: 106
Users logged in: 0
IPv4 address for docker0: 172.17.0.1
IPv4 address for eth0: 172.31.2.95
Expanded Security Maintenance for Applications is not enabled.
40 updates can be applied immediately.
28 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable
Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status
Last login: Sun Mar 31 12:28:34 2024 from 103.175.137.213
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
ubuntu@ip-172-31-2-95:~$ docker --version
Docker version 26.0.0, build 2ae903e
ubuntu@ip-172-31-2-95:~$ docker compose version
Docker Compose version v2.25.0
ubuntu@ip-172-31-2-95:~$