Project 3

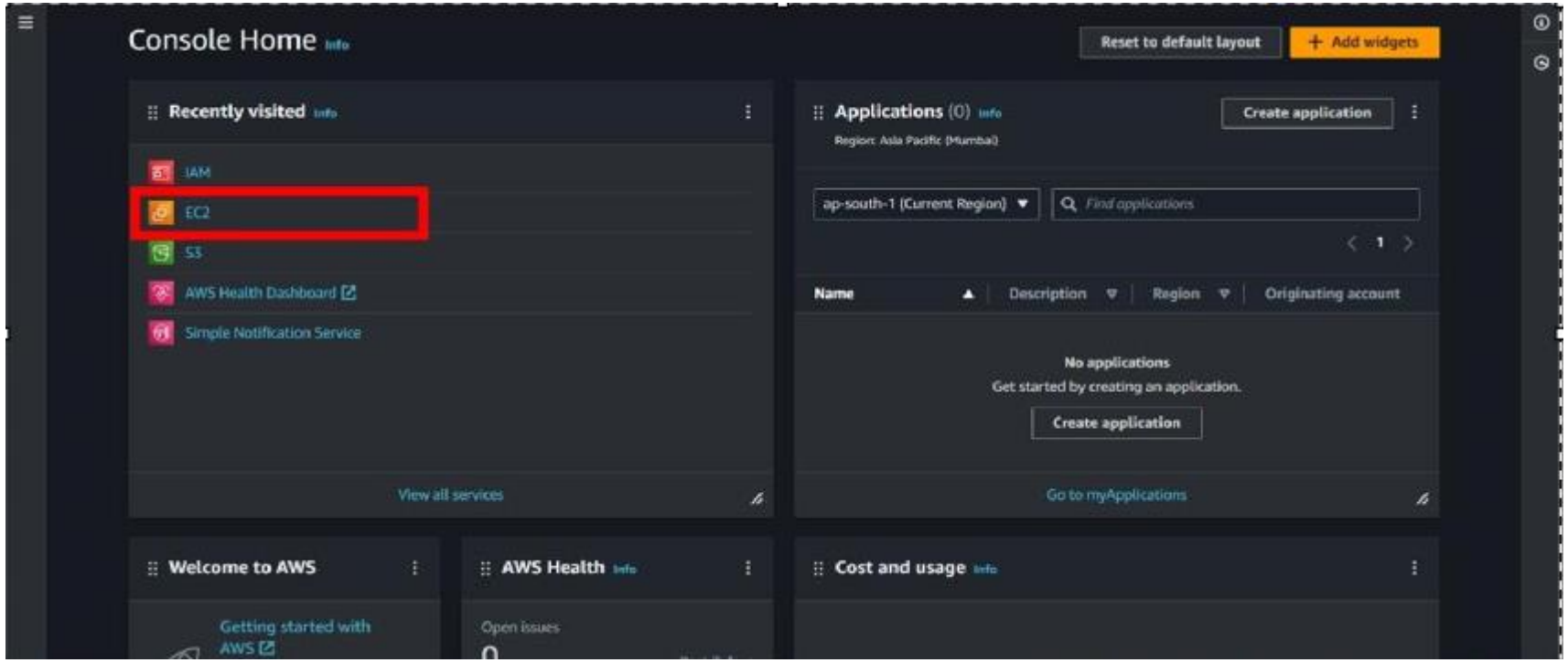
Integrate Grafana with Linux Server for high cpu utilization and create a graph in Grafana.

Sign in to AWS Management Console

1. Click on the Open Console button, and you will get redirected to AWS Console in a new browser tab.
- On the AWS sign-in page, Leave the Account ID as default. Never edit/remove the 12-digit Account ID present in the AWS Console. otherwise, you cannot proceed with the lab.

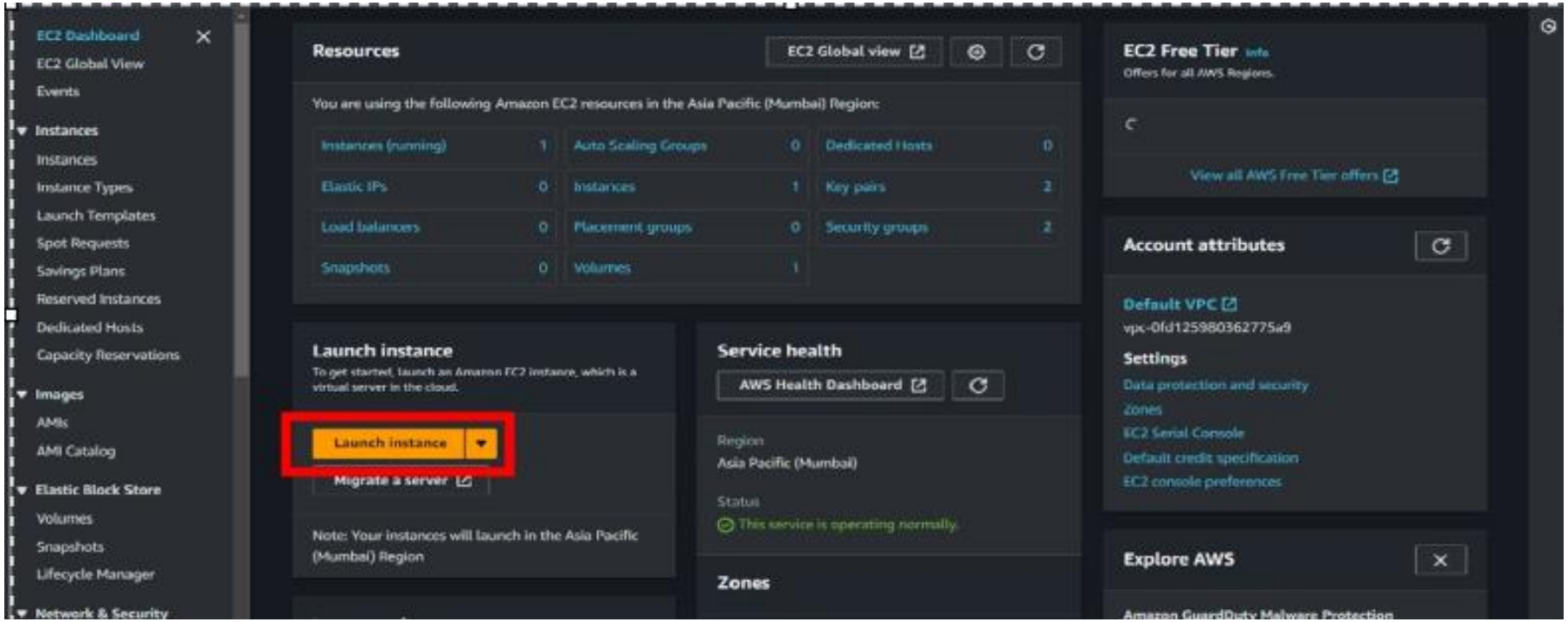
- Now copy your User Name and Password in the Lab Console to the IAM Username and Password in AWS Console and click on the Sign in button.

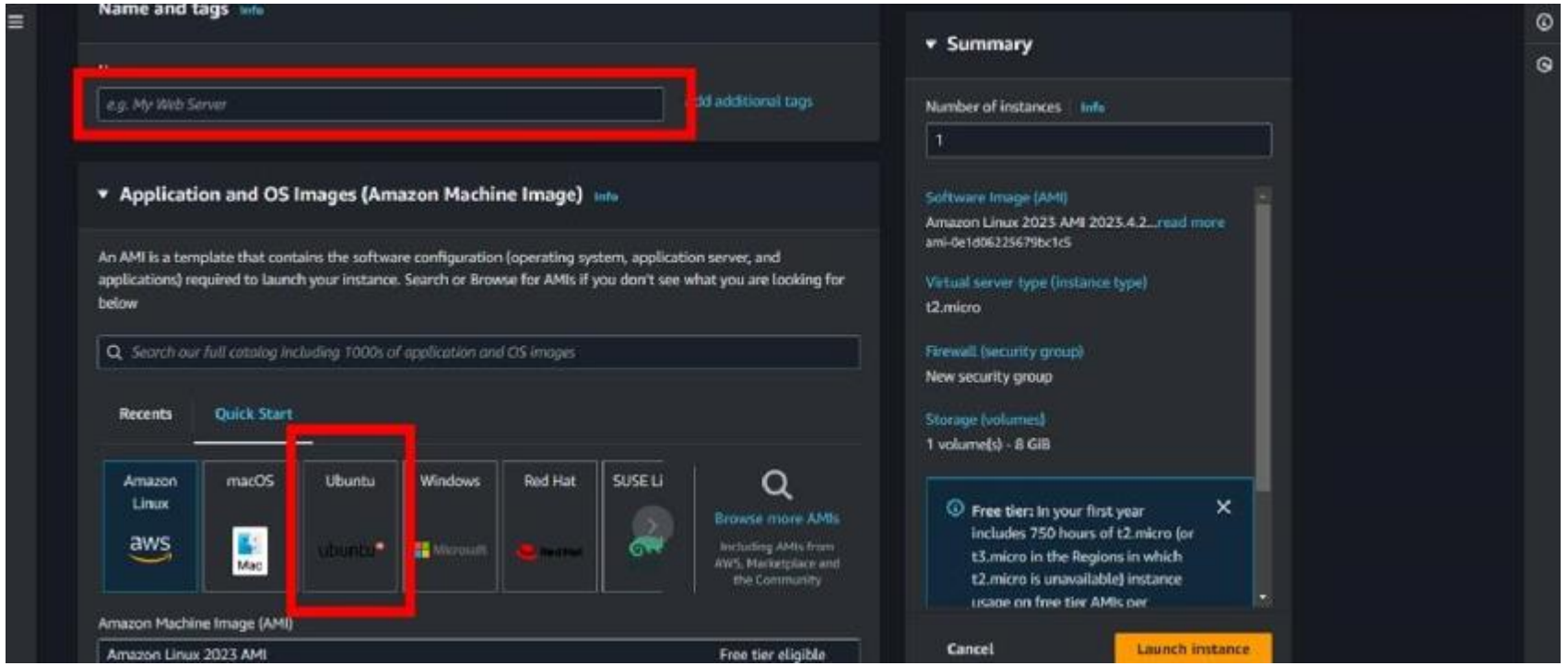
2. Once Signed in to the AWS Management Console, Make the default AWS Region as US East (N. Virginia) us-east-1.



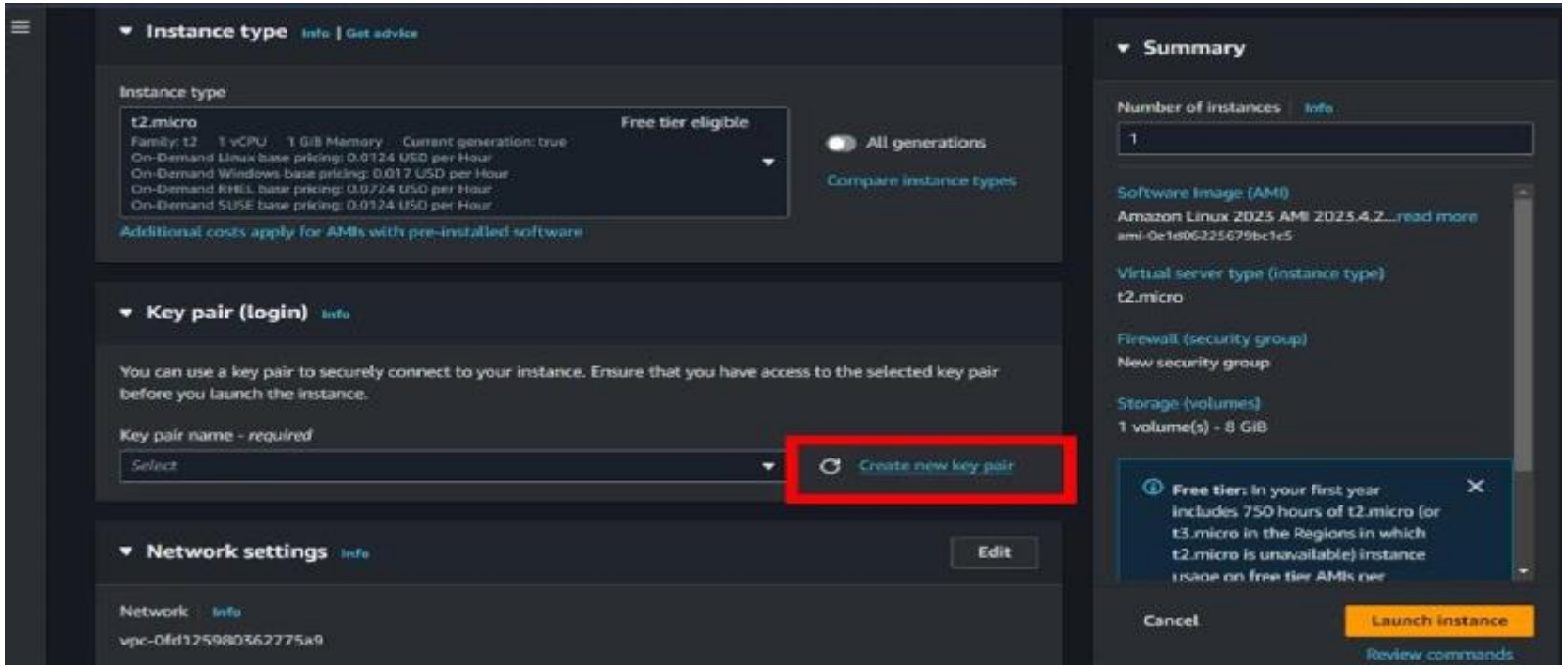
Create an EC2 Instance(ubuntu):

- For creating an EC2 instance follow the following steps as shown in snapshots.

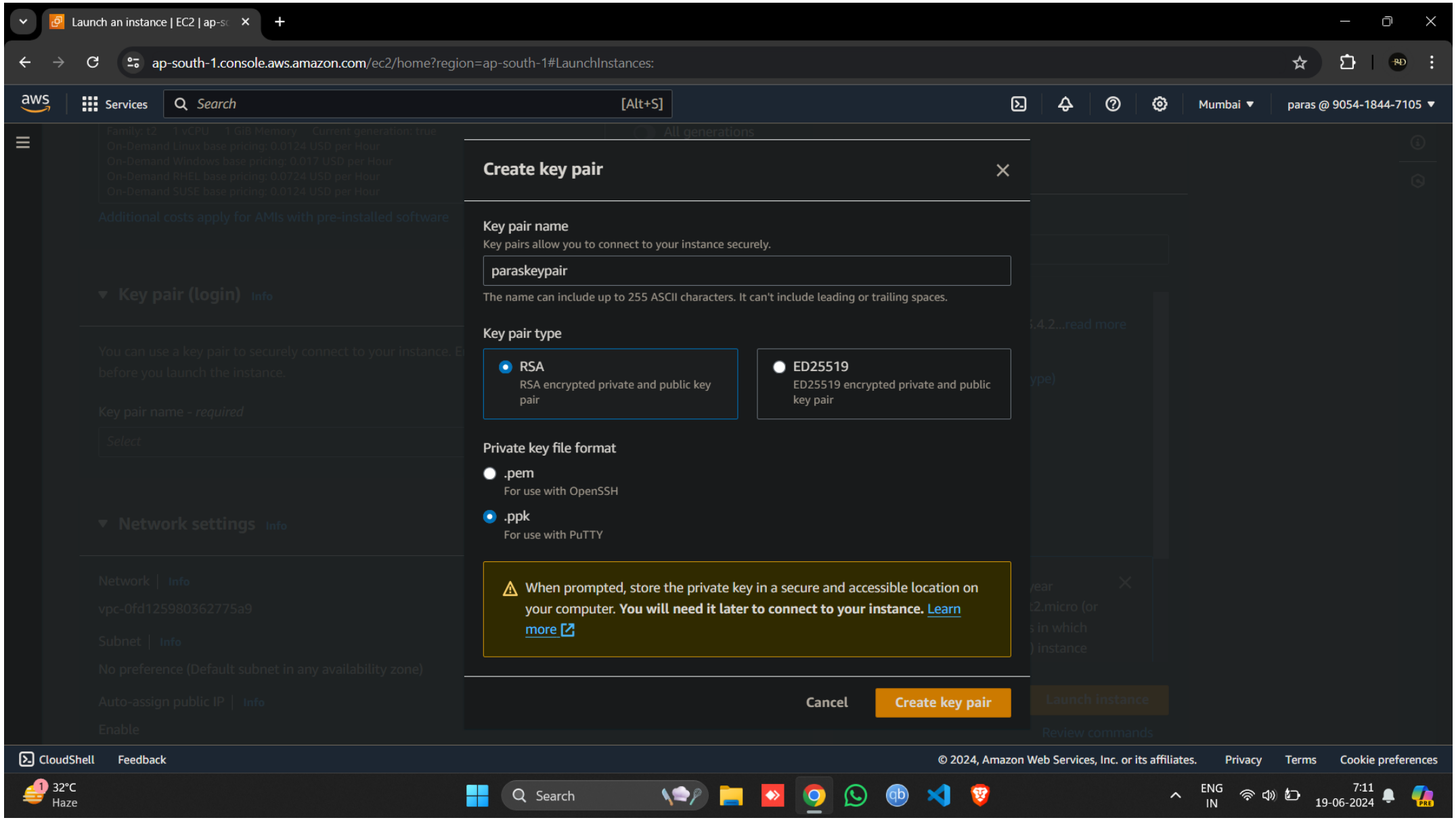




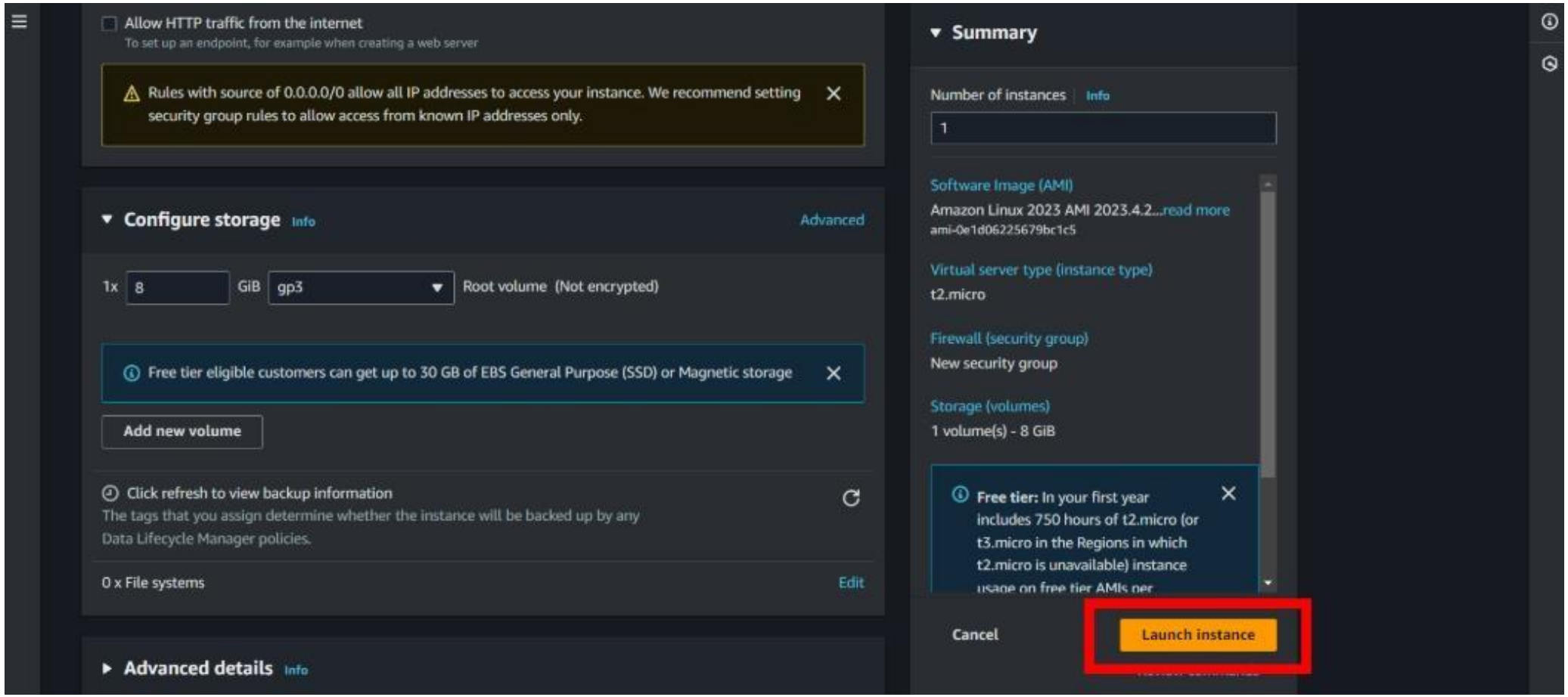
- Provide the EC2 name of your choise and select”**Ubuntu”**as an OS Image.



- Create a new key pair.

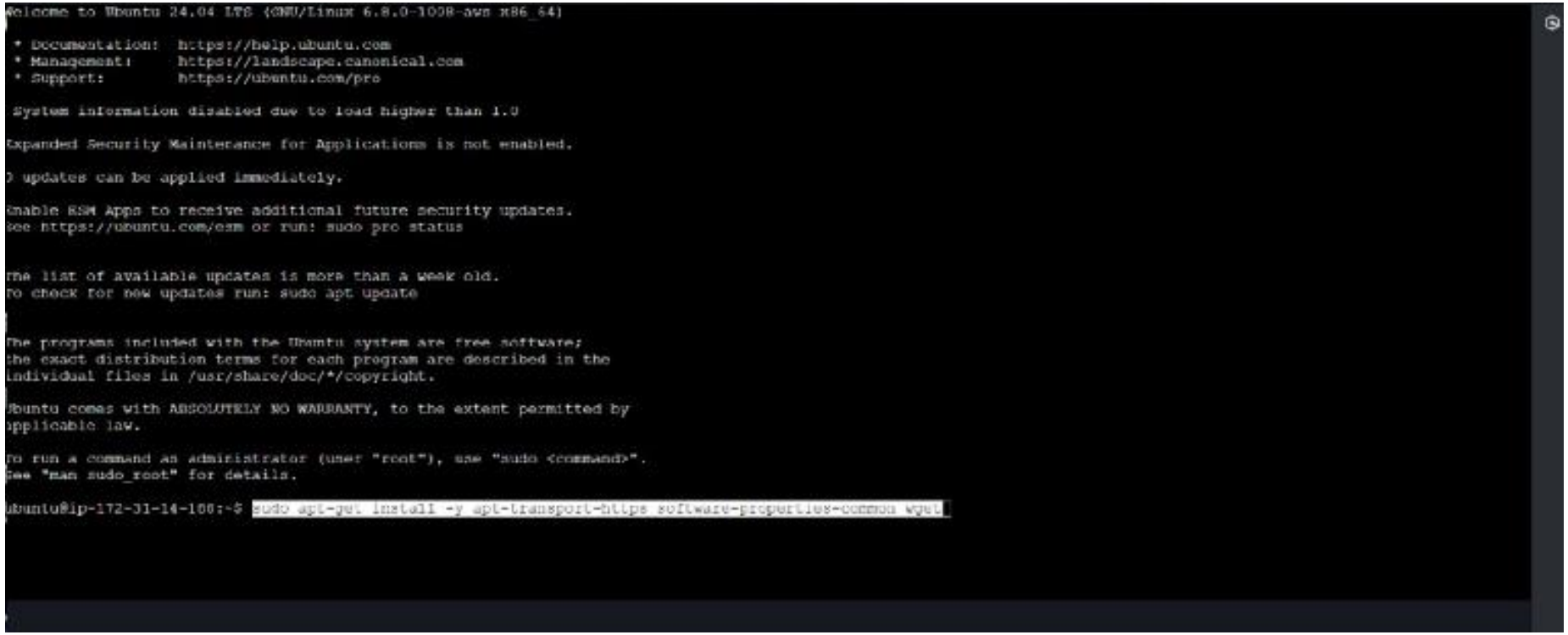

Launch an instance | EC2 | ap-s
ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#LaunchInstances:
aws
Services
Search
[Alt+S]
Mumbai
paras @ 9054-1844-7105
Create key pair
Key pair name
Key pairs allow you to connect to your instance securely.
paraskeypair
The name can include up to 255 ASCII characters. It can't include leading or trailing spaces.
Key pair type
RSA
RSA encrypted private and public key pair
ED25519
ED25519 encrypted private and public key pair
Private key file format
.pem
For use with OpenSSH
.ppk
For use with PuTTY
When prompted, store the private key in a secure and accessible location on your computer. You will need it later to connect to your instance. Learn more
Cancel
Create key pair
Key pair (login) Info
Network settings Info
Launch instance
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences
32°C
Haze
Search
ENG
IN
7:11
19-06-2024

- Scroll down and click on “**LAUNCH INSTANCE** “.



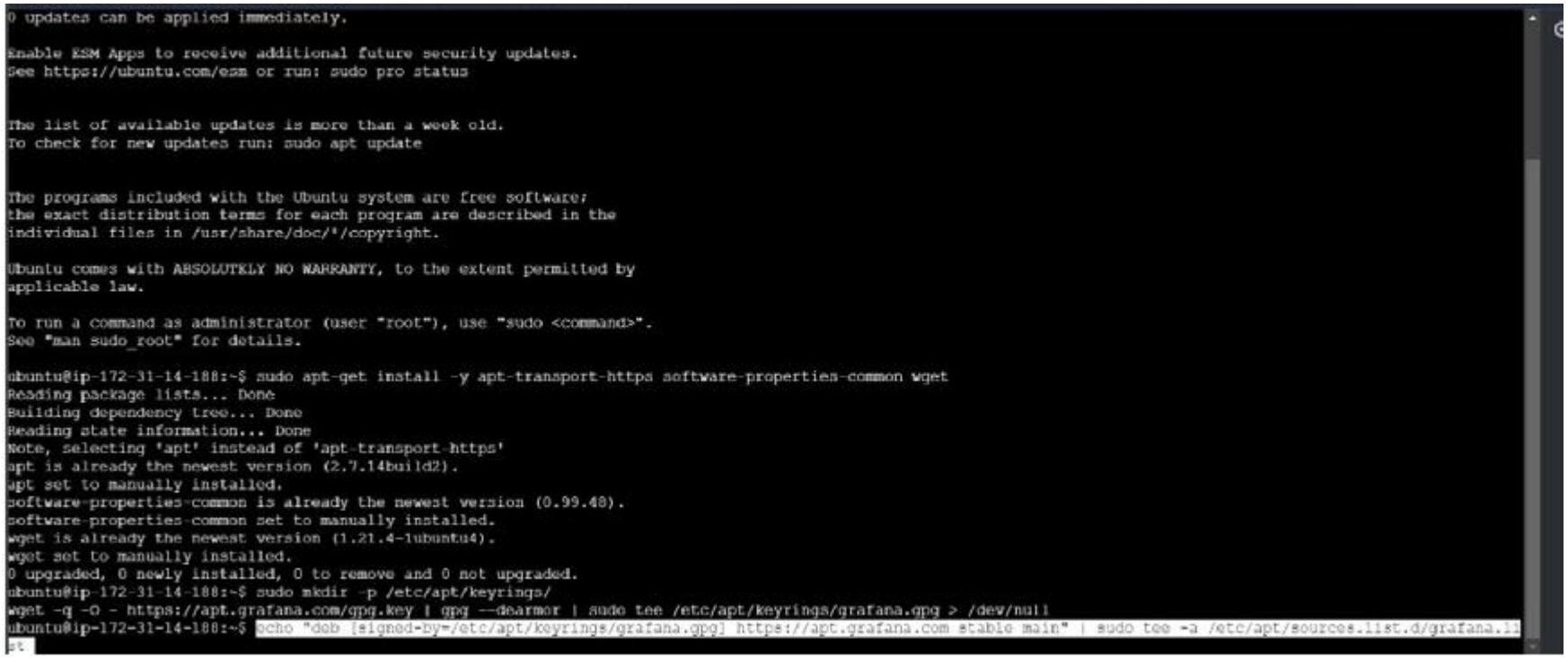
- Then open your instance and connect that instance by putty or on web browser.

- After connecting the instance follow the given command or read Grafana documentation for help.

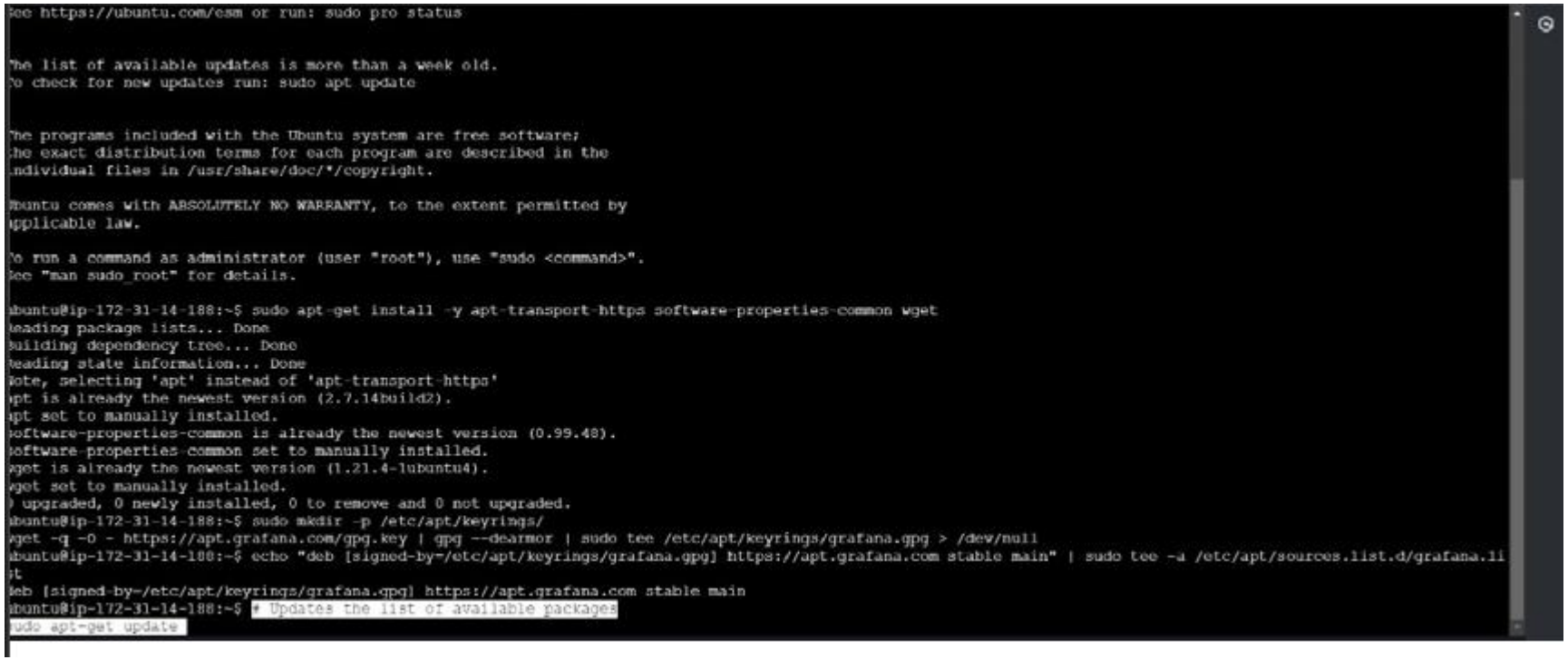


sudo apt-get install -y apt-transport-https software-properties-common wget

sudomkdir -p /etc/apt/keyrings/wget -q -O - https://apt.grafana.com/gpg.key | gpg --dearmor | sudo tee /etc/apt/keyrings/grafana.gpg> /dev/null

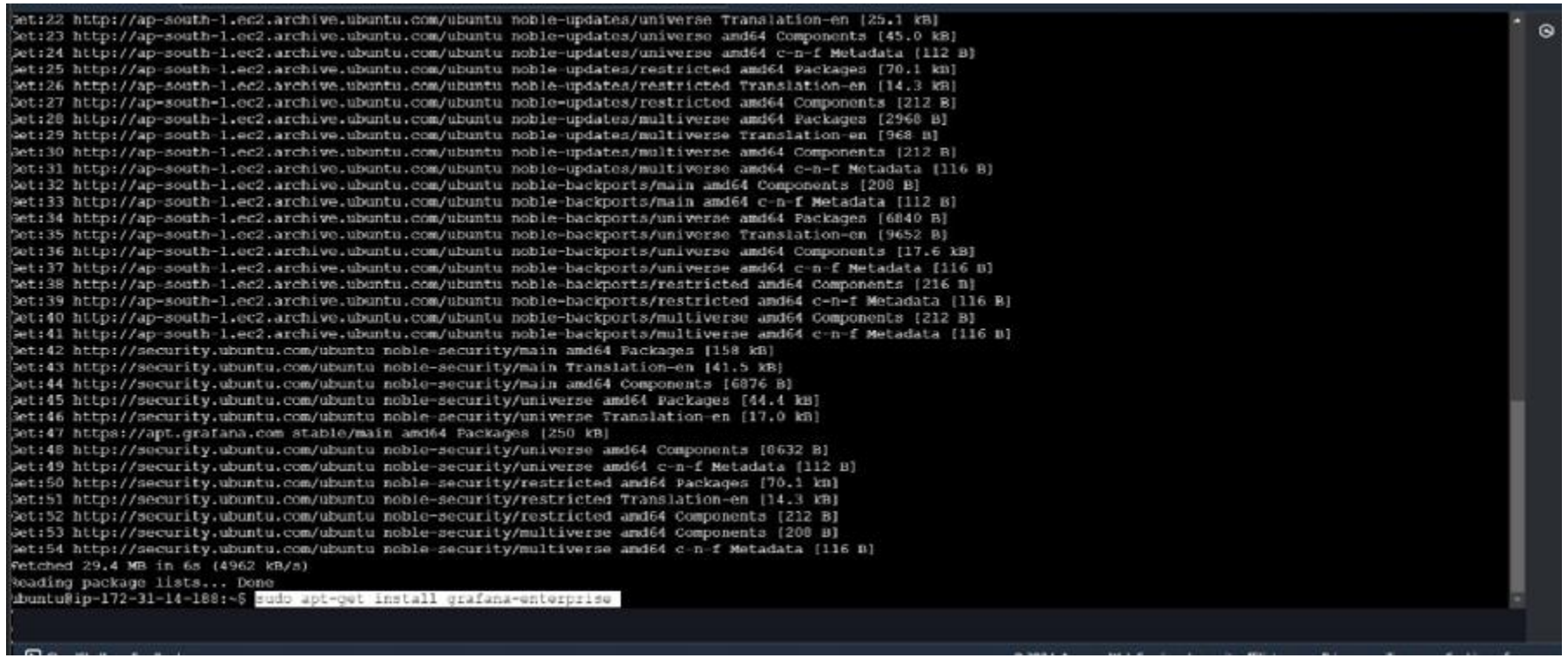


echo "deb [signed-by=/etc/apt/keyrings/grafana.gpg] https://apt.grafana.com stable main" | sudo tee -a /etc/apt/sources.list.d/grafana.list



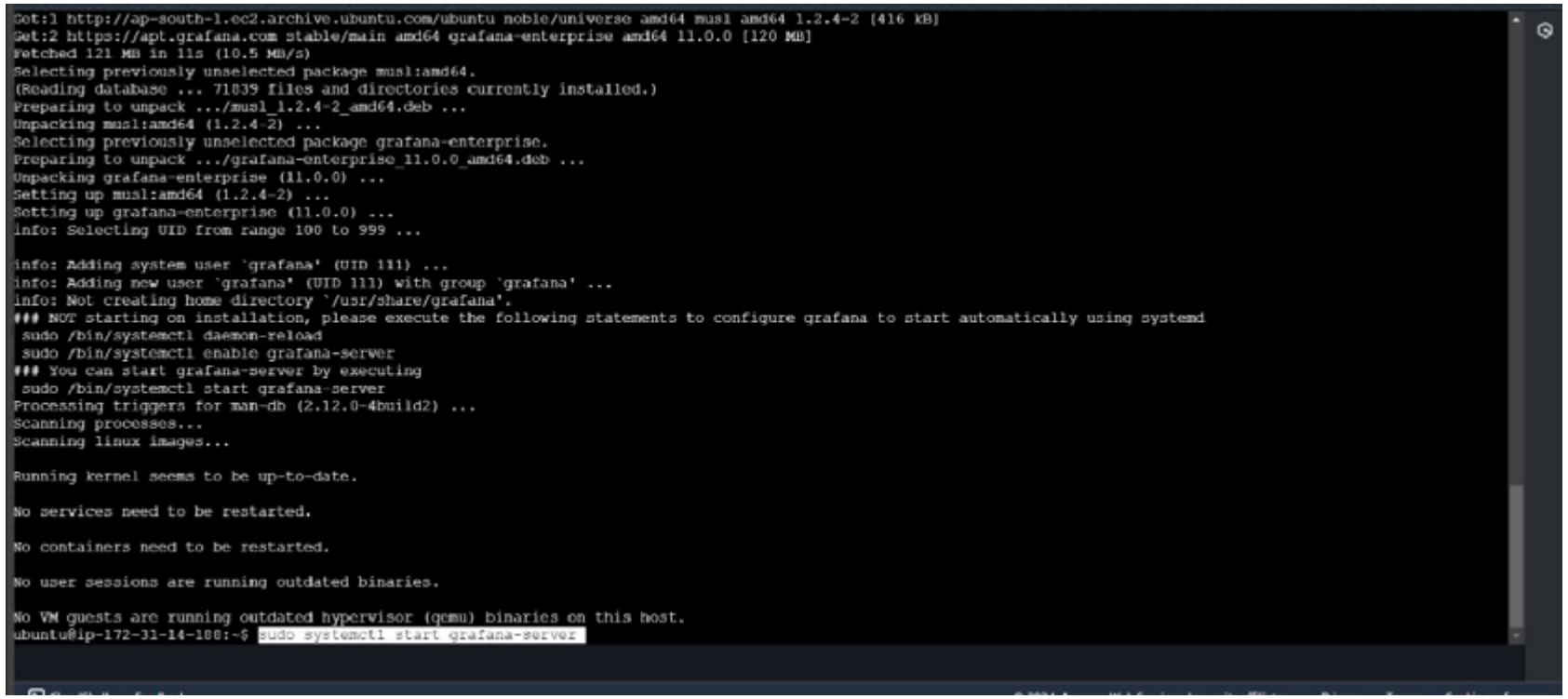
To updates the list of available packages

sudo apt-get update

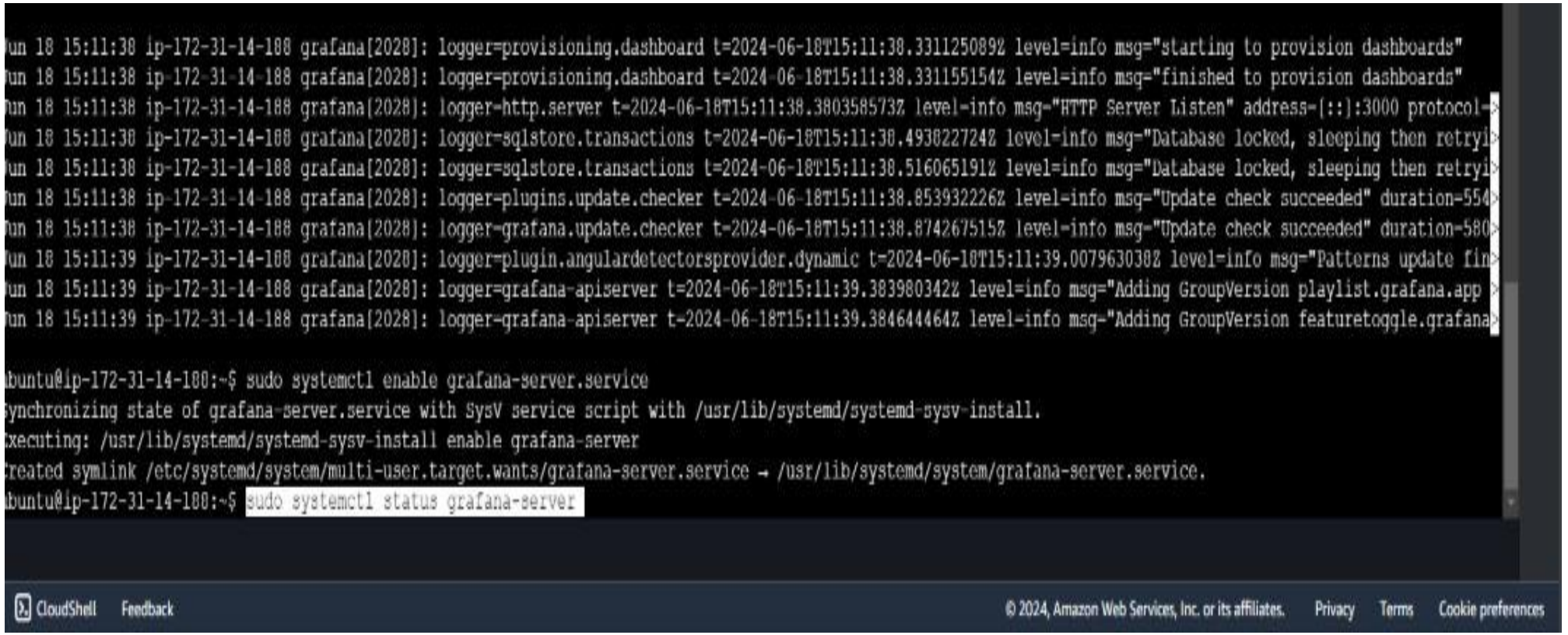


To installs the latest Enterprise release:

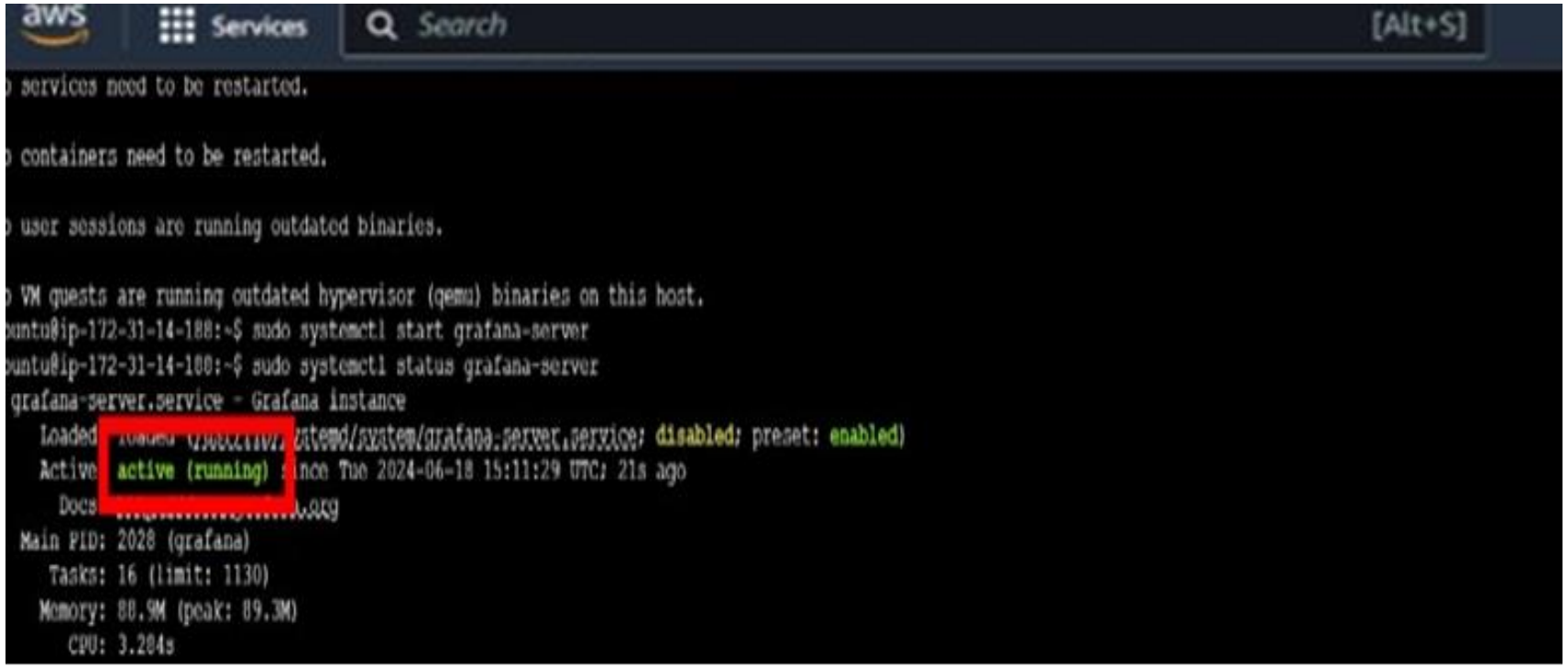
sudo apt-get install grafana-enterprise

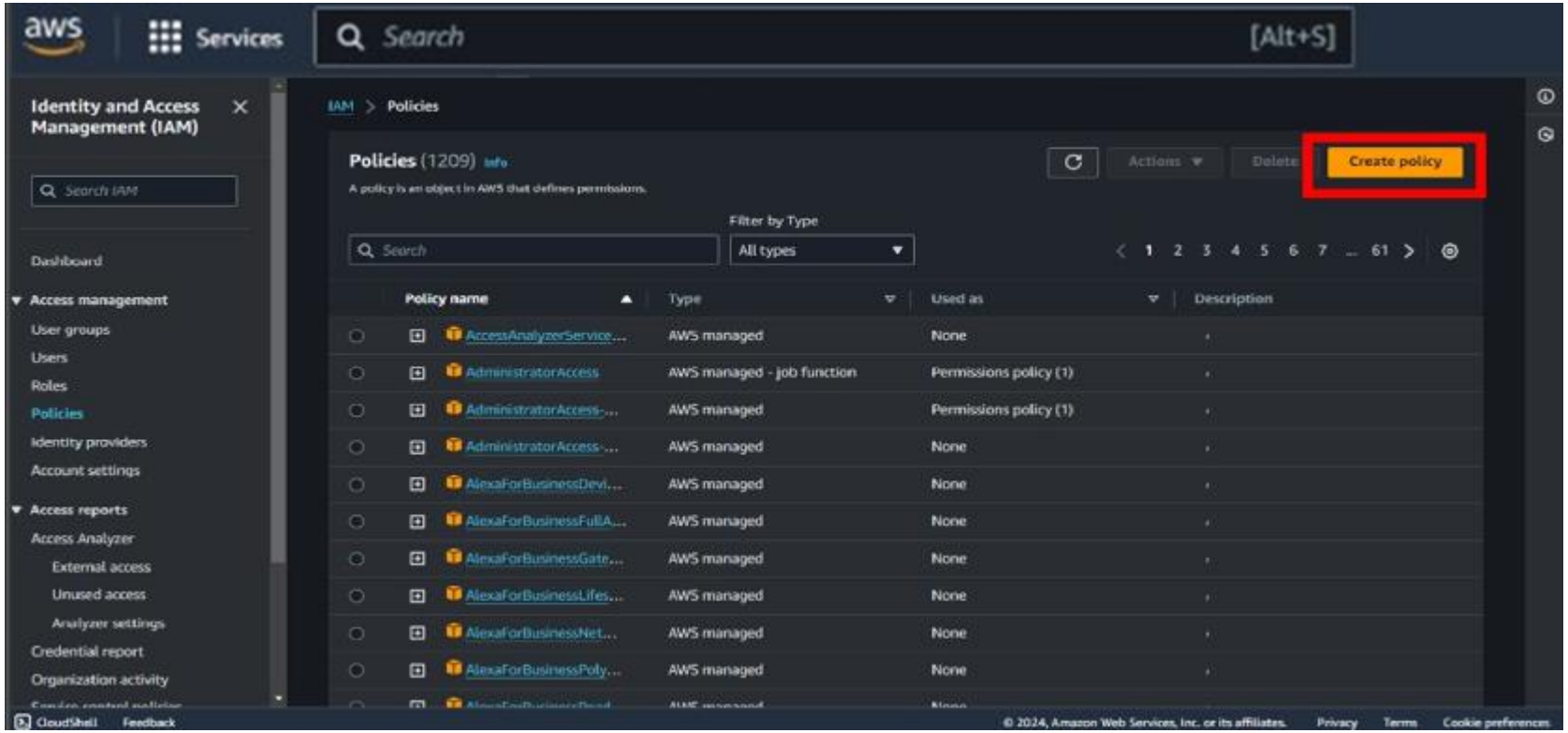


- *sudosystemctl start grafana-server*
- *sudosystemctl enable grafana-server.service*

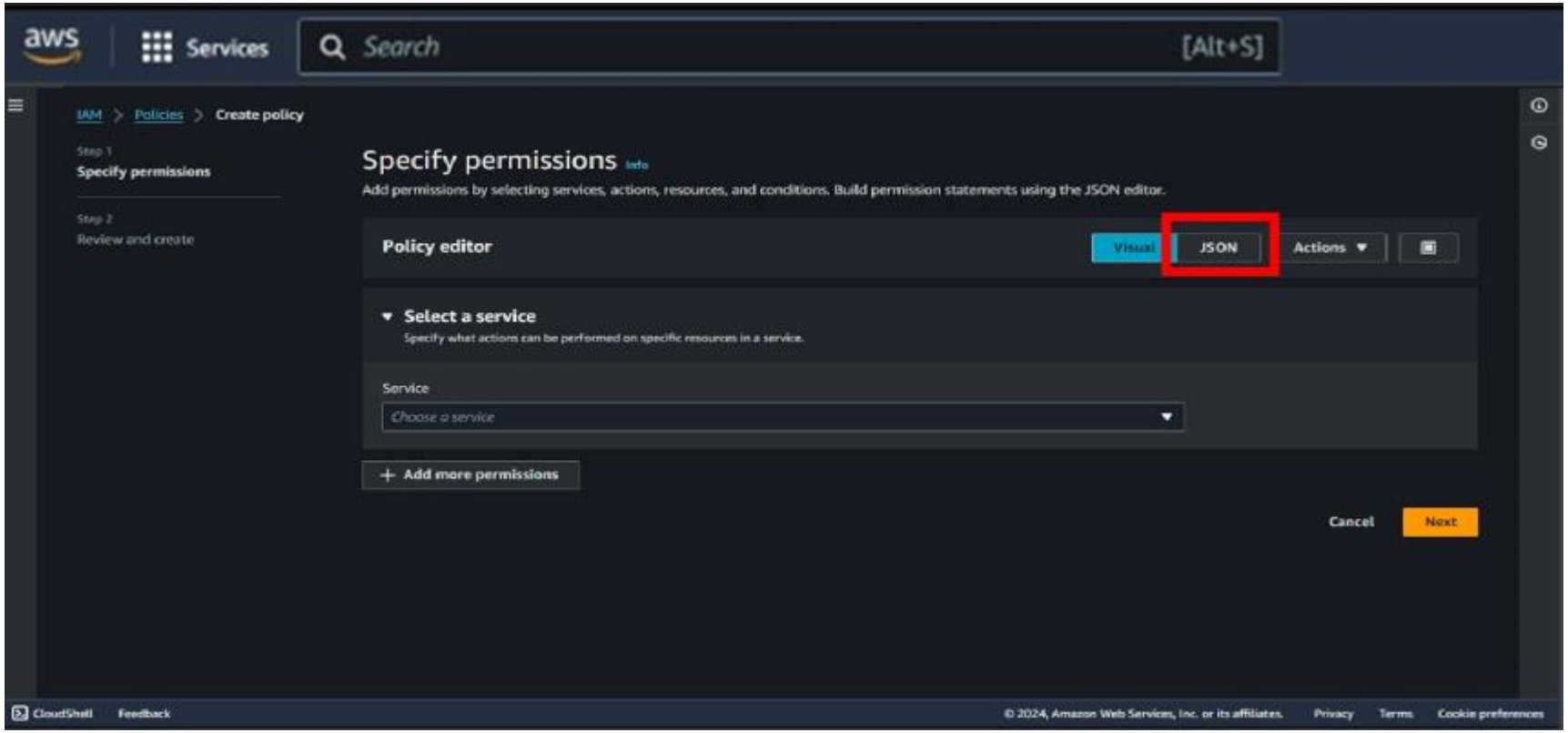


sudosystemctl status grafana-server.service

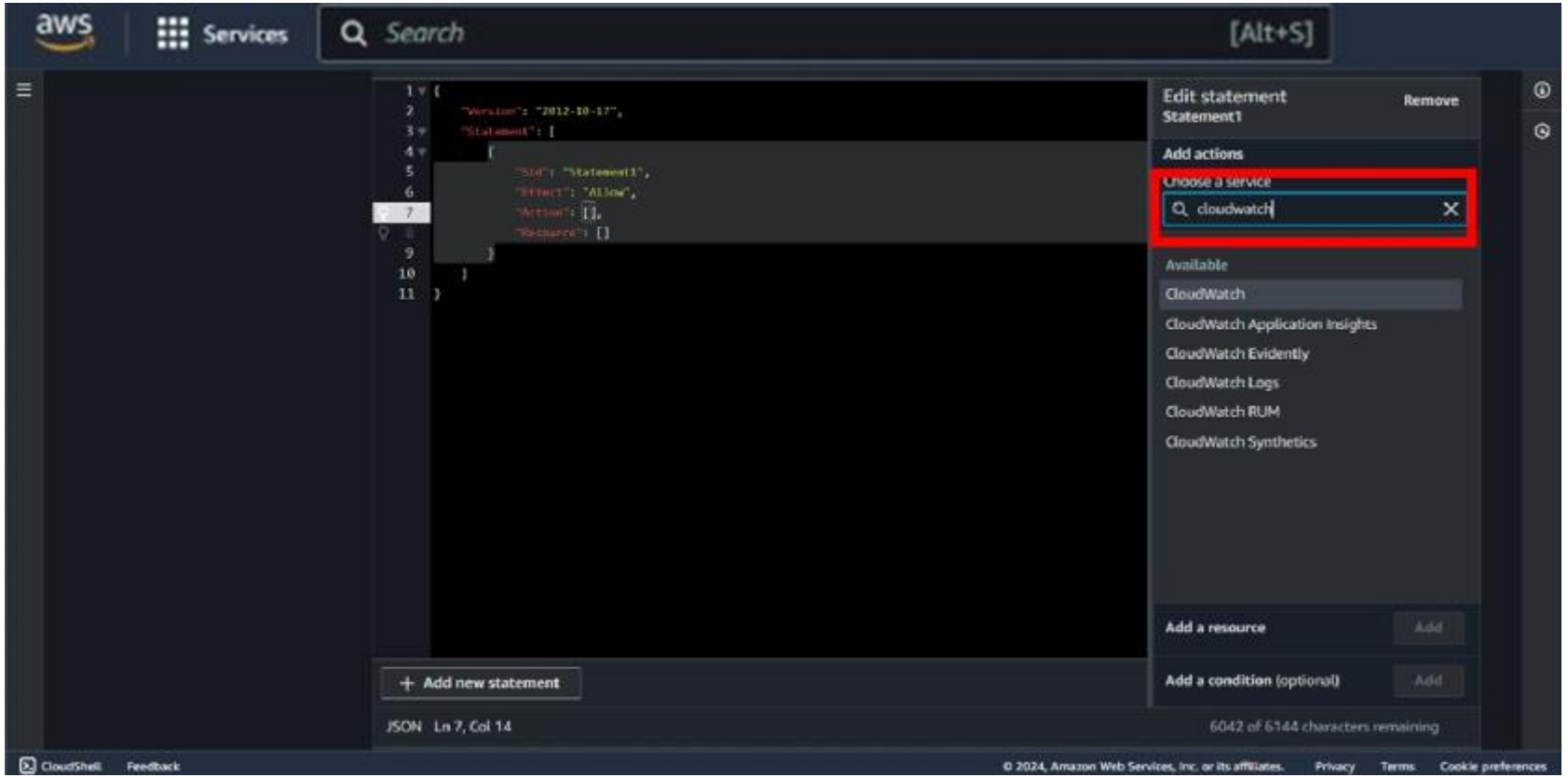

aws
Services
Search
[Alt+S]
services need to be restarted.
containers need to be restarted.
user sessions are running outdated binaries.
VM guests are running outdated hypervisor (qemu) binaries on this host.
buntu@ip-172-31-14-188:~$ sudo systemctl start grafana-server
buntu@ip-172-31-14-188:~$ sudo systemctl status grafana-server
grafana-server.service - Grafana instance
Loaded
/systemd/system/grafana-server.service; disabled; preset: enabled)
Active
active (running)
since Tue 2024-06-18 15:11:29 UTC; 21s ago
Docs
Main PID: 2028 (grafana)
Tasks: 16 (limit: 1130)
Memory: 88.9M (peak: 89.3M)
CPU: 3.284s



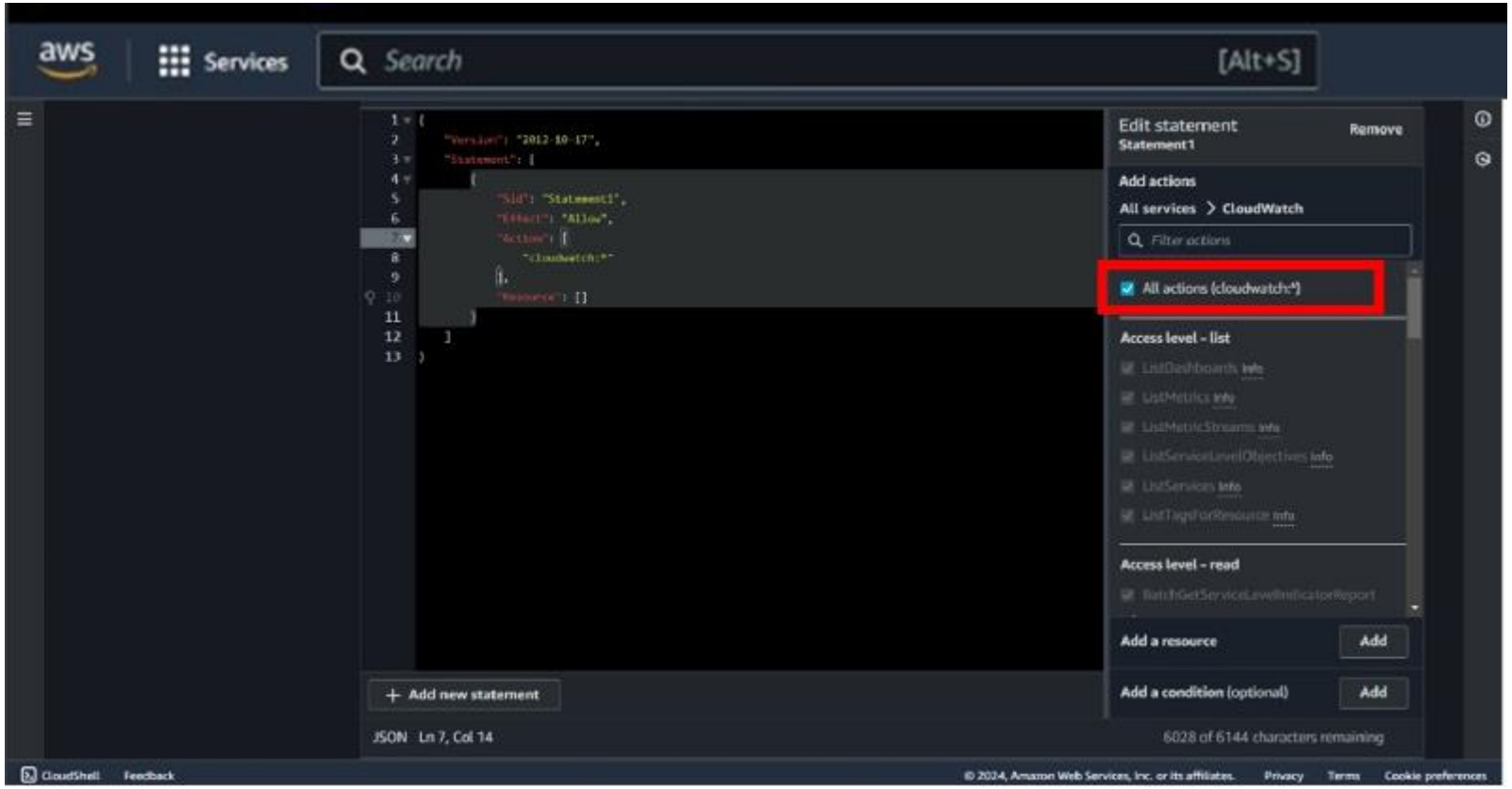
- Then search IAM role and go to policies and click on **Create policies**.



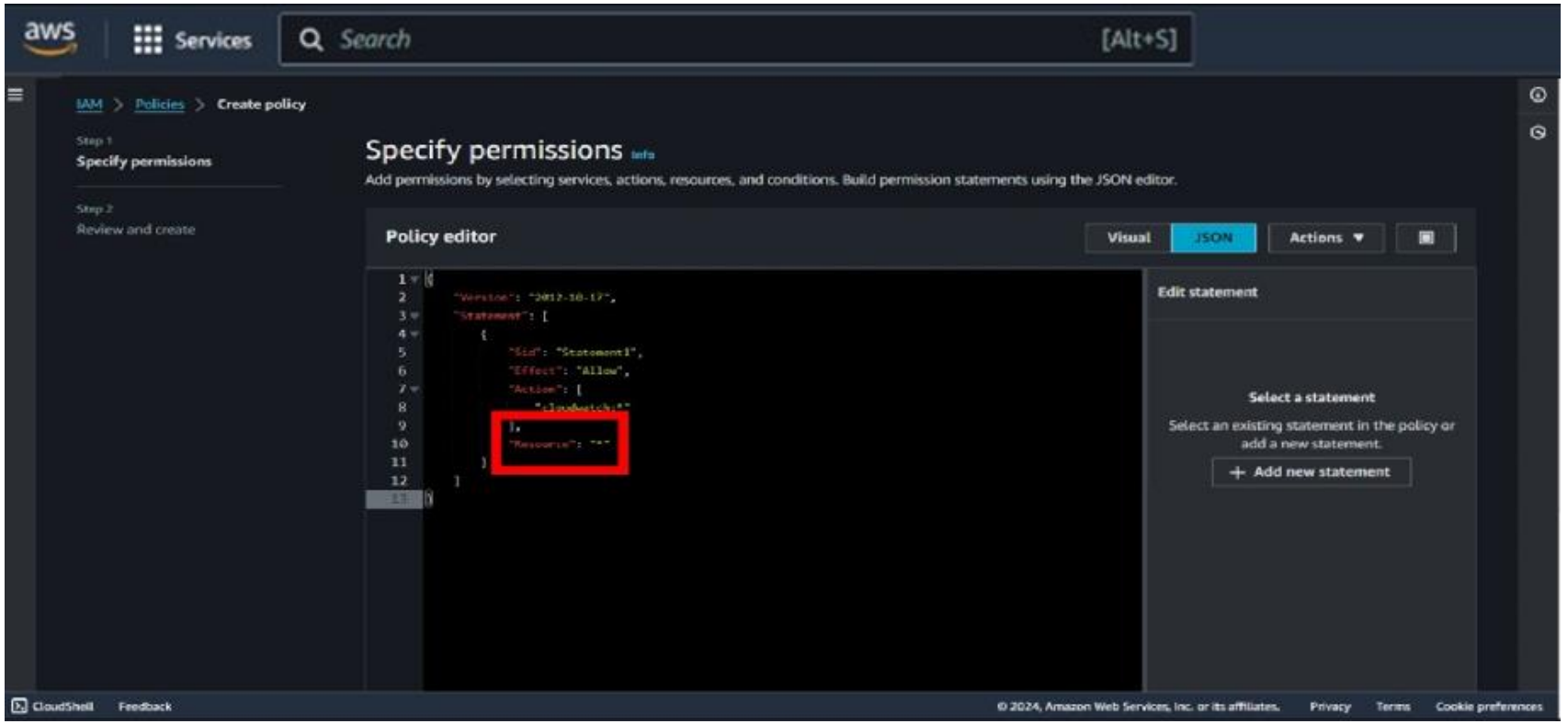
- Then go to **JSON** type.



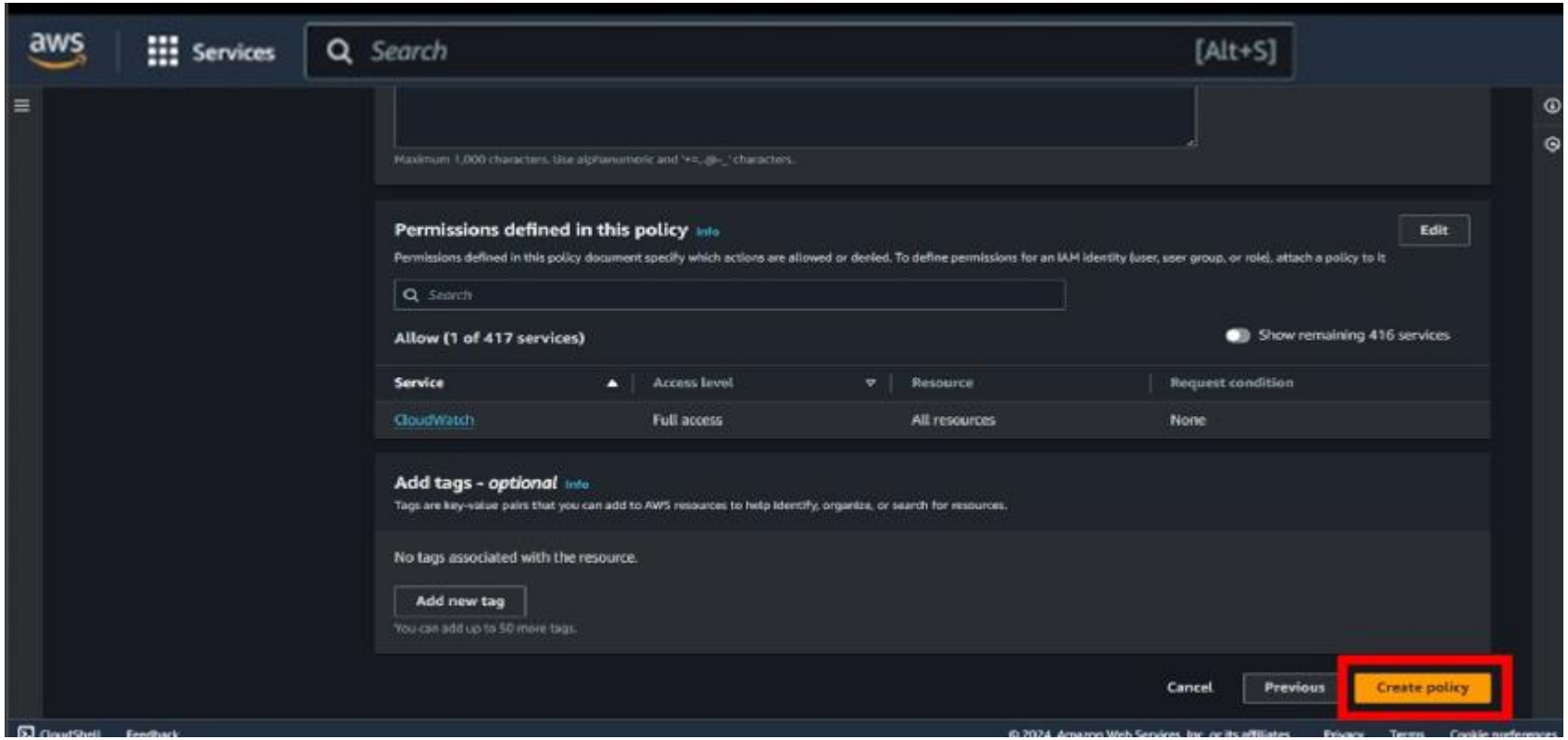
- Click on add action and search for **“Cloudwatch”**.



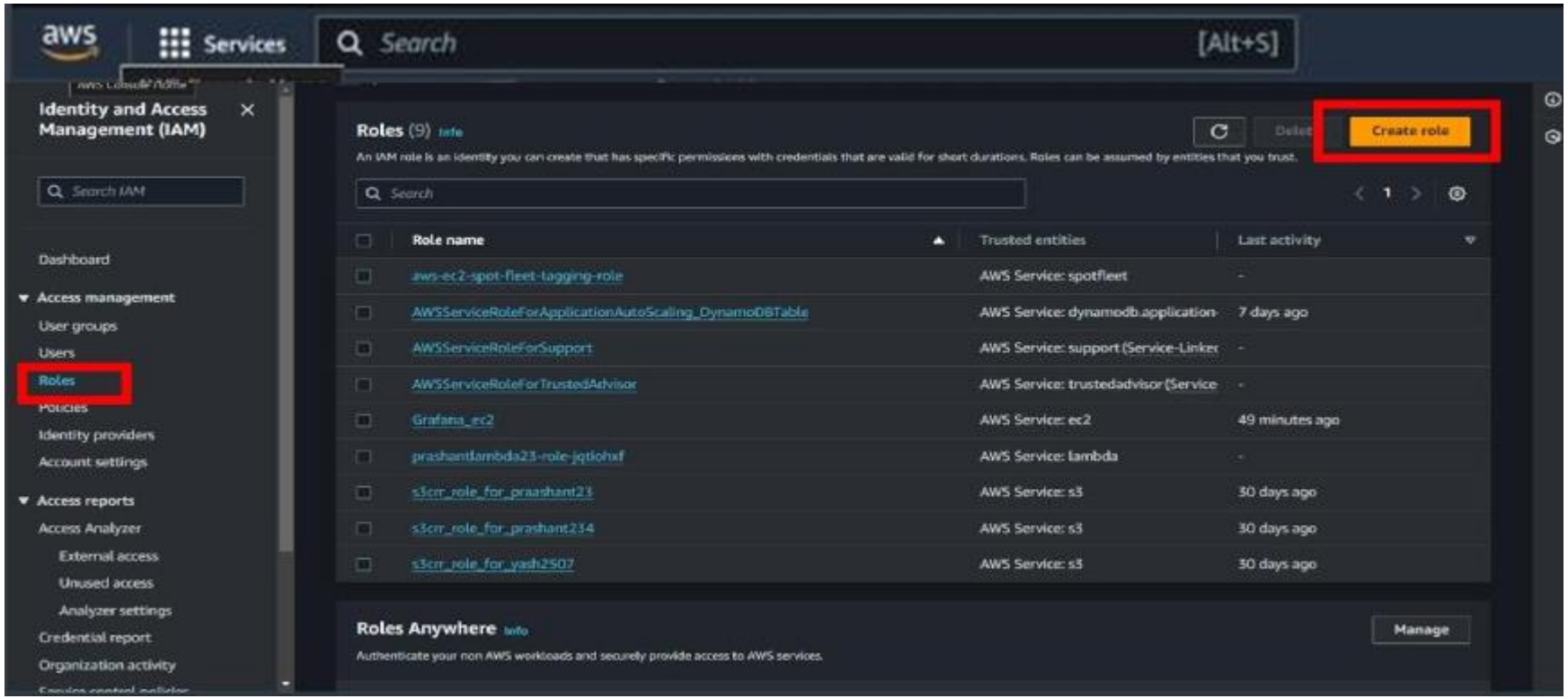
- After selecting cloudwatch select **“All actions “.**



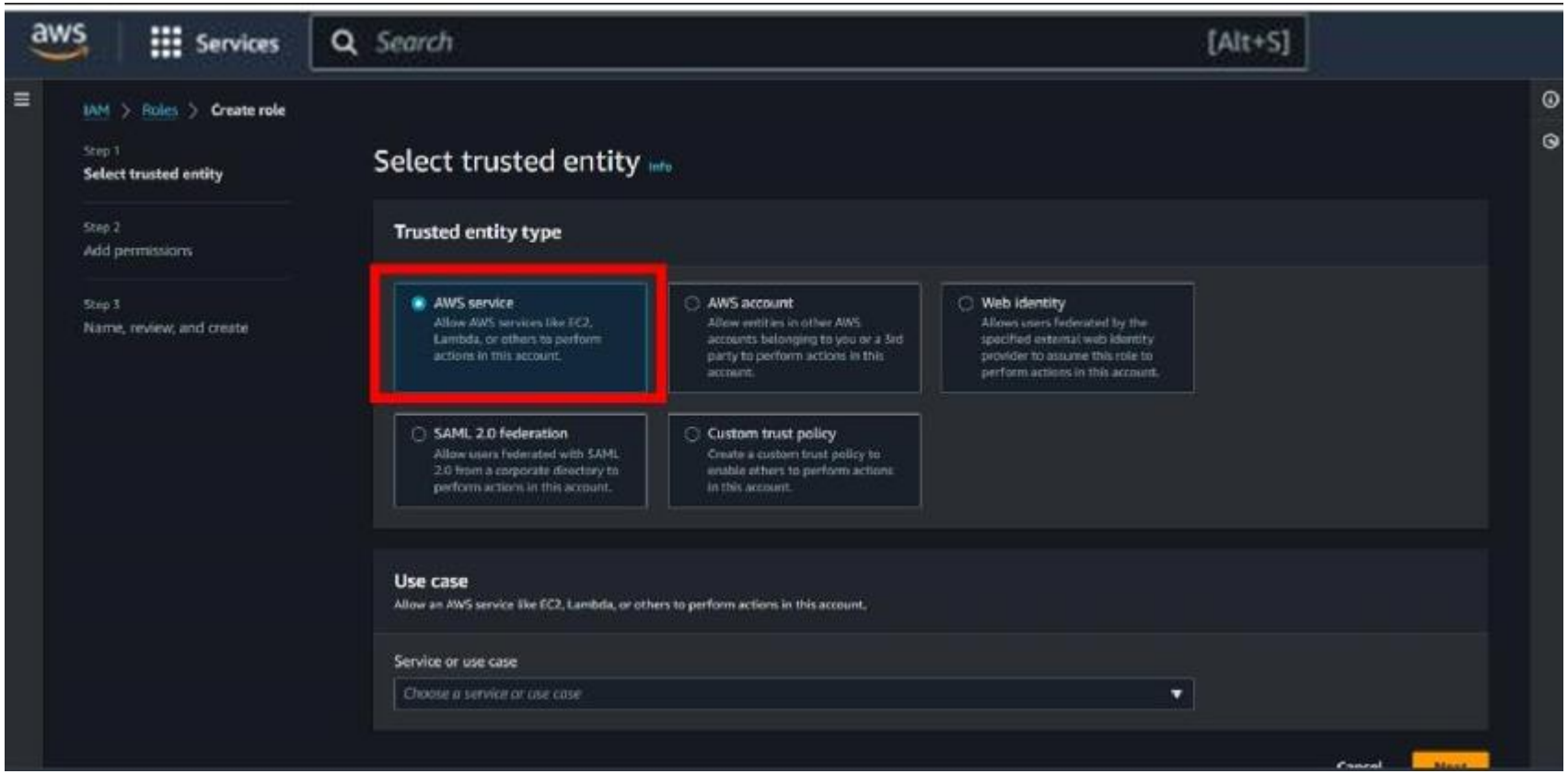
- Then put **“Resource “ : ”*”**



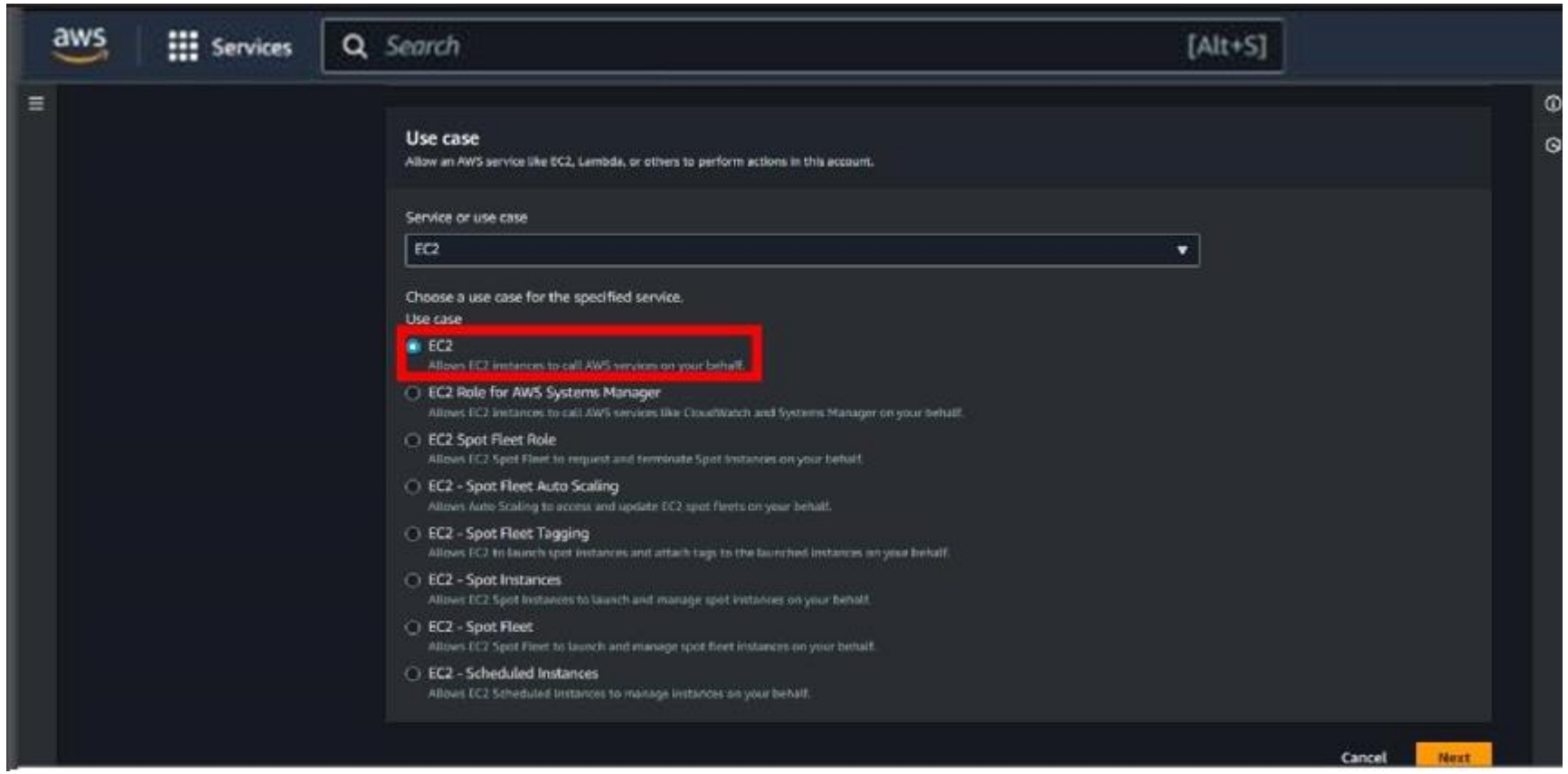
- Scroll down and click on **Create policy.**



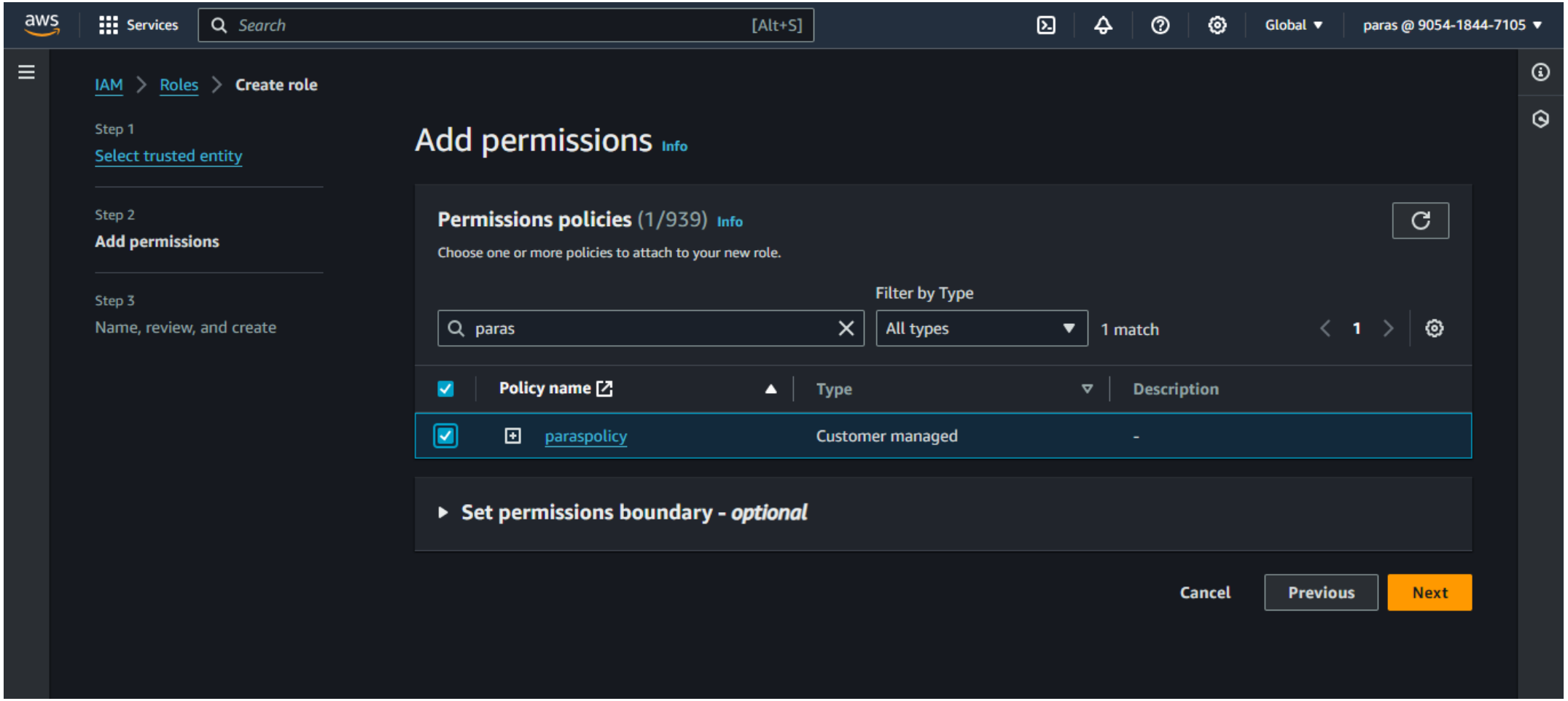
- Then go to roles and click on **Create roles.**



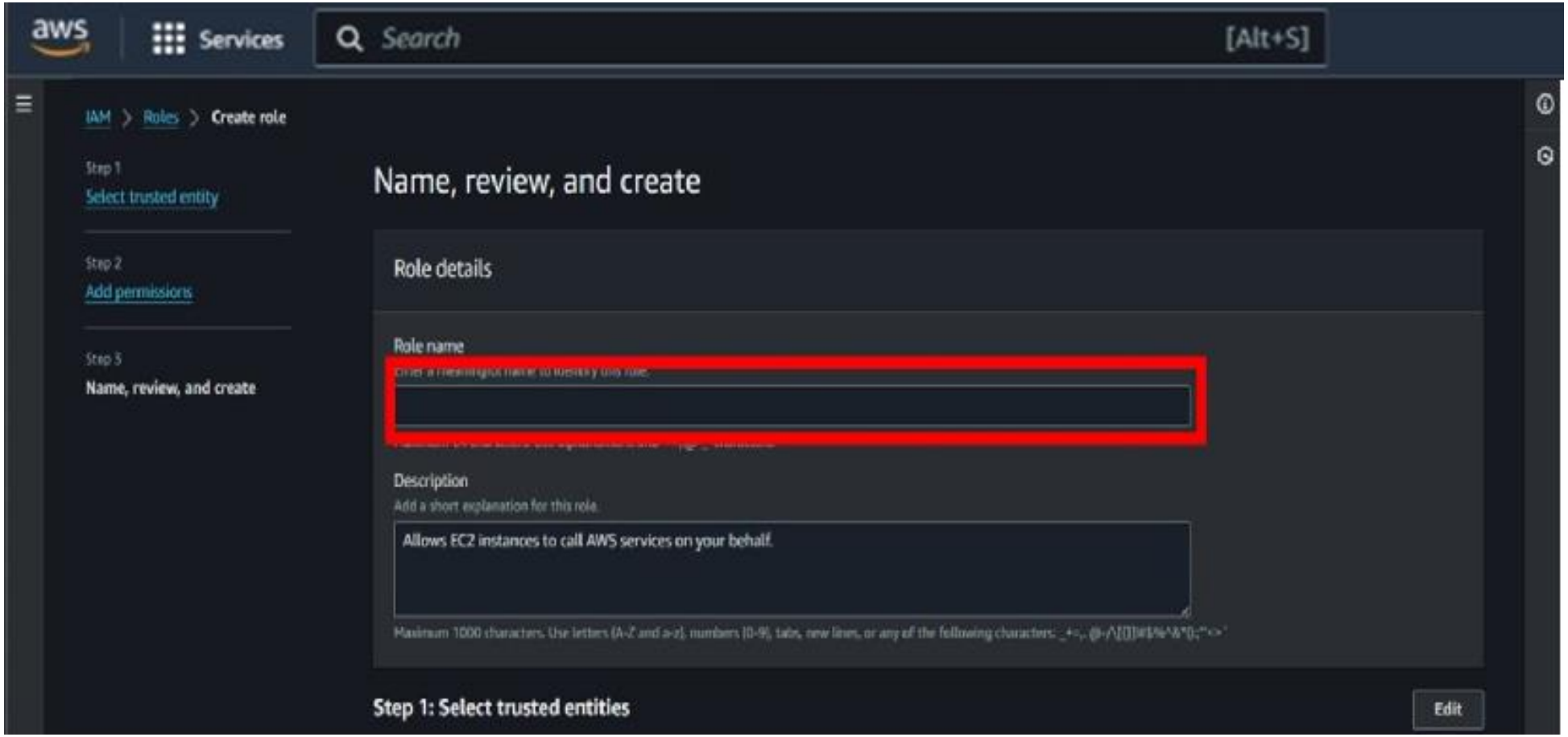
- Then select entity type is **AWS services .**



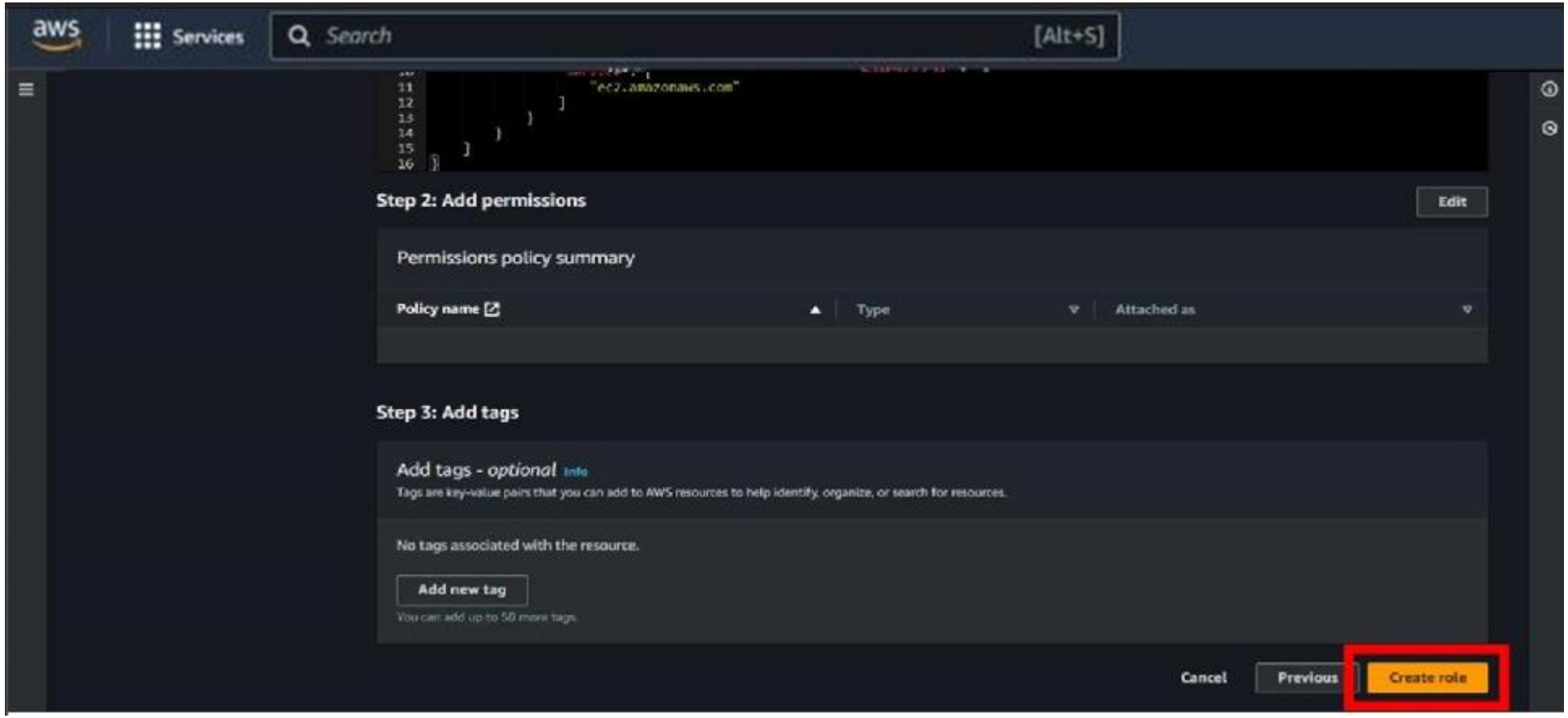
- Now , select use case as **EC2 .**



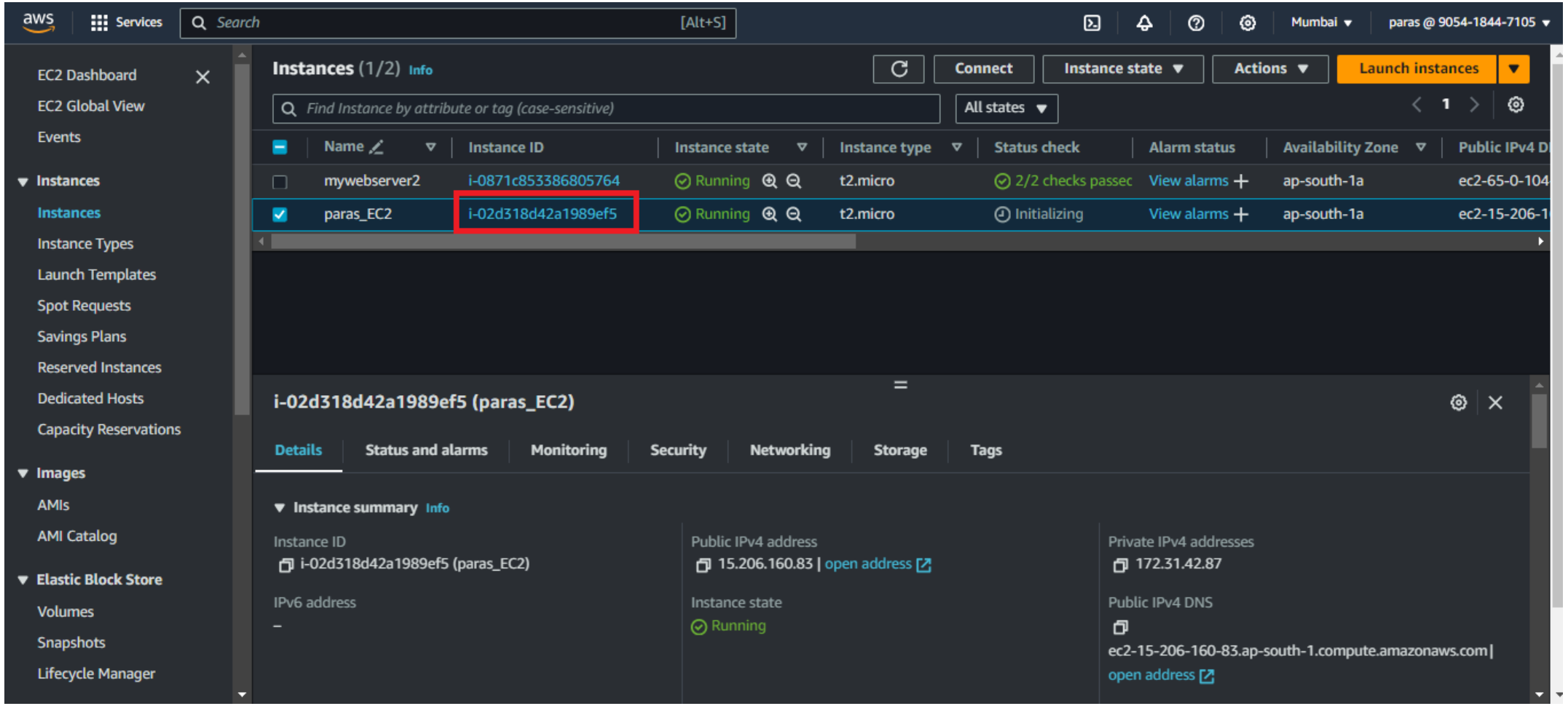
- Select your policy here which you have created previously , then click on **Next**.



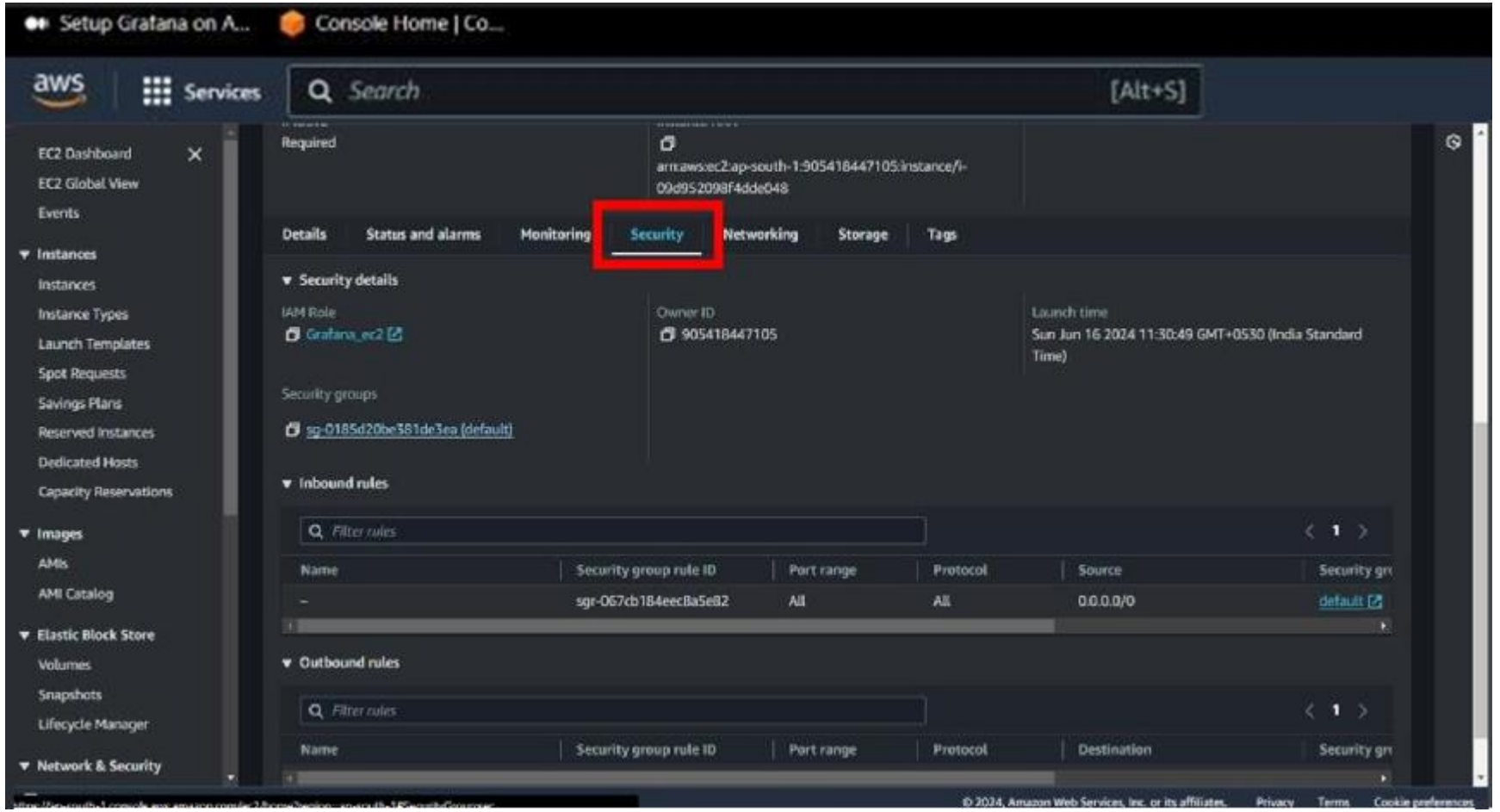
- Then give a name of your choise to the role .



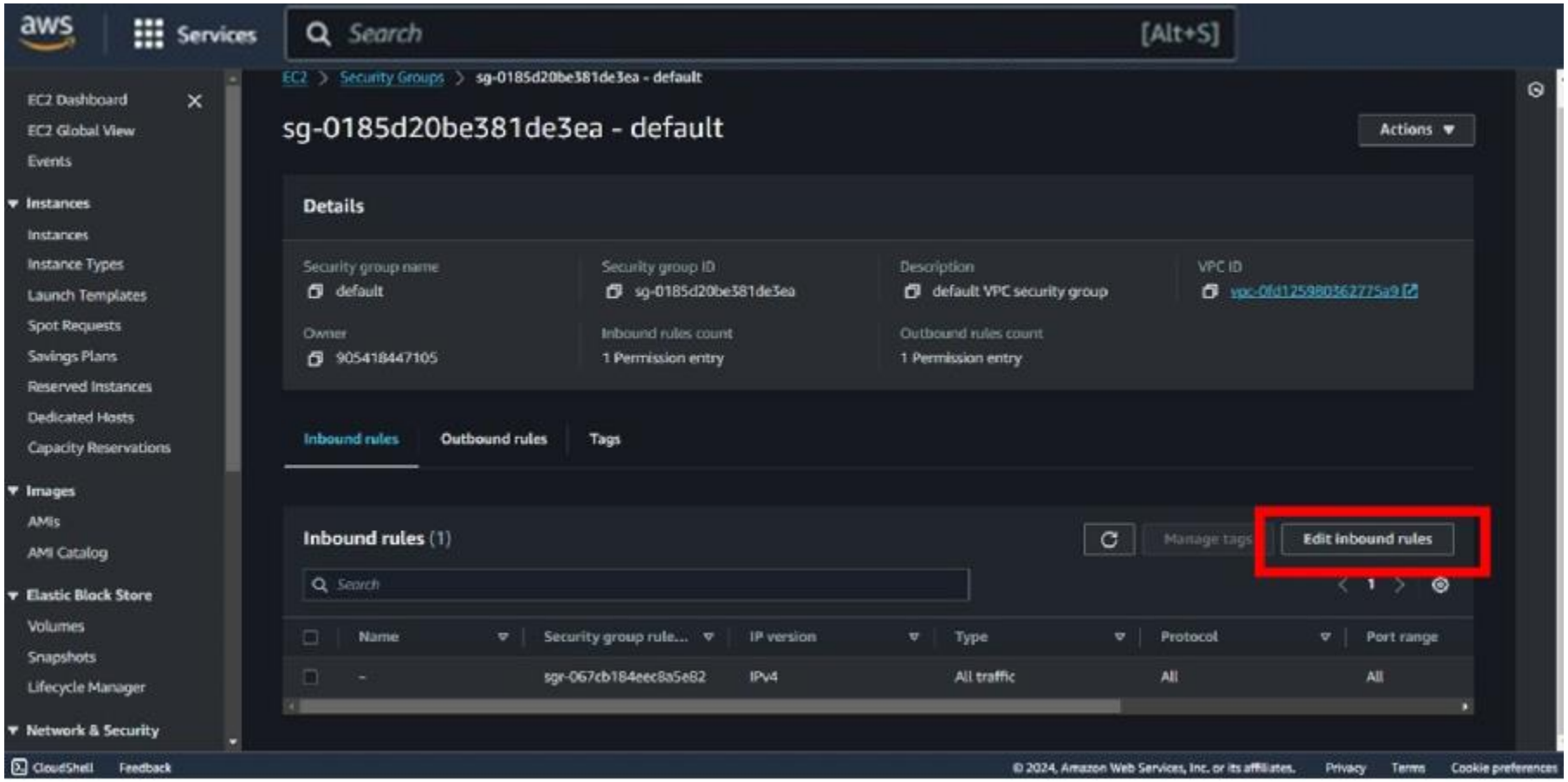
- Then scroll down and click on the **Create role** .



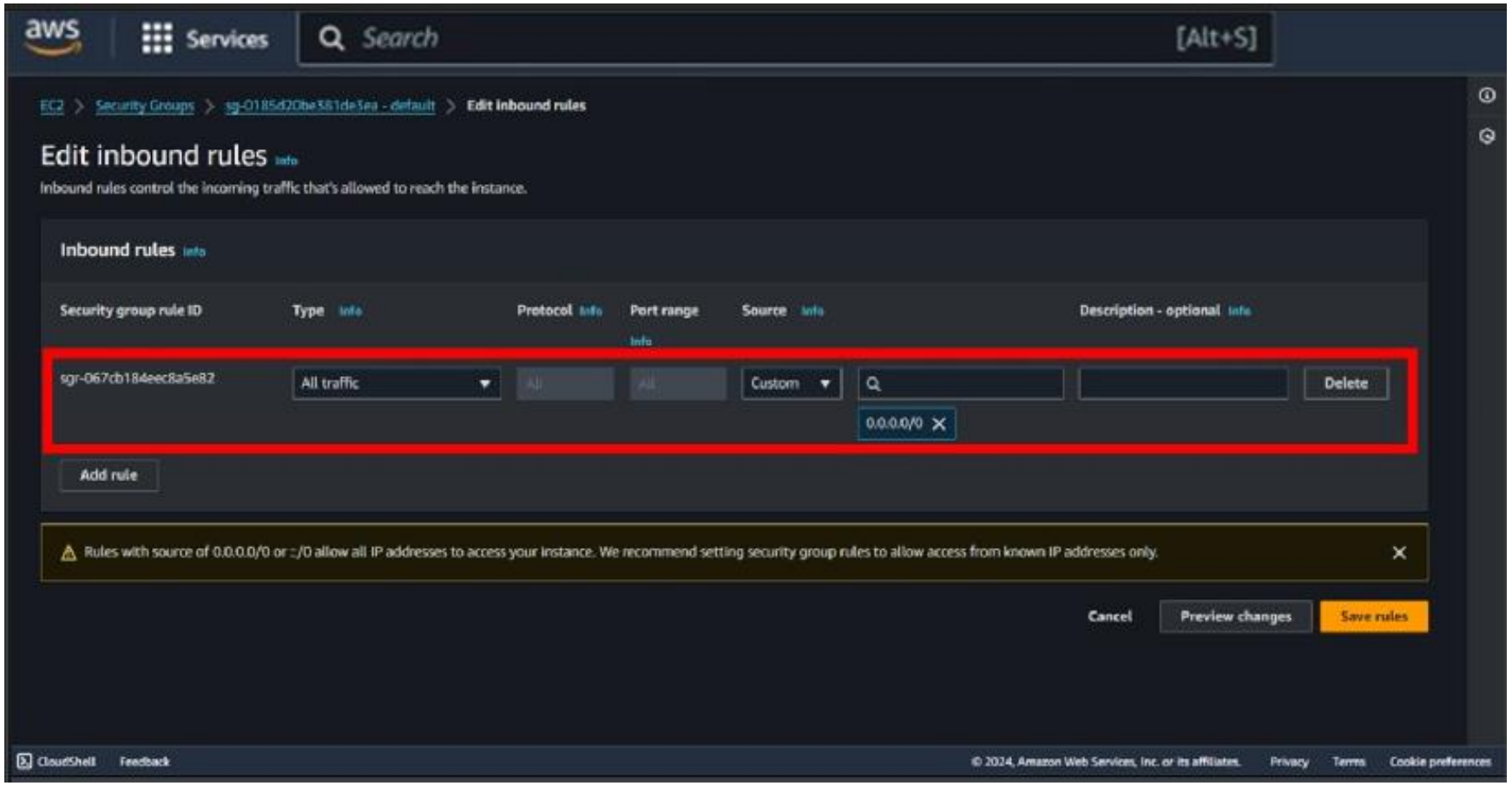
- After creating your role and policy go to instance and open your instance , which you have already created.



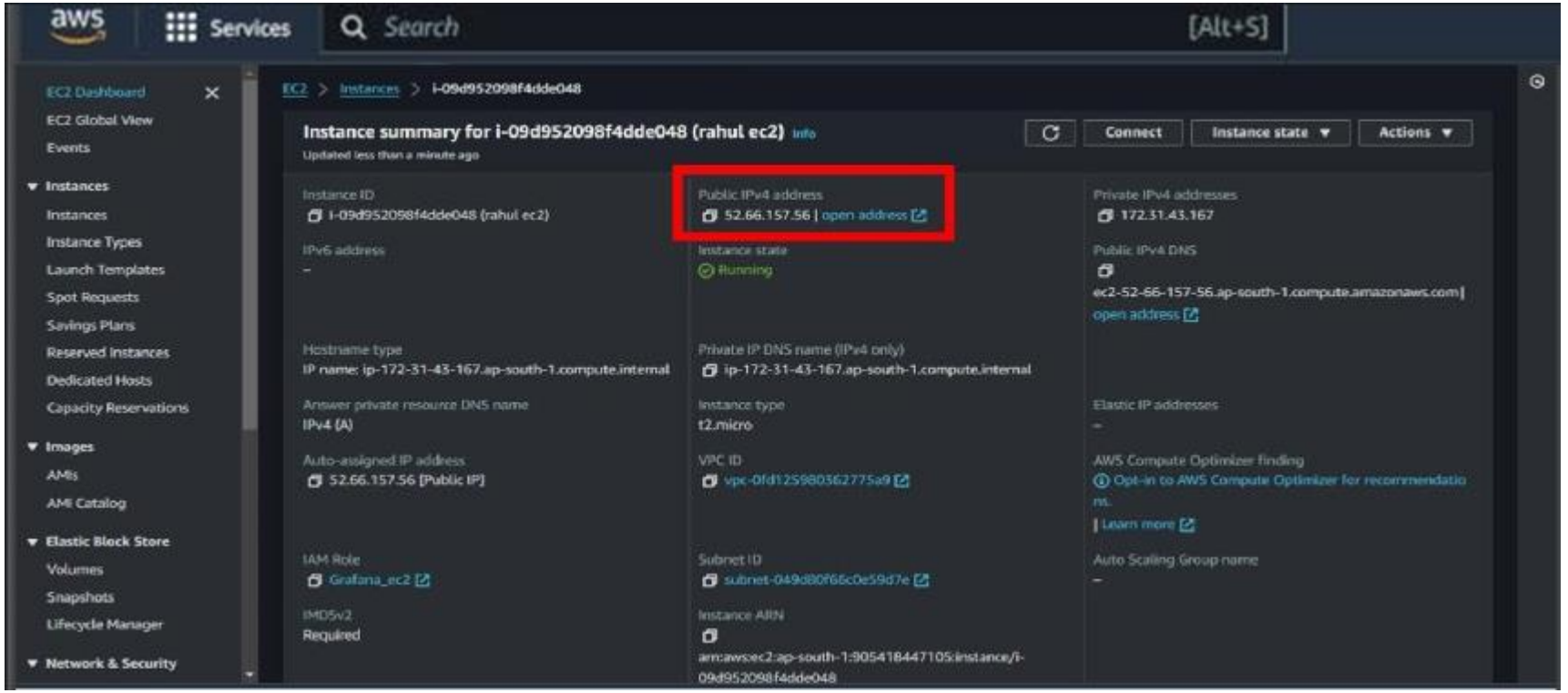
- Scroll down and go to **Security** option.



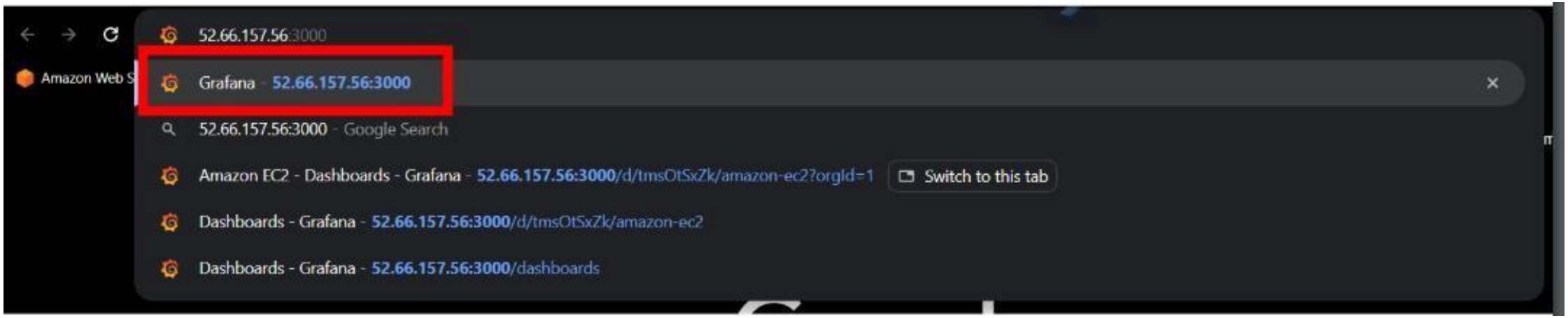
- Then click on **Edit inbound rule** .



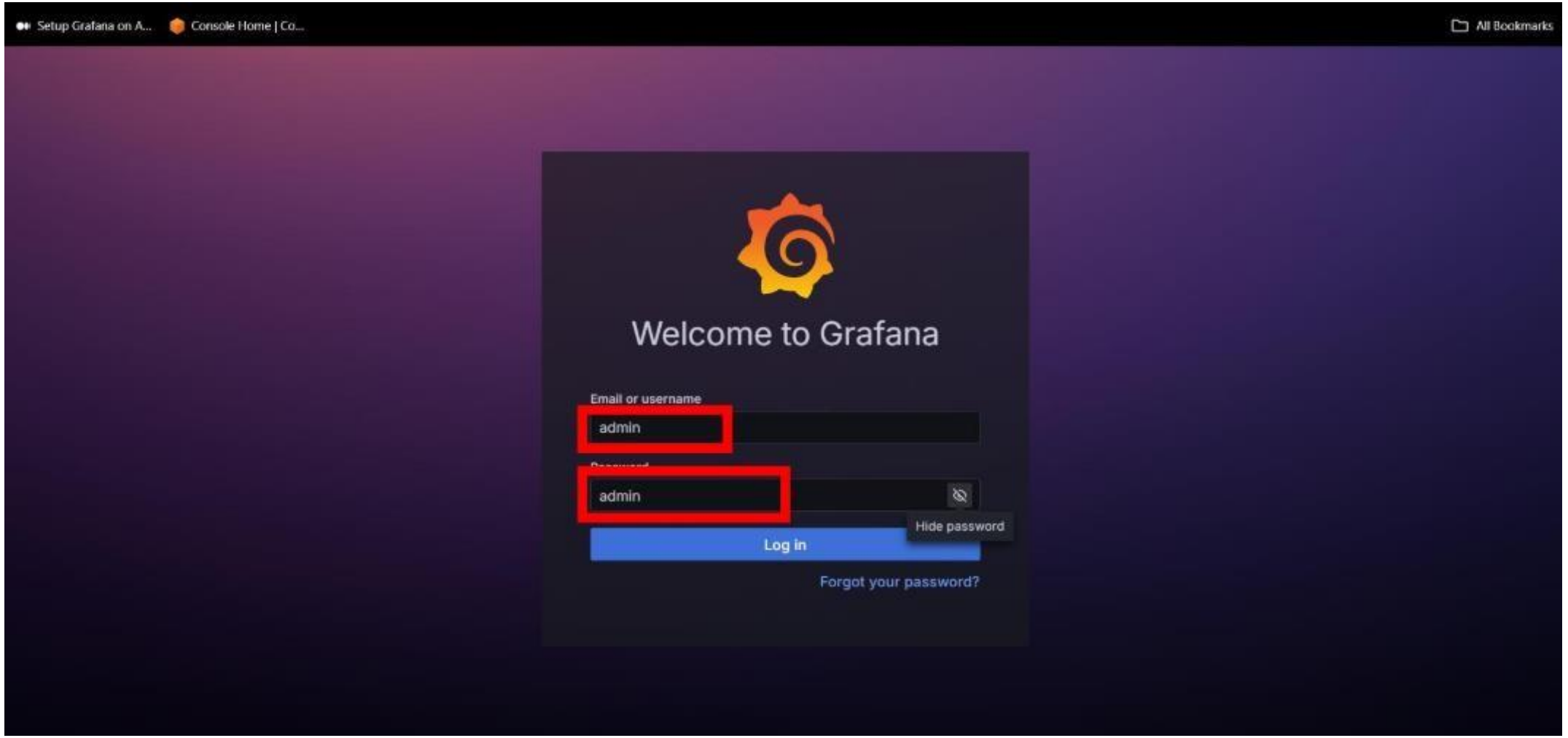
- Then modify your rule **select type = All traffic** and **source =0.0.0.0/0**



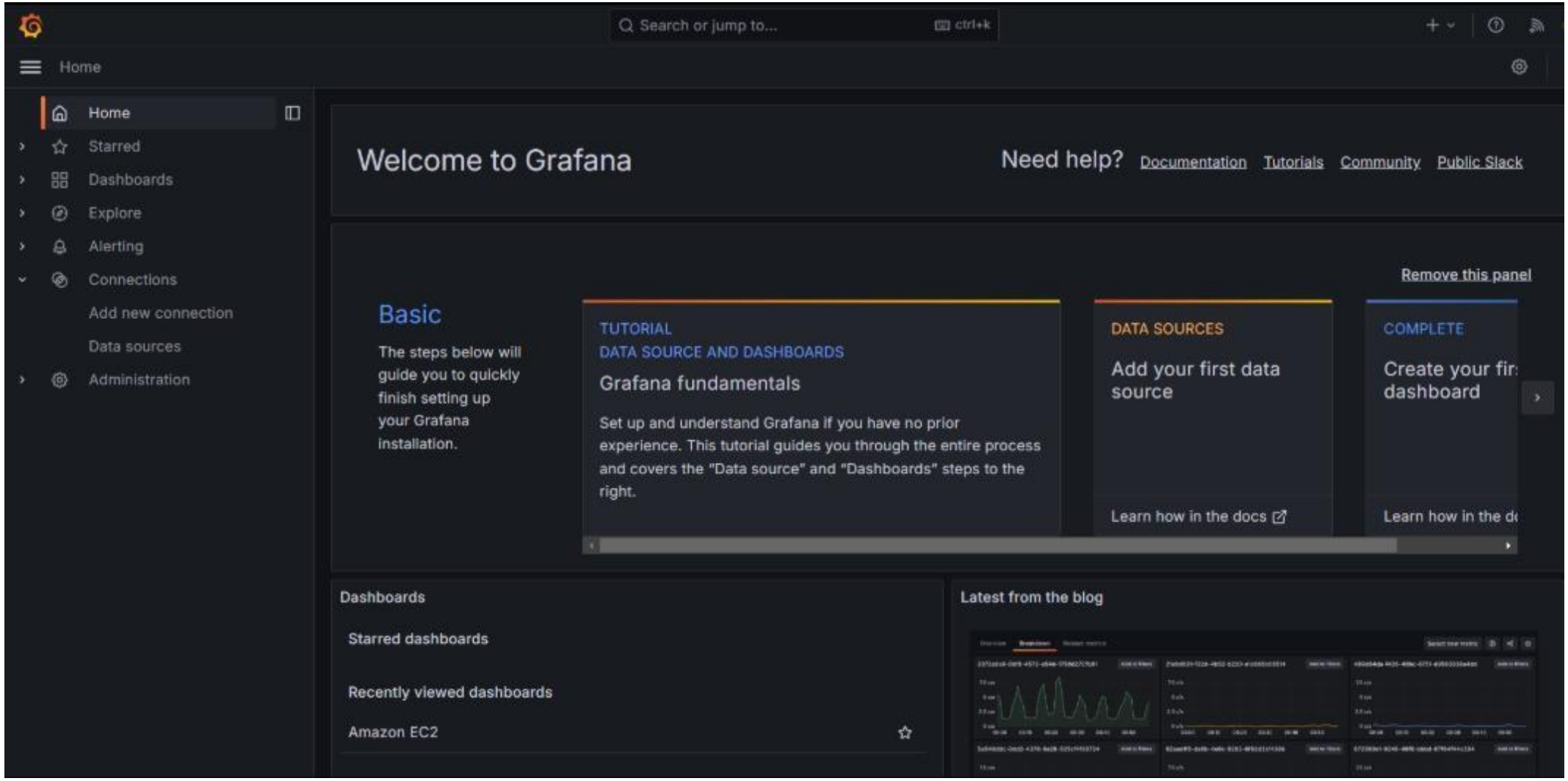
- Then copy your **public IPv4 address** of your instance .

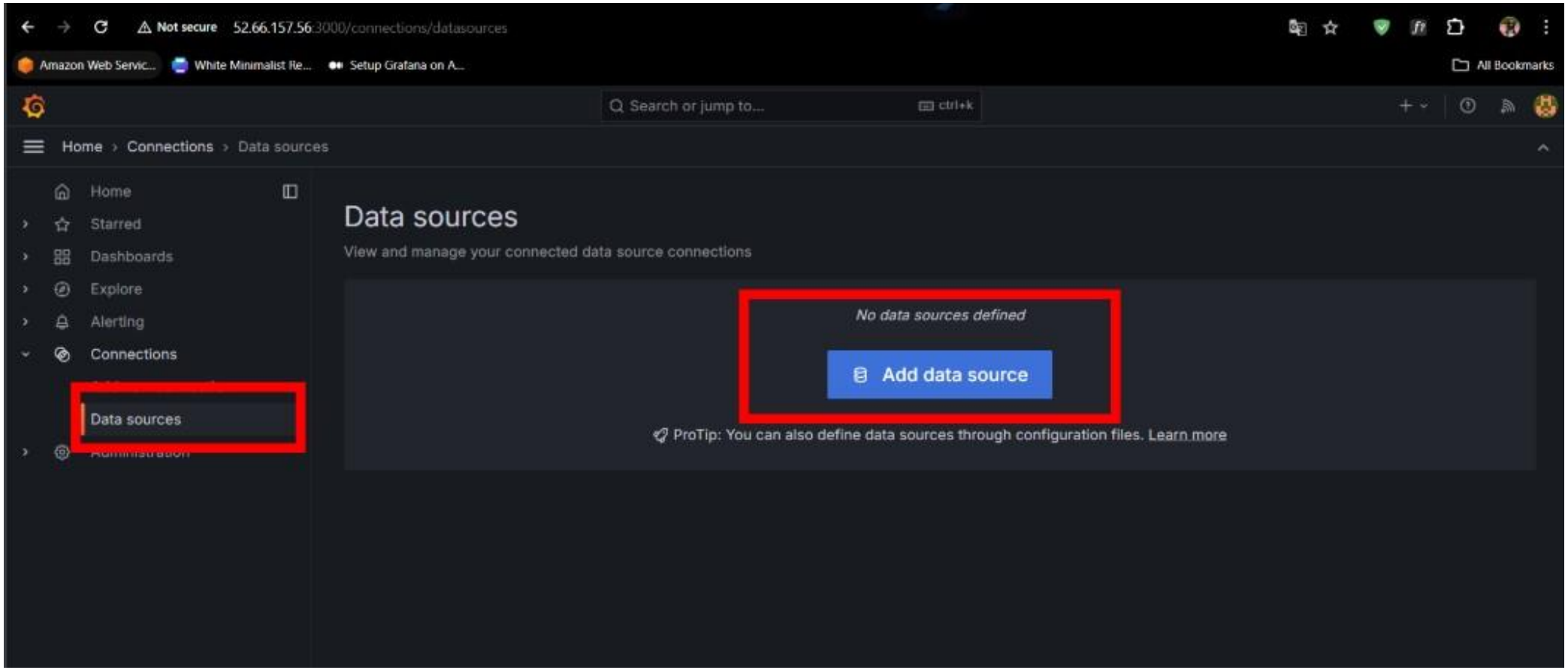


- Then paste your copied ip address and type “**:3000”** after ip address and search it .

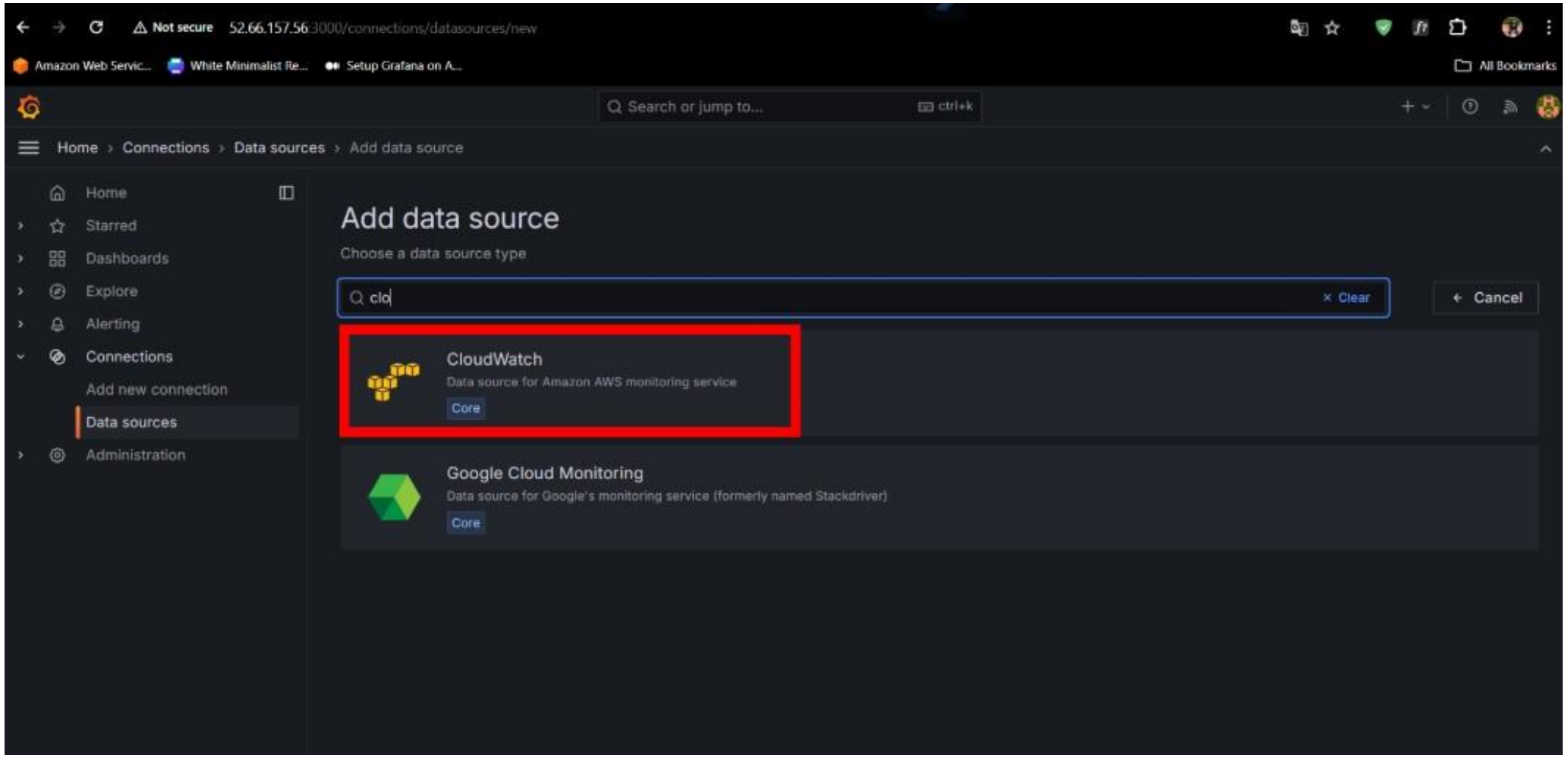


- Then login in Grafana by the help of credientials shown in above snapshot.

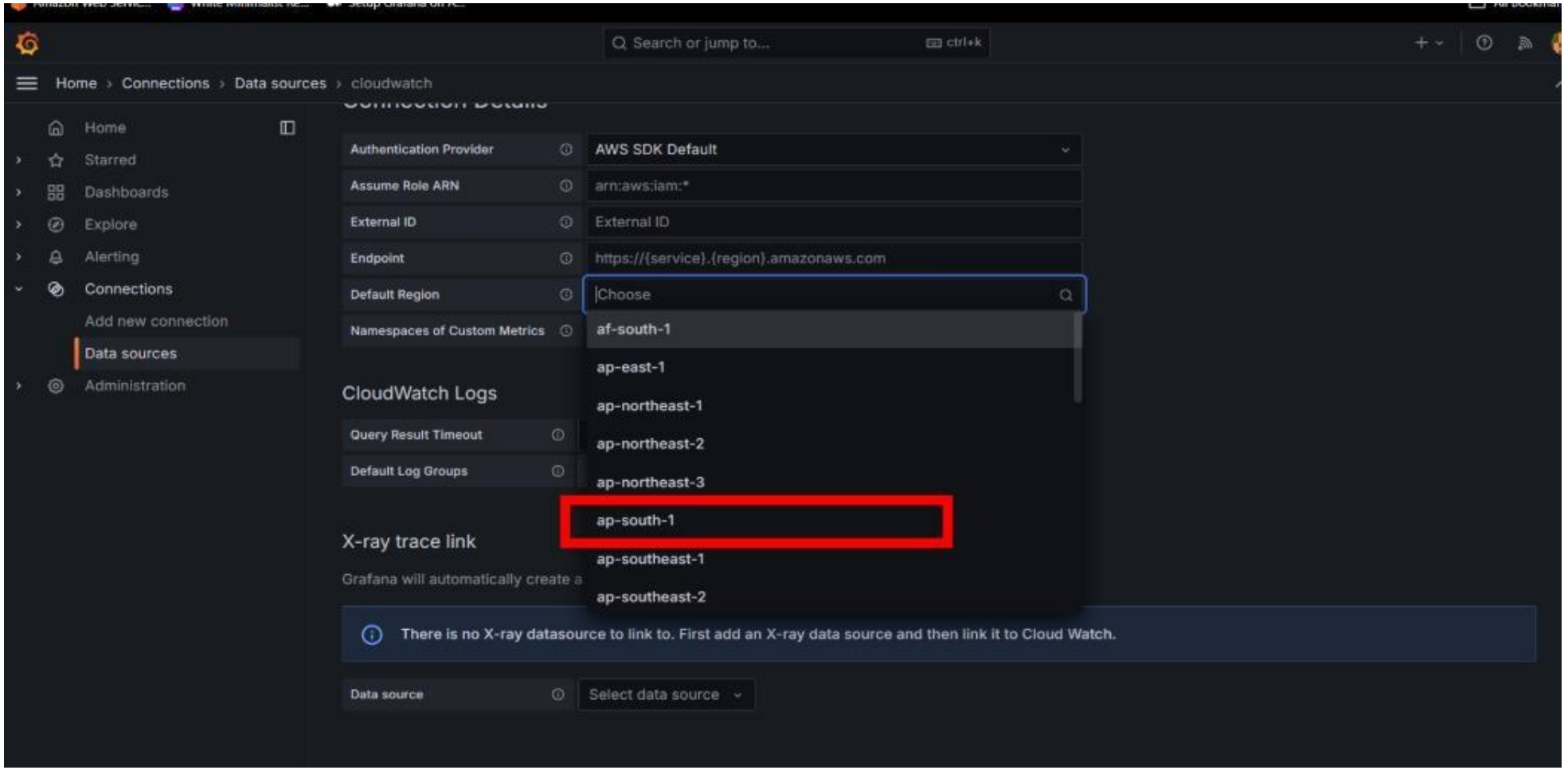

Search or jump to...
ctrl+k
Home
Home
Starred
Dashboards
Explore
Alerting
Connections
Add new connection
Data sources
Administration
Welcome to Grafana
Need help?
Documentation
Tutorials
Community
Public Slack
Remove this panel
Basic
The steps below will guide you to quickly finish setting up your Grafana installation.
TUTORIAL
DATA SOURCE AND DASHBOARDS
Grafana fundamentals
Set up and understand Grafana if you have no prior experience. This tutorial guides you through the entire process and covers the "Data source" and "Dashboards" steps to the right.
DATA SOURCES
Add your first data source
Learn how in the docs
COMPLETE
Create your fir dashboard
Learn how in the d
Dashboards
Starred dashboards
Recently viewed dashboards
Amazon EC2
Latest from the blog



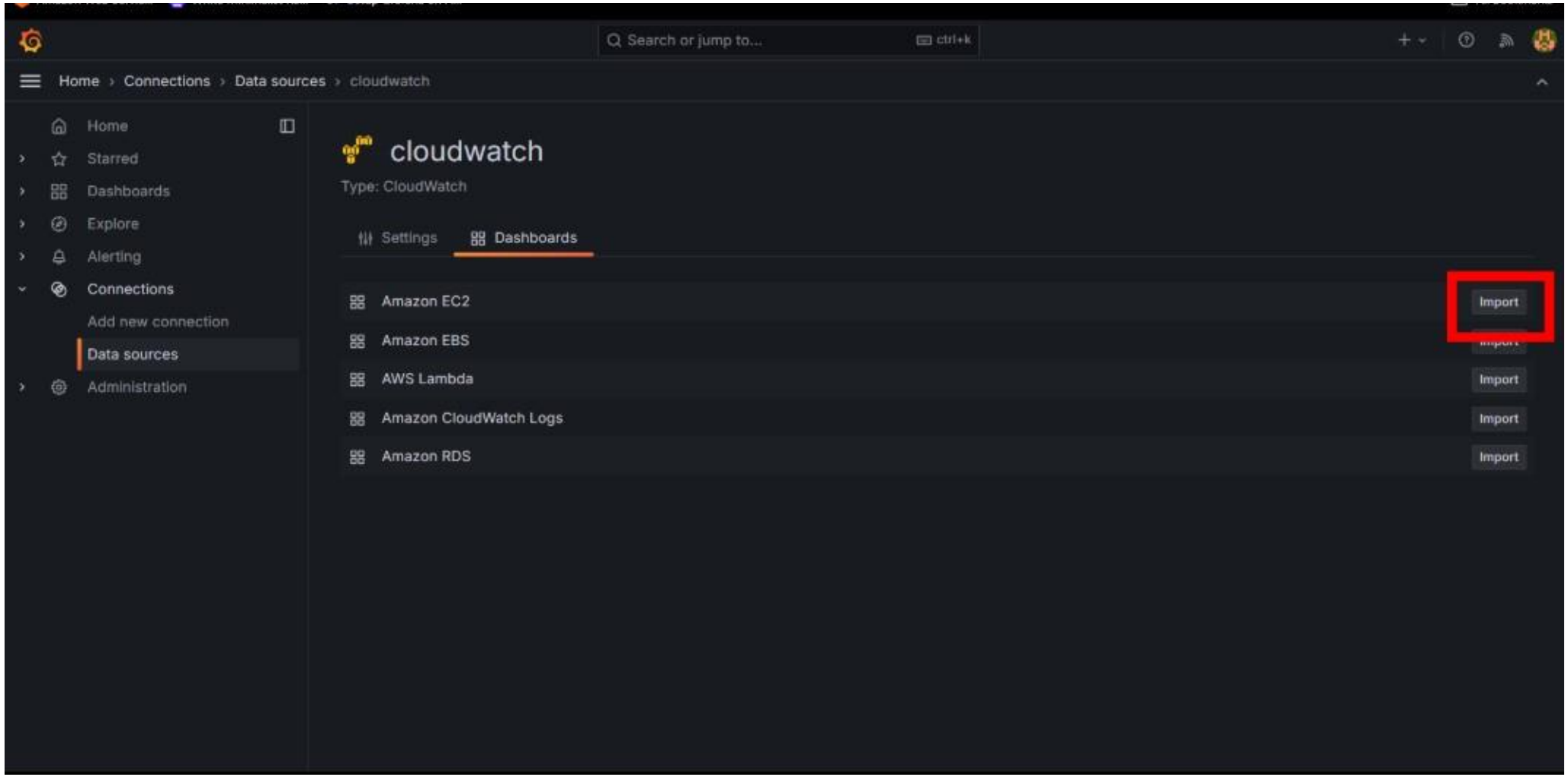
- Then go to **Dashboard** and click on **Adddata source** .



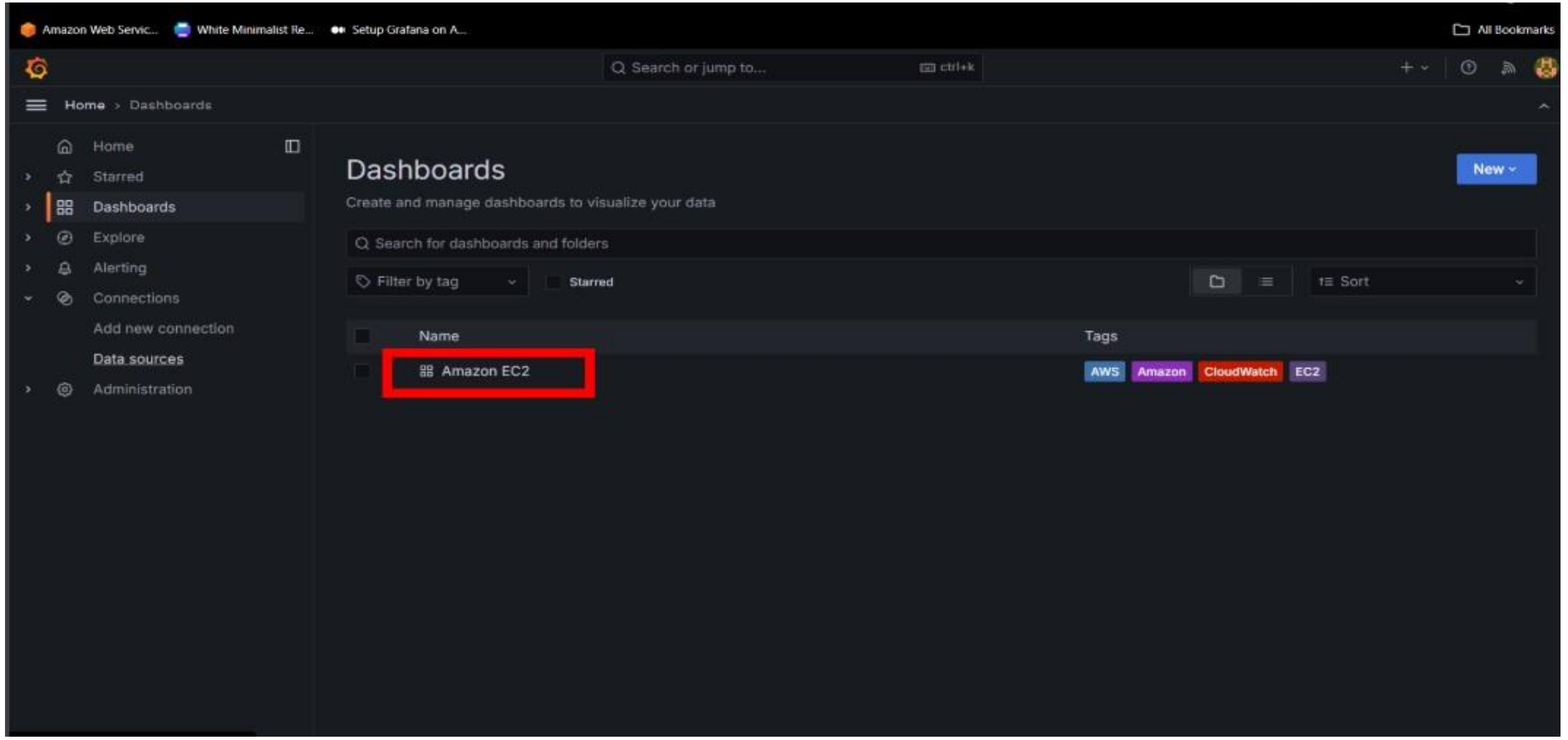
- Now , select “**Cloudwatch**” as an data source .



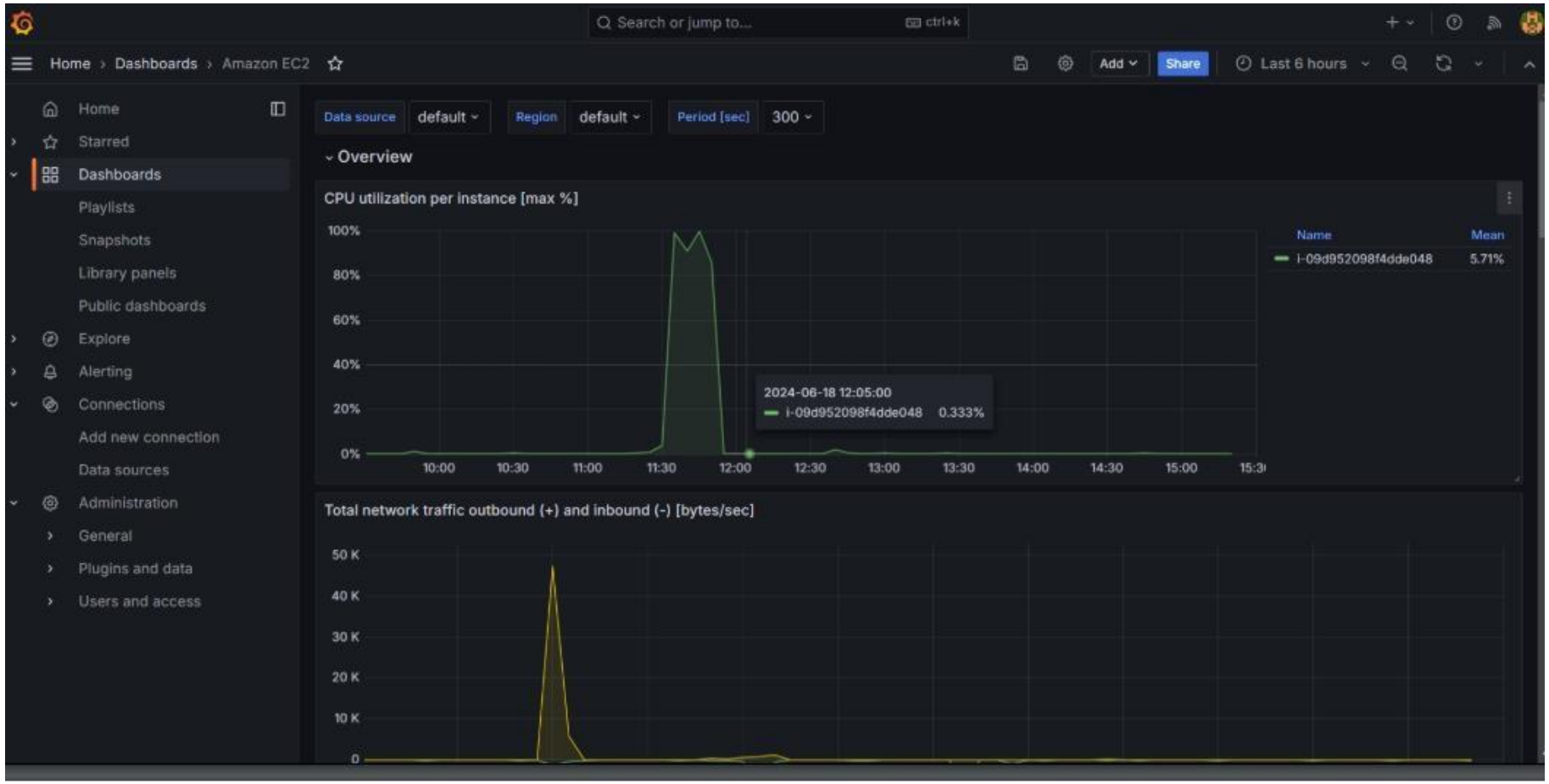
- Then after selecting cloudwatch select your region .


Search or jump to...
ctrl+k
Home › Connections › Data sources › cloudwatch
Home
Starred
Dashboards
Explore
Alerting
Connections
Add new connection
Data sources
Administration
cloudwatch
Type: CloudWatch
Settings
Dashboards
Amazon EC2
Import
Amazon EBS
AWS Lambda
Import
Amazon CloudWatch Logs
Import
Amazon RDS
Import

- Then inside your cloudwatch go to dashboard and **Import EC2**.



- Then go to dashboard and open your **Amazon EC2**.


Search or jump to... ctrl+k
Home › Dashboards › Amazon EC2
Add
Share
Last 6 hours
Home
Starred
Dashboards
Playlists
Snapshots
Library panels
Public dashboards
Explore
Alerting
Connections
Add new connection
Data sources
Administration
General
Plugins and data
Users and access
Data source
default
Region
default
Period [sec]
300
Overview
CPU utilization per instance [max %]
100%
80%
60%
40%
20%
0%
10:00
10:30
11:00
11:30
12:00
12:30
13:00
13:30
14:00
14:30
15:00
Name
Mean
i-09d952098f4dde048
5.71%
2024-06-18 12:05:00
i-09d952098f4dde048 0.333%
Total network traffic outbound (+) and inbound (-) [bytes/sec]
50 K
40 K
30 K
20 K
10 K
0


Search or jump to...
ctrl+k
Home
Dashboards
Amazon EC2
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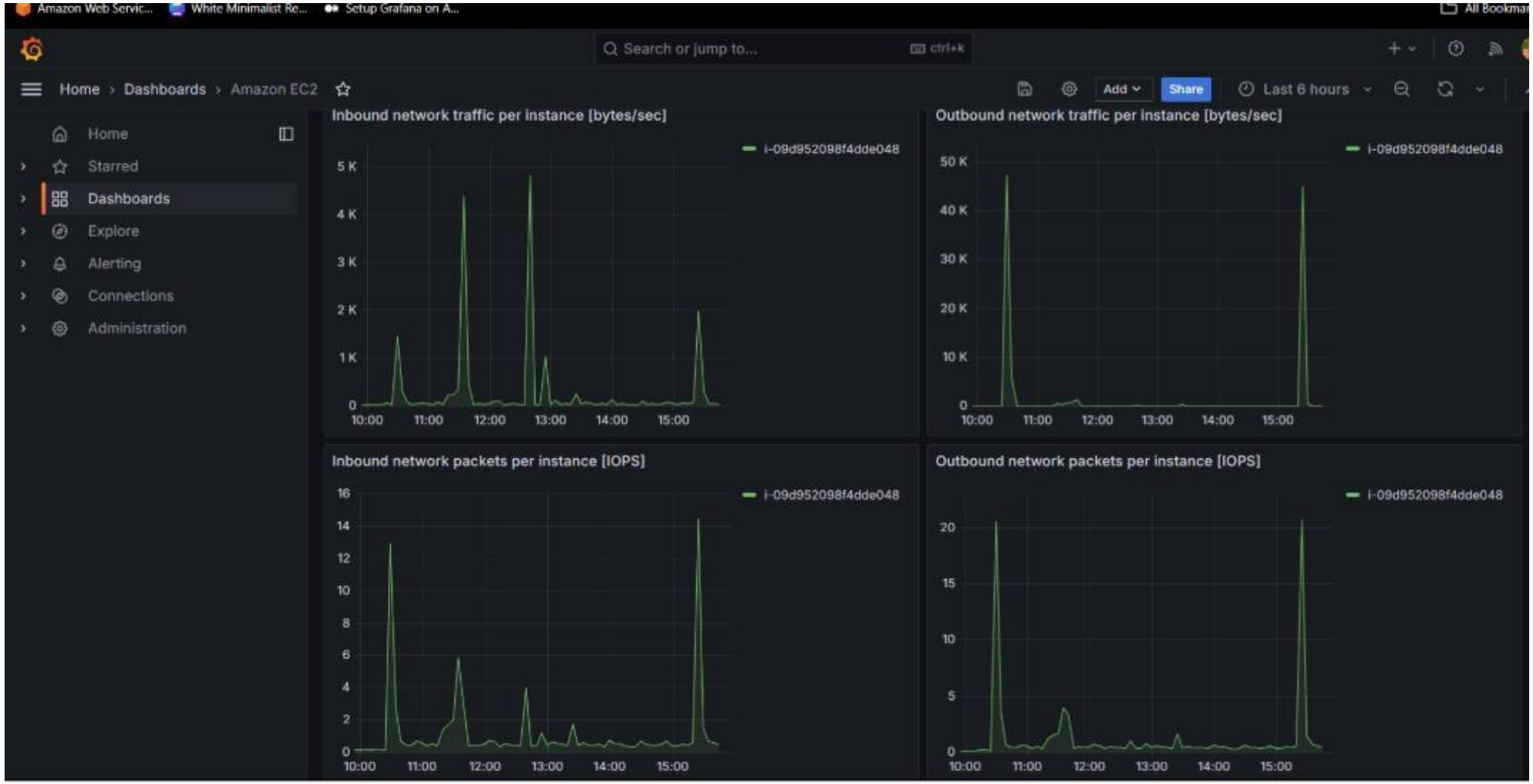
Total network traffic outbound (+) and inbound (-) [bytes/sec]
50 K
40 K
30 K
20 K
10 K
0
-10 K
10:00
10:30
11:00
11:30
12:00
12:30
13:00
13:30
14:00
14:30
15:00
15:30
Network details (4 panels)
Disk details (5 panels)
Status Checks (3 panels)
Information
For more information about avaialble metrics from Amazon EC2, visit the List of Available CloudWatch Metrics for Your EC2 Instances in the Amazon documentation.
For additional metrics and 1-minute granularity, enable Detailed Monitoring for your Amazon EC2 instances.
This dashboard has been optimized for 1-minute metrics.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Inbound network traffic per instance [bytes/sec]
i-09d952098f4dde048
5 K
4 K
3 K
2 K
1 K
0
10:00
11:00
12:00
13:00
14:00
15:00
Outbound network traffic per instance [bytes/sec]
i-09d952098f4dde048
50 K
40 K
30 K
20 K
10 K
0
10:00
11:00
12:00
13:00
14:00
15:00
Inbound network packets per instance [IOPS]
i-09d952098f4dde048
16
14
12
10
8
6
4
2
0
10:00
11:00
12:00
13:00
14:00
15:00
Outbound network packets per instance [IOPS]
i-09d952098f4dde048
20
15
10
5
0
10:00
11:00
12:00
13:00
14:00
15:00