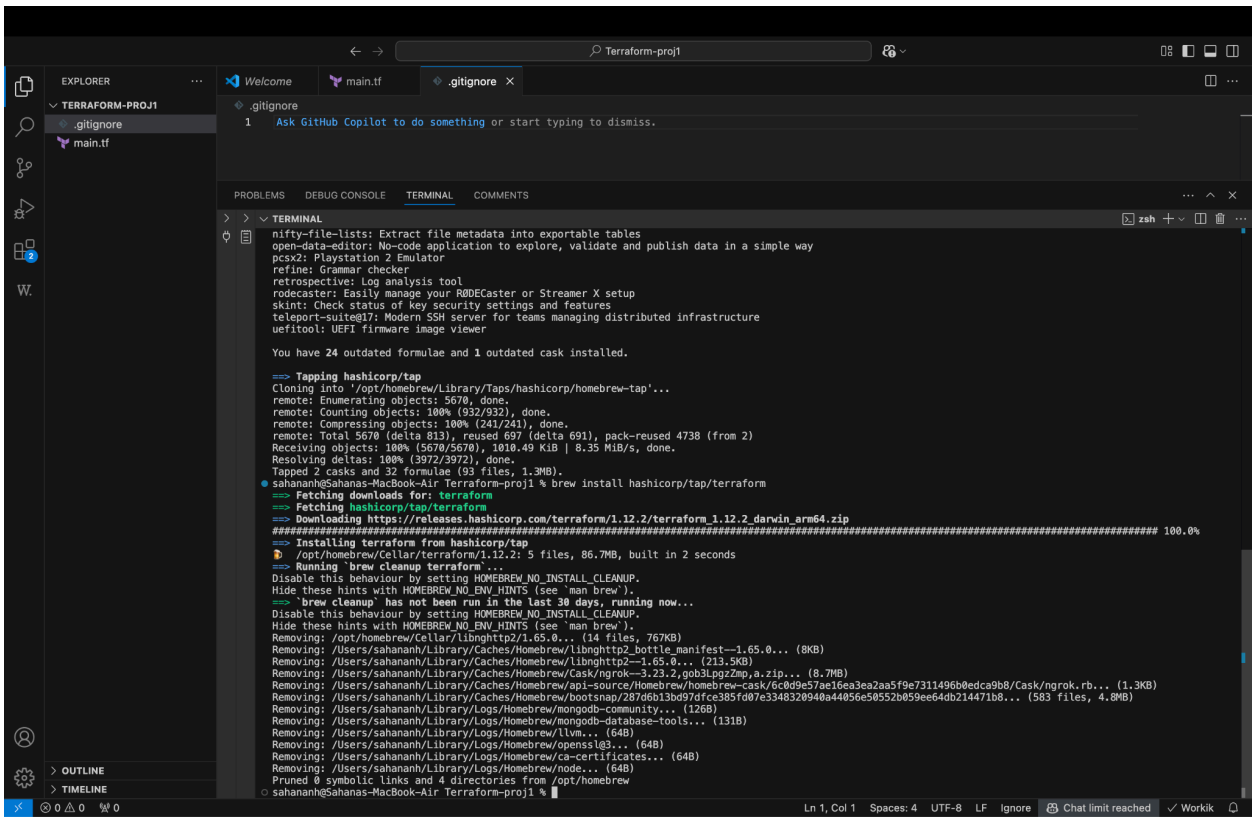
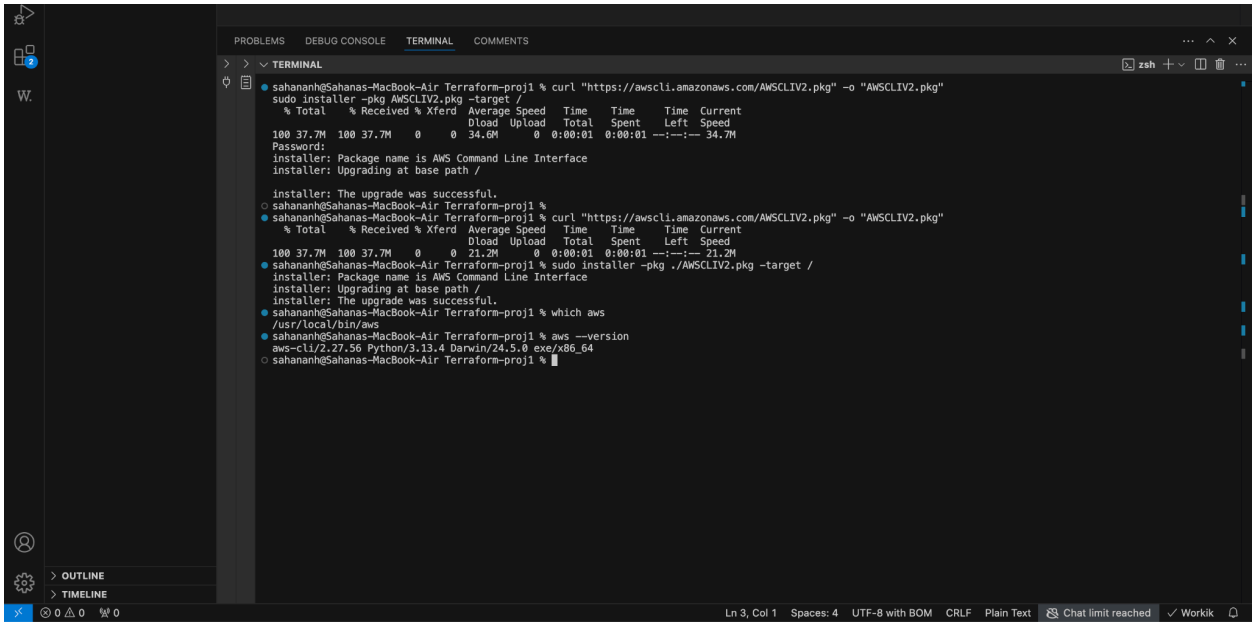
AWS Web Server Infrastructure with Terraform

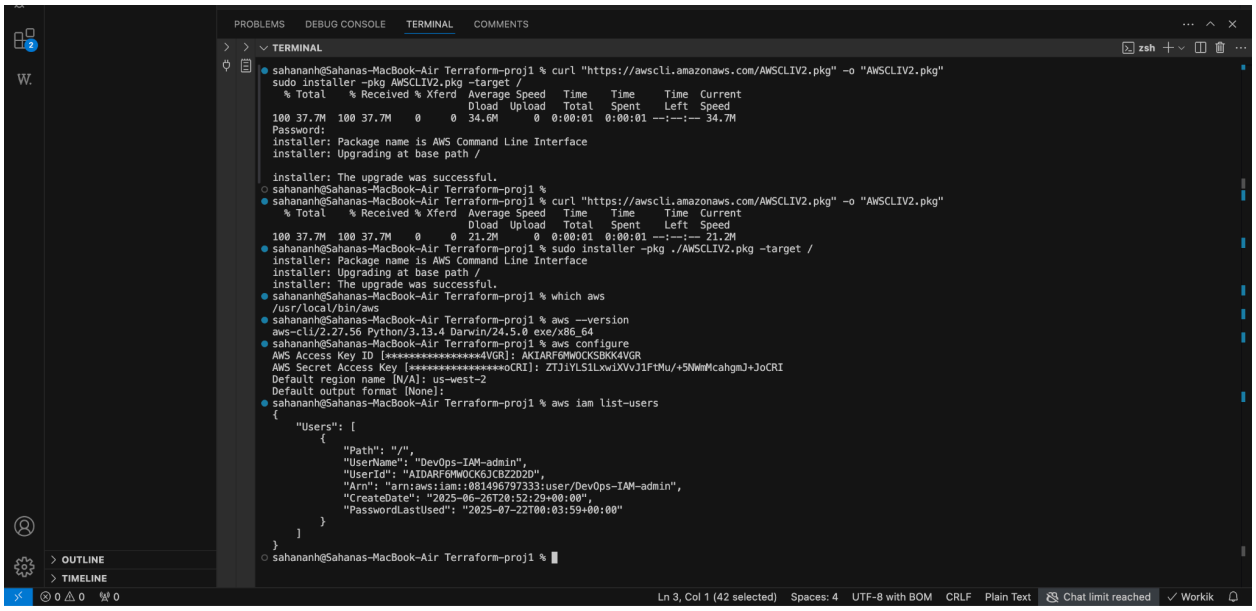
Installation on MacOS

brew tap hashicorp/tap
brew install hashicorp/tap/terraform



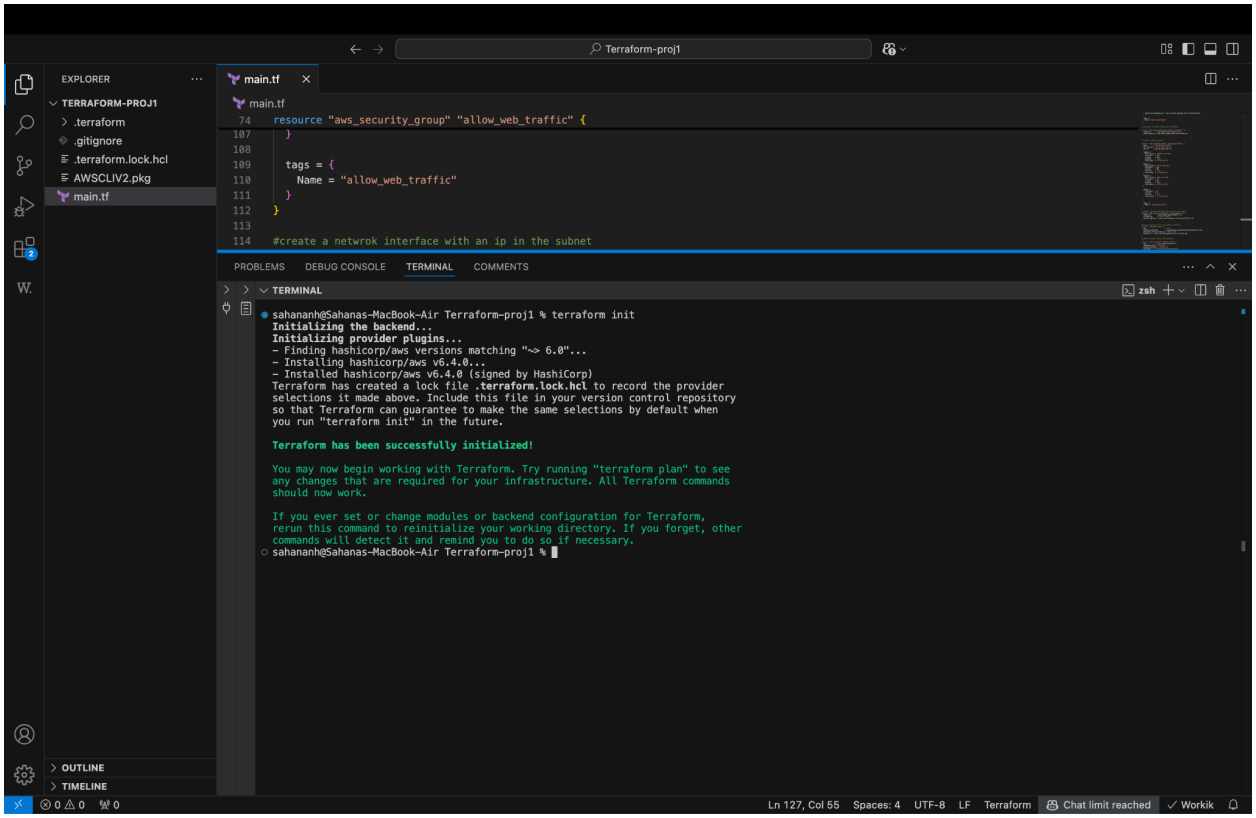
Install AWS CLI



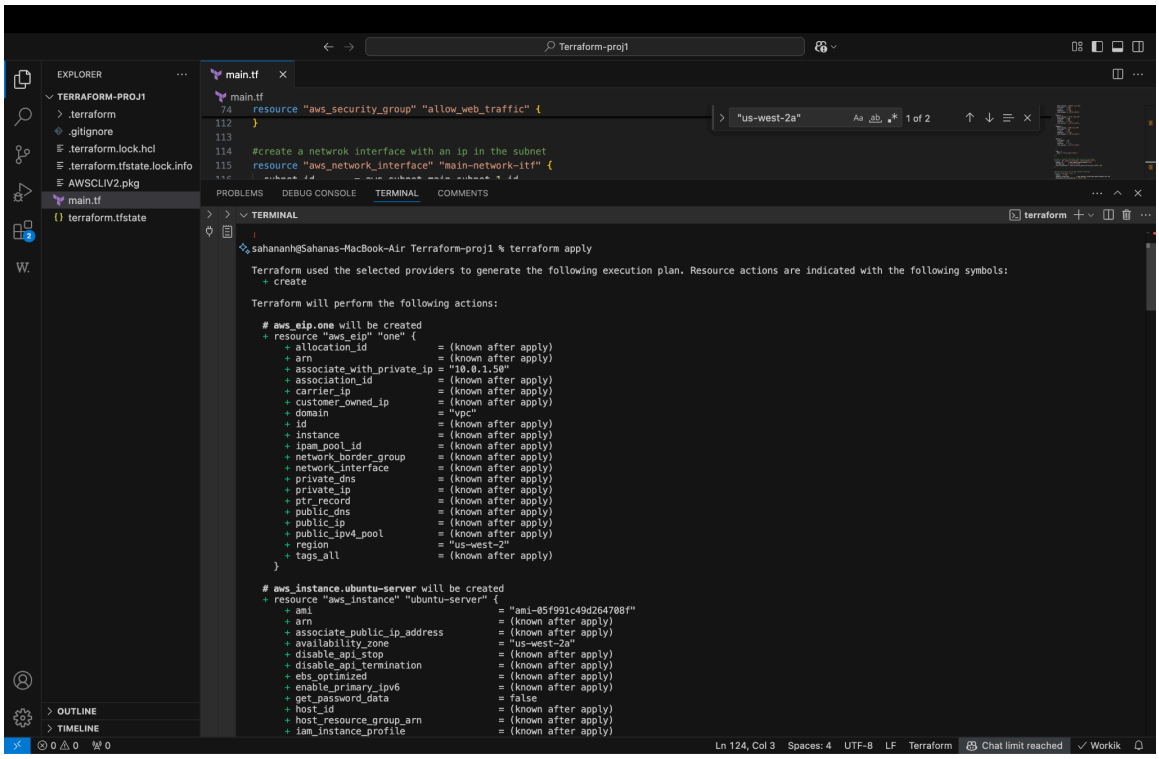


Go to EC2 instance in IAM user account and create a key pair

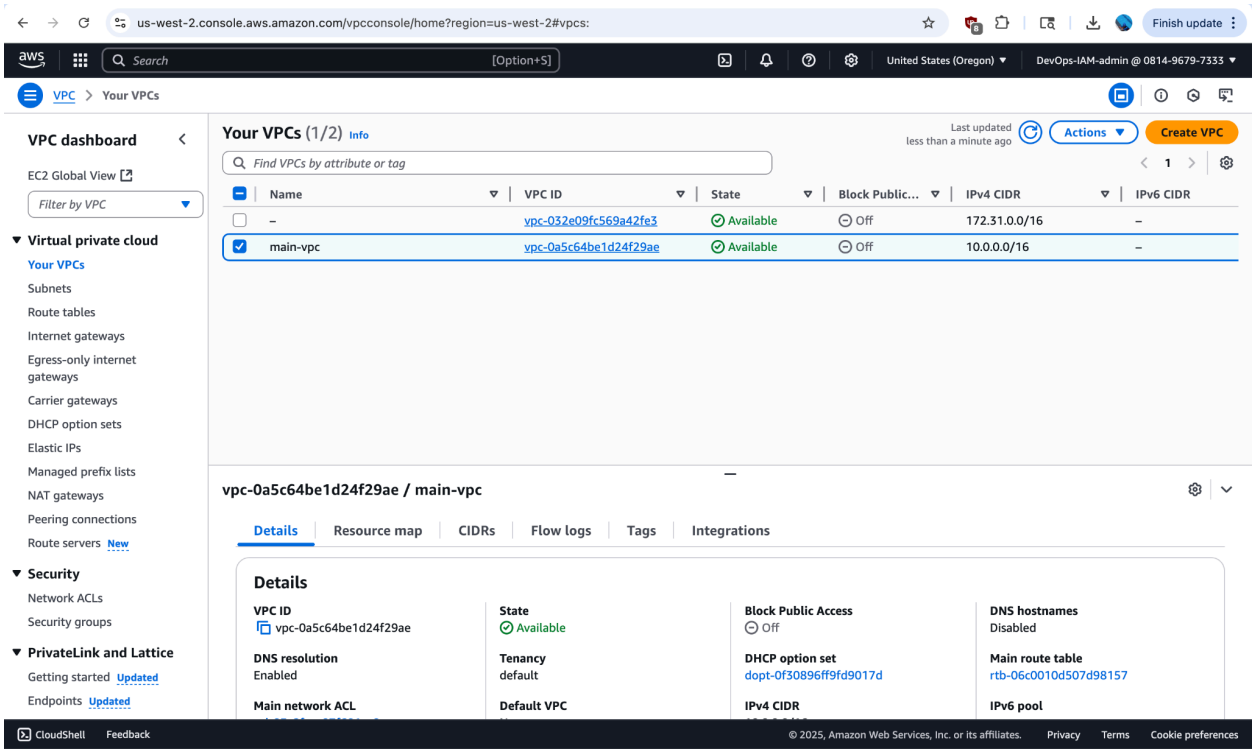
Initialize the terraform

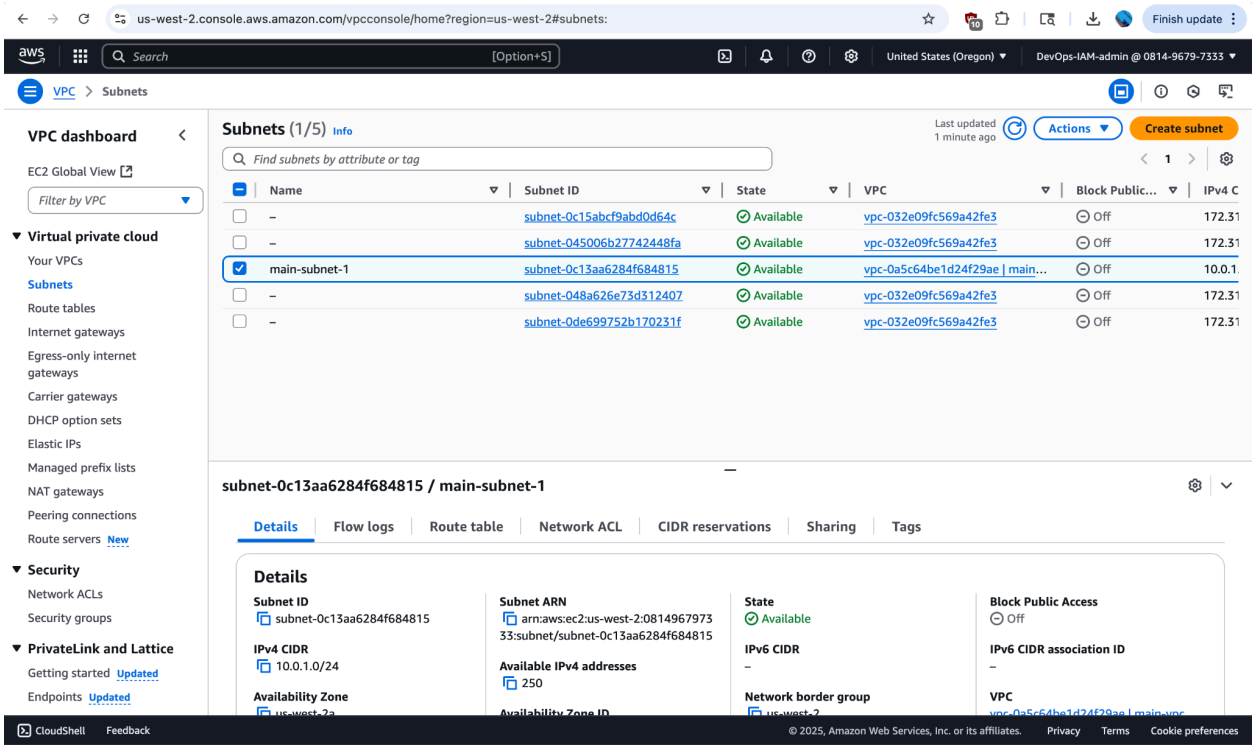


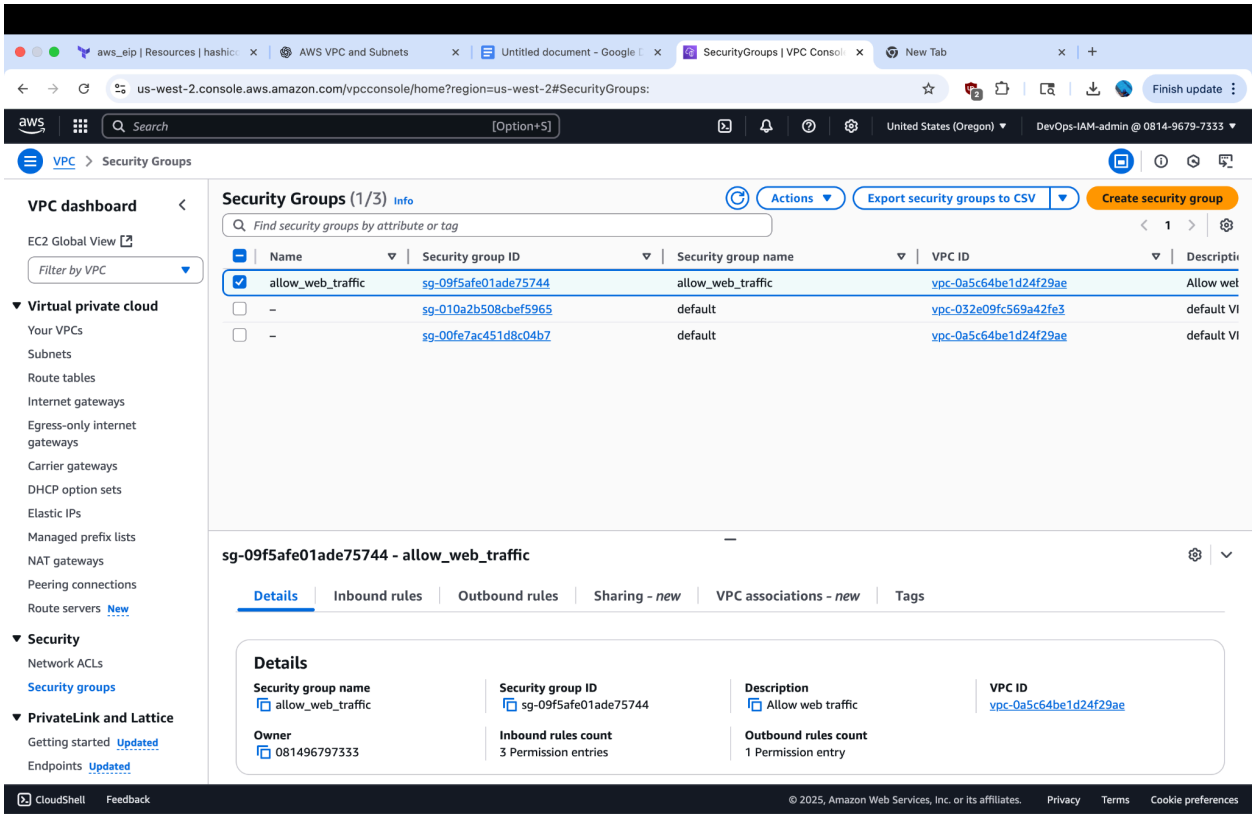
Terraform apply



Verify VPC, Subnet, route table, EC2






aws_eip | Resources | hashic
AWS VPC and Subnets
Untitled document - Google
SecurityGroups | VPC Consol
New Tab
us-west-2.console.aws.amazon.com/vpcconsole/home?region=us-west-2#SecurityGroups:
Finish update
Search
[Option+S]
United States (Oregon)
DevOps-IAM-admin @ 0814-9679-7333
VPC > Security Groups
VPC dashboard
EC2 Global View
Filter by VPC
Virtual private cloud
Your VPCs
Subnets
Route tables
Internet gateways
Egress-only internet gateways
Carrier gateways
DHCP option sets
Elastic IPs
Managed prefix lists
NAT gateways
Peering connections
Route servers New
Security
Network ACLs
Security groups
PrivateLink and Lattice
Getting started Updated
Endpoints Updated
Security Groups (1/3) Info
Actions
Export security groups to CSV
Create security group
Find security groups by attribute or tag
Name
Security group ID
Security group name
VPC ID
allow_web_traffic
sg-09f5afe01ade75744
allow_web_traffic
vpc-0a5c64be1d24f29ae
Allow web
sg-010a2b508cbef5965
default
vpc-032e09fc569a42fe3
default VI
sg-00fe7ac451d8c04b7
default
vpc-0a5c64be1d24f29ae
default VI
sg-09f5afe01ade75744 - allow_web_traffic
Details
Inbound rules
Outbound rules
Sharing - new
VPC associations - new
Tags
Details
Security group name
allow_web_traffic
Security group ID
sg-09f5afe01ade75744
Description
Allow web traffic
VPC ID
vpc-0a5c64be1d24f29ae
Owner
081496797333
Inbound rules count
3 Permission entries
Outbound rules count
1 Permission entry
CloudShell
Feedback
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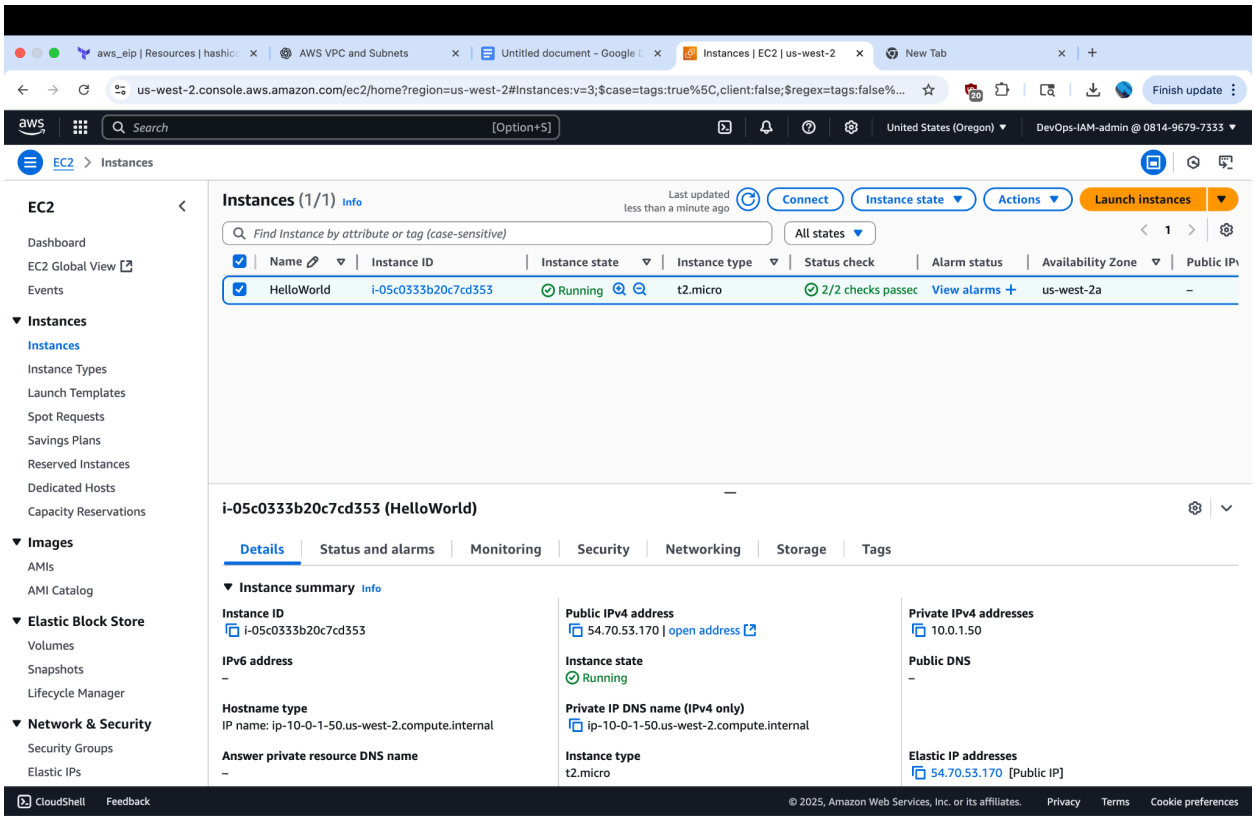
aws_eip | Resources | hashic
AWS VPC and Subnets
Untitled document - Google
Instances | EC2 | us-west-2
New Tab
us-west-2.console.aws.amazon.com/ec2/home?region=us-west-2#Instances:v=3;$case=tags:true%5C,client:false;$regex=tags:false%...
Finish update
Search
[Option+S]
United States (Oregon)
DevOps-IAM-admin @ 0814-9679-7333
EC2 > Instances
EC2
Dashboard
EC2 Global View
Events
Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Capacity Reservations
Images
AMIs
AMI Catalog
Elastic Block Store
Volumes
Snapshots
Lifecycle Manager
Network & Security
Security Groups
Elastic IPs
Instances (1/1) Info
Last updated less than a minute ago
Connect
Instance state
Actions
Launch instances
Find Instance by attribute or tag (case-sensitive)
All states
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
Availability Zone
Public IP
HelloWorld
i-05c0333b20c7cd353
Running
t2.micro
2/2 checks passec
View alarms
us-west-2a
i-05c0333b20c7cd353 (HelloWorld)
Details
Status and alarms
Monitoring
Security
Networking
Storage
Tags
Instance summary Info
Instance ID
i-05c0333b20c7cd353
Public IPv4 address
54.70.53.170 | open address
Private IPv4 addresses
10.0.1.50
IPv6 address
–
Instance state
Running
Public DNS
–
Hostname type
IP name: ip-10-0-1-50.us-west-2.compute.internal
Private IP DNS name (IPv4 only)
ip-10-0-1-50.us-west-2.compute.internal
Answer private resource DNS name
–
Instance type
t2.micro
Elastic IP addresses
54.70.53.170 [Public IP]
CloudShell
Feedback
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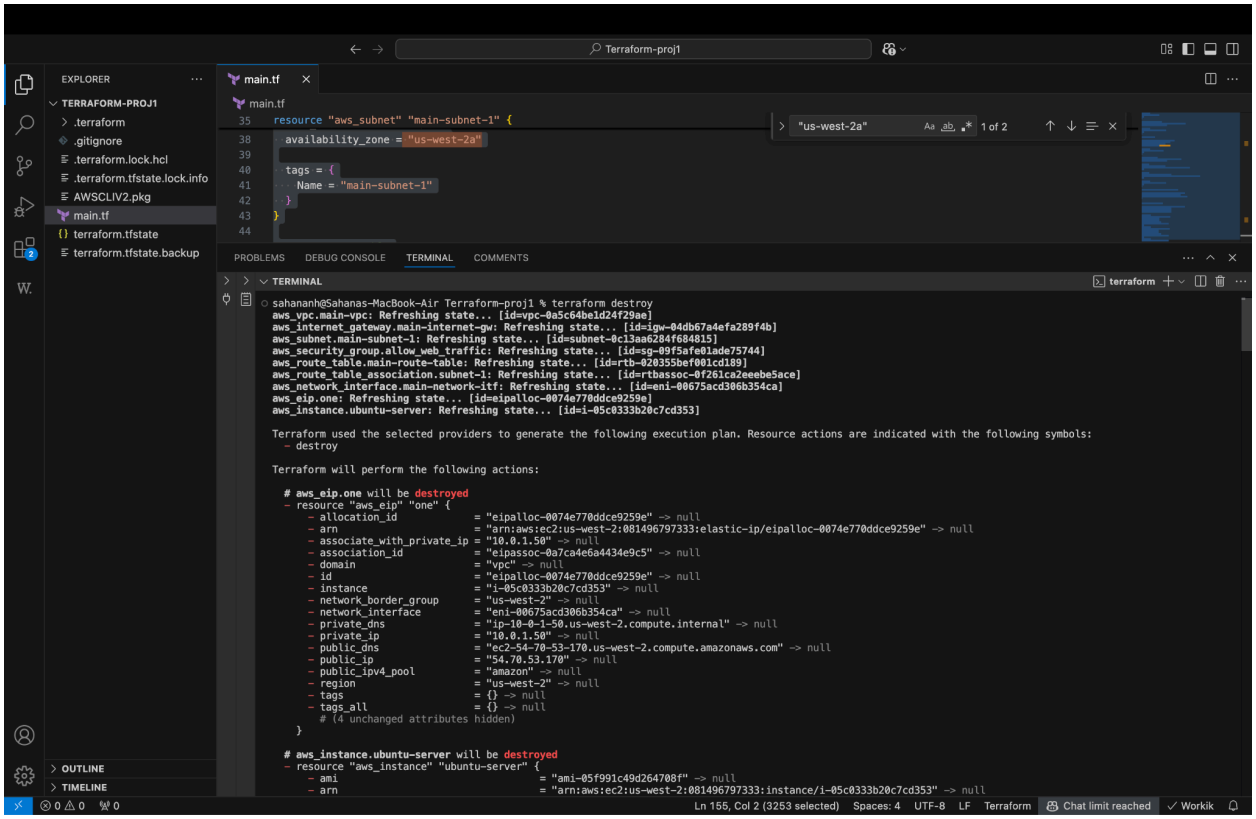
access your server:

```
Wireshark 4.4.7 Arm 64.dmg
sahananh@Sahanas-MacBook-Air downloads % chmod 400 "terrafrom-ec2-access-key-pair.pem"
sahananh@Sahanas-MacBook-Air downloads % ssh -i "terrafrom-ec2-access-key-pair.pem" ubuntu@54.70.53.170
The authenticity of host '54.70.53.170 (54.70.53.170)' can't be established.
ED25519 key fingerprint is SHA256:zMYdc0AI50ytbc914k2Af3xvQFwBSC5VanWruHJb8Gk.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '54.70.53.170' (ED25519) to the list of known hosts.
Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.8.0-1029-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/pro

 System information as of Tue Jul 22 01:50:43 UTC 2025

  System load:  0.0               Processes:             105
  Usage of /:   25.6% of 6.71GB   Users logged in:       0
  Memory usage: 20%               IPv4 address for enX0: 10.0.1.50
  Swap usage:   0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status


The list of available updates is more than a week old.
To check for new updates run: sudo apt update


The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-10-0-1-50:~$
```

Terraform Destroy