

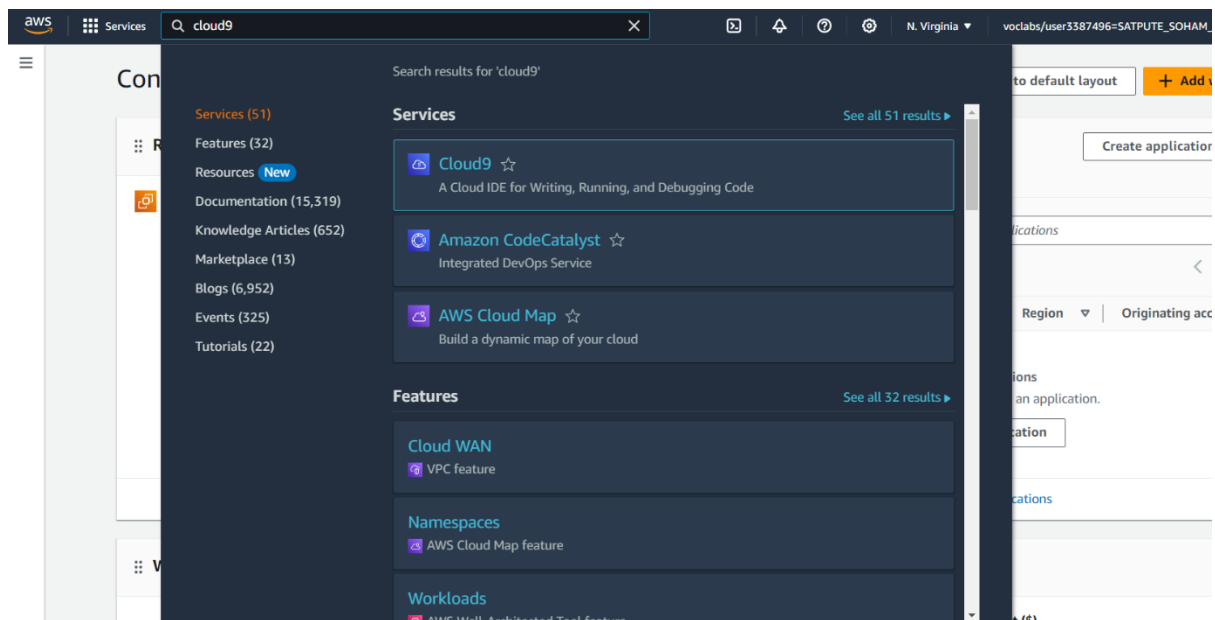
EXPERIMENT NO.1

Name: Soham Satpute

Class:D15A Roll No:52

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

1. Hosting using Cloud 9:



Click to go back and see history

ServicesSearch[Alt+S]

N. Virginiavoclabs/user3387496=SATPUTE_SOHAM_

For capabilities similar to AWS Cloud9, explore AWS Toolkits in your own IDE and AWS CloudShell in the AWS Management Console. [Find out more](#)

[AWS Cloud9](#) > [Environments](#) > Create environment

Create environment [Info](#)

Details

Name

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.

ServicesSearch[Alt+S]

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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 needs.

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](#)

aws

Services

Search

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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. [Find out more](#)
- AWSCloud9SSMAccessRole** and **AWSCloud9SSMInstanceProfile** – A service role and an instance profile are automatically created if Cloud9 accesses its EC2 instance through AWS Systems Manager. If your environments no longer require EC2 instances that block incoming traffic, you can delete these roles using the AWS IAM console. [Find out more](#)

Cancel

Create

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Services

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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

Amazon Virtual Private Cloud (VPC)

The VPC that your environment will access. To allow the AWS Cloud9 environment to connect to its EC2 instance, attach an Internet gateway (IGW) to your VPC. [Create new VPC](#)

vpc-03d1ce76af665f00f

Name –

Subnet

Used to setup your VPC configuration. To use a private subnet, select AWS Systems Manager (SSM) as the connection type. [Create new subnet](#)

No preference

Uses default subnet in any Availability Zone

► 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.

aws

Services

Search

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AWS Cloud9

My environments

Shared with me

All account environments

Documentation

Successfully created DEMO 1. 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. [Find out 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
<input type="radio"/>	DEMO 1	Open	EC2 instance	Secure Shell (SSH)	Owner	arn:aws:sts::229213576924:assumed-role/voclabs/user3387496=SATPUTE_SOHAM_SUDHIR

CloudShell

Feedback

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Q iam

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Search results for 'iam'

Services (11)

Features (24)

Resources New

Documentation (59,469)

Knowledge Articles (459)

Marketplace (864)


Blogs (1,846)

Events (12)


Tutorials (1)

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


Features

See all 24 results ▶


Groups

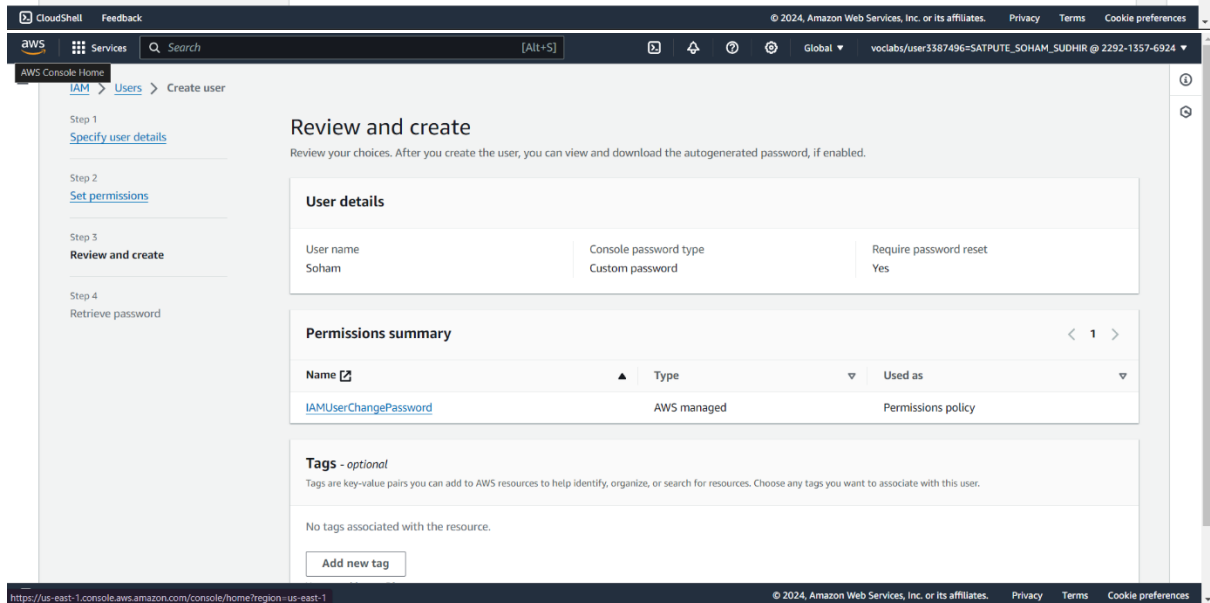
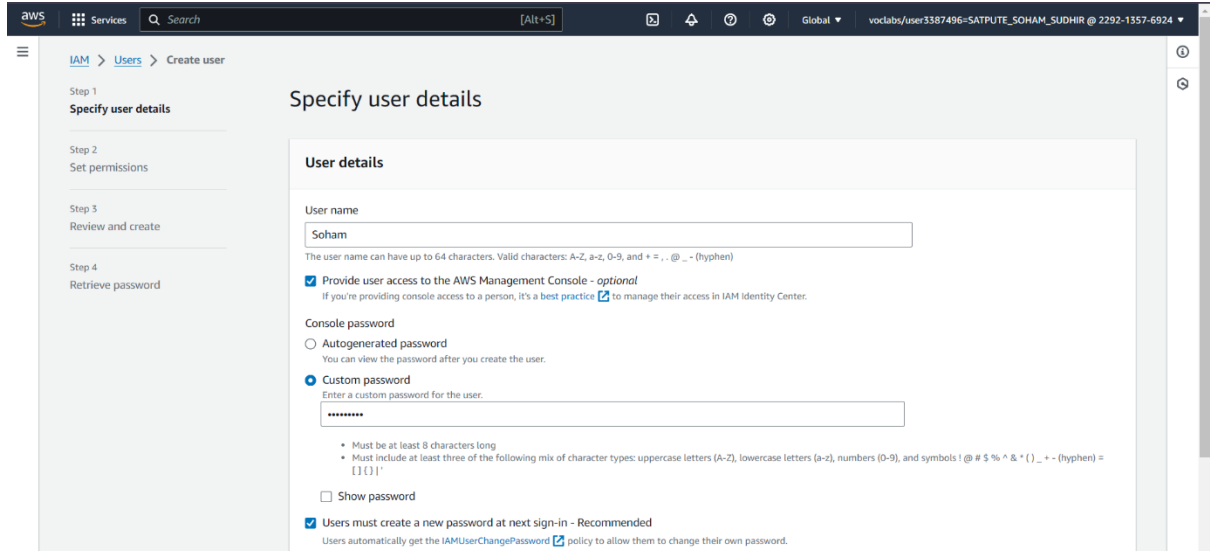
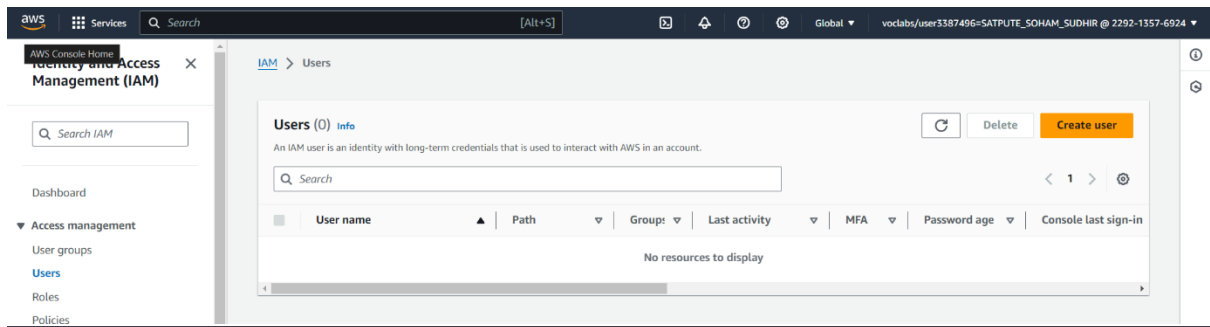
 IAM feature

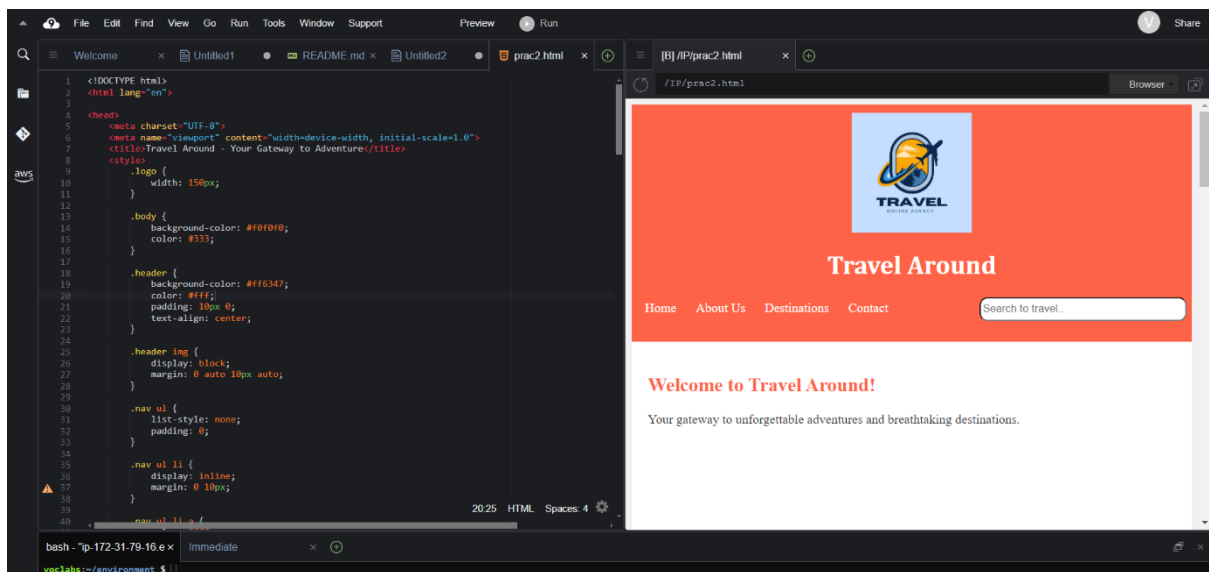
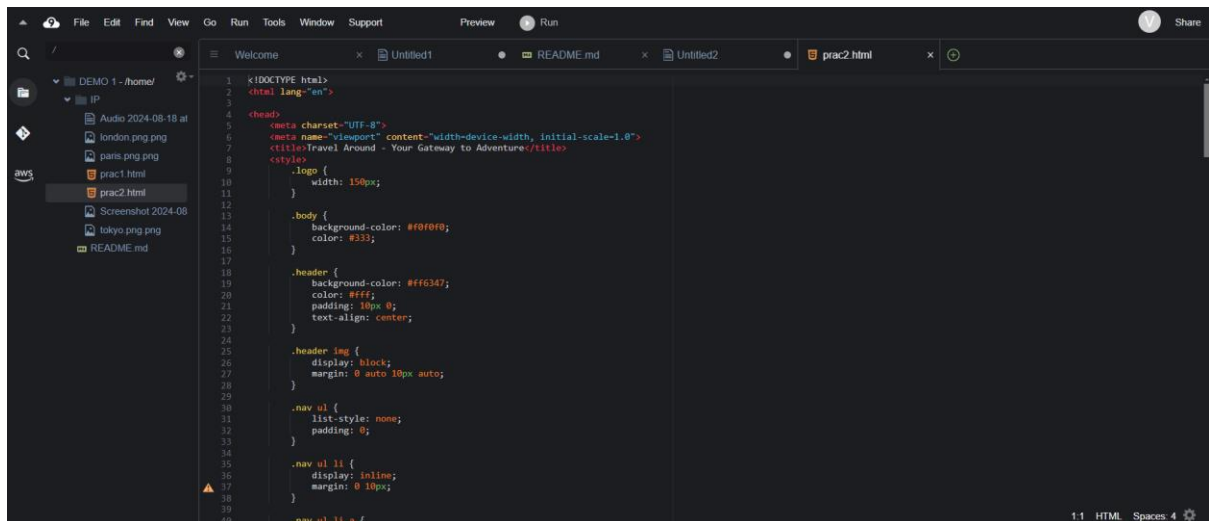
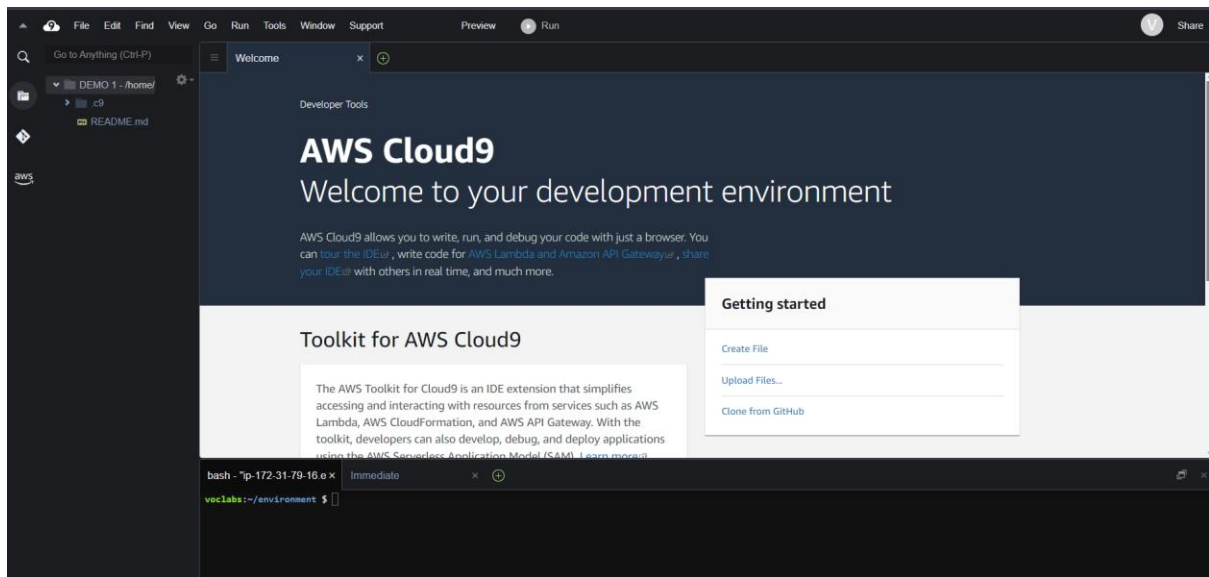
Roles

 IAM feature

Roles Anywhere

 IAM feature





2. Hosting using EC2 INSTANCE:

The image shows two screenshots of the AWS Management Console. The top screenshot is the EC2 Dashboard, and the bottom screenshot is the 'Launch an instance' wizard.

Top Screenshot: EC2 Dashboard

Resources

You are using the following Amazon EC2 resources in the US East (N. Virginia) Region:

Instances (running)	3	Auto Scaling Groups	0	Capacity Reservations	0
Dedicated Hosts	0	Elastic IPs	0	Instances	3
Key pairs	1	Load balancers	0	Placement groups	0
Security groups	3	Snapshots	0	Volumes	3

Launch instance

To get started, launch an Amazon EC2 instance, which is a virtual server in the cloud.

[Launch instance](#) [Migrate a server](#)

Note: Your instances will launch in the US East (N. Virginia) Region.

Service health

[AWS Health Dashboard](#)

Region: US East (N. Virginia)

Status: ✔ This service is operating normally.

Zones

Account attributes

[Default VPC](#)
vpc-03d1ce76af665f00f

Settings

[Data protection and security](#)
[Zones](#)
[EC2 Serial Console](#)
[Default credit specification](#)
[EC2 console preferences](#)

Explore AWS

Enable Best Price-Performance with AWS Graviton2

AWS Graviton2 powered EC2 instances enable up to 40% better price performance for a broad spectrum of cloud workloads. [Learn more](#)

Save up to 90% on EC2 with Spot Instances

Optimize price-performance by combining EC2 purchase options in a single EC2 ASG. [Learn more](#)

Bottom Screenshot: Launch an instance wizard

Launch an instance

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

Name: [Add additional tags](#)

Application and OS Images (Amazon Machine Image)

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.

[Recents](#) [Quick Start](#)

Summary

Number of instances:

Software Image (AMI)

Amazon Linux 2023 AMI 2023.5.2...[read more](#)
ami-066784287e358dad1

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance

[Cancel](#) [Launch instance](#) [Review commands](#)

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AWS Console Home

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

Recents Quick Start

Amazon Linux macOS Ubuntu Windows Red Hat SUSE Linux

Browse more AMIs
Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Ubuntu Server 24.04 LTS (HVM), SSD Volume Type
ami-0e86e20dae9224db8 (64-bit (x86)) / ami-0998a6a12ea24a797 (64-bit (ARM))
Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible

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-0e86e20dae9224db8 Verified provider

Summary

Number of instances 1

Software Image (AMI)
Canonical, Ubuntu, 24.04, amd64...read more
ami-0e86e20dae9224db8

Virtual server type (instance type)
t2.micro

Firewall (security group)
New security group

Storage (volumes)
1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance

Cancel Launch instance

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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

Additional costs apply for AMIs with pre-installed software

All generations Compare instance types

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

Network settings Info Edit

Network Info

vpc-03d1ce76af665f00f

Summary

Number of instances 1

Firewall (security group)
New security group

Storage (volumes)
1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel Launch instance

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Network settings Info Edit

Network Info

vpc-03d1ce76af665f00f

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-2' 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

Summary

Number of instances 1

Firewall (security group)
New security group



Storage (volumes)
1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

▼ Configure storage [Info](#)


Advanced

1x GiB 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](#)

EC2 > Instances > Launch an instance

 **Success**
Successfully initiated launch of instance (i-013988963664b36cd)

► Launch log

Next Steps

< 1 2 3 4 5 6 >

Create billing and free tier usage alerts

To manage costs and avoid surprise bills, set up email notifications for billing and free tier usage thresholds.

[Create billing alerts](#)

Connect to your instance

Once your instance is running, log into it from your local computer.

[Connect to instance](#)

[Learn more](#)

Connect an RDS database

Configure the connection between an EC2 instance and a database to allow traffic flow between them.

[Connect an RDS database](#)

[Create a new RDS database](#)

[Learn more](#)

Create EBS snapshot policy

Create a policy that automates the creation, retention, and deletion of EBS snapshots

[Create EBS snapshot policy](#)

```
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Welcome to Ubuntu 24.04 LTS (GNU/Linux 6.8.0-1012-aws x86_64)

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

System information as of Fri Aug 23 13:49:20 UTC 2024

System load:  0.53      Processes:    105
Usage of /:   22.8% of 6.71GB   Users logged in:  0
Memory usage: 21%      IPv4 address for enx0: 172.31.93.140
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.
```