ADVANCE DEVOPS EXPERIMENT NO.1

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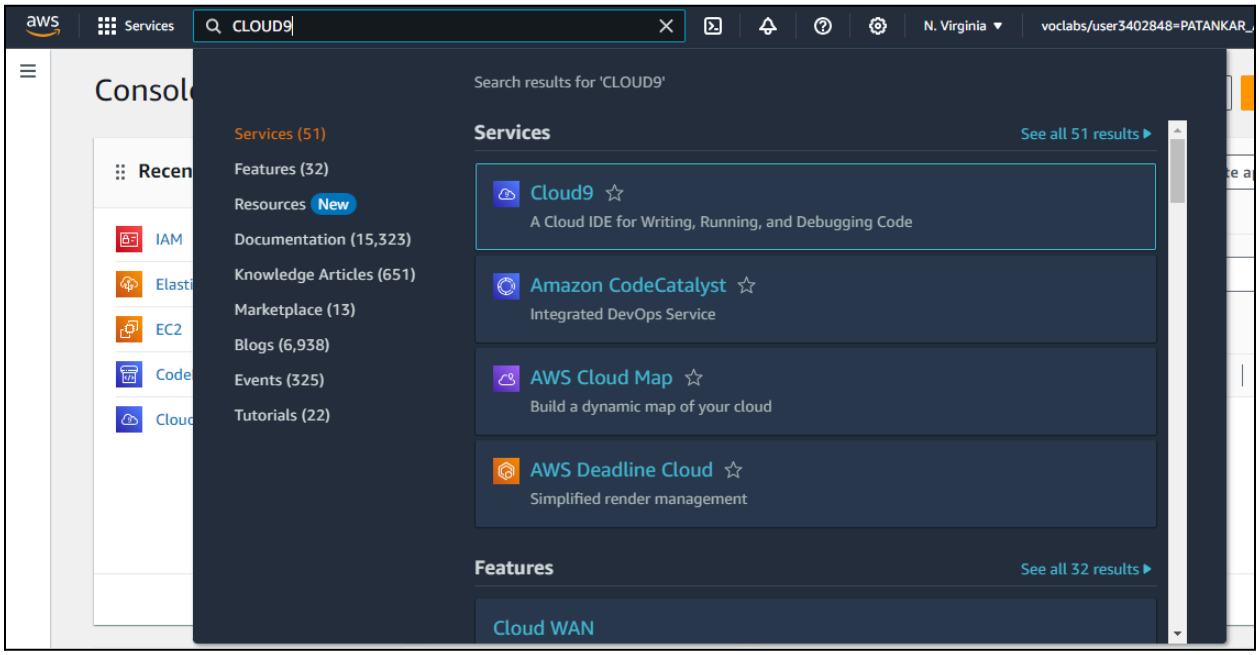
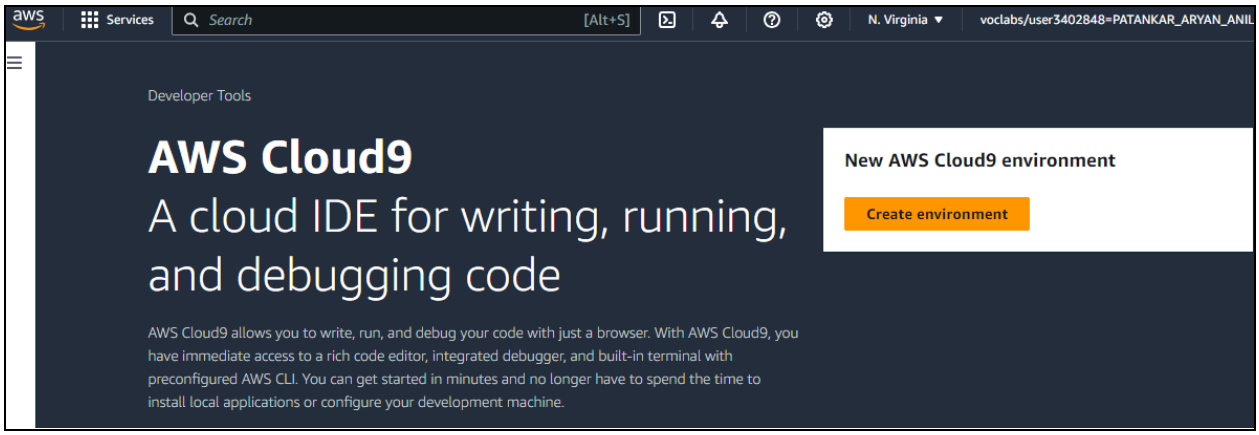
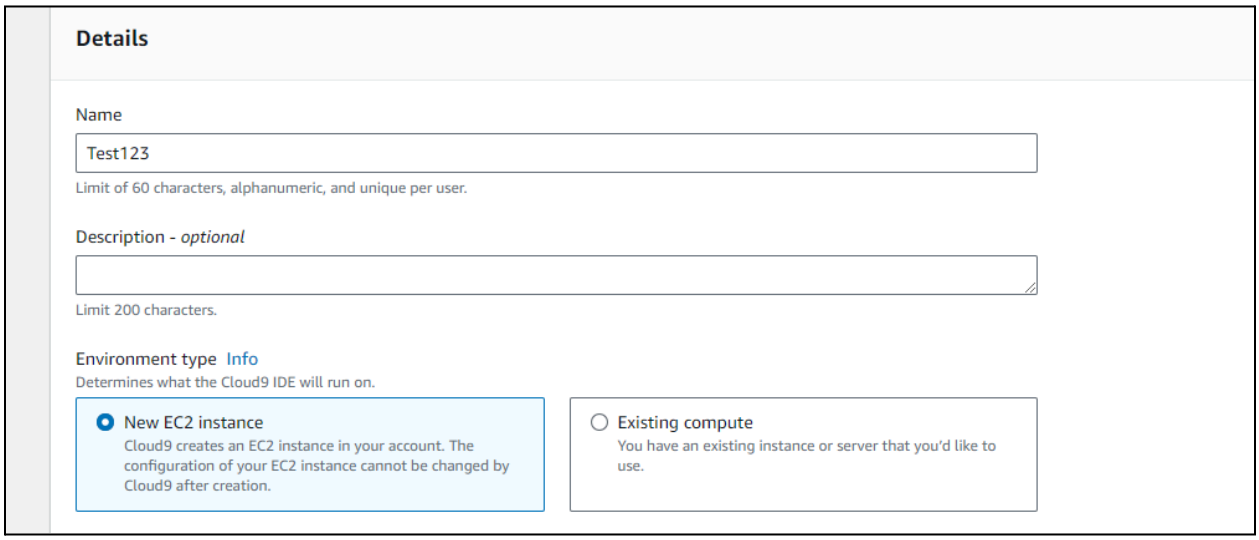
Class:D15A
Roll No:34

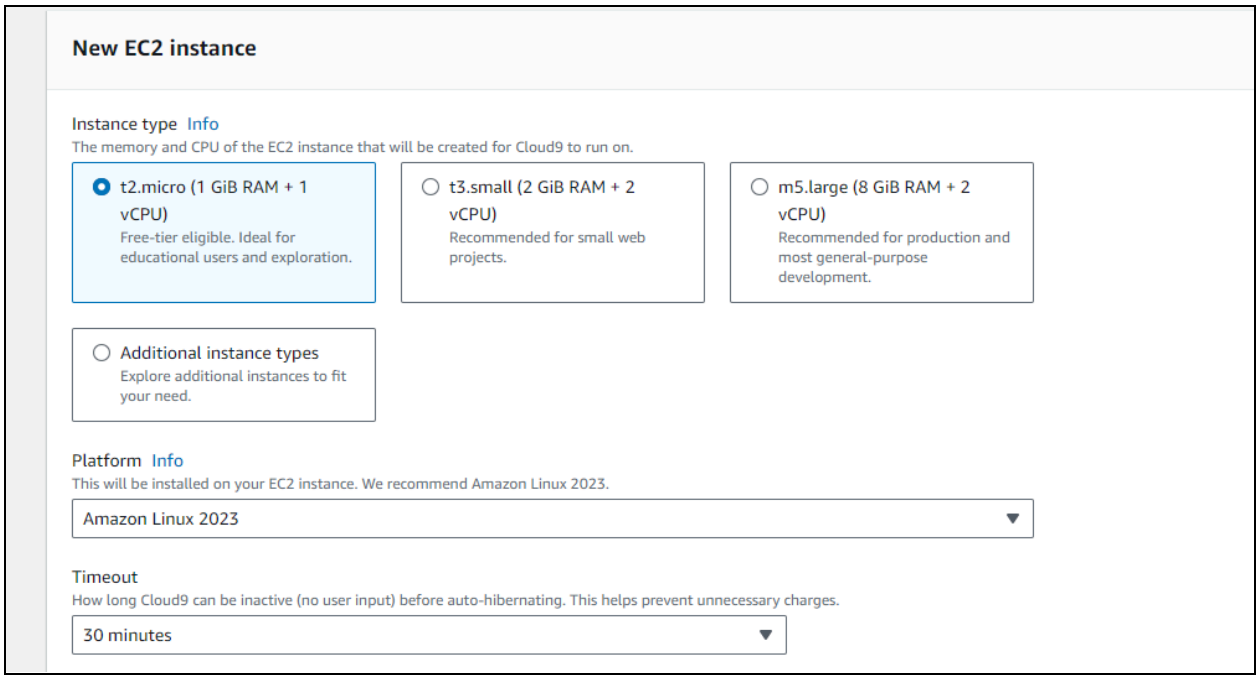
Aim:To understand the benefits of Cloud Infrastructure and Setup AWS Cloud9 IDE, Launch AWS Cloud9 IDE and Perform Collaboration Demonstration.

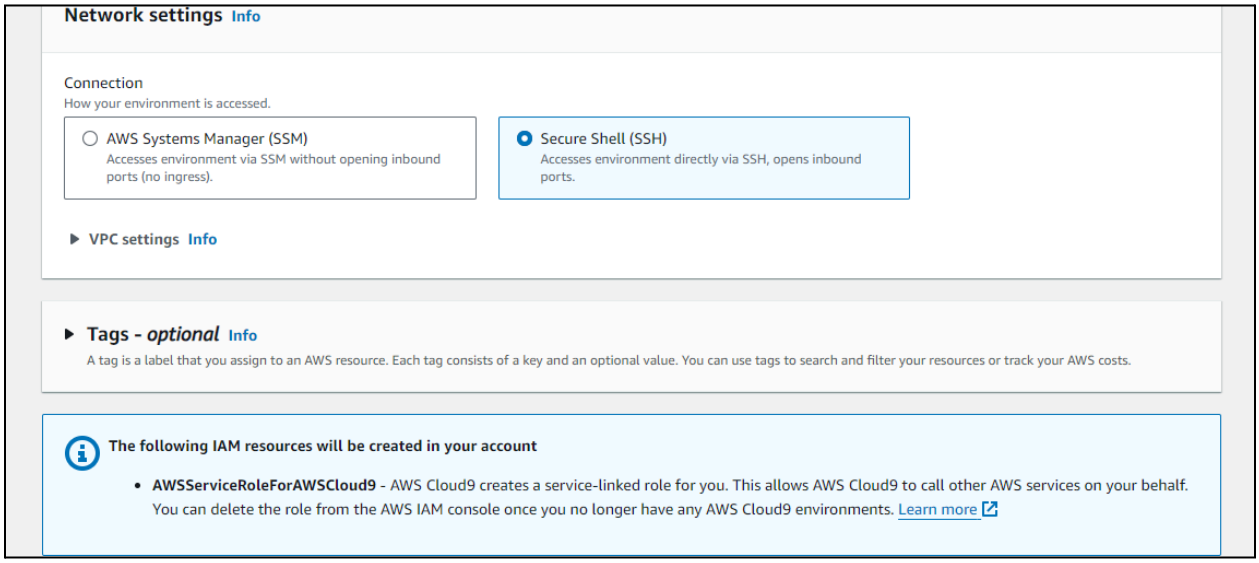
Cloud9

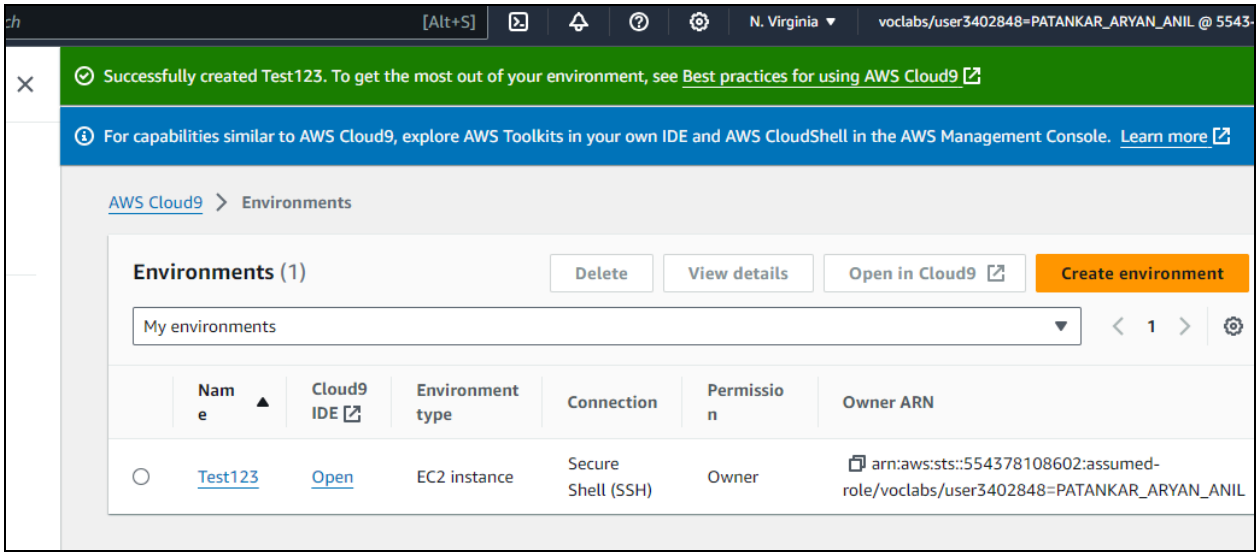


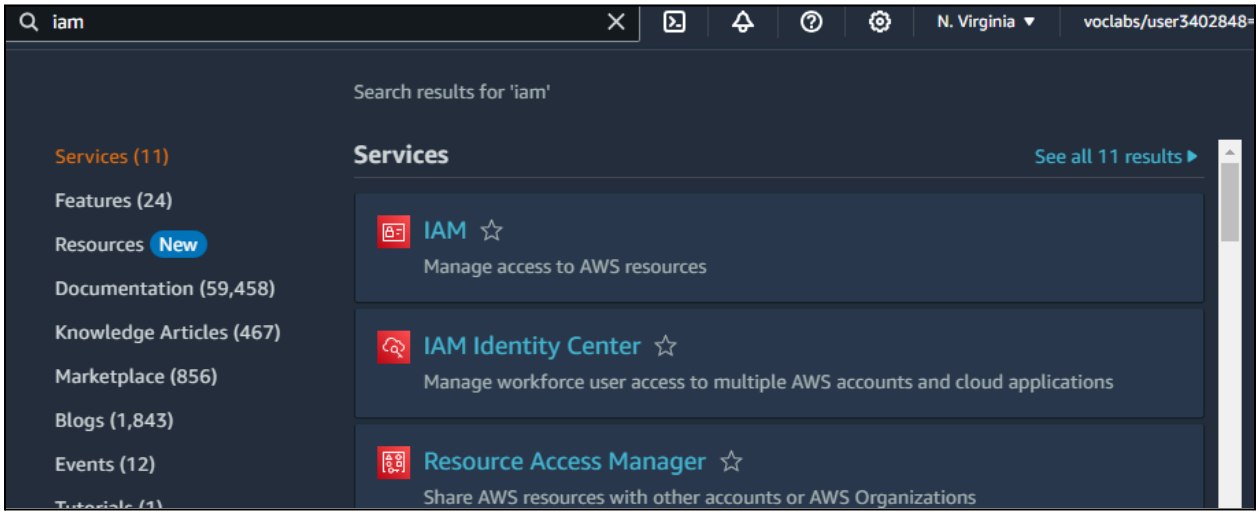

aws
Services
Search
[Alt+S]
N. Virginia
voclabs/user3402848=PATANKAR_ARYAN_ANIL
Developer Tools
AWS Cloud9
A cloud IDE for writing, running, and debugging code
AWS Cloud9 allows you to write, run, and debug your code with just a browser. With AWS Cloud9, you have immediate access to a rich code editor, integrated debugger, and built-in terminal with preconfigured AWS CLI. You can get started in minutes and no longer have to spend the time to install local applications or configure your development machine.
New AWS Cloud9 environment
Create environment

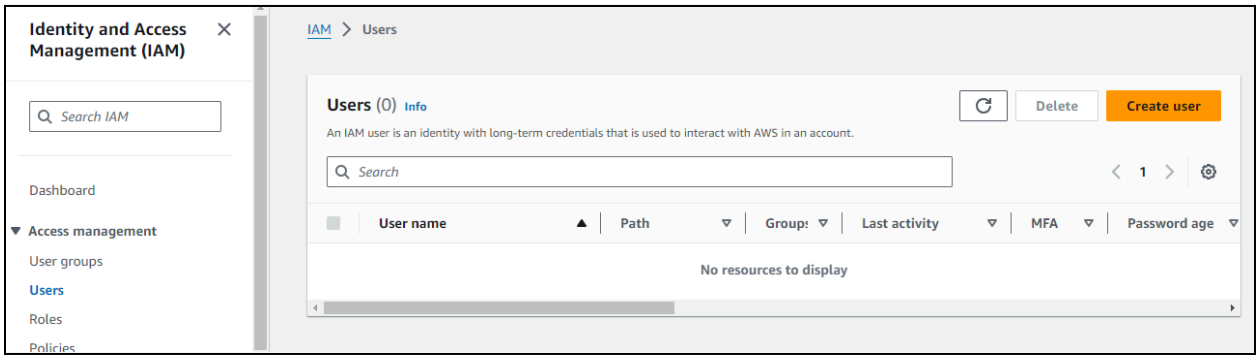

Details
Name
Test123
Limit of 60 characters, alphanumeric, and unique per user.
Description - optional
Limit 200 characters.
Environment type Info
Determines what the Cloud9 IDE will run on.
New EC2 instance
Cloud9 creates an EC2 instance in your account. The configuration of your EC2 instance cannot be changed by Cloud9 after creation.
Existing compute
You have an existing instance or server that you'd like to use.


New EC2 instance
Instance type Info
The memory and CPU of the EC2 instance that will be created for Cloud9 to run on.
t2.micro (1 GiB RAM + 1 vCPU)
Free-tier eligible. Ideal for educational users and exploration.
t3.small (2 GiB RAM + 2 vCPU)
Recommended for small web projects.
m5.large (8 GiB RAM + 2 vCPU)
Recommended for production and most general-purpose development.
Additional instance types
Explore additional instances to fit your need.
Platform Info
This will be installed on your EC2 instance. We recommend Amazon Linux 2023.
Amazon Linux 2023
Timeout
How long Cloud9 can be inactive (no user input) before auto-hibernating. This helps prevent unnecessary charges.
30 minutes


Network settings Info
Connection
How your environment is accessed.
AWS Systems Manager (SSM)
Accesses environment via SSM without opening inbound ports (no ingress).
Secure Shell (SSH)
Accesses environment directly via SSH, opens inbound ports.
VPC settings Info
Tags - optional Info
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.
The following IAM resources will be created in your account
AWSServiceRoleForAWSCloud9 - AWS Cloud9 creates a service-linked role for you. This allows AWS Cloud9 to call other AWS services on your behalf. You can delete the role from the AWS IAM console once you no longer have any AWS Cloud9 environments. Learn more


[Alt+S]
N. Virginia
voclabs/user3402848=PATANKAR_ARYAN_ANIL @ 5543-
Successfully created Test123. To get the most out of your environment, see Best practices for using AWS Cloud9
For capabilities similar to AWS Cloud9, explore AWS Toolkits in your own IDE and AWS CloudShell in the AWS Management Console. Learn more
AWS Cloud9 > Environments
Environments (1)
Delete
View details
Open in Cloud9
Create environment
My environments
1
Name
Cloud9 IDE
Environment type
Connection
Permission
Owner ARN
Test123
Open
EC2 instance
Secure Shell (SSH)
Owner
arn:aws:sts::554378108602:assumed-role/voclabs/user3402848=PATANKAR_ARYAN_ANIL


iam
N. Virginia
voclabs/user3402848=
Search results for 'iam'
Services (11)
Features (24)
Resources New
Documentation (59,458)
Knowledge Articles (467)
Marketplace (856)
Blogs (1,843)
Events (12)
Services
See all 11 results
IAM
Manage access to AWS resources
IAM Identity Center
Manage workforce user access to multiple AWS accounts and cloud applications
Resource Access Manager
Share AWS resources with other accounts or AWS Organizations


Identity and Access Management (IAM)
Search IAM
Dashboard
Access management
User groups
Users
Roles
Policies
IAM > Users
Users (0) Info
An IAM user is an identity with long-term credentials that is used to interact with AWS in an account.
Delete
Create user
Search
1
User name
Path
Groups
Last activity
MFA
Password age
No resources to display

User name

aryan

The user name can have up to 64 characters. Valid characters: A-Z, a-z, 0-9, and + = , . @ _ - (hyphen)

☑ Provide user access to the AWS Management Console - *optional*

If you're providing console access to a person, it's a best practice to manage their access in IAM Identity Center.

Console password

○ Autogenerated password

You can view the password after you create the user.

◉ Custom password

Enter a custom password for the user.

••••••••••

- Must be at least 8 characters long
- Must include at least three of the following mix of character types: uppercase letters (A-Z), lowercase letters (a-z), numbers (0-
  @ # $ % ^ & * ( ) _ + - (hyphen) = [ ] { } | '

☐ Show password

☑ Users must create a new password at next sign-in - Recommended

Users automatically get the IAMUserChangePassword policy to allow them to change their own password.

User details

User name	Console password type	Require password reset
aryan	Custom password	Yes

Permissions summary 1

Name	Type	Used as
IAMUserChangePassword	AWS managed	Permissions policy

Tags - *optional*

Tags are key-value pairs you can add to AWS resources to help identify, organize, or search for resources. Choose any tags you want to associate with this user.

No tags associated with the resource.

Add new tag

You can add up to 50 more tags.

more

Permissions options

- **Add user to group**
  Add user to an existing group, or create a new group. We recommend using groups to manage user permissions by job function.
- **Copy permissions**
  Copy all group memberships, attached managed policies, and inline policies from an existing user.
- **Attach policies directly**
  Attach a managed policy directly to a user. As a best practice, we recommend attaching policies to a group instead. Then, add the user to the appropriate group.

Get started with groups
Create a group and select policies to attach to the group. We recommend using groups to manage user permissions by job function, AWS service access, or custom permissions. Learn more

Create group

User name	Console password type	Require password reset
aryanp	None	No

Permissions summary

1

Name	Type	Used as
No resources		

Tags - *optional*

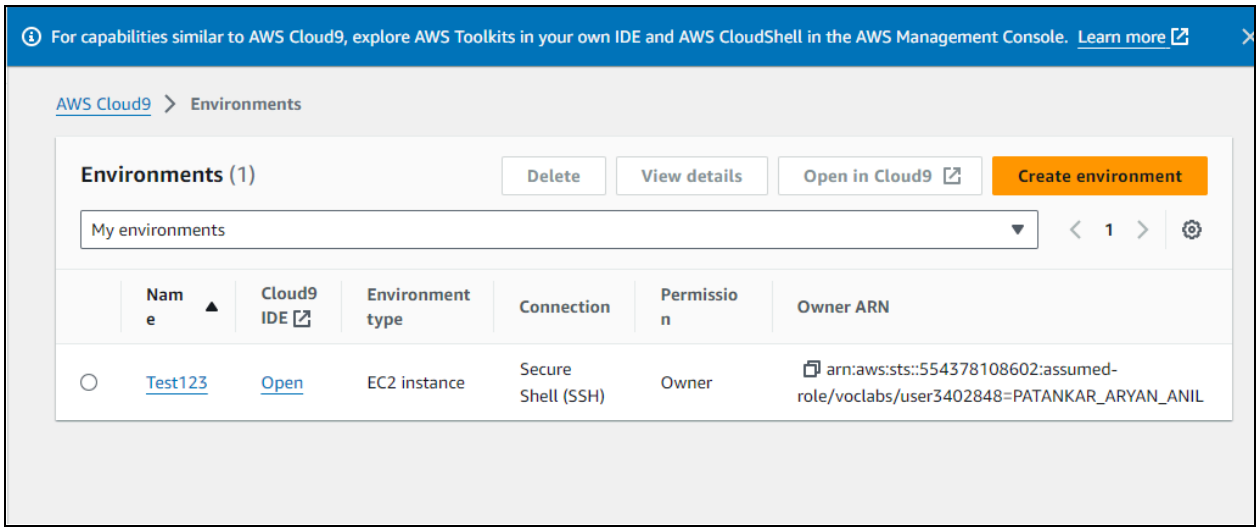
Tags are key-value pairs you can add to AWS resources to help identify, organize, or search for resources. Choose any tags you want to associate with this user.

No tags associated with the resource.

Add new tag

You can add up to 50 more tags.

Cancel Previous Create user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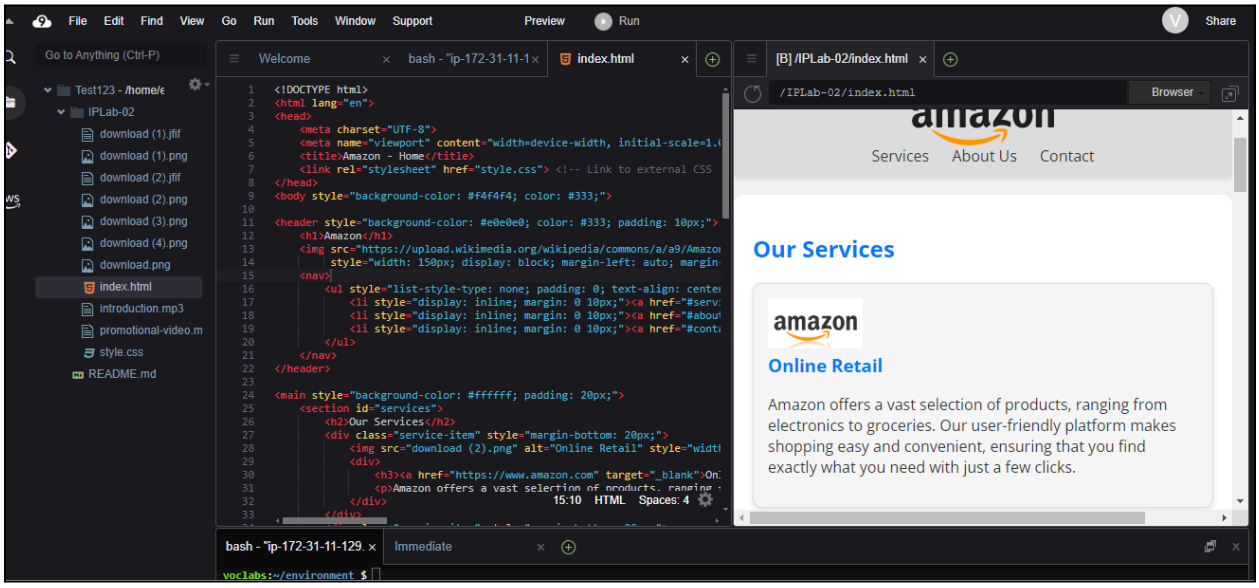
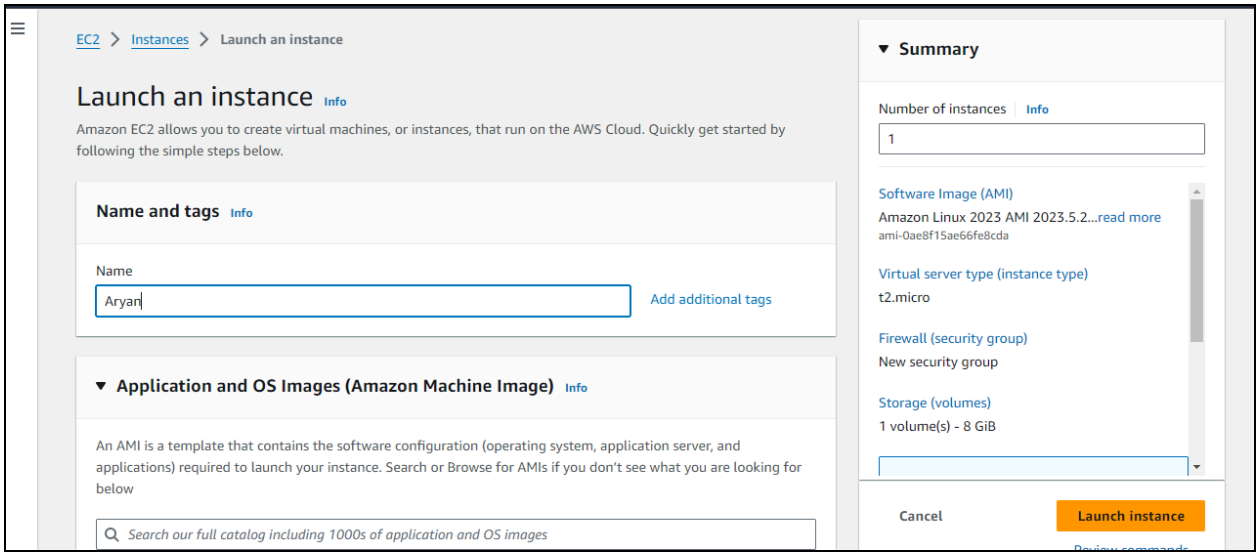
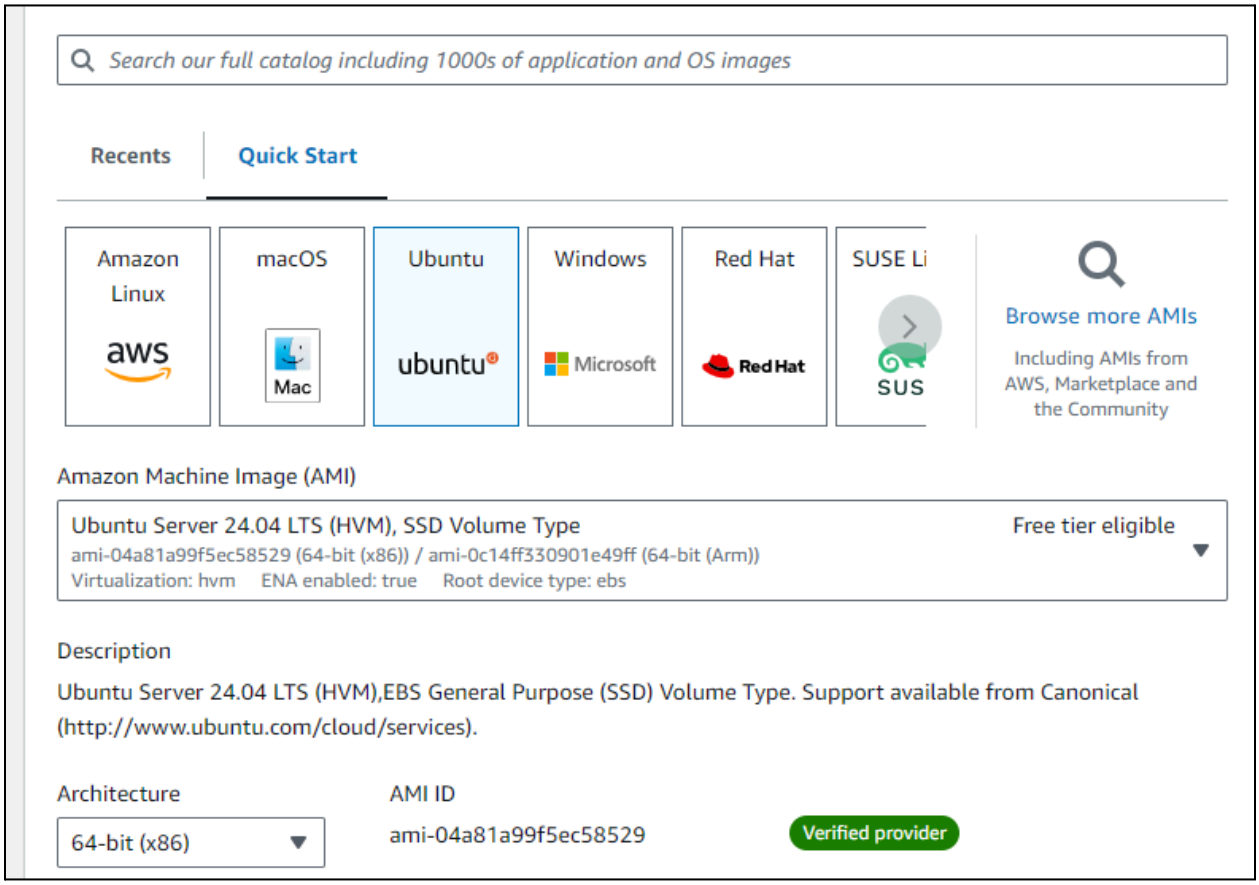
Open
EC2 instance
Secure Shell (SSH)
Owner
arn:aws:sts::554378108602:assumed-role/voclabs/user3402848=PATANKAR_ARYAN_ANIL



EC2 INSTANCE


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
Aryan
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
Summary
Number of instances Info
1
Software Image (AMI)
Amazon Linux 2023 AMI 2023.5.2...read more
ami-0ae8f15ae66fe8cda
Virtual server type (instance type)
t2.micro
Firewall (security group)
New security group
Storage (volumes)
1 volume(s) - 8 GiB
Cancel
Launch instance


Search our full catalog including 1000s of application and OS images
Recents
Quick Start
Amazon Linux
macOS
Mac
Ubuntu
ubuntu
Windows
Microsoft
Red Hat
Red Hat
SUSE Li
SUS
Browse more AMIs
Including AMIs from AWS, Marketplace and the Community
Amazon Machine Image (AMI)
Ubuntu Server 24.04 LTS (HVM), SSD Volume Type
Free tier eligible
ami-04a81a99f5ec58529 (64-bit (x86)) / ami-0c14ff330901e49ff (64-bit (Arm))
Virtualization: hvm ENA enabled: true Root device type: ebs
Description
Ubuntu Server 24.04 LTS (HVM),EBS General Purpose (SSD) Volume Type. Support available from Canonical (http://www.ubuntu.com/cloud/services).
Architecture
64-bit (x86)
AMI ID
ami-04a81a99f5ec58529
Verified provider

Configure storage Info

Advanced

1x 8 GiB gp3 Root volume (Not encrypted)

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage

Add new volume

The selected AMI contains more instance store volumes than the instance allows. Only the first 0 instance store volumes from the AMI will be accessible from the instance

Click refresh to view backup information

The tags that you assign determine whether the instance will be backed up by any Data Lifecycle Manager policies.

0 x File systems Edit

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*

vockey Create new key pair

Instance type Info | Get advice

Instance type

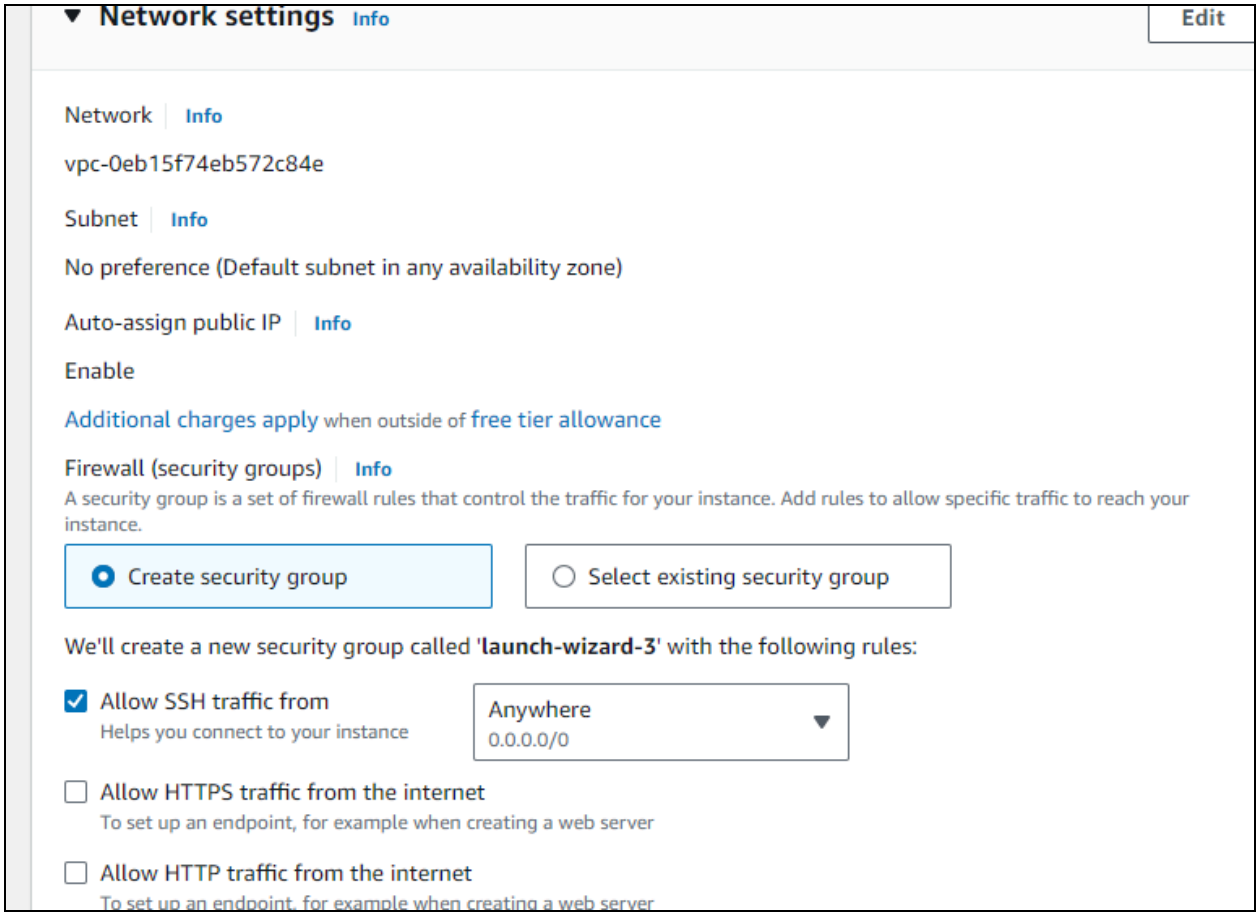
t2.micro Free tier eligible

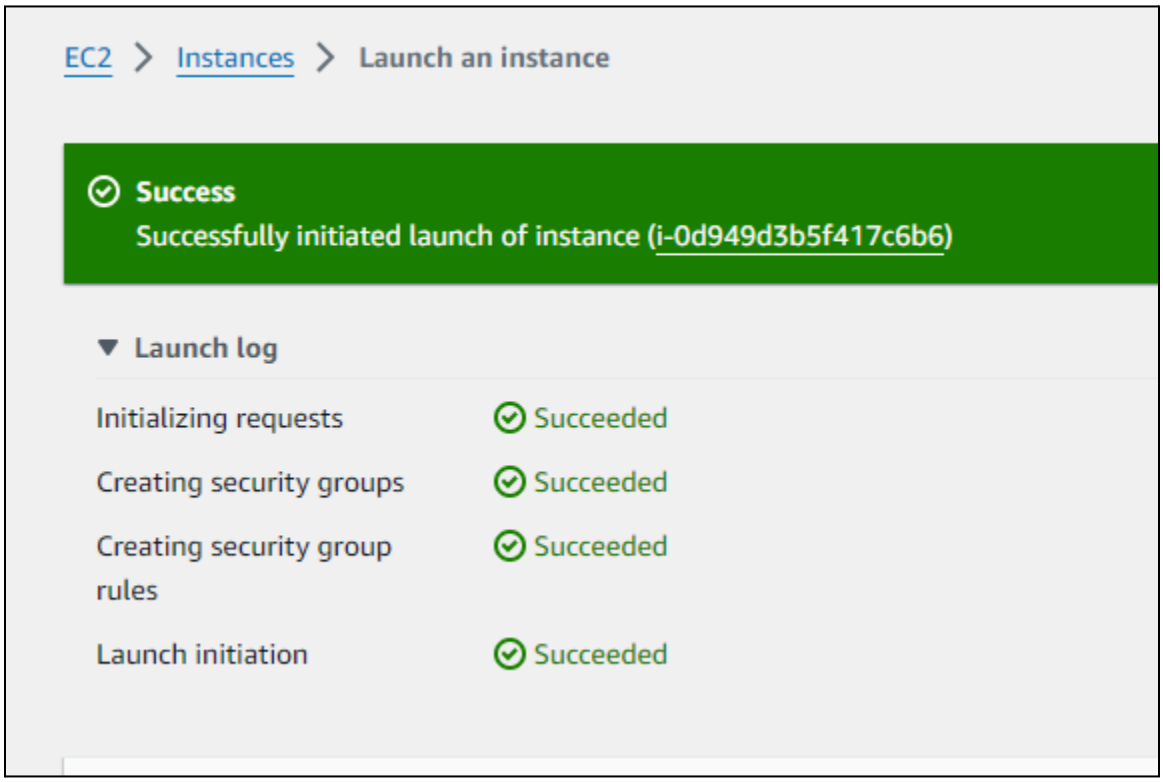
Family: t2 1 vCPU 1 GiB Memory Current generation: true
On-Demand Windows base pricing: 0.0162 USD per Hour
On-Demand SUSE base pricing: 0.0116 USD per Hour
On-Demand RHEL base pricing: 0.026 USD per Hour
On-Demand Linux base pricing: 0.0116 USD per Hour

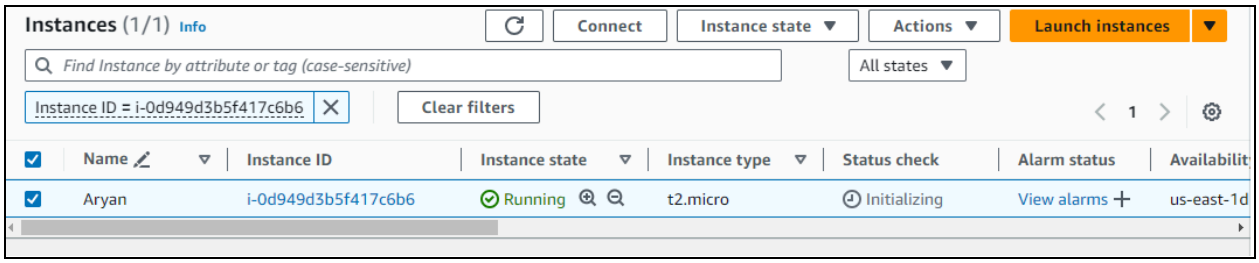
All generations

Compare instance types

Additional costs apply for AMIs with pre-installed software


Network settings Info
Edit
Network Info
vpc-0eb15f74eb572c84e
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-3' with the following rules:
Allow SSH traffic from
Helps you connect to your instance
Anywhere
0.0.0.0/0
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


EC2 > Instances > Launch an instance
Success
Successfully initiated launch of instance (i-0d949d3b5f417c6b6)
Launch log
Initializing requests
Succeeded
Creating security groups
Succeeded
Creating security group rules
Succeeded
Launch initiation
Succeeded

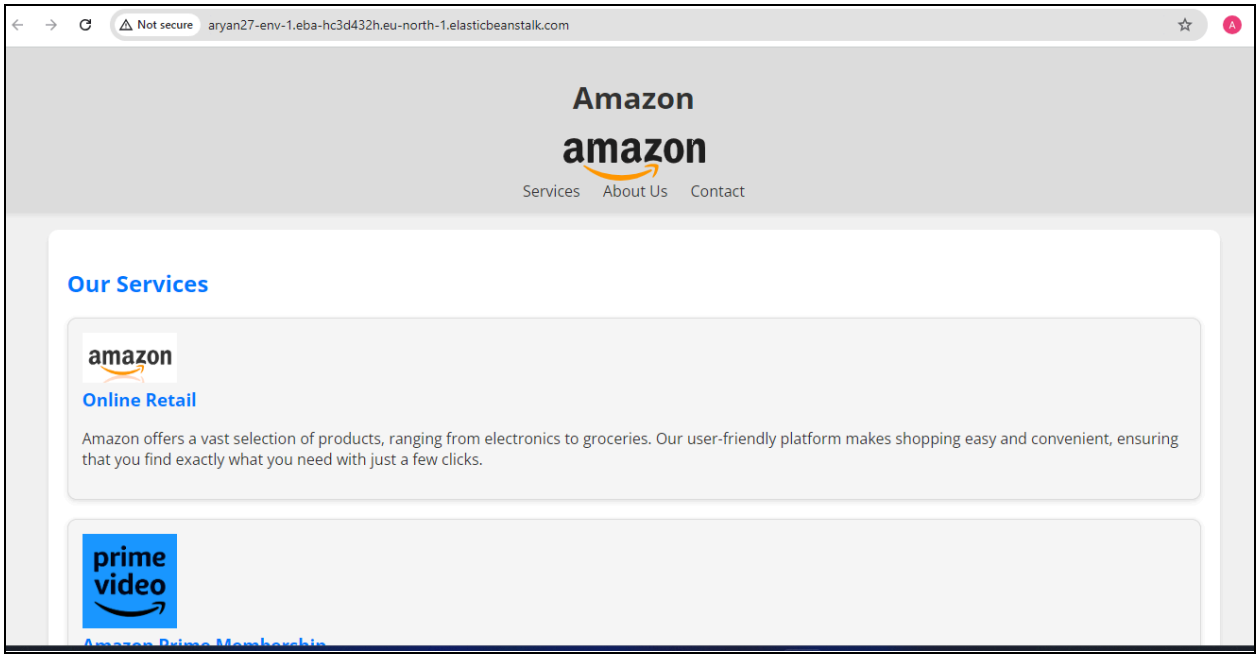



```
[1]+  Stopped                 nano index1.html
root@ip-172-31-36-118:/var/www/html# sudo nano index.html
root@ip-172-31-36-118:/var/www/html# sudo start apache2
sudo: start: command not found
root@ip-172-31-36-118:/var/www/html# sudo systemctl start apache2
root@ip-172-31-36-118:/var/www/html# sudo systemctl status apache2
● apache2.service - The Apache HTTP Server
     Loaded: loaded (/usr/lib/systemd/system/apache2.service; enabled; preset: enabled)
     Active: active (running) since Sun 2024-08-18 09:03:15 UTC; 22min ago
       Docs: https://httpd.apache.org/docs/2.4/
   Main PID: 3261 (apache2)
      Tasks: 55 (limit: 1130)
     Memory: 5.3M (peak: 5.5M)
        CPU: 128ms
     CGroup: /system.slice/apache2.service
             ├─3261 /usr/sbin/apache2 -k start
             ├─3264 /usr/sbin/apache2 -k start
             └─3265 /usr/sbin/apache2 -k start

Aug 18 09:03:15 ip-172-31-36-118 systemd[1]: Starting apache2.service - The Apache HTTP Server...
Aug 18 09:03:15 ip-172-31-36-118 systemd[1]: Started apache2.service - The Apache HTTP Server.
root@ip-172-31-36-118:/var/www/html#
```

```
See "man sudo_root" for details.

ubuntu@ip-172-31-36-118:~$ :/home/ubuntu# apt install apache2
-bash: :/home/ubuntu#: No such file or directory
ubuntu@ip-172-31-36-118:~$ cls
Command 'cls' not found, but there are 20 similar ones.
ubuntu@ip-172-31-36-118:~$ sudo su
root@ip-172-31-36-118:/home/ubuntu# apt install apache2
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils libapr1t64 libaprutil1-dbd-s
qlite3 libaprutil1-ldap libaprutil1t64 liblua5.4-0 ssl-cert
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-bro
wser
```

i-0d949d3b5f417c6b6 (Aryan)

PublicIPs: 52.207.231.96 PrivateIPs: 172.31.36.118


Not secure
aryan27-env-1.eba-hc3d432h.eu-north-1.elasticbeanstalk.com
Amazon
amazon
Services
About Us
Contact
Our Services
amazon
Online Retail
Amazon offers a vast selection of products, ranging from electronics to groceries. Our user-friendly platform makes shopping easy and convenient, ensuring that you find exactly what you need with just a few clicks.
prime video