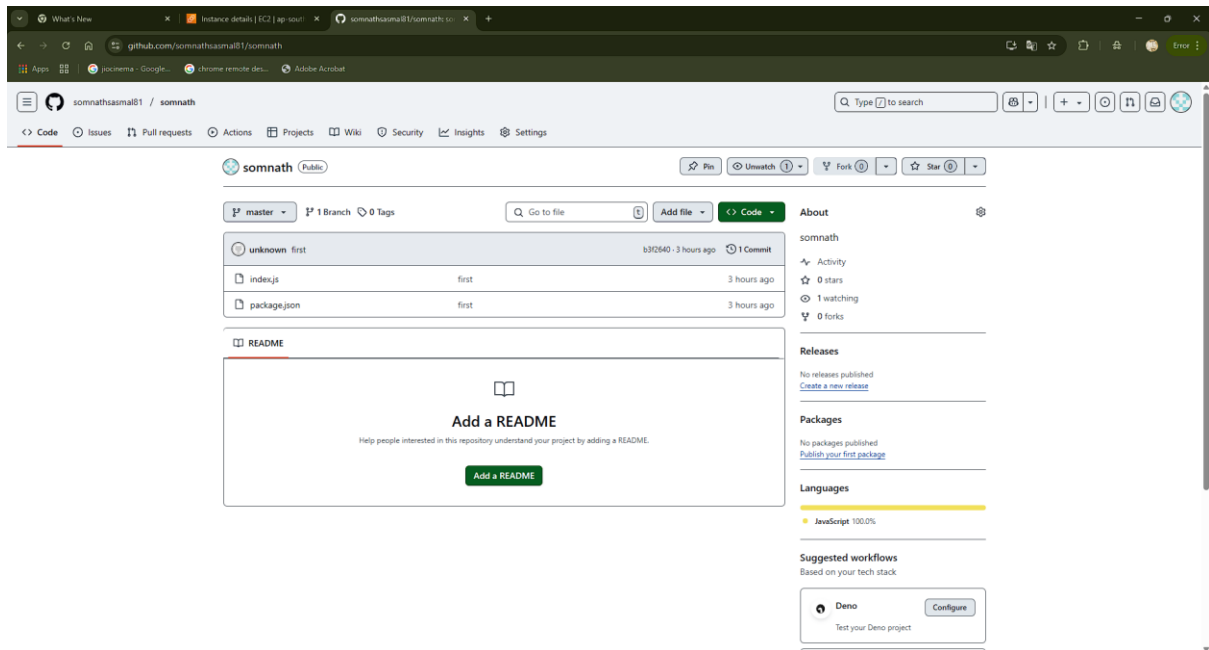


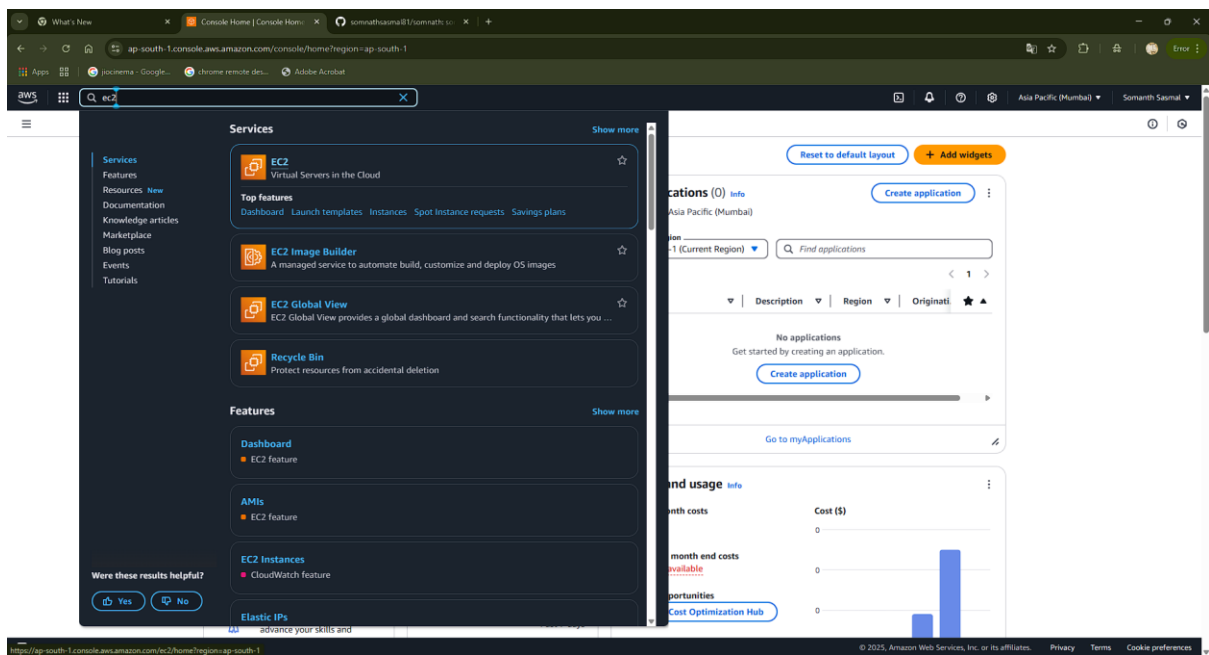
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Title: Deploy a project from GitHub to EC2 by creating a new security group and user data.

Step 1: Upload required files to github

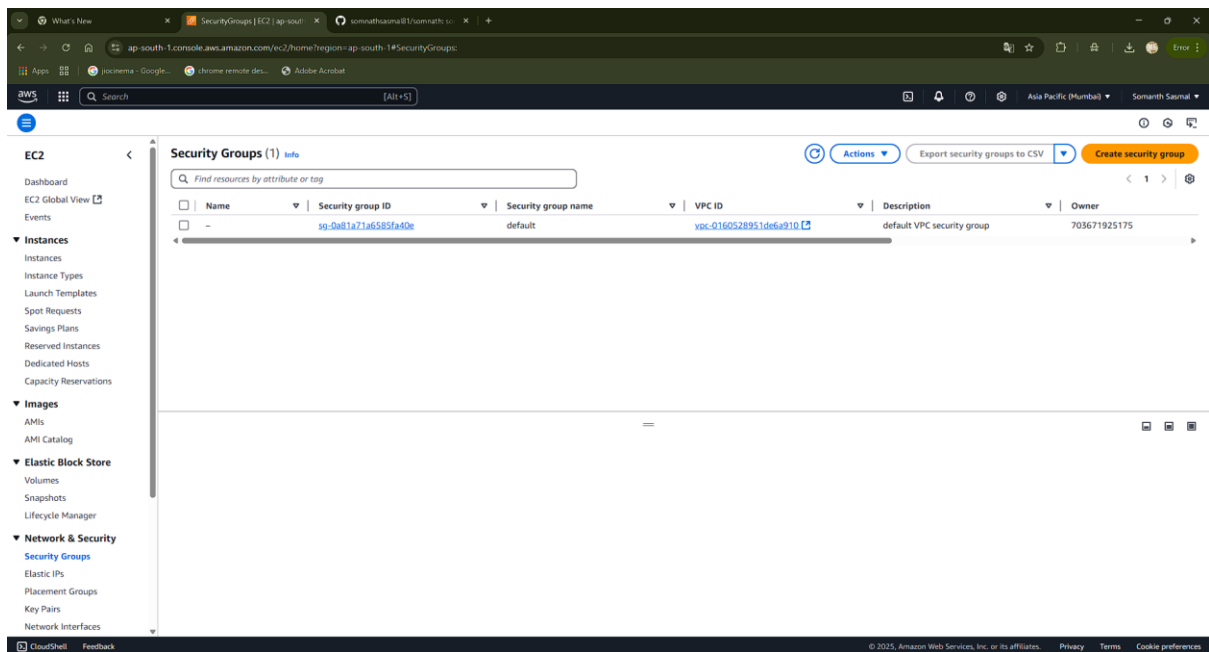


Step 2: Log into AWS and open EC2

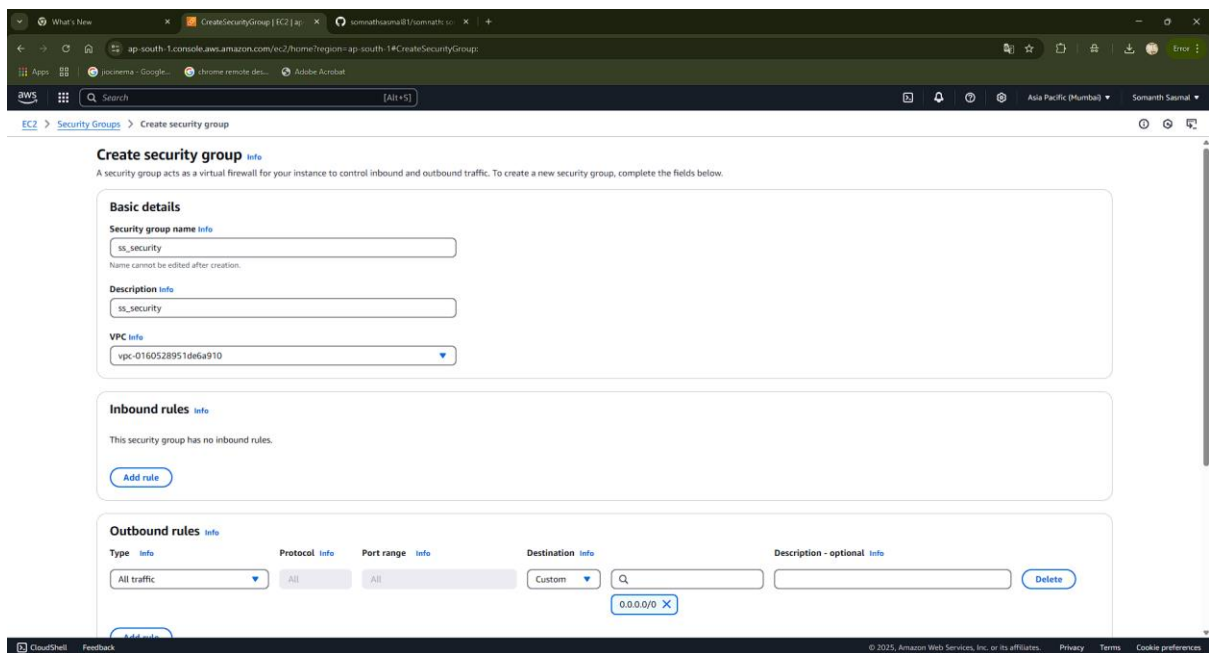


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Step 3: then in the left side click security groups under network and security



Step 4: then create security groups and add inbound rules



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Inbound rules

Type	Protocol	Port range	Source	Description - optional
SSH	TCP	22	Anywhere...	
HTTP	TCP	80	Anywhere...	
HTTPS	TCP	443	Anywhere...	
Custom TCP	TCP	4000	Anywhere...	

Outbound rules

Type	Protocol	Port range	Destination	Description - optional
All traffic	All	All	Custom	

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

[Cancel](#) [Create security group](#)

Step 3: then launch instance

Amazon Elastic Compute Cloud (EC2)
Create, manage, and monitor virtual servers in the cloud.

Amazon Elastic Compute Cloud (Amazon EC2) offers the broadest and deepest compute platform, with over 600 instance types and a choice of the latest processors, storage, networking, operating systems, and purchase models to help you best match the needs of your workload.

Launch a virtual server
To get started, launch an Amazon EC2 instance, which is a virtual server in the cloud.
[Launch instance](#) [View dashboard](#)

Get started
Take our walkthroughs to help you launch an instance, learn about EC2 best practices, and set up your account.
[Get started walkthroughs](#)
[Get started tutorial](#)

Additional actions
[View running instances](#)
[Migrate a server](#)
[Create load balancer](#)
[Request Spot Instances](#)
[Create an Auto Scaling group](#)

Benefits and features
EC2 offers ultimate scalability and control
Fully resizable compute capacity to support virtually any workload. This service is best if you want:

- Highest level of control of the entire technology stack, allowing full integration with all AWS services
- Widest variety of server size options
- Widest availability of operating systems to choose from including Linux, Windows, and macOS
- Global scalability

[Find out more about EC2](#)

Use cases
[Run cloud-native and enterprise](#) [Scale for HPC applications](#)

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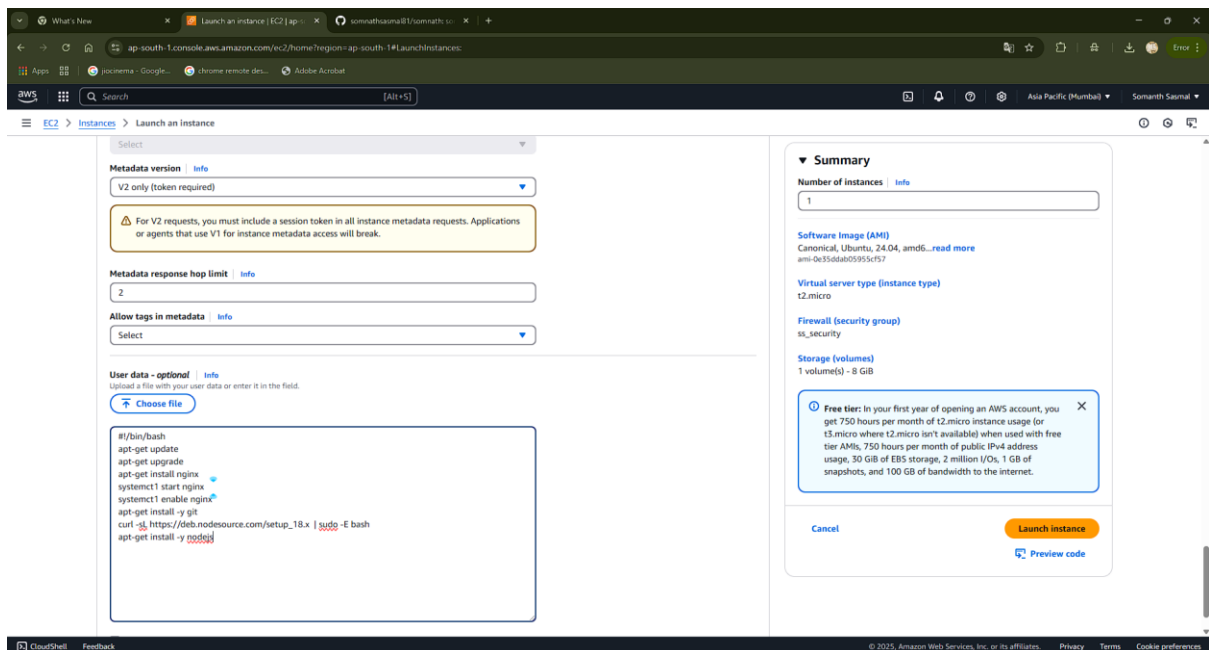
Step 4: then edit instances and click on the advance details

The screenshot displays the AWS Management Console 'Launch an instance' page. The interface is divided into several sections:

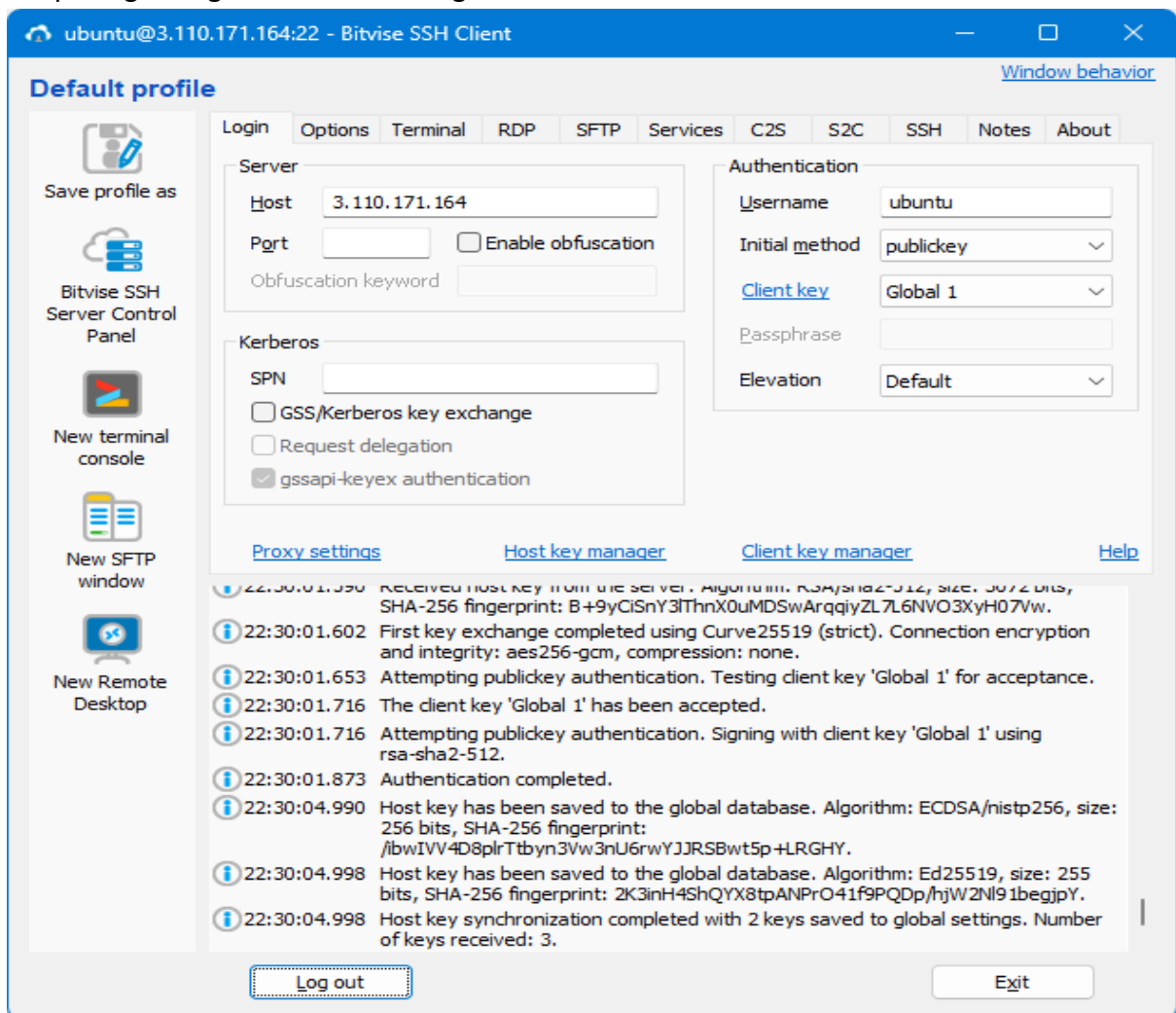
- Name and tags:** A text field labeled 'Name' contains 'github_sm'. There is a link 'Add additional tags'.
- Application and OS Images (Amazon Machine Image):** This section includes a search bar and a 'Quick Start' tab. Under 'Quick Start', there are icons for various operating systems: Amazon Linux, macOS, Ubuntu, Windows, Red Hat, SUSE Linux, and Debian. Below these icons, the 'Amazon Machine Image (AMI)' section shows 'Ubuntu Server 24.04 LTS (HVM), SSD Volume Type' as the selected AMI. It includes details like 'ami-0e35ddab05955c757' and 'Free tier eligible'. A description states: 'Ubuntu Server 24.04 LTS (HVM), EBS General Purpose (SSD) Volume Type. Support available from Canonical (http://www.ubuntu.com/cloud/services). Canonical, Ubuntu, 24.04, amd64 noble image'. Below this is a table with columns: Architecture, AMI ID, Publish Date, and Username.
- Summary:** This sidebar on the right contains key information: 'Number of instances' (1), 'Software Image (AMI)' (Canonical, Ubuntu, 24.04, amd64...), 'Virtual server type (instance type)' (t2.micro), 'Firewall (security group)' (New security group), and 'Storage (volumes)' (1 volume(s) - 8 GiB). It also features a 'Free tier' notification and buttons for 'Cancel', 'Launch instance', and 'Preview code'.
- Firewall (security groups):** This section allows selecting a security group. It has options to 'Create security group' or 'Select existing security group'. The 'Select existing security group' option is chosen, and a dropdown menu shows 'ss_security sg-0383a4ead0a04af31' as the selected group. A link 'Compare security group rules' is also present.
- Configure storage:** This section shows the storage configuration. It includes a dropdown for '1x' (8 GiB) and a dropdown for 'gp3'. A notification states: 'Free tier eligible customers can get up to 30 GiB of EBS General Purpose (SSD) or Magnetic storage'. There is a link 'Add new volume'. Below this, a note explains that the selected AMI contains more instance store volumes than the instance allows, and only the first 0 instance store volumes from the AMI will be accessible from the instance. There is a link 'Click refresh to view backup information' and a note about Data Lifecycle Manager policies. At the bottom of this section is a link 'Advanced details'.

ASSIGNMENT -10

Step 5: then write the code in advance setting and launch instance



Step 6: again login into bitwise using the new IPV4 address



ASSIGNMENT -10

Step 7: After then open a new terminal window and clone the git repository using command git clone link of the repository and install npm

```
ubuntu@3.110.171.164:22 - Bitvise xterm - ubuntu@ip-172-31-12-218: ~/sommnath
ubuntu@ip-172-31-12-218:~$ git clone https://github.com/somnathasmal81/sommnath.git
Cloning into 'sommnath'...
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 4 (delta 0), reused 4 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (4/4), done.
ubuntu@ip-172-31-12-218:~$ cd sommnath/
ubuntu@ip-172-31-12-218:~/sommnath$
```

```
ubuntu@3.110.171.164:22 - Bitvise xterm - ubuntu@ip-172-31-12-218: ~/sommnath
ubuntu@ip-172-31-12-218:~/sommnath$ npm install

added 227 packages, and audited 228 packages in 14s

25 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
npm notice
npm notice New major version of npm available! 10.8.2 -> 11.2.0
npm notice Changelog: https://github.com/npm/cli/releases/tag/v11.2.0
npm notice To update run: npm install -g npm@11.2.0
npm notice
ubuntu@ip-172-31-12-218:~/sommnath$
```

Step 8: then start the server using the command

```
ubuntu@3.110.171.164:22 - Bitvise xterm - ubuntu@ip-172-31-12-218: ~/sommnath
ubuntu@ip-172-31-12-218:~/sommnath$ node index.js
Started server
```

Step 8: Now copy the IPv4 address of the instance and paste it and the put the port like this
IP address:Port here IP address:4000



ASSIGNMENT -10