Deploying a Website using EC2 Instance

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About project

- I'm excited to share my experience of deploying a website using an EC2 instance on AWS as part of my internship at Gokboru Pvt Ltd.

- AWS, or Amazon Web Services, is a cloud computing platform that offers a vast array of services, including compute power, storage, and databases. One of its core services is EC2, which provides virtual servers, or instances, in the cloud. By leveraging EC2, we can efficiently deploy and manage websites without the need for physical hardware.

- During my internship, I had the opportunity to dive into the process of deploying a website on an EC2 instance. This involved selecting an appropriate instance type based on website traffic and resource requirements, setting up security groups to protect the instance, and installing a web server like Apache or Nginx. Subsequently, I configured the web server to serve the website files, ensuring optimal performance and security.

Steps to implement

aws

Step 1: Create an EC2 Instance

- Select an operating system (e.g., Ubuntu, Amazon Linux) that suits your website's requirements.
- Determine the appropriate instance type based on your website's expected traffic, CPU, memory, and storage needs.
- Create a security group to define inbound and outbound traffic rules for your instance. Allow HTTP (port 80) and HTTPS (port 443) traffic for web access.
- Generate a key pair to securely access your instance.

Step 2: Connect to the EC2 Instance

- Establish a secure SSH connection to your instance using the key pair you created and a SSH client like PuTTY or the AWS Management Console.

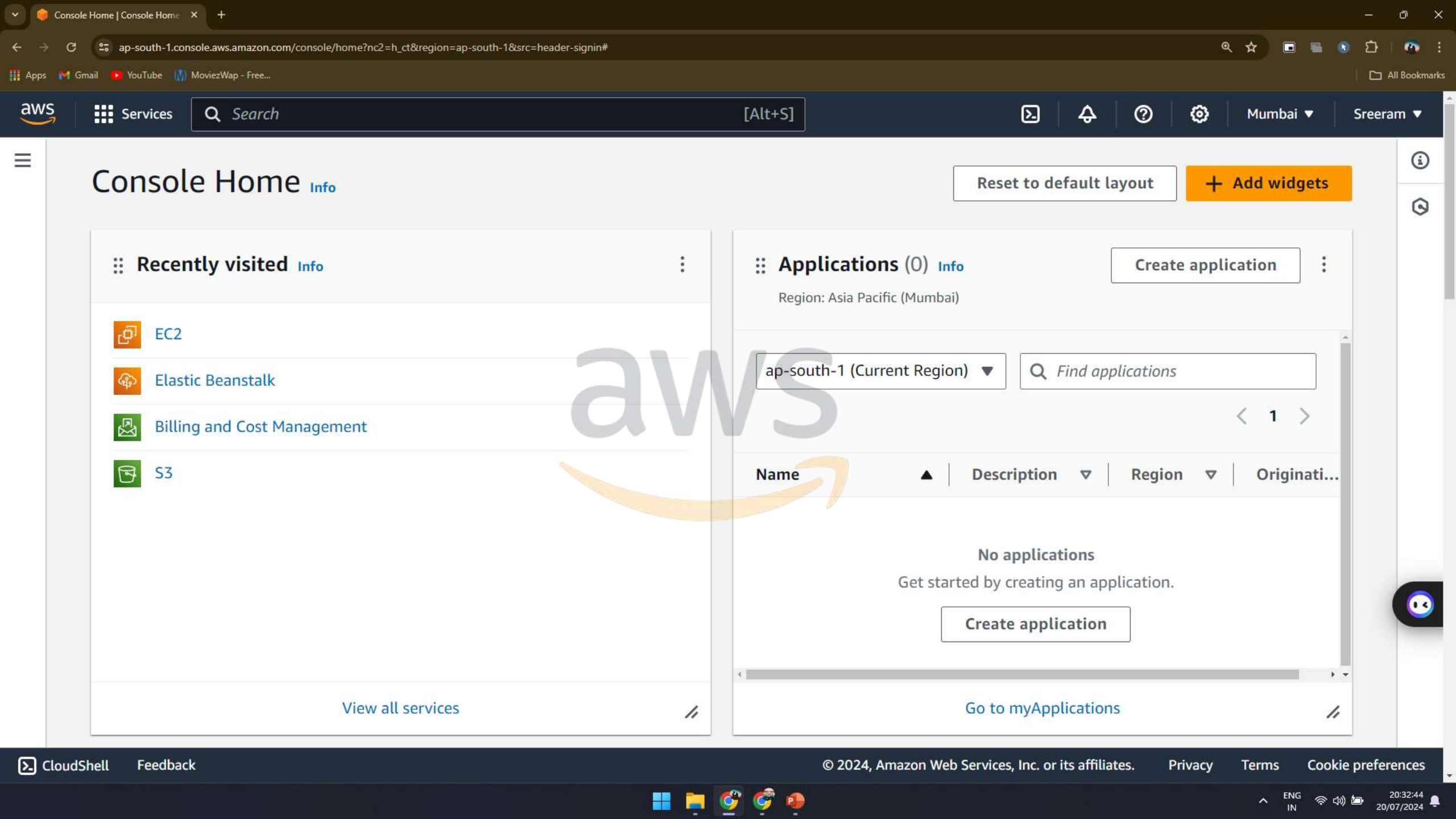# Steps to implement

Step 3: Install Web Server

- Update the package lists of your operating system using commands like sudo apt update `(Debian/Ubuntu) or` sudo yum update `(Amazon Linux).`

- Choose a web server like Apache or Nginx based on your preferences. Use package managers to install them (e.g., sudo apt install apache2 `or` sudo yum install httpd`).`

Step 4: Install httpd in terminal

- It will helps you to make html to **HTTPd,** `the Apache HTTP Server, is a versatile web server that can be a valuable asset in a wide range of projects`

Step 5: Checking the website through IP address

- `Once your website is deployed on the EC2 instance and configured correctly, you can access it by opening a web browser and entering the public IP address or DNS name of your EC2 instance in the`

ap-south-1.console.aws.amazon.com/console/home?nc2=h_ct&region=ap-south-1&src=header-signin#

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Console Home Info

Reset to default layout + Add widgets

Recently visited Info

EC2

Elastic Beanstalk

Billing and Cost Management

S3

View all services

Applications (0) Info

Create application

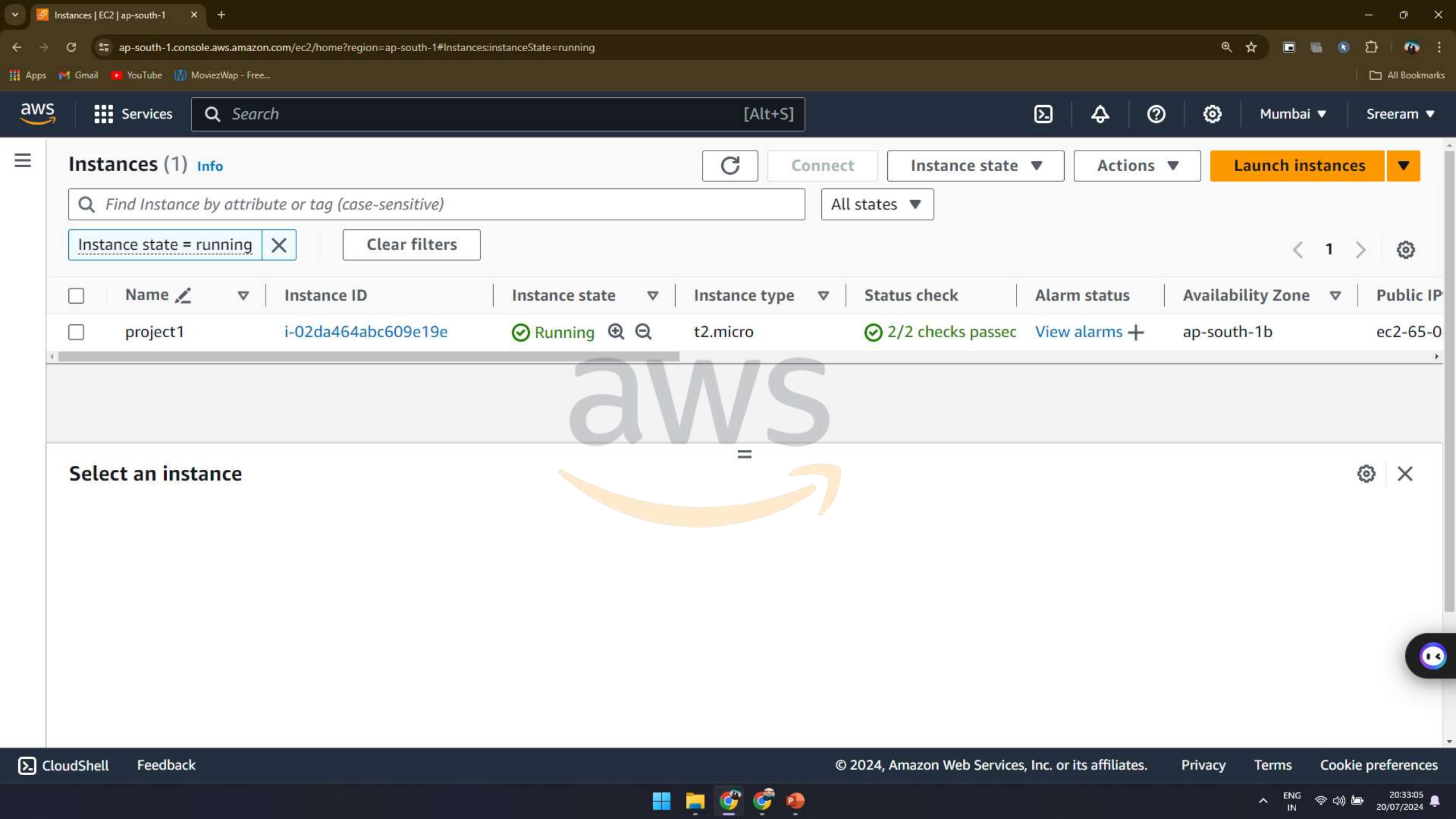Region: Asia Pacific (Mumbai)

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ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#InstanceDetails:instanceId=i-02da464abc609e19e

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EC2 > Instances > i-02da464abc609e19e

Instance summary for i-02da464abc609e19e (project1) Info

Updated less than a minute ago

     ⟳   Connect   Instance state ▼   Actions ▼

Instance ID	Public IPv4 address	Private IPv4 addresses
☐ i-02da464abc609e19e (project1)	☐ 65.0.105.165 | open address ↗	☐ 172.31.5.253

IPv6 address

–

Instance state

✓ Running

Public IPv4 DNS

☐
ec2-65-0-105-165.ap-south-1.compute.amazonaws.com

| open address ↗

Hostname type

IP name: ip-172-31-5-253.ap-south-1.compute.internal

Private IP DNS name (IPv4 only)

☐ ip-172-31-5-253.ap-south-1.compute.internal

Answer private resource DNS name

IPv4 (A)

Instance type

t2.micro

Elastic IP addresses

–

Auto-assigned IP address

☐ 65.0.105.165 [Public IP]

VPC ID

☐ vpc-0d1cc5c90f4d3c574 ↗

AWS Compute Optimizer finding

ⓘ Opt-in to AWS Compute Optimizer for recommendations.

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ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#InstanceDetails:instanceId=i-02da464abc609e19e

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Learn more ↗

🔘 Alarm recommendations 💡

3h 1d 1w **1h** ▦ | UTC timezone ▾ | ↻ ▾ | ↗ Add to dashboard | ⋮

CPU utilization (%) ⓘ ⋮

Percent

0.5

0.25

0

14:05   15:05

Network in (by... ⤢ ⓘ ⋮

Bytes

4.76k

2.38k

0

14:05   15:05

Network out (bytes) ⓘ ⋮

Bytes

6.01k

3.00k

0

14:05   15:05

Network packets in (c... ⓘ ⋮

Count

31.8

15.9

0

14:05   15:05

Network packets out (... ⓘ ⋮

Count

31.2

15.6

0

14:05   15:05

CPU credit usage (cou... ⓘ ⋮

Count

0.024

0.012

0

14:05   15:05

CPU credit balance (c... ⓘ ⋮

Count

145

72.5

0

14:05   15:05

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ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-02da464abc609e19e&osUser=ec2-user&region=ap-south-1&sshPort=22#/

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aws   Services   Search   [Alt+S]   Mumbai ▼   Sreeram ▼

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~~      \###|
~~       \#/___        https://aws.amazon.com/linux/amazon-linux-2023
~~        V~' '->
   ~~~        /
   ~~._.   _/
      _/ _/
    _/m/'

Last login: Mon Jul 15 13:06:15 2024 from 13.233.177.3
[ec2-user@ip-172-31-5-253 ~]$ su root-
su: user root- does not exist or the user entry does not contain all the required fields
[ec2-user@ip-172-31-5-253 ~]$ sudo su -
Last login: Mon Jul 15 12:34:17 UTC 2024 on pts/0
[root@ip-172-31-5-253 ~]# systemctl status httpd
● httpd.service - The Apache HTTP Server
     Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; preset: disabled)
     Active: active (running) since Sat 2024-07-13 22:57:25 UTC; 6 days ago
       Docs: man:httpd.service(8)
   Main PID: 26532 (httpd)
     Status: "Total requests: 8195; Idle/Busy workers 100/0;Requests/sec: 0.0142; Bytes served/sec:  30 B/sec"
      Tasks: 230 (limit: 1114)
     Memory: 21.8M
        CPU: 8min 8.940s
     CGroup: /system.slice/httpd.service
             ├─26532 /usr/sbin/httpd -DFOREGROUND
             ├─26533 /usr/sbin/httpd -DFOREGROUND
             ├─26534 /usr/sbin/httpd -DFOREGROUND
             ├─26535 /usr/sbin/httpd -DFOREGROUND
             ├─26536 /usr/sbin/httpd -DFOREGROUND
             └─26858 /usr/sbin/httpd -DFOREGROUND

Jul 13 22:57:25 ip-172-31-5-253.ap-south-1.compute.internal systemd[1]: Starting httpd.service - The Apache HTTP Server...
Jul 13 22:57:25 ip-172-31-5-253.ap-south-1.compute.internal systemd[1]: Started httpd.service - The Apache HTTP Server.
Jul 13 22:57:25 ip-172-31-5-253.ap-south-1.compute.internal httpd[26532]: Server configured, listening on: port 80
[root@ip-172-31-5-253 ~]#
```
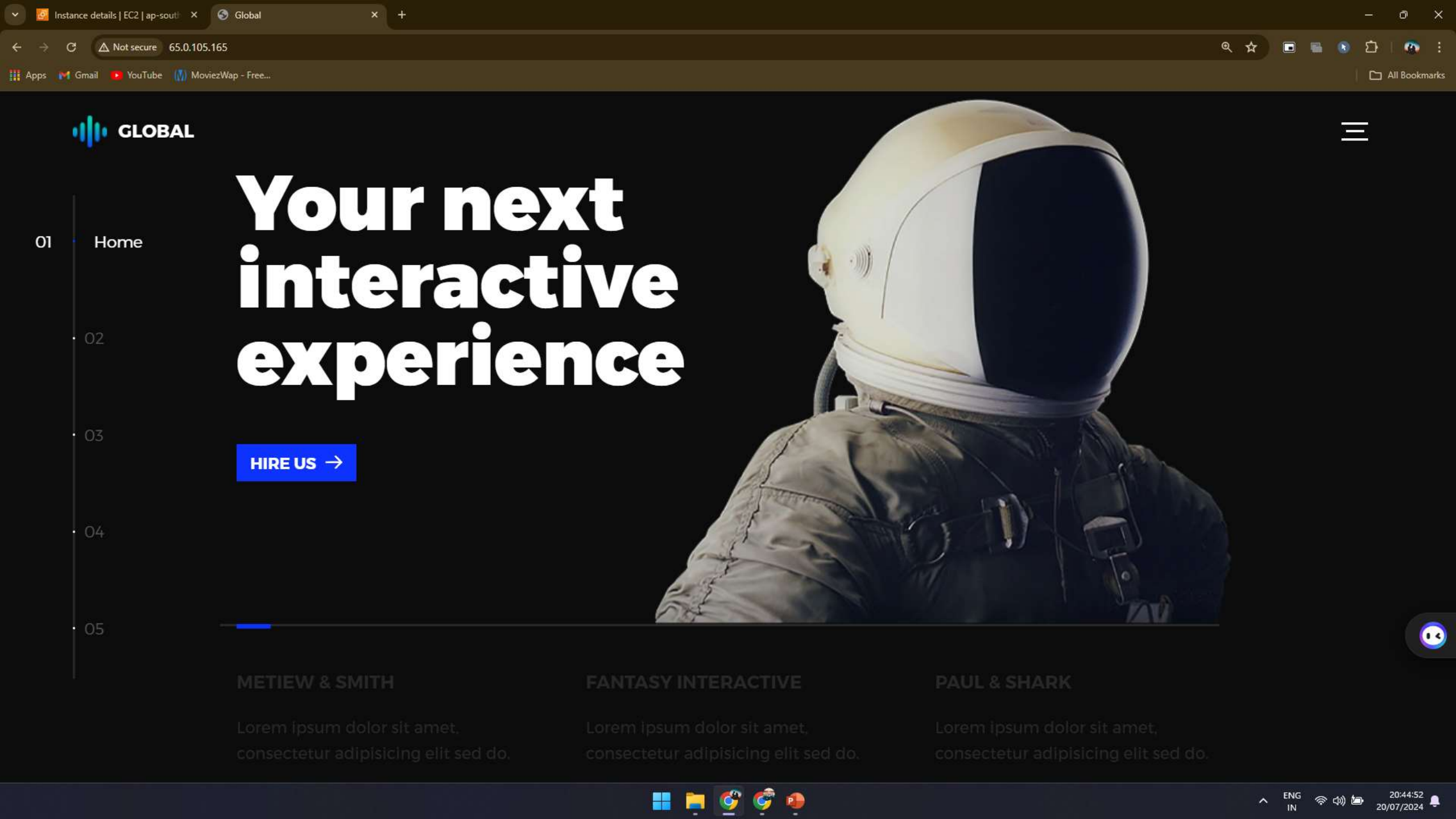
i-02da464abc609e19e (project1)

PublicIPs: 65.0.105.165   PrivateIPs: 172.31.5.253

ENG
IN

20:49:15
20/07/2024